Schema documentation for impex-1_0_2.xsd

october 3, 2014

Table of Contents

Namespace: "http://impex-fp7.oeaw.ac.at" 6
Schema(s) 6
Main schema `impex-1_0_2.xsd` 6
Element(s) 6
Element `Spase` 6
Element `Version` 7
Element `ResourceEntity` 7
Element `Catalog` 9
Element `ResourceID` 10
Element `ResourceHeader` 10
Element `ResourceName` 12
Element `AlternateName` 12
Element `ReleaseDate` 12
Element `ExpirationDate` 13
Element `Description` 13
Element `Acknowledgement` 14
Element `Contact` 14
Element `PersonID` 14
Element `Role` 15
Element `InformationURL` 16
Element `Name` 16
Element `URL` 17
Element `Language` 17
Element `Association` 17
Element `AssociationID` 18
Element `AssociationType` 18
Element `Note` 19
Element `PriorID` 19
Element `AccessInformation` 19
Element `RepositoryID` 20
Element `Availability` 21
Element `AccessRights` 21
Element `AccessURL` 21
Element `ProductKey` 22
Element `Format` 23
Element `Encoding` 25
Element `DataExtent` 26
Element `Quantity` 26
Element `Units` 27
Element `Per` 27
Element `ProviderResourceName` 28
Element `ProviderVersion` 28
Element `InstrumentID` 28
Element `PhenomenonType` 29
Element `TimeSpan` 30
Element `StartDate` 31
Element `StopDateEntity` 31
Element `Caveats` 32
Element `Keyword` 32
Element `InputResourceID` 32
Element `Parameter` 33
Element `Set` 35
Element `ParameterKey` 35
Element `Cadence` 35
Element `UnitsConversion` 36
Element `CoordinateSystem` 36
Element `CoordinateRepresentation` 37
Element `CoordinateSystemName` 37
Element `RenderingHints` 42
Element `DisplayType` 43
Element `AxisLabel` 43
Element `RenderingAxis` 44
Element `Index` 44

Element ValueFormat 45
Element ScaleMin 45
Element ScaleMax 45
Element ScaleType 46
Element Structure 46
Element Size 47
Element Element 47
Element Qualifier 49
Element ValidMin 52
Element ValidMax 52
Element FillValue 52
Element ParameterEntity 53
Element Property 53
Element PropertyQuantity 55
Element PropertyLabel 55
Element PropertyValue 55
Element PropertyTableURL 56
Element PropertyModel 56
Element ModelURL 56
Element Extension 57
Element Field 57
Element FieldQuantity 57
Element FrequencyRange 58
Element SpectralRange 59
Element Low 60
Element High 60
Element Bin 60
Element BandName 61
Element EnergyRange 61
Element AzimuthalAngleRange 62
Element PolarAngleRange 62
Element Wave 63
Element WaveType 64
Element WaveQuantity 65
Element WavelengthRange 66
Element Mixed 67
Element MixedQuantity 67
Element ParticleType 68
Element Support 69
Element SupportQuantity 69
Element DisplayData 70
Element ProcessingLevel 72
Element ProviderProcessingLevel 72
Element MeasurementType 73
Element TemporalDescription 74
Element Exposure 75
Element DisplayCadence 75
Element ObservedRegion 76
Element NumericalData 79
Element Document 81
Element DocumentType 82
Element MIMEType 83
Element Source 84
Element SourceType 84
Element MirrorURL 85
Element Checksum 85
Element HashValue 86
Element HashFunction 86
Element Instrument 86
Element InstrumentType 87
Element InvestigationName 90
Element OperatingSpan 91
Element StopDate 91
Element ObservatoryID 92
Element Observatory 92
Element ObservatoryGroupID 93
Element Location 93
Element ObservatoryRegion 94
Element Latitude 97
Element Longitude 97
Element Elevation 97
Element Person 98

Element PersonName 99
Element OrganizationName 99
Element Address 99
Element Email 100
Element PhoneNumber 100
Element FaxNumber 101
Element Registry 101
Element Repository 101
Element Service 102
Element Annotation 103
Element ImageURL 104
Element AnnotationType 104
Element ClassificationMethod 104
Element ConfidenceRating 105
Element ObservationExtent 105
Element StartLocation 106
Element StopLocation 106
Element AtomicNumber 107
Element ParentID 107
Element ParticleQuantity 107
Element RelativeStopDate 109
Element Granule 109
Element RegionBegin 111
Element RegionEnd 111
Element NumericalOutput 111
Element SimulatedInstrumentID 113
Element SpatialDescription 113
Element Dimension 114
Element CoordinatesLabel 115
Element PlaneNormalVector 115
Element PlanePoint 115
Element Step 116
Element SimulatedRegion 116
Element SimulationProduct 116
Element DisplayOutput 117
Element SimulationModel 119
Element SimulationModel / Versions 121
Element Versions / ModelVersion 121
Element ModelVersion / VersionID 121
Element SimulationType 122
Element CodeLanguage 122
Element TemporalDependence 122
Element InputProperties 123
Element OutputParameters 123
Element SimulationRun 123
Element Model 125
Element ModelID 125
Element VersionID 126
Element LikelihoodRating 126
Element SimulationTime 126
Element Duration 127
Element TimeStart 128
Element TimeStop 128
Element TimeStep 128
Element DiagnosisTimeStep 128
Element SavedQuantity 129
Element SimulationDomain 129
Element SpatialDimension 131
Element VelocityDimension 131
Element FieldDimension 132
Element GridStructure 132
Element GridCellSize 132
Element Symmetry 132
Element BoundaryConditions 133
Element ParticleBoundary 133
Element FrontWall 134
Element BackWall 134
Element SideWall 135
Element Obstacle 135
Element FieldBoundary 135
Element InputEntity 136
Element RegionParameter 137

Element Radius 138
Element SubLongitude 139
Element Period 140
Element ObjectMass 141
Element InputTableURL 142
Element InputParameter 142
Element ParameterQuantity 143
Element InputPopulation 143
Element ChemicalFormula 145
Element PopulationMassNumber 145
Element PopulationChargeState 146
Element PopulationDensity 146
Element PopulationTemperature 147
Element PopulationFlowSpeed 148
Element Distribution 149
Element ProductionRate 150
Element TotalProductionRate 150
Element Profile 151
Element InputField 152
Element InputLabel 154
Element FieldValue 154
Element FieldModel 155
Element InputProcess 155
Element ProcessType 157
Element ProcessCoefficient 157
Element ProcessCoeffType 158
Element ProcessModel 158
Element Particle 158
Element Particle / PopulationID 160
Element PopulationID 160
Complex Type(s) 160
Complex Type Spase 160
Complex Type Catalog 161
Complex Type ResourceHeader 162
Complex Type Contact 163
Complex Type InformationURL 164
Complex Type Association 165
Complex Type AccessInformation 165
Complex Type AccessURL 166
Complex Type DataExtent 167
Complex Type TimeSpan 168
Complex Type Parameter 168
Complex Type CoordinateSystem 170
Complex Type RenderingHints 170
Complex Type Structure 171
Complex Type Element 172
Complex Type Property 173
Complex Type Extension 175
Complex Type Field 175
Complex Type FrequencyRange 176
Complex Type Bin 176
Complex Type EnergyRange 177
Complex Type AzimuthalAngleRange 177
Complex Type PolarAngleRange 178
Complex Type Wave 179
Complex Type WavelengthRange 179
Complex Type Mixed 180
Complex Type Support 181
Complex Type DisplayData 181
Complex Type TemporalDescription 183
Complex Type NumericalData 184
Complex Type Document 186
Complex Type Source 187
Complex Type Checksum 187
Complex Type Instrument 188
Complex Type OperatingSpan 189
Complex Type Observatory 189
Complex Type Location 190
Complex Type Person 191
Complex Type Registry 192
Complex Type Repository 192
Complex Type Service 193

Complex Type Annotation 193
Complex Type ObservationExtent 194
Complex Type Granule 195
Complex Type NumericalOutput 197
Complex Type SpatialDescription 199
Complex Type DisplayOutput 200
Complex Type SimulationModel 203
Complex Type Versions 204
Complex Type ModelVersion 205
Complex Type InputProperties 205
Complex Type OutputParameters 205
Complex Type SimulationRun 206
Complex Type Model 208
Complex Type SimulationTime 208
Complex Type DiagnosisTimeStep 209
Complex Type SimulationDomain 210
Complex Type BoundaryConditions 212
Complex Type ElementBoundary 212
Complex Type RegionParameter 213
Complex Type InputValue 215
Complex Type InputParameter 216
Complex Type InputPopulation 217
Complex Type InputField 219
Complex Type InputProcess 221
Complex Type Particle 223
Simple Type(s) 224
Simple Type enumVersion 224
Simple Type ResourceID 224
Simple Type enumRole 225
Simple Type enumAssociationType 227
Simple Type enumAvailability 227
Simple Type enumAccessRights 228
Simple Type enumFormat 229
Simple Type enumEncoding 234
Simple Type enumPhenomenonType 235
Simple Type ParameterKey 239
Simple Type enumCoordinateRepresentation 239
Simple Type enumCoordinateSystemName 240
Simple Type enumDisplayType 248
Simple Type enumRenderingAxis 249
Simple Type typeSequence 250
Simple Type enumScaleType 250
Simple Type enumQualifier 251
Simple Type ImpexLargeListQuantities 258
Simple Type StringSequence 260
Simple Type enumFieldQuantity 260
Simple Type enumSpectralRange 261
Simple Type enumWaveType 264
Simple Type enumWaveQuantity 265
Simple Type enumMixedQuantity 268
Simple Type enumParticleType 269
Simple Type enumSupportQuantity 270
Simple Type enumProcessingLevel 271
Simple Type enumMeasurementType 272
Simple Type enumRegion 276
Simple Type enumDocumentType 283
Simple Type enumSourceType 284
Simple Type enumHashFunction 285
Simple Type enumInstrumentType 286
Simple Type enumAnnotationType 292
Simple Type enumClassificationMethod 293
Simple Type enumConfidenceRating 294
Simple Type BandName 294
Simple Type enumParticleQuantity 295
Simple Type enumComponent 298
Simple Type enumDirectionAngle 299
Simple Type enumEarth 299
Simple Type enumHardcopy 303
Simple Type enumHeliosphere 304
Simple Type enumIntegral 305
Simple Type enumIonosphere 306
Simple Type enumMagnetosphere 306

Simple Type enumNearSurface 307
Simple Type enumProjection 310
Simple Type enumImpexSpecialRegion 310
Simple Type enumSun 311
Simple Type enumText 312
Simple Type enumWaves 312
Simple Type FloatSequence 313
Simple Type PlaneNormalVector 313
Simple Type PlanePoint 313
Simple Type enumImpexRegion 314
Simple Type enumProduct 314
Simple Type enumSimulationType 315
Simple Type enumYN 316
Simple Type ImpexSavedQuantities 316
Simple Type enumSymmetry 316
Simple Type ChemicalFormula 317
Simple Type enumProcessType 317
Simple Type enumProcCoefType 318
Simple Type enumImpexQuantity 319
Simple Type PopulationID 319
Element Group(s) 319
Element Group CutsDescription 319
Element Group CubesDescription 320
Namespace: "" 320
Attribute(s) 320
Attribute Spase / @lang 320
Attribute DiagnosisTimeStep / @TimeStart 320
Attribute DiagnosisTimeStep / @Duration 320
Attribute InputValue / @Units 321
Attribute InputValue / @UnitsConversion 321

Namespace: "http://impex-fp7.oeaw.ac.at"

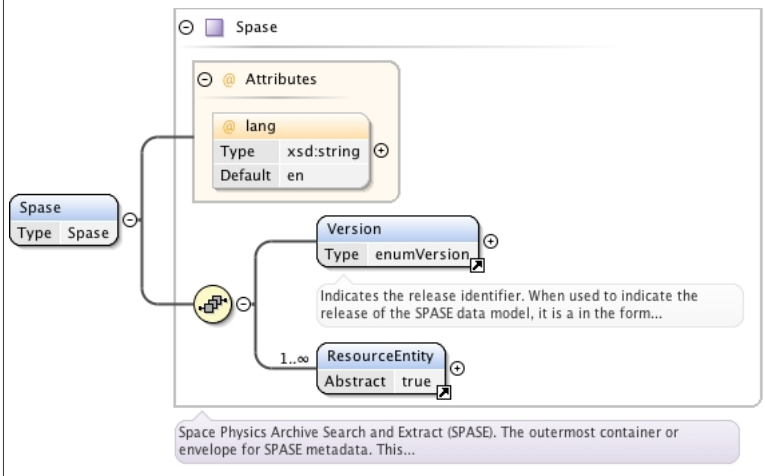
Schema(s)

Main schema impex-1_0_2.xsd

Namespace	http://impex-fp7.oeaw.ac.at
Properties	attribute form default: unqualified element form default: qualified

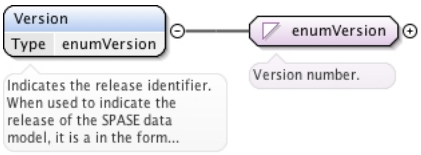
Element(s)

Element Spase

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	Spase
Properties	content: complex

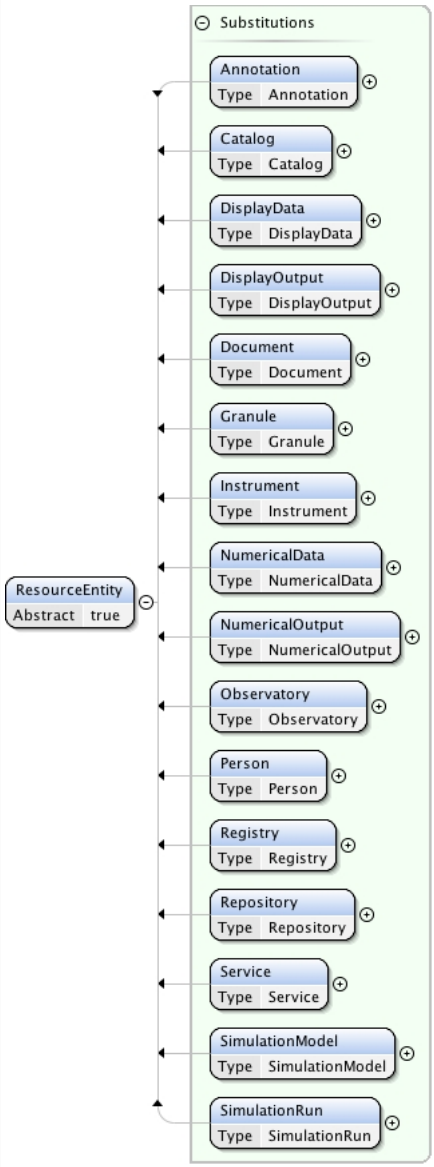
Model	Version , ResourceEntity+
Children	ResourceEntity, Version
Instance	<Spase lang="en" xmlns="http://impex-fp7.oeaw.ac.at"> <Version>{1,1}</Version> <ResourceEntity>{1,unbounded}</ResourceEntity> </Spase>
Attributes	**QName** / **Type** / **Default** / **Use** **lang** / xsd:string / en / optional
Source	<xsd:element name="Spase" type="Spase"/>

Element `Version`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Indicates the release identifier. When used to indicate the release of the SPASE data model, it is a in the form Major.Minor.Fix where Major: A significant change in the architecture of the model or rewrite of the implementation. This includes major changes in design or implementation language. This number starts at 0 (zero). Minor: An addition of terms or features that require changes in documentation/external API. This number starts at 0 (zero). Fix: Any change that doesn't require documentation/external API changes. This number starts at 0 (zero).
Diagram	
Type	enumVersion
Properties	content: simple
Facets	enumeration 2.2.2
Used by	Complex Type Spase
Source	<xsd:element name="Version" type="enumVersion"> <xsd:annotation> <xsd:documentation xml:lang="en">Indicates the release identifier. When used to indicate the release of the SPASE data model, it is a in the form Major.Minor.Fix where Major: A significant change in the architecture of the model or rewrite of the implementation. This includes major changes in design or implementation language. This number starts at 0 (zero). Minor: An addition of terms or features that require changes in documentation/external API. This number starts at 0 (zero). Fix: Any change that doesn't require documentation/external API changes. This number starts at 0 (zero).</xsd:documentation> </xsd:annotation> </xsd:element>

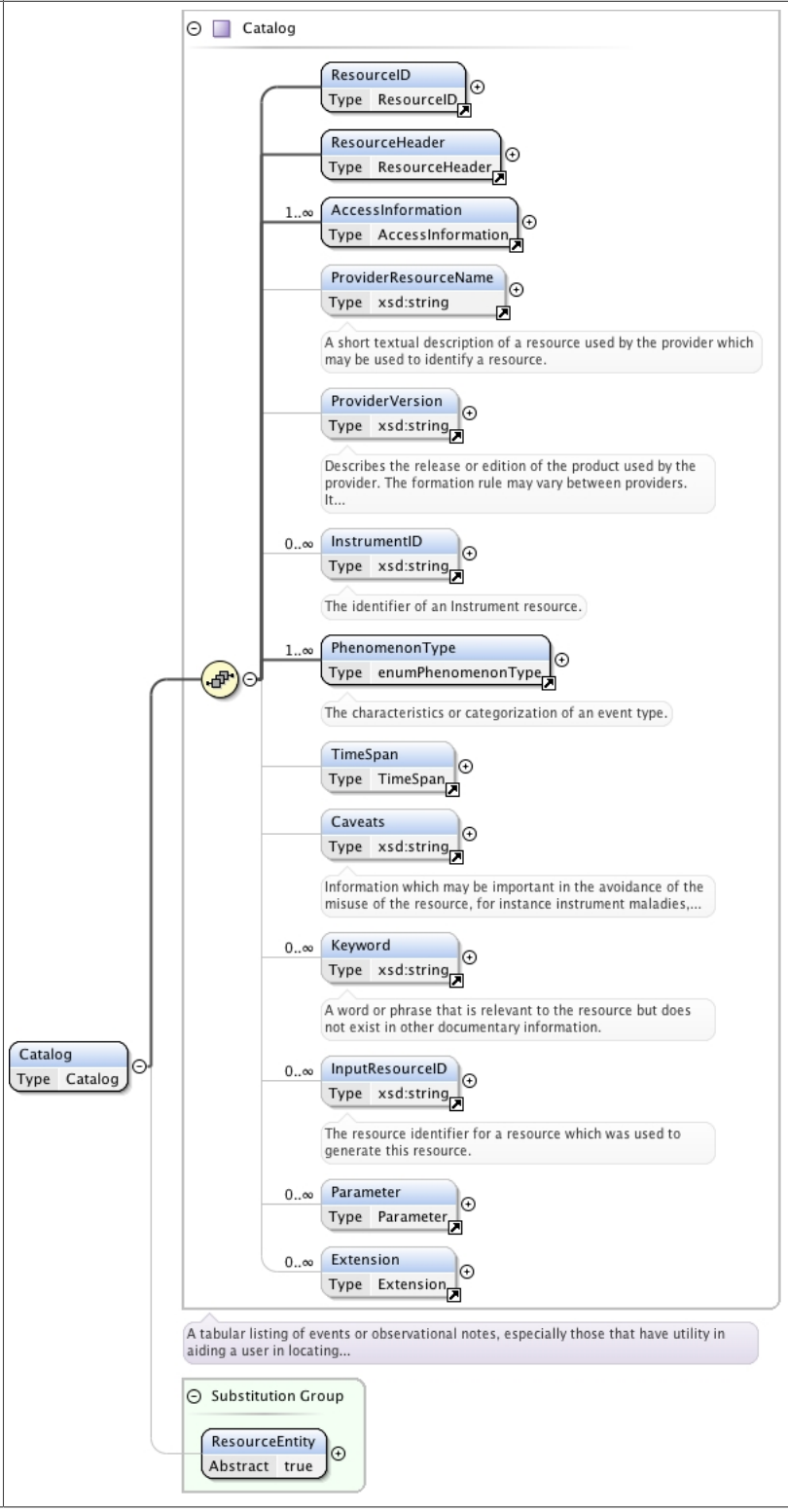
Element `ResourceEntity`

Namespace	http://impex-fp7.oeaw.ac.at

Diagram	
Properties	abstract: `true`
Substitution Group	• Catalog • DisplayData • NumericalData • Document • Instrument • Observatory • Person • Registry • Repository • Service • Annotation • Granule • NumericalOutput

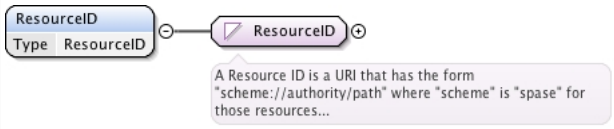
	• DisplayOutput • SimulationModel • SimulationRun
Used by	Complex Type Spase
Source	`<xsd:element name="ResourceEntity" abstract="true"/>`

Element `Catalog`

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	

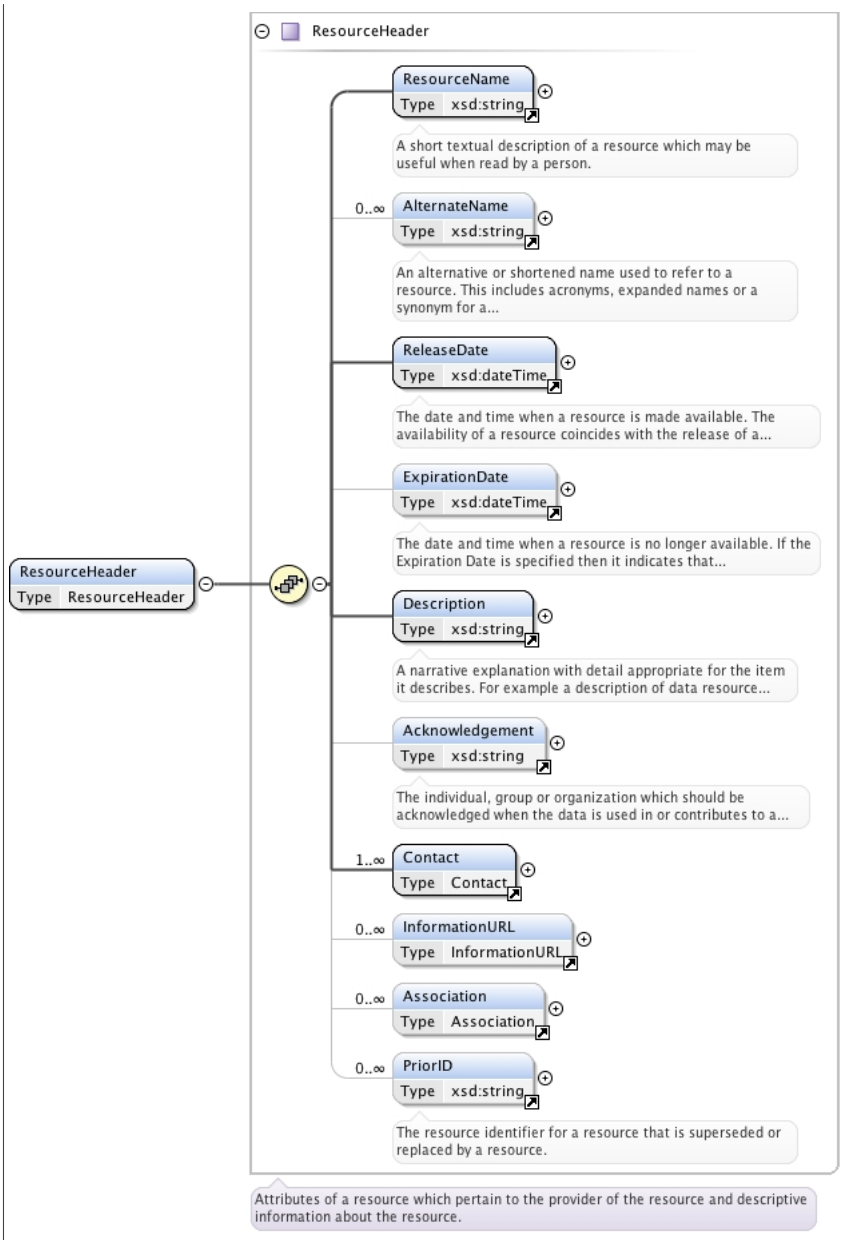
Type	Catalog
Properties	content: complex
Substitution Group Affiliation	• ResourceEntity
Model	ResourceID , ResourceHeader , AccessInformation+ , ProviderResourceName{0,1} , ProviderVersion{0,1} , InstrumentID* , PhenomenonType+ , TimeSpan{0,1} , Caveats{0,1} , Keyword* , InputResourceID* , Parameter* , Extension*
Children	AccessInformation, Caveats, Extension, InputResourceID, InstrumentID, Keyword, Parameter, PhenomenonType, ProviderResourceName, ProviderVersion, ResourceHeader, ResourceID, TimeSpan
Instance	<Catalog xmlns="http://impex-fp7.oeaw.ac.at"> <ResourceID>{1,1}</ResourceID> <ResourceHeader>{1,1}</ResourceHeader> <AccessInformation>{1,unbounded}</AccessInformation> <ProviderResourceName>{0,1}</ProviderResourceName> <ProviderVersion>{0,1}</ProviderVersion> <InstrumentID>{0,unbounded}</InstrumentID> <PhenomenonType>{1,unbounded}</PhenomenonType> <TimeSpan>{0,1}</TimeSpan> <Caveats>{0,1}</Caveats> <Keyword>{0,unbounded}</Keyword> <InputResourceID>{0,unbounded}</InputResourceID> <Parameter>{0,unbounded}</Parameter> <Extension>{0,unbounded}</Extension> </Catalog>
Source	<xsd:element name="Catalog" type="Catalog" substitutionGroup="ResourceEntity"/>

Element ResourceID

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	ResourceID
Properties	content: simple
Used by	Complex Types: Annotation, Catalog, DisplayData, DisplayOutput, Document, Granule, Instrument, NumericalData, NumericalOutput, Observatory, Person, Registry, Repository, Service, SimulationModel, SimulationRun
Source	<xsd:element name="ResourceID" type="ResourceID"/>

Element ResourceHeader

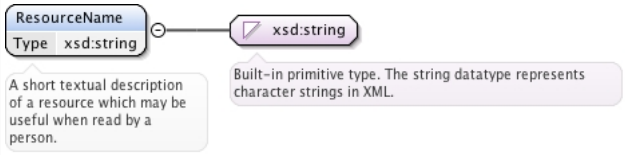
Namespace	http://impex-fp7.oeaw.ac.at

Diagram	
Type	ResourceHeader
Properties	content: `complex`
Used by	Complex Types: Annotation, Catalog, DisplayData, DisplayOutput, Document, Instrument, NumericalData, NumericalOutput, Observatory, Registry, Repository, Service, SimulationModel, SimulationRun
Model	ResourceName , AlternateName* , ReleaseDate , ExpirationDate{0,1} , Description , Acknowledgement{0,1} , Contact+ , InformationURL* , Association* , PriorID*
Children	Acknowledgement, AlternateName, Association, Contact, Description, ExpirationDate, InformationURL, PriorID, ReleaseDate, ResourceName

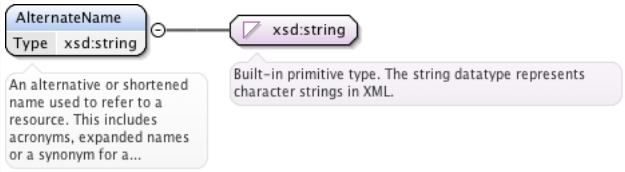
Instance	<pre><ResourceHeader xmlns="http://impex-fp7.oeaw.ac.at">
	  <ResourceName>{1,1}</ResourceName>
	  <AlternateName>{0,unbounded}</AlternateName>
	  <ReleaseDate>{1,1}</ReleaseDate>
	  <ExpirationDate>{0,1}</ExpirationDate>
	  <Description>{1,1}</Description>
	  <Acknowledgement>{0,1}</Acknowledgement>
	  <Contact>{1,unbounded}</Contact>
	  <InformationURL>{0,unbounded}</InformationURL>
	  <Association>{0,unbounded}</Association>
	  <PriorID>{0,unbounded}</PriorID>
	</ResourceHeader></pre>

Source	`<xsd:element name="ResourceHeader" type="ResourceHeader"/>`

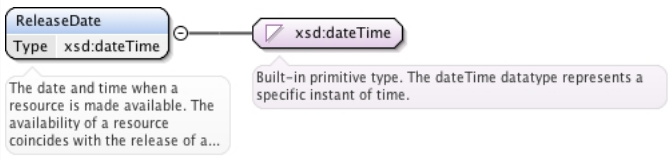
Element ResourceName

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A short textual description of a resource which may be useful when read by a person.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Type ResourceHeader
Source	<xsd:element name="ResourceName" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">A short textual description of a resource which may be useful when read by a person.</xsd:documentation> </xsd:annotation> </xsd:element>

Element AlternateName

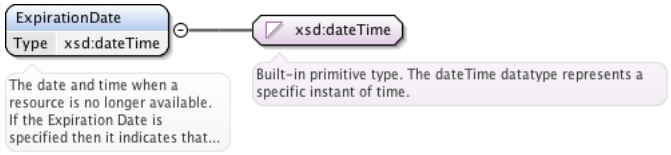
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	An alternative or shortened name used to refer to a resource. This includes acronyms, expanded names or a synonym for a resource.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Type ResourceHeader
Source	<xsd:element name="AlternateName" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">An alternative or shortened name used to refer to a resource. This includes acronyms, expanded names or a synonym for a resource.</xsd:documentation> </xsd:annotation> </xsd:element>

Element ReleaseDate

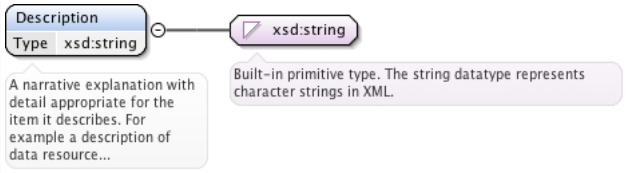
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The date and time when a resource is made available. The availability of a resource coincides with the release of a resource description. If the Release Date is specified as a future date then it indicates that resource should not be made available until that time. However, this is only advisory and in practice the Release Date should be the actual date the resource description was published.
Diagram	
Type	xsd:dateTime
Properties	content: simple

Used by	Complex Types	Granule, ModelVersion, Person, ResourceHeader
Source	<xsd:element name="ReleaseDate" type="xsd:dateTime"> <xsd:annotation> <xsd:documentation xml:lang="en">The date and time when a resource is made available. The availability of a resource coincides with the release of a resource description. If the Release Date is specified as a future date then it indicates that resource should not be made available until that time. However, this is only advisory and in practice the Release Date should be the actual date the resource description was published.</xsd:documentation> </xsd:annotation> </xsd:element>	

Element ExpirationDate

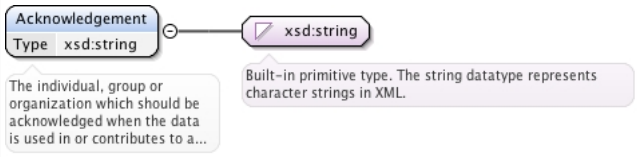
Namespace	http://impex-fp7.oeaw.ac.at	
Annotations	The date and time when a resource is no longer available. If the Expiration Date is specified then it indicates that resource should not be made available after that time. However, this is only advisory and in practice a resource description should be unpublished to eliminate access to a resource.	
Diagram		
Type	xsd:dateTime	
Properties	content:	simple
Used by	Complex Types	Granule, ResourceHeader
Source	<xsd:element name="ExpirationDate" type="xsd:dateTime"> <xsd:annotation> <xsd:documentation xml:lang="en">The date and time when a resource is no longer available. If the Expiration Date is specified then it indicates that resource should not be made available after that time. However, this is only advisory and in practice a resource description should be unpublished to eliminate access to a resource.</xsd:documentation> </xsd:annotation> </xsd:element>	

Element Description

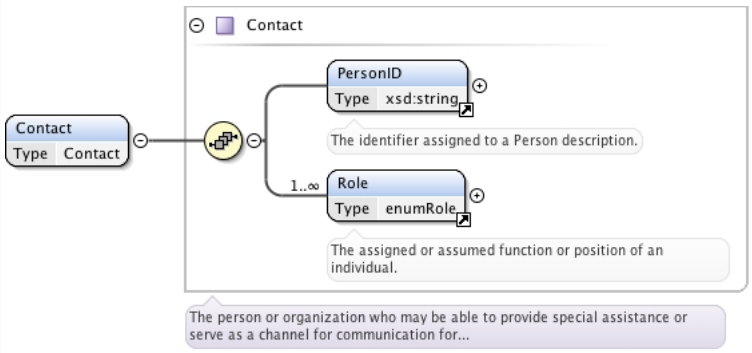
Namespace	http://impex-fp7.oeaw.ac.at	
Annotations	A narrative explanation with detail appropriate for the item it describes. For example a description of data resource should include discussions of the main quantities in the resource, possible uses and search terms. A description should also include whether any corrections (i.e, geometry, inertial) have been applied to the resource.	
Diagram		
Type	xsd:string	
Properties	content:	simple
Used by	Complex Types	AccessURL, InformationURL, InputField, InputParameter, InputPopulation, InputProcess, ModelVersion, Parameter, Property, RegionParameter, ResourceHeader, SimulationDomain, SimulationTime, Structure
Source	<xsd:element name="Description" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">A narrative explanation with detail appropriate for the item it describes. For example a description of data resource should include discussions of the main quantities in the resource, possible uses and search terms. A description should also	

```
 include whether any corrections (i.e, geometry, inertial) have been applied to the resource.</
xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

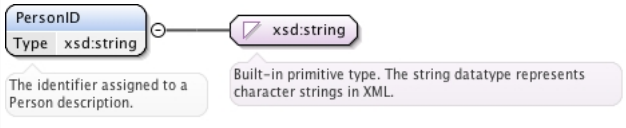
Element Acknowledgement

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The individual, group or organization which should be acknowledged when the data is used in or contributes to a presentation or publication.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Types AccessInformation, ResourceHeader
Source	<xsd:element name="Acknowledgement" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">The individual, group or organization which should be acknowledged when the data is used in or contributes to a presentation or publication.</xsd:documentation> </xsd:annotation> </xsd:element>

Element Contact

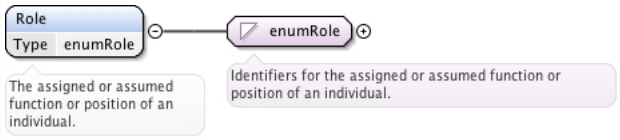
Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	Contact
Properties	content: complex
Used by	Complex Type ResourceHeader
Model	PersonID , Role+
Children	PersonID, Role
Instance	<Contact xmlns="http://impex-fp7.oeaw.ac.at"> <PersonID>{1,1}</PersonID> <Role>{1,unbounded}</Role> </Contact>
Source	<xsd:element name="Contact" type="Contact"/>

Element PersonID

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The identifier assigned to a Person description.
Diagram	

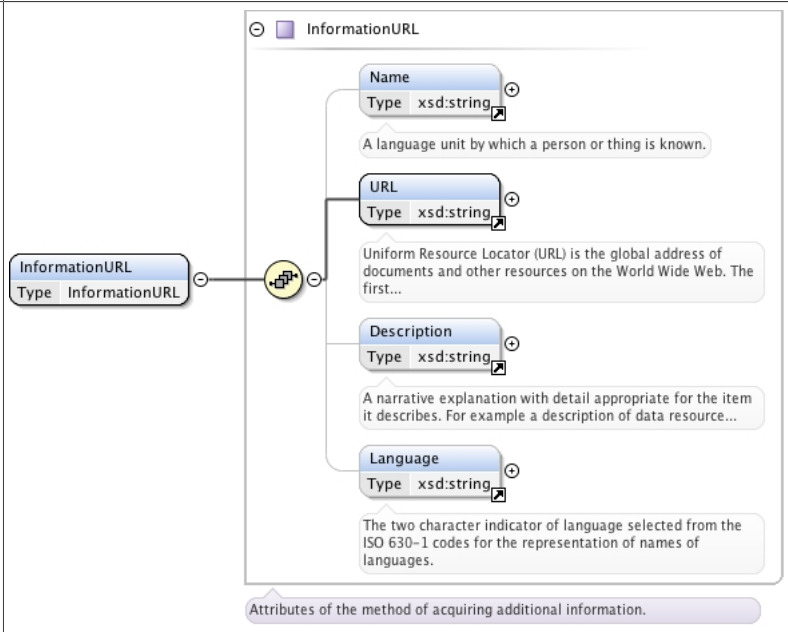
Type	xsd:string	
Properties	content:	simple
Used by	Complex Type	Contact
Source	<xsd:element name="PersonID" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">The identifier assigned to a Person description.</ xsd:documentation> </xsd:annotation> </xsd:element>	

Element Role

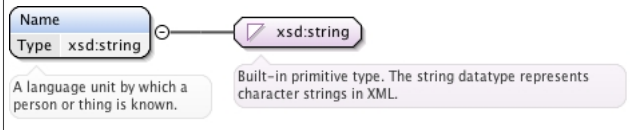
Namespace	http://impex-fp7.oeaw.ac.at		
Annotations	The assigned or assumed function or position of an individual.		
Diagram			
Type	enumRole		
Properties	content:	simple	
Facets	enumeration	ArchiveSpecialist	An individual who is an expert on a collection of resources and may also be knowledgeable of the phenomenon and related physics represented by the resources. This includes librarians, curators, archive scientists and other experts.
	enumeration	CoInvestigator	An individual who is a scientific peer and major participant in an investigation.
	enumeration	Contributor	An entity responsible for making contributions to the content of the resource.
	enumeration	DataProducer	An individual who generated the resource and is familiar with its provenance.
	enumeration	DeputyPI	An individual who is an administrative or scientific leader for an investigation operating under the supervision of a Principal Investigator.
	enumeration	FormerPI	An individual who had served as the administrative and scientific lead for an investigation, but no longer assumes that role.
	enumeration	GeneralContact	An individual who can provide information on a range of subjects or who can direct you to a domain expert.
	enumeration	MetadataContact	An individual who can affect a change in the metadata describing a resource.
	enumeration	PrincipalInvestigator	An individual who is the administrative and scientific lead for an investigation.
	enumeration	ProjectScientist	An individual who is an expert in the phenomenon and related physics explored by the project. A project scientist may also have a managerial role within the project.
	enumeration	Publisher	An individual, organization, institution or government department responsible for the production and dissemination of a document.
	enumeration	Scientist	An individual who is an expert in the phenomenon and related physics represented by the resource.
	enumeration	TeamLeader	An individual who is the designated leader of an investigation.
	enumeration	TeamMember	An individual who is a major participant in an investigation.
	enumeration	TechnicalContact	An individual who can provide specific information with regard to the resource or supporting software

Used by	Complex Type	Contact
Source	<xsd:element name="Role" type="enumRole"> <xsd:annotation> <xsd:documentation xml:lang="en">The assigned or assumed function or position of an individual.</xsd:documentation> </xsd:annotation> </xsd:element>	

Element InformationURL

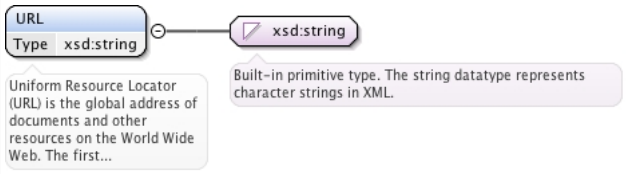
Namespace	http://impex-fp7.oeaw.ac.at	
Diagram		
Type	InformationURL	
Properties	content:	complex
Used by	Complex Type	ResourceHeader
Model	Name{0,1} , URL , Description{0,1} , Language{0,1}	
Children	Description, Language, Name, URL	
Instance	<InformationURL xmlns="http://impex-fp7.oeaw.ac.at"> <Name>{0,1}</Name> <URL>{1,1}</URL> <Description>{0,1}</Description> <Language>{0,1}</Language> </InformationURL>	
Source	<xsd:element name="InformationURL" type="InformationURL"/>	

Element Name

Namespace	http://impex-fp7.oeaw.ac.at	
Annotations	A language unit by which a person or thing is known.	
Diagram		
Type	xsd:string	
Properties	content:	simple
Used by	Complex Types	AccessURL, Element, InformationURL, InputField, InputParameter, InputPopulation, InputProcess, Parameter, Property
Source	<xsd:element name="Name" type="xsd:string">	

```
  <xsd:annotation>
    <xsd:documentation xml:lang="en">A language unit by which a person or thing is known.</
xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

Element URL

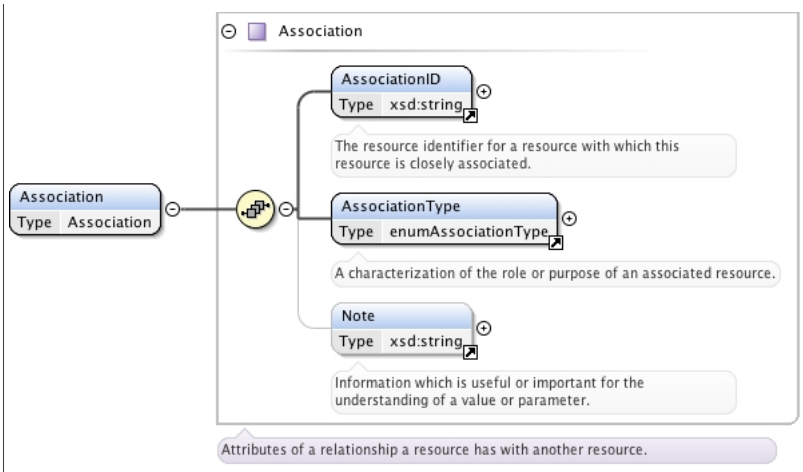
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Uniform Resource Locator (URL) is the global address of documents and other resources on the World Wide Web. The first part of the address indicates what protocol to use, and the second part specifies the IP address or the domain name where the resource is located followed by the pathname of the resource. A URL is specified in the form protocol://server.domain.name:port/pathname. Example protocols are HTTP or FTP, server domain name is the Internet name.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Types AccessURL, InformationURL, Source
Source	<xsd:element name="URL" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">Uniform Resource Locator (URL) is the global address of documents and other resources on the World Wide Web. The first part of the address indicates what protocol to use, and the second part specifies the IP address or the domain name where the resource is located followed by the pathname of the resource. A URL is specified in the form protocol://server.domain.name:port/pathname. Example protocols are HTTP or FTP, server domain name is the Internet name.</xsd:documentation> </xsd:annotation> </xsd:element>

Element Language

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The two character indicator of language selected from the ISO 630-1 codes for the representation of names of languages.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Types AccessURL, InformationURL
Source	<xsd:element name="Language" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">The two character indicator of language selected from the ISO 630-1 codes for the representation of names of languages.</xsd:documentation> </xsd:annotation> </xsd:element>

Element Association

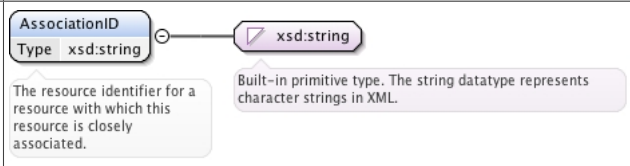
Namespace	http://impex-fp7.oeaw.ac.at

Diagram	
Type	Association
Properties	content: complex
Used by	Complex Type ResourceHeader
Model	AssociationID , AssociationType , Note{0,1}
Children	AssociationID, AssociationType, Note

Instance	`<Association xmlns="http://impex-fp7.oeaw.ac.at">`
	`  <AssociationID>{1,1}</AssociationID>`
	`  <AssociationType>{1,1}</AssociationType>`
	`  <Note>{0,1}</Note>`
	`</Association>`

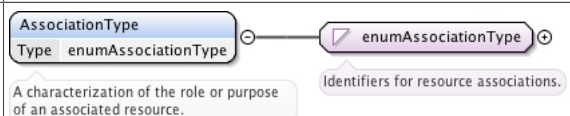
Source	`<xsd:element name="Association" type="Association"/>`

Element AssociationID

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The resource identifier for a resource with which this resource is closely associated.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Type Association

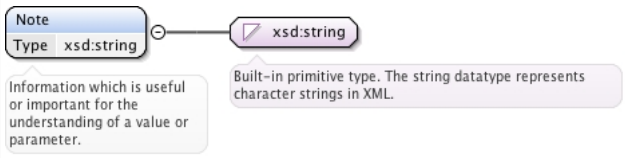
Source	`<xsd:element name="AssociationID" type="xsd:string">`
	`  <xsd:annotation>`
	`  <xsd:documentation xml:lang="en">The resource identifier for a resource with which this resource is closely associated.</xsd:documentation>`
	`  </xsd:annotation>`
	`</xsd:element>`

Element AssociationType

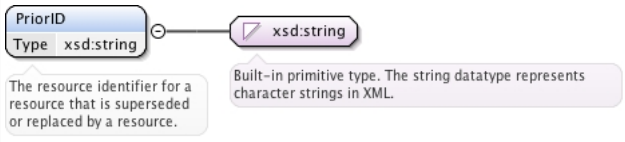
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A characterization of the role or purpose of an associated resource.
Diagram	
Type	enumAssociationType
Properties	content: simple

Facets	enumeration	ChildEventOf	A descendant or caused by another resource.
	enumeration	DerivedFrom	A transformed or altered version of a resource instance.
	enumeration	ObservedBy	Detected or originating from another resource.
	enumeration	Other	Not classified with more specific terms. The context of its usage may be described in related text.
	enumeration	PartOf	A portion of a larger resource.
	enumeration	RevisionOf	A modified version of a resource instance.
Used by	Complex Type	Association	
Source	<xsd:element name="AssociationType" type="enumAssociationType"> <xsd:annotation> <xsd:documentation xml:lang="en">A characterization of the role or purpose of an associated resource.</xsd:documentation> </xsd:annotation> </xsd:element>		

Element Note

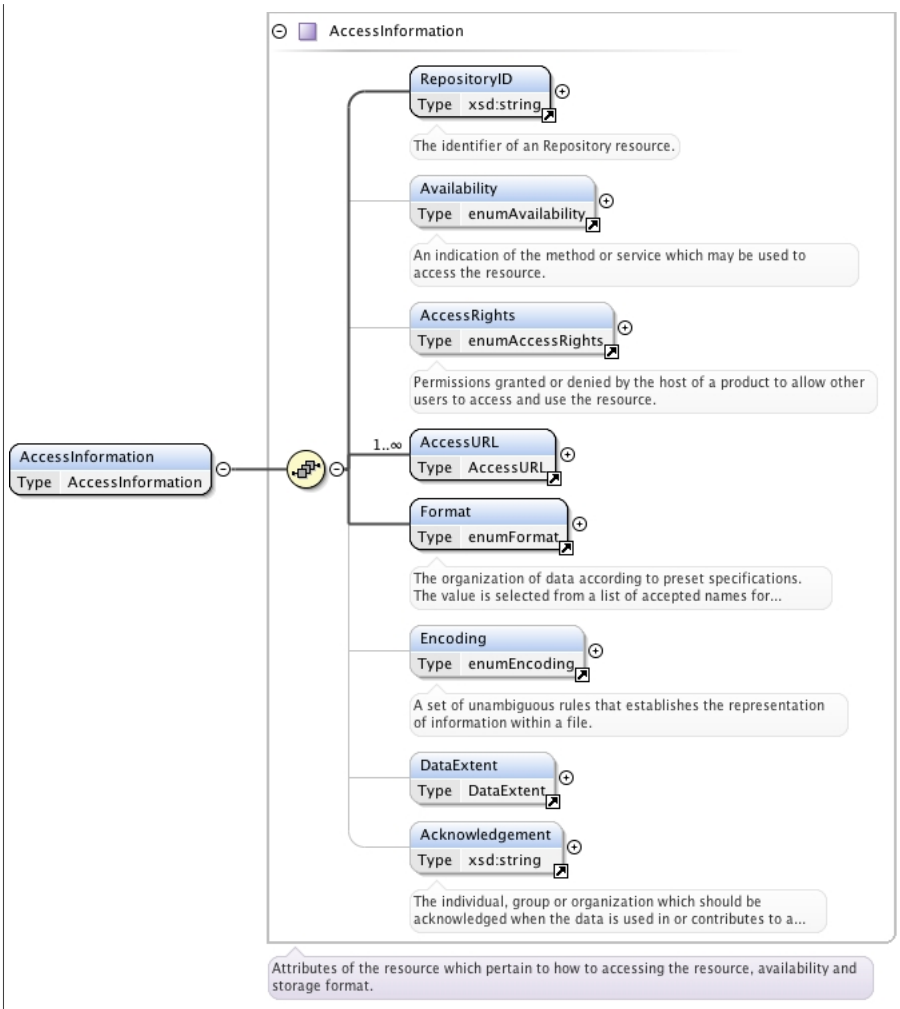
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Information which is useful or important for the understanding of a value or parameter.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Types: Association, ObservationExtent, OperatingSpan, Person, TimeSpan
Source	<xsd:element name="Note" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">Information which is useful or important for the understanding of a value or parameter.</xsd:documentation> </xsd:annotation> </xsd:element>

Element PriorID

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The resource identifier for a resource that is superseded or replaced by a resource.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Types: Granule, ResourceHeader
Source	<xsd:element name="PriorID" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">The resource identifier for a resource that is superseded or replaced by a resource.</xsd:documentation> </xsd:annotation> </xsd:element>

Element AccessInformation

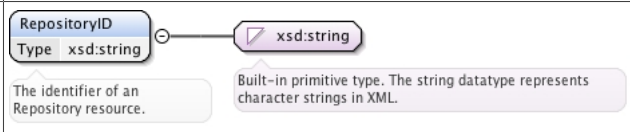
Namespace	http://impex-fp7.oeaw.ac.at

Diagram	
Type	AccessInformation
Properties	content: `complex`
Used by	Complex Types: Catalog, DisplayData, DisplayOutput, Document, NumericalData, NumericalOutput, SimulationRun
Model	RepositoryID , Availability{0,1} , AccessRights{0,1} , AccessURL+ , Format , Encoding{0,1} , DataExtent{0,1} , Acknowledgement{0,1}
Children	AccessRights, AccessURL, Acknowledgement, Availability, DataExtent, Encoding, Format, RepositoryID

Instance	`<AccessInformation xmlns="http://impex-fp7.oeaw.ac.at">`
	`  <RepositoryID>{1,1}</RepositoryID>`
	`  <Availability>{0,1}</Availability>`
	`  <AccessRights>{0,1}</AccessRights>`
	`  <AccessURL>{1,unbounded}</AccessURL>`
	`  <Format>{1,1}</Format>`
	`  <Encoding>{0,1}</Encoding>`
	`  <DataExtent>{0,1}</DataExtent>`
	`  <Acknowledgement>{0,1}</Acknowledgement>`
	`</AccessInformation>`

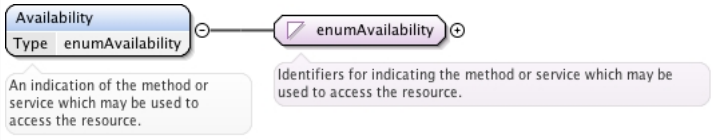
Source	`<xsd:element name="AccessInformation" type="AccessInformation"/>`

Element `RepositoryID`

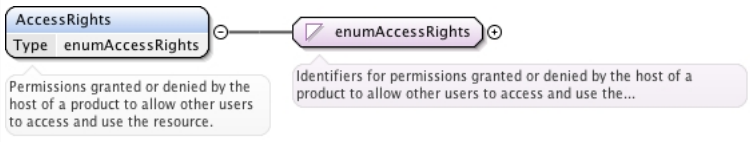
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	`The identifier of an Repository resource.`
Diagram	
Type	xsd:string

Properties	content:	simple
Used by	Complex Type	AccessInformation
Source	<xsd:element name="RepositoryID" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">The identifier of an Repository resource.</xsd:documentation> </xsd:annotation> </xsd:element>	

Element Availability

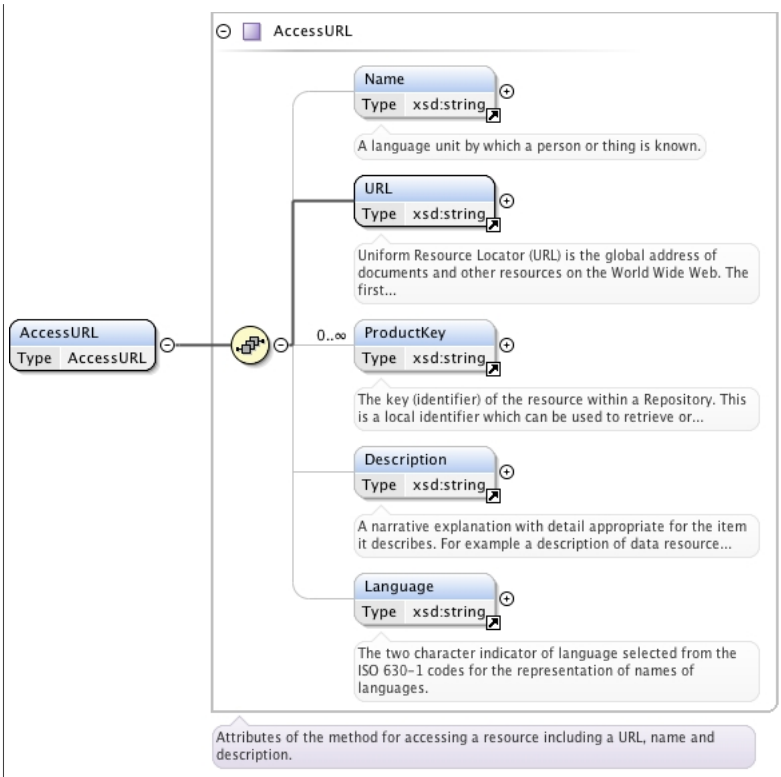
Namespace	http://impex-fp7.oeaw.ac.at		
Annotations	An indication of the method or service which may be used to access the resource.		
Diagram			
Type	enumAvailability		
Properties	content:	simple	
Facets	enumeration	Offline	Not directly accessible electronically. This includes resources which may to be moved to an on-line status in response to a given request.
	enumeration	Online	Directly accessible electronically.
Used by	Complex Type	AccessInformation	
Source	<xsd:element name="Availability" type="enumAvailability"> <xsd:annotation> <xsd:documentation xml:lang="en">An indication of the method or service which may be used to access the resource.</xsd:documentation> </xsd:annotation> </xsd:element>		

Element AccessRights

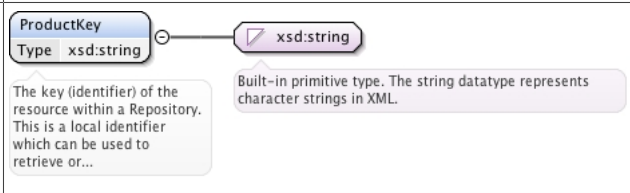
Namespace	http://impex-fp7.oeaw.ac.at		
Annotations	Permissions granted or denied by the host of a product to allow other users to access and use the resource.		
Diagram			
Type	enumAccessRights		
Properties	content:	simple	
Facets	enumeration	Open	Access is granted to everyone.
	enumeration	Restricted	Access to the product is regulated and requires some form of identification.
Used by	Complex Type	AccessInformation	
Source	<xsd:element name="AccessRights" type="enumAccessRights"> <xsd:annotation> <xsd:documentation xml:lang="en">Permissions granted or denied by the host of a product to allow other users to access and use the resource.</xsd:documentation> </xsd:annotation> </xsd:element>		

Element AccessURL

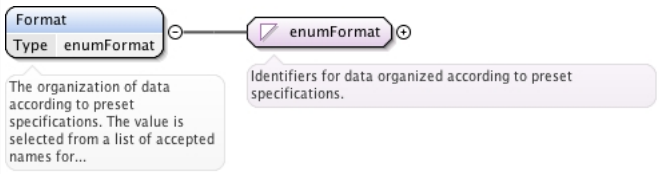
Namespace	http://impex-fp7.oeaw.ac.at

Diagram	
Type	AccessURL
Properties	content: complex
Used by	Complex Types AccessInformation, Registry, Repository, Service
Model	Name{0,1} , URL , ProductKey* , Description{0,1} , Language{0,1}
Children	Description, Language, Name, ProductKey, URL
Instance	<AccessURL xmlns="http://impex-fp7.oeaw.ac.at"> <Name>{0,1}</Name> <URL>{1,1}</URL> <ProductKey>{0,unbounded}</ProductKey> <Description>{0,1}</Description> <Language>{0,1}</Language> </AccessURL>
Source	<xsd:element name="AccessURL" type="AccessURL"/>

Element ProductKey

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The key (identifier) of the resource within a Repository. This is a local identifier which can be used to retrieve or locate the resource.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Type AccessURL
Source	<xsd:element name="ProductKey" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">The key (identifier) of the resource within a Repository. This is a local identifier which can be used to retrieve or locate the resource.</xsd:documentation> </xsd:annotation> </xsd:element>

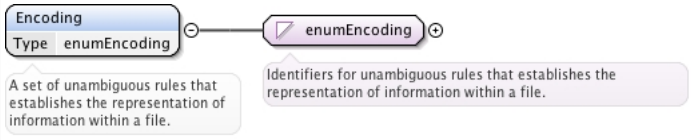
Element Format

Namespace	http://impex-fp7.oeaw.ac.at		
Annotations	The organization of data according to preset specifications. The value is selected from a list of accepted names for known, well documented formats.		
Diagram			
Type	enumFormat		
Properties	content:	simple	
Facets	enumeration	AVI	Audio Video Interleave (AVI) a digital format for movies that conforms to the Microsoft Windows Resource Interchange File Format (RIFF).
	enumeration	Binary	A direct representation of the bits which may be stored in memory on a computer.
	enumeration	CDF	Common Data Format (CDF). A binary storage format developed at Goddard Space Flight Center (GSFC).
	enumeration	CEF	Cluster Exchange Format (CEF) is a self-documenting ASCII format designed for the exchange of data. There are two versions of CEF which are not totally compatible.
	enumeration	CEF1	Cluster Exchange Format (CEF), version 1, is a self-documenting ASCII format designed for the exchange of data. The metadata contains information compatible with the ISTP recommendations for CDF.
	enumeration	CEF2	Cluster Exchange Format (CEF), version 2, is a self-documenting ASCII format designed for the exchange of data and introduced for Cluster Active Archive. Compared to version 1, the metadata description of vectors and tensors is different.
	enumeration	Excel	A Microsoft spreadsheet format used to hold a variety of data in tables which can include calculations.
	enumeration	FITS	Flexible Image Transport System (FITS) is a digital format primarily designed to store scientific data sets consisting of multi-dimensional arrays (1-D spectra, 2-D images or 3-D data cubes) and 2-dimensional tables containing rows and columns of data.
	enumeration	GIF	Graphic Interchange Format (GIF) first introduced in 1987 by CompuServe. GIF uses LZW compression and images are limited to 256 colours.
	enumeration	HDF	Hierarchical Data Format
	enumeration	HDF4	Hierarchical Data Format, Version 4
	enumeration	HDF5	Hierarchical Data Format, Version 5
	enumeration	HTML	A text file containing structured information represented in the HyperText Mark-up Language (HTML). See <http://www.w3.org/MarkUp/>
	enumeration	Hardcopy	A permanent reproduction, or copy in the form of a physical object, of any media suitable for direct use by a person.
	enumeration	Hardcopy.Film	An image recording medium on which usually a "negative" analog image is registered. A "positive" image can be recovered or reproduced from film, which is usually made of flexible materials for ease of storage and transportation.
	enumeration	Hardcopy.Microfiche	A sheet of microfilm on which many pages of

		material have been photographed; a magnification system is used to read the material.
enumeration	Hardcopy.Microfilm	Film rolls on which materials are photographed at greatly reduced size; a magnification system is used to read the material.
enumeration	Hardcopy.Photograph	An image (positive or negative) registered on a piece of photo-sensitive paper
enumeration	Hardcopy.PhotographicPlate	A rigid (typically glass) medium that functions like film. Its rigidity is for guarding against image distortion due to medium deformation (caused by heat and humidity). Photographic plates are often used for astronomical photography.
enumeration	Hardcopy.Print	A sheet of any written or printed material which may include notes or graphics. Multiple printed pages may be bound into a manuscript or book.
enumeration	IDFS	Instrument Data File Set (IDFS) is a set of files written in a prescribed format which contain data, timing data, and meta-data. IDFS was developed at Southwest Research Institute (SwRI).
enumeration	IDL	Interactive Data Language (IDL) save set. IDL is a proprietary format.
enumeration	JPEG	A binary format for still images defined by the Joint Photographic Experts Group
enumeration	MATLAB_4	MATLAB Workspace save set, version 4. MAT-files are double-precision, binary, MATLAB format files. MATLAB is a proprietary product of The MathWorks.
enumeration	MATLAB_6	MATLAB Workspace save set, version 6. MAT-files are double-precision, binary, MATLAB format files. MATLAB is a proprietary product of The MathWorks.
enumeration	MATLAB_7	MATLAB Workspace save set, version 7. MAT-files are double-precision, binary, MATLAB format files. Version 7 includes data compression and Unicode encoding. MATLAB is a proprietary product of The MathWorks.
enumeration	MPEG	A digital format for movies defined by the Motion Picture Experts Group
enumeration	NCAR	The National Center for Atmospheric Research (NCAR) format. A complete description of that standard is given in appendix C of the "Report on Establishment & Operation of the Incoherent-Scatter Data Base", dated August 23, 1984, obtainable from NCAR, P.O. Box 3000 Boulder, Colorado 80307-3000.
enumeration	NetCDF	Unidata Program Center's Network Common Data Form (NetCDF). A self-describing portable data format for array-oriented data access. See <http://my.unidata.ucar.edu/content/software/netcdf>
enumeration	PDF	A document expressed in the Portable Document Format (PDF) as defined by Adobe.
enumeration	PNG	A digital format for still images. Portable Network Graphics (PNG)
enumeration	Postscript	A page description programming language created by Adobe Systems Inc. that is a device-independent industry standard for representing text and graphics.
enumeration	QuickTime	A format for digital movies, as defined by Apple Computer. See <http://developer.apple.com/quicktime/>
enumeration	TIFF	A binary format for still pictures. Tagged Image Format File (TIFF). Originally developed by Aldus and now controlled by Adobe.
enumeration	Text	A sequence of characters which may have an imposed structure or organization.
enumeration	Text.ASCII	A sequence of characters that adheres to American

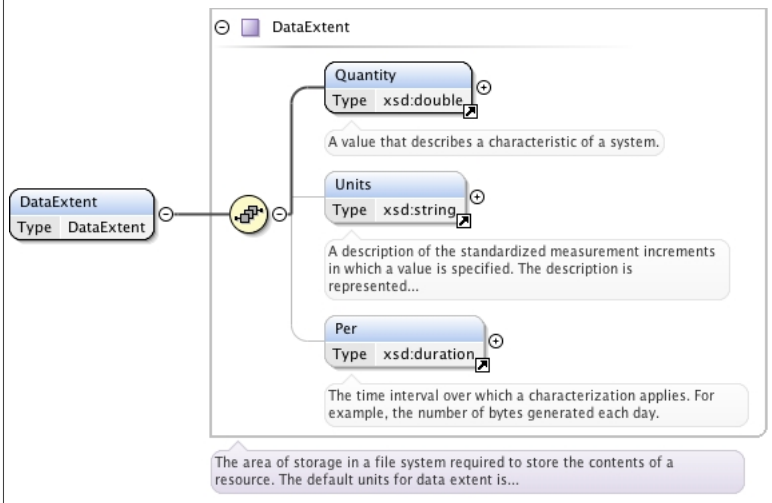
			Standard Code for Information Interchange (ASCII) which is an 7-bit character-coding scheme.
	enumeration	Text.Unicode	Text in multi-byte Unicode format.
	enumeration	UDF	Universal Data Format (UDF). The Optical Technology Storage Association's Universal Disk Format, based on ISO 13346. See <http://www.osta.org/specs/index.htm>
	enumeration	VOTable	A proposed IVOA standard designed as a flexible storage and exchange format for tabular data.
	enumeration	XML	eXtensible Mark-up Language (XML). A structured format for representing information. See <http://www.w3.org/XML/>
Used by	Complex Type	AccessInformation	
Source	<xsd:element name="Format" type="enumFormat"> <xsd:annotation> <xsd:documentation xml:lang="en">The organization of data according to preset specifications. The value is selected from a list of accepted names for known, well documented formats.</xsd:documentation> </xsd:annotation> </xsd:element>		

Element Encoding

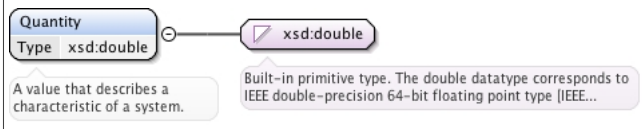
Namespace	http://impex-fp7.oeaw.ac.at		
Annotations	A set of unambiguous rules that establishes the representation of information within a file.		
Diagram			
Type	enumEncoding		
Properties	content:	simple	
Facets	enumeration	ASCII	A sequence of characters that adheres to American Standard Code for Information Interchange (ASCII) which is an 7-bit character-coding scheme.
	enumeration	BZIP2	An open standard algorithm by Julian Seward using Burrows-Wheeler block sorting and Huffman coding. See <http://www.bzip.org/>
	enumeration	Base64	A data encoding scheme whereby binary-encoded data is converted to printable ASCII characters. It is defined as a MIME content transfer encoding for use in Internet e-mail. The only characters used are the upper- and lower-case Roman alphabet characters (A-Z, a-z), the numerals (0-9), and the "+" and "/" symbols, with the "=" symbol as a special suffix (padding) code.
	enumeration	GZIP	An open standard algorithm distributed by GHU based on LZ77 and Huffman coding. See <http://www.gnu.org/software/gzip/gzip.html> or <http://www.gzip.org/>
	enumeration	None	A lack or absence of anything.
	enumeration	S3_BUCKET	A container of objects that comply with the Amazon Simple Storage Service (S3) specifications. A bucket has a unique, user-assigned key (name). A bucket can contain any number of objects with an aggregate size of 5 gigabytes. A bucket may be accompanied by up to 2 kilobytes of metadata.
	enumeration	TAR	A file format used to collate collections of files into one larger file, for distribution or archiving, while preserving file system information such as user and group permissions, dates, and directory structures. The format

			was standardized by POSIX.1-1988 and later POSIX.1-2001.
	enumeration	Unicode	Text in multi-byte Unicode format.
	enumeration	ZIP	An open standard for compression which is a variation of the LZW method and was originally used in the PKZIP utility.
Used by	Complex Type	AccessInformation	
Source	<xsd:element name="Encoding" type="enumEncoding"> <xsd:annotation> <xsd:documentation xml:lang="en">A set of unambiguous rules that establishes the representation of information within a file.</xsd:documentation> </xsd:annotation> </xsd:element>		

Element DataExtent

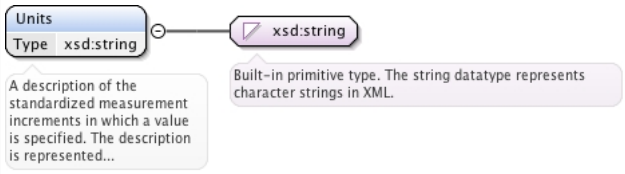
Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	DataExtent
Properties	content: complex
Used by	Complex Types AccessInformation, Source
Model	Quantity , Units{0,1} , Per{0,1}
Children	Per, Quantity, Units
Instance	<DataExtent xmlns="http://impex-fp7.oeaw.ac.at"> <Quantity>{1,1}</Quantity> <Units>{0,1}</Units> <Per>{0,1}</Per> </DataExtent>
Source	<xsd:element name="DataExtent" type="DataExtent"/>

Element Quantity

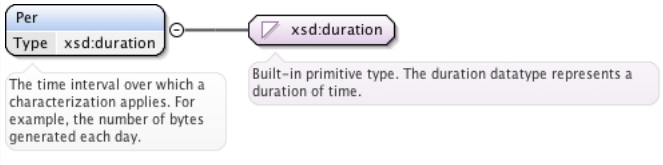
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A value that describes a characteristic of a system.
Diagram	
Type	xsd:double
Properties	content: simple
Used by	Complex Type DataExtent
Source	<xsd:element name="Quantity" type="xsd:double">

```
  <xsd:annotation>
    <xsd:documentation xml:lang="en">A value that describes a characteristic of a system.</
xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

Element Units

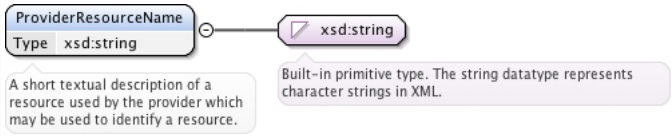
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A description of the standardized measurement increments in which a value is specified. The description is represented as a mathematical phrase. Units should be represented by widely accepted representation. For example, units should conform to the International System of Units (SI) which is maintained by BIPM (Bureau International des Poids et Mesures (see <http://www.bipm.fr/>) when appropriate or use tokens like "Re" to represent units of the Radius of the Earth. Within a phrase the circumflex (^) is used to indicate a power, a star (*) is used to indicate multiplication and a slash (/) division. When symbols are not separated by a mathematical operator, multiplication is assumed. Symbols for base units can be found at: <http://www.bipm.fr/en/si/si_brochure/chapter2/2-1/#symbols> and those for common derived units can be found at: <http://www.bipm.fr/en/si/derived_units/2-2-2.html>
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Types AzimuthalAngleRange, DataExtent, Element, EnergyRange, FrequencyRange, InputField, InputProcess, Parameter, PolarAngleRange, Property, SimulationDomain, SpatialDescription, WavelengthRange
Source	<xsd:element name="Units" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">A description of the standardized measurement increments in which a value is specified. The description is represented as a mathematical phrase. Units should be represented by widely accepted representation. For example, units should conform to the International System of Units (SI) which is maintained by BIPM (Bureau International des Poids et Mesures (see <http://www.bipm.fr/>) when appropriate or use tokens like "Re" to represent units of the Radius of the Earth. Within a phrase the circumflex (^) is used to indicate a power, a star (*) is used to indicate multiplication and a slash (/) division. When symbols are not separated by a mathematical operator, multiplication is assumed. Symbols for base units can be found at: <http://www.bipm.fr/en/si/si_brochure/chapter2/2-1/#symbols> and those for common derived units can be found at: <http://www.bipm.fr/en/si/derived_units/2-2-2.html></xsd:documentation> </xsd:annotation> </xsd:element>

Element Per

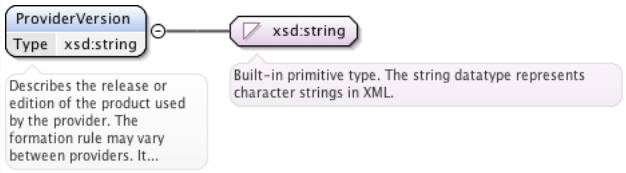
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The time interval over which a characterization applies. For example, the number of bytes generated each day.
Diagram	
Type	xsd:duration
Properties	content: simple
Used by	Complex Type DataExtent

Source	<xsd:element name="Per" type="xsd:duration"> <xsd:annotation> <xsd:documentation xml:lang="en">The time interval over which a characterization applies. For example, the number of bytes generated each day.</xsd:documentation> </xsd:annotation> </xsd:element>

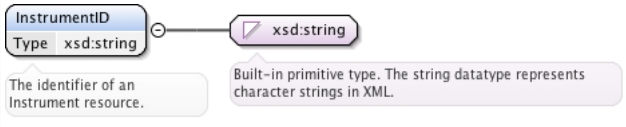
Element ProviderResourceName

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A short textual description of a resource used by the provider which may be used to identify a resource.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Types: Catalog, DisplayData, DisplayOutput, NumericalData, NumericalOutput, SimulationRun
Source	<xsd:element name="ProviderResourceName" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">A short textual description of a resource used by the provider which may be used to identify a resource.</xsd:documentation> </xsd:annotation> </xsd:element>

Element ProviderVersion

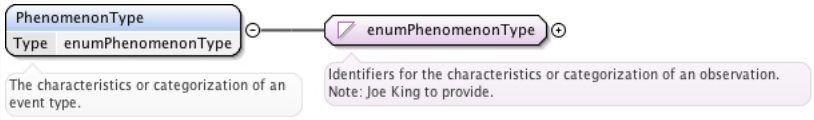
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Describes the release or edition of the product used by the provider. The formation rule may vary between providers. It is intended to aid in queries to the provider regarding the product.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Types: Catalog, DisplayData, DisplayOutput, NumericalData, NumericalOutput, SimulationRun
Source	<xsd:element name="ProviderVersion" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">Describes the release or edition of the product used by the provider. The formation rule may vary between providers. It is intended to aid in queries to the provider regarding the product.</xsd:documentation> </xsd:annotation> </xsd:element>

Element InstrumentID

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The identifier of an Instrument resource.
Diagram	

Type	xsd:string	
Properties	content:	simple
Used by	Complex Types	Catalog, DisplayData, NumericalData
Source	<xsd:element name="InstrumentID" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">The identifier of an Instrument resource.</xsd:documentation> </xsd:annotation> </xsd:element>	

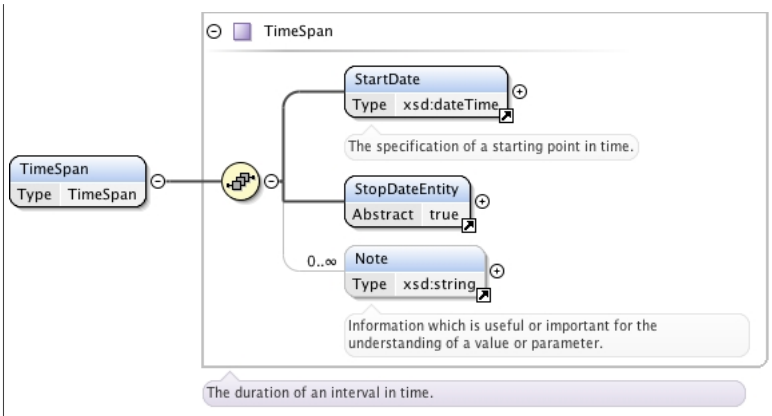
Element PhenomenonType

Namespace	http://impex-fp7.oeaw.ac.at		
Annotations	The characteristics or categorization of an event type.		
Diagram			
Type	enumPhenomenonType		
Properties	content:	simple	
Facets	enumeration	ActiveRegion	A localized, transient volume of the solar atmosphere in which PLAGEs, SUNSPOTS, FACULAe, FLAREs, etc. may be observed.
	enumeration	Aurora	An atmospheric phenomenon consisting of bands of light caused by charged solar particles following the earth's magnetic lines of force.
	enumeration	BowShockCrossing	A crossing of the boundary between the undisturbed (except for foreshock effects) solar wind and the shocked, decelerated solar wind of the magnetosheath.
	enumeration	CoronalHole	An extended region of the corona, exceptionally low in density and associated with unipolar photospheric regions. A coronal hole can be an "open" magnetic field in the corona and (perhaps) inner heliosphere which has a faster than average outflow (wind); A region of lower than "quiet" ion and electron density in the corona; or a region of lower peak electron temperature in the corona than in the "quiet" corona.
	enumeration	CoronalMassEjection	A solar event (CME) that involves a burst of plasma ejected into the interplanetary medium. CME's may be observed remotely relatively near the sun or in situ in the interplanetary medium. The latter type of observations are often referred to as Interplanetary CME's (ICME's).
	enumeration	EITWave	A wave in the corona of the Sun which produce shock waves on the Sun's chromosphere (Moreton Waves). EIT Waves are produced by large solar flare and expand outward at about 1,000 km/s. It usually appears as a slowly moving diffuse arc of brightening in H-alpha, and may travel for several hundred thousand km.
	enumeration	EnergeticSolarParticleEvent	An enhancement of interplanetary fluxes of energetic ions accelerated by interplanetary shocks and/or solar flares.
	enumeration	ForbushDecrease	A rapid decrease in the observed galactic cosmic ray intensity following the passage of an outwardly convecting interplanetary magnetic field disturbance, such as those associated with large CME's, that sweep some galactic cosmic rays away from Earth.
	enumeration	GeomagneticStorm	A magnetospheric disturbance typically defined by variations in the horizontal component of the Earth's surface magnetic field. The variation typically starts with a field enhancement

			associated with a solar wind pressure pulse and continues with a field depression associated with an enhancement of the diamagnetic magnetospheric ring current.
	enumeration	InterplanetaryShock	A shock propagating generally anti-sunward through the slower solar wind, often seen in front of CME-associated plasma clouds.
	enumeration	MagneticCloud	A transient event observed in the solar wind characterized as a region of enhanced magnetic field strength, smooth rotation of the magnetic field vector and low proton density and temperature.
	enumeration	MagnetopauseCrossing	A crossing of the interface between the shocked solar wind in the magnetosheath and the magnetic field and plasma in the magnetosphere.
	enumeration	RadioBurst	Emissions of the sun in radio wavelengths from centimeters to dekameters, under both quiet and disturbed conditions. Radio Bursts can be "Type I" consisting of many short, narrow-band bursts in the metric range (300 - 50 MHz).; "Type II" consisting of narrow-band emission that begins in the meter range (300 MHz) and sweeps slowly (tens of minutes) toward dekameter wavelengths (10 MHz).; "Type III" consisting of narrow-band bursts that sweep rapidly (seconds) from decimeter to dekameter wavelengths (500 - 0.5 MHz); and "Type IV" consisting of a smooth continuum of broad-band bursts primarily in the meter range (300 - 30 MHz).
	enumeration	SectorBoundaryCrossing	A sector boundary crossing is a transit by a spacecraft across the heliospheric current sheet separating the dominantly outward (away-from-the-sun) interplanetary magnetic field of one hemisphere of the heliosphere from the dominantly inward (toward-the-sun) polarity of the other hemisphere. Such crossings have multi-day intervals of opposite IMF dominant polarities on either side.
	enumeration	SolarFlare	An explosive event in the Sun's atmosphere which produces electromagnetic radiation across the electromagnetic spectrum at multiple wavelengths from long-wave radio to the shortest wavelength gamma rays.
	enumeration	SolarWindExtreme	Intervals of unusually large or small values of solar wind attributes such as flow speed and ion density.
	enumeration	StreamInteractionRegion	The region (SIR) where two solar wind streams, typically having differing characteristics and solar sources, abut up against (and possibly partially interpenetrate) each other.
	enumeration	Substorm	A process by which plasma in the magnetotail becomes energized at a fast rate.
Used by	Complex Types	Annotation, Catalog	
Source	<xsd:element name="PhenomenonType" type="enumPhenomenonType"> <xsd:annotation> <xsd:documentation xml:lang="en">The characteristics or categorization of an event type.</xsd:documentation> </xsd:annotation> </xsd:element>		

Element TimeSpan

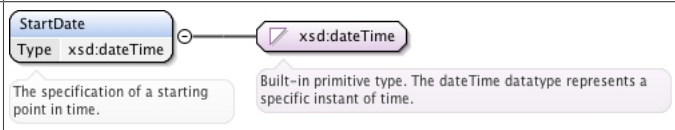
Namespace	http://impex-fp7.oeaw.ac.at

Diagram	
Type	TimeSpan
Properties	content: complex
Used by	Complex Types: Annotation, Catalog, TemporalDescription
Model	StartDate , StopDateEntity , Note*
Children	Note, StartDate, StopDateEntity

Instance	`<TimeSpan xmlns="http://impex-fp7.oeaw.ac.at">`
	`  <StartDate>{1,1}</StartDate>`
	`  <StopDateEntity>{1,1}</StopDateEntity>`
	`  <Note>{0,unbounded}</Note>`
	`</TimeSpan>`

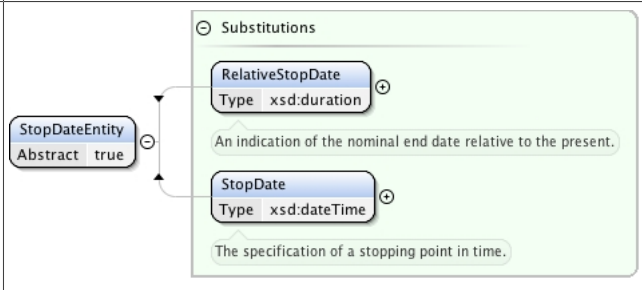
Source	`<xsd:element name="TimeSpan" type="TimeSpan"/>`

Element StartDate

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The specification of a starting point in time.
Diagram	
Type	xsd:dateTime
Properties	content: simple
Used by	Complex Types: Granule, OperatingSpan, TimeSpan

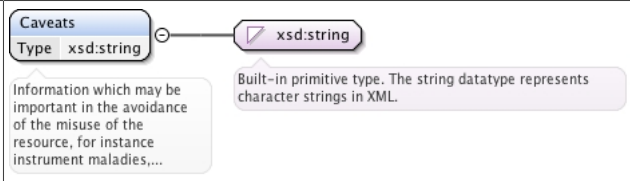
Source	`<xsd:element name="StartDate" type="xsd:dateTime">`
	`  <xsd:annotation>`
	`  <xsd:documentation xml:lang="en">The specification of a starting point in time.</xsd:documentation>`
	`  </xsd:annotation>`
	`</xsd:element>`

Element StopDateEntity

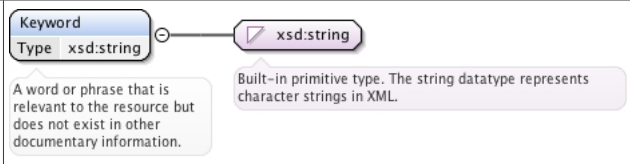
Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Properties	abstract: true
Substitution Group	• RelativeStopDate

	• StopDate
Used by	Complex Type TimeSpan
Source	`<xsd:element name="StopDateEntity" abstract="true"/>`

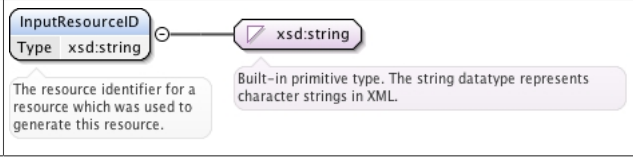
Element Caveats

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Information which may be important in the avoidance of the misuse of the resource, for instance instrument maladies, corruption or contamination.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Types Catalog, DisplayData, DisplayOutput, ElementBoundary, InputField, InputParameter, InputPopulation, InputProcess, Instrument, ModelVersion, NumericalData, NumericalOutput, Parameter, Property, RegionParameter, SimulationDomain, SimulationRun, SimulationTime
Source	`<xsd:element name="Caveats" type="xsd:string"><xsd:annotation><xsd:documentation xml:lang="en">Information which may be important in the avoidance of the misuse of the resource, for instance instrument maladies, corruption or contamination.</xsd:documentation></xsd:annotation></xsd:element>`

Element Keyword

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A word or phrase that is relevant to the resource but does not exist in other documentary information.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Types Catalog, DisplayData, DisplayOutput, Document, NumericalData, NumericalOutput, SimulationRun
Source	`<xsd:element name="Keyword" type="xsd:string"><xsd:annotation><xsd:documentation xml:lang="en">A word or phrase that is relevant to the resource but does not exist in other documentary information.</xsd:documentation></xsd:annotation></xsd:element>`

Element InputResourceID

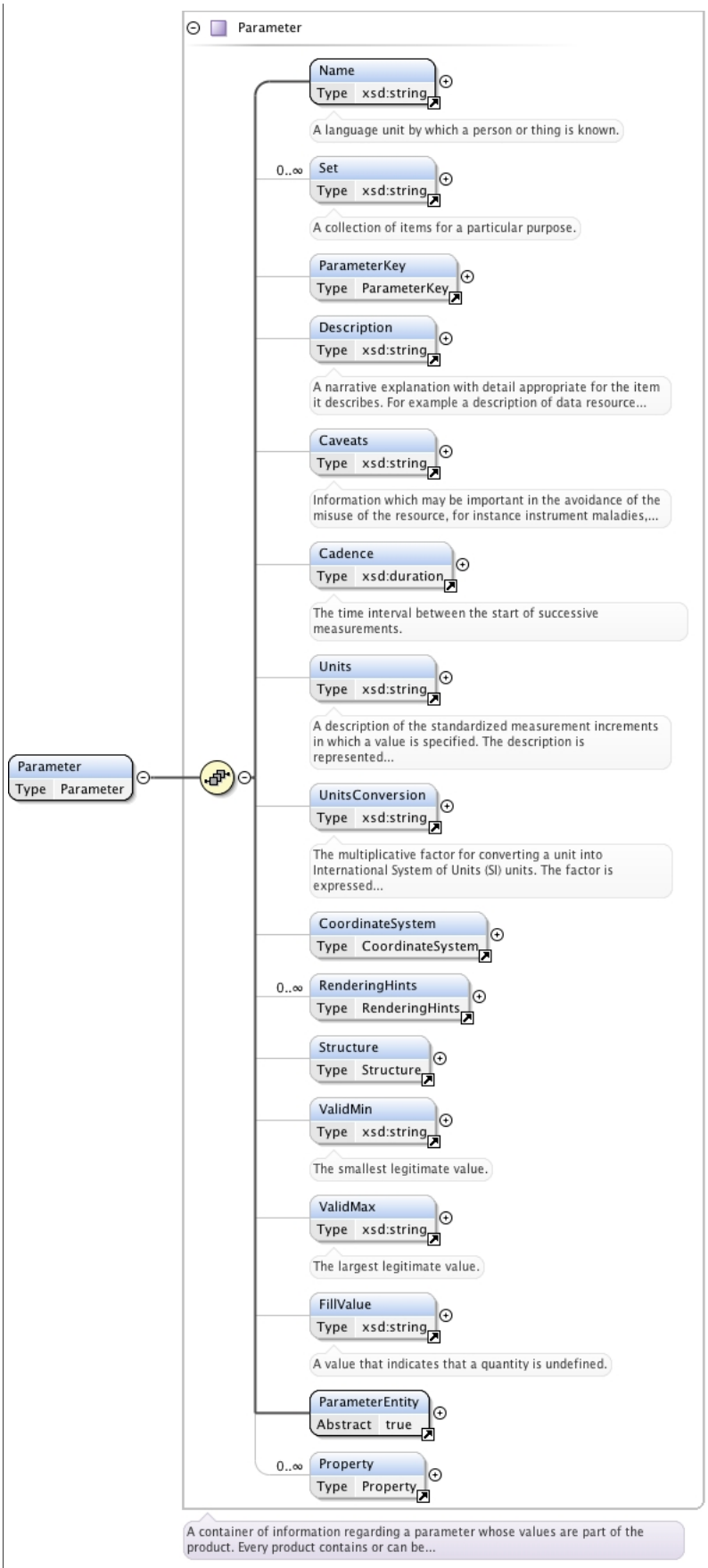
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The resource identifier for a resource which was used to generate this resource.
Diagram	

Type	xsd:string
Properties	content: simple
Used by	Complex Types: Catalog, DisplayData, DisplayOutput, Document, NumericalData, NumericalOutput, SimulationRun

Source	`<xsd:element name="InputResourceID" type="xsd:string">`
	`  <xsd:annotation>`
	`  <xsd:documentation xml:lang="en">The resource identifier for a resource which was used to generate this resource.</xsd:documentation>`
	`  </xsd:annotation>`
	`</xsd:element>`

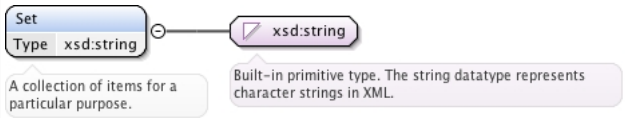
Element `Parameter`

Namespace	http://impex-fp7.oeaw.ac.at

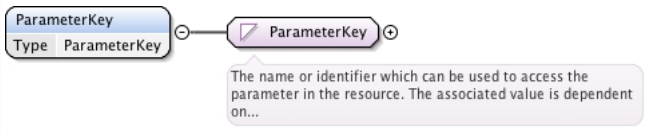
Diagram	
Type	Parameter
Properties	content: complex

Used by	Complex Types Catalog, DisplayData, DisplayOutput, NumericalData, NumericalOutput, OutputParameters
Model	Name , Set* , ParameterKey{0,1} , Description{0,1} , Caveats{0,1} , Cadence{0,1} , Units{0,1} , UnitsConversion{0,1} , CoordinateSystem{0,1} , RenderingHints* , Structure{0,1} , ValidMin{0,1} , ValidMax{0,1} , FillValue{0,1} , ParameterEntity , Property*
Children	Cadence, Caveats, CoordinateSystem, Description, FillValue, Name, ParameterEntity, ParameterKey, Property, RenderingHints, Set, Structure, Units, UnitsConversion, ValidMax, ValidMin
Instance	<Parameter xmlns="http://impex-fp7.oeaw.ac.at"> <Name>{1,1}</Name> <Set>{0,unbounded}</Set> <ParameterKey>{0,1}</ParameterKey> <Description>{0,1}</Description> <Caveats>{0,1}</Caveats> <Cadence>{0,1}</Cadence> <Units>{0,1}</Units> <UnitsConversion>{0,1}</UnitsConversion> <CoordinateSystem>{0,1}</CoordinateSystem> <RenderingHints>{0,unbounded}</RenderingHints> <Structure>{0,1}</Structure> <ValidMin>{0,1}</ValidMin> <ValidMax>{0,1}</ValidMax> <FillValue>{0,1}</FillValue> <ParameterEntity>{1,1}</ParameterEntity> <Property>{0,unbounded}</Property> </Parameter>
Source	<xsd:element name="Parameter" type="Parameter"/>

Element Set

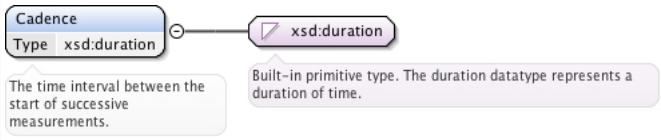
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A collection of items for a particular purpose.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Types InputField, InputPopulation, InputProcess, Parameter
Source	<xsd:element name="Set" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">A collection of items for a particular purpose.</ xsd:documentation> </xsd:annotation> </xsd:element>

Element ParameterKey

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	ParameterKey
Properties	content: simple
Used by	Complex Types Element, InputField, InputPopulation, InputProcess, Parameter
Source	<xsd:element name="ParameterKey" type="ParameterKey"/>

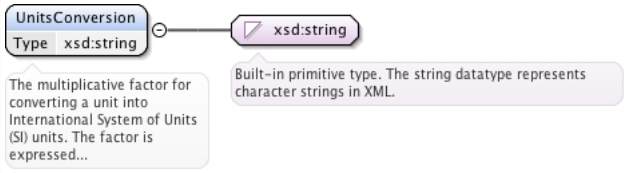
Element Cadence

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The time interval between the start of successive measurements.

Diagram	
Type	xsd:duration
Properties	content: simple
Used by	Complex Types Parameter, TemporalDescription

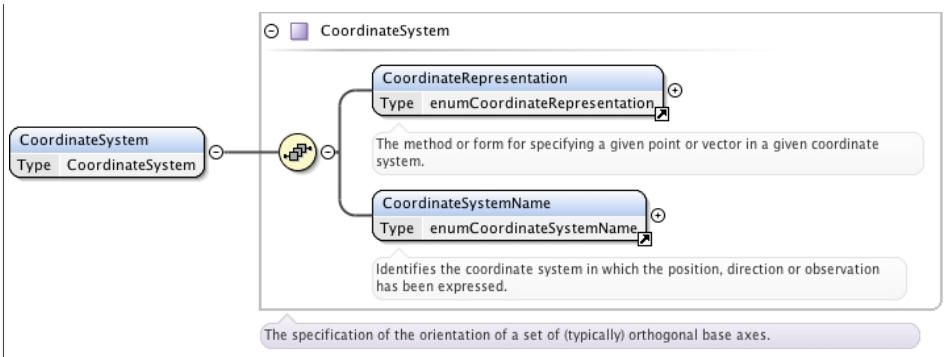
Source	`<xsd:element name="Cadence" type="xsd:duration">`
	`  <xsd:annotation>`
	`  <xsd:documentation xml:lang="en">The time interval between the start of successive measurements.</xsd:documentation>`
	`  </xsd:annotation>`
	`</xsd:element>`

Element UnitsConversion

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The multiplicative factor for converting a unit into International System of Units (SI) units. The factor is expressed in the form "number > x", where "number" is a numerical value and "x" is the appropriate SI units. The basic SI units are Enumerated: m (meter), N (newton), kg (kilogram), Pa (pascal), s (second), Hz (hertz), A (ampere), V (volt), K (kelvin), W (watt), rad (radian), J (joule), sr (steradian), C (coulomb), T (tesla), ohm (ohm), mho (mho or seimens), H (henry), and F (farad). Two useful units which are not SI units are: degree (angle), and unitless (no units). An example is: "1.0E-9>T" which converts the units, presumable nT, to Tesla. Another example is: "1.0e+3>m/s" which converts a velocity expressed in kilometers per second to meters per second.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Types Element, InputField, InputProcess, Parameter, Property, SimulationDomain, SpatialDescription
Source	`<xsd:element name="UnitsConversion" type="xsd:string">` `  <xsd:annotation>` ` <xsd:documentation xml:lang="en">The multiplicative factor for converting a unit into International System of Units (SI) units. The factor is expressed in the form "number > x", where "number" is a numerical value and "x" is the appropriate SI units. The basic SI units are Enumerated: m (meter), N (newton), kg (kilogram), Pa (pascal), s (second), Hz (hertz), A (ampere), V (volt), K (kelvin), W (watt), rad (radian), J (joule), sr (steradian), C (coulomb), T (tesla), ohm (ohm), mho (mho or seimens), H (henry), and F (farad). Two useful units which are not SI units are: degree (angle), and unitless (no units). An example is: "1.0E-9>T" which converts the units, presumable nT, to Tesla. Another example is: "1.0e+3>m/s" which converts a velocity expressed in kilometers per second to meters per second.</xsd:documentation>` ` </xsd:annotation>` `</xsd:element>`

Element CoordinateSystem

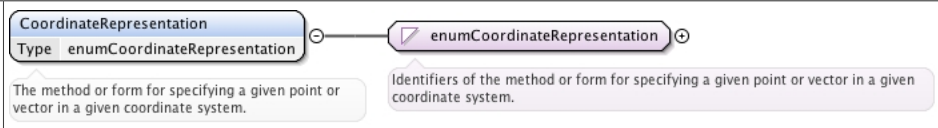
Namespace	http://impex-fp7.oeaw.ac.at

Diagram	
Type	CoordinateSystem
Properties	content: complex
Used by	Complex Types: InputField, Parameter, SimulationDomain, SpatialDescription
Model	CoordinateRepresentation , CoordinateSystemName
Children	CoordinateRepresentation, CoordinateSystemName

Instance	`<CoordinateSystem xmlns="http://impex-fp7.oeaw.ac.at">`
	`  <CoordinateRepresentation>{1,1}</CoordinateRepresentation>`
	`  <CoordinateSystemName>{1,1}</CoordinateSystemName>`
	`</CoordinateSystem>`

Source	`<xsd:element name="CoordinateSystem" type="CoordinateSystem"/>`

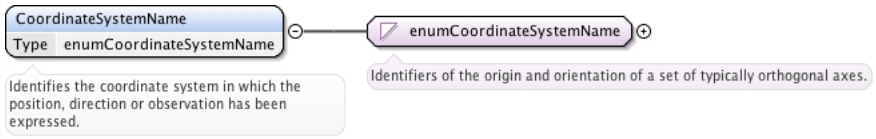
Element CoordinateRepresentation

Namespace	http://impex-fp7.oeaw.ac.at		
Annotations	The method or form for specifying a given point or vector in a given coordinate system.		
Diagram			
Type	enumCoordinateRepresentation		
Properties	content:	simple	
Facets	enumeration	Cartesian	A representation in which a position vector or a measured vector (e.g., field or flow) is specified by its components along the base axes of the coordinate system.
	enumeration	Cylindrical	A coordinate representation of a position vector or measured vector (field or flow) by its k-component, the magnitude of its projection into the i-j plane, and the azimuthal angle of the i-j plane projection.
	enumeration	Spherical	A coordinate representation of a position vector or of a measured vector by its magnitude and two direction angles. The angles are relative to the base axes of the coordinate system used. Typically the angles are phi [azimuth angle, =arctan (j/i)] and theta, where theta may be a polar angle, arctan {[SQRT(i^2+j^2)]/k}, or an elevation angle, arctan [k/SQRT (i^2+j^2)].
Used by	Complex Type	CoordinateSystem	

Source	`<xsd:element name="CoordinateRepresentation" type="enumCoordinateRepresentation">`
	`  <xsd:annotation>`
	`  <xsd:documentation xml:lang="en">The method or form for specifying a given point or vector in a given coordinate system.</xsd:documentation>`
	`  </xsd:annotation>`
	`</xsd:element>`		

Element CoordinateSystemName

Namespace	http://impex-fp7.oeaw.ac.at

Annotations	Identifies the coordinate system in which the position, direction or observation has been expressed.		
Diagram			
Type	enumCoordinateSystemName		
Properties	content:	simple	
Facets	enumeration	CGM	Corrected Geomagnetic - A coordinate system from a spatial point with GEO radial distance and geomagnetic latitude and longitude, follow the epoch-appropriate IGRF/DGRF model field vector through to the point where the field line crosses the geomagnetic dipole equatorial plane. Then trace the dipole magnetic field vector Earthward from that point on the equatorial plane, in the same hemisphere as the original point, until the initial radial distance is reached. Designate the dipole latitude and longitude at that point as the CGM latitude and longitude of the original point. See <http://nssdc.gsfc.nasa.gov/space/cgm/cgmm_des.html>
	enumeration	Carrington	A coordinate system which is centered at the Sun and is "fixed" with respect to the synodic rotation rate; the mean synodic value is about 27.2753 days. The Astronomical Almanac gives a value for Carrington longitude of 349.03 degrees at 0000 UT on 1 January 1995.
	enumeration	CSO	A generic body-Centered Solar Orbital (CSO) frame related to comets and asteroids. The frame is defined as a two-vector style dynamic frame as follows: The position of the sun relative to the body is the primary vector: the X axis points from the body to the sun. The inertially referenced velocity of the sun relative to the body is the secondary vector: the Y axis is the component of this velocity vector orthogonal to the X axis. The Z axis is X cross Y, completing the right-handed reference frame. All vectors are geometric: no aberration corrections are used.
	enumeration	DM	Dipole Meridian - A coordinate system centered at the observation point. Z axis is parallel to the Earth's dipole axis, positive northward. X is in the plane defined by Z and the line linking the observation point with the Earth's center. Y is positive eastward. See <http://cdpp.cnes.fr/00428.pdf>
	enumeration	GEI	Geocentric Equatorial Inertial - A coordinate system where the Z axis is along Earth's spin vector, positive northward. X axis points towards the first point of Aries (from the Earth towards the Sun at the vernal equinox). See Russell, 1971
	enumeration	GEO	Geographic - geocentric corotating - A coordinate system where the Z axis is along Earth's spin vector, positive northward. X axis lies in Greenwich meridian, positive towards Greenwich. See Russell, 1971.
	enumeration	GPHIO	In this Cartesian coordinate system, X is along the flow direction, Y is along the Ganymede–Jupiter vector, and Z is along the spin axis. These coordinates are analogous to the earth-centered GSE coordinates that relate to the direction of flow of the solar wind onto Earth’s environment.

enumeration	GSE	Geocentric Solar Ecliptic - A coordinate system where the X axis is from Earth to Sun. Z axis is normal to the ecliptic, positive northward. See Russell, 1971.
enumeration	GSEQ	Geocentric Solar Equatorial - A coordinate system where the X axis is from Earth to Sun. Y axis is parallel to solar equatorial plane. Z axis is positive northward. See Russell, 1971
enumeration	GSM	Geocentric Solar Magnetospheric - A coordinate system where the X axis is from Earth to Sun, Z axis is northward in a plane containing the X axis and the geomagnetic dipole axis. See Russell, 1971
enumeration	HAE	Heliocentric Aries Ecliptic - A coordinate system where the Z axis is normal to the ecliptic plane, positive northward. X axis is positive towards the first point of Aries (from Earth to Sun at vernal equinox). Same as SE below. See Hapgood, 1992.
enumeration	HCC	Heliocentric Cartesian - A 3-D orthonormal coordinate system that is primarily intended to specify with two dimensions a point on the solar disk. The Z axis points toward the observer. The Y axis lies in the plane defined by the solar spin vector and the Z axis, positive northward. The X axis is perpendicular to the Y and Z axes, positive toward solar west. Standard representation for this system is via the point's x and y values, expressed either as physical distances or as fractions of the solar disk radius.
enumeration	HCI	Heliographic Carrington Inertial.
enumeration	HCR	Heliocentric Radial - A 3-D orthonormal coordinate system that is primarily intended to specify with two dimensions a point on the solar disk. The Z axis points toward the observer. The Y axis lies in the plane defined by the solar spin vector and the Z axis, positive northward. The X axis is perpendicular to the Y and Z axes, positive toward solar west. Standard representation for this system is via the point's distance rho from the Z axis [Rho = SQRT(x**2 + y**2)] and its phase angle psi measured counterclockwise from the +Y axis [psi = arctan (-y/x)]
enumeration	HEE	Heliocentric Earth Ecliptic - A coordinate system where the Z axis is normal to the ecliptic plane, positive northward. X axis points from Sun to Earth. See Hapgood, 1992
enumeration	HEEQ	Heliocentric Earth Equatorial - A coordinate system where the Z axis is normal to the solar equatorial plane, positive northward. X axis is generally Earthward in the plane defined by the Z axis and the Sun-Earth direction. See Hapgood, 1992.
enumeration	HG	Heliographic - A heliocentric rotating coordinate system where the Z axis is normal to the solar equatorial plane, positive northward. X, Y axes rotate with a 25.38 day period. The zero longitude (X axis) is defined as the longitude that passed through the ascending node of the solar equator on the ecliptic plane on 1 January, 1854 at 12 UT. See <http://nssdc.gsfc.nasa.gov/space/helios/coor_des.html>
enumeration	HGI	Heliographic Inertial - A heliocentric coordinate system where the Z axis is normal to the solar equatorial plane, positive northward. X axis is along the intersection line between solar equatorial and ecliptic planes. The X axis was positive at SE longitude of 74.367 deg on Jan 1, 1900. (See SE below.) See <http://nssdc.gsfc.nasa.gov/space/helios/coor_des.html>
enumeration	HPC	Helioprojective Cartesian = A 3-D orthonormal (left-handed) coordinate system that is primarily

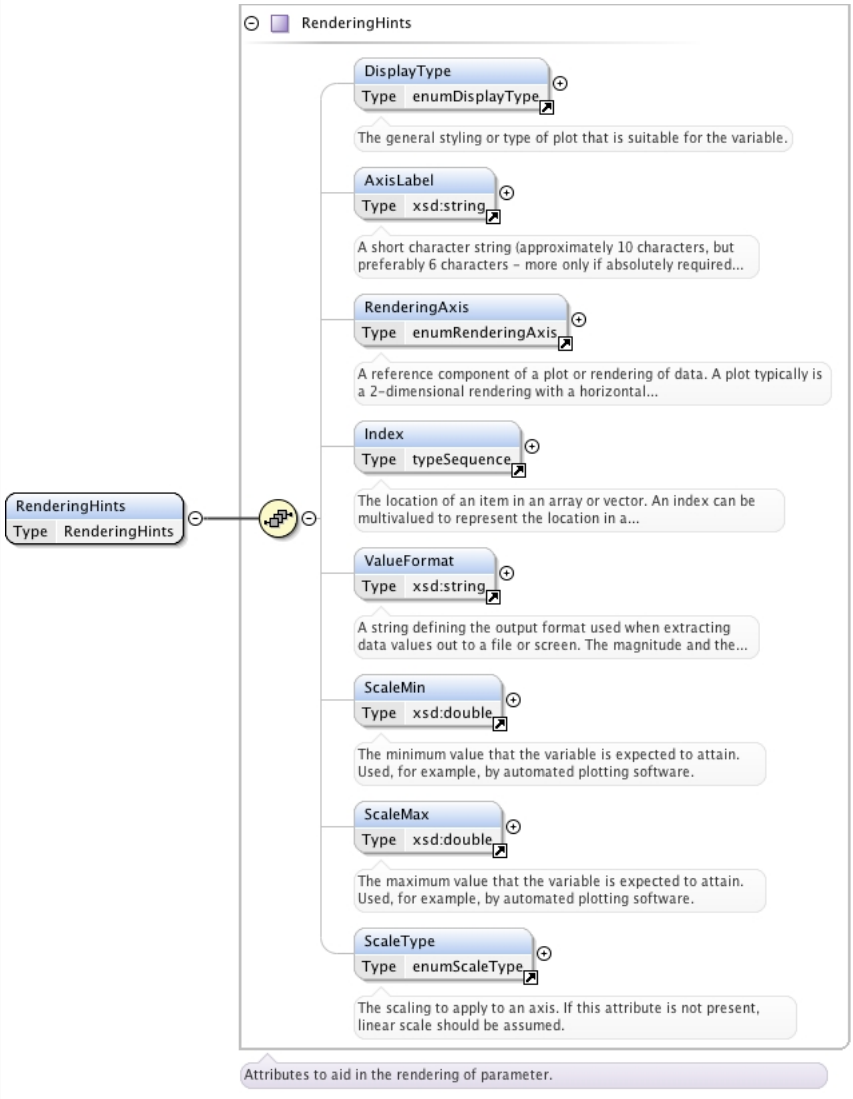
		intended to specify with two dimensions a point on the solar disk. The Z axis points from the observer to the center of the solar disk. The Y axis lies in the plane defined by the solar spin vector and the Z axis, positive northward. The X axis is perpendicular to the Y and Z axes, positive toward solar west. Given as the distance between the observer and the center of the solar disk, the standard representation of an (x,y) point on the solar disk is via the point's longitude angle [arctan (x/d)] and latitude angle [arctan y/d].
enumeration	HPR	Helioprojective Radial - A 3-D orthonormal (left-handed) coordinate system that is primarily intended to specify with two dimensions a point on the solar disk. The Z axis points from the observer to the center of the solar disk. The Y axis lies in the plane defined by the solar spin vector and the Z axis, positive northward. The X axis is perpendicular to the Y and Z axes, positive toward solar west. Given as the distance between the observer and the center of the solar disk, the standard representation for this system of an (x,y) point on the solar disk is via the point's latitude angle theta {= arctan [SQRT(x**2 + y**2)]/d]} or equivalent declination parameter delta (= theta - 90 deg), and its phase angle psi as measured counter- clockwise from the +Y axis [psi = arctan (-y/x)].
enumeration	HSM	TBD
enumeration	J2000	An astronomical coordinate system which uses the mean equator and equinox of Julian date 2451545.0 TT (Terrestrial Time), or January 1, 2000, noon TT. (aka J2000) to define a celestial reference frame.
enumeration	JSM	Jovian Solar Magnetospheric - A coordinate system where the X axis is from Jupiter to Sun, Z axis is northward in a plane containing the X axis and the Jovian dipole axis.
enumeration	JSO	Coordinate Sytem Related to Jupiter Jovian Solar Orbital (X anti-sunward, Y along the orbital velocity direction)
enumeration	KSM	Kronian Solar Magnetospheric - A coordinate system where the X axis is from Saturn to Sun, Z axis is northward in a plane containing the X axis and the Kronian dipole axis.
enumeration	KSO	Coordinate Sytem Related to Saturn Kronian Solar Orbital (X anti-sunward, Y along the orbital velocity direction)
enumeration	LGM	Local Geomagnetic - A coordinate system used mainly for Earth surface or near Earth surface magnetic field data. X axis northward from observation point in a geographic meridian. Z axis downward towards Earth's center. In this system, H (total horizontal component) = SQRT (Bx^2 + By^2) and D (declination angle) = arctan (By/Bx)
enumeration	MAG	Geomagnetic - geocentric. Z axis is parallel to the geomagnetic dipole axis, positive north. X is in the plane defined by the Z axis and the Earth's rotation axis. If N is a unit vector from the Earth's center to the north geographic pole, the signs of the X and Y axes are given by Y = N x Z, X = Y x Z.. See Russell, 1971, and <http://cdpp.cnes.fr/00428.pdf>
enumeration	MFA	Magnetic Field Aligned - A coordinate system spacecraft-centered system with Z in the direction of the ambient magnetic field vector. X is in the plane defined by Z and the spacecraft-Sun line, positive sunward. See <http://cdpp.cnes.fr/00428.pdf>
enumeration	MSO	Mars or Mercury Solar Orbital coordinate system. The X axis points from the center of the planet to the Sun;

		the Z axis is perpendicular to the orbital plane of the planet and parallel to the angular momentum vector. The Y axis completes the right-handed coordinate system.
enumeration	RTN	Radial Tangential Normal. Typically centered at a spacecraft. Used for IMF and plasma V vectors. R (radial) axis is radially away from the Sun, T (tangential) axis is normal to the plane formed by R and the Sun's spin vector, positive in the direction of planetary motion. N (normal) is R x T.
enumeration	SC	Spacecraft - A coordinate system defined by the spacecraft geometry and/or spin. Often has Z axis parallel to spacecraft spin vector. X and Y axes may or may not corotate with the spacecraft. See SR and SR2 below.
enumeration	SE	Solar Ecliptic - A heliocentric coordinate system where the Z axis is normal to the ecliptic plane, positive northward. X axis is positive towards the first point of Aries (from Earth to Sun at vernal equinox). Same as HAE above. See <http://nssdc.gsfc.nasa.gov/space/helios/coor_des.html>
enumeration	SM	Solar Magnetic - A geocentric coordinate system where the Z axis is northward along Earth's dipole axis, X axis is in plane of z axis and Earth-Sun line, positive sunward. See Russell, 1971.
enumeration	SR	Spin Reference - A special case of a Spacecraft (SC) coordinate system for a spinning spacecraft. Z is parallel to the spacecraft spin vector. X and Y rotate with the spacecraft. See <http://cdpp.cnes.fr/00428.pdf>
enumeration	SR2	Spin Reference 2 - A special case of a Spacecraft (SC) coordinate system for a spinning spacecraft. Z is parallel to the spacecraft spin vector. X is in the plane defined by Z and the spacecraft-Sun line, positive sunward. See <http://cdpp.cnes.fr/00428.pdf>
enumeration	SSE	Spacecraft Solar Ecliptic - A coordinate system used for deep space spacecraft, for example Helios. - X axis from spacecraft to Sun. Z axis normal to ecliptic plane, positive northward. Note: Angle between normals to ecliptic and to Helios orbit plane ~ 0.25 deg.
enumeration	SSE_L	Selenocentric Solar Ecliptic. The X axis points from the center of the Earth's moon to the sun, the Z axis is normal to the ecliptic plane, positive northward. And the Y axis completes the right-handed set of axes.
enumeration	SpacecraftOrbitPlane	A coordinate system where X lies in the plane normal to and in the direction of motion of the spacecraft, Z is normal to this plane and Y completes the triad in a right-handed coordinate system.
enumeration	TIIS	In this Cartesian coordinate system, X is along the flow direction, Y is along the Titan–Saturn vector, and Z is along the spin axis. These coordinates are analogous to the earth-centered GSE coordinates that relate to the direction of flow of the solar wind onto Earth’s environment.
enumeration	VSO	Venus Solar Orbital coordinate system. The X axis points from the center of the planet to the Sun; The Z axis is perpendicular to the orbital plane of the planet and parallel to the angular momentum vector. The Y axis completes the right-handed coordinate system.
enumeration	WGS84	The World Geodetic System (WGS) defines a

	reference frame for the earth, for use in geodesy and navigation. The WGS84 uses the zero meridian as defined by the Bureau International de l'Heure.
Used by	Complex Types CoordinateSystem, Location

Source	`<xsd:element name="CoordinateSystemName" type="enumCoordinateSystemName">`
	`  <xsd:annotation>`
	`  <xsd:documentation xml:lang="en">Identifies the coordinate system in which the position, direction or observation has been expressed.</xsd:documentation>`
	`  </xsd:annotation>`
	`</xsd:element>`

Element RenderingHints

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	RenderingHints
Properties	content: complex
Used by	Complex Types Element, Parameter
Model	DisplayType{0,1} , AxisLabel{0,1} , RenderingAxis{0,1} , Index{0,1} , ValueFormat{0,1} , ScaleMin{0,1} , ScaleMax{0,1} , ScaleType{0,1}
Children	AxisLabel, DisplayType, Index, RenderingAxis, ScaleMax, ScaleMin, ScaleType, ValueFormat

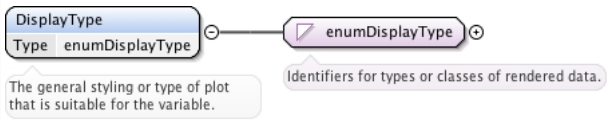
Instance	`<RenderingHints xmlns="http://impex-fp7.oeaw.ac.at">`
	`  <DisplayType>{0,1}</DisplayType>`
	`  <AxisLabel>{0,1}</AxisLabel>`

```
  <RenderingAxis>{0,1}</RenderingAxis>
  <Index>{0,1}</Index>
  <ValueFormat>{0,1}</ValueFormat>
  <ScaleMin>{0,1}</ScaleMin>
  <ScaleMax>{0,1}</ScaleMax>
  <ScaleType>{0,1}</ScaleType>
</RenderingHints>
```

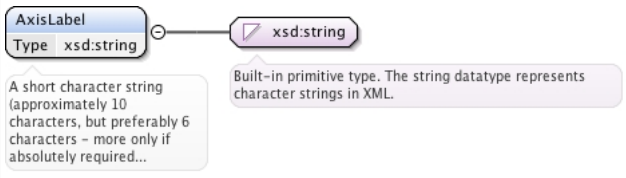
Source

```
<xsd:element name="RenderingHints" type="RenderingHints"/>
```

Element DisplayType

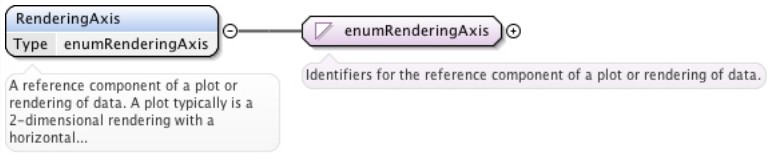
Namespace	http://impex-fp7.oeaw.ac.at		
Annotations	The general styling or type of plot that is suitable for the variable.		
Diagram			
Type	enumDisplayType		
Properties	content:	simple	
Facets	enumeration	Image	A two-dimensional representation of data with values at each element of the array related to an intensity or a color.
	enumeration	Plasmagram	The characterization of signal strengths in active sounding measurements as a function of virtual range or signal delay time and sounding frequency. A Plasmagram is also referred to as an Ionogram.
	enumeration	Spectrogram	The characterization of signal strengths as a function of frequency (or energy) and time.
	enumeration	StackPlot	A representation of data showing multiple sets of observations on a single plot, possibly offsetting each plot by some uniform amount.
	enumeration	TimeSeries	A representation of data showing a set of observations taken at different points in time and charted as a time series.
	enumeration	WaveForm	Spatial or temporal variations of wave amplitude over wave-period timescales.
Used by	Complex Type	RenderingHints	
Source	<xsd:element name="DisplayType" type="enumDisplayType"> <xsd:annotation> <xsd:documentation xml:lang="en">The general styling or type of plot that is suitable for the variable.</xsd:documentation> </xsd:annotation> </xsd:element>		

Element AxisLabel

Namespace	http://impex-fp7.oeaw.ac.at	
Annotations	A short character string (approximately 10 characters, but preferably 6 characters - more only if absolutely required for clarity) which can be used to label a y-axis for a plot or to provide a heading for a data listing.	
Diagram		
Type	xsd:string	
Properties	content:	simple
Used by	Complex Type	RenderingHints
Source	<xsd:element name="AxisLabel" type="xsd:string">	

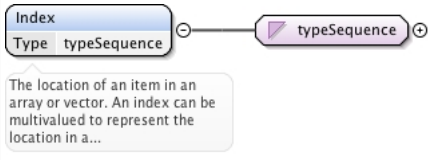
```
  <xsd:annotation>
    <xsd:documentation xml:lang="en">A short character string (approximately 10 characters, but
 preferably 6 characters - more only if absolutely required for clarity) which can be used to label
 a y-axis for a plot or to provide a heading for a data listing.</xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

Element RenderingAxis

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A reference component of a plot or rendering of data. A plot typically is a 2-dimensional rendering with a horizontal and verticle axis. A third dimension can be introduced with a color coding of the rendered data.
Diagram	
Type	enumRenderingAxis
Properties	content: simple
Facets	enumeration ColorBar — A spectrum or set of colors used to represent data values. enumeration Horizontal — Parallel to or in the plane of the horizon or a base line. enumeration Vertical — Perpendicular to the plane of the horizon or a base line.
Used by	Complex Type RenderingHints

Source	`<xsd:element name="RenderingAxis" type="enumRenderingAxis">`
	`<xsd:annotation>`
	`<xsd:documentation xml:lang="en">A reference component of a plot or rendering of data. A plot typically is a 2-dimensional rendering with a horizontal and verticle axis. A third dimension can be introduced with a color coding of the rendered data.</xsd:documentation>`
	`</xsd:annotation>`
	`</xsd:element>`

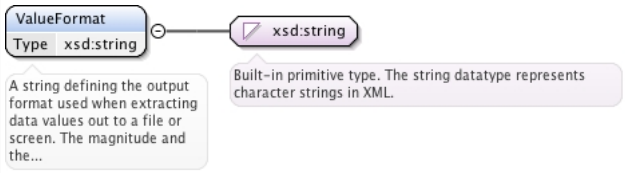
Element Index

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The location of an item in an array or vector. An index can be multivalued to represent the location in a multidimensional object. The index of the first item is "1". A value of "0" is a wild card for all elements at the location in an array. A value of "-1" is a reference to the dimension at the location in the array. A "-1" is used when describing the attributes of the dimension, where as "0" or a positive integer is used to describe attributes of individual elements.
Diagram	
Type	typeSequence
Properties	content: simple
Used by	Complex Types Element, RenderingHints

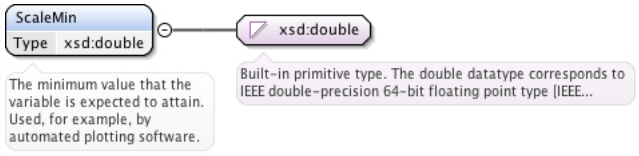
Source	`<xsd:element name="Index" type="typeSequence">`
	`<xsd:annotation>`
	`<xsd:documentation xml:lang="en">The location of an item in an array or vector. An index can be multivalued to represent the location in a multidimensional object. The index of the first item is "1". A value of "0" is a wild card for all elements at the location in an array. A value of "-1" is a reference to the dimension at the location in the array. A "-1" is used when describing the`

```
 attributes of the dimension, where as "0" or a positive integer is used to describe attributes of
 individual elements.</xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

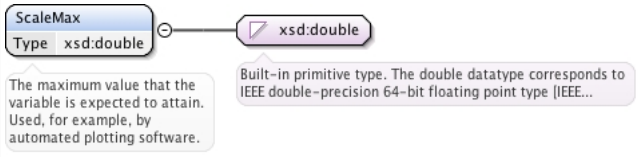
Element `ValueFormat`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A string defining the output format used when extracting data values out to a file or screen. The magnitude and the number of significant figures needed should be carefully considered. The output format string can be in either Fortran or C syntax.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Type RenderingHints
Source	<xsd:element name="ValueFormat" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">A string defining the output format used when extracting data values out to a file or screen. The magnitude and the number of significant figures needed should be carefully considered. The output format string can be in either Fortran or C syntax.</xsd:documentation> </xsd:annotation> </xsd:element>

Element `ScaleMin`

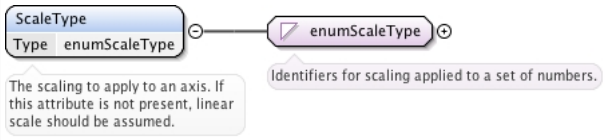
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The minimum value that the variable is expected to attain. Used, for example, by automated plotting software.
Diagram	
Type	xsd:double
Properties	content: simple
Used by	Complex Type RenderingHints
Source	<xsd:element name="ScaleMin" type="xsd:double"> <xsd:annotation> <xsd:documentation xml:lang="en">The minimum value that the variable is expected to attain. Used, for example, by automated plotting software.</xsd:documentation> </xsd:annotation> </xsd:element>

Element `ScaleMax`

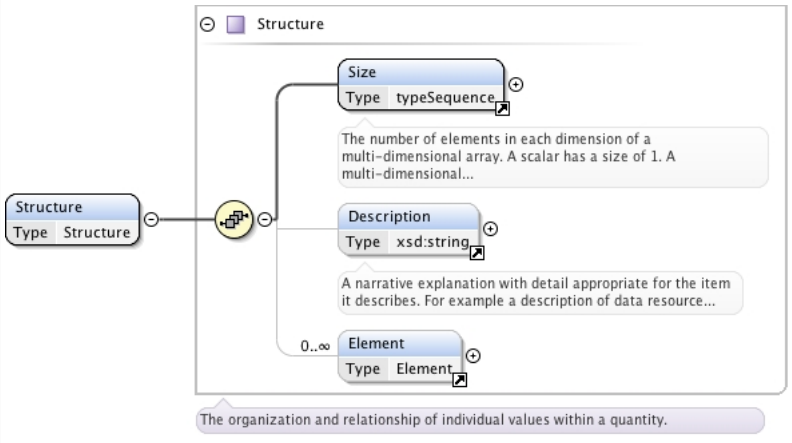
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The maximum value that the variable is expected to attain. Used, for example, by automated plotting software.
Diagram	

Type	xsd:double
Properties	content: simple
Used by	Complex Type RenderingHints
Source	<xsd:element name="ScaleMax" type="xsd:double"> <xsd:annotation> <xsd:documentation xml:lang="en">The maximum value that the variable is expected to attain. Used, for example, by automated plotting software.</xsd:documentation> </xsd:annotation> </xsd:element>

Element ScaleType

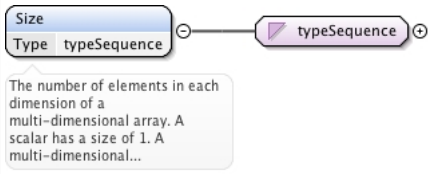
Namespace	http://impex-fp7.oeaw.ac.at		
Annotations	The scaling to apply to an axis. If this attribute is not present, linear scale should be assumed.		
Diagram			
Type	enumScaleType		
Properties	content: simple		
Facets	enumeration	LinearScale	Intervals which are equally spaced.
	enumeration	LogScale	Intervals which are spaced proportionally to the logarithms of the values being represented.
Used by	Complex Type RenderingHints		
Source	<xsd:element name="ScaleType" type="enumScaleType"> <xsd:annotation> <xsd:documentation xml:lang="en">The scaling to apply to an axis. If this attribute is not present, linear scale should be assumed.</xsd:documentation> </xsd:annotation> </xsd:element>		

Element Structure

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	Structure
Properties	content: complex
Used by	Complex Type Parameter
Model	Size , Description{0,1} , Element*
Children	Description, Element, Size
Instance	<Structure xmlns="http://impex-fp7.oeaw.ac.at">

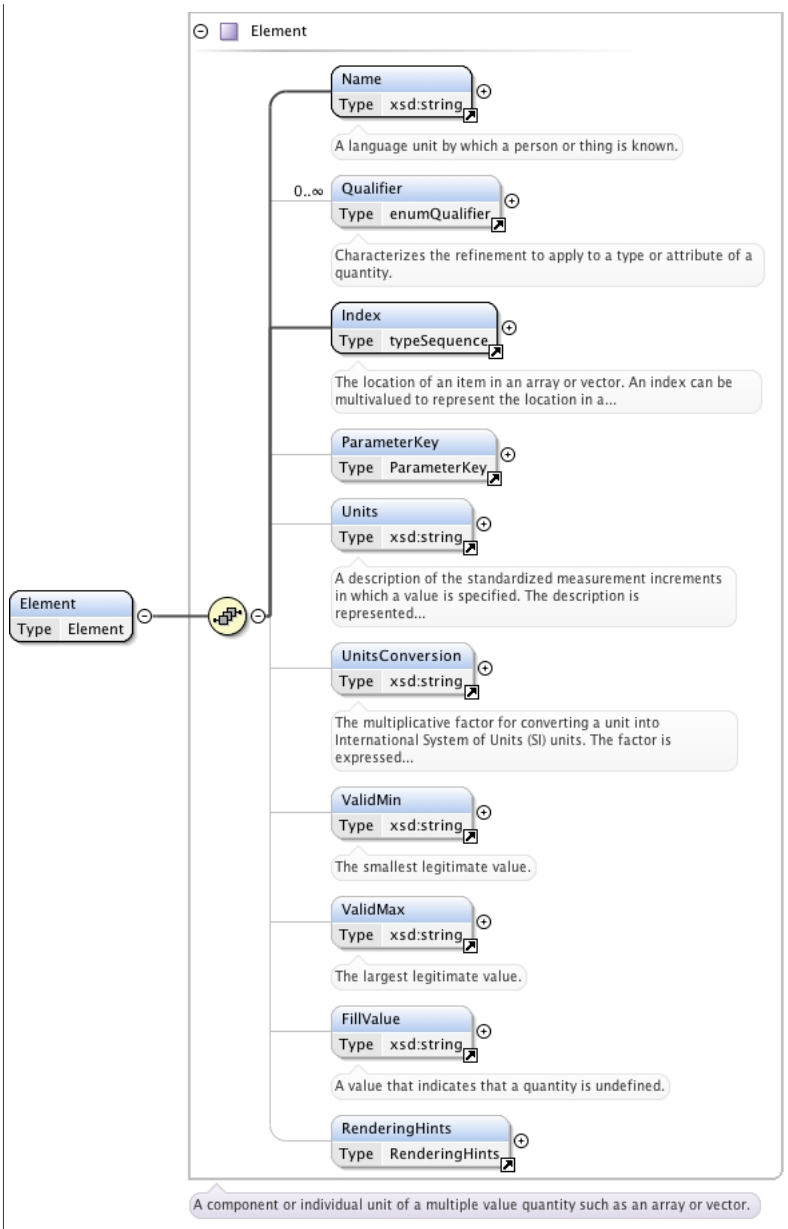
	<Size>{1,1}</Size> <Description>{0,1}</Description> <Element>{0,unbounded}</Element> </Structure>
Source	<xsd:element name="Structure" type="Structure"/>

Element Size

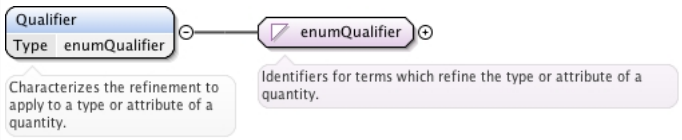
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The number of elements in each dimension of a multi-dimensional array. A scalar has a size of 1. A multi-dimensional vector will have a size for each dimension. Note that the number of elements in the size of an N-dimensional array conveys the array's dimensionality while the product of those numbers conveys the total number of elements in the array. When size is used to describe a tensor it is the number of elements in the tensor. As such it has a limited set of values. A tensor of rank 1 has a size of 3, rank 2 a size of 9, rank 3 a size of 27 and rank n a size of 3^n.
Diagram	
Type	typeSequence
Properties	content: simple
Used by	Complex Type Structure
Source	<xsd:element name="Size" type="typeSequence"> <xsd:annotation> <xsd:documentation xml:lang="en">The number of elements in each dimension of a multi-dimensional array. A scalar has a size of 1. A multi-dimensional vector will have a size for each dimension. Note that the number of elements in the size of an N-dimensional array conveys the array's dimensionality while the product of those numbers conveys the total number of elements in the array. When size is used to describe a tensor it is the number of elements in the tensor. As such it has a limited set of values. A tensor of rank 1 has a size of 3, rank 2 a size of 9, rank 3 a size of 27 and rank n a size of 3^n.</xsd:documentation> </xsd:annotation> </xsd:element>

Element Element

Namespace	http://impex-fp7.oeaw.ac.at

Diagram	
Type	Element
Properties	content: complex
Used by	Complex Type Structure
Model	Name , Qualifier* , Index , ParameterKey{0,1} , Units{0,1} , UnitsConversion{0,1} , ValidMin{0,1} , ValidMax{0,1} , FillValue{0,1} , RenderingHints{0,1}
Children	FillValue, Index, Name, ParameterKey, Qualifier, RenderingHints, Units, UnitsConversion, ValidMax, ValidMin
Instance	<Element xmlns="http://impex-fp7.oeaw.ac.at"> <Name>{1,1}</Name> <Qualifier>{0,unbounded}</Qualifier> <Index>{1,1}</Index> <ParameterKey>{0,1}</ParameterKey> <Units>{0,1}</Units> <UnitsConversion>{0,1}</UnitsConversion> <ValidMin>{0,1}</ValidMin> <ValidMax>{0,1}</ValidMax> <FillValue>{0,1}</FillValue> <RenderingHints>{0,1}</RenderingHints> </Element>
Source	<xsd:element name="Element" type="Element"/>

Element `Qualifier`

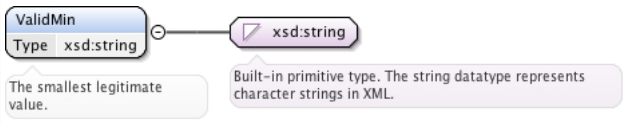
Namespace	http://impex-fp7.oeaw.ac.at		
Annotations	Characterizes the refinement to apply to a type or attribute of a quantity.		
Diagram			
Type	enumQualifier		
Properties	content:	simple	
Facets	enumeration	Anisotropy	Direction-dependent property.
	enumeration	Array	A sequence of values corresponding to the elements in a rectilinear, n-dimension matrix. Each value can be referenced by a unique index.
	enumeration	Average	The statistical mean; the sum of a set of values divided by the number of values in the set.
	enumeration	Characteristic	A quantity which can be easily identified and measured in a given environment.
	enumeration	Circular	Relative to polarization, right-hand circularly polarized light is defined such that the electric field is rotating clockwise as seen by an observer towards whom the wave is moving. Left-hand circularly polarized light is defined such that the electric field is rotating counterclockwise as seen by an observer towards whom the wave is moving. The polarization of magnetohydrodynamic waves is specified with respect to the ambient mean magnetic field : right-hand polarized waves have a transverse electric field component which turns in a right-handed sense (that of the gyrating electrons) around the magnetic field.
	enumeration	Column	A two-dimensional measure of a quantity. The column is the area over which the quantity is measured.
	enumeration	Component	Projection of a vector along one of the base axes of a coordinate system.
	enumeration	Component.I	Projection of a vector along the first named axis of a coordinate system. Typically the X axis, but could be the R axis for an RTN coordinate system.
	enumeration	Component.J	Projection of a vector along the second named axis of a coordinate system. Typically the Y axis, but could be the T axis for an RTN coordinate system.
	enumeration	Component.K	Projection of a vector along the third named axis of a coordinate system. Typically the Z axis, but could be the N axis for an RTN coordinate system.
	enumeration	Core	The central or main part of an object or calculated distribution. For example, the part of a distribution of particles at low energies that is a thermal (Maxwellian) population.
	enumeration	CrossSpectrum	The Fourier transform of the cross correlation of two physical or empirical observations.
	enumeration	Deviation	The difference between an observed value and the expected value of a quantity.
	enumeration	Differential	A measurement within a narrow range of energy and/or solid angle.
	enumeration	Direction	The spatial relation between an object and another object, the orientation of the object or the course along which the object points

		or moves.
enumeration	DirectionAngle	The angle between a position vector or measured vector (or one of its projections onto a plane) and one of the base axes of the coordinate system.
enumeration	DirectionAngle.AzimuthAngle	The angle between the projection into the i-j plane of a position or measured vector and the i-axis of the coordinate system. Mathematically defined as arctan(j/i).
enumeration	DirectionAngle.ElevationAngle	The angle between the position or measured vector and the i-j plane of the coordinate system. Mathematically defined as arctan(k/SQRT(i^2+j^2)).
enumeration	DirectionAngle.PolarAngle	The angle between the position or measured vector and the k-axis of the coordinate system. Mathematically defined as arctan([SQRT(i^2+j^2)]/k).
enumeration	Directional	A measurement within a narrow range of solid angle.
enumeration	FieldAligned	The component of a quantity which is oriented in the same direction of a field.
enumeration	Fit	Values that make an model agree with the data.
enumeration	Group	An assemblage of values that a certain relation or common characteristic.
enumeration	Halo	The part of an object or distribution surrounding some central body or distribution. For example, the particles above the core energies that show enhancements above the thermal population. Typically, a "power law tail" shows a break from the core Maxwellian at a particular energy.
enumeration	Integral	A flux measurement in a broad range of energy and solid angle.
enumeration	Integral.Area	Integration over the extent of a planar region, or of the surface of a solid.
enumeration	Integral.Bandwidth	Integration over the width a frequency band.
enumeration	Integral.SolidAngle	Integration over the angle in three-dimensional space that an object subtends at a point.
enumeration	LineOfSight	The line of sight is the line that connects the observer with the observed object. This expression is often used with measurements of Doppler velocity and magnetic field in magnetograms, where only the component of the vector field directed along the line of sight is measured.
enumeration	Linear	Polarization where the E-field vector is confined to a given plane
enumeration	Magnitude	A measure of the strength of a vector quantity or length of its representational vector.
enumeration	Maximum	The largest value of a batch or sample or the upper bound of a probability distribution.
enumeration	Median	The measure of central tendency of a set of n. values computed by ordering the values and taking the value at position (n. + 1) / 2 when n. is odd or the arithmetic mean of the values at positions n. / 2 and (n. / 2) + 1 when n. is even.
enumeration	Minimum	The smallest value of a batch or sample or the lower bound of a probability distribution.
enumeration	Moment	Parameters determined by integration over a distribution function convolved with a power of velocity.
enumeration	Parallel	Having the same direction as a given direction
enumeration	Peak	The maximum value for the quantity in question, over a period of time which is usually equal to the cadence.
enumeration	Perpendicular	At right angles to a given direction.
enumeration	Perturbation	Variations in the state of a system.

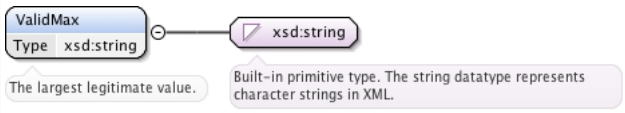
	enumeration	Phase	A point or portion in a recurring series of changes.
	enumeration	PhaseAngle	Phase difference between two or more waves, normally expressed in degrees.
	enumeration	Projection	A measure of the length of a position or measured vector as projected into a plane of the coordinate system.
	enumeration	Projection.IJ	A measure of the length of a position or measured vector projected into the i-j (typically X-Y) plane of the coordinate system.
	enumeration	Projection.IK	A measure of the length of a position or measured vector projected into the i-k (typically X-Z) plane of the coordinate system.
	enumeration	Projection.JK	A measure of the length of a position or measured vector projected into the j-k (typically Y-Z) plane of the coordinate system.
	enumeration	Pseudo	Similar to or having the appearance of something else. Can be used to indicate an estimation or approximation of a particular quantity.
	enumeration	Ratio	The relative magnitudes of two quantities.
	enumeration	Scalar	A quantity that is completely specified by its magnitude and has no direction.
	enumeration	Spectral	Characterized as a range or continuum of frequencies
	enumeration	StandardDeviation	The square root of the average of the squares of deviations about the mean of a set of data. Standard deviation is a statistical measure of spread or variability.
	enumeration	StokesParameters	A set of four parameters (usually called I,Q, U and V) which describe the polarization state of an electromagnetic wave propagating through space.
	enumeration	Strahl	A distribution of particles concentrated in a narrow energy band. The band may be may be aligned with a secondary feature. For example, it may occur in a narrow cone aligned with the mean magnetic field direction.
	enumeration	Superhalo	The part of an object or distribution surrounding some central body or distribution evident in a second break in the distribution function (e.g., a different power law). It consists of a population at a higher energies than for a halo.
	enumeration	Symmetric	Equal distribution about one or more axes.
	enumeration	Tensor	A generalized linear "quantity" or "geometrical entity" that can be expressed as a multi-dimensional array relative to a choice of basis of the particular space on which it is defined.
	enumeration	Total	The summation of quantities over all possible species.
	enumeration	Trace	The sum of the elements on the main diagonal (the diagonal from the upper left to the lower right) of a square matrix.
	enumeration	Uncertainty	A statistically defined discrepancy between a measured quantity and the true value of that quantity that cannot be corrected by calculation or calibration.
	enumeration	Variance	A measure of dispersion of a set of data points around their mean value. The expectation value of the squared deviations from the mean.
	enumeration	Vector	A set of parameter values each along some independent variable (e.g., components of a field in three orthogonal spatial directions; atmospheric temperature values at several altitudes, or at a given latitude and longitude;).
Used by	Complex Types	Element, Field, InputField, InputParameter, InputPopulation, Mixed, Particle, Property, Support, Wave	

Source	<xsd:element name="Qualifier" type="enumQualifier"> <xsd:annotation> <xsd:documentation xml:lang="en">Characterizes the refinement to apply to a type or attribute of a quantity.</xsd:documentation> </xsd:annotation> </xsd:element>

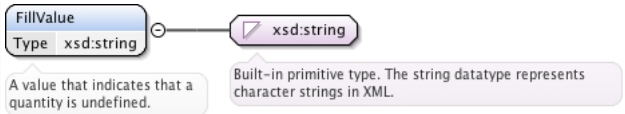
Element ValidMin

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The smallest legitimate value.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Types Element, InputField, Parameter, Property, SimulationDomain
Source	<xsd:element name="ValidMin" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">The smallest legitimate value.</xsd:documentation> </xsd:annotation> </xsd:element>

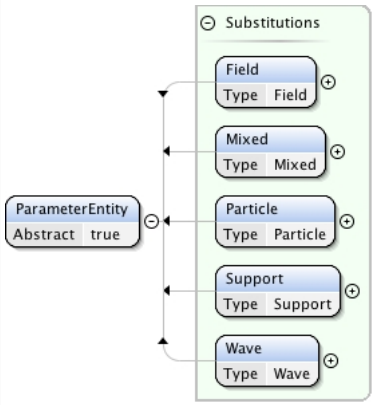
Element ValidMax

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The largest legitimate value.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Types Element, InputField, Parameter, Property, SimulationDomain
Source	<xsd:element name="ValidMax" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">The largest legitimate value.</xsd:documentation> </xsd:annotation> </xsd:element>

Element FillValue

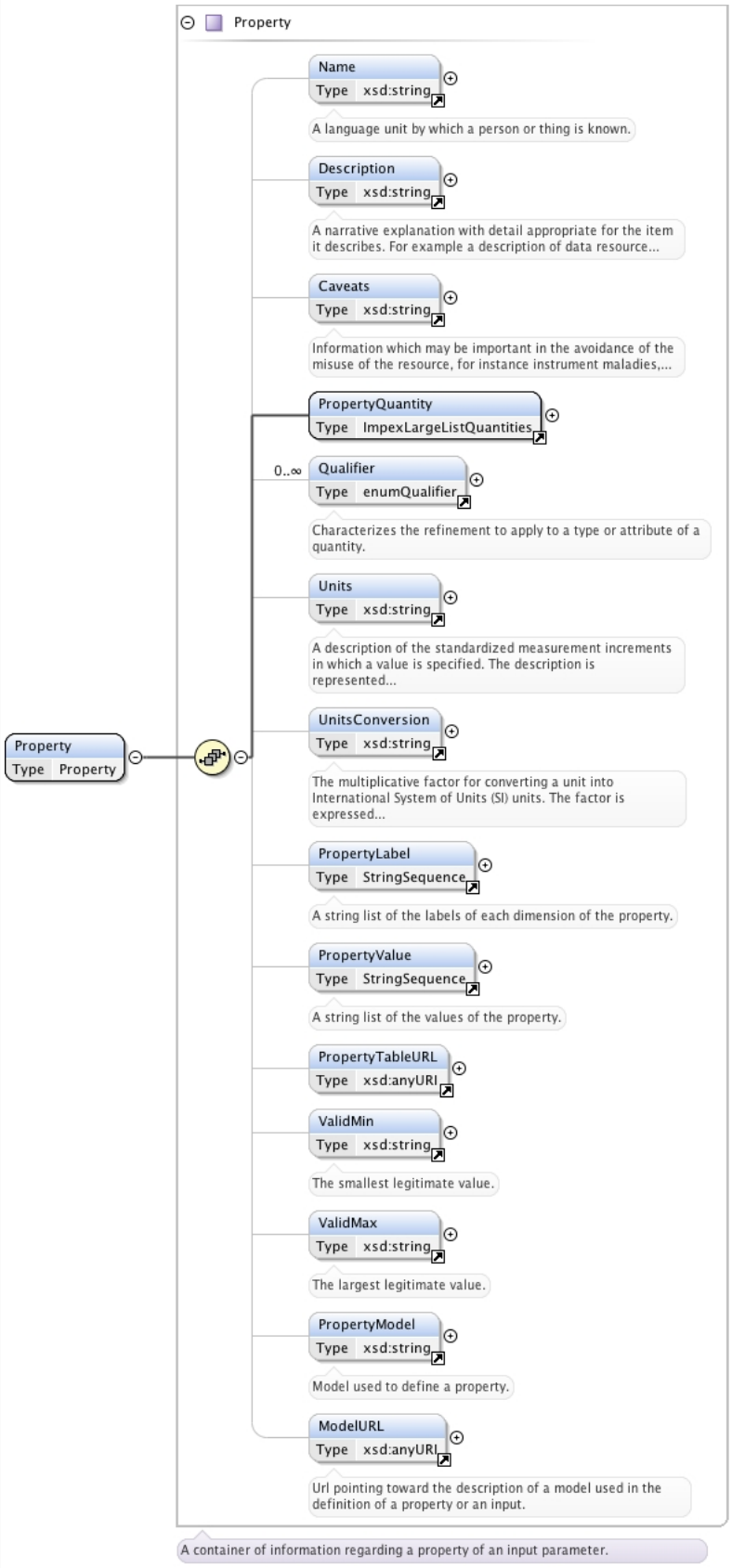
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A value that indicates that a quantity is undefined.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Types Element, Parameter
Source	<xsd:element name="FillValue" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">A value that indicates that a quantity is undefined.</xsd:documentation> </xsd:annotation> </xsd:element>

Element `ParameterEntity`

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Properties	abstract: `true`
Substitution Group	• Field • Wave • Mixed • Support • Particle
Used by	Complex Type Parameter
Source	`<xsd:element name="ParameterEntity" abstract="true"/>`

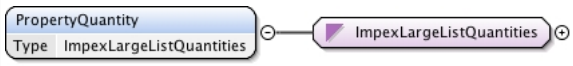
Element `Property`

Namespace	http://impex-fp7.oeaw.ac.at

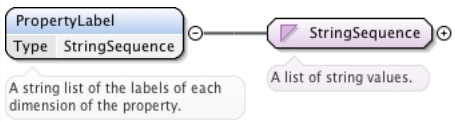
Diagram	
Type	Property
Properties	content: complex
Used by	Complex Types DisplayOutput, InputParameter, InputProperties, NumericalOutput, Parameter, RegionParameter

Model	Name{0,1} , Description{0,1} , Caveats{0,1} , PropertyQuantity , Qualifier* , Units{0,1} , UnitsConversion{0,1} , PropertyLabel{0,1} , PropertyValue{0,1} , PropertyTableURL{0,1} , ValidMin{0,1} , ValidMax{0,1} , PropertyModel{0,1} , ModelURL{0,1}
Children	Caveats, Description, ModelURL, Name, PropertyLabel, PropertyModel, PropertyQuantity, PropertyTableURL, PropertyValue, Qualifier, Units, UnitsConversion, ValidMax, ValidMin
Instance	<Property xmlns="http://impex-fp7.oeaw.ac.at"> <Name>{0,1}</Name> <Description>{0,1}</Description> <Caveats>{0,1}</Caveats> <PropertyQuantity>{1,1}</PropertyQuantity> <Qualifier>{0,unbounded}</Qualifier> <Units>{0,1}</Units> <UnitsConversion>{0,1}</UnitsConversion> <PropertyLabel>{0,1}</PropertyLabel> <PropertyValue>{0,1}</PropertyValue> <PropertyTableURL>{0,1}</PropertyTableURL> <ValidMin>{0,1}</ValidMin> <ValidMax>{0,1}</ValidMax> <PropertyModel>{0,1}</PropertyModel> <ModelURL>{0,1}</ModelURL> </Property>
Source	<xsd:element name="Property" type="Property"/>

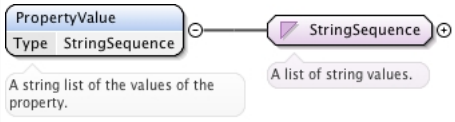
Element PropertyQuantity

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	ImpexLargeListQuantities
Properties	content: simple
Used by	Complex Type Property
Source	<xsd:element name="PropertyQuantity" type="ImpexLargeListQuantities"/>

Element PropertyLabel

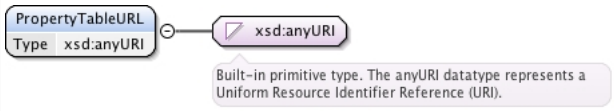
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A string list of the labels of each dimension of the property.
Diagram	
Type	StringSequence
Properties	content: simple
Used by	Complex Type Property
Source	<xsd:element name="PropertyLabel" type="StringSequence"> <xsd:annotation> <xsd:documentation xml:lang="en">A string list of the labels of each dimension of the property.</xsd:documentation> </xsd:annotation> </xsd:element>

Element PropertyValue

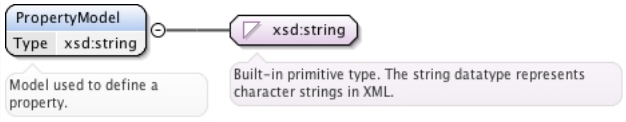
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A string list of the values of the property.
Diagram	
Type	StringSequence

Properties	content:	simple
Used by	Complex Type	Property
Source	<xsd:element name="PropertyValue" type="StringSequence"> <xsd:annotation> <xsd:documentation xml:lang="en">A string list of the values of the property.</ xsd:documentation> </xsd:annotation> </xsd:element>	

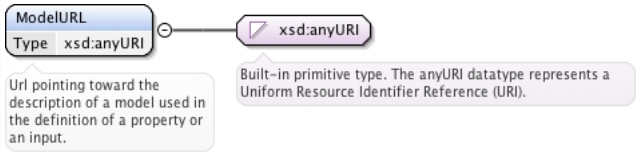
Element PropertyTableURL

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	xsd:anyURI
Properties	content: simple
Used by	Complex Type Property
Source	<xsd:element name="PropertyTableURL" type="xsd:anyURI"/>

Element PropertyModel

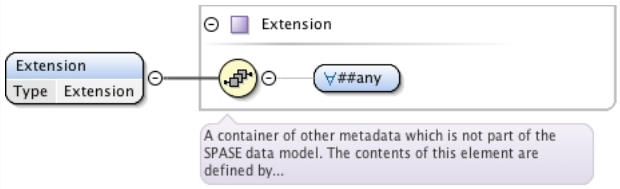
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Model used to define a property.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Type Property
Source	<xsd:element name="PropertyModel" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">Model used to define a property.</xsd:documentation> </xsd:annotation> </xsd:element>

Element ModelURL

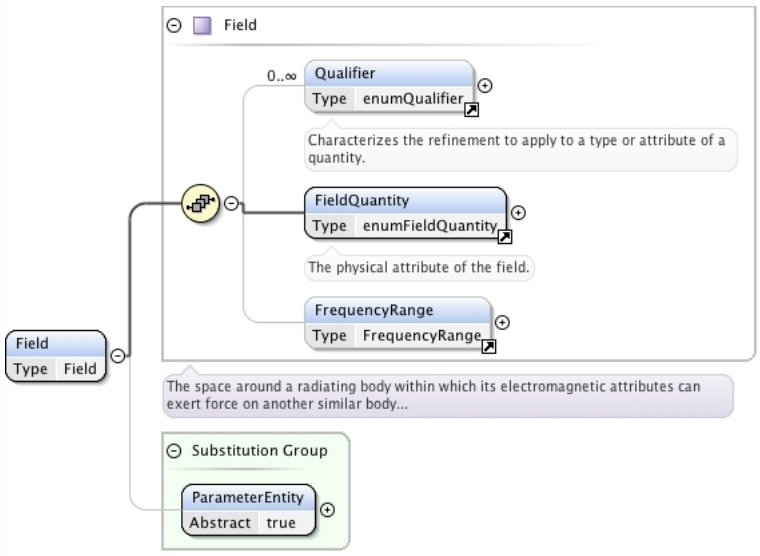
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Url pointing toward the description of a model used in the definition of a property or an input.
Diagram	
Type	xsd:anyURI
Properties	content: simple
Used by	Complex Types InputField, InputPopulation, InputProcess, Property, SimulationModel
Source	<xsd:element name="ModelURL" type="xsd:anyURI"> <xsd:annotation> <xsd:documentation xml:lang="en">Url pointing toward the description of a model used in the definition of a property or an input.</xsd:documentation>

```
  </xsd:annotation>
</xsd:element>
```

Element Extension

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	Extension
Properties	content: complex
Used by	Complex Types: Annotation, Catalog, DisplayData, DisplayOutput, Instrument, NumericalData, NumericalOutput, Observatory, Person, Registry, Repository, Service, SimulationRun
Model	ANY element from ANY namespace
Source	`<xsd:element name="Extension" type="Extension"/>`

Element Field

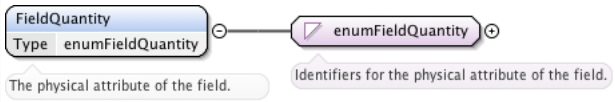
Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	Field
Properties	content: complex
Substitution Group Affiliation	• ParameterEntity
Model	Qualifier* , FieldQuantity , FrequencyRange{0,1}
Children	FieldQuantity, FrequencyRange, Qualifier

Instance	`<Field xmlns="http://impex-fp7.oeaw.ac.at">`
	`  <Qualifier>{0,unbounded}</Qualifier>`
	`  <FieldQuantity>{1,1}</FieldQuantity>`
	`  <FrequencyRange>{0,1}</FrequencyRange>`
	`</Field>`

Source	`<xsd:element name="Field" type="Field" substitutionGroup="ParameterEntity"/>`

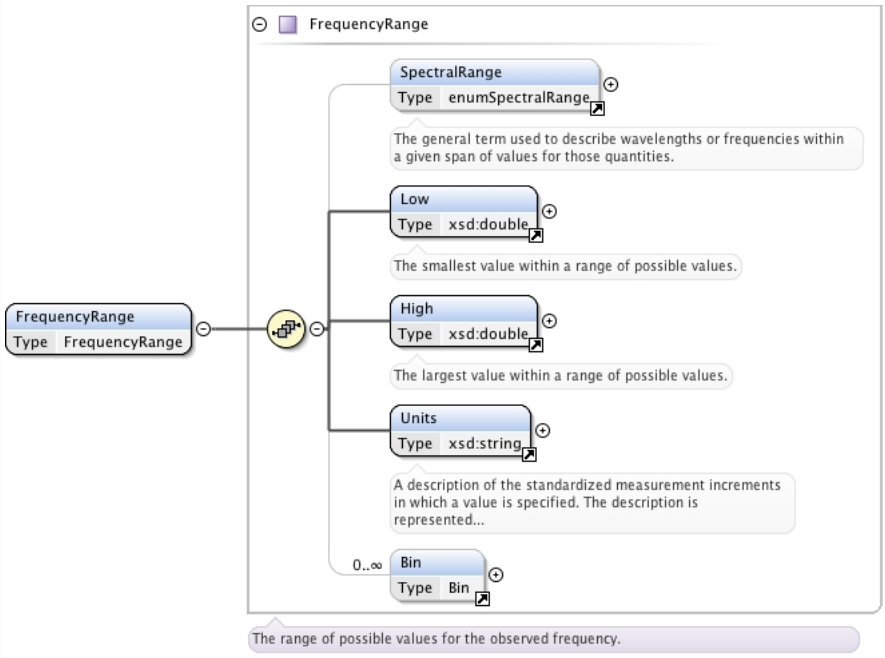
Element FieldQuantity

Namespace	http://impex-fp7.oeaw.ac.at

Annotations	The physical attribute of the field.		
Diagram			
Type	enumFieldQuantity		
Properties	content:	simple	
Facets	enumeration	Current	The flow of electrons through a conductor caused by a potential difference.
	enumeration	Electric	The physical attribute that exerts an electrical force.
	enumeration	Electromagnetic	Electric and magnetic field variations in time and space that propagate through a medium or a vacuum with the wave's propagation, electric field, and magnetic field vectors forming an orthogonal triad. Waves in this category are detected by having their field quantities measured.
	enumeration	Gyrofrequency	The number of gyrations around a magnetic guiding center (field line) a charged particle makes per unit time due to the Lorentz force.
	enumeration	Magnetic	The physical attribute attributed to a magnet or its equivalent.
	enumeration	PlasmaFrequency	A number-density-dependent characteristic frequency of a plasma.
	enumeration	Potential	A field which obeys Laplace's Equation.
	enumeration	PoyntingFlux	Electromagnetic energy flux transported by a wave characterized as the rate of energy transport per unit area per steradian.
Used by	Complex Types	Field, InputField	

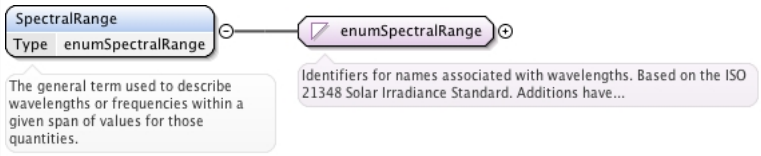
Source	`<xsd:element name="FieldQuantity" type="enumFieldQuantity">`
	`<xsd:annotation>`
	`<xsd:documentation xml:lang="en">`The physical attribute of the field.`</xsd:documentation>`
	`</xsd:annotation>`
	`</xsd:element>`		

Element FrequencyRange

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	FrequencyRange

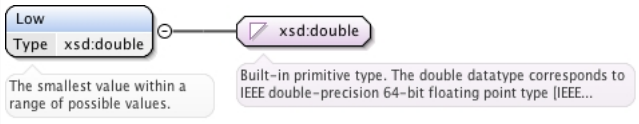
Properties	content:	complex
Used by	Complex Types	Field, Wave
Model	SpectralRange{0,1} , Low , High , Units , Bin*	
Children	Bin, High, Low, SpectralRange, Units	
Instance	<FrequencyRange xmlns="http://impex-fp7.oeaw.ac.at"> <SpectralRange>{0,1}</SpectralRange> <Low>{1,1}</Low> <High>{1,1}</High> <Units>{1,1}</Units> <Bin>{0,unbounded}</Bin> </FrequencyRange>	
Source	<xsd:element name="FrequencyRange" type="FrequencyRange"/>	

Element SpectralRange

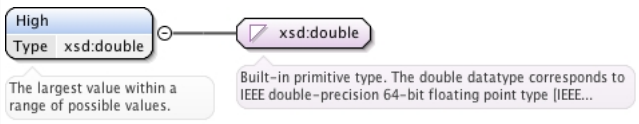
Namespace	http://impex-fp7.oeaw.ac.at		
Annotations	The general term used to describe wavelengths or frequencies within a given span of values for those quantities.		
Diagram			
Type	enumSpectralRange		
Properties	content:	simple	
Facets	enumeration	CaK	A spectrum with a wavelength of range centered near 393.5 nm. VSO nickname: Ca-K image with range of 391.9 nm to 395.2 nm.
	enumeration	ExtremeUltraviolet	A spectrum with a wavelength range of 10.0 nm to 125.0nm. VSO nickname: EUV image with a range of of 10.0 nm to 125.0 nm
	enumeration	FarUltraviolet	A spectrum with a wavelength range of 122 nm to 200.0nm. VSO nickname: FUV image with a range of 122.0 nm to 200 nm
	enumeration	GammaRays	Photons with a wavelength range: 0.00001 to 0.001 nm
	enumeration	Halpha	A spectrum with a wavelength range centered at 656.3 nm. VSO nickname: H-alpha image with a spectrum range of of 655.8 nm to 656.8 nm.
	enumeration	HardXrays	Photons with a wavelength range: 0.001 to 0.1 nm and an energy range of 12 keV to 120 keV
	enumeration	He10830	A spectrum with a wavelength range centered at 1082.9 nm. VSO nickname: He 10830 image with a range of 1082.5 nm to 1083.3 nm.
	enumeration	He304	A spectrum centered around the resonance line of ionised helium at 304 Angstrom (30.4 nm).
	enumeration	Infrared	Photons with a wavelength range: 760 to 1.00x10^6 nm
	enumeration	K7699	A spectrum with a wavelength range centred at 769.9 nm. VSO nickname: K-7699 dopplergram with a range of 769.8 nm to 770.0 nm.
	enumeration	LBHBand	Lyman-Birge-Hopfield band in the far ultraviolet range with wavelength range of 140nm to 170 nm.
	enumeration	Microwave	Photons with a wavelength range: 1.00x10^6 to 1.50x10^7 nm
	enumeration	NaD	A spectrum with a wavelength range of centered at 589.3 nm. VSO nickname: Na-D image with a range of 588.8 nm to 589.8 nm.
	enumeration	Ni6768	A spectrum with a wavelength range centered at 676.8 nm. VSO nickname: Ni-6768 dopplergram with a range of of 676.7 nm to 676.9 nm.

	enumeration	Optical	Photons with a wavelength range: 380 to 760 nm
	enumeration	RadioFrequency	Photons with a wavelength range: 100,000 to 1.00x10^11 nm
	enumeration	SoftXRays	X-Rays with an energy range of 0.12 keV to 12 keV.
	enumeration	Ultraviolet	Photons with a wavelength range: 10 to 400 nm.
	enumeration	WhiteLight	Photons with a wavelength in the visible range for humans.
	enumeration	XRays	Photons with a wavelength range: 0.001 <= x < 10 nm
Used by	Complex Types	DisplayData, DisplayOutput, FrequencyRange, NumericalData, NumericalOutput, WavelengthRange	
Source	<xsd:element name="SpectralRange" type="enumSpectralRange"> <xsd:annotation> <xsd:documentation xml:lang="en">The general term used to describe wavelengths or frequencies within a given span of values for those quantities.</xsd:documentation> </xsd:annotation> </xsd:element>		

Element Low

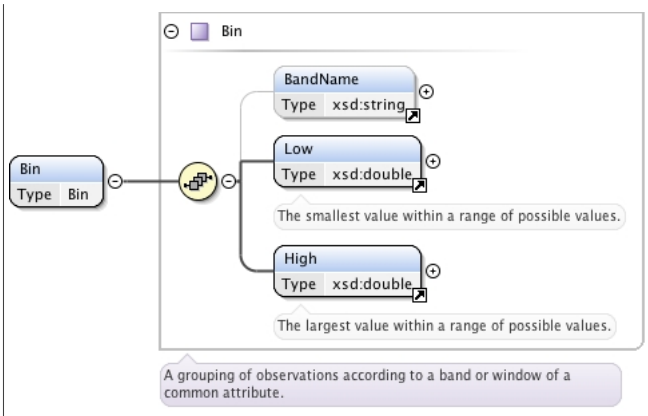
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The smallest value within a range of possible values.
Diagram	
Type	xsd:double
Properties	content: simple
Used by	Complex Types: AzimuthalAngleRange, Bin, EnergyRange, FrequencyRange, PolarAngleRange, WavelengthRange
Source	<xsd:element name="Low" type="xsd:double"> <xsd:annotation> <xsd:documentation xml:lang="en">The smallest value within a range of possible values.</xsd:documentation> </xsd:annotation> </xsd:element>

Element High

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The largest value within a range of possible values.
Diagram	
Type	xsd:double
Properties	content: simple
Used by	Complex Types: AzimuthalAngleRange, Bin, EnergyRange, FrequencyRange, PolarAngleRange, WavelengthRange
Source	<xsd:element name="High" type="xsd:double"> <xsd:annotation> <xsd:documentation xml:lang="en">The largest value within a range of possible values.</xsd:documentation> </xsd:annotation> </xsd:element>

Element Bin

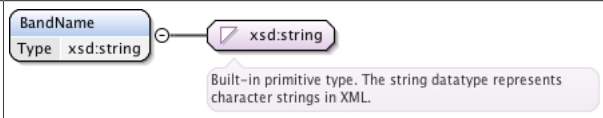
Namespace	http://impex-fp7.oeaw.ac.at

Diagram	
Type	Bin
Properties	content: complex
Used by	Complex Types AzimuthalAngleRange, EnergyRange, FrequencyRange, PolarAngleRange, WavelengthRange
Model	BandName{0,1} , Low , High
Children	BandName, High, Low

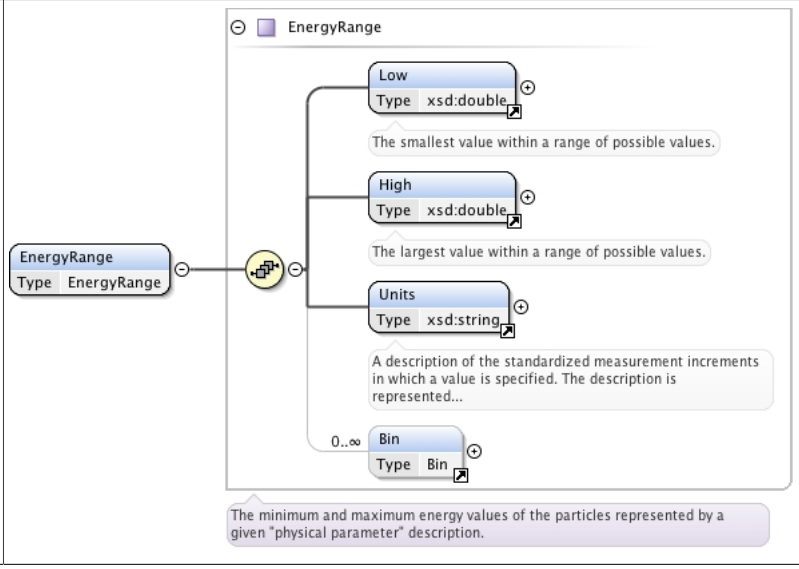
Instance	`<Bin xmlns="http://impex-fp7.oeaw.ac.at">`
	`  <BandName>{0,1}</BandName>`
	`  <Low>{1,1}</Low>`
	`  <High>{1,1}</High>`
	`</Bin>`

Source	`<xsd:element name="Bin" type="Bin"/>`

Element BandName

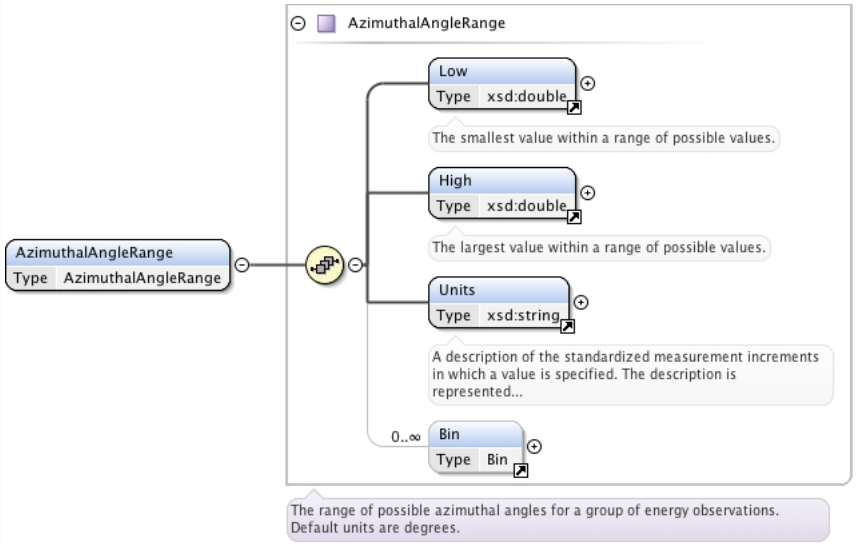
Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Type Bin
Source	`<xsd:element name="BandName" type="xsd:string"/>`

Element EnergyRange

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	

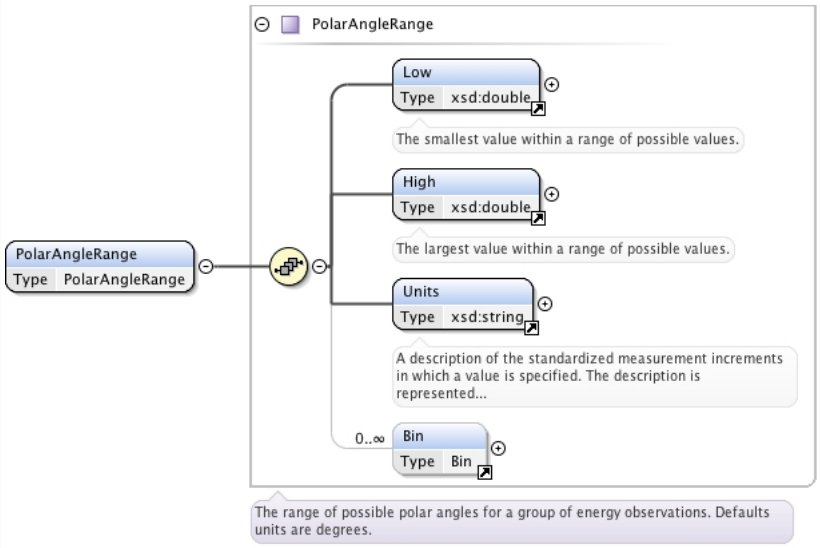
Type	EnergyRange
Properties	content: complex
Used by	Complex Types: Particle, Wave
Model	Low , High , Units , Bin*
Children	Bin, High, Low, Units
Instance	<EnergyRange xmlns="http://impex-fp7.oeaw.ac.at"> <Low>{1,1}</Low> <High>{1,1}</High> <Units>{1,1}</Units> <Bin>{0,unbounded}</Bin> </EnergyRange>
Source	<xsd:element name="EnergyRange" type="EnergyRange"/>

Element AzimuthalAngleRange

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	AzimuthalAngleRange
Properties	content: complex
Used by	Complex Type: Particle
Model	Low , High , Units , Bin*
Children	Bin, High, Low, Units
Instance	<AzimuthalAngleRange xmlns="http://impex-fp7.oeaw.ac.at"> <Low>{1,1}</Low> <High>{1,1}</High> <Units>{1,1}</Units> <Bin>{0,unbounded}</Bin> </AzimuthalAngleRange>
Source	<xsd:element name="AzimuthalAngleRange" type="AzimuthalAngleRange"/>

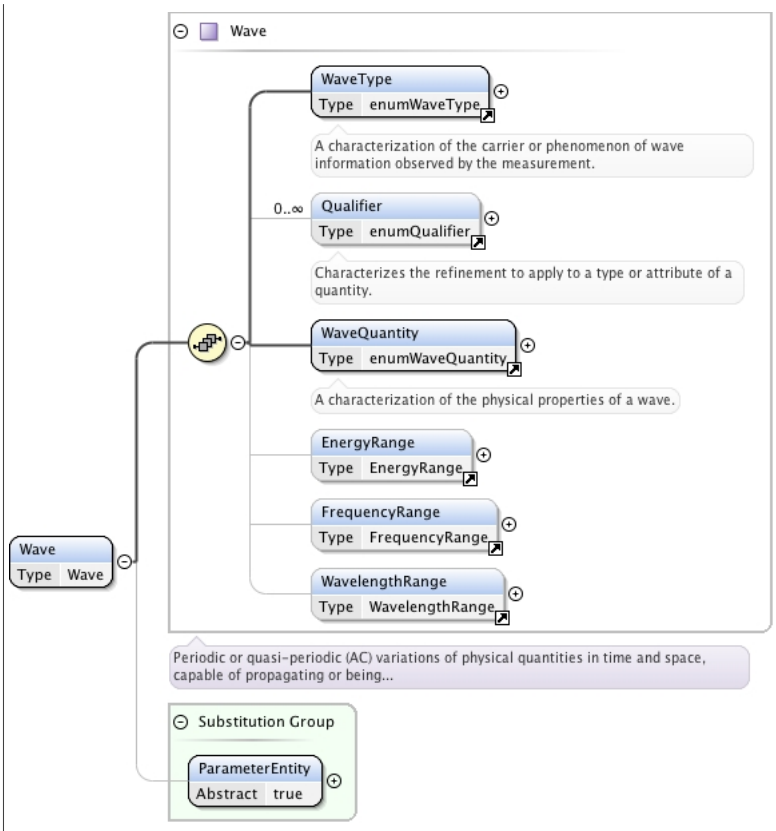
Element PolarAngleRange

Namespace	http://impex-fp7.oeaw.ac.at

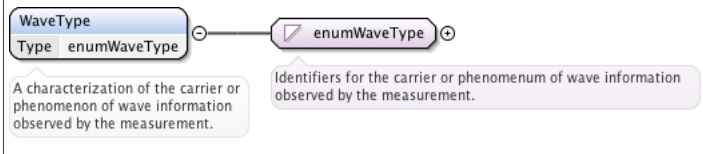
Diagram	
Type	PolarAngleRange
Properties	content: complex
Used by	Complex Type Particle
Model	Low , High , Units , Bin*
Children	Bin, High, Low, Units
Instance	<PolarAngleRange xmlns="http://impex-fp7.oeaw.ac.at"> <Low>{1,1}</Low> <High>{1,1}</High> <Units>{1,1}</Units> <Bin>{0,unbounded}</Bin> </PolarAngleRange>
Source	<xsd:element name="PolarAngleRange" type="PolarAngleRange"/>

Element Wave

Namespace	http://impex-fp7.oeaw.ac.at

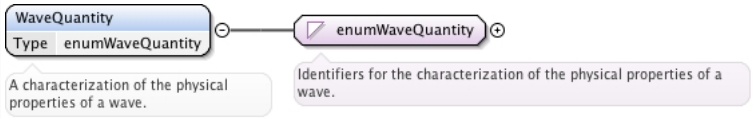
Diagram	
Type	Wave
Properties	content: complex
Substitution Group Affiliation	• ParameterEntity
Model	WaveType , Qualifier* , WaveQuantity , EnergyRange{0,1} , FrequencyRange{0,1} , WavelengthRange{0,1}
Children	EnergyRange, FrequencyRange, Qualifier, WaveQuantity, WaveType, WavelengthRange
Instance	<Wave xmlns="http://impex-fp7.oeaw.ac.at"> <WaveType>{1,1}</WaveType> <Qualifier>{0,unbounded}</Qualifier> <WaveQuantity>{1,1}</WaveQuantity> <EnergyRange>{0,1}</EnergyRange> <FrequencyRange>{0,1}</FrequencyRange> <WavelengthRange>{0,1}</WavelengthRange> </Wave>
Source	<xsd:element name="Wave" type="Wave" substitutionGroup="ParameterEntity"/>

Element WaveType

Namespace	http://impex-fp7.oeaw.ac.at		
Annotations	A characterization of the carrier or phenomenon of wave information observed by the measurement.		
Diagram			
Type	enumWaveType		
Properties	content: simple		
Facets	enumeration	Electromagnetic	Electric and magnetic field variations in time and space that propagate through a medium or a vacuum with the wave's propagation, electric field, and magnetic field vectors forming an orthogonal triad. Waves in this category

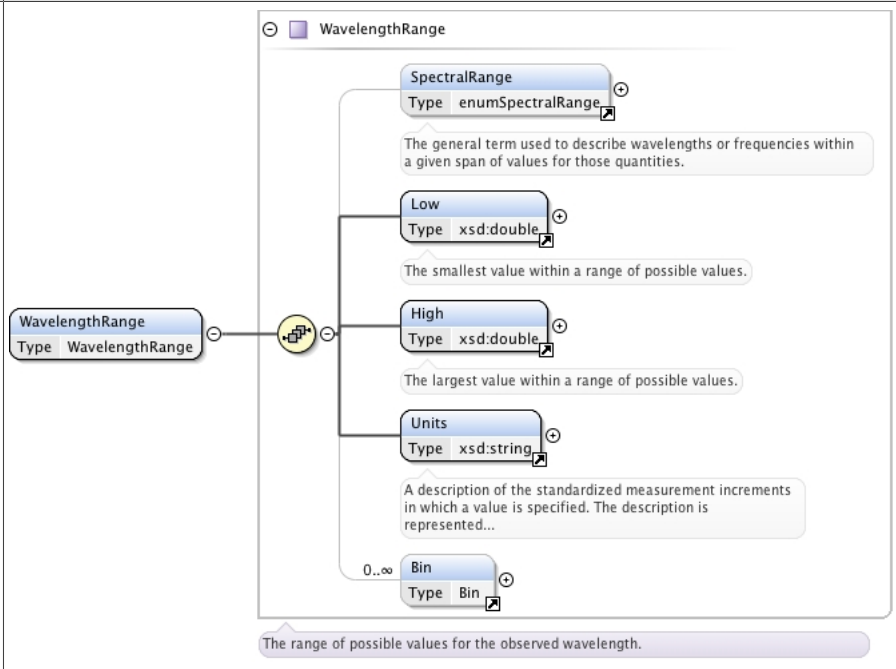
			are detected by having their field quantities measured.
	enumeration	Electrostatic	Collective longitudinal electric-field and plasma oscillations trapped within a body of plasma.
	enumeration	Hydrodynamic	Periodic or quasi-periodic oscillations of fluid quantities.
	enumeration	MHD	Hydrodynamic waves in a magnetized plasma in which the background magnetic field plays a key role in controlling the wave propagation characteristics.
	enumeration	Photon	Electromagnetic waves detected by techniques that utilize their corpuscular character (e.g., CCD, CMOS, photomultipliers).
	enumeration	PlasmaWaves	Self-consistent collective oscillations of particles and fields (electric and magnetic) in a plasma.
Used by	Complex Type	Wave	
Source	<xsd:element name="WaveType" type="enumWaveType"> <xsd:annotation> <xsd:documentation xml:lang="en">A characterization of the carrier or phenomenon of wave information observed by the measurement.</xsd:documentation> </xsd:annotation> </xsd:element>		

Element WaveQuantity

Namespace	http://impex-fp7.oeaw.ac.at		
Annotations	A characterization of the physical properties of a wave.		
Diagram			
Type	enumWaveQuantity		
Properties	content:	simple	
Facets	enumeration	ACElectricField	Alternating electric field component of a wave.
	enumeration	ACMagneticField	Alternating magnetic field component of a wave.
	enumeration	Absorption	Decrease of radiant energy (relative to the background continuum spectrum).
	enumeration	Albedo	The ratio of reflected radiation from the surface to incident radiation upon it.
	enumeration	DopplerFrequency	Change in the frequency of a propagating wave due to motion of the source, the observer, the reflector, or the propagation medium.
	enumeration	Emissivity	The energy emitted spontaneously per unit bandwidth (typically frequency) per unit time per unit mass of source. Emissivity is usually integrated over all directions/solid angles.
	enumeration	EnergyFlux	The amount of energy passing through a unit area in a unit time.
	enumeration	EquivalentWidth	The spectral width of a total absorption line having the amount of absorbed radiant energy being equivalent to that in an observed absorption line.
	enumeration	Frequency	The number of occurrences of a repeating event per unit time.
	enumeration	Gyrofrequency	The number of gyrations around a magnetic guiding center (field line) a charged particle makes per unit time due to the Lorentz force.
	enumeration	Intensity	The measurement of radiant or wave energy per unit detector area per unit bandwidth per unit solid angle per unit time.

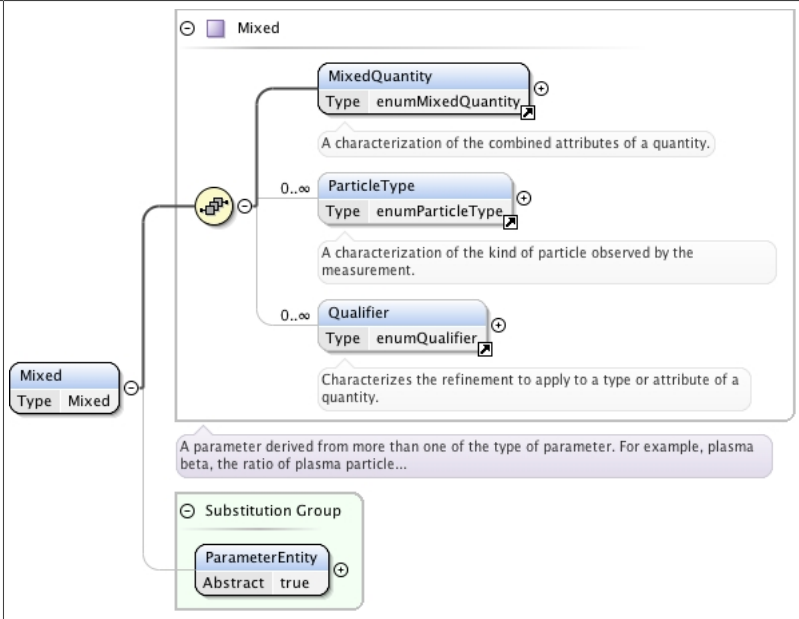
	enumeration	LineDepth	The measure of the amount of absorption below the continuum (depth) in a particular wavelength or frequency in an absorption spectrum.
	enumeration	MagneticField	A region of space near a magnetized body where magnetic forces can be detected (as measured by methods such as Zeeman splitting, etc.).
	enumeration	ModeAmplitude	In helioseismology the magnitude of oscillation of waves of a particular geometry.
	enumeration	PlasmaFrequency	A number-density-dependent characteristic frequency of a plasma.
	enumeration	Polarization	Direction of the electric vector of an electromagnetic wave. The wave can be linearly polarized in any direction perpendicular to the direction of travel, circularly polarized (clockwise or counterclockwise), unpolarized, or mixtures of the above.
	enumeration	PoyntingFlux	Electromagnetic energy flux transported by a wave characterized as the rate of energy transport per unit area per steradian.
	enumeration	PropagationTime	Time difference between transmission and reception of a wave in an active wave experiment.
	enumeration	StokesParameters	A set of four parameters (usually called I,Q, U and V) which describe the polarization state of an electromagnetic wave propagating through space.
	enumeration	Velocity	Rate of change of position. Also used for the average velocity of a collection of particles, also referred to as "bulk velocity".
	enumeration	Wavelength	The peak-to-peak distance over one wave period.
Used by	Complex Type	Wave	
Source	<xsd:element name="WaveQuantity" type="enumWaveQuantity"> <xsd:annotation> <xsd:documentation xml:lang="en">A characterization of the physical properties of a wave.</xsd:documentation> </xsd:annotation> </xsd:element>		

Element WavelengthRange

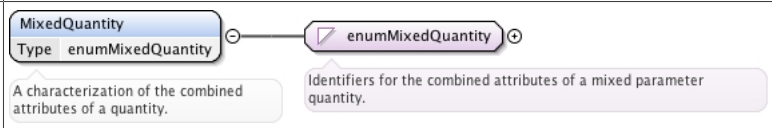
Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	WavelengthRange

Properties	content: complex
Used by	Complex Type Wave
Model	SpectralRange{0,1} , Low , High , Units , Bin*
Children	Bin, High, Low, SpectralRange, Units
Instance	<WavelengthRange xmlns="http://impex-fp7.oeaw.ac.at"> <SpectralRange>{0,1}</SpectralRange> <Low>{1,1}</Low> <High>{1,1}</High> <Units>{1,1}</Units> <Bin>{0,unbounded}</Bin> </WavelengthRange>
Source	<xsd:element name="WavelengthRange" type="WavelengthRange"/>

Element Mixed

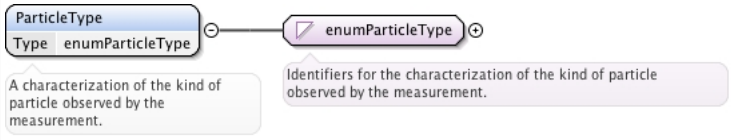
Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	Mixed
Properties	content: complex
Substitution Group Affiliation	• ParameterEntity
Model	MixedQuantity , ParticleType* , Qualifier*
Children	MixedQuantity, ParticleType, Qualifier
Instance	<Mixed xmlns="http://impex-fp7.oeaw.ac.at"> <MixedQuantity>{1,1}</MixedQuantity> <ParticleType>{0,unbounded}</ParticleType> <Qualifier>{0,unbounded}</Qualifier> </Mixed>
Source	<xsd:element name="Mixed" type="Mixed" substitutionGroup="ParameterEntity"/>

Element MixedQuantity

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A characterization of the combined attributes of a quantity.
Diagram	
Type	enumMixedQuantity

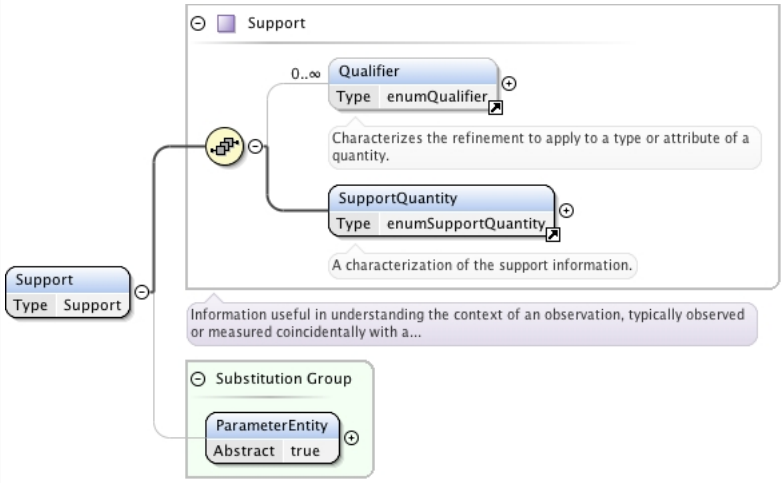
Properties	content:	simple	
Facets	enumeration	AkasofuEpsilon	A measure of the magnetopause energy flux and an indicator of the solar wind power available for subsequent magnetospheric energization. Defined as: V*B^2*l^2sin(theta/2)^4 where B is the IMF, l is an empirical scaling parameter equal to 7 RE, and theta = tan(BY /BZ)^-1 the IMF clock angle.
	enumeration	AlfvenMachNumber	The ratio of the bulk flow speed to the Alfven speed.
	enumeration	AlfvenVelocity	Phase velocity of the Alfven wave; In SI units it is the velocity of the magnetic field divided by the square root of the mass density times the permeability of free space (mu).
	enumeration	FrequencyToGyrofrequencyRatio	The ratio of the characteristic frequency of a medium to gyrofrequency of a particle.
	enumeration	MagnetosonicMachNumber	The ratio of the velocity of fast mode waves to the Alfven velocity.
	enumeration	Other	Not classified with more specific terms. The context of its usage may be described in related text.
	enumeration	PlasmaBeta	The ratio of the plasma pressure (nkT) to the magnetic pressure (B^2/2mu0) of the SUM(nkT)/(B^2/2mu0).
	enumeration	TotalPressure	In an MHD fluid it is the number density (N) times Boltzmann constant times the temperature in Kelvin.
	enumeration	VCrossB	The cross product of the charge velocity (V) and the magnetic field (B). It is the electric field exerted on a point charge by a magnetic field.
Used by	Complex Type	Mixed	
Source	<xsd:element name="MixedQuantity" type="enumMixedQuantity"> <xsd:annotation> <xsd:documentation xml:lang="en">A characterization of the combined attributes of a quantity.</xsd:documentation> </xsd:annotation> </xsd:element>		

Element ParticleType

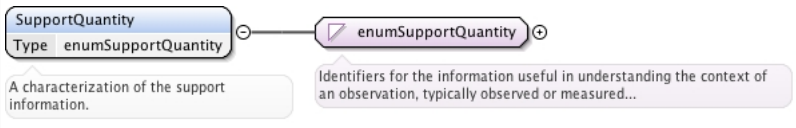
Namespace	http://impex-fp7.oeaw.ac.at		
Annotations	A characterization of the kind of particle observed by the measurement.		
Diagram			
Type	enumParticleType		
Properties	content:	simple	
Facets	enumeration	Aerosol	A suspension of fine solid or liquid particles in a gas.
	enumeration	AlphaParticle	A positively charged nuclear particle that consists of two protons and two neutrons.
	enumeration	Atom	Matter consisting of a nucleus surrounded by electrons which has no net charge.
	enumeration	Dust	Free microscopic particles of solid material.
	enumeration	Electron	An elementary particle consisting of a charge of negative electricity equal to about 1.602 x 10^(-19) Coulomb and having a mass when at rest of about 9.109534 x 10^(-28) gram.
	enumeration	Ion	An atom that has acquired a net electric charge by gaining or losing one or more electrons.(Note: Z>2)

	enumeration	Molecule	A group of atoms so united and combined by chemical affinity that they form a complete, integrated whole, being the smallest portion of any particular compound that can exist in a free state
	enumeration	Neutron	An elementary particle that has no net charge and is a constituent of atomic nuclei, and that has a mass slightly large than a proton (1.673 x 10^(-24) gram.)
	enumeration	Proton	An elementary particle that is a constituent of all atomic nuclei, that carries a positive charge numerically equal to the charge of an electron, and that has a mass of 1.673 x 10^(-24) gram.
Used by	Complex Types	InputPopulation, Mixed, Particle	
Source	<xsd:element name="ParticleType" type="enumParticleType"> <xsd:annotation> <xsd:documentation xml:lang="en">A characterization of the kind of particle observed by the measurement.</xsd:documentation> </xsd:annotation> </xsd:element>		

Element Support

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	Support
Properties	content: complex
Substitution Group Affiliation	• ParameterEntity
Model	Qualifier* , SupportQuantity
Children	Qualifier, SupportQuantity
Instance	<Support xmlns="http://impex-fp7.oeaw.ac.at"> <Qualifier>{0,unbounded}</Qualifier> <SupportQuantity>{1,1}</SupportQuantity> </Support>
Source	<xsd:element name="Support" type="Support" substitutionGroup="ParameterEntity"/>

Element SupportQuantity

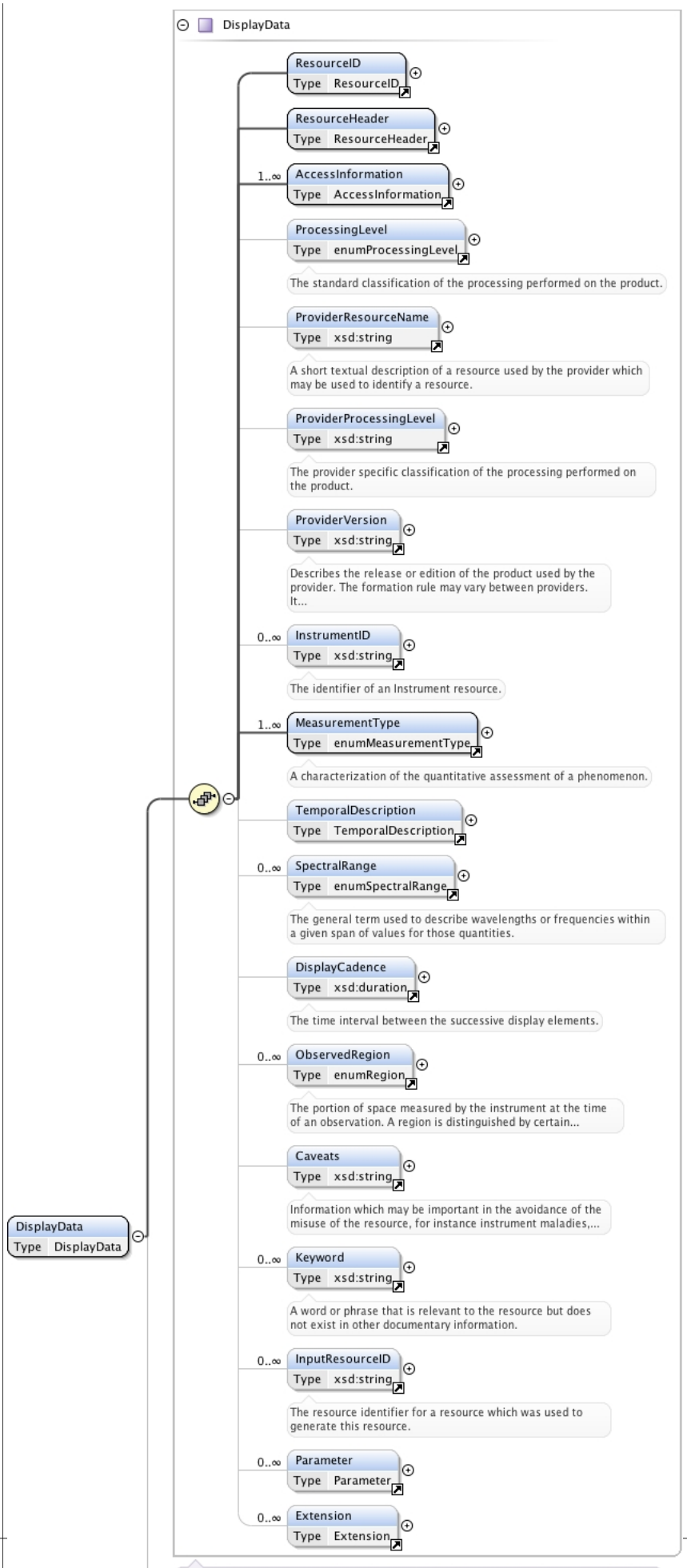
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A characterization of the support information.
Diagram	

Type	enumSupportQuantity		
Properties	content:	simple	
Facets	enumeration	InstrumentMode	An indication of a state (mode) in which the instrument is operating. How a mode influences the interpretation and representation of data is described in instrument related documentation.
	enumeration	Other	Not classified with more specific terms. The context of its usage may be described in related text.
	enumeration	Positional	The specification of the location of an object or measurement within a reference coordinate system. The position is usually expressed as a set of values corresponding to the location along a set of orthogonal axes together with the date/time of the observation.
	enumeration	Temporal	Pertaining to time.
	enumeration	Velocity	Rate of change of position. Also used for the average velocity of a collection of particles, also referred to as "bulk velocity".
Used by	Complex Type	Support	
Source	<xsd:element name="SupportQuantity" type="enumSupportQuantity"> <xsd:annotation> <xsd:documentation xml:lang="en">A characterization of the support information.</xsd:documentation> </xsd:annotation> </xsd:element>		

Element DisplayData

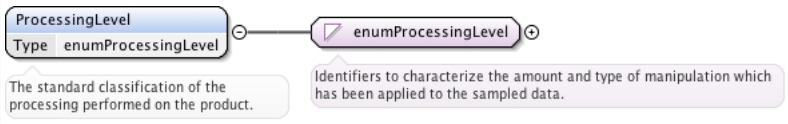
Namespace	http://impex-fp7.oeaw.ac.at

Diagram


DisplayData
ResourceID
Type ResourceID
ResourceHeader
Type ResourceHeader
1..∞
AccessInformation
Type AccessInformation
ProcessingLevel
Type enumProcessingLevel
The standard classification of the processing performed on the product.
ProviderResourceName
Type xsd:string
A short textual description of a resource used by the provider which may be used to identify a resource.
ProviderProcessingLevel
Type xsd:string
The provider specific classification of the processing performed on the product.
ProviderVersion
Type xsd:string
Describes the release or edition of the product used by the provider. The formation rule may vary between providers. It...
0..∞
InstrumentID
Type xsd:string
The identifier of an Instrument resource.
1..∞
MeasurementType
Type enumMeasurementType
A characterization of the quantitative assessment of a phenomenon.
TemporalDescription
Type TemporalDescription
0..∞
SpectralRange
Type enumSpectralRange
The general term used to describe wavelengths or frequencies within a given span of values for those quantities.
DisplayCadence
Type xsd:duration
The time interval between the successive display elements.
0..∞
ObservedRegion
Type enumRegion
The portion of space measured by the instrument at the time of an observation. A region is distinguished by certain...
Caveats
Type xsd:string
Information which may be important in the avoidance of the misuse of the resource, for instance instrument maladies,...
0..∞
Keyword
Type xsd:string
A word or phrase that is relevant to the resource but does not exist in other documentary information.
0..∞
InputResourceID
Type xsd:string
The resource identifier for a resource which was used to generate this resource.
0..∞
Parameter
Type Parameter
0..∞
Extension
Type Extension
A graphical representation of data wherein the underlying numeric values are not (readily) accessible for analysis.....
Substitution Group
DisplayData
Type DisplayData

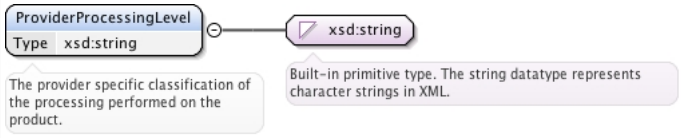
Type	DisplayData
Properties	content: complex
Substitution Group Affiliation	• ResourceEntity
Model	ResourceID , ResourceHeader , AccessInformation+ , ProcessingLevel{0,1} , ProviderResourceName{0,1} , ProviderProcessingLevel{0,1} , ProviderVersion{0,1} , InstrumentID* , MeasurementType+ , TemporalDescription{0,1} , SpectralRange* , DisplayCadence{0,1} , ObservedRegion* , Caveats{0,1} , Keyword* , InputResourceID* , Parameter* , Extension*
Children	AccessInformation, Caveats, DisplayCadence, Extension, InputResourceID, InstrumentID, Keyword, MeasurementType, ObservedRegion, Parameter, ProcessingLevel, ProviderProcessingLevel, ProviderResourceName, ProviderVersion, ResourceHeader, ResourceID, SpectralRange, TemporalDescription
Instance	<DisplayData xmlns="http://impex-fp7.oeaw.ac.at"> <ResourceID>{1,1}</ResourceID> <ResourceHeader>{1,1}</ResourceHeader> <AccessInformation>{1,unbounded}</AccessInformation> <ProcessingLevel>{0,1}</ProcessingLevel> <ProviderResourceName>{0,1}</ProviderResourceName> <ProviderProcessingLevel>{0,1}</ProviderProcessingLevel> <ProviderVersion>{0,1}</ProviderVersion> <InstrumentID>{0,unbounded}</InstrumentID> <MeasurementType>{1,unbounded}</MeasurementType> <TemporalDescription>{0,1}</TemporalDescription> <SpectralRange>{0,unbounded}</SpectralRange> <DisplayCadence>{0,1}</DisplayCadence> <ObservedRegion>{0,unbounded}</ObservedRegion> <Caveats>{0,1}</Caveats> <Keyword>{0,unbounded}</Keyword> <InputResourceID>{0,unbounded}</InputResourceID> <Parameter>{0,unbounded}</Parameter> <Extension>{0,unbounded}</Extension> </DisplayData>
Source	<xsd:element name="DisplayData" type="DisplayData" substitutionGroup="ResourceEntity"/>

Element ProcessingLevel

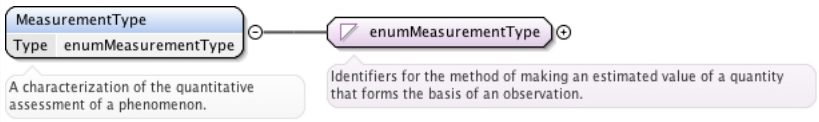
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The standard classification of the processing performed on the product.
Diagram	
Type	enumProcessingLevel
Properties	content: simple
Facets	enumeration Calibrated — Data wherein sensor outputs have been convolved with instrument response function, often irreversibly, to yield data in physical units. enumeration Raw — Data in its original state with no processing to account for calibration!!! enumeration Uncalibrated — Duplicate data are removed from the data stream and data are time ordered. Values are not adjusted for any potential biases or external factors.
Used by	Complex Types: DisplayData, DisplayOutput, NumericalData, NumericalOutput
Source	<xsd:element name="ProcessingLevel" type="enumProcessingLevel"> <xsd:annotation> <xsd:documentation xml:lang="en">The standard classification of the processing performed on the product.</xsd:documentation> </xsd:annotation> </xsd:element>

Element ProviderProcessingLevel

Namespace	http://impex-fp7.oeaw.ac.at

Annotations	The provider specific classification of the processing performed on the product.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Types: DisplayData, DisplayOutput, NumericalData, NumericalOutput, SimulationRun
Source	<xsd:element name="ProviderProcessingLevel" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">The provider specific classification of the processing performed on the product.</xsd:documentation> </xsd:annotation> </xsd:element>

Element MeasurementType

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A characterization of the quantitative assessment of a phenomenon.
Diagram	
Type	enumMeasurementType
Properties	content: simple

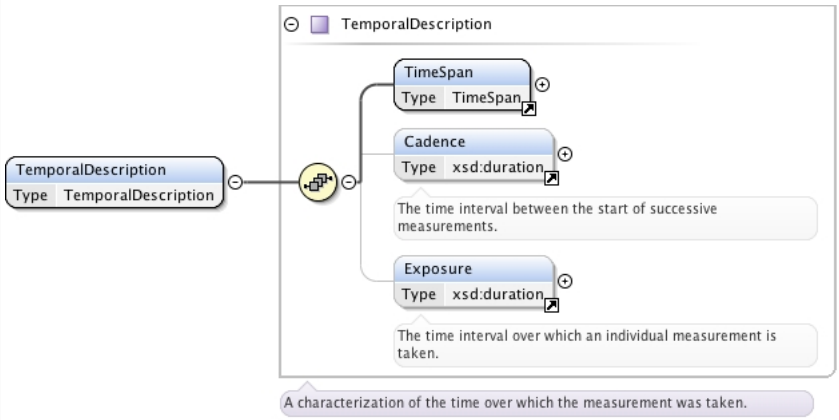
Facets

enumeration	Current	Direct measurement of the electric curreny
enumeration	ActivityIndex	An indication, derived from one or more measurements, of the level of activity of an object or region, such as sunspot number, F10.7 flux, Dst, or the Polar Cap Indices.
enumeration	Dopplergram	A map or image depicting the spatial distribution of line-of-sight velocities of the observed object.
enumeration	Dust	Free microscopic particles of solid material.
enumeration	ElectricField	A region of space around a charged particle, or between two voltages within which a force is exerted on charged objects in its vicinity. An electric field is the electric force per unit charge.
enumeration	EnergeticParticles	Pieces of matter that are moving very fast. Energetic particles include protons, electrons, neutrons, neutrinos, the nuclei of atoms, and other sub-atomic particles.
enumeration	Ephemeris	The spatial coordinates of a body as a function of time. When used as an Instrument Type it represents the process or methods used to generate spatial coordinates.
enumeration	ImageIntensity	Measurements of the two-dimensional distribution of the intensity of photons from some region or object such as the Sun or the polar auroral regions; can be in any wavelength band, and polarized, etc.
enumeration	InstrumentStatus	A quantity directly related to the operation or function of an instrument.
enumeration	IonComposition	In situ measurements of the relative flux or density of electrically charged particles in the space environment. May give simple fluxes, but full distribution functions are sometimes measured.
enumeration	Irradiance	Irradiance - A radiometric term for the power of electromagnetic radiation at a surface,

			per unit area. "Irradiance" is used when the electromagnetic radiation is incident on the surface. Irradiance data may be reported in any units (i.e. counts/s) due to, for example, being at a particular wavelength, or to being a not-fully-calibrated relative measurement.
	enumeration	MagneticField	A region of space near a magnetized body where magnetic forces can be detected (as measured by methods such as Zeeman splitting, etc.).
	enumeration	Magnetogram	Measurements of the vector or line-of-sight magnetic field determined from remote sensing measurements of the detailed structure of spectral lines, including their splitting and polarization. ("Magnetogram.")
	enumeration	NeutralAtomImages	Measurements of neutral atom fluxes as a function of look direction; often related to remote energetic charged particles that lose their charge through charge-exchange and then reach the detector on a line-of-sight trajectory.
	enumeration	NeutralGas	Measurements of neutral atomic and molecular components of a gas.
	enumeration	Profile	Measurements of a quantity as a function of height above an object such as the limb of a body.
	enumeration	Radiance	A radiometric measurement that describes the amount of electromagnetic radiation that passes through or is emitted from a particular area, and falls within a given solid angle in a specified direction. They are used to characterize both emission from diffuse sources and reflection from diffuse surfaces.
	enumeration	Spectrum	The distribution of a characteristic of a physical system or phenomenon, such as the energy emitted by a radiant source, arranged in the order of wavelengths.
	enumeration	ThermalPlasma	Measurements of the plasma in the energy regime where the most of the plasma occurs. May be the basic fluxes in the form of distribution functions or the derived bulk parameters (density, flow velocity, etc.).
	enumeration	Waves	Data resulting from observations of wave experiments and natural wave phenomena. Wave experiments are typically active and natural wave phenomena are passive. Examples of wave experiments include coherent/incoherent scatter radars, radio soundings, VLF propagation studies, ionospheric scintillation of beacon satellite signals, etc. Examples of natural wave phenomena include micropulsations, mesospheric gravity waves, auroral/plasmaspheric hiss, Langmuir waves, AKR, Jovian decametric radiation, solar radio bursts, etc.
	enumeration	Waves.Active	Exerting an influence or producing a change or effect. An active measurement is one which produces a transmission or excitation as a part of the measurement cycle.
	enumeration	Waves.Passive	Movement or effect produced by outside influence. A passive measurement is one which does not produce a transmission or excitation as a part of the measurement cycle.
Used by	Complex Types	DisplayData, DisplayOutput, NumericalData, NumericalOutput	
Source	<xsd:element name="MeasurementType" type="enumMeasurementType"> <xsd:annotation> <xsd:documentation xml:lang="en">A characterization of the quantitative assessment of a phenomenon.</xsd:documentation> </xsd:annotation> </xsd:element>		

Element TemporalDescription

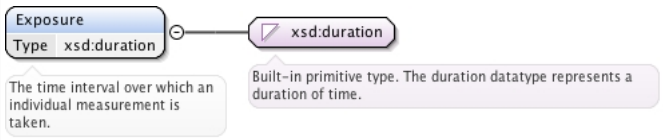
Namespace	http://impex-fp7.oeaw.ac.at

Diagram	
Type	TemporalDescription
Properties	content: complex
Used by	Complex Types DisplayData, DisplayOutput, NumericalData, NumericalOutput
Model	TimeSpan , Cadence{0,1} , Exposure{0,1}
Children	Cadence, Exposure, TimeSpan

Instance	`<TemporalDescription xmlns="http://impex-fp7.oeaw.ac.at">`
	`  <TimeSpan>{1,1}</TimeSpan>`
	`  <Cadence>{0,1}</Cadence>`
	`  <Exposure>{0,1}</Exposure>`
	`</TemporalDescription>`

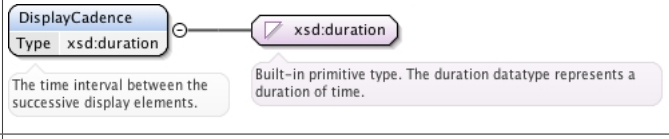
Source	`<xsd:element name="TemporalDescription" type="TemporalDescription"/>`

Element Exposure

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The time interval over which an individual measurement is taken.
Diagram	
Type	xsd:duration
Properties	content: simple
Used by	Complex Type TemporalDescription

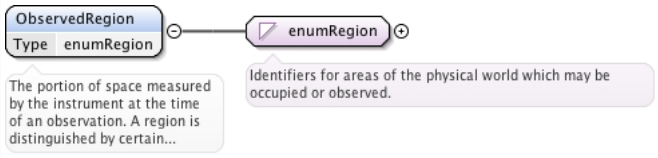
Source	`<xsd:element name="Exposure" type="xsd:duration">`
	`  <xsd:annotation>`
	`  <xsd:documentation xml:lang="en">The time interval over which an individual measurement is taken.</xsd:documentation>`
	`  </xsd:annotation>`
	`</xsd:element>`

Element DisplayCadence

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The time interval between the successive display elements.
Diagram	
Type	xsd:duration
Properties	content: simple
Used by	Complex Types DisplayData, DisplayOutput

Source	<xsd:element name="DisplayCadence" type="xsd:duration"> <xsd:annotation> <xsd:documentation xml:lang="en">The time interval between the successive display elements.</ xsd:documentation> </xsd:annotation> </xsd:element>

Element ObservedRegion

Namespace	http://impex-fp7.oeaw.ac.at		
Annotations	The portion of space measured by the instrument at the time of an observation. A region is distinguished by certain natural features or physical characteristics. It is the location of the observatory for in situ data, the location or region sensed by remote sensing observatories and the location-of-relevance for parameters that are derived from observational data.		
Diagram			
Type	enumRegion		
Properties	content:	simple	
Facets	enumeration	Asteroid	A small extraterrestrial body consisting mostly of rock and metal that is in orbit around the sun.
	enumeration	Callisto	A moon of the planet Jupiter, the second largest after Ganymede and the third-largest in the solar system
	enumeration	Comet	A relatively small extraterrestrial body consisting of a frozen mass that travels around the sun in a highly elliptical orbit.
	enumeration	Earth	The third planet from the sun in our solar system.
	enumeration	Earth.Magnetosheath	The region between the bow shock and the magnetopause, characterized by very turbulent plasma.
	enumeration	Earth.Magnetosphere	The region of space above the atmosphere or surface of the planet, and bounded by the magnetopause, that is under the direct influence of the planet's magnetic field.
	enumeration	Earth.Magnetosphere.Magnetotail	The region on the night side of the body where the magnetic filed is stretched backwards by the force of the solar wind. For Earth, the magnetotail begins at a night-side radial distance of 10 Re (X > -10Re).
	enumeration	Earth.Magnetosphere.Main	The region of the magnetosphere where the magnetic field lines are closed, but does not include the gaseous region gravitationally bound to the body.
	enumeration	Earth.Magnetosphere.Polar	The region near the pole of a body. For a magnetosphere the polar region is the area where magnetic field lines are open and includes the auroral zone.
	enumeration	Earth.Magnetosphere.RadiationBelt	The region within a magnetosphere where high- energy particles could potentially be trapped in a magnetic field.
	enumeration	Earth.NearSurface	The gaseous and possibly ionized environment of a body extending from the surface to some specified altitude. For the Earth, this altitude is 2000 km.
	enumeration	Earth.NearSurface.Atmosphere	The neutral gases surrounding a body that extends from the surface and is bound to the body by virtue of the gravitational attraction.
	enumeration	Earth.NearSurface.AuroralRegion	The region in the atmospheric where electrically- charged

		particles bombarding the upper atmosphere of a planet in the presence of a magnetic field produce an optical phenomenon.
enumeration	Earth.NearSurface.EquatorialRegion	A region centered on the equator and limited in latitude by approximately 23 degrees north and south of the equator.
enumeration	Earth.NearSurface.Ionosphere	The charged or ionized gases surrounding a body that are nominally bound to the body by virtue of the gravitational attraction.
enumeration	Earth.NearSurface.Ionosphere.DRegion	The layer of the ionosphere that exists approximately 50 to 95 km above the surface of the Earth. One of several layers in the ionosphere.
enumeration	Earth.NearSurface.Ionosphere.ERegion	A layer of ionised gas occurring at 90-150km above the ground. One of several layers in the ionosphere. Also called the The Kennelly-Heaviside layer.
enumeration	Earth.NearSurface.Ionosphere.FRegion	A layer that contains ionized gases at a height of around 150-800 km above sea level, placing it in the thermosphere. the F region has the highest concentration of free electrons and ions anywhere in the atmosphere. It may be thought of as comprising two layers, the F1-and F2-layers. One of several layers in the ionosphere. Also known as the Appleton layer.
enumeration	Earth.NearSurface.Ionosphere.Topside	The region at the upper most areas of the ionosphere.
enumeration	Earth.NearSurface.Mesosphere	The layer of the atmosphere that extends from the Stratosphere to a range of 80 km to 85 km, temperature decreasing with height.
enumeration	Earth.NearSurface.Plasmasphere	A region of the magnetosphere consisting of low energy (cool) plasma. It is located above the ionosphere. The outer boundary of the plasmasphere is known as the plasmapause, which is defined by an order of magnitude drop in plasma density.
enumeration	Earth.NearSurface.PolarCap	The areas of the globe surrounding the poles and consisting of the region north of 60 degrees north latitude an the region south of 60 degrees south latitude.
enumeration	Earth.NearSurface.SouthAtlanticAnomalyRegion	The region where the Earth's inner van Allen radiation belt makes its closest approach to the planet's surface. The result is that, for a given altitude, the radiation intensity is higher over this region than elsewhere.
enumeration	Earth.NearSurface.Stratosphere	The layer of the atmosphere that extends from the troposphere to about 30 km, temperature increases with height. The stratosphere contains the ozone layer.
enumeration	Earth.NearSurface.Thermosphere	The layer of the atmosphere that extends from the Mesosphere to 640+ km, temperature increasing with height.
enumeration	Earth.NearSurface.Troposphere	The lowest layer of the atmosphere which begins at the surface and extends to between 7 km (4.4 mi) at the poles and 17 km (10.6 mi) at the equator, with some variation due to weather factors.
enumeration	Earth.Surface	The outermost area of a solid object.
enumeration	Enceladus	One of the innermost moons of Saturn.
enumeration	Europa	The sixth-closest moon of the planet Jupiter
enumeration	Ganymede	The biggest moon of Jupiter planet in our solar system.
enumeration	Heliosphere	The solar atmosphere extending roughly from the outer corona to the edge of the solar plasma at the heliopause separating primarily solar plasma from interstellar plasma.
enumeration	Heliosphere.Heliosheath	The region extending radially outward from the heliospheric termination shock and in which the decelerated solar wind plasma is still significant.

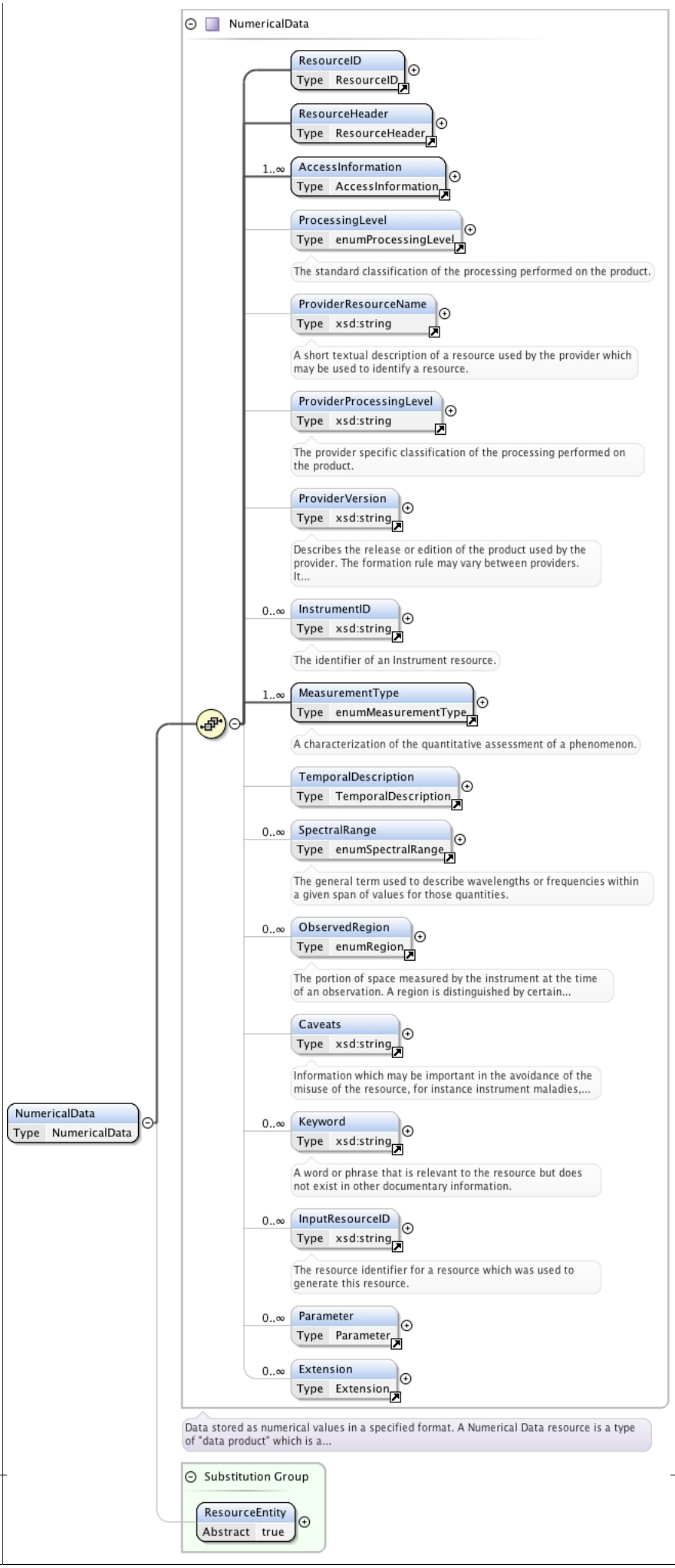
enumeration	Heliosphere.Inner	The region of the heliosphere extending radially outward from the solar coronal base to just inside 1 AU.
enumeration	Heliosphere.NearEarth	The heliospheric region near the Earth which extends to and includes the area near the L1 and L2 Lagrange point.
enumeration	Heliosphere.Outer	The region of the heliosphere extending radially outward from just outside 1 AU to the heliospheric termination shock.
enumeration	Heliosphere.Remote1AU	A roughly toroidal region that includes the Earth's orbit, but exclusive of the region near the Earth.
enumeration	Interstellar	The region between stars outside of the star's heliopause.
enumeration	Io	The innermost of the four Galilean moons of the planet Jupiter
enumeration	Jupiter	The fifth planet from the sun in our solar system.
enumeration	Jupiter.Magnetosphere	The magnetosphere of the fifth planet from the sun in our solar system.
enumeration	Mars	The forth planet from the sun in our solar system.
enumeration	Mercury	The first planet from the sun in our solar system.
enumeration	Mercury.Magnetosphere	The magnetosphere of the first planet from the sun in our solar system.
enumeration	Neptune	The seventh planet from the sun in our solar system.
enumeration	Planet	There are eigth planets in the solar system.
enumeration	Planet.Magnetosphere	The magnetosphere of one of the planets in the solar system.
enumeration	Pluto	The ninth (sub)planet from the sun in our solar system.
enumeration	Rhea	The second-largest moon of Saturn and the ninth largest moon in the Solar System
enumeration	Saturn	The sixth planet from the sun in our solar system.
enumeration	Saturn.Magnetosphere	The magnetosphere of the sixth planet from the sun in our solar system.
enumeration	Sun	The star upon which our solar system is centered.
enumeration	Sun.Chromosphere	The region of the Sun's (or a star's) atmosphere above the temperature minimum and below the Transition Region. The solar chromosphere is approximately 400 km to 2100 km above the photosphere, and characterized by temperatures from 4500 - 28000 K.
enumeration	Sun.Corona	The outermost atmospheric region of the Sun or a star, characterized by ionization temperatures above 10^5 K. The solar corona starts at about 2100 km above the photosphere; there is no generally defined upper limit.
enumeration	Sun.Interior	The region inside the body which is not visible from outside the body.
enumeration	Sun.Photosphere	The atmospheric layer of the Sun or a star from which continuum radiation, especially optical, is emitted to space. For the Sun, the photosphere is about 500 km thick.
enumeration	Sun.TransitionRegion	A very narrow (<100 km) layer between the chromosphere and the corona where the temperature rises abruptly from about 8000 to about 500,000 K.
enumeration	Titan	The largest moon of Saturn
enumeration	Uranus	The eighth planet from the sun in our solar system.
enumeration	Venus	The second planet from the sun in our solar

	system.
Used by	Complex Types DisplayData, NumericalData, ObservationExtent
Source	<xsd:element name="ObservedRegion" type="enumRegion"> <xsd:annotation> <xsd:documentation xml:lang="en">The portion of space measured by the instrument at the time of an observation. A region is distinguished by certain natural features or physical characteristics. It is the location of the observatory for in situ data, the location or region sensed by remote sensing observatories and the location-of-relevance for parameters that are derived from observational data.</xsd:documentation> </xsd:annotation> </xsd:element>

Element NumericalData

Namespace	http://impex-fp7.oeaw.ac.at

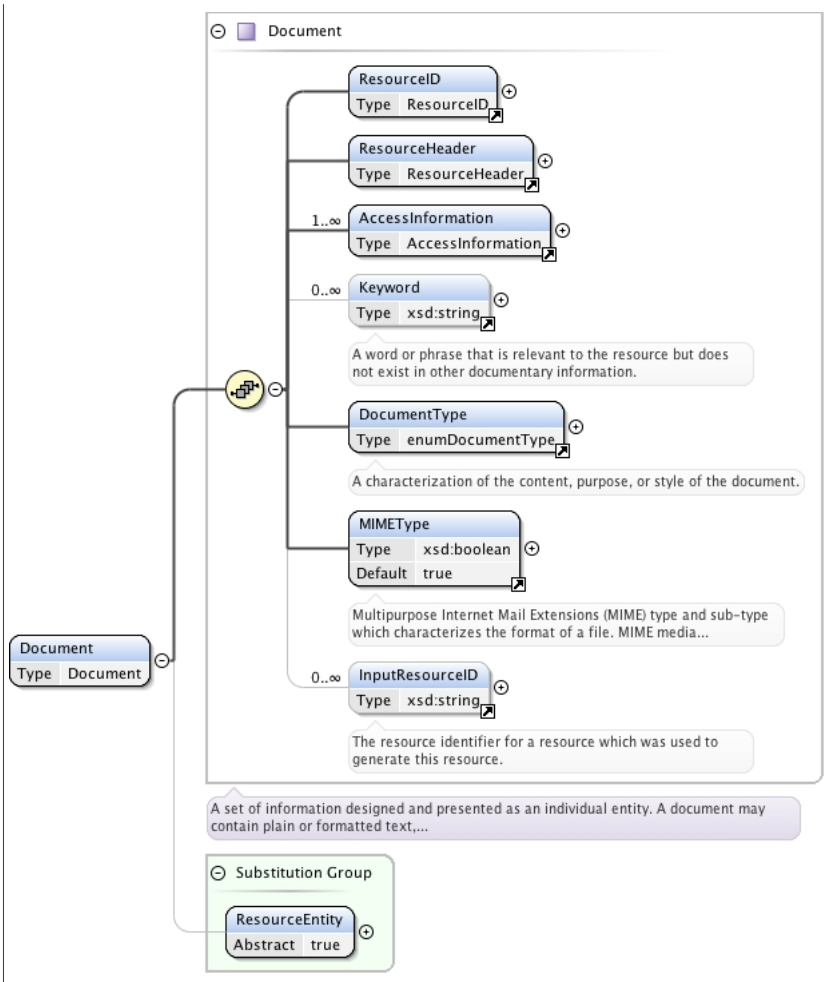
Diagram


NumericalData
ResourceID
Type ResourceID
ResourceHeader
Type ResourceHeader
1..∞
AccessInformation
Type AccessInformation
ProcessingLevel
Type enumProcessingLevel
The standard classification of the processing performed on the product.
ProviderResourceName
Type xsd:string
A short textual description of a resource used by the provider which may be used to identify a resource.
ProviderProcessingLevel
Type xsd:string
The provider specific classification of the processing performed on the product.
ProviderVersion
Type xsd:string
Describes the release or edition of the product used by the provider. The formation rule may vary between providers. It...
0..∞
InstrumentID
Type xsd:string
The identifier of an Instrument resource.
1..∞
MeasurementType
Type enumMeasurementType
A characterization of the quantitative assessment of a phenomenon.
TemporalDescription
Type TemporalDescription
0..∞
SpectralRange
Type enumSpectralRange
The general term used to describe wavelengths or frequencies within a given span of values for those quantities.
0..∞
ObservedRegion
Type enumRegion
The portion of space measured by the instrument at the time of an observation. A region is distinguished by certain...
Caveats
Type xsd:string
Information which may be important in the avoidance of the misuse of the resource, for instance instrument maladies,...
0..∞
Keyword
Type xsd:string
A word or phrase that is relevant to the resource but does not exist in other documentary information.
0..∞
InputResourceID
Type xsd:string
The resource identifier for a resource which was used to generate this resource.
0..∞
Parameter
Type Parameter
0..∞
Extension
Type Extension
Data stored as numerical values in a specified format. A Numerical Data resource is a type of "data product" which is a...
NumericalData
Type NumericalData
Substitution Group
ResourceEntity
Abstract true

Type	NumericalData
Properties	content: complex
Substitution Group Affiliation	• ResourceEntity
Model	ResourceID , ResourceHeader , AccessInformation+ , ProcessingLevel{0,1} , ProviderResourceName{0,1} , ProviderProcessingLevel{0,1} , ProviderVersion{0,1} , InstrumentID* , MeasurementType+ , TemporalDescription{0,1} , SpectralRange* , ObservedRegion* , Caveats{0,1} , Keyword* , InputResourceID* , Parameter* , Extension*
Children	AccessInformation, Caveats, Extension, InputResourceID, InstrumentID, Keyword, MeasurementType, ObservedRegion, Parameter, ProcessingLevel, ProviderProcessingLevel, ProviderResourceName, ProviderVersion, ResourceHeader, ResourceID, SpectralRange, TemporalDescription
Instance	<NumericalData xmlns="http://impex-fp7.oeaw.ac.at"> <ResourceID>{1,1}</ResourceID> <ResourceHeader>{1,1}</ResourceHeader> <AccessInformation>{1,unbounded}</AccessInformation> <ProcessingLevel>{0,1}</ProcessingLevel> <ProviderResourceName>{0,1}</ProviderResourceName> <ProviderProcessingLevel>{0,1}</ProviderProcessingLevel> <ProviderVersion>{0,1}</ProviderVersion> <InstrumentID>{0,unbounded}</InstrumentID> <MeasurementType>{1,unbounded}</MeasurementType> <TemporalDescription>{0,1}</TemporalDescription> <SpectralRange>{0,unbounded}</SpectralRange> <ObservedRegion>{0,unbounded}</ObservedRegion> <Caveats>{0,1}</Caveats> <Keyword>{0,unbounded}</Keyword> <InputResourceID>{0,unbounded}</InputResourceID> <Parameter>{0,unbounded}</Parameter> <Extension>{0,unbounded}</Extension> </NumericalData>
Source	<xsd:element name="NumericalData" type="NumericalData" substitutionGroup="ResourceEntity"/>

Element Document

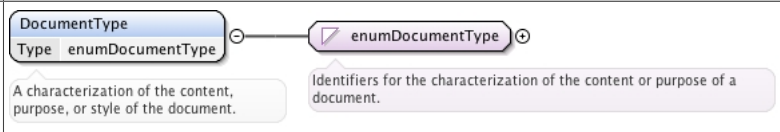
Namespace	http://impex-fp7.oeaw.ac.at

Diagram	
Type	Document
Properties	content: complex
Substitution Group Affiliation	• ResourceEntity
Model	ResourceID , ResourceHeader , AccessInformation+ , Keyword* , DocumentType , MIMEType , InputResourceID*
Children	AccessInformation, DocumentType, InputResourceID, Keyword, MIMEType, ResourceHeader, ResourceID

Instance	`<Document xmlns="http://impex-fp7.oeaw.ac.at">`
	`<ResourceID>{1,1}</ResourceID>`
	`<ResourceHeader>{1,1}</ResourceHeader>`
	`<AccessInformation>{1,unbounded}</AccessInformation>`
	`<Keyword>{0,unbounded}</Keyword>`
	`<DocumentType>{1,1}</DocumentType>`
	`<MIMEType>{1,1}</MIMEType>`
	`<InputResourceID>{0,unbounded}</InputResourceID>`
	`</Document>`

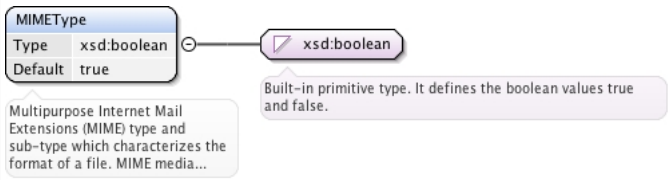
Source	`<xsd:element name="Document" type="Document" substitutionGroup="ResourceEntity"/>`

Element DocumentType

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A characterization of the content, purpose, or style of the document.
Diagram	
Type	enumDocumentType

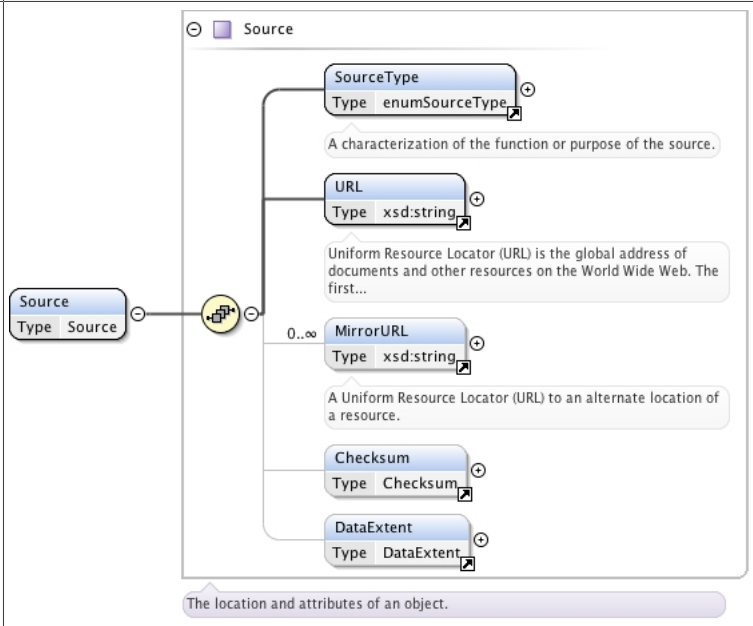
Properties	content:	simple	
Facets	enumeration	Other	
	enumeration	Poster	A set of information arranged on a single page or sheet, typically in a large format.
	enumeration	Presentation	A set of information that is used when communicating to an audience.
	enumeration	Report	A document which describes the findings of some individual or group.
	enumeration	Specification	A detailed description of the requirements and other aspects of an object or component that may be used to develop an implementation.
	enumeration	TechnicalNote	A document summarizing the performance and other technical characteristics of a product, machine, component, subsystem or software in sufficient detail to be used by an engineer or researcher.
	enumeration	WhitePaper	An authoritative report giving information or proposals on an issue.
Used by	Complex Type	Document	
Source	<xsd:element name="DocumentType" type="enumDocumentType"> <xsd:annotation> <xsd:documentation xml:lang="en">A characterization of the content, purpose, or style of the document.</xsd:documentation> </xsd:annotation> </xsd:element>		

Element MIMEType

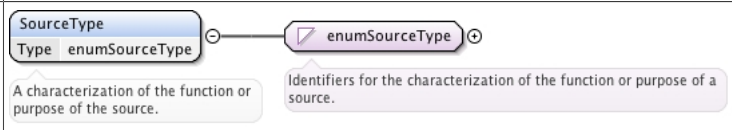
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Multipurpose Internet Mail Extensions (MIME) type and sub-type which characterizes the format of a file. MIME media types are define in RFC memorandum RFC 2046. Current MIME types are maintained by Internet Assigned Numbers Authority (IANA) at http://www.iana.org/assignments/media-types/index.html. Commonly used MIME types are: application/vnd.ms-powerpoint (ppt, pptx), application/vnd.ms-excel (xls, xlsx), text/richtext (rtx), application/postscript (eps, ps), application/pdf (pdf), application/xml-dtd (dtd), text/html (htm, html), text/xml (xsl, xml, xsd), application/x-dvi (dvi). If a document is compressed the specified MIME type should be for the uncompressed document.
Diagram	
Type	xsd:boolean

Properties	content:	simple
	default:	true
Used by	Complex Type	Document
Source	<xsd:element name="MIMEType" type="xsd:boolean" default="true"> <xsd:annotation> <xsd:documentation xml:lang="en">Multipurpose Internet Mail Extensions (MIME) type and sub-type which characterizes the format of a file. MIME media types are define in RFC memorandum RFC 2046. Current MIME types are maintained by Internet Assigned Numbers Authority (IANA) at http://www.iana.org/assignments/media-types/index.html. Commonly used MIME types are: application/vnd.ms-powerpoint (ppt, pptx), application/vnd.ms-excel (xls, xlsx), text/richtext (rtx), application/postscript (eps, ps), application/pdf (pdf), application/xml-dtd (dtd), text/html (htm, html), text/xml (xsl, xml, xsd), application/x-dvi (dvi). If a document is compressed the specified MIME type should be for the uncompressed document.</xsd:documentation> </xsd:annotation> </xsd:element>	

Element Source

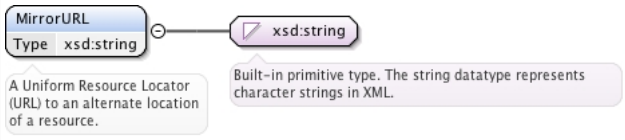
Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	Source
Properties	content: complex
Used by	Complex Type Granule
Model	SourceType , URL , MirrorURL* , Checksum{0,1} , DataExtent{0,1}
Children	Checksum, DataExtent, MirrorURL, SourceType, URL
Instance	<Source xmlns="http://impex-fp7.oeaw.ac.at"> <SourceType>{1,1}</SourceType> <URL>{1,1}</URL> <MirrorURL>{0,unbounded}</MirrorURL> <Checksum>{0,1}</Checksum> <DataExtent>{0,1}</DataExtent> </Source>
Source	<xsd:element name="Source" type="Source"/>

Element SourceType

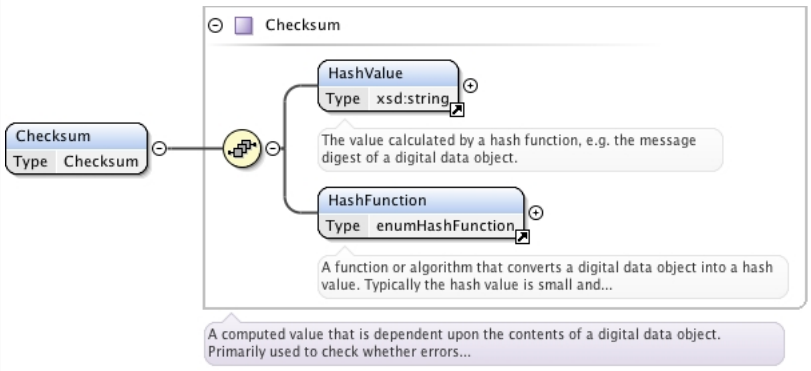
Namespace	http://impex-fp7.oeaw.ac.at		
Annotations	A characterization of the function or purpose of the source.		
Diagram			
Type	enumSourceType		
Properties	content: simple		
Facets	enumeration	Ancillary	A complementary item which can be subordinate, subsidiary, auxiliary, supplementary to the primary item.
	enumeration	Browse	A representation of an image which is suitable to reveal most or all of the details of the image.
	enumeration	Data	A collection of organized information, usually the results of experience, observation or experiment, or a set of premises. This may consist of numbers, words, or images, particularly as measurements or observations of a set of

			variables.
	enumeration	Layout	The structured arrangement of items in a collection.
	enumeration	Thumbnail	A small representation of an image which is suitable to infer what the full-sized imaged is like.
Used by	Complex Type	Source	
Source	<xsd:element name="SourceType" type="enumSourceType"> <xsd:annotation> <xsd:documentation xml:lang="en">A characterization of the function or purpose of the source.</xsd:documentation> </xsd:annotation> </xsd:element>		

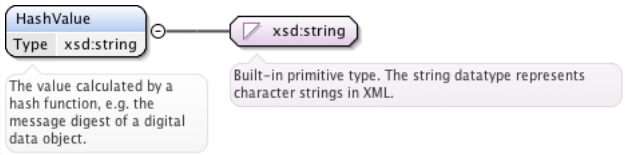
Element MirrorURL

Namespace	http://impex-fp7.oeaw.ac.at	
Annotations	A Uniform Resource Locator (URL) to an alternate location of a resource.	
Diagram		
Type	xsd:string	
Properties	content:	simple
Used by	Complex Type	Source
Source	<xsd:element name="MirrorURL" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">A Uniform Resource Locator (URL) to an alternate location of a resource.</xsd:documentation> </xsd:annotation> </xsd:element>	

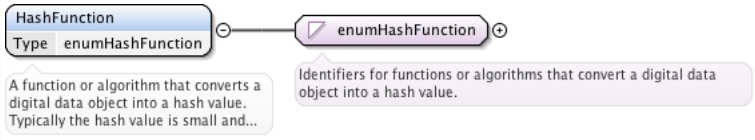
Element Checksum

Namespace	http://impex-fp7.oeaw.ac.at	
Diagram		
Type	Checksum	
Properties	content:	complex
Used by	Complex Type	Source
Model	HashValue , HashFunction	
Children	HashFunction, HashValue	
Instance	<Checksum xmlns="http://impex-fp7.oeaw.ac.at"> <HashValue>{1,1}</HashValue> <HashFunction>{1,1}</HashFunction> </Checksum>	
Source	<xsd:element name="Checksum" type="Checksum"/>	

Element HashValue

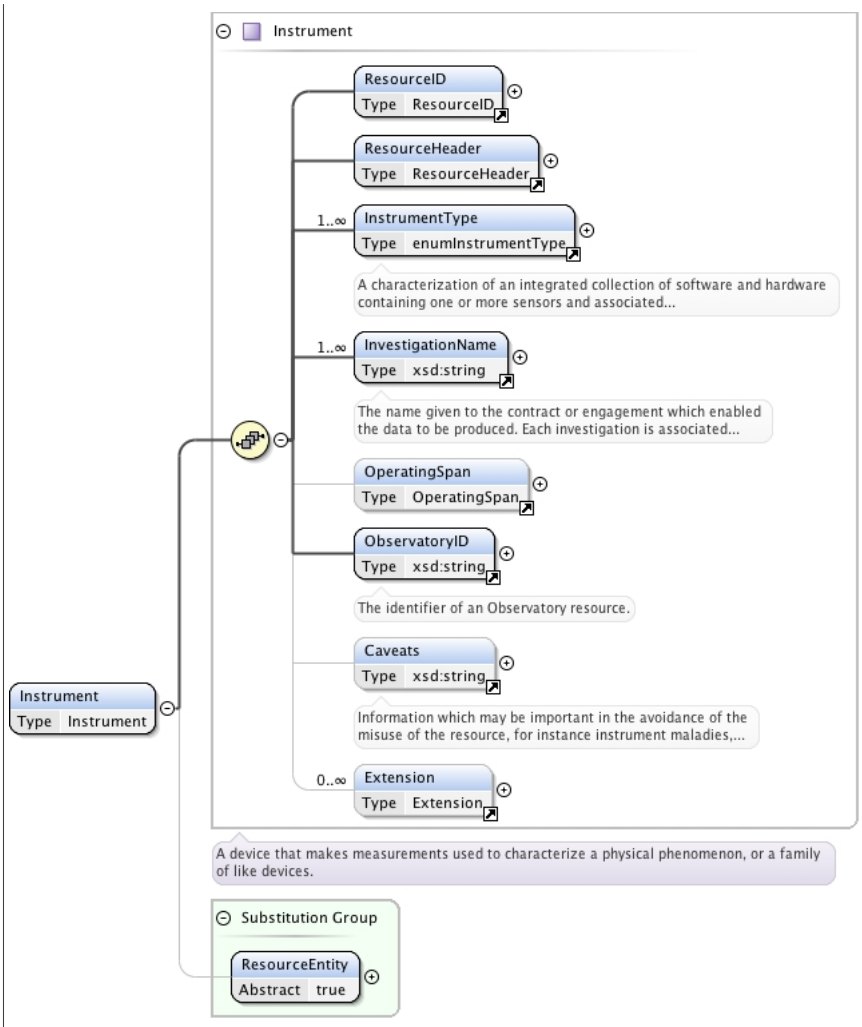
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The value calculated by a hash function, e.g. the message digest of a digital data object.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Type Checksum
Source	<xsd:element name="HashValue" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">The value calculated by a hash function, e.g. the message digest of a digital data object.</xsd:documentation> </xsd:annotation> </xsd:element>

Element HashFunction

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A function or algorithm that converts a digital data object into a hash value. Typically the hash value is small and concise when compared to the digital data object.
Diagram	
Type	enumHashFunction
Properties	content: simple
Facets	enumeration MD5 — Message Digest 5 (MD5) is a 128-bit message digest algorithm created in 1991 by Professor Ronald Rivest. enumeration SHA1 — Secure Hash Algorithm (SHA), a 160-bit message digest algorithm developed by the NSA and described in Federal Information Processing Standard (FIPS) publication 180-1. enumeration SHA256 — Secure Hash Algorithm (SHA), a 256-bit message digest algorithm developed by the NSA and described in Federal Information Processing Standard (FIPS) publication 180-1.
Used by	Complex Type Checksum
Source	<xsd:element name="HashFunction" type="enumHashFunction"> <xsd:annotation> <xsd:documentation xml:lang="en">A function or algorithm that converts a digital data object into a hash value. Typically the hash value is small and concise when compared to the digital data object.</xsd:documentation> </xsd:annotation> </xsd:element>

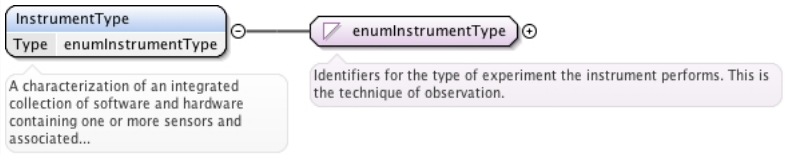
Element Instrument

Namespace	http://impex-fp7.oeaw.ac.at

Diagram	
Type	Instrument
Properties	content: complex
Substitution Group Affiliation	• ResourceEntity
Model	ResourceID , ResourceHeader , InstrumentType+ , InvestigationName+ , OperatingSpan{0,1} , ObservatoryID , Caveats{0,1} , Extension*
Children	Caveats, Extension, InstrumentType, InvestigationName, ObservatoryID, OperatingSpan, ResourceHeader, ResourceID
Instance	<Instrument xmlns="http://impex-fp7.oeaw.ac.at"> <ResourceID>{1,1}</ResourceID> <ResourceHeader>{1,1}</ResourceHeader> <InstrumentType>{1,unbounded}</InstrumentType> <InvestigationName>{1,unbounded}</InvestigationName> <OperatingSpan>{0,1}</OperatingSpan> <ObservatoryID>{1,1}</ObservatoryID> <Caveats>{0,1}</Caveats> <Extension>{0,unbounded}</Extension> </Instrument>
Source	<xsd:element name="Instrument" type="Instrument" substitutionGroup="ResourceEntity"/>

Element `InstrumentType`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A characterization of an integrated collection of software and hardware containing one or more sensors and associated controls used to produce data on an environment.

Diagram			
Type	enumInstrumentType		
Properties	content:	simple	
Facets	enumeration	Antenna	A sensor used to measure electric potential.
	enumeration	Channeltron	An instrument that detects electrons, ions, and UV-radiation, according to the principle of a secondary emission multiplier. It is typically used in electron spectroscopy and mass spectrometry.
	enumeration	Coronograph	An instrument which can image things very close to the Sun by using a disk to block the Sun's bright surface which reveals the faint solar corona and other celestial objects.
	enumeration	DoubleSphere	A dipole antenna of which the active (sensor) elements are small spheres located at the ends of two wires deployed in the equatorial plane, on opposite sides of a spinning spacecraft.
	enumeration	DustDetector	An instrument which determines the mass and speed of ambient dust particles.
	enumeration	ElectronDriftInstrument	An active experiment to measure the electron drift velocity based on sensing the displacement of a weak beam of electrons after one gyration in the ambient magnetic field.
	enumeration	ElectrostaticAnalyser	An instrument which uses charged plates to analyze the mass, charge and kinetic energies of charged particles which enter the instrument.
	enumeration	EnergeticParticleInstrument	An instrument that measures fluxes of charged particles as a function of time, direction of motion, mass, charge and/or species.
	enumeration	FaradayCup	An instrument consisting of an electrode from which electrical current is measured while a charged particle beam (electrons or ions) impinges on it. Used to determine energy spectrum and sometimes ion composition of the impinging particles.
	enumeration	FluxFeedback	A search coil whose bandwidth and signal/noise ratio are increased by the application of negative feedback at the sensor (flux) level by driving a collocated coil with a signal from the preamplifier.
	enumeration	FourierTransformSpectrograph	An instrument that determines the spectra of a radiative source, using time-domain measurements and a Fourier transform.
	enumeration	GeigerMuellerTube	An instrument which measures density of ionizing radiation based on interactions with a gas.
	enumeration	Imager	An instrument which samples the radiation from an area at one or more spectral ranges emitted or reflected by an object.
	enumeration	ImagingSpectrometer	An instrument which is a multispectral scanner with a very large number of channels (64-256 channels) with very narrow band widths.
	enumeration	Interferometer	An instrument to study the properties of two or more waves from the pattern of interference created by their superposition.
	enumeration	IonChamber	A device in which the collected electrical charge from ionization in a gas-filled cavity is taken to be the proportion to some parameter (e.g. dose or exposure) of radiation field
	enumeration	IonDrift	A device which measures the current produced by the displacement of ambient ions on a grid, thereby allowing the determination of the ion trajectory and velocity.

enumeration	LangmuirProbe	A monopole antenna associated with an instrument. The instrument applies a potential to the antenna which is swept to determine the voltage/ current characteristic. This provides information about the plasma surrounding the probe and spacecraft.
enumeration	LongWire	A dipole antenna whose active (sensor) elements are two wires deployed in the equatorial plane on opposite sides of a spinning spacecraft, and whose length is several times greater than the spacecraft diameter.
enumeration	Magnetometer	An instrument which measures the ambient magnetic field.
enumeration	MassSpectrometer	An instrument which distinguishes chemical species in terms of their different isotopic masses.
enumeration	MicrochannelPlate	An instrument used for the detection of elementary particles, ions, ultraviolet rays and soft X-rays constructed from very thin conductive glass capillaries.
enumeration	MultispectralImager	An instrument which captures images at multiple spectral ranges.
enumeration	NeutralAtomImager	An instrument which measures the quantity and properties of neutral particles over a range of angles. Measured properties can include mass and energy.
enumeration	NeutralParticleDetector	An instrument which measures the quantity and properties of neutral particles. Measured properties can include mass and plasma bulk densities.
enumeration	ParticleCorrelator	An instrument which correlates particle flux to help identify wave/particle interactions.
enumeration	ParticleDetector	An instrument which detects particle flux!!!
enumeration	Photometer	An instrument which measures the strength of electromagnetic radiation within a spectral band which can range from ultraviolet to infrared and includes the visible spectrum.
enumeration	Photopolarimeter	An instrument which measures the intensity and polarization or radiant energy. A photopolarimeter is a combination of a photometer and a polarimeter.
enumeration	Platform	A collection of components which can be positioned and oriented as a single unit. A platform may contain other platforms. For example, a spacecraft is a platform which may have components that can be articulated and are also considered platforms.
enumeration	ProportionalCounter	An instrument which measures energy of ionization radiation based on interactions with a gas.
enumeration	QuadrisphericalAnalyser	An instrument used for the 3-D detection of plasma, energetic electrons and ions, and for positive-ion composition measurements.
enumeration	Radar	An instrument that uses directional properties of returned power to infer spatial and/or other characteristics of a remote object.
enumeration	Radiometer	An instrument for detecting or measuring radiant energy. Radiometers are commonly limited to infrared radiation.
enumeration	ResonanceSounder	A combination of a radio receiver and a pulsed transmitter used to study the plasma surrounding a spacecraft by identifying resonances or cut-offs (of the wave dispersion relation), whose frequencies are related to the ambient plasma density and magnetic field. When the transmitter is off it is essentially a high frequency-resolution spectral power receiver.
enumeration	RetardingPotentialAnalyser	An instrument which measures ion temperatures and ion concentrations using a planar ion

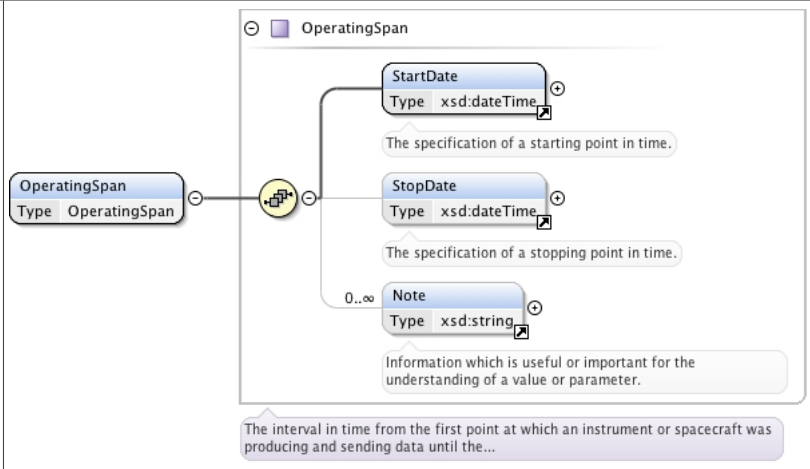
			trap.
	enumeration	Riometer	An instrument which measure the signal strength in various directions of the galactic radio signals. Variations in these signals are influenced by solar flare activity and geomagnetic storm and substorm processes.
	enumeration	ScintillationDetector	An instrument which detects flouresences of a material which is excited by high energy (ionizing) electromagnetic or charged particle radiation.
	enumeration	SearchCoil	An instrument which measures the time variation of the magnetic flux threading a loop by measurement of the electric potential difference induced between the ends of the wire.
	enumeration	Sounder	An instrument which measures the radiances from an object. A sounder may measure radiances at multiple spectral ranges.
	enumeration	SpacecraftPotentialControl	An instrument to control the electric potential of a spacecraft with respect to the ambient plasma by emitting a variable current of positive ions.
	enumeration	SpectralPowerReceiver	A radio receiver which determines the power spectral density of the electric or magnetic field, or both, at one or more frequencies.
	enumeration	Spectrometer	An instrument that measures the component wavelengths of light (or other electromagnetic radiation) by splitting the light up into its component wavelengths.
	enumeration	TimeOfFlight	An instrument which measures the time it takes for a particle to travel between two detectors.
	enumeration	Unspecified	A value which is not provided.
	enumeration	WaveformReceiver	A radio receiver which outputs the value of one or more components of the electric and/or magnetic field as a function of time.
Used by	Complex Type	Instrument	
Source	<xsd:element name="InstrumentType" type="enumInstrumentType"> <xsd:annotation> <xsd:documentation xml:lang="en">A characterization of an integrated collection of software and hardware containing one or more sensors and associated controls used to produce data on an environment.</xsd:documentation> </xsd:annotation> </xsd:element>		

Element InvestigationName

Namespace	http://impex-fp7.oeaw.ac.at	
Annotations	The name given to the contract or engagement which enabled the data to be produced. Each investigation is associated with a Principal Investigator or Guest Investigator who was responsible for the original proposal. For single PI missions each major subsystem having its own identified Team Leader may also be classed as an "Investigation" for the purposes of data archiving.	
Diagram		
Type	xsd:string	
Properties	content:	simple
Used by	Complex Type	Instrument
Source	<xsd:element name="InvestigationName" type="xsd:string"> <xsd:annotation>	

```
    <xsd:documentation xml:lang="en">The name given to the contract or engagement which enabled
 the data to be produced. Each investigation is associated with a Principal Investigator or Guest
 Investigator who was responsible for the original proposal. For single PI missions each major
 subsystem having its own identified Team Leader may also be classed as an "Investigation" for the
 purposes of data archiving.</xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

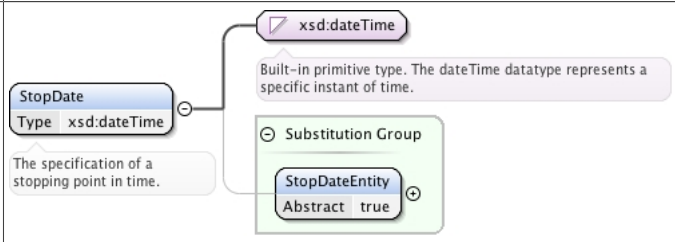
Element `OperatingSpan`

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	OperatingSpan
Properties	content: `complex`
Used by	Complex Types: Instrument, Observatory
Model	StartDate , StopDate{0,1} , Note*
Children	Note, StartDate, StopDate

Instance	`<OperatingSpan xmlns="http://impex-fp7.oeaw.ac.at">`
	`  <StartDate>{1,1}</StartDate>`
	`  <StopDate>{0,1}</StopDate>`
	`  <Note>{0,unbounded}</Note>`
	`</OperatingSpan>`

Source	`<xsd:element name="OperatingSpan" type="OperatingSpan"/>`

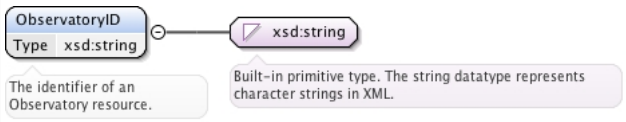
Element `StopDate`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	`The specification of a stopping point in time.`
Diagram	
Type	xsd:dateTime
Properties	content: `simple`
Substitution Group Affiliation	• StopDateEntity
Used by	Complex Types: Granule, OperatingSpan

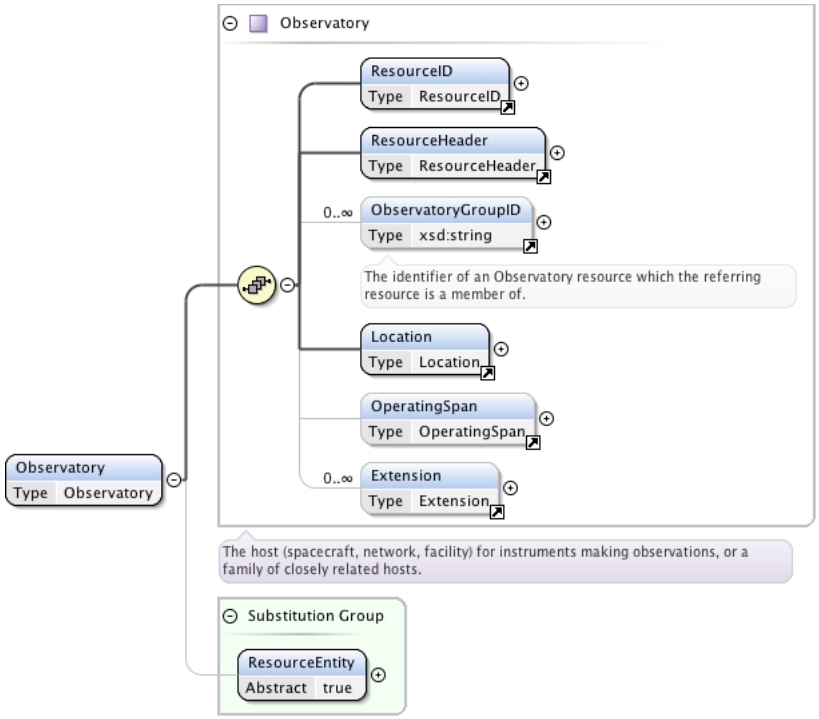
Source	`<xsd:element name="StopDate" type="xsd:dateTime" substitutionGroup="StopDateEntity">`
	`  <xsd:annotation>`
	`  <xsd:documentation xml:lang="en">The specification of a stopping point in time.</`
	`xsd:documentation>`
	`  </xsd:annotation>`

```
</xsd:element>
```

Element ObservatoryID

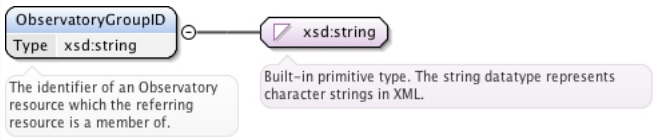
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The identifier of an Observatory resource.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Type Instrument
Source	<xsd:element name="ObservatoryID" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">The identifier of an Observatory resource.</xsd:documentation> </xsd:annotation> </xsd:element>

Element Observatory

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	Observatory
Properties	content: complex
Substitution Group Affiliation	• ResourceEntity
Model	ResourceID , ResourceHeader , ObservatoryGroupID* , Location , OperatingSpan{0,1} , Extension*
Children	Extension, Location, ObservatoryGroupID, OperatingSpan, ResourceHeader, ResourceID
Instance	<Observatory xmlns="http://impex-fp7.oeaw.ac.at"> <ResourceID>{1,1}</ResourceID> <ResourceHeader>{1,1}</ResourceHeader> <ObservatoryGroupID>{0,unbounded}</ObservatoryGroupID> <Location>{1,1}</Location> <OperatingSpan>{0,1}</OperatingSpan> <Extension>{0,unbounded}</Extension> </Observatory>

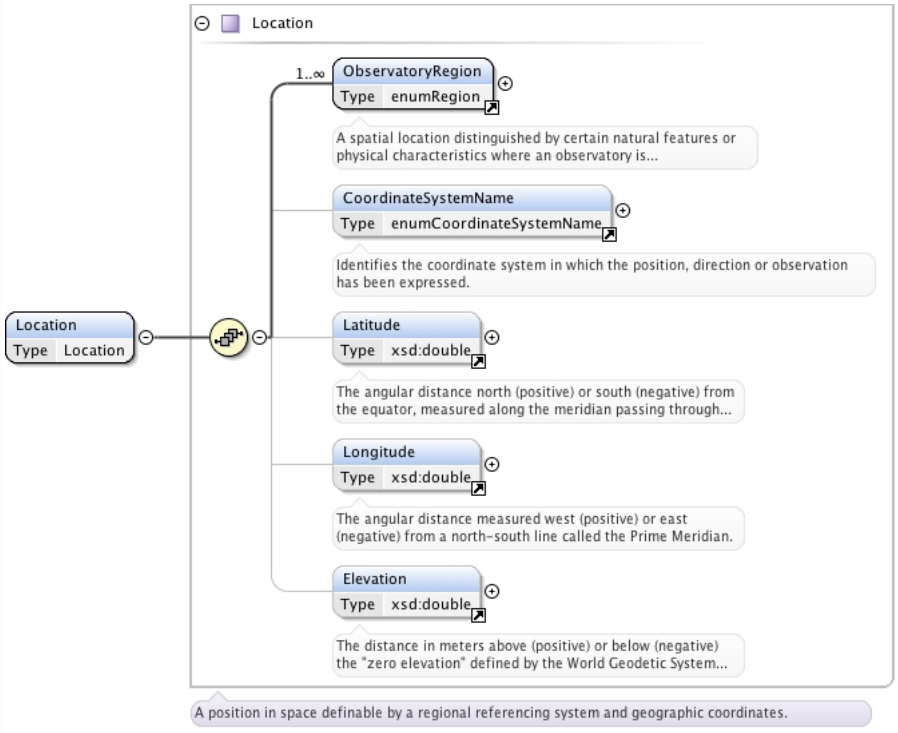
Source	`<xsd:element name="Observatory" type="Observatory" substitutionGroup="ResourceEntity"/>`

Element `ObservatoryGroupID`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The identifier of an Observatory resource which the referring resource is a member of.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Type Observatory

Source	`<xsd:element name="ObservatoryGroupID" type="xsd:string">`
	`  <xsd:annotation>`
	`  <xsd:documentation xml:lang="en">The identifier of an Observatory resource which the referring resource is a member of.</xsd:documentation>`
	`  </xsd:annotation>`
	`</xsd:element>`

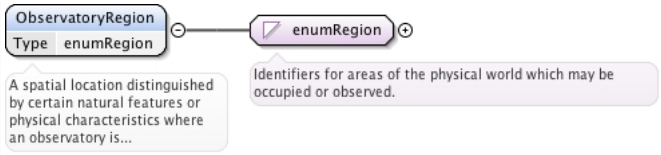
Element `Location`

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	Location
Properties	content: complex
Used by	Complex Type Observatory
Model	ObservatoryRegion+ , CoordinateSystemName{0,1} , Latitude{0,1} , Longitude{0,1} , Elevation{0,1}
Children	CoordinateSystemName, Elevation, Latitude, Longitude, ObservatoryRegion

Instance	`<Location xmlns="http://impex-fp7.oeaw.ac.at">`
	`  <ObservatoryRegion>{1,unbounded}</ObservatoryRegion>`
	`  <CoordinateSystemName>{0,1}</CoordinateSystemName>`
	`  <Latitude>{0,1}</Latitude>`
	`  <Longitude>{0,1}</Longitude>`
	`  <Elevation>{0,1}</Elevation>`
	`</Location>`

Source	`<xsd:element name="Location" type="Location"/>`

Element `ObservatoryRegion`

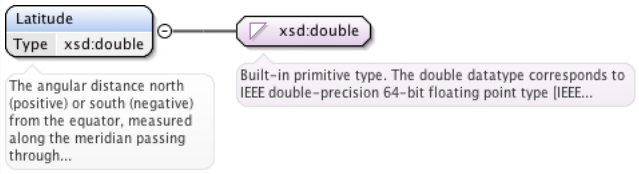
Namespace	http://impex-fp7.oeaw.ac.at		
Annotations	A spatial location distinguished by certain natural features or physical characteristics where an observatory is located.		
Diagram			
Type	enumRegion		
Properties	content:	simple	
Facets	enumeration	Asteroid	A small extraterrestrial body consisting mostly of rock and metal that is in orbit around the sun.
	enumeration	Callisto	A moon of the planet Jupiter, the second largest after Ganymede and the third-largest in the solar system
	enumeration	Comet	A relatively small extraterrestrial body consisting of a frozen mass that travels around the sun in a highly elliptical orbit.
	enumeration	Earth	The third planet from the sun in our solar system.
	enumeration	Earth.Magnetosheath	The region between the bow shock and the magnetopause, characterized by very turbulent plasma.
	enumeration	Earth.Magnetosphere	The region of space above the atmosphere or surface of the planet, and bounded by the magnetopause, that is under the direct influence of the planet's magnetic field.
	enumeration	Earth.Magnetosphere.Magnetotail	The region on the night side of the body where the magnetic filed is stretched backwards by the force of the solar wind. For Earth, the magnetotail begins at a night-side radial distance of 10 Re (X > -10Re).
	enumeration	Earth.Magnetosphere.Main	The region of the magnetosphere where the magnetic field lines are closed, but does not include the gaseous region gravitationally bound to the body.
	enumeration	Earth.Magnetosphere.Polar	The region near the pole of a body. For a magnetosphere the polar region is the area where magnetic field lines are open and includes the auroral zone.
	enumeration	Earth.Magnetosphere.RadiationBelt	The region within a magnetosphere where high-energy particles could potentially be trapped in a magnetic field.
	enumeration	Earth.NearSurface	The gaseous and possibly ionized environment of a body extending from the surface to some specified altitude. For the Earth, this altitude is 2000 km.
	enumeration	Earth.NearSurface.Atmosphere	The neutral gases surrounding a body that extends from the surface and is bound to the body by virtue of the gravitational attraction.
	enumeration	Earth.NearSurface.AuroralRegion	The region in the atmospheric where electrically-charged particles bombarding the upper atmosphere of a planet in the presence of a magnetic field produce an optical phenomenon.
	enumeration	Earth.NearSurface.EquatorialRegion	A region centered on the equator and limited in latitude by approximately 23 degrees north and south of the equator.
	enumeration	Earth.NearSurface.Ionosphere	The charged or ionized gases surrounding a body that are nominally bound to the body

		by virtue of the gravitational attraction.
enumeration	Earth.NearSurface.Ionosphere.DRegion	The Region of the ionosphere that exists approximately 50 to 95 km above the surface of the Earth. One of several layers in the ionosphere.
enumeration	Earth.NearSurface.Ionosphere.ERegion	A layer of ionised gas occurring at 90-150km above the ground. One of several layers in the ionosphere. Also called the The Kennelly-Heaviside layer.
enumeration	Earth.NearSurface.Ionosphere.FRegion	A region that contains ionized gases at a height of around 150-800 km above sea level, placing it in the thermosphere. the F region has the highest concentration of free electrons and ions anywhere in the atmosphere. It may be thought of as comprising two layers, the F1-and F2-layers. One of several layers in the ionosphere. Also known as the Appleton layer.
enumeration	Earth.NearSurface.Ionosphere.Topside	The region at the upper most areas of the ionosphere.
enumeration	Earth.NearSurface.Mesosphere	The layer of the atmosphere that extends from the Stratosphere to a range of 80 km to 85 km, temperature decreasing with height.
enumeration	Earth.NearSurface.Plasmasphere	A region of the magnetosphere consisting of low energy (cool) plasma. It is located above the ionosphere. The outer boundary of the plasmasphere is known as the plasmapause, which is defined by an order of magnitude drop in plasma density.
enumeration	Earth.NearSurface.PolarCap	The areas of the globe surrounding the poles and consisting of the region north of 60 degrees north latitude an the region south of 60 degrees south latitude.
enumeration	Earth.NearSurface.SouthAtlanticAnomalyRegion	The region where the Earth's inner van Allen radiation belt makes its closest approach to the planet's surface. The result is that, for a given altitude, the radiation intensity is higher over this region than elsewhere.
enumeration	Earth.NearSurface.Stratosphere	The layer of the atmosphere that extends from the troposphere to about 30 km, temperature increases with height. The stratosphere contains the ozone layer.
enumeration	Earth.NearSurface.Thermosphere	The layer of the atmosphere that extends from the Mesosphere to 640+ km, temperature increasing with height.
enumeration	Earth.NearSurface.Troposphere	The lowest layer of the atmosphere which begins at the surface and extends to between 7 km (4.4 mi) at the poles and 17 km (10.6 mi) at the equator, with some variation due to weather factors.
enumeration	Earth.Surface	The outermost area of a solid object.
enumeration	Enceladus	One of the innermost moons of Saturn.
enumeration	Europa	The sixth-closest moon of the planet Jupiter
enumeration	Ganymede	The biggest moon of Jupiter planet in our solar system.
enumeration	Heliosphere	The solar atmosphere extending roughly from the outer corona to the edge of the solar plasma at the heliopause separating primarily solar plasma from interstellar plasma.
enumeration	Heliosphere.Heliosheath	The region extending radially outward from the heliospheric termination shock and in which the decelerated solar wind plasma is still significant.
enumeration	Heliosphere.Inner	The region of the heliosphere extending radially outward from the solar coronal base to just inside 1 AU.
enumeration	Heliosphere.NearEarth	The heliospheric region near the Earth which extends to and includes the area near the L1 and L2 Lagrange point.
enumeration	Heliosphere.Outer	The region of the heliosphere extending radially

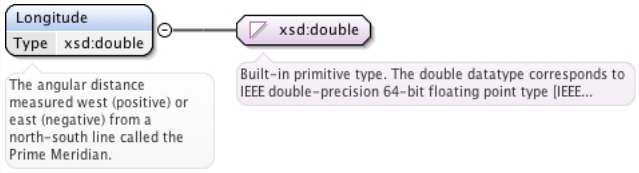
			outward from just outside 1 AU to the heliospheric termination shock.
	enumeration	Heliosphere.Remote1AU	A roughly toroidal region that includes the Earth's orbit, but exclusive of the region near the Earth.
	enumeration	Interstellar	The region between stars outside of the star's heliopause.
	enumeration	Io	The innermost of the four Galilean moons of the planet Jupiter
	enumeration	Jupiter	The fifth planet from the sun in our solar system.
	enumeration	Jupiter.Magnetosphere	The magnetosphere of the fifth planet from the sun in our solar system.
	enumeration	Mars	The forth planet from the sun in our solar system.
	enumeration	Mercury	The first planet from the sun in our solar system.
	enumeration	Mercury.Magnetosphere	The magnetosphere of the first planet from the sun in our solar system.
	enumeration	Neptune	The seventh planet from the sun in our solar system.
	enumeration	Planet	There are eigth planets in the solar system.
	enumeration	Planet.Magnetosphere	The magnetosphere of one of the planets in the solar system.
	enumeration	Pluto	The ninth (sub)planet from the sun in our solar system.
	enumeration	Rhea	The second-largest moon of Saturn and the ninth largest moon in the Solar System
	enumeration	Saturn	The sixth planet from the sun in our solar system.
	enumeration	Saturn.Magnetosphere	The magnetosphere of the sixth planet from the sun in our solar system.
	enumeration	Sun	The star upon which our solar system is centered.
	enumeration	Sun.Chromosphere	The region of the Sun's (or a star's) atmosphere above the temperature minimum and below the Transition Region. The solar chromosphere is approximately 400 km to 2100 km above the photosphere, and characterized by temperatures from 4500 - 28000 K.
	enumeration	Sun.Corona	The outermost atmospheric region of the Sun or a star, characterized by ionization temperatures above 10^5 K. The solar corona starts at about 2100 km above the photosphere; there is no generally defined upper limit.
	enumeration	Sun.Interior	The region inside the body which is not visible from outside the body.
	enumeration	Sun.Photosphere	The atmospheric layer of the Sun or a star from which continuum radiation, especially optical, is emitted to space. For the Sun, the photosphere is about 500 km thick.
	enumeration	Sun.TransitionRegion	A very narrow (<100 km) layer between the chromosphere and the corona where the temperature rises abruptly from about 8000 to about 500,000 K.
	enumeration	Titan	The largest moon of Saturn
	enumeration	Uranus	The eighth planet from the sun in our solar system.
	enumeration	Venus	The second planet from the sun in our solar system.
Used by	Complex Type	Location	
Source	<xsd:element name="ObservatoryRegion" type="enumRegion"> <xsd:annotation> <xsd:documentation xml:lang="en">A spatial location distinguished by certain natural features or physical characteristics where an observatory is located.</xsd:documentation> </xsd:annotation>		

```
</xsd:element>
```

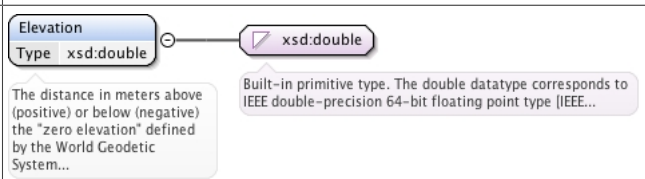
Element Latitude

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The angular distance north (positive) or south (negative) from the equator, measured along the meridian passing through the point.
Diagram	
Type	xsd:double
Properties	content: simple
Used by	Complex Type: Location
Source	`<xsd:element name="Latitude" type="xsd:double"><xsd:annotation><xsd:documentation xml:lang="en">The angular distance north (positive) or south (negative) from the equator, measured along the meridian passing through the point.</xsd:documentation></xsd:annotation></xsd:element>`

Element Longitude

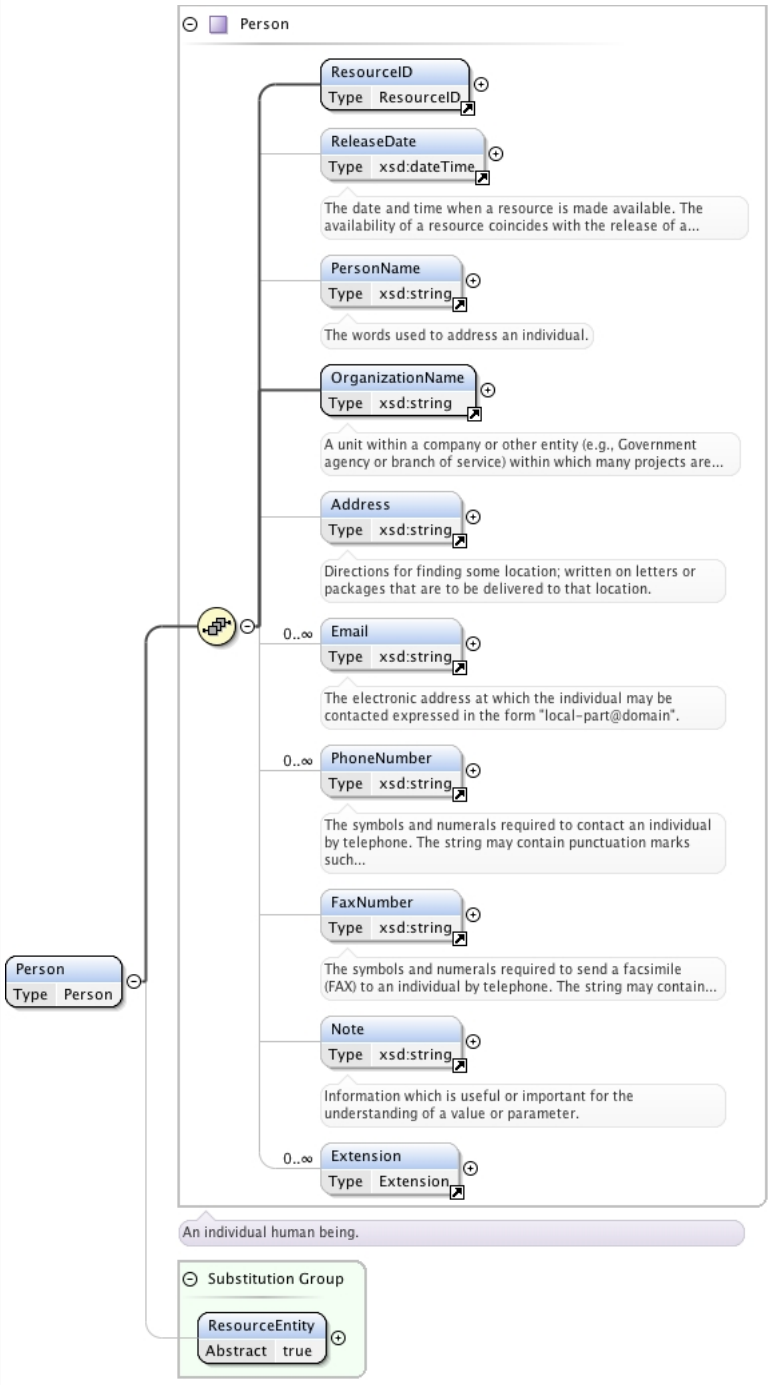
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The angular distance measured west (positive) or east (negative) from a north-south line called the Prime Meridian.
Diagram	
Type	xsd:double
Properties	content: simple
Used by	Complex Type: Location
Source	`<xsd:element name="Longitude" type="xsd:double"><xsd:annotation><xsd:documentation xml:lang="en">The angular distance measured west (positive) or east (negative) from a north-south line called the Prime Meridian.</xsd:documentation></xsd:annotation></xsd:element>`

Element Elevation

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The distance in meters above (positive) or below (negative) the "zero elevation" defined by the World Geodetic System reference frame (WGS84).
Diagram	
Type	xsd:double

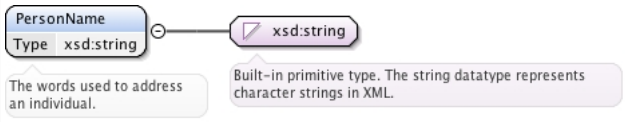
Properties	content: simple
Used by	Complex Type Location
Source	<xsd:element name="Elevation" type="xsd:double"> <xsd:annotation> <xsd:documentation xml:lang="en">The distance in meters above (positive) or below (negative) the "zero elevation" defined by the World Geodetic System reference frame (WGS84).</xsd:documentation> </xsd:annotation> </xsd:element>

Element Person

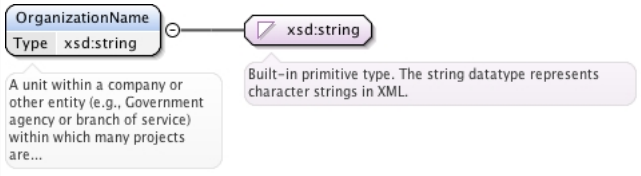
Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	Person
Properties	content: complex

Substitution Group Affiliation	• ResourceEntity
Model	ResourceID , ReleaseDate{0,1} , PersonName{0,1} , OrganizationName , Address{0,1} , Email* , PhoneNumber* , FaxNumber{0,1} , Note{0,1} , Extension*
Children	Address, Email, Extension, FaxNumber, Note, OrganizationName, PersonName, PhoneNumber, ReleaseDate, ResourceID
Instance	<Person xmlns="http://impex-fp7.oeaw.ac.at"> <ResourceID>{1,1}</ResourceID> <ReleaseDate>{0,1}</ReleaseDate> <PersonName>{0,1}</PersonName> <OrganizationName>{1,1}</OrganizationName> <Address>{0,1}</Address> <Email>{0,unbounded}</Email> <PhoneNumber>{0,unbounded}</PhoneNumber> <FaxNumber>{0,1}</FaxNumber> <Note>{0,1}</Note> <Extension>{0,unbounded}</Extension> </Person>
Source	<xsd:element name="Person" type="Person" substitutionGroup="ResourceEntity"/>

Element PersonName

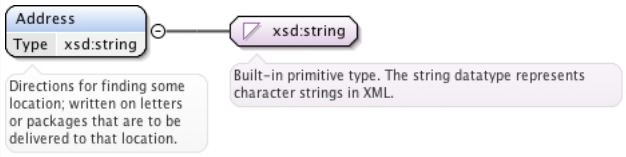
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The words used to address an individual.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Type Person
Source	<xsd:element name="PersonName" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">The words used to address an individual.</xsd:documentation> </xsd:annotation> </xsd:element>

Element OrganizationName

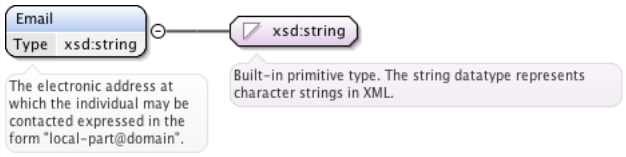
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A unit within a company or other entity (e.g., Government agency or branch of service) within which many projects are managed as a whole.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Type Person
Source	<xsd:element name="OrganizationName" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">A unit within a company or other entity (e.g., Government agency or branch of service) within which many projects are managed as a whole.</xsd:documentation> </xsd:annotation> </xsd:element>

Element Address

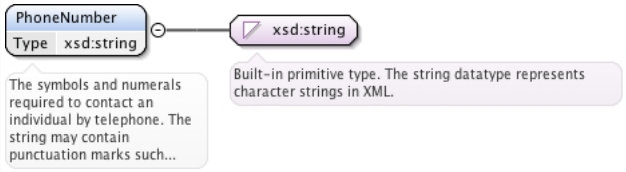
Namespace	http://impex-fp7.oeaw.ac.at

Annotations	Directions for finding some location; written on letters or packages that are to be delivered to that location.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Type Person
Source	<xsd:element name="Address" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">Directions for finding some location; written on letters or packages that are to be delivered to that location.</xsd:documentation> </xsd:annotation> </xsd:element>

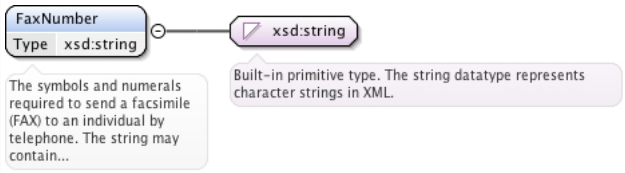
Element Email

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The electronic address at which the individual may be contacted expressed in the form "local-part@domain".
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Type Person
Source	<xsd:element name="Email" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">The electronic address at which the individual may be contacted expressed in the form "local-part@domain".</xsd:documentation> </xsd:annotation> </xsd:element>

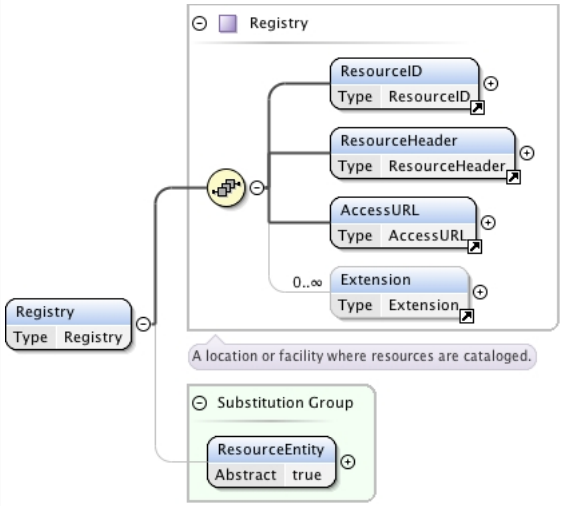
Element PhoneNumber

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The symbols and numerals required to contact an individual by telephone. The string may contain punctuation marks such as dash (-) or dot (.) to separate fields within the string.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Type Person
Source	<xsd:element name="PhoneNumber" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">The symbols and numerals required to contact an individual by telephone. The string may contain punctuation marks such as dash (-) or dot (.) to separate fields within the string.</xsd:documentation> </xsd:annotation> </xsd:element>

Element FaxNumber

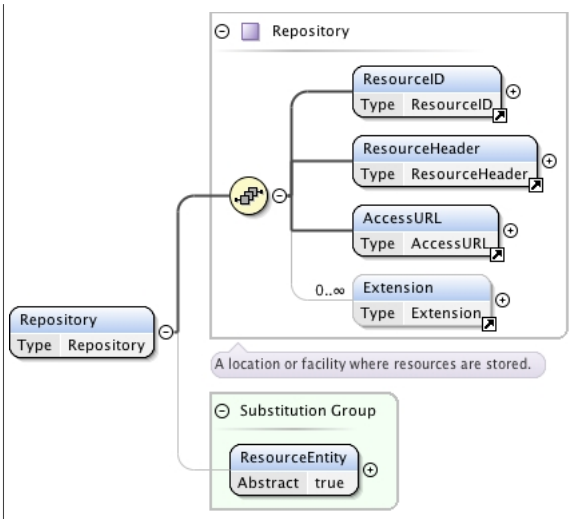
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The symbols and numerals required to send a facsimile (FAX) to an individual by telephone. The string may contain punctuation marks such as dash (-) or dot (.) to separate fields within the string.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Type Person
Source	<xsd:element name="FaxNumber" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">The symbols and numerals required to send a facsimile (FAX) to an individual by telephone. The string may contain punctuation marks such as dash (-) or dot (.) to separate fields within the string.</xsd:documentation> </xsd:annotation> </xsd:element>

Element Registry

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	Registry
Properties	content: complex
Substitution Group Affiliation	• ResourceEntity
Model	ResourceID , ResourceHeader , AccessURL , Extension*
Children	AccessURL, Extension, ResourceHeader, ResourceID
Instance	<Registry xmlns="http://impex-fp7.oeaw.ac.at"> <ResourceID>{1,1}</ResourceID> <ResourceHeader>{1,1}</ResourceHeader> <AccessURL>{1,1}</AccessURL> <Extension>{0,unbounded}</Extension> </Registry>
Source	<xsd:element name="Registry" type="Registry" substitutionGroup="ResourceEntity"/>

Element Repository

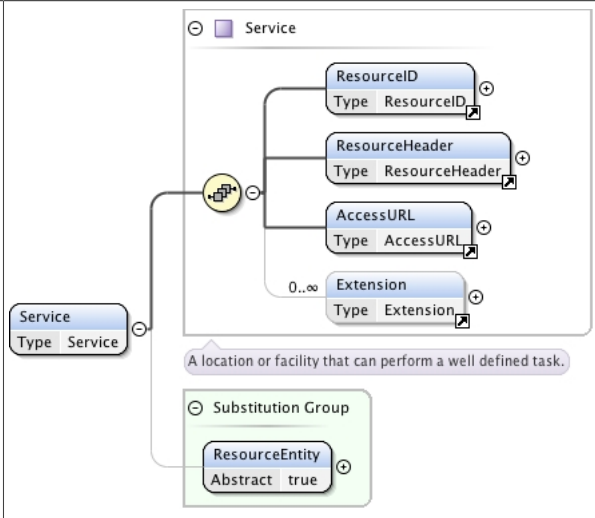
Namespace	http://impex-fp7.oeaw.ac.at

Diagram	
Type	Repository
Properties	content: complex
Substitution Group Affiliation	• ResourceEntity
Model	ResourceID , ResourceHeader , AccessURL , Extension*
Children	AccessURL, Extension, ResourceHeader, ResourceID

Instance	`<Repository xmlns="http://impex-fp7.oeaw.ac.at">`
	`  <ResourceID>{1,1}</ResourceID>`
	`  <ResourceHeader>{1,1}</ResourceHeader>`
	`  <AccessURL>{1,1}</AccessURL>`
	`  <Extension>{0,unbounded}</Extension>`
	`</Repository>`

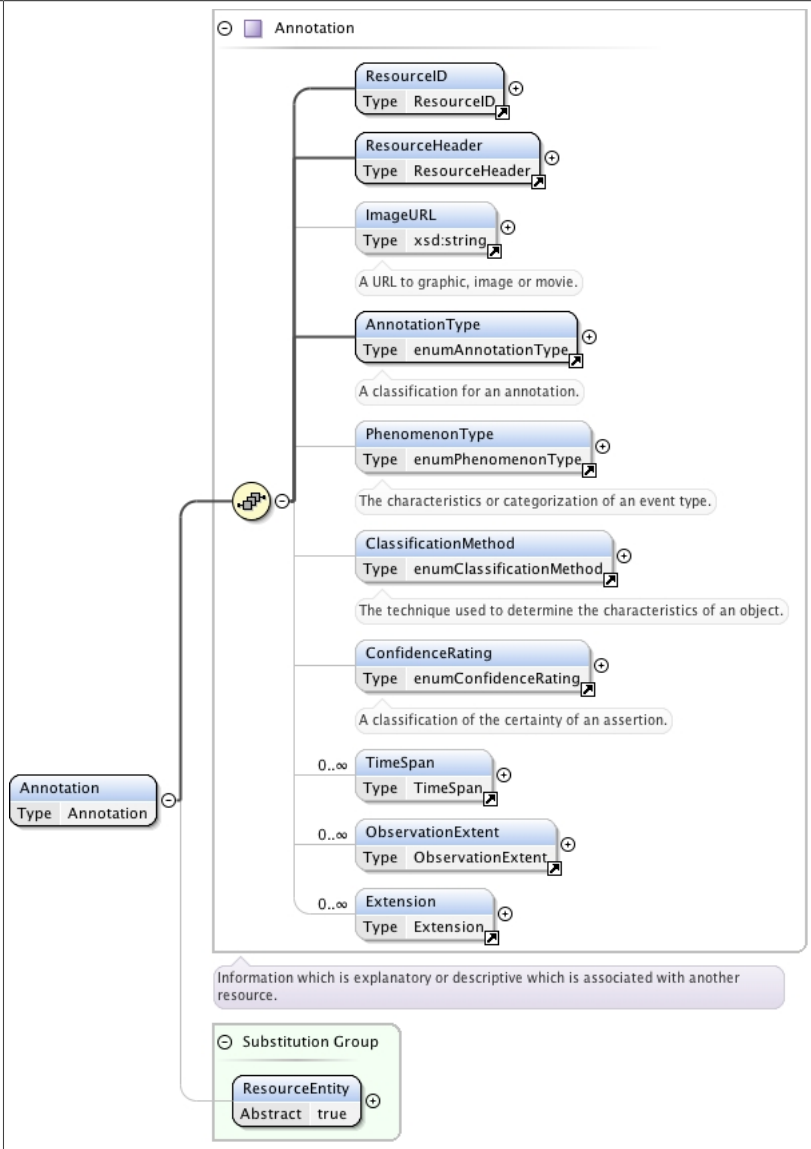
Source	`<xsd:element name="Repository" type="Repository" substitutionGroup="ResourceEntity"/>`

Element Service

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	Service
Properties	content: complex
Substitution Group Affiliation	• ResourceEntity
Model	ResourceID , ResourceHeader , AccessURL , Extension*
Children	AccessURL, Extension, ResourceHeader, ResourceID
Instance	`<Service xmlns="http://impex-fp7.oeaw.ac.at">`

	<ResourceID>{1,1}</ResourceID> <ResourceHeader>{1,1}</ResourceHeader> <AccessURL>{1,1}</AccessURL> <Extension>{0,unbounded}</Extension> </Service>
Source	<xsd:element name="Service" type="Service" substitutionGroup="ResourceEntity"/>

Element Annotation

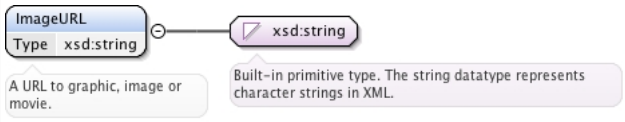
Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	Annotation
Properties	content: complex
Substitution Group Affiliation	• ResourceEntity
Model	ResourceID , ResourceHeader , ImageURL{0,1} , AnnotationType , PhenomenonType{0,1} , ClassificationMethod{0,1} , ConfidenceRating{0,1} , TimeSpan* , ObservationExtent* , Extension*
Children	AnnotationType, ClassificationMethod, ConfidenceRating, Extension, ImageURL, ObservationExtent, PhenomenonType, ResourceHeader, ResourceID, TimeSpan
Instance	<Annotation xmlns="http://impex-fp7.oeaw.ac.at"> <ResourceID>{1,1}</ResourceID> <ResourceHeader>{1,1}</ResourceHeader> <ImageURL>{0,1}</ImageURL> <AnnotationType>{1,1}</AnnotationType> <PhenomenonType>{0,1}</PhenomenonType>

```
  <ClassificationMethod>{0,1}</ClassificationMethod>
  <ConfidenceRating>{0,1}</ConfidenceRating>
  <TimeSpan>{0,unbounded}</TimeSpan>
  <ObservationExtent>{0,unbounded}</ObservationExtent>
  <Extension>{0,unbounded}</Extension>
</Annotation>
```

Source

```
<xsd:element name="Annotation" type="Annotation" substitutionGroup="ResourceEntity"/>
```

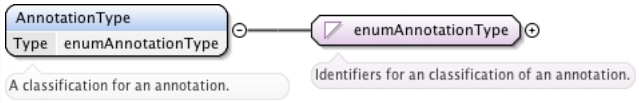
Element ImageURL

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A URL to graphic, image or movie.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Type Annotation

Source

```
<xsd:element name="ImageURL" type="xsd:string">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">A URL to graphic, image or movie.</xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

Element AnnotationType

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A classification for an annotation.
Diagram	
Type	enumAnnotationType
Properties	content: simple

Facets

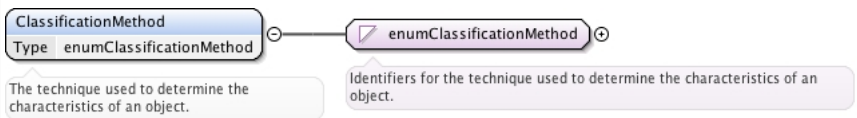
enumeration	Anomaly	An interval where measurements or observations may be adversely affected.
enumeration	Event	An action or observation which occurs at a point in time.
enumeration	Feature	A prominent or distinctive characteristic that occurs at a location or persists over a period of time.

Used by	Complex Type Annotation

Source

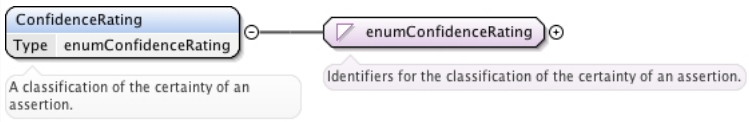
```
<xsd:element name="AnnotationType" type="enumAnnotationType">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">A classification for an annotation.</xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

Element ClassificationMethod

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The technique used to determine the characteristics of an object.
Diagram	
Type	enumClassificationMethod
Properties	content: simple

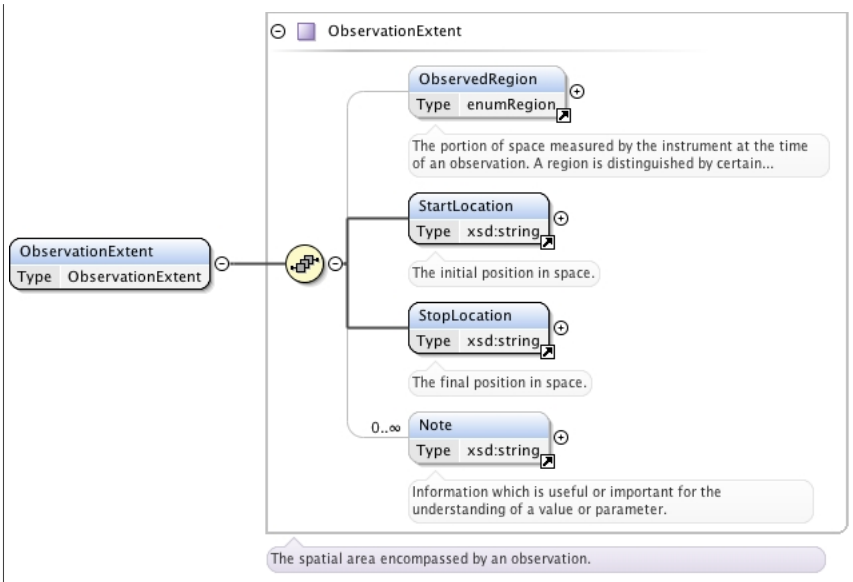
Facets	enumeration	Automatic	Determined by the analysis or assessment performed by a program or server.
	enumeration	Inferred	Determined by the analysis of other information or resources.
	enumeration	Inspection	Determined by the analysis or assessment performed by a person.
Used by	Complex Type	Annotation	
Source	<xsd:element name="ClassificationMethod" type="enumClassificationMethod"> <xsd:annotation> <xsd:documentation xml:lang="en">The technique used to determine the characteristics of an object.</xsd:documentation> </xsd:annotation> </xsd:element>		

Element ConfidenceRating

Namespace	http://impex-fp7.oeaw.ac.at		
Annotations	A classification of the certainty of an assertion.		
Diagram			
Type	enumConfidenceRating		
Properties	content:	simple	
Facets	enumeration	Probable	Likely given the available evidence. Considered in the range of 4-7 on a scale of 0-10.
	enumeration	Strong	Highly likely given the available evidence. Considered in the range of 7-10 on a scale of 0-10.
	enumeration	Unlikely	Not likely given the available evidence. Considered in the range of 0 on a scale of 0-10.
	enumeration	Weak	Slightly likely given the available evidence. Considered in the range of 1-4 on a scale of 0-10.
Used by	Complex Type	Annotation	
Source	<xsd:element name="ConfidenceRating" type="enumConfidenceRating"> <xsd:annotation> <xsd:documentation xml:lang="en">A classification of the certainty of an assertion.</xsd:documentation> </xsd:annotation> </xsd:element>		

Element ObservationExtent

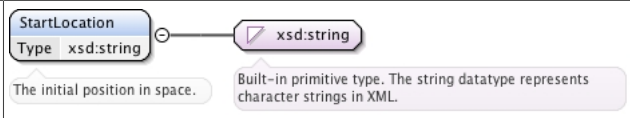
Namespace	http://impex-fp7.oeaw.ac.at

Diagram	
Type	ObservationExtent
Properties	content: complex
Used by	Complex Type Annotation
Model	ObservedRegion{0,1} , StartLocation , StopLocation , Note*
Children	Note, ObservedRegion, StartLocation, StopLocation

Instance	`<ObservationExtent xmlns="http://impex-fp7.oeaw.ac.at">`
	`<ObservedRegion>{0,1}</ObservedRegion>`
	`<StartLocation>{1,1}</StartLocation>`
	`<StopLocation>{1,1}</StopLocation>`
	`<Note>{0,unbounded}</Note>`
	`</ObservationExtent>`

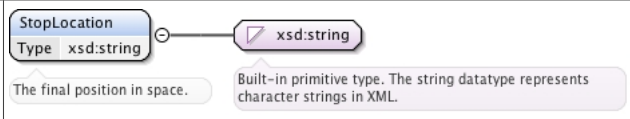
Source	`<xsd:element name="ObservationExtent" type="ObservationExtent"/>`

Element StartLocation

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The initial position in space.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Type ObservationExtent

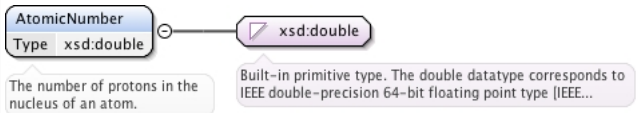
Source	`<xsd:element name="StartLocation" type="xsd:string">`
	`<xsd:annotation>`
	`<xsd:documentation xml:lang="en">The initial position in space.</xsd:documentation>`
	`</xsd:annotation>`
	`</xsd:element>`

Element StopLocation

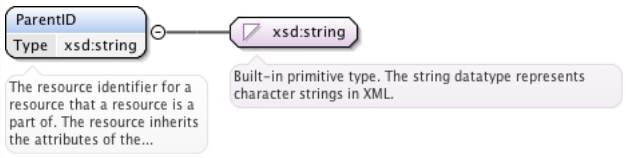
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The final position in space.
Diagram	
Type	xsd:string
Properties	content: simple

Used by	Complex Type ObservationExtent
Source	<xsd:element name="StopLocation" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">The final position in space.</xsd:documentation> </xsd:annotation> </xsd:element>

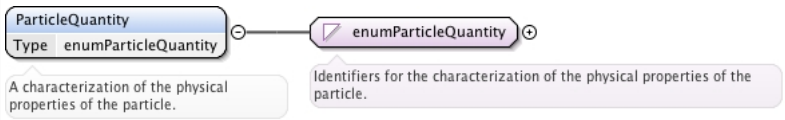
Element AtomicNumber

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The number of protons in the nucleus of an atom.
Diagram	
Type	xsd:double
Properties	content: simple
Used by	Complex Types InputPopulation, Particle
Source	<xsd:element name="AtomicNumber" type="xsd:double"> <xsd:annotation> <xsd:documentation xml:lang="en">The number of protons in the nucleus of an atom.</ xsd:documentation> </xsd:annotation> </xsd:element>

Element ParentID

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The resource identifier for a resource that a resource is a part of. The resource inherits the attributes of the referenced resource. Attributes defined in the resource override attributes of the parent in the manner prescribed by the containing resource.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Type Granule
Source	<xsd:element name="ParentID" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">The resource identifier for a resource that a resource is a part of. The resource inherits the attributes of the referenced resource. Attributes defined in the resource override attributes of the parent in the manner prescribed by the containing resource.</ xsd:documentation> </xsd:annotation> </xsd:element>

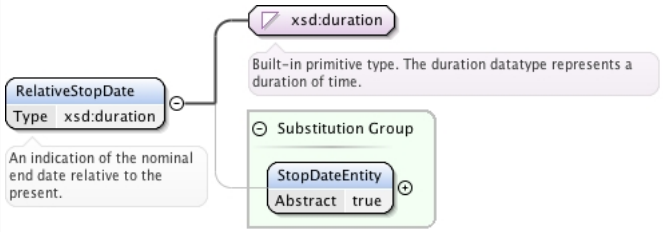
Element ParticleQuantity

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A characterization of the physical properties of the particle.
Diagram	
Type	enumParticleQuantity

Properties	content:	simple	
Facets	enumeration	ArrivalDirection	An angular measure of the direction from which an energetic particle or photon was incident on a detector. The angles may be measured in any coordinate system.
	enumeration	AtomicNumberDetected	The number of protons in the nucleus of an atom as determined by a detector.
	enumeration	AverageChargeState	A measure of the composite deficit (positive) or excess (negative) of electrons with respect to protons.
	enumeration	ChargeState	Charge of a fully or partially stripped ion, in units of the charge of a proton. Charge state of a bare proton = 1.
	enumeration	CountRate	The number of events per unit time.
	enumeration	Counts	The number of detection events occurring in a detector over the detector accumulation time.
	enumeration	Energy	The capacity for doing work as measured by the capability of doing work (potential energy) or the conversion of this capability to motion (kinetic energy)
	enumeration	EnergyDensity	The amount of energy per unit volume.
	enumeration	EnergyFlux	The amount of energy passing through a unit area in a unit time.
	enumeration	FlowSpeed	The rate at which particles or energy is passing through a unit area in a unit time.
	enumeration	FlowVelocity	The volume of matter passing through a unit area perpendicular to the direction of flow in a unit of time.
	enumeration	Fluence	The time integral of a flux. A fluence does not have any "per unit time" in its units.
	enumeration	Gyrofrequency	The number of gyrations around a magnetic guiding center (field line) a charged particle makes per unit time due to the Lorentz force.
	enumeration	HeatFlux	Flow of thermal energy through a gas or plasma; typically computed as third moment of a distribution function.
	enumeration	Mass	The measure of inertia (mass) of individual objects (e.g., aerosols).
	enumeration	MassDensity	The mass of particles per unit volume.
	enumeration	MassNumber	The total number of protons and neutrons (together known as nucleons) in an atomic nucleus.
	enumeration	NumberDensity	The number of particles per unit volume.
	enumeration	NumberFlux	The number of particles passing a unit area in unit time, possibly also per unit energy (or equivalent) and/or per unit look direction.
	enumeration	ParticleRadius	The mean radius for a Gaussian distribution of particles with an axial ratio of 2 and a distribution width that varies as 0.5 radius. A value of zero means no cloud was detected.
	enumeration	PhaseSpaceDensity	The number of particles per unit volume in the six-dimensional space of position and velocity.
	enumeration	PlasmaFrequency	A number-density-dependent characteristic frequency of a plasma.
	enumeration	Pressure	The force per unit area exerted by a particle distribution or field.
	enumeration	SonicMachNumber	The ratio of the bulk flow speed to the speed of sound in the medium.
	enumeration	SoundSpeed	The speed at which sound travels through a medium.
	enumeration	Temperature	A measure of the kinetic energy of random motion with respect to the average. Temperature is properly defined only for an equilibrium particle distribution (Maxwellian distribution).

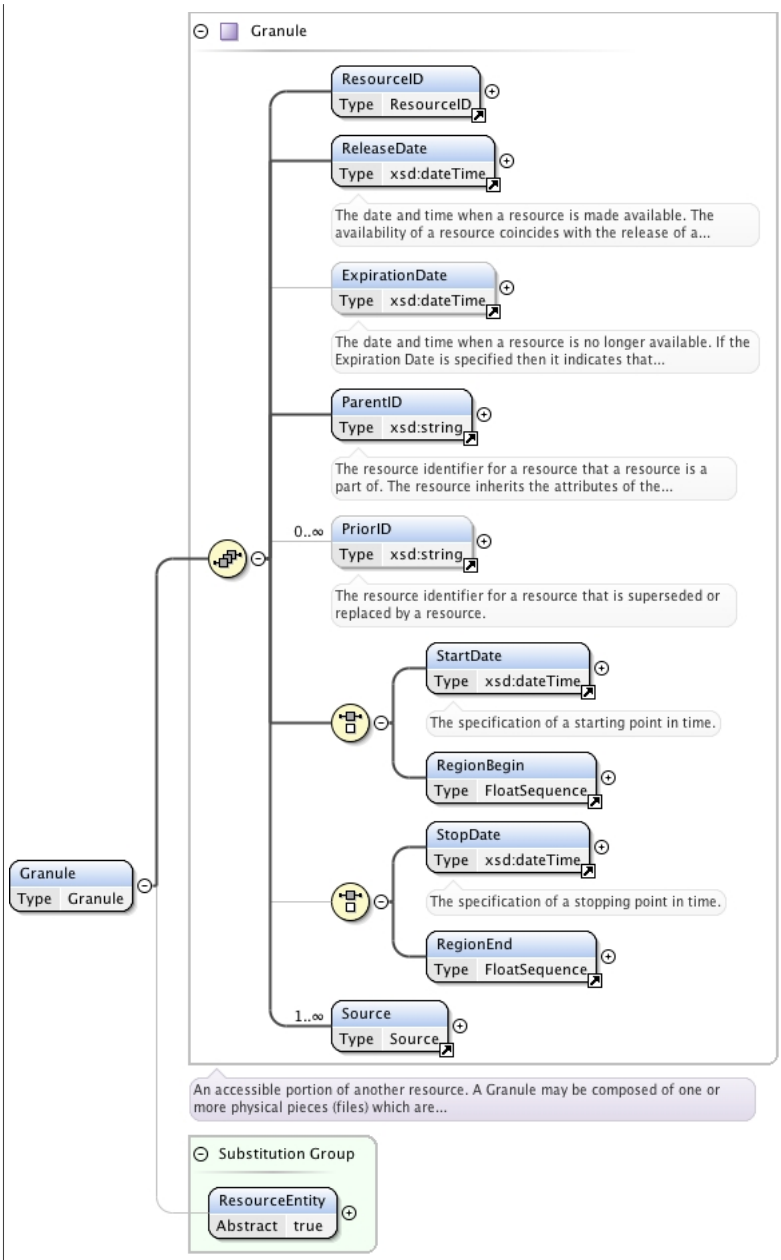
	enumeration	ThermalSpeed	For a Maxwellian distribution, the difference between the mean speed and the speed within which ~69% (one sigma) of all the members of the speed distribution occur.
	enumeration	Velocity	Rate of change of position. Also used for the average velocity of a collection of particles, also referred to as "bulk velocity".
Used by	Complex Type	Particle	
Source	<xsd:element name="ParticleQuantity" type="enumParticleQuantity"> <xsd:annotation> <xsd:documentation xml:lang="en">A characterization of the physical properties of the particle.</xsd:documentation> </xsd:annotation> </xsd:element>		

Element RelativeStopDate

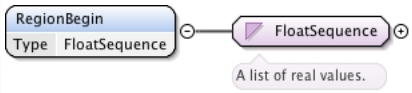
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	An indication of the nominal end date relative to the present.
Diagram	
Type	xsd:duration
Properties	content: simple
Substitution Group Affiliation	• StopDateEntity
Source	<xsd:element name="RelativeStopDate" type="xsd:duration" substitutionGroup="StopDateEntity"> <xsd:annotation> <xsd:documentation xml:lang="en">An indication of the nominal end date relative to the present.</xsd:documentation> </xsd:annotation> </xsd:element>

Element Granule

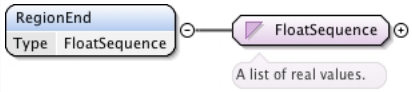
Namespace	http://impex-fp7.oeaw.ac.at

Diagram	
Type	Granule
Properties	content: complex
Substitution Group Affiliation	• ResourceEntity
Model	ResourceID , ReleaseDate , ExpirationDate{0,1} , ParentID , PriorID* , (StartDate | RegionBegin) , (StopDate | RegionEnd) , Source+
Children	ExpirationDate, ParentID, PriorID, RegionBegin, RegionEnd, ReleaseDate, ResourceID, Source, StartDate, StopDate
Instance	<Granule xmlns="http://impex-fp7.oeaw.ac.at"> <ResourceID>{1,1}</ResourceID> <ReleaseDate>{1,1}</ReleaseDate> <ExpirationDate>{0,1}</ExpirationDate> <ParentID>{1,1}</ParentID> <PriorID>{0,unbounded}</PriorID> <StartDate>{1,1}</StartDate> <RegionBegin>{1,1}</RegionBegin> <StopDate>{1,1}</StopDate> <RegionEnd>{1,1}</RegionEnd> <Source>{1,unbounded}</Source> </Granule>
Source	<xsd:element name="Granule" type="Granule" substitutionGroup="ResourceEntity"/>

Element RegionBegin

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	FloatSequence
Properties	content: simple
Used by	Complex Type Granule Element Group CubesDescription
Source	`<xsd:element name="RegionBegin" type="FloatSequence"/>`

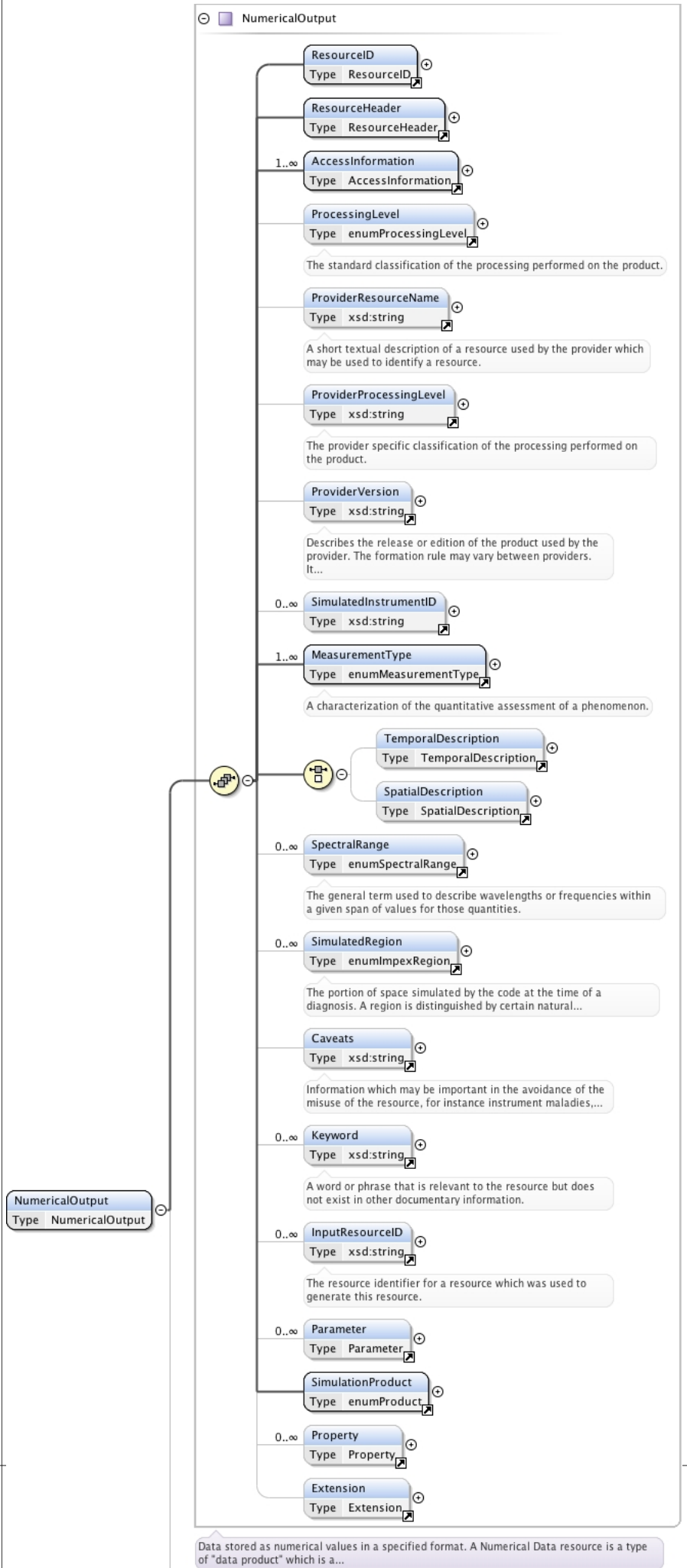
Element RegionEnd

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	FloatSequence
Properties	content: simple
Used by	Complex Type Granule Element Group CubesDescription
Source	`<xsd:element name="RegionEnd" type="FloatSequence"/>`

Element NumericalOutput

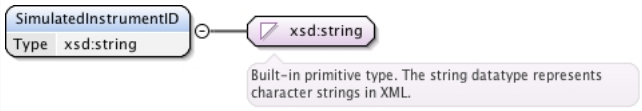
Namespace	http://impex-fp7.oeaw.ac.at

Diagram


NumericalOutput
ResourceID
Type ResourceID
ResourceHeader
Type ResourceHeader
1..∞
AccessInformation
Type AccessInformation
ProcessingLevel
Type enumProcessingLevel
The standard classification of the processing performed on the product.
ProviderResourceName
Type xsd:string
A short textual description of a resource used by the provider which may be used to identify a resource.
ProviderProcessingLevel
Type xsd:string
The provider specific classification of the processing performed on the product.
ProviderVersion
Type xsd:string
Describes the release or edition of the product used by the provider. The formation rule may vary between providers. It...
0..∞
SimulatedInstrumentID
Type xsd:string
1..∞
MeasurementType
Type enumMeasurementType
A characterization of the quantitative assessment of a phenomenon.
TemporalDescription
Type TemporalDescription
SpatialDescription
Type SpatialDescription
0..∞
SpectralRange
Type enumSpectralRange
The general term used to describe wavelengths or frequencies within a given span of values for those quantities.
0..∞
SimulatedRegion
Type enumImpexRegion
The portion of space simulated by the code at the time of a diagnosis. A region is distinguished by certain natural...
Caveats
Type xsd:string
Information which may be important in the avoidance of the misuse of the resource, for instance instrument maladies,...
0..∞
Keyword
Type xsd:string
A word or phrase that is relevant to the resource but does not exist in other documentary information.
0..∞
InputResourceID
Type xsd:string
The resource identifier for a resource which was used to generate this resource.
0..∞
Parameter
Type Parameter
SimulationProduct
Type enumProduct
0..∞
Property
Type Property
Extension
Type Extension
Data stored as numerical values in a specified format. A Numerical Data resource is a type of "data product" which is a...
NumericalOutput
Type NumericalOutput

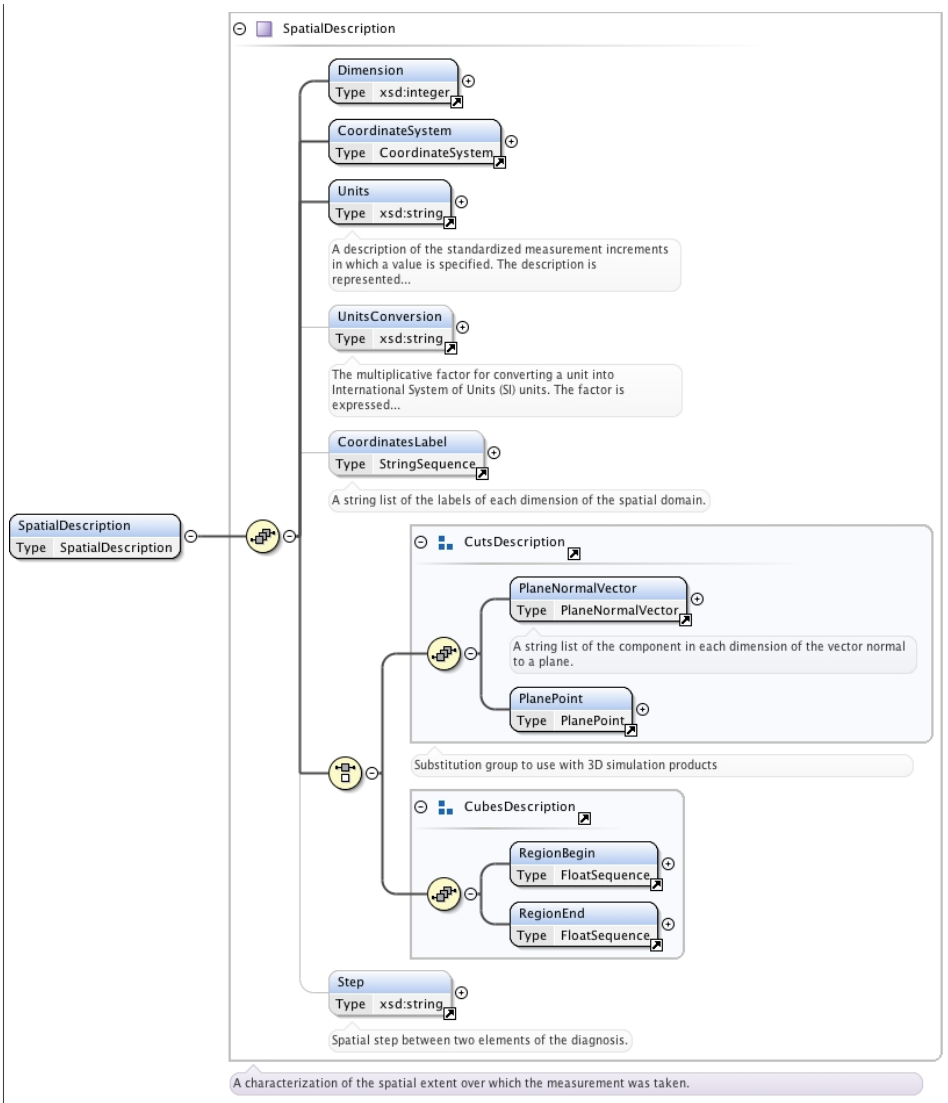
Type	NumericalOutput
Properties	content: complex
Substitution Group Affiliation	• ResourceEntity
Model	ResourceID , ResourceHeader , AccessInformation+ , ProcessingLevel{0,1} , ProviderResourceName{0,1} , ProviderProcessingLevel{0,1} , ProviderVersion{0,1} , SimulatedInstrumentID* , MeasurementType+ , (TemporalDescription{0,1} | SpatialDescription{0,1}) , SpectralRange* , SimulatedRegion* , Caveats{0,1} , Keyword* , InputResourceID* , Parameter* , SimulationProduct , Property* , Extension{0,1}
Children	AccessInformation, Caveats, Extension, InputResourceID, Keyword, MeasurementType, Parameter, ProcessingLevel, Property, ProviderProcessingLevel, ProviderResourceName, ProviderVersion, ResourceHeader, ResourceID, SimulatedInstrumentID, SimulatedRegion, SimulationProduct, SpatialDescription, SpectralRange, TemporalDescription
Instance	<NumericalOutput xmlns="http://impex-fp7.oeaw.ac.at"> <ResourceID>{1,1}</ResourceID> <ResourceHeader>{1,1}</ResourceHeader> <AccessInformation>{1,unbounded}</AccessInformation> <ProcessingLevel>{0,1}</ProcessingLevel> <ProviderResourceName>{0,1}</ProviderResourceName> <ProviderProcessingLevel>{0,1}</ProviderProcessingLevel> <ProviderVersion>{0,1}</ProviderVersion> <SimulatedInstrumentID>{0,unbounded}</SimulatedInstrumentID> <MeasurementType>{1,unbounded}</MeasurementType> <TemporalDescription>{0,1}</TemporalDescription> <SpatialDescription>{0,1}</SpatialDescription> <SpectralRange>{0,unbounded}</SpectralRange> <SimulatedRegion>{0,unbounded}</SimulatedRegion> <Caveats>{0,1}</Caveats> <Keyword>{0,unbounded}</Keyword> <InputResourceID>{0,unbounded}</InputResourceID> <Parameter>{0,unbounded}</Parameter> <SimulationProduct>{1,1}</SimulationProduct> <Property>{0,unbounded}</Property> <Extension>{0,1}</Extension> </NumericalOutput>
Source	<xsd:element name="NumericalOutput" type="NumericalOutput" substitutionGroup="ResourceEntity"/>

Element SimulatedInstrumentID

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Types DisplayOutput, NumericalOutput
Source	<xsd:element name="SimulatedInstrumentID" type="xsd:string"/>

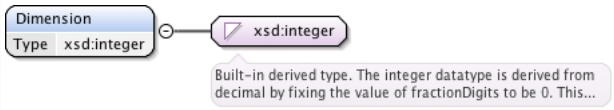
Element SpatialDescription

Namespace	http://impex-fp7.oeaw.ac.at

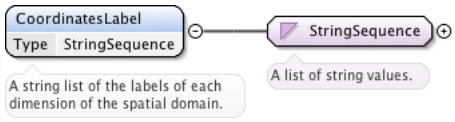
Diagram	
Type	SpatialDescription
Properties	content: complex
Used by	Complex Types DisplayOutput, NumericalOutput, SimulationModel
Model	Dimension , CoordinateSystem , Units , UnitsConversion{0,1} , CoordinatesLabel{0,1} , ((PlaneNormalVector , PlanePoint) | (RegionBegin , RegionEnd)) , Step{0,1}
Children	CoordinateSystem, CoordinatesLabel, Dimension, PlaneNormalVector, PlanePoint, RegionBegin, RegionEnd, Step, Units, UnitsConversion
Instance	<SpatialDescription xmlns="http://impex-fp7.oeaw.ac.at"> <Dimension>{1,1}</Dimension> <CoordinateSystem>{1,1}</CoordinateSystem> <Units>{1,1}</Units> <UnitsConversion>{0,1}</UnitsConversion> <CoordinatesLabel>{0,1}</CoordinatesLabel> <PlaneNormalVector>{1,1}</PlaneNormalVector> <PlanePoint>{1,1}</PlanePoint> <RegionBegin>{1,1}</RegionBegin> <RegionEnd>{1,1}</RegionEnd> <Step>{0,1}</Step> </SpatialDescription>
Source	<xsd:element name="SpatialDescription" type="SpatialDescription"/>

Element Dimension

Namespace	http://impex-fp7.oeaw.ac.at

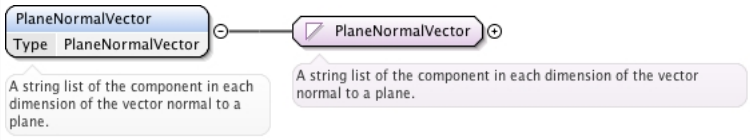
Diagram	
Type	xsd:integer
Properties	content: simple
Used by	Complex Type SpatialDescription
Source	`<xsd:element name="Dimension" type="xsd:integer"/>`

Element CoordinatesLabel

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A string list of the labels of each dimension of the spatial domain.
Diagram	
Type	StringSequence
Properties	content: simple
Used by	Complex Types SimulationDomain, SpatialDescription

Source	`<xsd:element name="CoordinatesLabel" type="StringSequence">`
	`  <xsd:annotation>`
	`  <xsd:documentation xml:lang="en">A string list of the labels of each dimension of the spatial domain.</xsd:documentation>`
	`  </xsd:annotation>`
	`</xsd:element>`

Element PlaneNormalVector

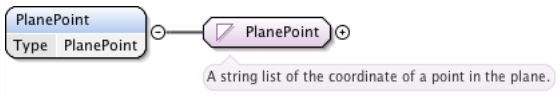
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A string list of the component in each dimension of the vector normal to a plane.
Diagram	
Type	PlaneNormalVector

Type hierarchy	• xsd:float
	  • FloatSequence
	  • PlaneNormalVector

Properties	content: simple
Used by	Element Group CutsDescription

Source	`<xsd:element name="PlaneNormalVector" type="PlaneNormalVector">`
	`  <xsd:annotation>`
	`  <xsd:documentation xml:lang="en">A string list of the component in each dimension of the vector normal to a plane.</xsd:documentation>`
	`  </xsd:annotation>`
	`</xsd:element>`

Element PlanePoint

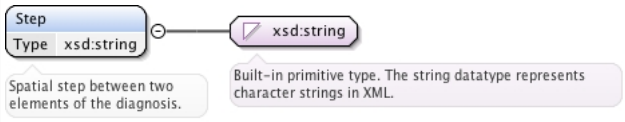
Namespace	http://impex-fp7.oeaw.ac.at
Diagram	

Type	PlanePoint

Type hierarchy	• xsd:float
	  • FloatSequence
	  • PlanePoint

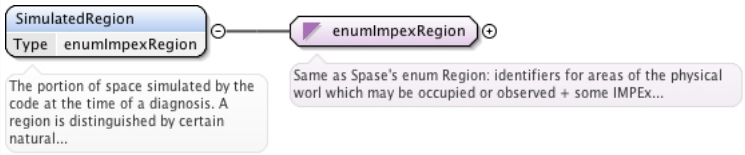
Properties	content: simple
Used by	Element Group CutsDescription
Source	`<xsd:element name="PlanePoint" type="PlanePoint"/>`

Element Step

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Spatial step between two elements of the diagnosis.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Type SpatialDescription

Source	`<xsd:element name="Step" type="xsd:string">`
	`  <xsd:annotation>`
	`  <xsd:documentation>Spatial step between two elements of the diagnosis.</xsd:documentation>`
	`  </xsd:annotation>`
	`</xsd:element>`

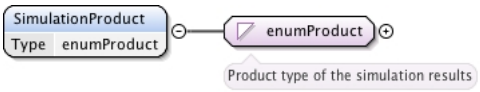
Element SimulatedRegion

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The portion of space simulated by the code at the time of a diagnosis. A region is distinguished by certain natural features or physical characteristics. It is the location of the observatory for in situ data, the location or region sensed by remote sensing observatories and the location-of-relevance for parameters that are derived from observational data.
Diagram	
Type	enumImpexRegion
Properties	content: simple
Used by	Complex Types DisplayOutput, InputField, InputParameter, InputPopulation, InputProcess, NumericalOutput, RegionParameter, SimulationModel, SimulationRun

Source	`<xsd:element name="SimulatedRegion" type="enumImpexRegion">`
	`  <xsd:annotation>`
	`  <xsd:documentation>The portion of space simulated by the code at the time of a diagnosis.`
	`A region is distinguished by certain natural features or physical characteristics. It is the`
	`location of the observatory for in situ data, the location or region sensed by remote sensing`
	`observatories and the location-of-relevance for parameters that are derived from observational`
	`data.</xsd:documentation>`
	`  </xsd:annotation>`
	`</xsd:element>`

Element SimulationProduct

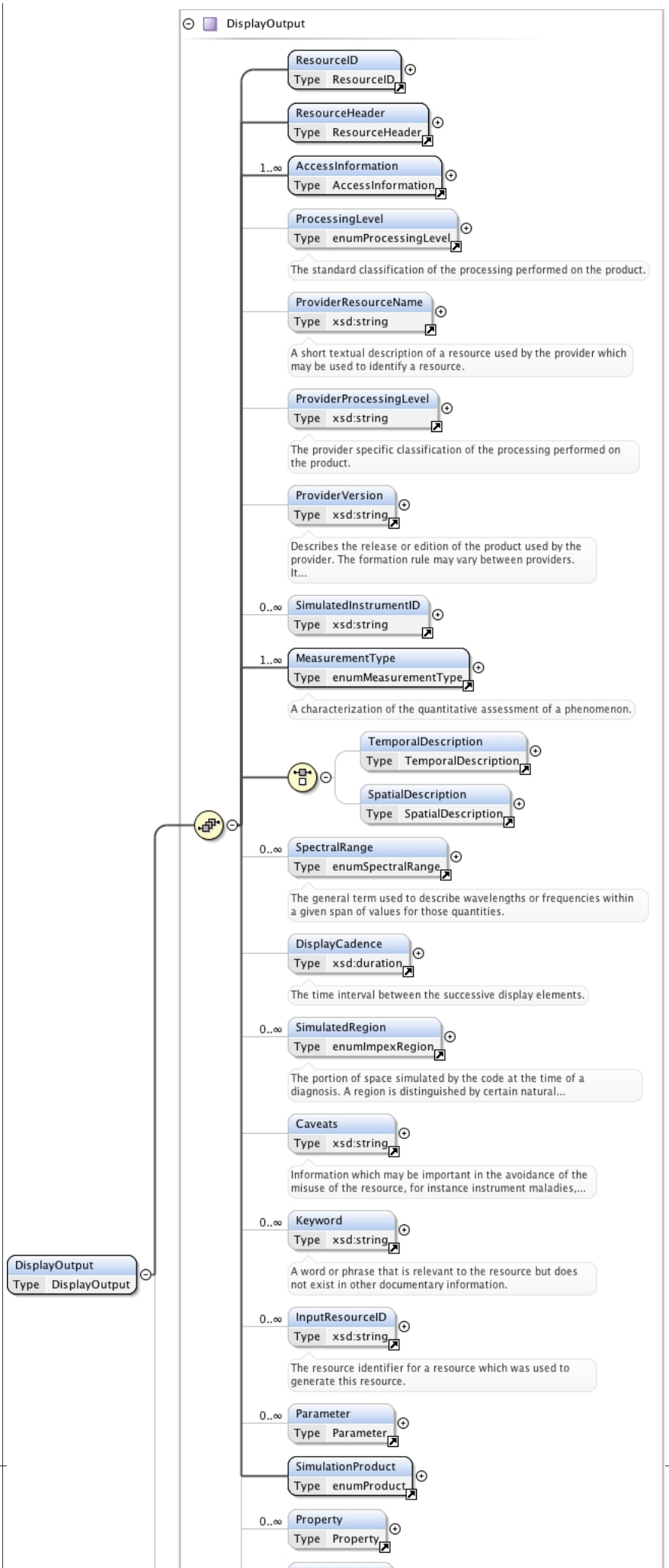
Namespace	http://impex-fp7.oeaw.ac.at

Diagram	
Type	enumProduct
Properties	content: simple
Facets	enumeration 3DCubes enumeration 2DCuts enumeration TimeSeries enumeration SpatialSeries enumeration Lines enumeration Spectra
Used by	Complex Types DisplayOutput, NumericalOutput
Source	`<xsd:element name="SimulationProduct" type="enumProduct"/>`

Element `DisplayOutput`

Namespace	http://impex-fp7.oeaw.ac.at

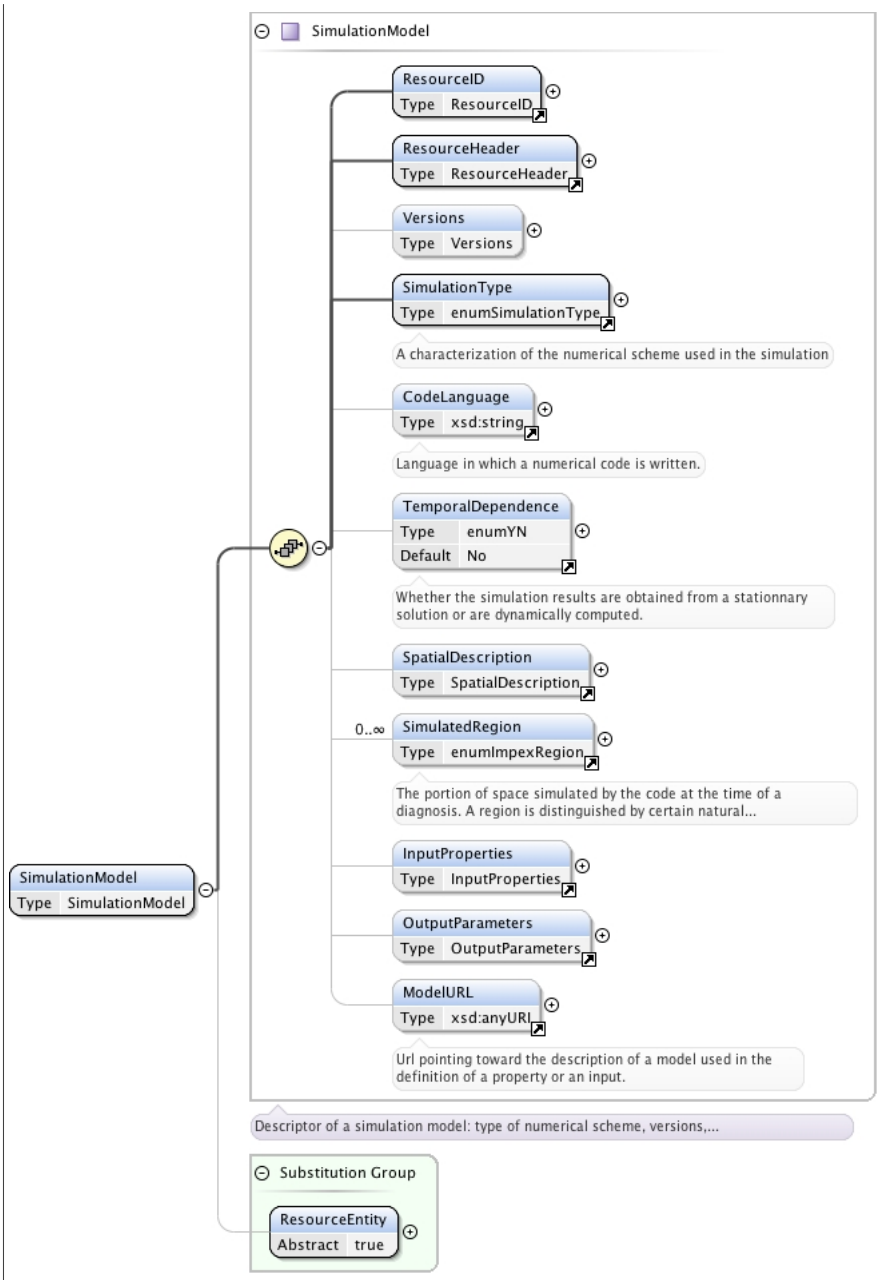
Diagram


DisplayOutput
ResourceID
Type ResourceID
ResourceHeader
Type ResourceHeader
1..∞
AccessInformation
Type AccessInformation
ProcessingLevel
Type enumProcessingLevel
The standard classification of the processing performed on the product.
ProviderResourceName
Type xsd:string
A short textual description of a resource used by the provider which may be used to identify a resource.
ProviderProcessingLevel
Type xsd:string
The provider specific classification of the processing performed on the product.
ProviderVersion
Type xsd:string
Describes the release or edition of the product used by the provider. The formation rule may vary between providers. It...
0..∞
SimulatedInstrumentID
Type xsd:string
1..∞
MeasurementType
Type enumMeasurementType
A characterization of the quantitative assessment of a phenomenon.
TemporalDescription
Type TemporalDescription
SpatialDescription
Type SpatialDescription
0..∞
SpectralRange
Type enumSpectralRange
The general term used to describe wavelengths or frequencies within a given span of values for those quantities.
DisplayCadence
Type xsd:duration
The time interval between the successive display elements.
0..∞
SimulatedRegion
Type enumImpexRegion
The portion of space simulated by the code at the time of a diagnosis. A region is distinguished by certain natural...
Caveats
Type xsd:string
Information which may be important in the avoidance of the misuse of the resource, for instance instrument maladies,...
0..∞
Keyword
Type xsd:string
A word or phrase that is relevant to the resource but does not exist in other documentary information.
0..∞
InputResourceID
Type xsd:string
The resource identifier for a resource which was used to generate this resource.
0..∞
Parameter
Type Parameter
SimulationProduct
Type enumProduct
0..∞
Property
Type Property
DisplayOutput
Type DisplayOutput

Type	DisplayOutput
Properties	content: complex
Substitution Group Affiliation	• ResourceEntity
Model	ResourceID , ResourceHeader , AccessInformation+ , ProcessingLevel{0,1} , ProviderResourceName{0,1} , ProviderProcessingLevel{0,1} , ProviderVersion{0,1} , SimulatedInstrumentID* , MeasurementType+ , (TemporalDescription{0,1} | SpatialDescription{0,1}) , SpectralRange* , DisplayCadence{0,1} , SimulatedRegion* , Caveats{0,1} , Keyword* , InputResourceID* , Parameter* , SimulationProduct , Property* , Extension{0,1}
Children	AccessInformation, Caveats, DisplayCadence, Extension, InputResourceID, Keyword, MeasurementType, Parameter, ProcessingLevel, Property, ProviderProcessingLevel, ProviderResourceName, ProviderVersion, ResourceHeader, ResourceID, SimulatedInstrumentID, SimulatedRegion, SimulationProduct, SpatialDescription, SpectralRange, TemporalDescription
Instance	<DisplayOutput xmlns="http://impex-fp7.oeaw.ac.at"> <ResourceID>{1,1}</ResourceID> <ResourceHeader>{1,1}</ResourceHeader> <AccessInformation>{1,unbounded}</AccessInformation> <ProcessingLevel>{0,1}</ProcessingLevel> <ProviderResourceName>{0,1}</ProviderResourceName> <ProviderProcessingLevel>{0,1}</ProviderProcessingLevel> <ProviderVersion>{0,1}</ProviderVersion> <SimulatedInstrumentID>{0,unbounded}</SimulatedInstrumentID> <MeasurementType>{1,unbounded}</MeasurementType> <TemporalDescription>{0,1}</TemporalDescription> <SpatialDescription>{0,1}</SpatialDescription> <SpectralRange>{0,unbounded}</SpectralRange> <DisplayCadence>{0,1}</DisplayCadence> <SimulatedRegion>{0,unbounded}</SimulatedRegion> <Caveats>{0,1}</Caveats> <Keyword>{0,unbounded}</Keyword> <InputResourceID>{0,unbounded}</InputResourceID> <Parameter>{0,unbounded}</Parameter> <SimulationProduct>{1,1}</SimulationProduct> <Property>{0,unbounded}</Property> <Extension>{0,1}</Extension> </DisplayOutput>
Source	<xsd:element name="DisplayOutput" type="DisplayOutput" substitutionGroup="ResourceEntity"/>

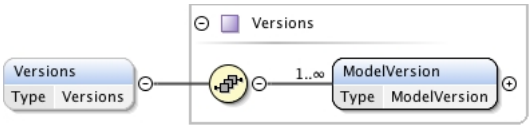
Element SimulationModel

Namespace	http://impex-fp7.oeaw.ac.at

Diagram	
Type	SimulationModel
Properties	content: complex
Substitution Group Affiliation	• ResourceEntity
Model	ResourceID , ResourceHeader , Versions{0,1} , SimulationType , CodeLanguage{0,1} , TemporalDependence{0,1} , SpatialDescription{0,1} , SimulatedRegion* , InputProperties{0,1} , OutputParameters{0,1} , ModelURL{0,1}
Children	CodeLanguage, InputProperties, ModelURL, OutputParameters, ResourceHeader, ResourceID, SimulatedRegion, SimulationType, SpatialDescription, TemporalDependence, Versions
Instance	<SimulationModel xmlns="http://impex-fp7.oeaw.ac.at"> <ResourceID>{1,1}</ResourceID> <ResourceHeader>{1,1}</ResourceHeader> <Versions>{0,1}</Versions> <SimulationType>{1,1}</SimulationType> <CodeLanguage>{0,1}</CodeLanguage> <TemporalDependence>{0,1}</TemporalDependence> <SpatialDescription>{0,1}</SpatialDescription> <SimulatedRegion>{0,unbounded}</SimulatedRegion> <InputProperties>{0,1}</InputProperties> <OutputParameters>{0,1}</OutputParameters> <ModelURL>{0,1}</ModelURL>

	`</SimulationModel>`
Source	`<xsd:element name="SimulationModel" type="SimulationModel" substitutionGroup="ResourceEntity"/>`

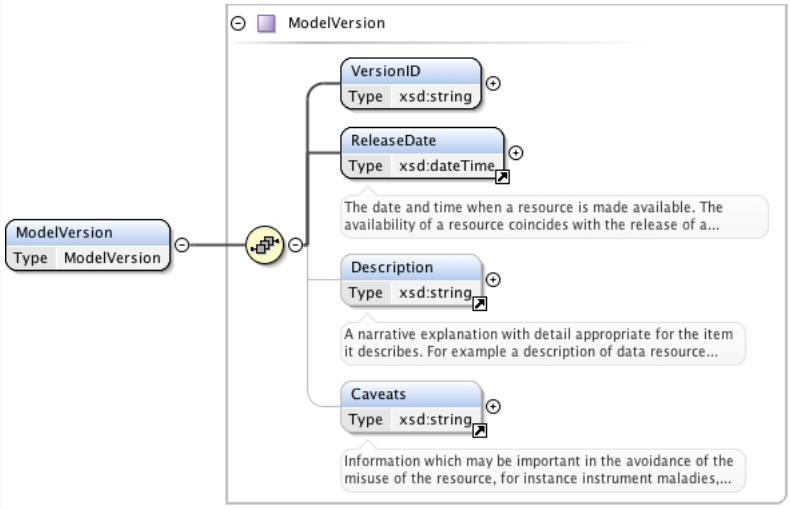
Element SimulationModel / Versions

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	Versions
Properties	content: complex minOccurs: 0
Model	ModelVersion+
Children	ModelVersion

Instance	`<Versions xmlns="http://impex-fp7.oeaw.ac.at">`
	`  <ModelVersion>{1,unbounded}</ModelVersion>`
	`</Versions>`

Source	`<xsd:element name="Versions" type="Versions" minOccurs="0"/>`

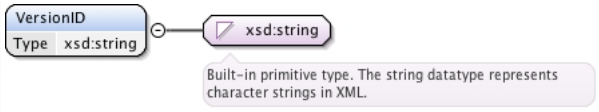
Element Versions / ModelVersion

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	ModelVersion
Properties	content: complex maxOccurs: unbounded
Model	VersionID , ReleaseDate , Description{0,1} , Caveats{0,1}
Children	Caveats, Description, ReleaseDate, VersionID

Instance	`<ModelVersion xmlns="http://impex-fp7.oeaw.ac.at">`
	`  <VersionID>{1,1}</VersionID>`
	`  <ReleaseDate>{1,1}</ReleaseDate>`
	`  <Description>{0,1}</Description>`
	`  <Caveats>{0,1}</Caveats>`
	`</ModelVersion>`

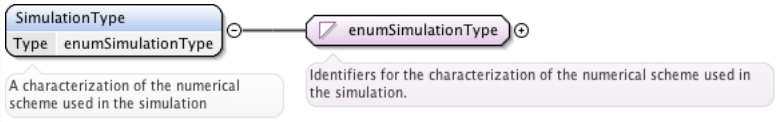
Source	`<xsd:element name="ModelVersion" type="ModelVersion" maxOccurs="unbounded"/>`

Element ModelVersion / VersionID

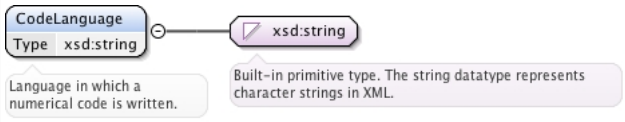
Namespace	http://impex-fp7.oeaw.ac.at
Diagram	

Type	xsd:string
Properties	content: simple
Source	`<xsd:element name="VersionID" type="xsd:string"/>`

Element SimulationType

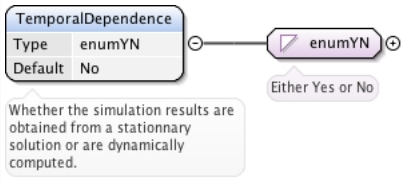
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A characterization of the numerical scheme used in the simulation
Diagram	
Type	enumSimulationType
Properties	content: simple
Facets	enumeration Analytic enumeration Hybrid — A numerical scheme simulating ions as particles and electrons as a fluid. enumeration MHD — A numerical scheme simulating the plasma as a fluid. enumeration PIC — A numerical scheme simulating ions and electrons as macroparticles. enumeration Test_Particle — A numerical scheme simulating the motion of charged particles in a prescribed field. enumeration Paraboloid
Used by	Complex Type SimulationModel
Source	`<xsd:element name="SimulationType" type="enumSimulationType"> <xsd:annotation> <xsd:documentation xml:lang="en">A characterization of the numerical scheme used in the simulation</xsd:documentation> </xsd:annotation> </xsd:element>`

Element CodeLanguage

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Language in which a numerical code is written.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Type SimulationModel
Source	`<xsd:element name="CodeLanguage" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">Language in which a numerical code is written.</xsd:documentation> </xsd:annotation> </xsd:element>`

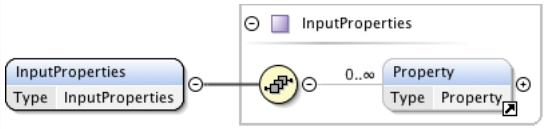
Element TemporalDependence

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Whether the simulation results are obtained from a stationnary solution or are dynamically computed.

Diagram	
Type	enumYN
Properties	content: simple default: No
Facets	enumeration Yes enumeration No
Used by	Complex Types SimulationModel, SimulationRun

Source	`<xsd:element name="TemporalDependence" type="enumYN" default="No">`
	`  <xsd:annotation>`
	`  <xsd:documentation xml:lang="en">Whether the simulation results are obtained from a stationnary solution or are dynamically computed.</xsd:documentation>`
	`  </xsd:annotation>`
	`</xsd:element>`

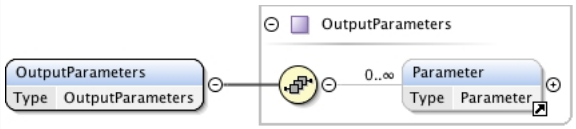
Element `InputProperties`

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	InputProperties
Properties	content: complex
Used by	Complex Type SimulationModel
Model	Property*
Children	Property

Instance	`<InputProperties xmlns="http://impex-fp7.oeaw.ac.at">`
	`  <Property>{0,unbounded}</Property>`
	`</InputProperties>`

Source	`<xsd:element name="InputProperties" type="InputProperties"/>`

Element `OutputParameters`

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	OutputParameters
Properties	content: complex
Used by	Complex Type SimulationModel
Model	Parameter*
Children	Parameter

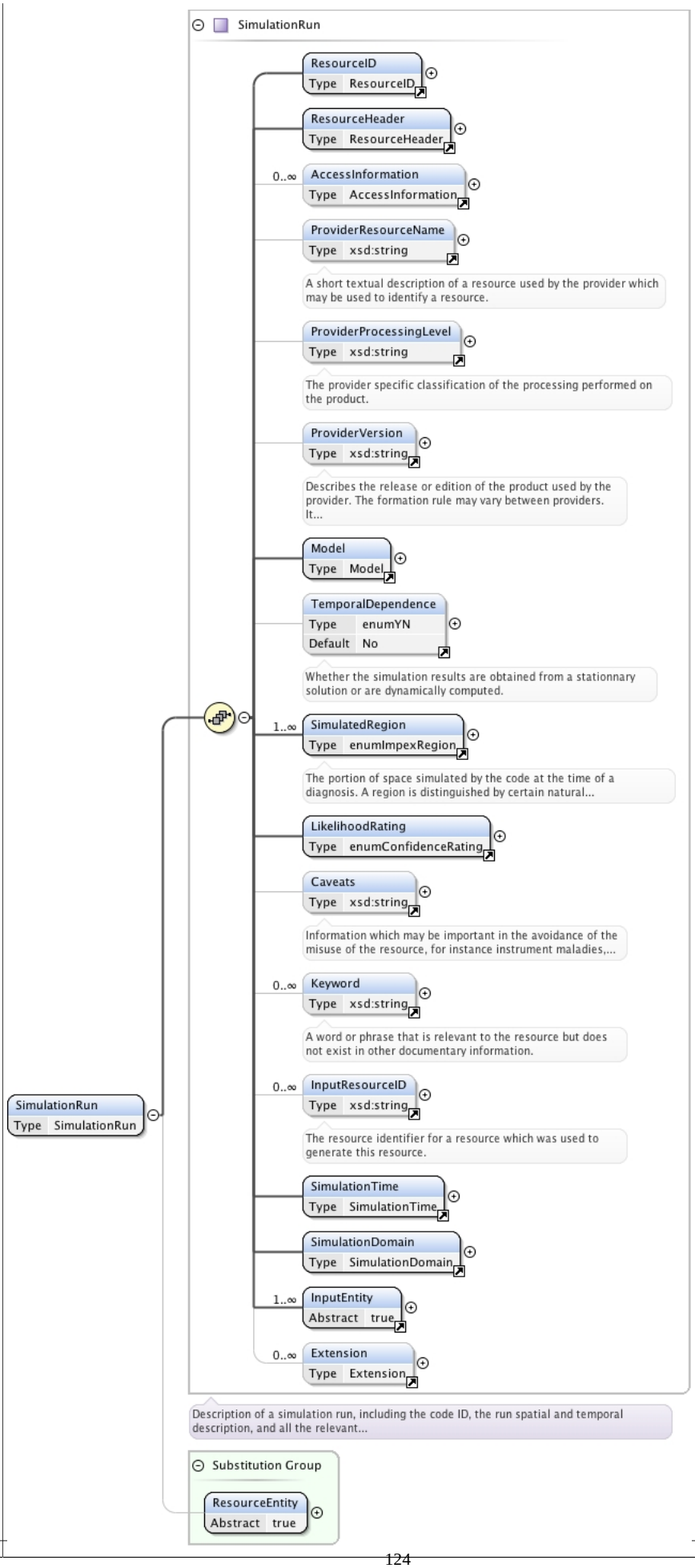
Instance	`<OutputParameters xmlns="http://impex-fp7.oeaw.ac.at">`
	`  <Parameter>{0,unbounded}</Parameter>`
	`</OutputParameters>`

Source	`<xsd:element name="OutputParameters" type="OutputParameters"/>`

Element `SimulationRun`

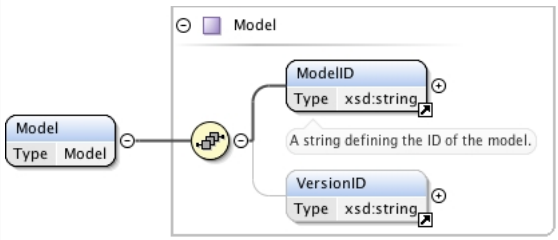
Namespace	http://impex-fp7.oeaw.ac.at

Diagram

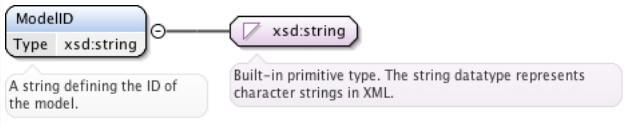

SimulationRun
ResourceID
Type ResourceID
ResourceHeader
Type ResourceHeader
0..∞
AccessInformation
Type AccessInformation
ProviderResourceName
Type xsd:string
A short textual description of a resource used by the provider which may be used to identify a resource.
ProviderProcessingLevel
Type xsd:string
The provider specific classification of the processing performed on the product.
ProviderVersion
Type xsd:string
Describes the release or edition of the product used by the provider. The formation rule may vary between providers. It...
Model
Type Model
TemporalDependence
Type enumYN
Default No
Whether the simulation results are obtained from a stationnary solution or are dynamically computed.
1..∞
SimulatedRegion
Type enumImpexRegion
The portion of space simulated by the code at the time of a diagnosis. A region is distinguished by certain natural...
LikelihoodRating
Type enumConfidenceRating
Caveats
Type xsd:string
Information which may be important in the avoidance of the misuse of the resource, for instance instrument maladies,...
0..∞
Keyword
Type xsd:string
A word or phrase that is relevant to the resource but does not exist in other documentary information.
0..∞
InputResourceID
Type xsd:string
The resource identifier for a resource which was used to generate this resource.
SimulationTime
Type SimulationTime
SimulationDomain
Type SimulationDomain
1..∞
InputEntity
Abstract true
0..∞
Extension
Type Extension
Description of a simulation run, including the code ID, the run spatial and temporal description, and all the relevant...
SimulationRun
Type SimulationRun
Substitution Group
ResourceEntity
Abstract true

Type	SimulationRun
Properties	content: complex
Substitution Group Affiliation	• ResourceEntity
Model	ResourceID , ResourceHeader , AccessInformation* , ProviderResourceName{0,1} , ProviderProcessingLevel{0,1} , ProviderVersion{0,1} , Model , TemporalDependence{0,1} , SimulatedRegion+ , LikelihoodRating , Caveats{0,1} , Keyword* , InputResourceID* , SimulationTime , SimulationDomain , InputEntity+ , Extension*
Children	AccessInformation, Caveats, Extension, InputEntity, InputResourceID, Keyword, LikelihoodRating, Model, ProviderProcessingLevel, ProviderResourceName, ProviderVersion, ResourceHeader, ResourceID, SimulatedRegion, SimulationDomain, SimulationTime, TemporalDependence
Instance	<SimulationRun xmlns="http://impex-fp7.oeaw.ac.at"> <ResourceID>{1,1}</ResourceID> <ResourceHeader>{1,1}</ResourceHeader> <AccessInformation>{0,unbounded}</AccessInformation> <ProviderResourceName>{0,1}</ProviderResourceName> <ProviderProcessingLevel>{0,1}</ProviderProcessingLevel> <ProviderVersion>{0,1}</ProviderVersion> <Model>{1,1}</Model> <TemporalDependence>{0,1}</TemporalDependence> <SimulatedRegion>{1,unbounded}</SimulatedRegion> <LikelihoodRating>{1,1}</LikelihoodRating> <Caveats>{0,1}</Caveats> <Keyword>{0,unbounded}</Keyword> <InputResourceID>{0,unbounded}</InputResourceID> <SimulationTime>{1,1}</SimulationTime> <SimulationDomain>{1,1}</SimulationDomain> <InputEntity>{1,unbounded}</InputEntity> <Extension>{0,unbounded}</Extension> </SimulationRun>
Source	<xsd:element name="SimulationRun" type="SimulationRun" substitutionGroup="ResourceEntity"/>

Element Model

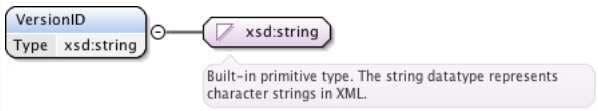
Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	Model
Properties	content: complex
Used by	Complex Type SimulationRun
Model	ModelID , VersionID{0,1}
Children	ModelID, VersionID
Instance	<Model xmlns="http://impex-fp7.oeaw.ac.at"> <ModelID>{1,1}</ModelID> <VersionID>{0,1}</VersionID> </Model>
Source	<xsd:element name="Model" type="Model"/>

Element ModelID

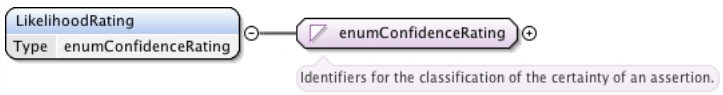
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A string defining the ID of the model.
Diagram	

Type	xsd:string
Properties	content: simple
Used by	Complex Type Model
Source	<xsd:element name="ModelID" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">A string defining the ID of the model.</xsd:documentation> </xsd:annotation> </xsd:element>

Element VersionID

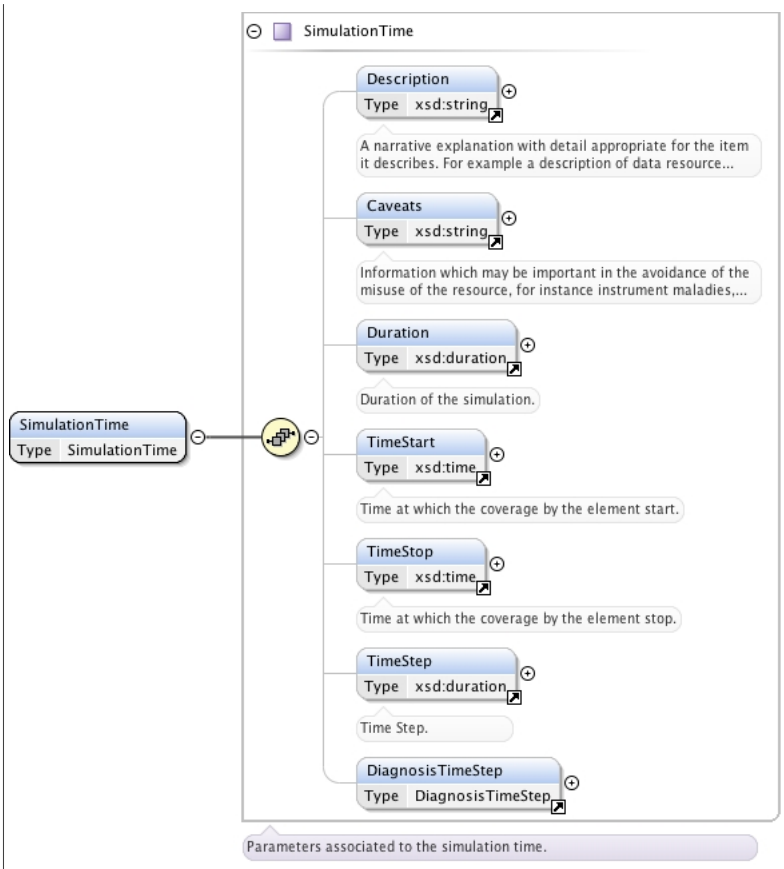
Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Type Model
Source	<xsd:element name="VersionID" type="xsd:string"/>

Element LikelihoodRating

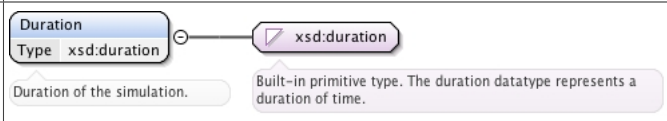
Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	enumConfidenceRating
Properties	content: simple
Facets	enumeration Probable — Likely given the available evidence. Considered in the range of 4-7 on a scale of 0-10. enumeration Strong — Highly likely given the available evidence. Considered in the range of 7-10 on a scale of 0-10. enumeration Unlikely — Not likely given the available evidence. Considered in the range of 0 on a scale of 0-10. enumeration Weak — Slightly likely given the available evidence. Considered in the range of 1-4 on a scale of 0-10.
Used by	Complex Type SimulationRun
Source	<xsd:element name="LikelihoodRating" type="enumConfidenceRating"/>

Element SimulationTime

Namespace	http://impex-fp7.oeaw.ac.at

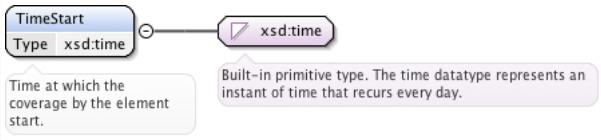
Diagram	
Type	SimulationTime
Properties	content: complex
Used by	Complex Type SimulationRun
Model	Description{0,1} , Caveats{0,1} , Duration{0,1} , TimeStart{0,1} , TimeStop{0,1} , TimeStep{0,1} , DiagnosisTimeStep{0,1}
Children	Caveats, Description, DiagnosisTimeStep, Duration, TimeStart, TimeStep, TimeStop
Instance	<SimulationTime xmlns="http://impex-fp7.oeaw.ac.at"> <Description>{0,1}</Description> <Caveats>{0,1}</Caveats> <Duration>{0,1}</Duration> <TimeStart>{0,1}</TimeStart> <TimeStop>{0,1}</TimeStop> <TimeStep>{0,1}</TimeStep> <DiagnosisTimeStep Duration="" TimeStart="">{0,1}</DiagnosisTimeStep> </SimulationTime>
Source	<xsd:element name="SimulationTime" type="SimulationTime"/>

Element Duration

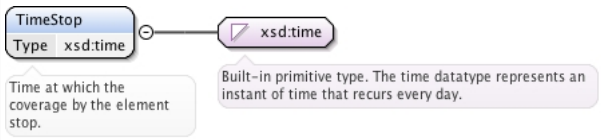
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Duration of the simulation.
Diagram	
Type	xsd:duration
Properties	content: simple
Used by	Complex Type SimulationTime
Source	<xsd:element name="Duration" type="xsd:duration"> <xsd:annotation> <xsd:documentation xml:lang="en">Duration of the simulation.</xsd:documentation> </xsd:annotation>

```
</xsd:element>
```

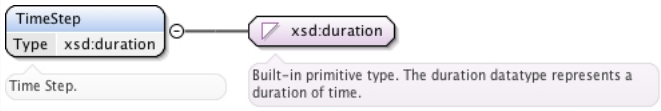
Element TimeStart

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Time at which the coverage by the element start.
Diagram	
Type	xsd:time
Properties	content: simple
Used by	Complex Type SimulationTime
Source	<xsd:element name="TimeStart" type="xsd:time"> <xsd:annotation> <xsd:documentation xml:lang="en">Time at which the coverage by the element start.</ xsd:documentation> </xsd:annotation> </xsd:element>

Element TimeStop

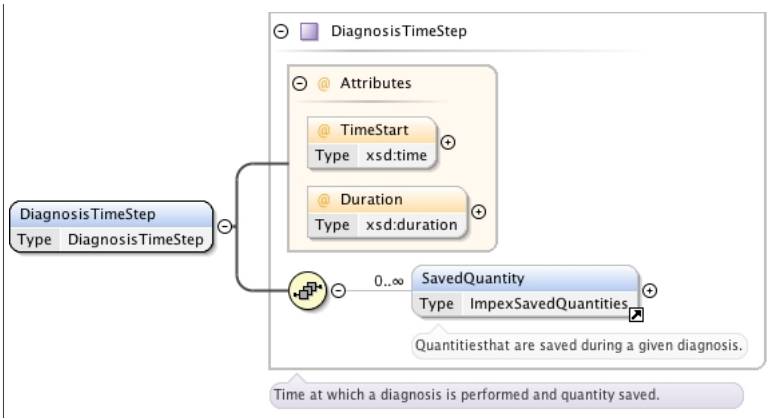
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Time at which the coverage by the element stop.
Diagram	
Type	xsd:time
Properties	content: simple
Used by	Complex Type SimulationTime
Source	<xsd:element name="TimeStop" type="xsd:time"> <xsd:annotation> <xsd:documentation xml:lang="en">Time at which the coverage by the element stop.</ xsd:documentation> </xsd:annotation> </xsd:element>

Element TimeStep

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Time Step.
Diagram	
Type	xsd:duration
Properties	content: simple
Used by	Complex Type SimulationTime
Source	<xsd:element name="TimeStep" type="xsd:duration"> <xsd:annotation> <xsd:documentation xml:lang="en">Time Step.</xsd:documentation> </xsd:annotation> </xsd:element>

Element DiagnosisTimeStep

Namespace	http://impex-fp7.oeaw.ac.at

Diagram	
Type	DiagnosisTimeStep
Properties	content: complex
Used by	Complex Type SimulationTime
Model	SavedQuantity*
Children	SavedQuantity

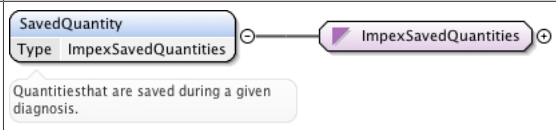
Instance	`<DiagnosisTimeStep Duration="" TimeStart="" xmlns="http://impex-fp7.oeaw.ac.at">`
	`  <SavedQuantity>{0,unbounded}</SavedQuantity>`
	`</DiagnosisTimeStep>`

Attributes

QName	Type	Use
Duration	xsd:duration	optional
TimeStart	xsd:time	optional

Source	`<xsd:element name="DiagnosisTimeStep" type="DiagnosisTimeStep"/>`

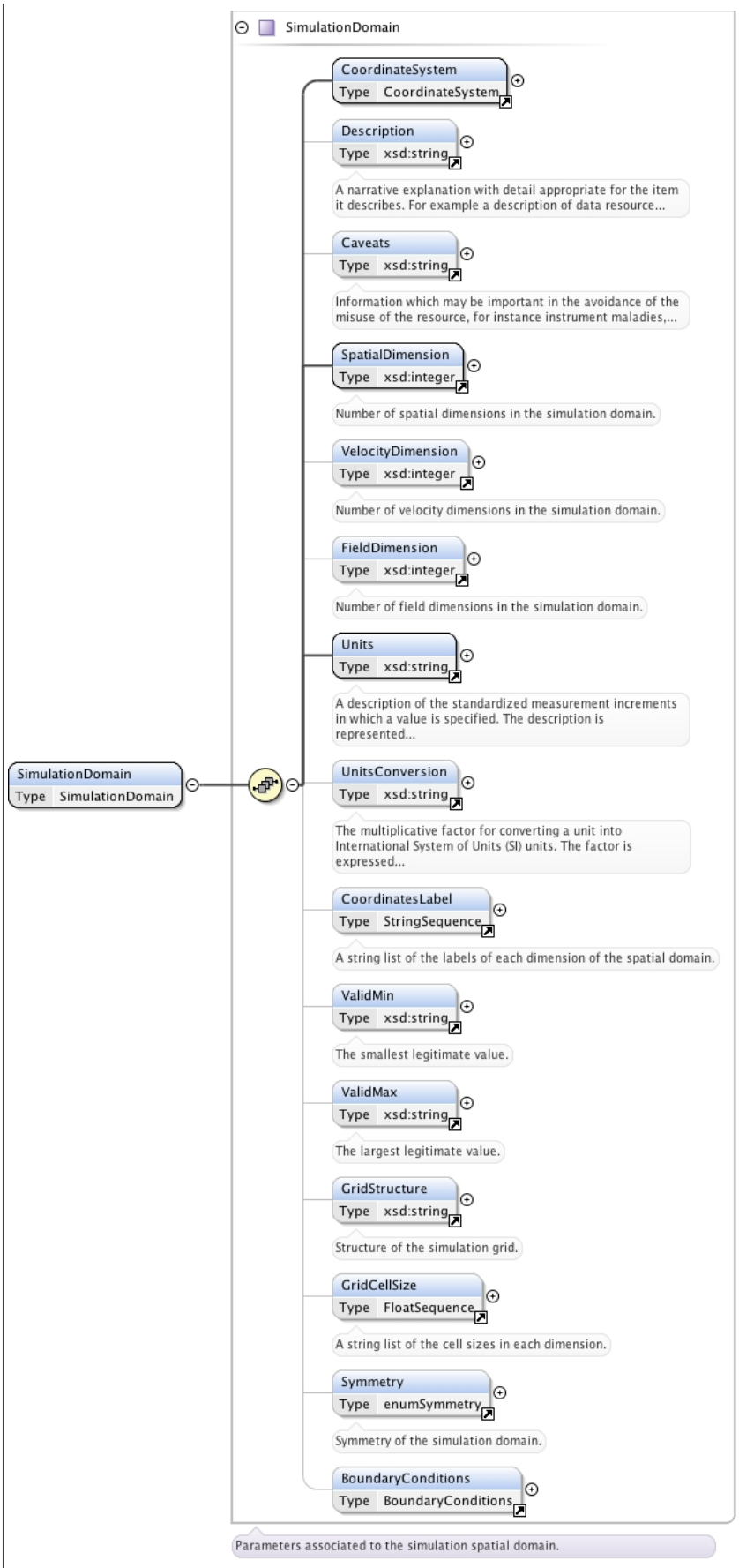
Element SavedQuantity

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Quantitiesthat are saved during a given diagnosis.
Diagram	
Type	ImpexSavedQuantities
Properties	content: simple
Used by	Complex Type DiagnosisTimeStep

Source	`<xsd:element name="SavedQuantity" type="ImpexSavedQuantities">`
	`  <xsd:annotation>`
	`  <xsd:documentation>Quantitiesthat are saved during a given diagnosis.</xsd:documentation>`
	`  </xsd:annotation>`
	`</xsd:element>`

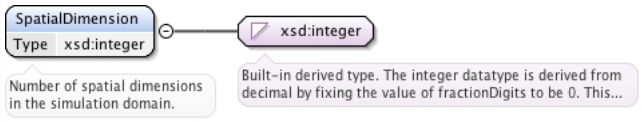
Element SimulationDomain

Namespace	http://impex-fp7.oeaw.ac.at

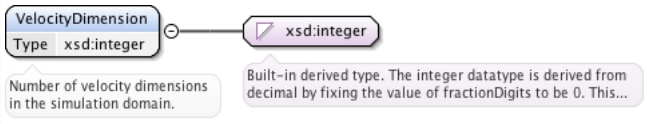
Diagram	
Type	SimulationDomain

Properties	content: complex
Used by	Complex Type SimulationRun
Model	CoordinateSystem , Description{0,1} , Caveats{0,1} , SpatialDimension , VelocityDimension{0,1} , FieldDimension{0,1} , Units , UnitsConversion{0,1} , CoordinatesLabel{0,1} , ValidMin{0,1} , ValidMax{0,1} , GridStructure{0,1} , GridCellSize{0,1} , Symmetry{0,1} , BoundaryConditions{0,1}
Children	BoundaryConditions, Caveats, CoordinateSystem, CoordinatesLabel, Description, FieldDimension, GridCellSize, GridStructure, SpatialDimension, Symmetry, Units, UnitsConversion, ValidMax, ValidMin, VelocityDimension
Instance	<SimulationDomain xmlns="http://impex-fp7.oeaw.ac.at"> <CoordinateSystem>{1,1}</CoordinateSystem> <Description>{0,1}</Description> <Caveats>{0,1}</Caveats> <SpatialDimension>{1,1}</SpatialDimension> <VelocityDimension>{0,1}</VelocityDimension> <FieldDimension>{0,1}</FieldDimension> <Units>{1,1}</Units> <UnitsConversion>{0,1}</UnitsConversion> <CoordinatesLabel>{0,1}</CoordinatesLabel> <ValidMin>{0,1}</ValidMin> <ValidMax>{0,1}</ValidMax> <GridStructure>{0,1}</GridStructure> <GridCellSize>{0,1}</GridCellSize> <Symmetry>{0,1}</Symmetry> <BoundaryConditions>{0,1}</BoundaryConditions> </SimulationDomain>
Source	<xsd:element name="SimulationDomain" type="SimulationDomain"/>

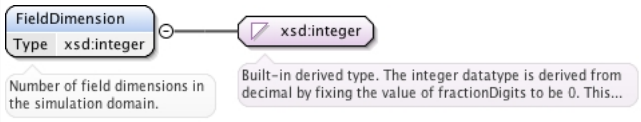
Element SpatialDimension

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Number of spatial dimensions in the simulation domain.
Diagram	
Type	xsd:integer
Properties	content: simple
Used by	Complex Type SimulationDomain
Source	<xsd:element name="SpatialDimension" type="xsd:integer"> <xsd:annotation> <xsd:documentation xml:lang="en">Number of spatial dimensions in the simulation domain.</ xsd:documentation> </xsd:annotation> </xsd:element>

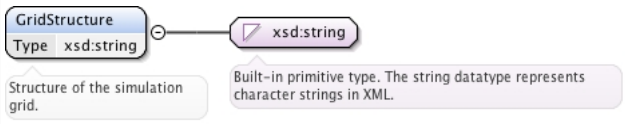
Element VelocityDimension

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Number of velocity dimensions in the simulation domain.
Diagram	
Type	xsd:integer
Properties	content: simple
Used by	Complex Type SimulationDomain
Source	<xsd:element name="VelocityDimension" type="xsd:integer"> <xsd:annotation> <xsd:documentation xml:lang="en">Number of velocity dimensions in the simulation domain.</ xsd:documentation> </xsd:annotation> </xsd:element>

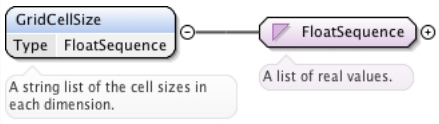
Element FieldDimension

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Number of field dimensions in the simulation domain.
Diagram	
Type	xsd:integer
Properties	content: simple
Used by	Complex Type SimulationDomain
Source	<xsd:element name="FieldDimension" type="xsd:integer"> <xsd:annotation> <xsd:documentation xml:lang="en">Number of field dimensions in the simulation domain.</xsd:documentation> </xsd:annotation> </xsd:element>

Element GridStructure

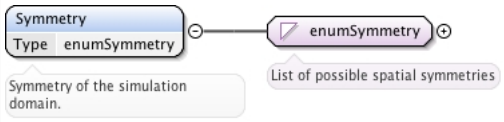
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Structure of the simulation grid.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Type SimulationDomain
Source	<xsd:element name="GridStructure" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">Structure of the simulation grid.</xsd:documentation> </xsd:annotation> </xsd:element>

Element GridCellSize

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A string list of the cell sizes in each dimension.
Diagram	
Type	FloatSequence
Properties	content: simple
Used by	Complex Type SimulationDomain
Source	<xsd:element name="GridCellSize" type="FloatSequence"> <xsd:annotation> <xsd:documentation xml:lang="en">A string list of the cell sizes in each dimension.</xsd:documentation> </xsd:annotation> </xsd:element>

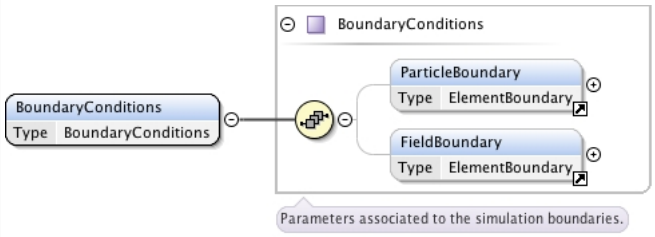
Element Symmetry

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Symmetry of the simulation domain.

Diagram	
Type	enumSymmetry
Properties	content: simple
Facets	enumeration None — No Symmetry. enumeration Axial — Axial symmetry. enumeration Plane — Symmetry across a plane. enumeration Central — Central Symmetry.
Used by	Complex Type SimulationDomain

Source	`<xsd:element name="Symmetry" type="enumSymmetry">`
	`  <xsd:annotation>`
	`  <xsd:documentation xml:lang="en">Symmetry of the simulation domain.</xsd:documentation>`
	`  </xsd:annotation>`
	`</xsd:element>`

Element BoundaryConditions

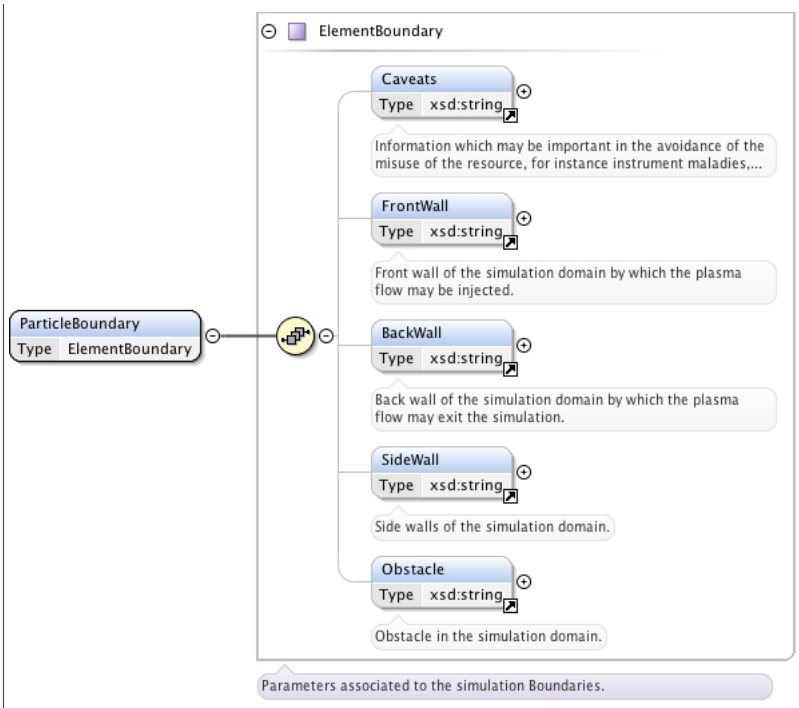
Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	BoundaryConditions
Properties	content: complex
Used by	Complex Type SimulationDomain
Model	ParticleBoundary{0,1} , FieldBoundary{0,1}
Children	FieldBoundary, ParticleBoundary

Instance	`<BoundaryConditions xmlns="http://impex-fp7.oeaw.ac.at">`
	`  <ParticleBoundary>{0,1}</ParticleBoundary>`
	`  <FieldBoundary>{0,1}</FieldBoundary>`
	`</BoundaryConditions>`

Source	`<xsd:element name="BoundaryConditions" type="BoundaryConditions"/>`

Element ParticleBoundary

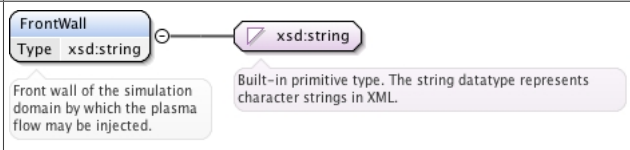
Namespace	http://impex-fp7.oeaw.ac.at

Diagram	
Type	ElementBoundary
Properties	content: complex
Used by	Complex Type BoundaryConditions
Model	Caveats{0,1} , FrontWall{0,1} , BackWall{0,1} , SideWall{0,1} , Obstacle{0,1}
Children	BackWall, Caveats, FrontWall, Obstacle, SideWall

Instance	`<ParticleBoundary xmlns="http://impex-fp7.oeaw.ac.at">`
	`  <Caveats>{0,1}</Caveats>`
	`  <FrontWall>{0,1}</FrontWall>`
	`  <BackWall>{0,1}</BackWall>`
	`  <SideWall>{0,1}</SideWall>`
	`  <Obstacle>{0,1}</Obstacle>`
	`</ParticleBoundary>`

Source	`<xsd:element name="ParticleBoundary" type="ElementBoundary"/>`

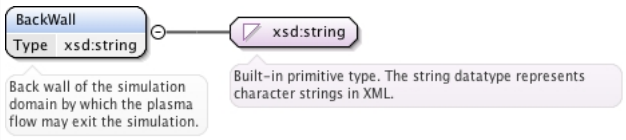
Element `FrontWall`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Front wall of the simulation domain by which the plasma flow may be injected.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Type ElementBoundary

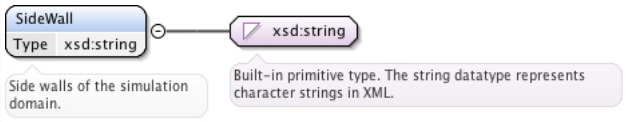
Source	`<xsd:element name="FrontWall" type="xsd:string">`
	`  <xsd:annotation>`
	`  <xsd:documentation xml:lang="en">Front wall of the simulation domain by which the plasma flow may be injected.</xsd:documentation>`
	`  </xsd:annotation>`
	`</xsd:element>`

Element `BackWall`

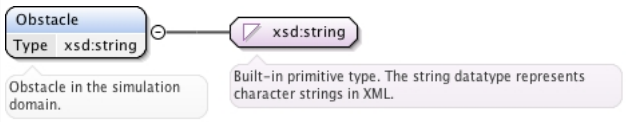
Namespace	http://impex-fp7.oeaw.ac.at

Annotations	Back wall of the simulation domain by which the plasma flow may exit the simulation.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Type ElementBoundary
Source	<xsd:element name="BackWall" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">Back wall of the simulation domain by which the plasma flow may exit the simulation.</xsd:documentation> </xsd:annotation> </xsd:element>

Element SideWall

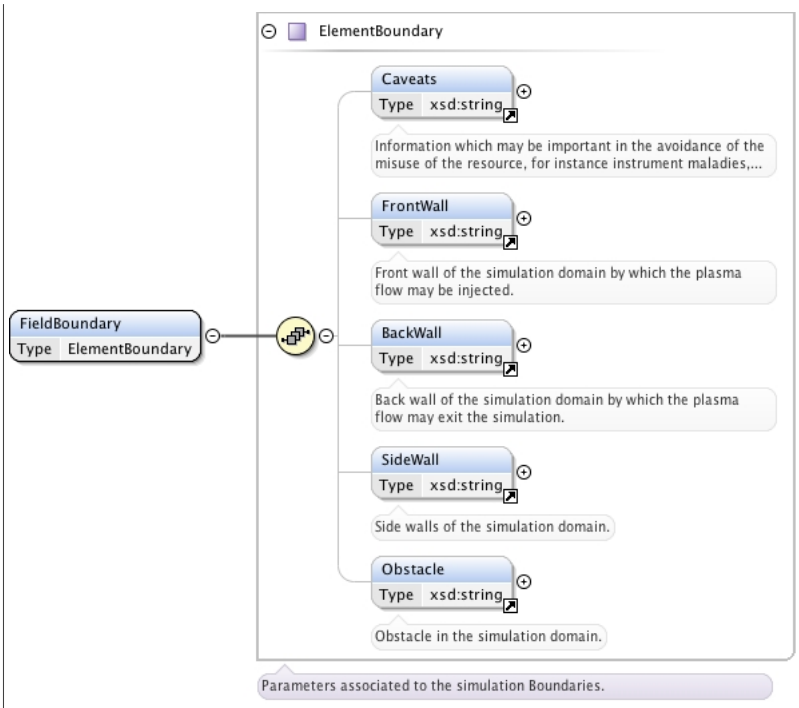
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Side walls of the simulation domain.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Type ElementBoundary
Source	<xsd:element name="SideWall" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">Side walls of the simulation domain.</xsd:documentation> </xsd:annotation> </xsd:element>

Element Obstacle

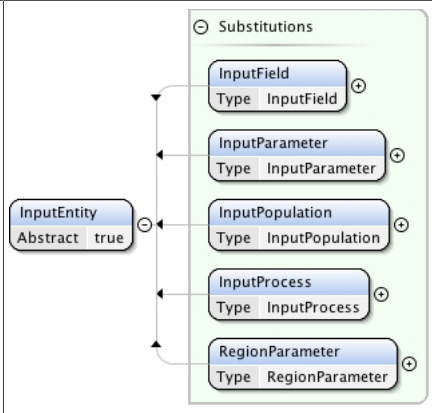
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Obstacle in the simulation domain.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Type ElementBoundary
Source	<xsd:element name="Obstacle" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">Obstacle in the simulation domain.</xsd:documentation> </xsd:annotation> </xsd:element>

Element FieldBoundary

Namespace	http://impex-fp7.oeaw.ac.at

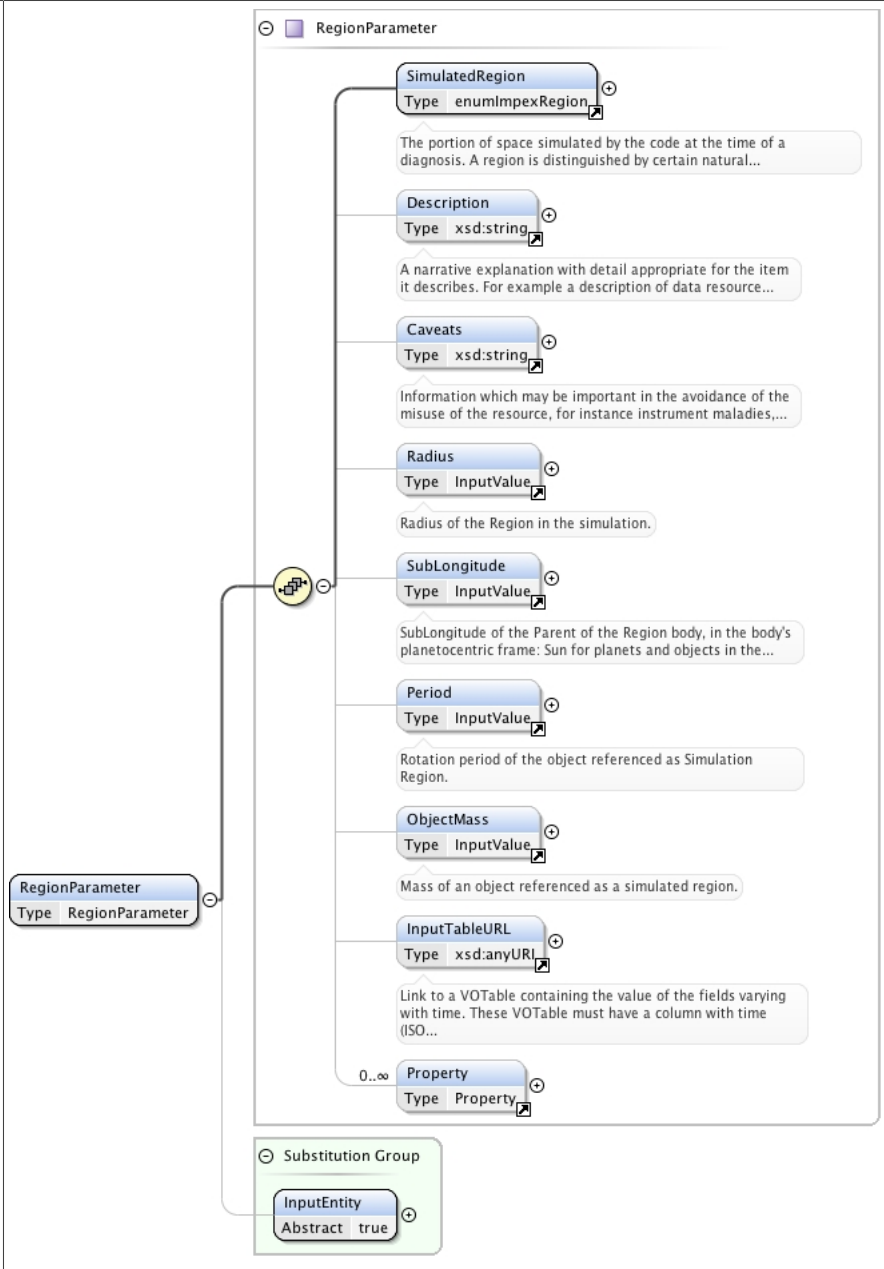
Diagram	
Type	ElementBoundary
Properties	content: complex
Used by	Complex Type BoundaryConditions
Model	Caveats{0,1} , FrontWall{0,1} , BackWall{0,1} , SideWall{0,1} , Obstacle{0,1}
Children	BackWall, Caveats, FrontWall, Obstacle, SideWall
Instance	<FieldBoundary xmlns="http://impex-fp7.oeaw.ac.at"> <Caveats>{0,1}</Caveats> <FrontWall>{0,1}</FrontWall> <BackWall>{0,1}</BackWall> <SideWall>{0,1}</SideWall> <Obstacle>{0,1}</Obstacle> </FieldBoundary>
Source	<xsd:element name="FieldBoundary" type="ElementBoundary"/>

Element InputEntity

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Properties	abstract: true
Substitution Group	• RegionParameter • InputParameter • InputPopulation

	• InputField • InputProcess
Used by	Complex Type SimulationRun
Source	`<xsd:element name="InputEntity" abstract="true"/>`

Element `RegionParameter`

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	RegionParameter
Properties	content: `complex`
Substitution Group Affiliation	• InputEntity
Model	SimulatedRegion , Description{0,1} , Caveats{0,1} , Radius{0,1} , SubLongitude{0,1} , Period{0,1} , ObjectMass{0,1} , InputTableURL{0,1} , Property*
Children	Caveats, Description, InputTableURL, ObjectMass, Period, Property, Radius, SimulatedRegion, SubLongitude
Instance	`<RegionParameter xmlns="http://impex-fp7.oeaw.ac.at">`

```
  <SimulatedRegion>{1,1}</SimulatedRegion>
  <Description>{0,1}</Description>
  <Caveats>{0,1}</Caveats>
  <Radius Units="" UnitsConversion="">{0,1}</Radius>
  <SubLongitude Units="" UnitsConversion="">{0,1}</SubLongitude>
  <Period Units="" UnitsConversion="">{0,1}</Period>
  <ObjectMass Units="" UnitsConversion="">{0,1}</ObjectMass>
  <InputTableURL>{0,1}</InputTableURL>
  <Property>{0,unbounded}</Property>
</RegionParameter>
```

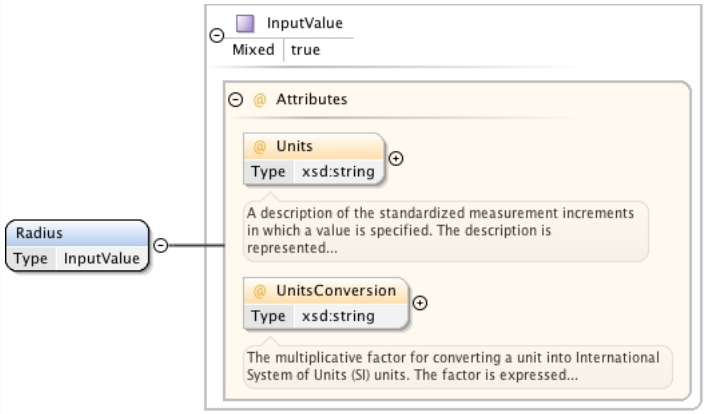
Source

```
<xsd:element name="RegionParameter" substitutionGroup="InputEntity" type="RegionParameter"/>
```

Element Radius

Namespace: http://impex-fp7.oeaw.ac.at

Diagram



Type: InputValue

Properties

content:	complex
mixed:	true

Used by

Complex Type	RegionParameter

Model

Attributes

QName	Type	Use	
Units	xsd:string	optional	

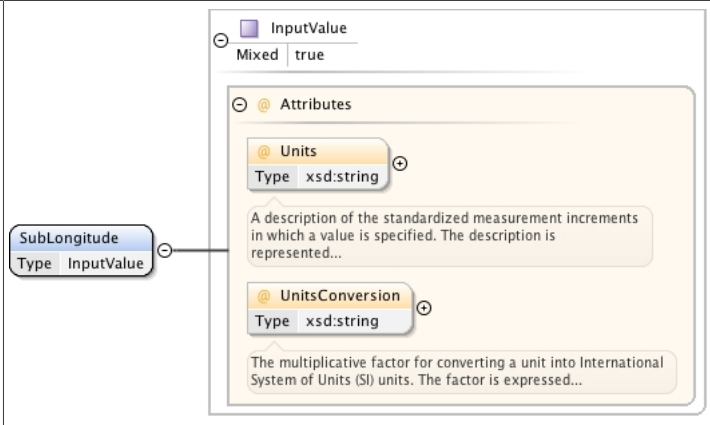
```
A description of the standardized measurement
increments in which a value is specified.
The description is represented as a mathematical
phrase. Units should be represented by widely
accepted representation. For example, units
should conform to the International System
of Units (SI) which is maintained by BIPM
(Bureau International des Poids et Mesures
(see <http://www.bipm.fr/> ) when appropriate
or use tokens like "Re" to represent units
of the Radius of the Earth. Within a phrase
the circumflex (^) is used to indicate a power,
a star (*) is used to indicate multiplication
and a slash (/) division. When symbols are
not separated by a mathematical operator,
multiplication is assumed. Symbols for base
units can be found at: <http://www.bipm.fr/en/si/si_brochure/chapter2/2-1/
#symbols>
and those for common derived units can be
found at: <http://www.bipm.fr/en/si/derived_units/2-2-2.html>
```

UnitsConversion	xsd:string	optional	

```
The multiplicative factor for converting a
unit into International System of Units (SI)
units. The factor is expressed in the form
"number > x", where "number" is a numerical
value and "x" is the appropriate SI units.
The basic SI units are Enumerated: m (meter),
N (newton), kg (kilogram), Pa (pascal), s
(second), Hz (hertz), A (ampere), V (volt),
K (kelvin), W (watt), rad (radian), J (joule),
sr (steradian), C (coulomb), T (tesla), ohm
(ohm), mho (mho or seimens), H (henry), and
```

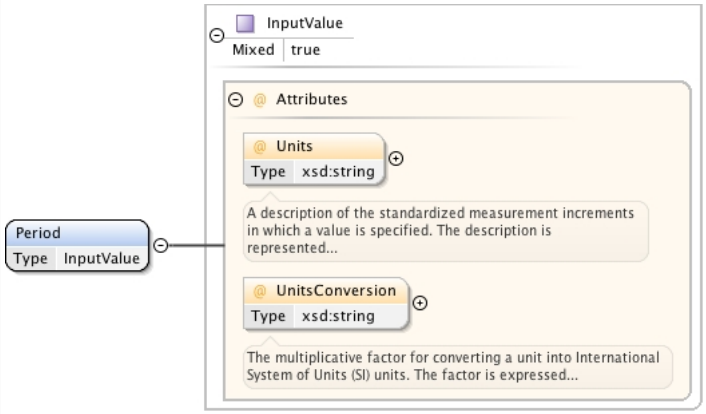
	QName	Type	Use	
		F (farad). Two useful units which are not SI units are: degree (angle), and unitless (no units). An example is: "1.0E-5>T" which converts the units, presumable nT, to tesla. Another example is: "1.0e+3>m/s" which converts a velocity expressed in kilometers per second to meters per second.		
Source	<xsd:element name="Radius" type="InputValue"/>			

Element SubLongitude

Namespace	http://impex-fp7.oeaw.ac.at			
Diagram				
Type	InputValue			
Properties	content:	complex		
	mixed:	true		
Used by	Complex Type	RegionParameter		
Model				
Attributes	**QName**	**Type**	**Use**	
	Units	xsd:string	optional	
		A description of the standardized measurement increments in which a value is specified. The description is represented as a mathematical phrase. Units should be represented by widely accepted representation. For example, units should conform to the International System of Units (SI) which is maintained by BIPM (Bureau International des Poids et Mesures (see <http://www.bipm.fr/>) when appropriate or use tokens like "Re" to represent units of the Radius of the Earth. Within a phrase the circumflex (^) is used to indicate a power, a star (*) is used to indicate multiplication and a slash (/) division. When symbols are not separated by a mathematical operator, multiplication is assumed. Symbols for base units can be found at: <http://www.bipm.fr/en/si/si_brochure/chapter2/2-1/#symbols> and those for common derived units can be found at: <http://www.bipm.fr/en/si/derived_units/2-2-2.html>		
	UnitsConversion	xsd:string	optional	
		The multiplicative factor for converting a unit into International System of Units (SI) units. The factor is expressed in the form "number > x", where "number" is a numerical value and "x" is the appropriate SI units. The basic SI units are Enumerated: m (meter), N (newton), kg (kilogram), Pa (pascal), s (second), Hz (hertz), A (ampere), V (volt), K (kelvin), W (watt), rad (radian), J (joule), sr (steradian), C (coulomb), T (tesla), ohm (ohm), mho (mho or seimens), H (henry), and F (farad). Two useful units which are not		

	QName	Type	Use	
		SI units are: degree (angle), and unitless (no units). An example is: "1.0E-5>T" which converts the units, presumable nT, to tesla. Another example is: "1.0e+3>m/s" which converts a velocity expressed in kilometers per second to meters per second.		
Source	<xsd:element name="SubLongitude" type="InputValue"/>			

Element Period

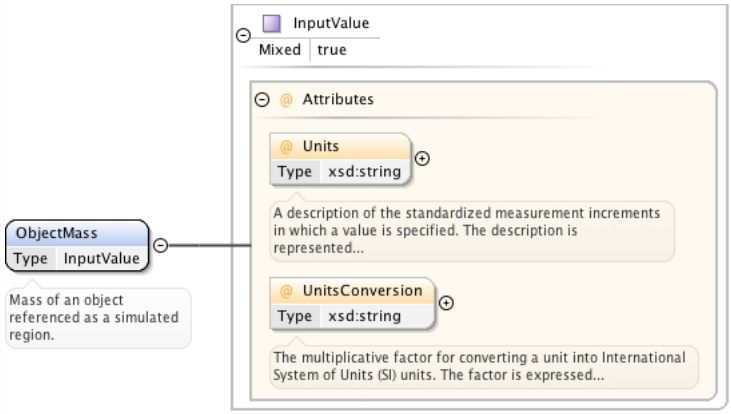
Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	InputValue
Properties	content: complex mixed: true
Used by	Complex Type RegionParameter
Model	

Attributes

QName	Type	Use	
Units	xsd:string	optional	
	A description of the standardized measurement increments in which a value is specified. The description is represented as a mathematical phrase. Units should be represented by widely accepted representation. For example, units should conform to the International System of Units (SI) which is maintained by BIPM (Bureau International des Poids et Mesures (see <http://www.bipm.fr/>) when appropriate or use tokens like "Re" to represent units of the Radius of the Earth. Within a phrase the circumflex (^) is used to indicate a power, a star (*) is used to indicate multiplication and a slash (/) division. When symbols are not separated by a mathematical operator, multiplication is assumed. Symbols for base units can be found at: <http://www.bipm.fr/en/si/si_brochure/chapter2/2-1/#symbols> and those for common derived units can be found at: <http://www.bipm.fr/en/si/derived_units/2-2-2.html>		
UnitsConversion	xsd:string	optional	
	The multiplicative factor for converting a unit into International System of Units (SI) units. The factor is expressed in the form "number > x", where "number" is a numerical value and "x" is the appropriate SI units. The basic SI units are Enumerated: m (meter), N (newton), kg (kilogram), Pa (pascal), s (second), Hz (hertz), A (ampere), V (volt), K (kelvin), W (watt), rad (radian), J (joule), sr (steradian), C (coulomb), T (tesla), ohm (ohm), mho (mho or seimens), H (henry), and F (farad). Two useful units which are not SI units are: degree (angle), and unitless (no units). An example is: "1.0E-5>T" which		

	QName	Type	Use	
		converts the units, presumable nT, to tesla. Another example is: "1.0e+3>m/s" which converts a velocity expressed in kilometers per second to meters per second.		
Source	<xsd:element name="Period" type="InputValue"/>			

Element `ObjectMass`

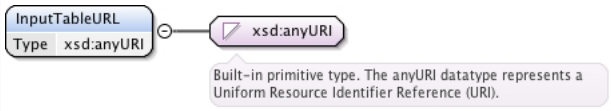
Namespace	http://impex-fp7.oeaw.ac.at			
Annotations	Mass of an object referenced as a simulated region.			
Diagram				
Type	InputValue			
Properties	content: complex			
	mixed: true			
Used by	Complex Type	RegionParameter		
Model				
Attributes	**QName**	**Type**	**Use**	
	Units	xsd:string	optional	
		A description of the standardized measurement increments in which a value is specified. The description is represented as a mathematical phrase. Units should be represented by widely accepted representation. For example, units should conform to the International System of Units (SI) which is maintained by BIPM (Bureau International des Poids et Mesures (see <http://www.bipm.fr/>) when appropriate or use tokens like "Re" to represent units of the Radius of the Earth. Within a phrase the circumflex (^) is used to indicate a power, a star (*) is used to indicate multiplication and a slash (/) division. When symbols are not separated by a mathematical operator, multiplication is assumed. Symbols for base units can be found at: <http://www.bipm.fr/en/si/si_brochure/chapter2/2-1/#symbols> and those for common derived units can be found at: <http://www.bipm.fr/en/si/derived_units/2-2-2.html>		
	UnitsConversion	xsd:string	optional	
		The multiplicative factor for converting a unit into International System of Units (SI) units. The factor is expressed in the form "number > x", where "number" is a numerical value and "x" is the appropriate SI units. The basic SI units are Enumerated: m (meter), N (newton), kg (kilogram), Pa (pascal), s (second), Hz (hertz), A (ampere), V (volt), K (kelvin), W (watt), rad (radian), J (joule), sr (steradian), C (coulomb), T (tesla), ohm (ohm), mho (mho or seimens), H (henry), and F (farad). Two useful units which are not SI units are: degree (angle), and unitless (no units). An example is: "1.0E-5>T" which		

	QName	Type	Use	
		converts the units, presumable nT, to tesla. Another example is: "1.0e+3>m/s" which converts a velocity expressed in kilometers per second to meters per second.		

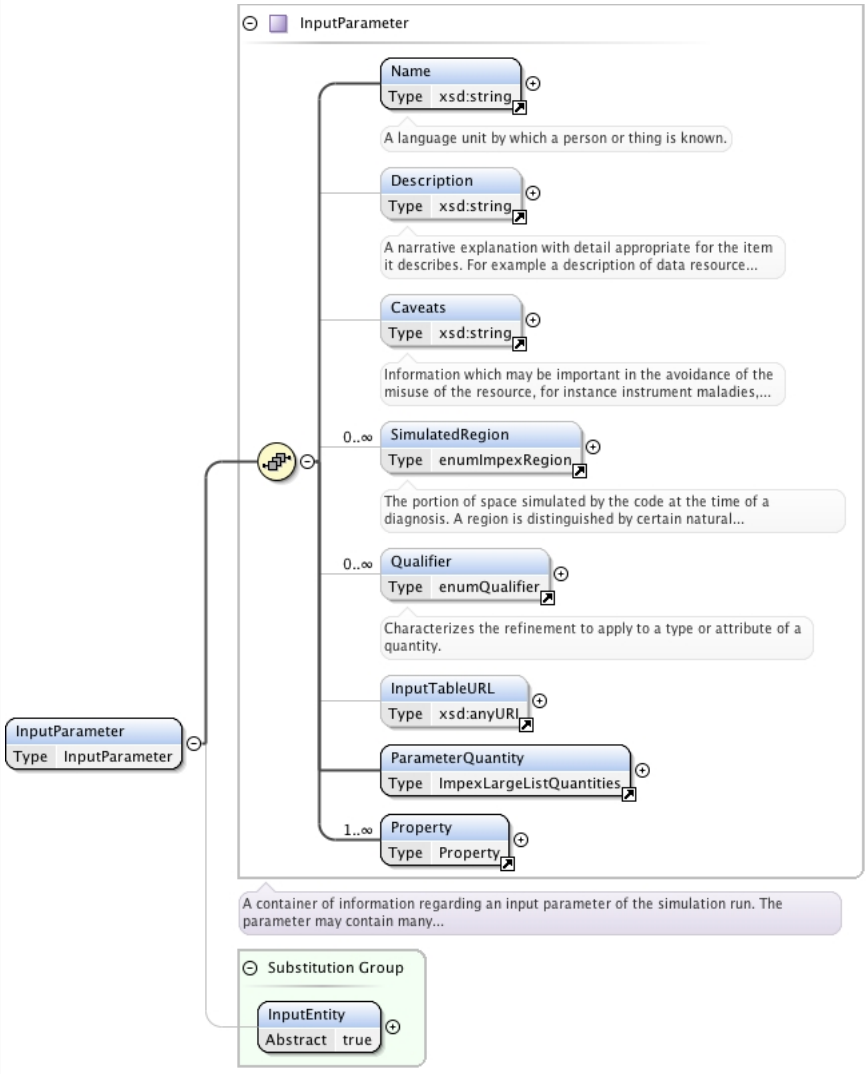
Source

```
<xsd:element name="ObjectMass" type="InputValue">
  <xsd:annotation>
    <xsd:documentation>Mass of an object referenced as a simulated region.</xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

Element `InputTableURL`

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	xsd:anyURI
Properties	content: simple
Used by	Complex Types: InputField, InputParameter, InputPopulation, RegionParameter
Source	`<xsd:element name="InputTableURL" type="xsd:anyURI"/>`

Element `InputParameter`

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	

Type	InputParameter
Properties	content: complex
Substitution Group Affiliation	• InputEntity
Model	Name , Description{0,1} , Caveats{0,1} , SimulatedRegion* , Qualifier* , InputTableURL{0,1} , ParameterQuantity , Property+
Children	Caveats, Description, InputTableURL, Name, ParameterQuantity, Property, Qualifier, SimulatedRegion
Instance	<InputParameter xmlns="http://impex-fp7.oeaw.ac.at"> <Name>{1,1}</Name> <Description>{0,1}</Description> <Caveats>{0,1}</Caveats> <SimulatedRegion>{0,unbounded}</SimulatedRegion> <Qualifier>{0,unbounded}</Qualifier> <InputTableURL>{0,1}</InputTableURL> <ParameterQuantity>{1,1}</ParameterQuantity> <Property>{1,unbounded}</Property> </InputParameter>
Source	<xsd:element name="InputParameter" type="InputParameter" substitutionGroup="InputEntity"/>

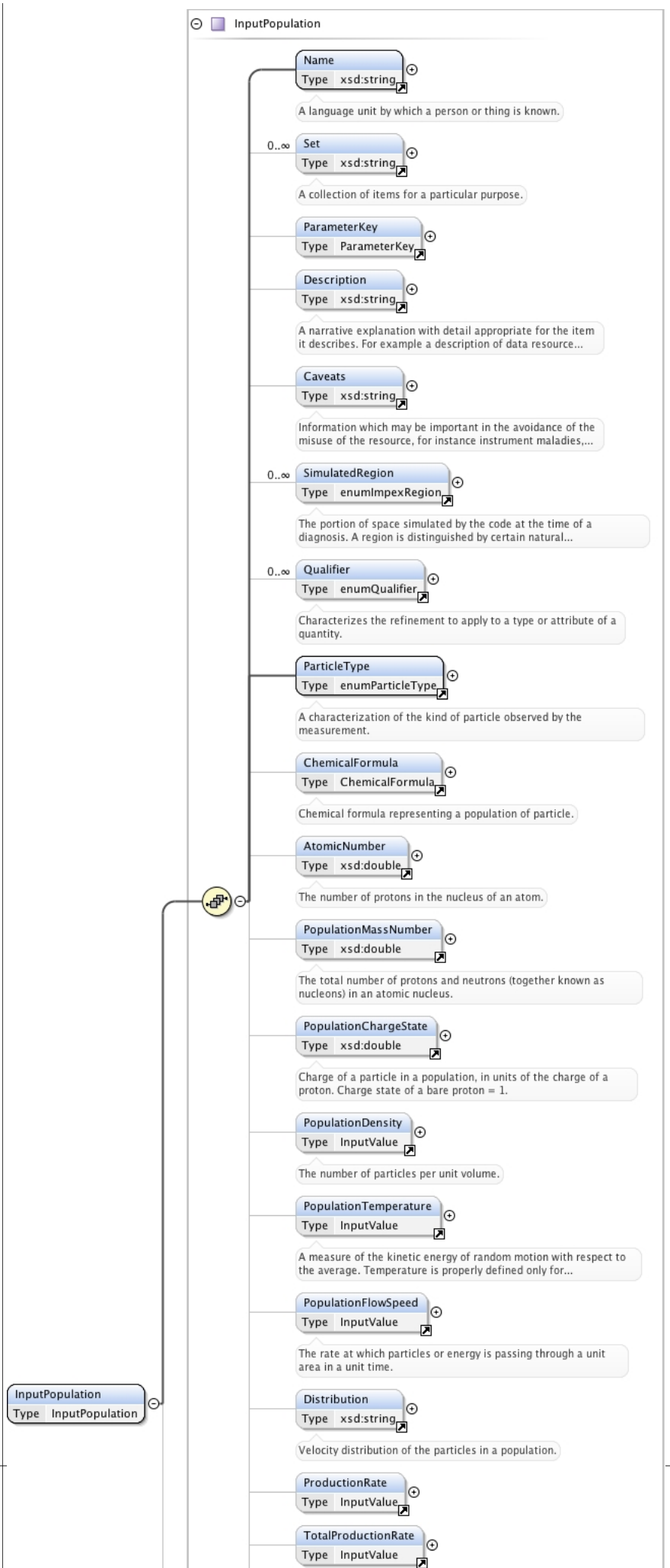
Element ParameterQuantity

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	ImpexLargeListQuantities
Properties	content: simple
Used by	Complex Type InputParameter
Source	<xsd:element name="ParameterQuantity" type="ImpexLargeListQuantities"/>

Element InputPopulation

Namespace	http://impex-fp7.oeaw.ac.at

Diagram

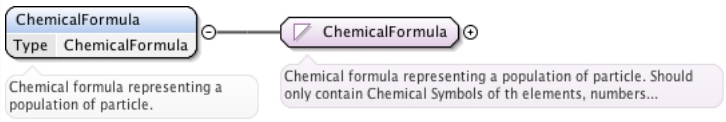

InputPopulation
Type InputPopulation
InputPopulation
Name
Type xsd:string
A language unit by which a person or thing is known.
0..∞ Set
Type xsd:string
A collection of items for a particular purpose.
ParameterKey
Type ParameterKey
Description
Type xsd:string
A narrative explanation with detail appropriate for the item it describes. For example a description of data resource...
Caveats
Type xsd:string
Information which may be important in the avoidance of the misuse of the resource, for instance instrument maladies,...
0..∞ SimulatedRegion
Type enumImpexRegion
The portion of space simulated by the code at the time of a diagnosis. A region is distinguished by certain natural...
0..∞ Qualifier
Type enumQualifier
Characterizes the refinement to apply to a type or attribute of a quantity.
ParticleType
Type enumParticleType
A characterization of the kind of particle observed by the measurement.
ChemicalFormula
Type ChemicalFormula
Chemical formula representing a population of particle.
AtomicNumber
Type xsd:double
The number of protons in the nucleus of an atom.
PopulationMassNumber
Type xsd:double
The total number of protons and neutrons (together known as nucleons) in an atomic nucleus.
PopulationChargeState
Type xsd:double
Charge of a particle in a population, in units of the charge of a proton. Charge state of a bare proton = 1.
PopulationDensity
Type InputValue
The number of particles per unit volume.
PopulationTemperature
Type InputValue
A measure of the kinetic energy of random motion with respect to the average. Temperature is properly defined only for...
PopulationFlowSpeed
Type InputValue
The rate at which particles or energy is passing through a unit area in a unit time.
Distribution
Type xsd:string
Velocity distribution of the particles in a population.
ProductionRate
Type InputValue
TotalProductionRate
Type InputValue

Type	InputPopulation
Properties	content: complex
Substitution Group Affiliation	• InputEntity
Model	Name , Set* , ParameterKey{0,1} , Description{0,1} , Caveats{0,1} , SimulatedRegion* , Qualifier* , ParticleType , ChemicalFormula{0,1} , AtomicNumber{0,1} , PopulationMassNumber{0,1} , PopulationChargeState{0,1} , PopulationDensity{0,1} , PopulationTemperature{0,1} , PopulationFlowSpeed{0,1} , Distribution{0,1} , ProductionRate{0,1} , TotalProductionRate{0,1} , InputTableURL{0,1} , Profile{0,1} , ModelURL{0,1}
Children	AtomicNumber, Caveats, ChemicalFormula, Description, Distribution, InputTableURL, ModelURL, Name, ParameterKey, ParticleType, PopulationChargeState, PopulationDensity, PopulationFlowSpeed, PopulationMassNumber, PopulationTemperature, ProductionRate, Profile, Qualifier, Set, SimulatedRegion, TotalProductionRate

Instance	<pre><InputPopulation xmlns="http://impex-fp7.oeaw.ac.at">
	  <Name>{1,1}</Name>
	  <Set>{0,unbounded}</Set>
	  <ParameterKey>{0,1}</ParameterKey>
	  <Description>{0,1}</Description>
	  <Caveats>{0,1}</Caveats>
	  <SimulatedRegion>{0,unbounded}</SimulatedRegion>
	  <Qualifier>{0,unbounded}</Qualifier>
	  <ParticleType>{1,1}</ParticleType>
	  <ChemicalFormula>{0,1}</ChemicalFormula>
	  <AtomicNumber>{0,1}</AtomicNumber>
	  <PopulationMassNumber>{0,1}</PopulationMassNumber>
	  <PopulationChargeState>{0,1}</PopulationChargeState>
	  <PopulationDensity Units="" UnitsConversion="">{0,1}</PopulationDensity>
	  <PopulationTemperature Units="" UnitsConversion="">{0,1}</PopulationTemperature>
	  <PopulationFlowSpeed Units="" UnitsConversion="">{0,1}</PopulationFlowSpeed>
	  <Distribution>{0,1}</Distribution>
	  <ProductionRate Units="" UnitsConversion="">{0,1}</ProductionRate>
	  <TotalProductionRate Units="" UnitsConversion="">{0,1}</TotalProductionRate>
	  <InputTableURL>{0,1}</InputTableURL>
	  <Profile>{0,1}</Profile>
	  <ModelURL>{0,1}</ModelURL>
	</InputPopulation></pre>

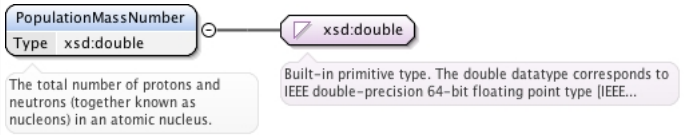
Source	<pre><xsd:element name="InputPopulation" type="InputPopulation" substitutionGroup="InputEntity"/></pre>

Element ChemicalFormula

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Chemical formula representing a population of particle.
Diagram	
Type	ChemicalFormula
Properties	content: simple
Used by	Complex Types InputPopulation, Particle

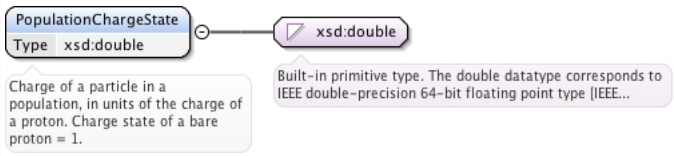
Source	<pre><xsd:element name="ChemicalFormula" type="ChemicalFormula">
	  <xsd:annotation>
	  <xsd:documentation>Chemical formula representing a population of particle.</xsd:documentation>
	  </xsd:annotation>
	</xsd:element></pre>

Element PopulationMassNumber

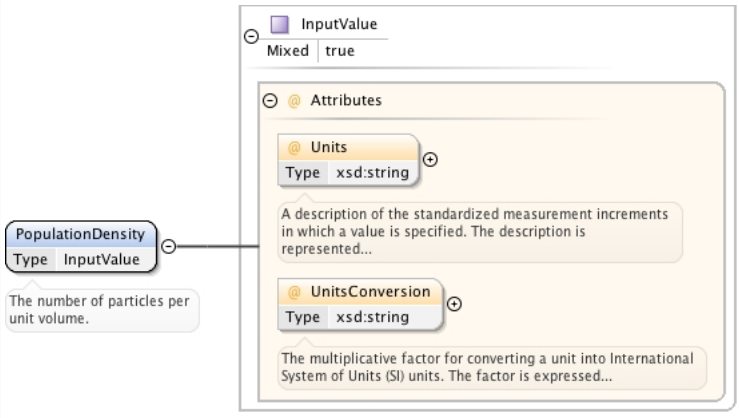
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The total number of protons and neutrons (together known as nucleons) in an atomic nucleus.
Diagram	
Type	xsd:double

Properties	content:	simple
Used by	Complex Types	InputPopulation, Particle
Source	<xsd:element name="PopulationMassNumber" type="xsd:double"> <xsd:annotation> <xsd:documentation xml:lang="en">The total number of protons and neutrons (together known as nucleons) in an atomic nucleus.</xsd:documentation> </xsd:annotation> </xsd:element>	

Element PopulationChargeState

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Charge of a particle in a population, in units of the charge of a proton. Charge state of a bare proton = 1.
Diagram	
Type	xsd:double
Properties	content: simple
Used by	Complex Types: InputPopulation, Particle
Source	<xsd:element name="PopulationChargeState" type="xsd:double"> <xsd:annotation> <xsd:documentation xml:lang="en">Charge of a particle in a population, in units of the charge of a proton. Charge state of a bare proton = 1.</xsd:documentation> </xsd:annotation> </xsd:element>

Element PopulationDensity

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The number of particles per unit volume.
Diagram	
Type	InputValue
Properties	content: complex mixed: true
Used by	Complex Type: InputPopulation
Model	

Attributes

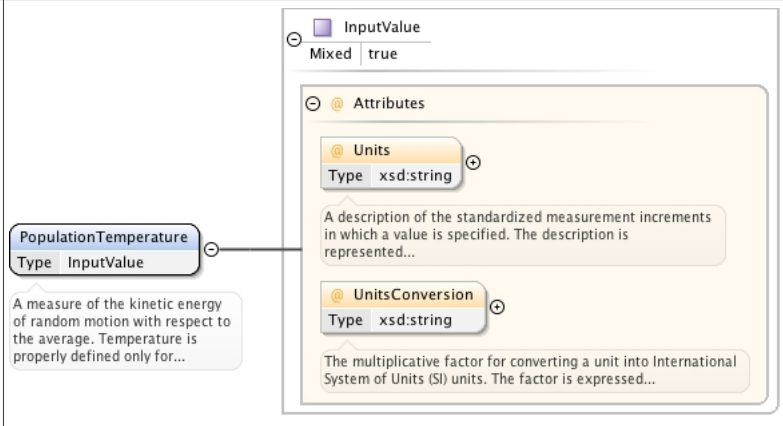
QName	Type	Use	
Units	xsd:string	optional	
	A description of the standardized measurement increments in which a value is specified. The description is represented as a mathematical		

	QName	Type	Use	
		phrase. Units should be represented by widely accepted representation. For example, units should conform to the International System of Units (SI) which is maintained by BIPM (Bureau International des Poids et Mesures (see <http://www.bipm.fr/>) when appropriate or use tokens like "Re" to represent units of the Radius of the Earth. Within a phrase the circumflex (^) is used to indicate a power, a star (*) is used to indicate multiplication and a slash (/) division. When symbols are not separated by a mathematical operator, multiplication is assumed. Symbols for base units can be found at: <http://www.bipm.fr/en/si/si_brochure/chapter2/2-1/#symbols> and those for common derived units can be found at: <http://www.bipm.fr/en/si/derived_units/2-2-2.html>		
	UnitsConversion	xsd:string	optional	
		The multiplicative factor for converting a unit into International System of Units (SI) units. The factor is expressed in the form "number > x", where "number" is a numerical value and "x" is the appropriate SI units. The basic SI units are Enumerated: m (meter), N (newton), kg (kilogram), Pa (pascal), s (second), Hz (hertz), A (ampere), V (volt), K (kelvin), W (watt), rad (radian), J (joule), sr (steradian), C (coulomb), T (tesla), ohm (ohm), mho (mho or seimens), H (henry), and F (farad). Two useful units which are not SI units are: degree (angle), and unitless (no units). An example is: "1.0E-5>T" which converts the units, presumable nT, to tesla. Another example is: "1.0e+3>m/s" which converts a velocity expressed in kilometers per second to meters per second.		

Source

```
<xsd:element name="PopulationDensity" type="InputValue">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">The number of particles per unit volume.</xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

Element PopulationTemperature

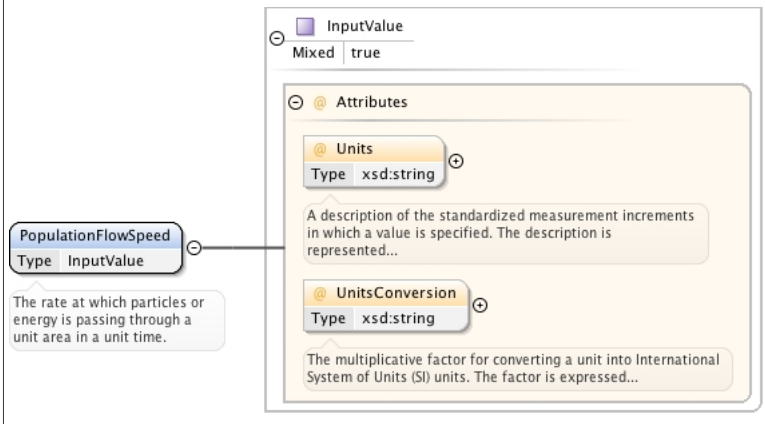
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A measure of the kinetic energy of random motion with respect to the average. Temperature is properly defined only for an equilibrium particle distribution (Maxwellian distribution).
Diagram	
Type	InputValue
Properties	content: complex mixed: true
Used by	Complex Type: InputPopulation
Model	

Attributes	**QName**	**Type**	**Use**	
	Units	xsd:string	optional	
		A description of the standardized measurement increments in which a value is specified. The description is represented as a mathematical phrase. Units should be represented by widely accepted representation. For example, units should conform to the International System of Units (SI) which is maintained by BIPM (Bureau International des Poids et Mesures (see <http://www.bipm.fr/>) when appropriate or use tokens like "Re" to represent units of the Radius of the Earth. Within a phrase the circumflex (^) is used to indicate a power, a star (*) is used to indicate multiplication and a slash (/) division. When symbols are not separated by a mathematical operator, multiplication is assumed. Symbols for base units can be found at: <http://www.bipm.fr/en/si/si_brochure/chapter2/2-1/#symbols> and those for common derived units can be found at: <http://www.bipm.fr/en/si/derived_units/2-2-2.html>		
	UnitsConversion	xsd:string	optional	
		The multiplicative factor for converting a unit into International System of Units (SI) units. The factor is expressed in the form "number > x", where "number" is a numerical value and "x" is the appropriate SI units. The basic SI units are Enumerated: m (meter), N (newton), kg (kilogram), Pa (pascal), s (second), Hz (hertz), A (ampere), V (volt), K (kelvin), W (watt), rad (radian), J (joule), sr (steradian), C (coulomb), T (tesla), ohm (ohm), mho (mho or seimens), H (henry), and F (farad). Two useful units which are not SI units are: degree (angle), and unitless (no units). An example is: "1.0E-5>T" which converts the units, presumable nT, to tesla. Another example is: "1.0e+3>m/s" which converts a velocity expressed in kilometers per second to meters per second.		

Source

```
<xsd:element name="PopulationTemperature" type="InputValue">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">A measure of the kinetic energy of random motion with respect
 to the average. Temperature is properly defined only for an equilibrium particle distribution
 (Maxwellian distribution).</xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

Element PopulationFlowSpeed

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The rate at which particles or energy is passing through a unit area in a unit time.
Diagram	
Type	InputValue
Properties	content: complex

	mixed:	`true`
Used by	Complex Type	InputPopulation
Model		

Attributes

QName	Type	Use	
Units	xsd:string	optional	

A description of the standardized measurement increments in which a value is specified. The description is represented as a mathematical phrase. Units should be represented by widely accepted representation. For example, units should conform to the International System of Units (SI) which is maintained by BIPM (Bureau International des Poids et Mesures (see <http://www.bipm.fr/>) when appropriate or use tokens like "Re" to represent units of the Radius of the Earth. Within a phrase the circumflex (^) is used to indicate a power, a star (*) is used to indicate multiplication and a slash (/) division. When symbols are not separated by a mathematical operator, multiplication is assumed. Symbols for base units can be found at: <http://www.bipm.fr/en/si/si_brochure/chapter2/2-1/#symbols> and those for common derived units can be found at: <http://www.bipm.fr/en/si/derived_units/2-2-2.html>

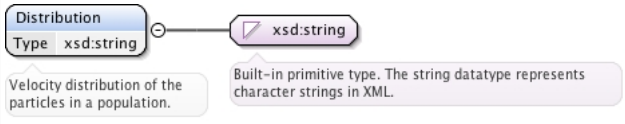
UnitsConversion	xsd:string	optional	

The multiplicative factor for converting a unit into International System of Units (SI) units. The factor is expressed in the form "number > x", where "number" is a numerical value and "x" is the appropriate SI units. The basic SI units are Enumerated: m (meter), N (newton), kg (kilogram), Pa (pascal), s (second), Hz (hertz), A (ampere), V (volt), K (kelvin), W (watt), rad (radian), J (joule), sr (steradian), C (coulomb), T (tesla), ohm (ohm), mho (mho or seimens), H (henry), and F (farad). Two useful units which are not SI units are: degree (angle), and unitless (no units). An example is: "1.0E-5>T" which converts the units, presumable nT, to tesla. Another example is: "1.0e+3>m/s" which converts a velocity expressed in kilometers per second to meters per second.

Source

```
<xsd:element name="PopulationFlowSpeed" type="InputValue">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">The rate at which particles or energy is passing through a unit
 area in a unit time.</xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

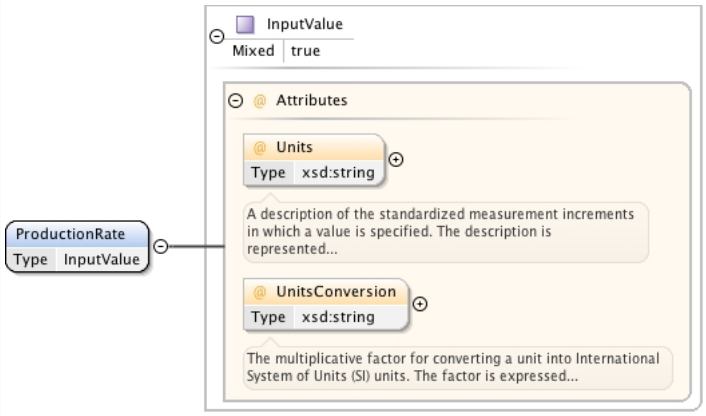
Element `Distribution`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	`Velocity distribution of the particles in a population.`
Diagram	
Type	xsd:string
Properties	content: `simple`
Used by	Complex Type InputPopulation

Source

```
<xsd:element name="Distribution" type="xsd:string">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Velocity distribution of the particles in a population.</
xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

Element `ProductionRate`

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	InputValue
Properties	content: `complex` mixed: `true`
Used by	Complex Type InputPopulation
Model	

Attributes

QName	Type	Use	
Units	xsd:string	optional	

```
A description of the standardized measurement
increments in which a value is specified.
The description is represented as a mathematical
phrase. Units should be represented by widely
accepted representation. For example, units
should conform to the International System
of Units (SI) which is maintained by BIPM
(Bureau International des Poids et Mesures
(see <http://www.bipm.fr/> ) when appropriate
or use tokens like "Re" to represent units
of the Radius of the Earth. Within a phrase
the circumflex (^) is used to indicate a power,
a star (*) is used to indicate multiplication
and a slash (/) division. When symbols are
not separated by a mathematical operator,
multiplication is assumed. Symbols for base
units can be found at: <http://www.bipm.fr/en/si/si_brochure/chapter2/2-1/
#symbols>
and those for common derived units can be
found at: <http://www.bipm.fr/en/si/derived_units/2-2-2.html>
```

UnitsConversion	xsd:string	optional	

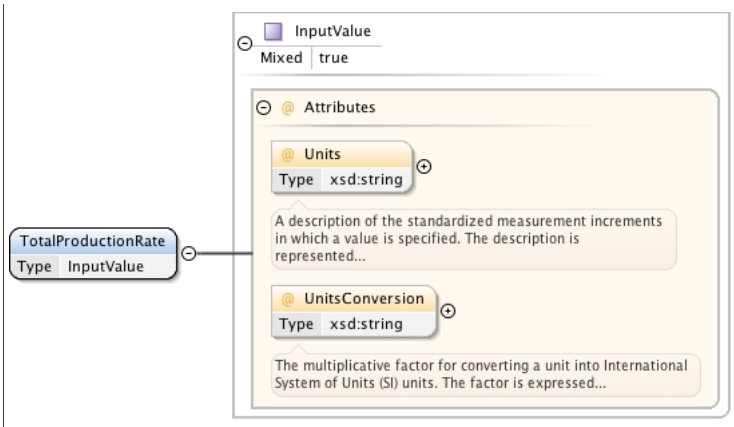
```
The multiplicative factor for converting a
unit into International System of Units (SI)
units. The factor is expressed in the form
"number > x", where "number" is a numerical
value and "x" is the appropriate SI units.
The basic SI units are Enumerated: m (meter),
N (newton), kg (kilogram), Pa (pascal), s
(second), Hz (hertz), A (ampere), V (volt),
K (kelvin), W (watt), rad (radian), J (joule),
sr (steradian), C (coulomb), T (tesla), ohm
(ohm), mho (mho or seimens), H (henry), and
F (farad). Two useful units which are not
SI units are: degree (angle), and unitless
(no units). An example is: "1.0E-5>T" which
converts the units, presumable nT, to tesla.
Another example is: "1.0e+3>m/s" which converts
a velocity expressed in kilometers per second
to meters per second.
```

Source

```
<xsd:element name="ProductionRate" type="InputValue"/>
```

Element `TotalProductionRate`

Namespace	http://impex-fp7.oeaw.ac.at

Diagram	
Type	InputValue
Properties	content: `complex` mixed: `true`
Used by	Complex Type InputPopulation
Model	

Attributes

QName	Type	Use	
Units	xsd:string	optional	

A description of the standardized measurement increments in which a value is specified. The description is represented as a mathematical phrase. Units should be represented by widely accepted representation. For example, units should conform to the International System of Units (SI) which is maintained by BIPM (Bureau International des Poids et Mesures (see <http://www.bipm.fr/>) when appropriate or use tokens like "Re" to represent units of the Radius of the Earth. Within a phrase the circumflex (^) is used to indicate a power, a star (*) is used to indicate multiplication and a slash (/) division. When symbols are not separated by a mathematical operator, multiplication is assumed. Symbols for base units can be found at: <http://www.bipm.fr/en/si/si_brochure/chapter2/2-1/#symbols> and those for common derived units can be found at: <http://www.bipm.fr/en/si/derived_units/2-2-2.html>

UnitsConversion	xsd:string	optional	

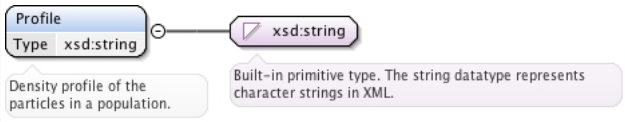
The multiplicative factor for converting a unit into International System of Units (SI) units. The factor is expressed in the form "number > x", where "number" is a numerical value and "x" is the appropriate SI units. The basic SI units are Enumerated: m (meter), N (newton), kg (kilogram), Pa (pascal), s (second), Hz (hertz), A (ampere), V (volt), K (kelvin), W (watt), rad (radian), J (joule), sr (steradian), C (coulomb), T (tesla), ohm (ohm), mho (mho or seimens), H (henry), and F (farad). Two useful units which are not SI units are: degree (angle), and unitless (no units). An example is: "1.0E-5>T" which converts the units, presumable nT, to tesla. Another example is: "1.0e+3>m/s" which converts a velocity expressed in kilometers per second to meters per second.

Source

```
<xsd:element name="TotalProductionRate" type="InputValue"/>
```

Element `Profile`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Density profile of the particles in a population.

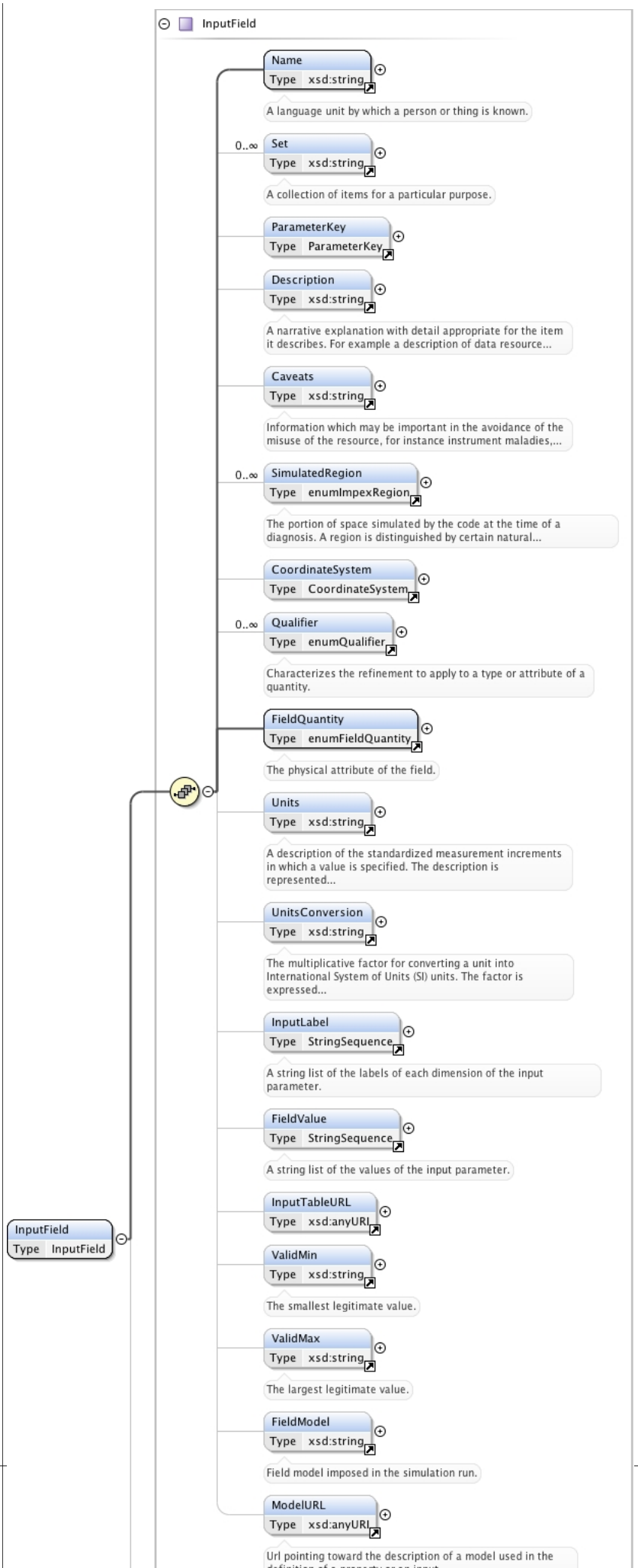
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Type InputPopulation

Source	`<xsd:element name="Profile" type="xsd:string">`
	`  <xsd:annotation>`
	`  <xsd:documentation xml:lang="en">Density profile of the particles in a population.</xsd:documentation>`
	`  </xsd:annotation>`
	`</xsd:element>`

Element `InputField`

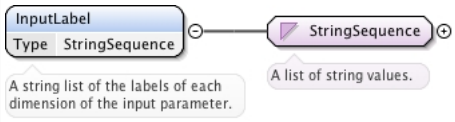
Namespace	http://impex-fp7.oeaw.ac.at

Diagram

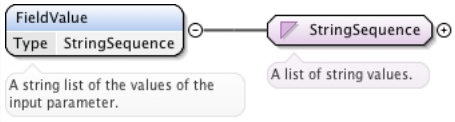

InputField
Name
Type xsd:string
A language unit by which a person or thing is known.
0..∞
Set
Type xsd:string
A collection of items for a particular purpose.
ParameterKey
Type ParameterKey
Description
Type xsd:string
A narrative explanation with detail appropriate for the item it describes. For example a description of data resource...
Caveats
Type xsd:string
Information which may be important in the avoidance of the misuse of the resource, for instance instrument maladies,...
0..∞
SimulatedRegion
Type enumImpexRegion
The portion of space simulated by the code at the time of a diagnosis. A region is distinguished by certain natural...
CoordinateSystem
Type CoordinateSystem
0..∞
Qualifier
Type enumQualifier
Characterizes the refinement to apply to a type or attribute of a quantity.
FieldQuantity
Type enumFieldQuantity
The physical attribute of the field.
Units
Type xsd:string
A description of the standardized measurement increments in which a value is specified. The description is represented...
UnitsConversion
Type xsd:string
The multiplicative factor for converting a unit into International System of Units (SI) units. The factor is expressed...
InputLabel
Type StringSequence
A string list of the labels of each dimension of the input parameter.
FieldValue
Type StringSequence
A string list of the values of the input parameter.
InputTableURL
Type xsd:anyURI
ValidMin
Type xsd:string
The smallest legitimate value.
ValidMax
Type xsd:string
The largest legitimate value.
FieldModel
Type xsd:string
Field model imposed in the simulation run.
ModelURL
Type xsd:anyURI
Url pointing toward the description of a model used in the
InputField
Type InputField

Type	InputField
Properties	content: complex
Substitution Group Affiliation	• InputEntity
Model	Name , Set* , ParameterKey{0,1} , Description{0,1} , Caveats{0,1} , SimulatedRegion* , CoordinateSystem{0,1} , Qualifier* , FieldQuantity , Units{0,1} , UnitsConversion{0,1} , InputLabel{0,1} , FieldValue{0,1} , InputTableURL{0,1} , ValidMin{0,1} , ValidMax{0,1} , FieldModel{0,1} , ModelURL{0,1}
Children	Caveats, CoordinateSystem, Description, FieldModel, FieldQuantity, FieldValue, InputLabel, InputTableURL, ModelURL, Name, ParameterKey, Qualifier, Set, SimulatedRegion, Units, UnitsConversion, ValidMax, ValidMin
Instance	<InputField xmlns="http://impex-fp7.oeaw.ac.at"> <Name>{1,1}</Name> <Set>{0,unbounded}</Set> <ParameterKey>{0,1}</ParameterKey> <Description>{0,1}</Description> <Caveats>{0,1}</Caveats> <SimulatedRegion>{0,unbounded}</SimulatedRegion> <CoordinateSystem>{0,1}</CoordinateSystem> <Qualifier>{0,unbounded}</Qualifier> <FieldQuantity>{1,1}</FieldQuantity> <Units>{0,1}</Units> <UnitsConversion>{0,1}</UnitsConversion> <InputLabel>{0,1}</InputLabel> <FieldValue>{0,1}</FieldValue> <InputTableURL>{0,1}</InputTableURL> <ValidMin>{0,1}</ValidMin> <ValidMax>{0,1}</ValidMax> <FieldModel>{0,1}</FieldModel> <ModelURL>{0,1}</ModelURL> </InputField>
Source	<xsd:element name="InputField" type="InputField" substitutionGroup="InputEntity"/>

Element InputLabel

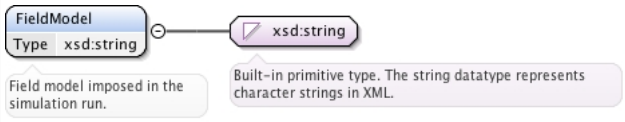
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A string list of the labels of each dimension of the input parameter.
Diagram	
Type	StringSequence
Properties	content: simple
Used by	Complex Type InputField
Source	<xsd:element name="InputLabel" type="StringSequence"> <xsd:annotation> <xsd:documentation xml:lang="en">A string list of the labels of each dimension of the input parameter.</xsd:documentation> </xsd:annotation> </xsd:element>

Element FieldValue

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A string list of the values of the input parameter.
Diagram	
Type	StringSequence
Properties	content: simple
Used by	Complex Type InputField

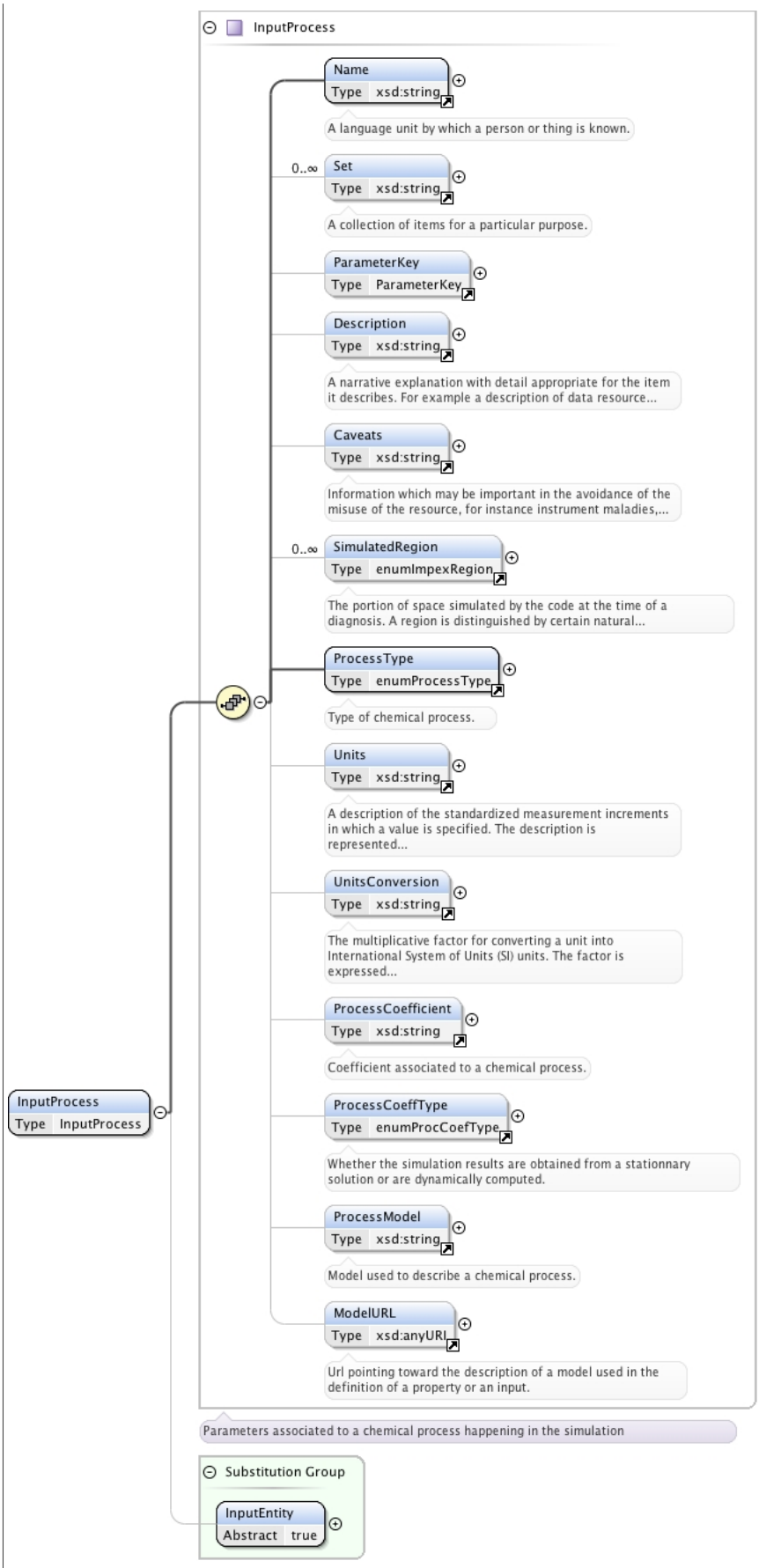
Source	<xsd:element name="FieldValue" type="StringSequence"> <xsd:annotation> <xsd:documentation xml:lang="en">A string list of the values of the input parameter.</ xsd:documentation> </xsd:annotation> </xsd:element>

Element FieldModel

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Field model imposed in the simulation run.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Type InputField
Source	<xsd:element name="FieldModel" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">Field model imposed in the simulation run.</xsd:documentation> </xsd:annotation> </xsd:element>

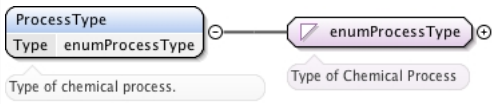
Element InputProcess

Namespace	http://impex-fp7.oeaw.ac.at

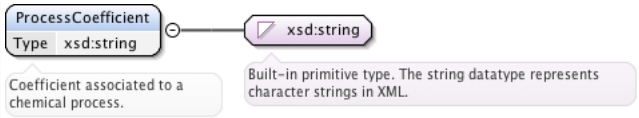
Diagram	
Type	InputProcess

Properties	content: complex
Substitution Group Affiliation	• InputEntity
Model	Name , Set* , ParameterKey{0,1} , Description{0,1} , Caveats{0,1} , SimulatedRegion* , ProcessType , Units{0,1} , UnitsConversion{0,1} , ProcessCoefficient{0,1} , ProcessCoeffType{0,1} , ProcessModel{0,1} , ModelURL{0,1}
Children	Caveats, Description, ModelURL, Name, ParameterKey, ProcessCoeffType, ProcessCoefficient, ProcessModel, ProcessType, Set, SimulatedRegion, Units, UnitsConversion
Instance	<InputProcess xmlns="http://impex-fp7.oeaw.ac.at"> <Name>{1,1}</Name> <Set>{0,unbounded}</Set> <ParameterKey>{0,1}</ParameterKey> <Description>{0,1}</Description> <Caveats>{0,1}</Caveats> <SimulatedRegion>{0,unbounded}</SimulatedRegion> <ProcessType>{1,1}</ProcessType> <Units>{0,1}</Units> <UnitsConversion>{0,1}</UnitsConversion> <ProcessCoefficient>{0,1}</ProcessCoefficient> <ProcessCoeffType>{0,1}</ProcessCoeffType> <ProcessModel>{0,1}</ProcessModel> <ModelURL>{0,1}</ModelURL> </InputProcess>
Source	<xsd:element name="InputProcess" type="InputProcess" substitutionGroup="InputEntity"/>

Element ProcessType

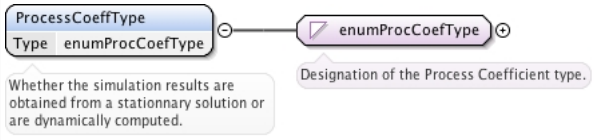
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Type of chemical process.
Diagram	
Type	enumProcessType
Properties	content: simple
Facets	enumeration ChargeExchange — Chemical process involving a charge transfer from an ion (which becomes neutral) to a neutral (which becomes ionized). enumeration ElectronImpact — Chemical process by which a neutral is ionized thanks to the energy from the impact of an electron. enumeration PhotoIonization — Chemical process by which a neutral is ionized thanks to the energy from a photon. enumeration DissociativeRecombination — Chemical process by which an ion is neutralized by capturing an electron, and splits in two new neutral species.
Used by	Complex Type InputProcess
Source	<xsd:element name="ProcessType" type="enumProcessType"> <xsd:annotation> <xsd:documentation xml:lang="en">Type of chemical process.</xsd:documentation> </xsd:annotation> </xsd:element>

Element ProcessCoefficient

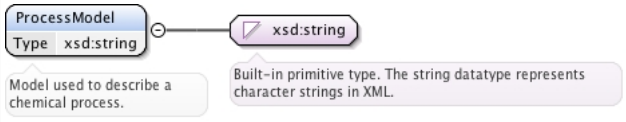
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Coefficient associated to a chemical process.
Diagram	
Type	xsd:string

Properties	content:	simple
Used by	Complex Type	InputProcess
Source	<xsd:element name="ProcessCoefficient" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">Coefficient associated to a chemical process.</ xsd:documentation> </xsd:annotation> </xsd:element>	

Element ProcessCoeffType

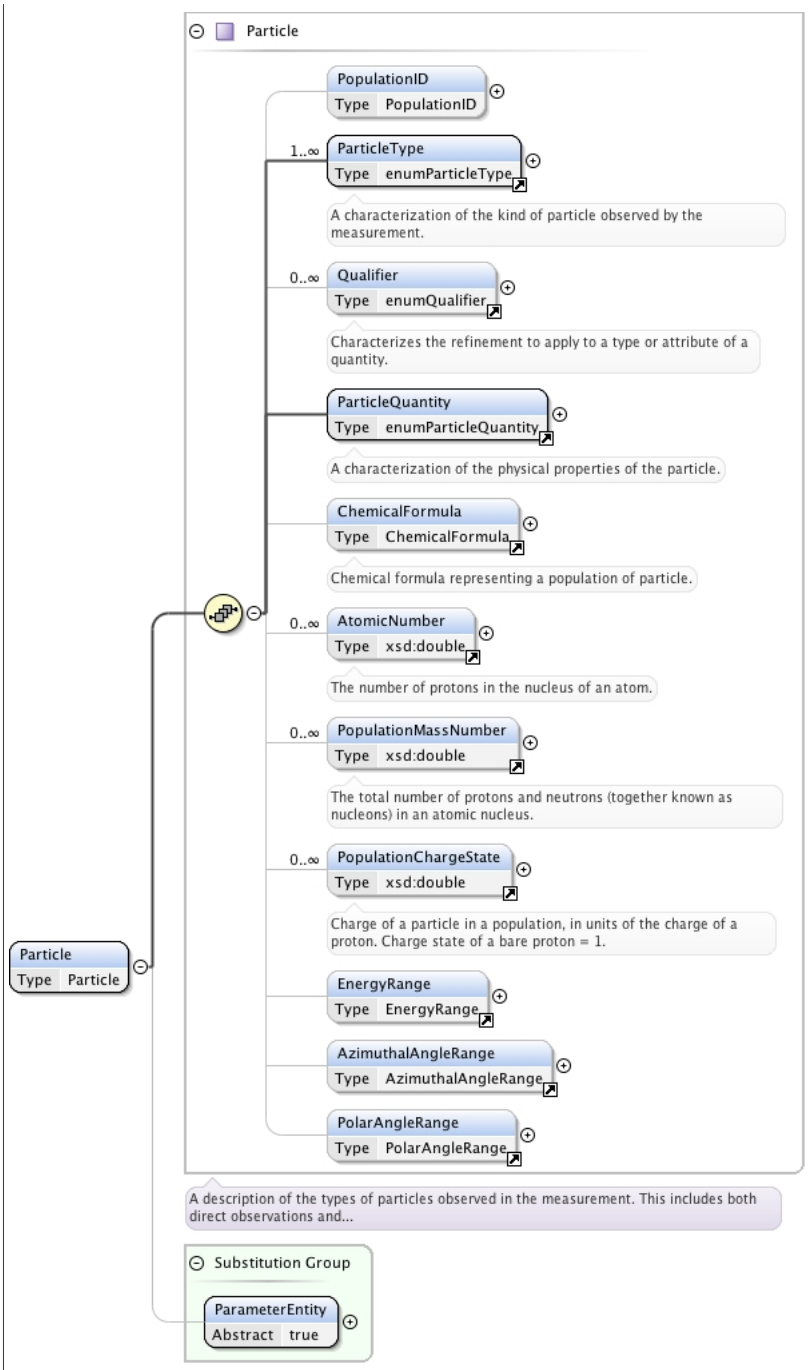
Namespace	http://impex-fp7.oeaw.ac.at		
Annotations	Whether the simulation results are obtained from a stationnary solution or are dynamically computed.		
Diagram			
Type	enumProcCoefType		
Properties	content:	simple	
Facets	enumeration	CrossSection	Cross section of the reaction, when the reaction implies the collision of two particles.
	enumeration	Frequency	Reaction frequency: number of reaction per unit of time.
	enumeration	Rate	Reaction rate: reaction production per unit of time.
	enumeration	Other	Anything else.
Used by	Complex Type	InputProcess	
Source	<xsd:element name="ProcessCoeffType" type="enumProcCoefType"> <xsd:annotation> <xsd:documentation xml:lang="en">Whether the simulation results are obtained from a stationnary solution or are dynamically computed.</xsd:documentation> </xsd:annotation> </xsd:element>		

Element ProcessModel

Namespace	http://impex-fp7.oeaw.ac.at	
Annotations	Model used to describe a chemical process.	
Diagram		
Type	xsd:string	
Properties	content:	simple
Used by	Complex Type	InputProcess
Source	<xsd:element name="ProcessModel" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">Model used to describe a chemical process.</xsd:documentation> </xsd:annotation> </xsd:element>	

Element Particle

Namespace	http://impex-fp7.oeaw.ac.at

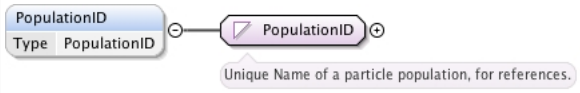
Diagram	
Type	Particle
Properties	content: complex
Substitution Group Affiliation	• ParameterEntity
Model	PopulationID{0,1} , ParticleType+ , Qualifier* , ParticleQuantity , ChemicalFormula{0,1} , AtomicNumber* , PopulationMassNumber* , PopulationChargeState* , EnergyRange{0,1} , AzimuthalAngleRange{0,1} , PolarAngleRange{0,1}
Children	AtomicNumber, AzimuthalAngleRange, ChemicalFormula, EnergyRange, ParticleQuantity, ParticleType, PolarAngleRange, PopulationChargeState, PopulationID, PopulationMassNumber, Qualifier
Instance	<Particle xmlns="http://impex-fp7.oeaw.ac.at"> <PopulationID>{0,1}</PopulationID> <ParticleType>{1,unbounded}</ParticleType> <Qualifier>{0,unbounded}</Qualifier> <ParticleQuantity>{1,1}</ParticleQuantity> <ChemicalFormula>{0,1}</ChemicalFormula> <AtomicNumber>{0,unbounded}</AtomicNumber> <PopulationMassNumber>{0,unbounded}</PopulationMassNumber>

```
  <PopulationChargeState>{0,unbounded}</PopulationChargeState>
  <EnergyRange>{0,1}</EnergyRange>
  <AzimuthalAngleRange>{0,1}</AzimuthalAngleRange>
  <PolarAngleRange>{0,1}</PolarAngleRange>
</Particle>
```

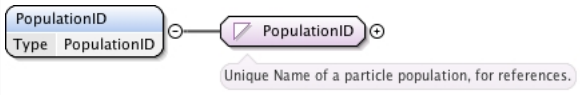
Source

```
<xsd:element name="Particle" substitutionGroup="ParameterEntity" type="Particle"/>
```

Element `Particle / PopulationID`

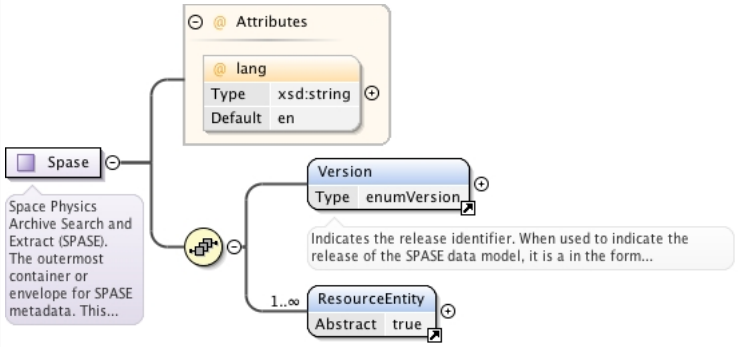
Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	PopulationID
Properties	content: simple minOccurs: 0
Source	`<xsd:element minOccurs="0" name="PopulationID" type="PopulationID"/>`

Element `PopulationID`

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	PopulationID
Properties	content: simple
Source	`<xsd:element name="PopulationID" type="PopulationID"/>`

Complex Type(s)

Complex Type `Spase`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Space Physics Archive Search and Extract (SPASE). The outermost container or envelope for SPASE metadata. This indicates the start of the SPASE metadata.
Diagram	
Used by	Element Spase
Model	Version , ResourceEntity+
Children	ResourceEntity, Version

Attributes

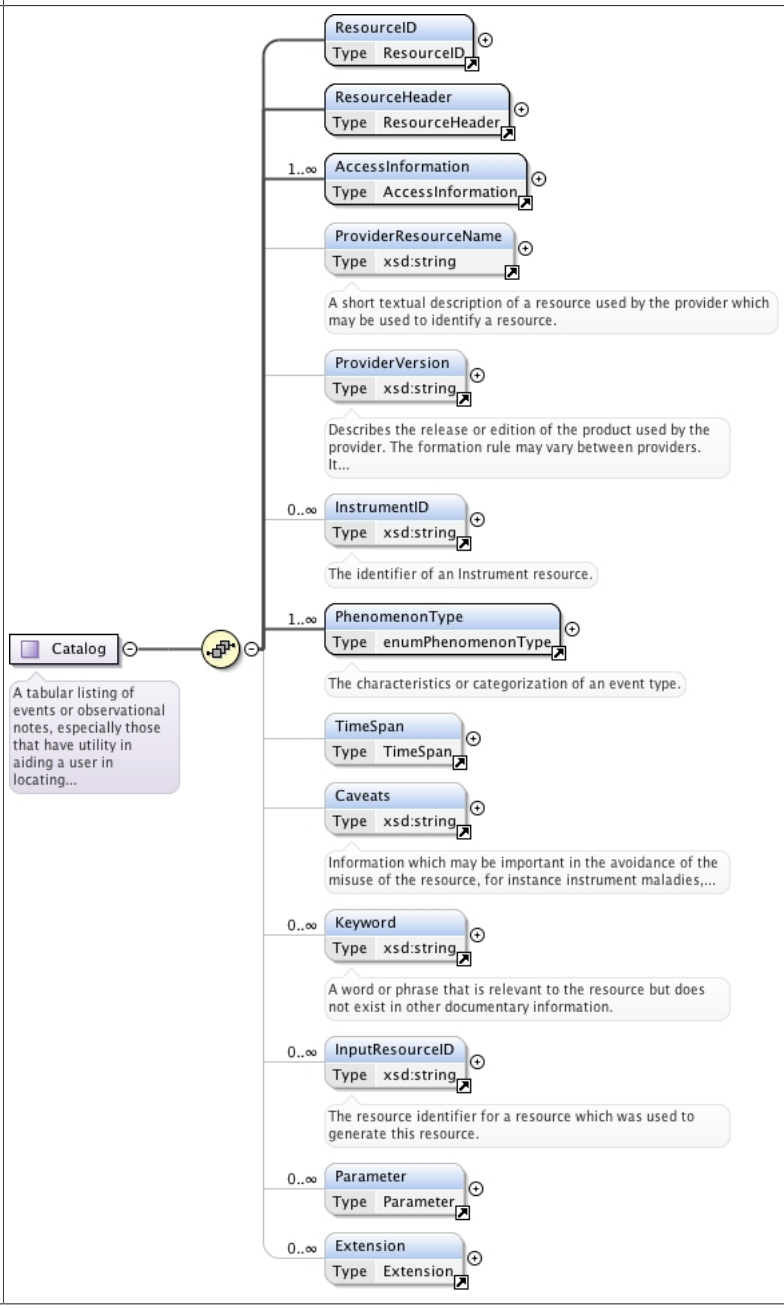
QName	Type	Default	Use
lang	xsd:string	en	optional

Source

```
<xsd:complexType name="Spase">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Space Physics Archive Search and Extract (SPASE). The outermost
 container or envelope for SPASE metadata. This indicates the start of the SPASE metadata.</
xsd:documentation>
  </xsd:annotation>
```

```
  <xsd:sequence>
    <xsd:element ref="Version" minOccurs="1" maxOccurs="1"/>
    <xsd:element ref="ResourceEntity" minOccurs="1" maxOccurs="unbounded"/>
  </xsd:sequence>
  <xsd:attribute name="lang" type="xsd:string" default="en"/>
</xsd:complexType>
```

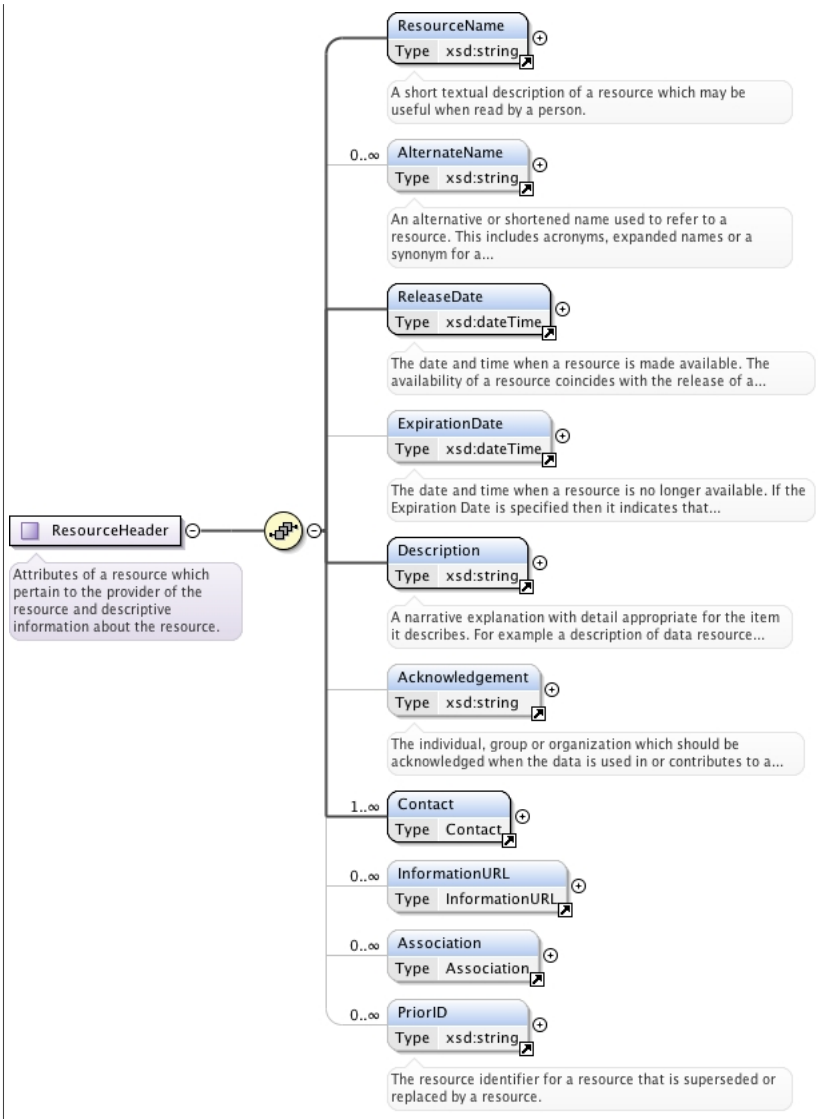
Complex Type `Catalog`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A tabular listing of events or observational notes, especially those that have utility in aiding a user in locating data. Catalogues include lists of events, files in a product, and data availability. A Catalog resource is a type of "data product" which is a set of data that is uniformly processed and formatted, from one or more instruments, typically spanning the full duration of the observations of the relevant instrument(s). A data product may consist of a collection of granules of successive time spans, but may be a single high-level entity.
Diagram	

Used by	Element Catalog
Model	ResourceID , ResourceHeader , AccessInformation+ , ProviderResourceName{0,1} , ProviderVersion{0,1} , InstrumentID* , PhenomenonType+ , TimeSpan{0,1} , Caveats{0,1} , Keyword* , InputResourceID* , Parameter* , Extension*
Children	AccessInformation, Caveats, Extension, InputResourceID, InstrumentID, Keyword, Parameter, PhenomenonType, ProviderResourceName, ProviderVersion, ResourceHeader, ResourceID, TimeSpan
Source	<xsd:complexType name="Catalog"> <xsd:annotation> <xsd:documentation xml:lang="en">A tabular listing of events or observational notes, especially those that have utility in aiding a user in locating data. Catalogues include lists of events, files in a product, and data availability. A Catalog resource is a type of "data product" which is a set of data that is uniformly processed and formatted, from one or more instruments, typically spanning the full duration of the observations of the relevant instrument(s). A data product may consist of a collection of granules of successive time spans, but may be a single high-level entity.</xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="ResourceID" minOccurs="1" maxOccurs="1"/> <xsd:element ref="ResourceHeader" minOccurs="1" maxOccurs="1"/> <xsd:element ref="AccessInformation" minOccurs="1" maxOccurs="unbounded"/> <xsd:element ref="ProviderResourceName" minOccurs="0" maxOccurs="1"/> <xsd:element ref="ProviderVersion" minOccurs="0" maxOccurs="1"/> <xsd:element ref="InstrumentID" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="PhenomenonType" minOccurs="1" maxOccurs="unbounded"/> <xsd:element ref="TimeSpan" minOccurs="0" maxOccurs="1"/> <xsd:element ref="Caveats" minOccurs="0" maxOccurs="1"/> <xsd:element ref="Keyword" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="InputResourceID" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="Parameter" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="Extension" minOccurs="0" maxOccurs="unbounded"/> </xsd:sequence> </xsd:complexType>

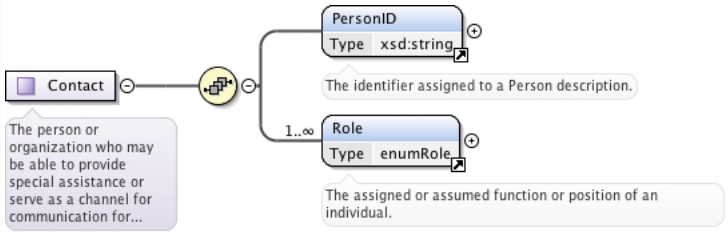
Complex Type `ResourceHeader`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Attributes of a resource which pertain to the provider of the resource and descriptive information about the resource.

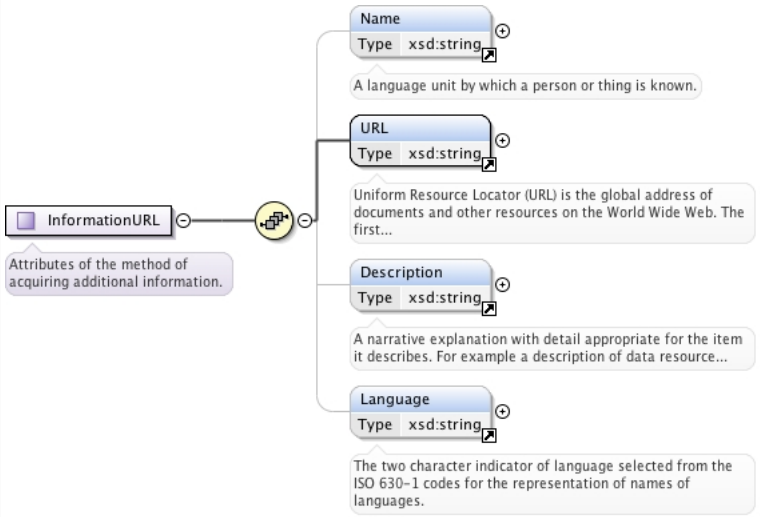
Diagram	
Used by	Element ResourceHeader
Model	ResourceName , AlternateName* , ReleaseDate , ExpirationDate{0,1} , Description , Acknowledgement{0,1} , Contact+ , InformationURL* , Association* , PriorID*
Children	Acknowledgement, AlternateName, Association, Contact, Description, ExpirationDate, InformationURL, PriorID, ReleaseDate, ResourceName
Source	<xsd:complexType name="ResourceHeader"> <xsd:annotation> <xsd:documentation xml:lang="en">Attributes of a resource which pertain to the provider of the resource and descriptive information about the resource.</xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="ResourceName" minOccurs="1" maxOccurs="1"/> <xsd:element ref="AlternateName" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="ReleaseDate" minOccurs="1" maxOccurs="1"/> <xsd:element ref="ExpirationDate" minOccurs="0" maxOccurs="1"/> <xsd:element ref="Description" minOccurs="1" maxOccurs="1"/> <xsd:element ref="Acknowledgement" minOccurs="0" maxOccurs="1"/> <xsd:element ref="Contact" minOccurs="1" maxOccurs="unbounded"/> <xsd:element ref="InformationURL" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="Association" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="PriorID" minOccurs="0" maxOccurs="unbounded"/> </xsd:sequence> </xsd:complexType>

Complex Type `Contact`

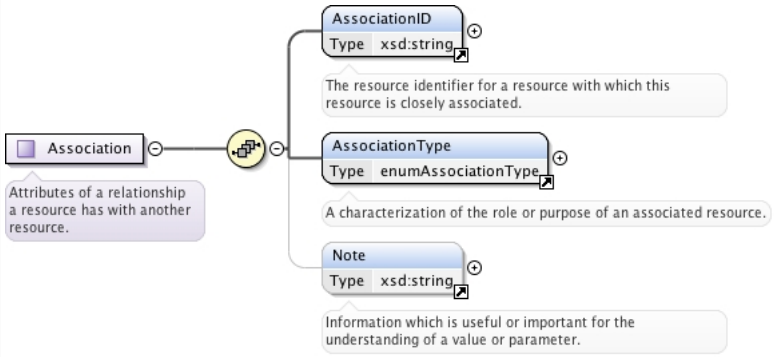
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The person or organization who may be able

	to provide special assistance or serve as a channel for communication for additional information about a resource.
Diagram	
Used by	Element Contact
Model	PersonID , Role+
Children	PersonID, Role
Source	<xsd:complexType name="Contact"> <xsd:annotation> <xsd:documentation xml:lang="en">The person or organization who may be able to provide special assistance or serve as a channel for communication for additional information about a resource.</xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="PersonID" minOccurs="1" maxOccurs="1"/> <xsd:element ref="Role" minOccurs="1" maxOccurs="unbounded"/> </xsd:sequence> </xsd:complexType>

Complex Type `InformationURL`

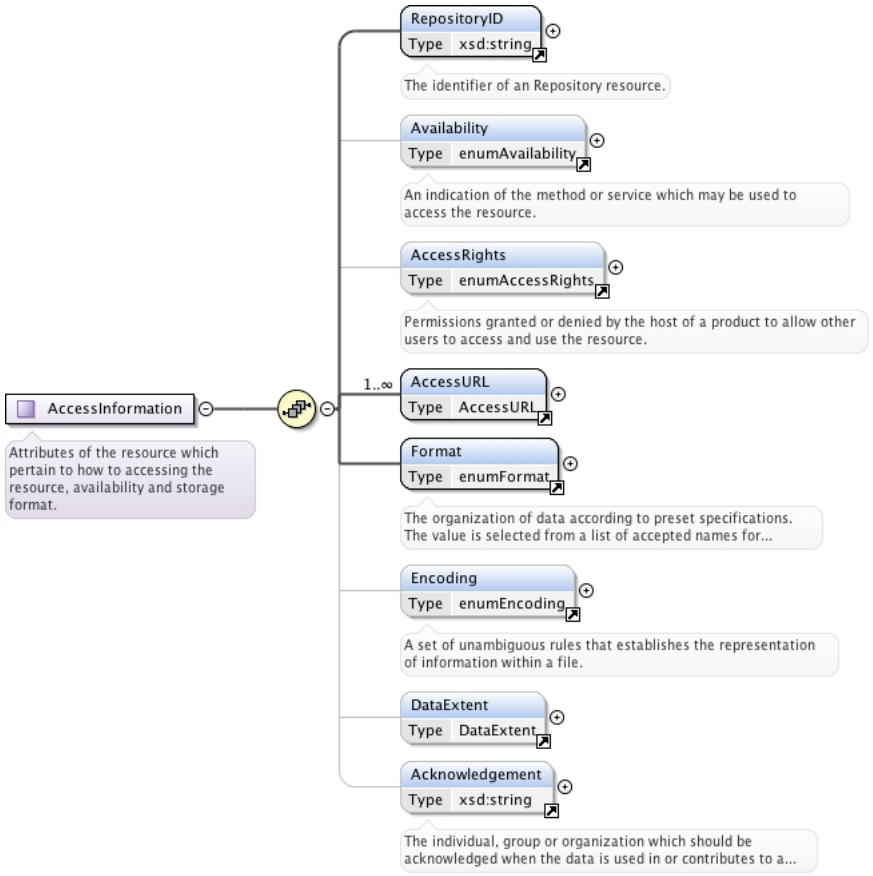
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Attributes of the method of acquiring additional information.
Diagram	
Used by	Element InformationURL
Model	Name{0,1} , URL , Description{0,1} , Language{0,1}
Children	Description, Language, Name, URL
Source	<xsd:complexType name="InformationURL"> <xsd:annotation> <xsd:documentation xml:lang="en">Attributes of the method of acquiring additional information.</xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="Name" minOccurs="0" maxOccurs="1"/> <xsd:element ref="URL" minOccurs="1" maxOccurs="1"/> <xsd:element ref="Description" minOccurs="0" maxOccurs="1"/> <xsd:element ref="Language" minOccurs="0" maxOccurs="1"/> </xsd:sequence> </xsd:complexType>

Complex Type `Association`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Attributes of a relationship a resource has with another resource.
Diagram	
Used by	Element Association
Model	AssociationID , AssociationType , Note{0,1}
Children	AssociationID, AssociationType, Note
Source	<xsd:complexType name="Association"> <xsd:annotation> <xsd:documentation xml:lang="en">Attributes of a relationship a resource has with another resource.</xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="AssociationID" minOccurs="1" maxOccurs="1"/> <xsd:element ref="AssociationType" minOccurs="1" maxOccurs="1"/> <xsd:element ref="Note" minOccurs="0" maxOccurs="1"/> </xsd:sequence> </xsd:complexType>

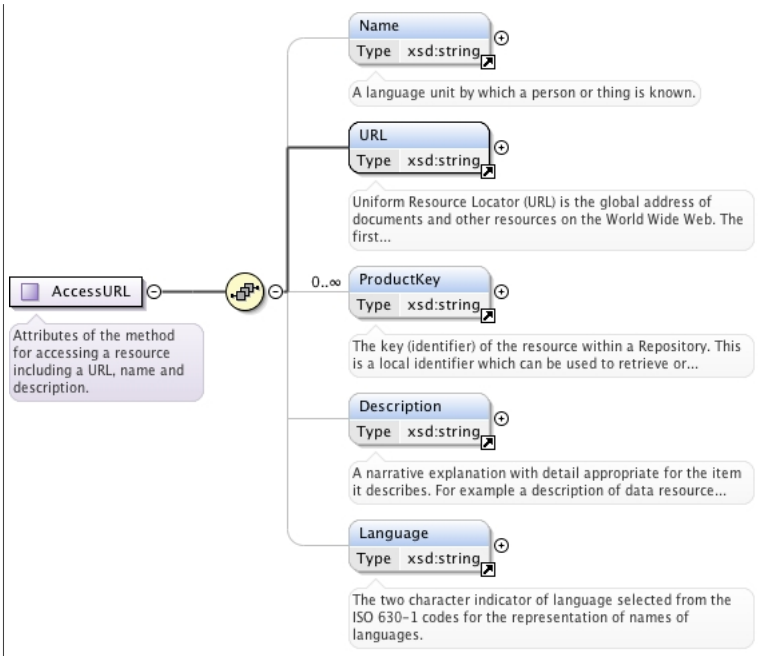
Complex Type `AccessInformation`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Attributes of the resource which pertain to how to accessing the resource, availability and storage format.

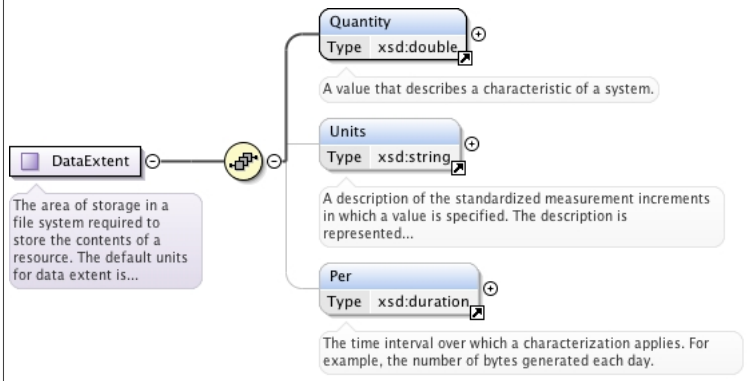
Diagram	
Used by	Element AccessInformation
Model	RepositoryID , Availability{0,1} , AccessRights{0,1} , AccessURL+ , Format , Encoding{0,1} , DataExtent{0,1} , Acknowledgement{0,1}
Children	AccessRights, AccessURL, Acknowledgement, Availability, DataExtent, Encoding, Format, RepositoryID
Source	<xsd:complexType name="AccessInformation"> <xsd:annotation> <xsd:documentation xml:lang="en">Attributes of the resource which pertain to how to accessing the resource, availability and storage format.</xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="RepositoryID" minOccurs="1" maxOccurs="1"/> <xsd:element ref="Availability" minOccurs="0" maxOccurs="1"/> <xsd:element ref="AccessRights" minOccurs="0" maxOccurs="1"/> <xsd:element ref="AccessURL" minOccurs="1" maxOccurs="unbounded"/> <xsd:element ref="Format" minOccurs="1" maxOccurs="1"/> <xsd:element ref="Encoding" minOccurs="0" maxOccurs="1"/> <xsd:element ref="DataExtent" minOccurs="0" maxOccurs="1"/> <xsd:element ref="Acknowledgement" minOccurs="0" maxOccurs="1"/> </xsd:sequence> </xsd:complexType>

Complex Type AccessURL

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Attributes of the method for accessing a resource including a URL, name and description.

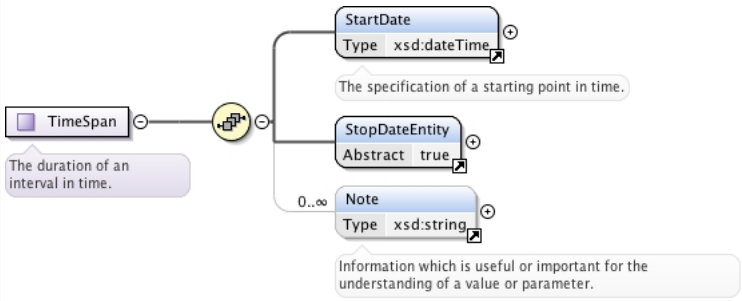
Diagram	
Used by	Element AccessURL
Model	Name{0,1} , URL , ProductKey* , Description{0,1} , Language{0,1}
Children	Description, Language, Name, ProductKey, URL
Source	<xsd:complexType name="AccessURL"> <xsd:annotation> <xsd:documentation xml:lang="en">Attributes of the method for accessing a resource including a URL, name and description.</xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="Name" minOccurs="0" maxOccurs="1"/> <xsd:element ref="URL" minOccurs="1" maxOccurs="1"/> <xsd:element ref="ProductKey" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="Description" minOccurs="0" maxOccurs="1"/> <xsd:element ref="Language" minOccurs="0" maxOccurs="1"/> </xsd:sequence> </xsd:complexType>

Complex Type `DataExtent`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The area of storage in a file system required to store the contents of a resource. The default units for data extent is bytes.
Diagram	
Used by	Element DataExtent
Model	Quantity , Units{0,1} , Per{0,1}
Children	Per, Quantity, Units
Source	<xsd:complexType name="DataExtent"> <xsd:annotation>

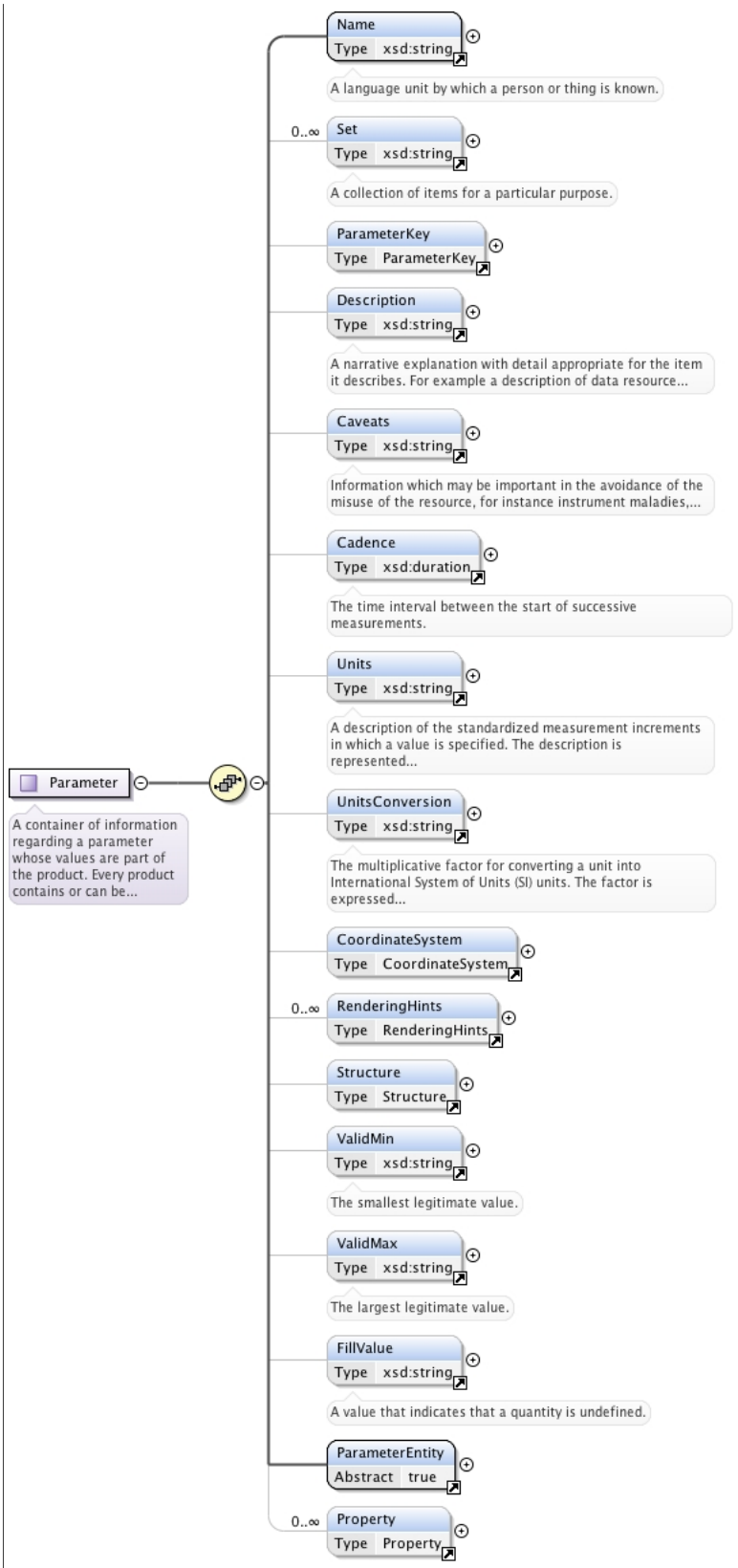
```
    <xsd:documentation xml:lang="en">The area of storage in a file system required to store the
 contents of a resource. The default units for data extent is bytes.</xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element ref="Quantity" minOccurs="1" maxOccurs="1"/>
    <xsd:element ref="Units" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="Per" minOccurs="0" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

Complex Type `TimeSpan`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The duration of an interval in time.
Diagram	
Used by	Element TimeSpan
Model	StartDate , StopDateEntity , Note*
Children	Note, StartDate, StopDateEntity
Source	<xsd:complexType name="TimeSpan"> <xsd:annotation> <xsd:documentation xml:lang="en">The duration of an interval in time.</xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="StartDate" minOccurs="1" maxOccurs="1"/> <xsd:element ref="StopDateEntity" minOccurs="1" maxOccurs="1"/> <xsd:element ref="Note" minOccurs="0" maxOccurs="unbounded"/> </xsd:sequence> </xsd:complexType>

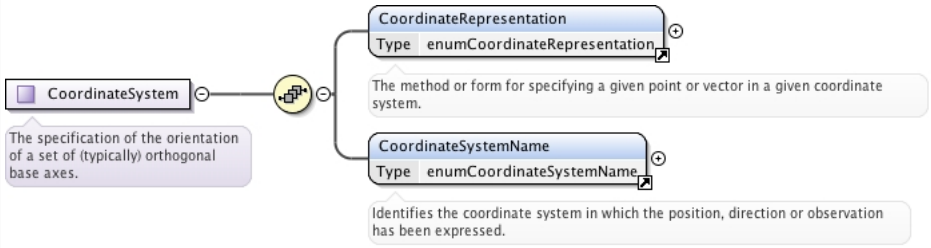
Complex Type `Parameter`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A container of information regarding a parameter whose values are part of the product. Every product contains or can be related to one or more parameters.

Diagram	
Used by	Element Parameter
Model	Name , Set* , ParameterKey{0,1} , Description{0,1} , Caveats{0,1} , Cadence{0,1} , Units{0,1} , UnitsConversion{0,1} , CoordinateSystem{0,1} , RenderingHints* , Structure{0,1} , ValidMin{0,1} , ValidMax{0,1} , FillValue{0,1} , ParameterEntity , Property*
Children	Cadence, Caveats, CoordinateSystem, Description, FillValue, Name, ParameterEntity, ParameterKey, Property, RenderingHints, Set, Structure, Units, UnitsConversion, ValidMax, ValidMin

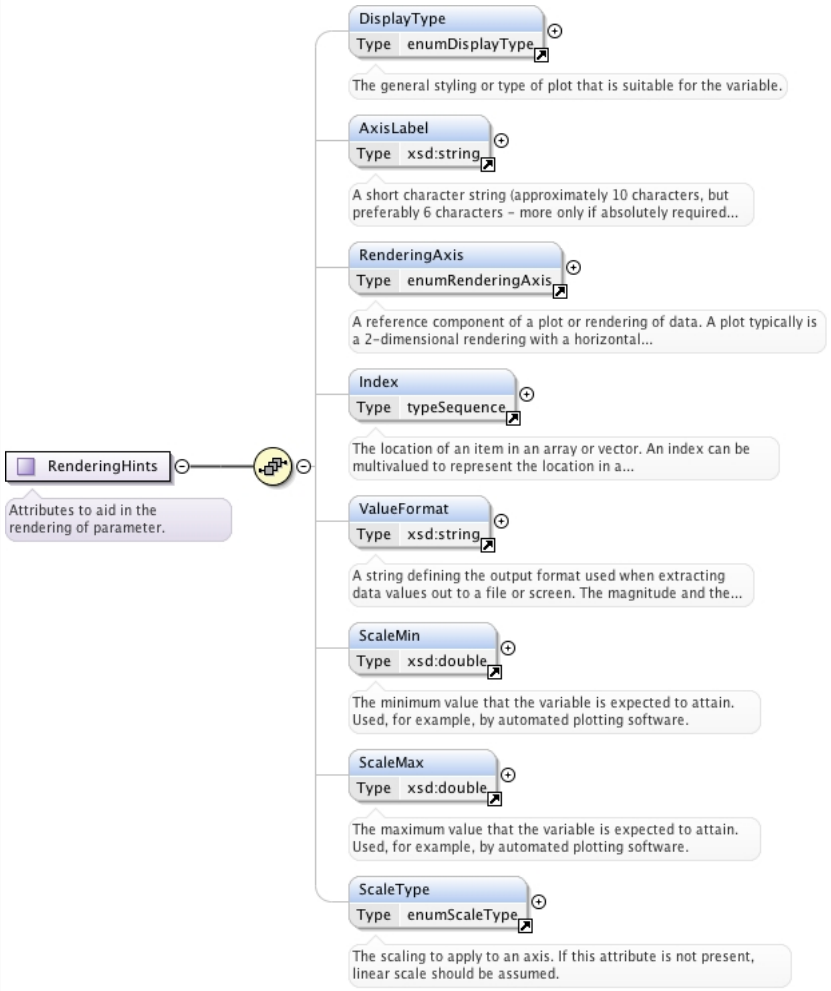
Source	<xsd:complexType name="Parameter"> <xsd:annotation> <xsd:documentation xml:lang="en">A container of information regarding a parameter whose values are part of the product. Every product contains or can be related to one or more parameters.</xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="Name" minOccurs="1" maxOccurs="1"/> <xsd:element ref="Set" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="ParameterKey" minOccurs="0" maxOccurs="1"/> <xsd:element ref="Description" minOccurs="0" maxOccurs="1"/> <xsd:element ref="Caveats" minOccurs="0" maxOccurs="1"/> <xsd:element ref="Cadence" minOccurs="0" maxOccurs="1"/> <xsd:element ref="Units" minOccurs="0" maxOccurs="1"/> <xsd:element ref="UnitsConversion" minOccurs="0" maxOccurs="1"/> <xsd:element ref="CoordinateSystem" minOccurs="0" maxOccurs="1"/> <xsd:element ref="RenderingHints" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="Structure" minOccurs="0" maxOccurs="1"/> <xsd:element ref="ValidMin" minOccurs="0" maxOccurs="1"/> <xsd:element ref="ValidMax" minOccurs="0" maxOccurs="1"/> <xsd:element ref="FillValue" minOccurs="0" maxOccurs="1"/> <xsd:element ref="ParameterEntity" minOccurs="1" maxOccurs="1"/> <xsd:element ref="Property" maxOccurs="unbounded" minOccurs="0"/> </xsd:sequence> </xsd:complexType>

Complex Type `CoordinateSystem`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The specification of the orientation of a set of (typically) orthogonal base axes.
Diagram	
Used by	Element CoordinateSystem
Model	CoordinateRepresentation , CoordinateSystemName
Children	CoordinateRepresentation, CoordinateSystemName
Source	<xsd:complexType name="CoordinateSystem"> <xsd:annotation> <xsd:documentation xml:lang="en">The specification of the orientation of a set of (typically) orthogonal base axes.</xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="CoordinateRepresentation" minOccurs="1" maxOccurs="1"/> <xsd:element ref="CoordinateSystemName" minOccurs="1" maxOccurs="1"/> </xsd:sequence> </xsd:complexType>

Complex Type `RenderingHints`

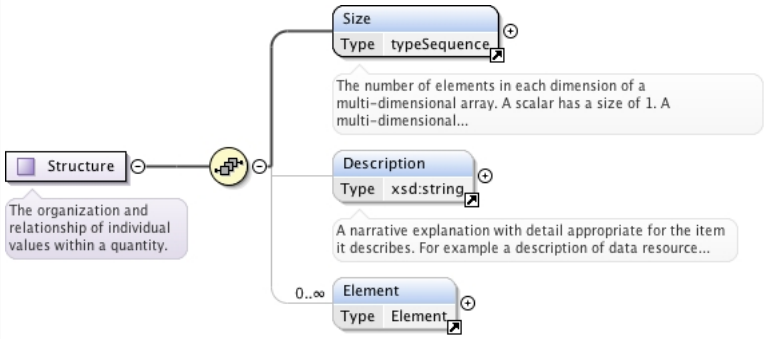
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Attributes to aid in the rendering of parameter.

Diagram	
Used by	Element RenderingHints
Model	DisplayType{0,1} , AxisLabel{0,1} , RenderingAxis{0,1} , Index{0,1} , ValueFormat{0,1} , ScaleMin{0,1} , ScaleMax{0,1} , ScaleType{0,1}
Children	AxisLabel, DisplayType, Index, RenderingAxis, ScaleMax, ScaleMin, ScaleType, ValueFormat

Source	`<xsd:complexType name="RenderingHints">`
	`  <xsd:annotation>`
	`  <xsd:documentation xml:lang="en">Attributes to aid in the rendering of parameter.</xsd:documentation>`
	`  </xsd:annotation>`
	`  <xsd:sequence>`
	`  <xsd:element ref="DisplayType" minOccurs="0" maxOccurs="1"/>`
	`  <xsd:element ref="AxisLabel" minOccurs="0" maxOccurs="1"/>`
	`  <xsd:element ref="RenderingAxis" minOccurs="0" maxOccurs="1"/>`
	`  <xsd:element ref="Index" minOccurs="0" maxOccurs="1"/>`
	`  <xsd:element ref="ValueFormat" minOccurs="0" maxOccurs="1"/>`
	`  <xsd:element ref="ScaleMin" minOccurs="0" maxOccurs="1"/>`
	`  <xsd:element ref="ScaleMax" minOccurs="0" maxOccurs="1"/>`
	`  <xsd:element ref="ScaleType" minOccurs="0" maxOccurs="1"/>`
	`  </xsd:sequence>`
	`</xsd:complexType>`

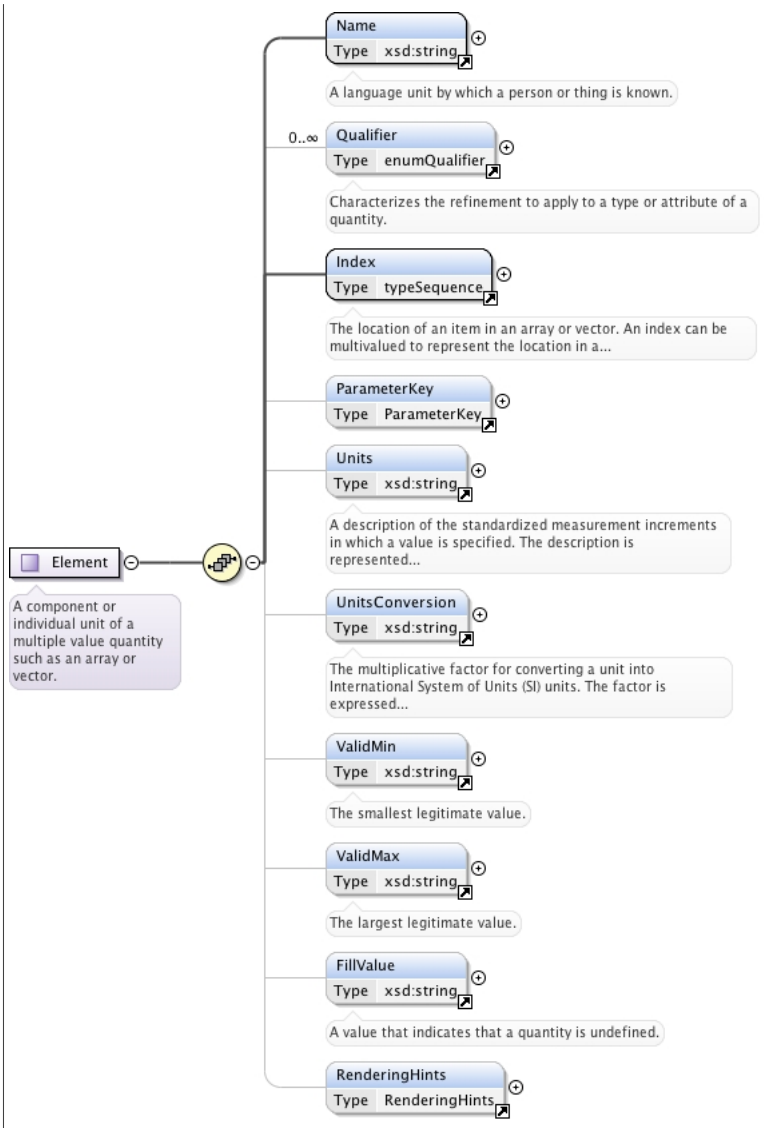
Complex Type `Structure`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The organization and relationship of individual values within a quantity.

Diagram	
Used by	Element Structure
Model	Size , Description{0,1} , Element*
Children	Description, Element, Size
Source	<xsd:complexType name="Structure"> <xsd:annotation> <xsd:documentation xml:lang="en">The organization and relationship of individual values within a quantity.</xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="Size" minOccurs="1" maxOccurs="1"/> <xsd:element ref="Description" minOccurs="0" maxOccurs="1"/> <xsd:element ref="Element" minOccurs="0" maxOccurs="unbounded"/> </xsd:sequence> </xsd:complexType>

Complex Type `Element`

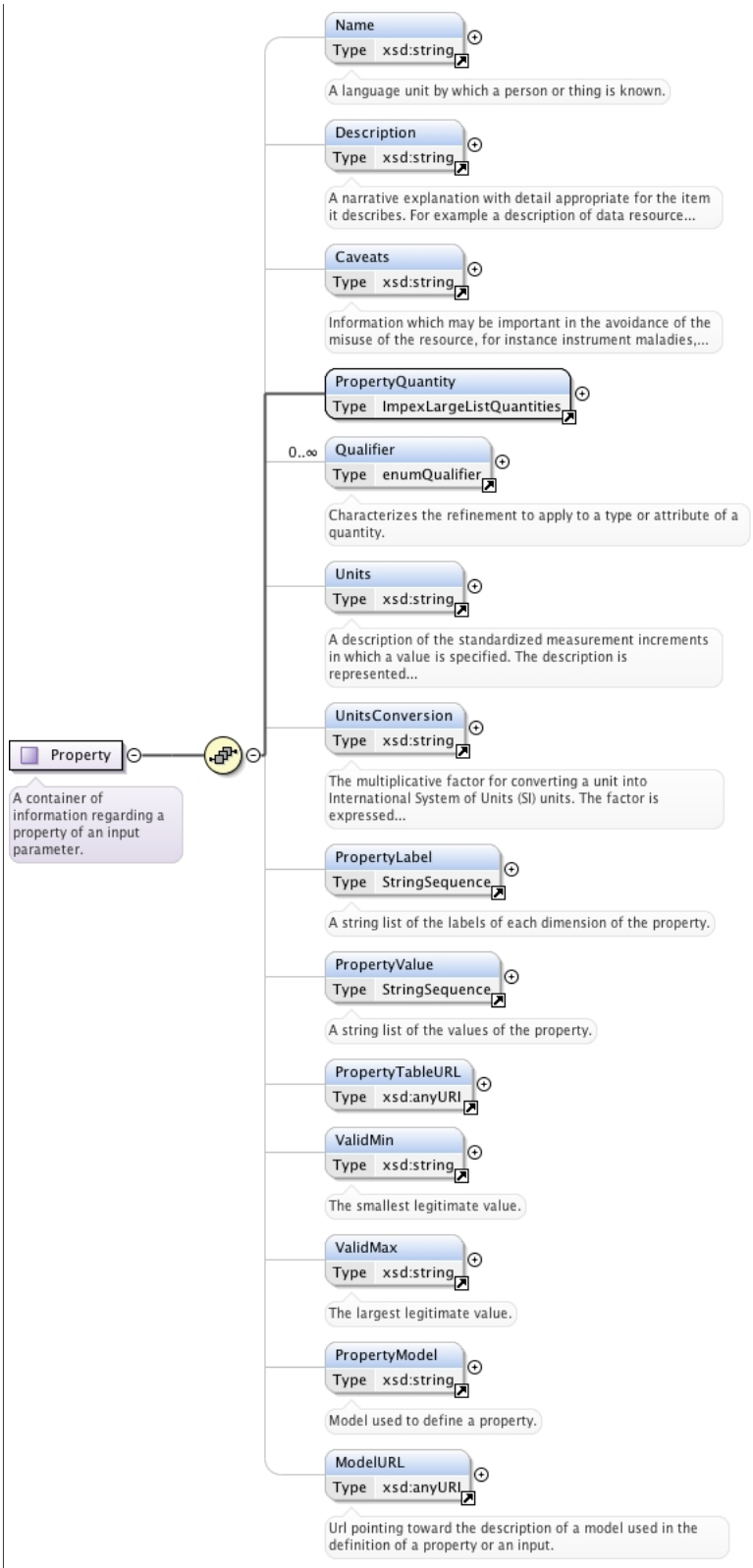
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A component or individual unit of a multiple value quantity such as an array or vector.

Diagram	
Used by	Element Element
Model	Name , Qualifier* , Index , ParameterKey{0,1} , Units{0,1} , UnitsConversion{0,1} , ValidMin{0,1} , ValidMax{0,1} , FillValue{0,1} , RenderingHints{0,1}
Children	FillValue, Index, Name, ParameterKey, Qualifier, RenderingHints, Units, UnitsConversion, ValidMax, ValidMin

Source	`<xsd:complexType name="Element">`
	`<xsd:annotation>`
	`<xsd:documentation xml:lang="en">A component or individual unit of a multiple value quantity such as an array or vector.</xsd:documentation>`
	`</xsd:annotation>`
	`<xsd:sequence>`
	`<xsd:element ref="Name" minOccurs="1" maxOccurs="1"/>`
	`<xsd:element ref="Qualifier" minOccurs="0" maxOccurs="unbounded"/>`
	`<xsd:element ref="Index" minOccurs="1" maxOccurs="1"/>`
	`<xsd:element ref="ParameterKey" minOccurs="0" maxOccurs="1"/>`
	`<xsd:element ref="Units" minOccurs="0" maxOccurs="1"/>`
	`<xsd:element ref="UnitsConversion" minOccurs="0" maxOccurs="1"/>`
	`<xsd:element ref="ValidMin" minOccurs="0" maxOccurs="1"/>`
	`<xsd:element ref="ValidMax" minOccurs="0" maxOccurs="1"/>`
	`<xsd:element ref="FillValue" minOccurs="0" maxOccurs="1"/>`
	`<xsd:element ref="RenderingHints" minOccurs="0" maxOccurs="1"/>`
	`</xsd:sequence>`
	`</xsd:complexType>`

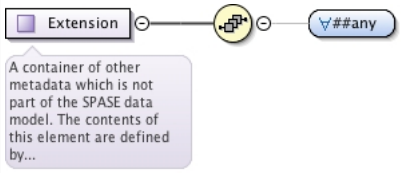
Complex Type `Property`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	`A container of information regarding a property of an input parameter.`

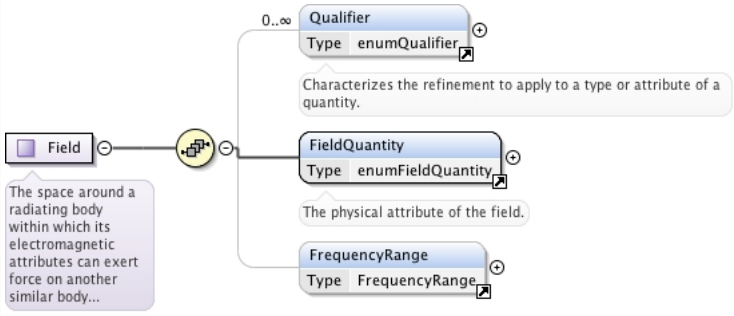
Diagram	
Used by	Element Property
Model	Name{0,1} , Description{0,1} , Caveats{0,1} , PropertyQuantity , Qualifier* , Units{0,1} , UnitsConversion{0,1} , PropertyLabel{0,1} , PropertyValue{0,1} , PropertyTableURL{0,1} , ValidMin{0,1} , ValidMax{0,1} , PropertyModel{0,1} , ModelURL{0,1}
Children	Caveats, Description, ModelURL, Name, PropertyLabel, PropertyModel, PropertyQuantity, PropertyTableURL, PropertyValue, Qualifier, Units, UnitsConversion, ValidMax, ValidMin
Source	<xsd:complexType name="Property"> <xsd:annotation>

```
    <xsd:documentation xml:lang="en">A container of information regarding a property of an input
 parameter.</xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element ref="Name" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="Description" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="Caveats" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="PropertyQuantity" minOccurs="1" maxOccurs="1"/>
    <xsd:element maxOccurs="unbounded" minOccurs="0" ref="Qualifier"/>
    <xsd:element ref="Units" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="UnitsConversion" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="PropertyLabel" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="PropertyValue" minOccurs="0" maxOccurs="1"/>
    <xsd:element minOccurs="0" ref="PropertyTableURL"/>
    <xsd:element ref="ValidMin" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="ValidMax" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="PropertyModel" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="ModelURL" minOccurs="0" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

Complex Type `Extension`

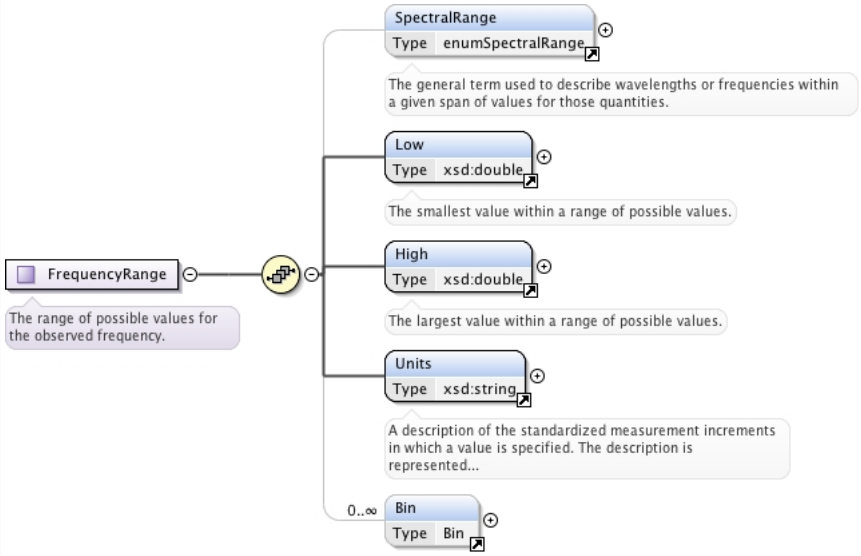
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A container of other metadata which is not part of the SPASE data model. The contents of this element are defined by individual usage. The organization and content are constrained by the implementation. For example, in an XML representation of the SPASE metadata the content must conform to the XML specifications.
Diagram	
Used by	Element Extension
Model	ANY element from ANY namespace
Source	<xsd:complexType name="Extension"> <xsd:annotation> <xsd:documentation xml:lang="en">A container of other metadata which is not part of the SPASE data model. The contents of this element are defined by individual usage. The organization and content are constrained by the implementation. For example, in an XML representation of the SPASE metadata the content must conform to the XML specifications.</xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:any minOccurs="0"/> </xsd:sequence> </xsd:complexType>

Complex Type `Field`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The space around a radiating body within which its electromagnetic attributes can exert force on another similar body that is not in direct contact.
Diagram	

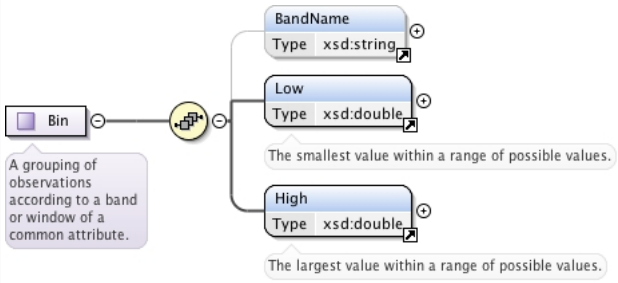
Used by	Element Field
Model	Qualifier* , FieldQuantity , FrequencyRange{0,1}
Children	FieldQuantity, FrequencyRange, Qualifier
Source	<xsd:complexType name="Field"> <xsd:annotation> <xsd:documentation xml:lang="en">The space around a radiating body within which its electromagnetic attributes can exert force on another similar body that is not in direct contact.</xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="Qualifier" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="FieldQuantity" minOccurs="1" maxOccurs="1"/> <xsd:element ref="FrequencyRange" minOccurs="0" maxOccurs="1"/> </xsd:sequence> </xsd:complexType>

Complex Type FrequencyRange

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The range of possible values for the observed frequency.
Diagram	
Used by	Element FrequencyRange
Model	SpectralRange{0,1} , Low , High , Units , Bin*
Children	Bin, High, Low, SpectralRange, Units
Source	<xsd:complexType name="FrequencyRange"> <xsd:annotation> <xsd:documentation xml:lang="en">The range of possible values for the observed frequency.</xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="SpectralRange" minOccurs="0" maxOccurs="1"/> <xsd:element ref="Low" minOccurs="1" maxOccurs="1"/> <xsd:element ref="High" minOccurs="1" maxOccurs="1"/> <xsd:element ref="Units" minOccurs="1" maxOccurs="1"/> <xsd:element ref="Bin" minOccurs="0" maxOccurs="unbounded"/> </xsd:sequence> </xsd:complexType>

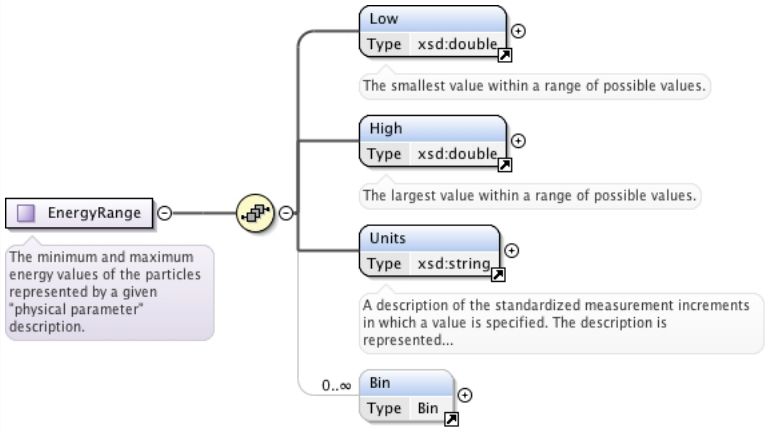
Complex Type Bin

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A grouping of observations according to a band or window of a common attribute.

Diagram	
Used by	Element Bin
Model	BandName{0,1} , Low , High
Children	BandName, High, Low

Source	`<xsd:complexType name="Bin">`
	`  <xsd:annotation>`
	`  <xsd:documentation xml:lang="en">A grouping of observations according to a band or window of a common attribute.</xsd:documentation>`
	`  </xsd:annotation>`
	`  <xsd:sequence>`
	`  <xsd:element ref="BandName" minOccurs="0" maxOccurs="1"/>`
	`  <xsd:element ref="Low" minOccurs="1" maxOccurs="1"/>`
	`  <xsd:element ref="High" minOccurs="1" maxOccurs="1"/>`
	`  </xsd:sequence>`
	`</xsd:complexType>`

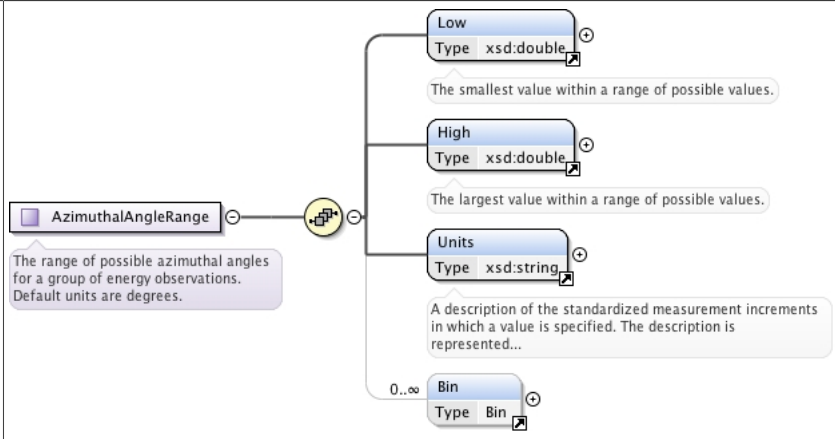
Complex Type EnergyRange

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The minimum and maximum energy values of the particles represented by a given "physical parameter" description.
Diagram	
Used by	Element EnergyRange
Model	Low , High , Units , Bin*
Children	Bin, High, Low, Units

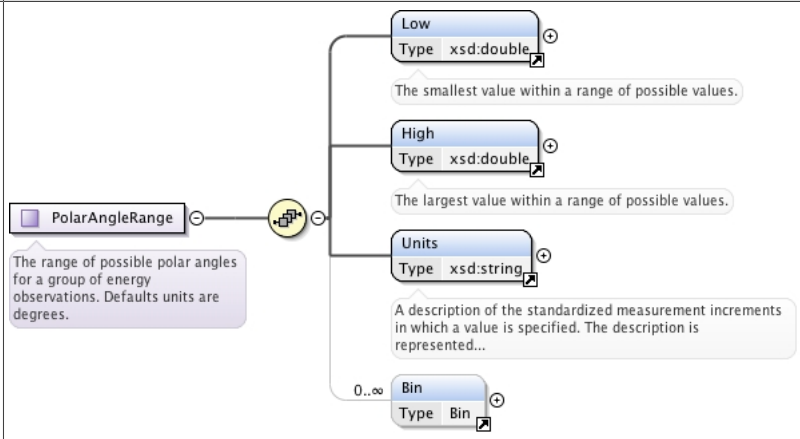
Source	`<xsd:complexType name="EnergyRange">`
	`  <xsd:annotation>`
	`  <xsd:documentation xml:lang="en">The minimum and maximum energy values of the particles represented by a given "physical parameter" description.</xsd:documentation>`
	`  </xsd:annotation>`
	`  <xsd:sequence>`
	`  <xsd:element ref="Low" minOccurs="1" maxOccurs="1"/>`
	`  <xsd:element ref="High" minOccurs="1" maxOccurs="1"/>`
	`  <xsd:element ref="Units" minOccurs="1" maxOccurs="1"/>`
	`  <xsd:element ref="Bin" minOccurs="0" maxOccurs="unbounded"/>`
	`  </xsd:sequence>`
	`</xsd:complexType>`

Complex Type AzimuthalAngleRange

Namespace	http://impex-fp7.oeaw.ac.at

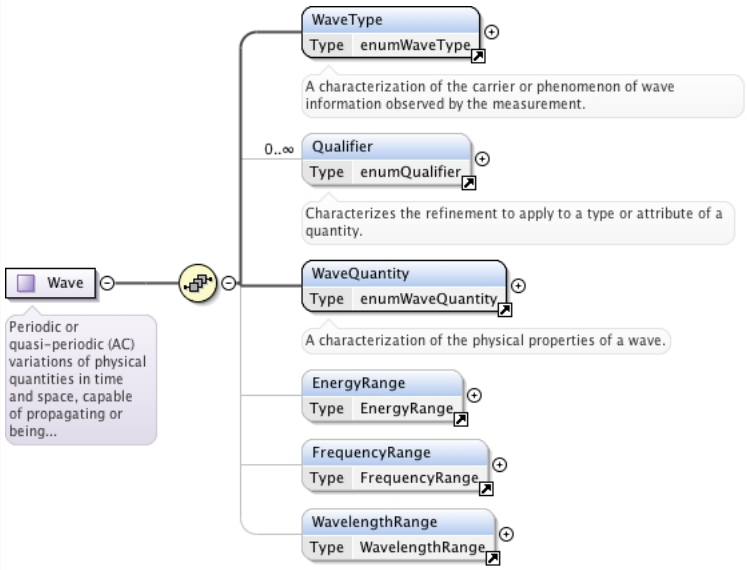
Annotations	The range of possible azimuthal angles for a group of energy observations. Default units are degrees.
Diagram	
Used by	Element AzimuthalAngleRange
Model	Low , High , Units , Bin*
Children	Bin, High, Low, Units
Source	<xsd:complexType name="AzimuthalAngleRange"> <xsd:annotation> <xsd:documentation xml:lang="en">The range of possible azimuthal angles for a group of energy observations. Default units are degrees.</xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="Low" minOccurs="1" maxOccurs="1"/> <xsd:element ref="High" minOccurs="1" maxOccurs="1"/> <xsd:element ref="Units" minOccurs="1" maxOccurs="1"/> <xsd:element ref="Bin" minOccurs="0" maxOccurs="unbounded"/> </xsd:sequence> </xsd:complexType>

Complex Type `PolarAngleRange`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The range of possible polar angles for a group of energy observations. Defaults units are degrees.
Diagram	
Used by	Element PolarAngleRange
Model	Low , High , Units , Bin*
Children	Bin, High, Low, Units
Source	<xsd:complexType name="PolarAngleRange"> <xsd:annotation> <xsd:documentation xml:lang="en">The range of possible polar angles for a group of energy observations. Defaults units are degrees.</xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="Low" minOccurs="1" maxOccurs="1"/>

```
    <xsd:element ref="High" minOccurs="1" maxOccurs="1"/>
    <xsd:element ref="Units" minOccurs="1" maxOccurs="1"/>
    <xsd:element ref="Bin" minOccurs="0" maxOccurs="unbounded"/>
  </xsd:sequence>
</xsd:complexType>
```

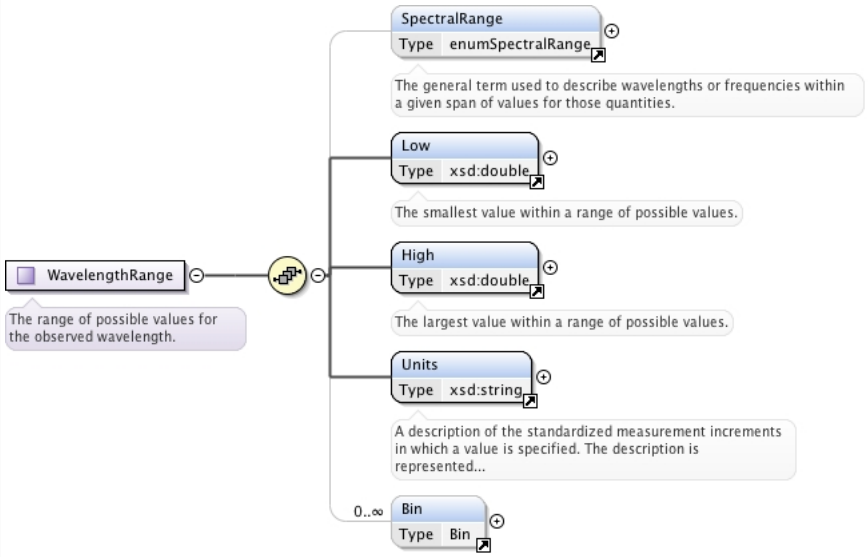
Complex Type `Wave`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Periodic or quasi-periodic (AC) variations of physical quantities in time and space, capable of propagating or being trapped within particular regimes.
Diagram	
Used by	Element Wave
Model	WaveType , Qualifier* , WaveQuantity , EnergyRange{0,1} , FrequencyRange{0,1} , WavelengthRange{0,1}
Children	EnergyRange, FrequencyRange, Qualifier, WaveQuantity, WaveType, WavelengthRange
Source	

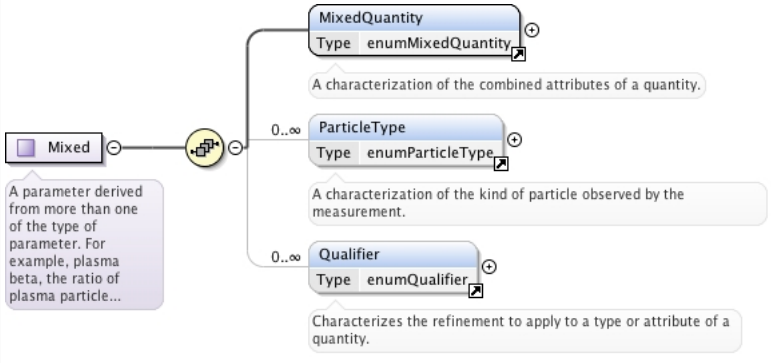
```
<xsd:complexType name="Wave">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Periodic or quasi-periodic (AC) variations of physical
 quantities in time and space, capable of propagating or being trapped within particular regimes.</
xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element ref="WaveType" minOccurs="1" maxOccurs="1"/>
    <xsd:element ref="Qualifier" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element ref="WaveQuantity" minOccurs="1" maxOccurs="1"/>
    <xsd:element ref="EnergyRange" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="FrequencyRange" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="WavelengthRange" minOccurs="0" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

Complex Type `WavelengthRange`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The range of possible values for the observed wavelength.

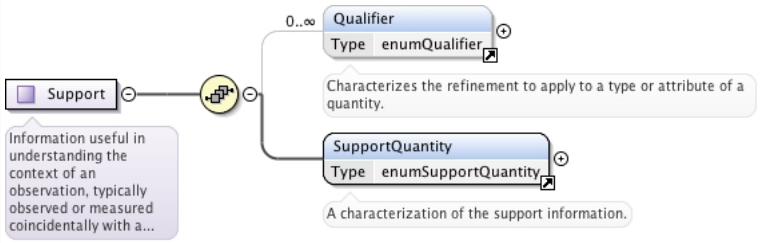
Diagram	
Used by	Element WavelengthRange
Model	SpectralRange{0,1} , Low , High , Units , Bin*
Children	Bin, High, Low, SpectralRange, Units
Source	<xsd:complexType name="WavelengthRange"> <xsd:annotation> <xsd:documentation xml:lang="en">The range of possible values for the observed wavelength.</xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="SpectralRange" minOccurs="0" maxOccurs="1"/> <xsd:element ref="Low" minOccurs="1" maxOccurs="1"/> <xsd:element ref="High" minOccurs="1" maxOccurs="1"/> <xsd:element ref="Units" minOccurs="1" maxOccurs="1"/> <xsd:element ref="Bin" minOccurs="0" maxOccurs="unbounded"/> </xsd:sequence> </xsd:complexType>

Complex Type `Mixed`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A parameter derived from more than one of the type of parameter. For example, plasma beta, the ratio of plasma particle energy density to the energy density of the magnetic field permeating the plasma, is "mixed."
Diagram	
Used by	Element Mixed
Model	MixedQuantity , ParticleType* , Qualifier*
Children	MixedQuantity, ParticleType, Qualifier
Source	<xsd:complexType name="Mixed"> <xsd:annotation> <xsd:documentation xml:lang="en">A parameter derived from more than one of the type of parameter. For example, plasma beta, the ratio of plasma particle energy density to the energy density of the magnetic field permeating the plasma, is "mixed."</xsd:documentation>

```
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element ref="MixedQuantity" minOccurs="1" maxOccurs="1"/>
    <xsd:element ref="ParticleType" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element ref="Qualifier" minOccurs="0" maxOccurs="unbounded"/>
  </xsd:sequence>
</xsd:complexType>
```

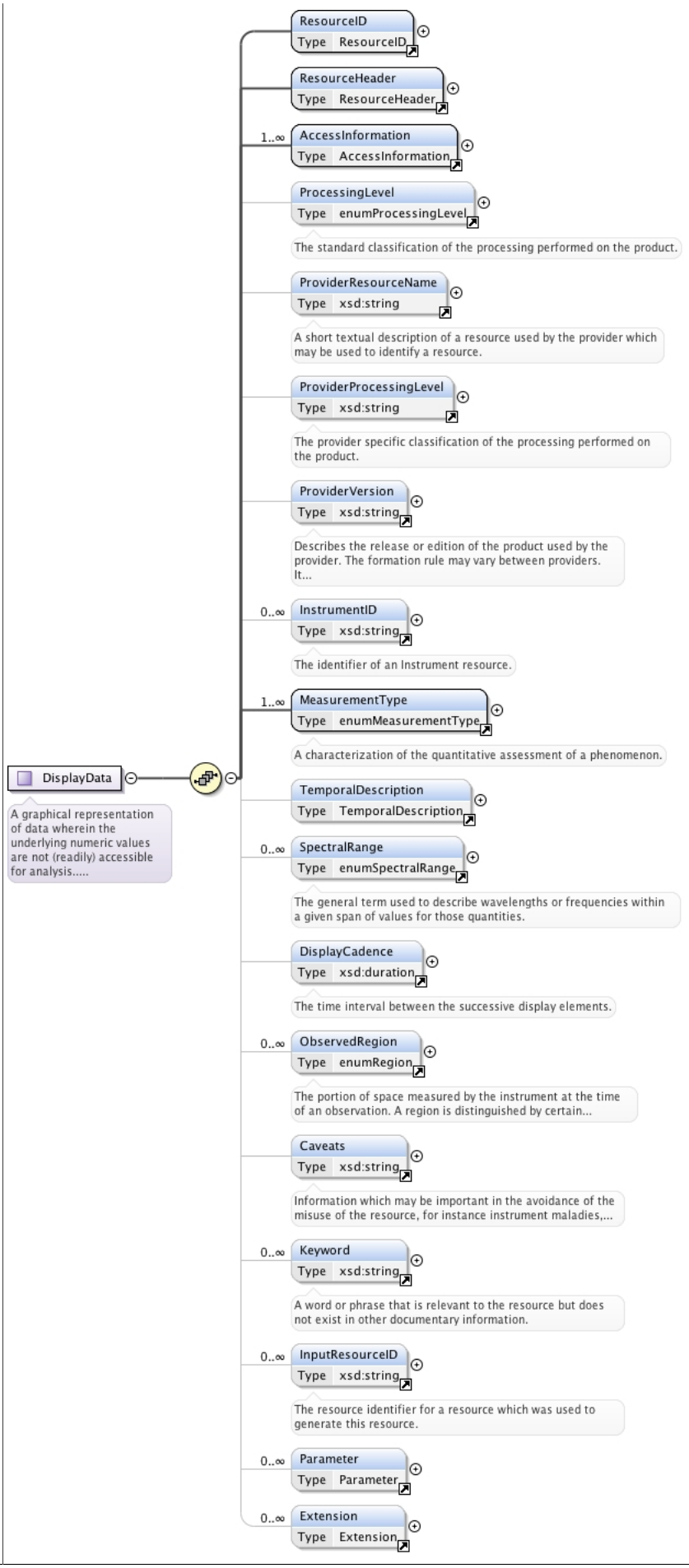
Complex Type `Support`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Information useful in understanding the context of an observation, typically observed or measured coincidentally with a physical observation.
Diagram	
Used by	Element Support
Model	Qualifier* , SupportQuantity
Children	Qualifier, SupportQuantity
Source	<xsd:complexType name="Support"> <xsd:annotation> <xsd:documentation xml:lang="en">Information useful in understanding the context of an observation, typically observed or measured coincidentally with a physical observation.</xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="Qualifier" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="SupportQuantity" minOccurs="1" maxOccurs="1"/> </xsd:sequence> </xsd:complexType>

Complex Type `DisplayData`

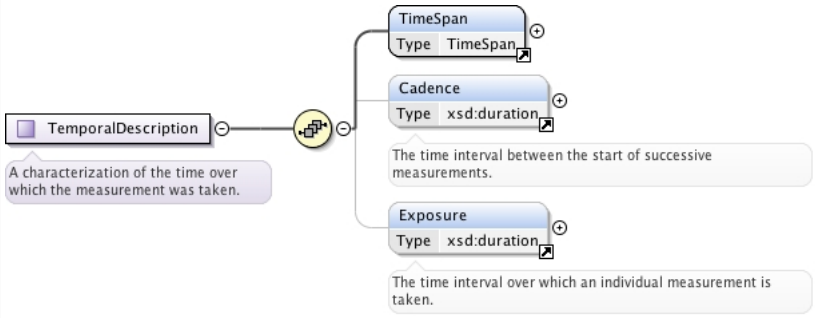
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A graphical representation of data wherein the underlying numeric values are not (readily) accessible for analysis.. Examples are line plots and spectrograms. A Display Data resource is a type of "data product" which is a set of data that is uniformly processed and formatted, from one or more instruments, typically spanning the full duration of the observations of the relevant instrument(s). A data product may consist of a collection of granules of successive time spans, but may be a single high-level entity.

Diagram


DisplayData
A graphical representation of data wherein the underlying numeric values are not (readily) accessible for analysis.....
ResourceID
Type ResourceID
ResourceHeader
Type ResourceHeader
1..∞ AccessInformation
Type AccessInformation
ProcessingLevel
Type enumProcessingLevel
The standard classification of the processing performed on the product.
ProviderResourceName
Type xsd:string
A short textual description of a resource used by the provider which may be used to identify a resource.
ProviderProcessingLevel
Type xsd:string
The provider specific classification of the processing performed on the product.
ProviderVersion
Type xsd:string
Describes the release or edition of the product used by the provider. The formation rule may vary between providers. It...
0..∞ InstrumentID
Type xsd:string
The identifier of an Instrument resource.
1..∞ MeasurementType
Type enumMeasurementType
A characterization of the quantitative assessment of a phenomenon.
TemporalDescription
Type TemporalDescription
0..∞ SpectralRange
Type enumSpectralRange
The general term used to describe wavelengths or frequencies within a given span of values for those quantities.
DisplayCadence
Type xsd:duration
The time interval between the successive display elements.
0..∞ ObservedRegion
Type enumRegion
The portion of space measured by the instrument at the time of an observation. A region is distinguished by certain...
Caveats
Type xsd:string
Information which may be important in the avoidance of the misuse of the resource, for instance instrument maladies,...
0..∞ Keyword
Type xsd:string
A word or phrase that is relevant to the resource but does not exist in other documentary information.
0..∞ InputResourceID
Type xsd:string
The resource identifier for a resource which was used to generate this resource.
0..∞ Parameter
Type Parameter
0..∞ Extension
Type Extension

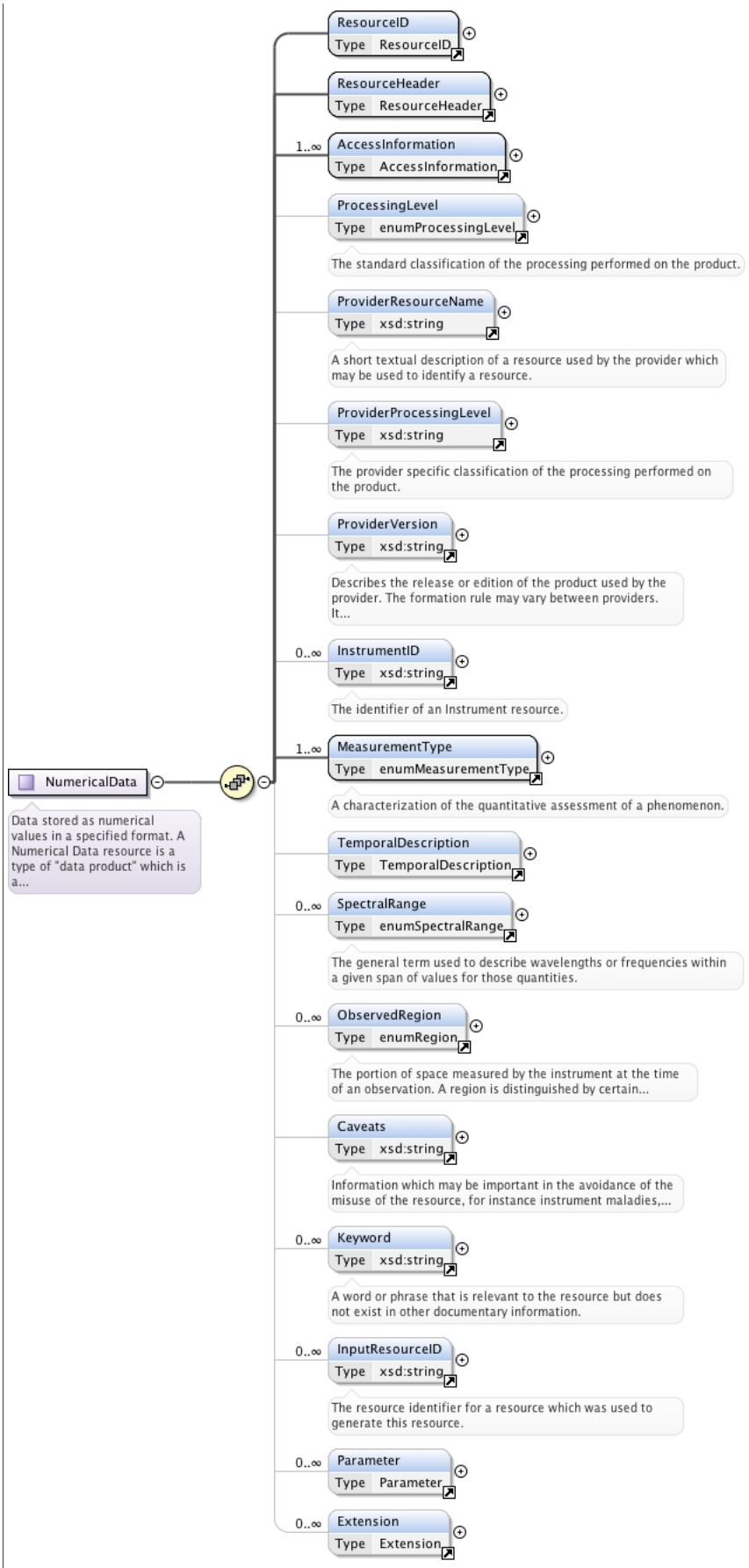
Used by	Element DisplayData
Model	ResourceID , ResourceHeader , AccessInformation+ , ProcessingLevel{0,1} , ProviderResourceName{0,1} , ProviderProcessingLevel{0,1} , ProviderVersion{0,1} , InstrumentID* , MeasurementType+ , TemporalDescription{0,1} , SpectralRange* , DisplayCadence{0,1} , ObservedRegion* , Caveats{0,1} , Keyword* , InputResourceID* , Parameter* , Extension*
Children	AccessInformation, Caveats, DisplayCadence, Extension, InputResourceID, InstrumentID, Keyword, MeasurementType, ObservedRegion, Parameter, ProcessingLevel, ProviderProcessingLevel, ProviderResourceName, ProviderVersion, ResourceHeader, ResourceID, SpectralRange, TemporalDescription
Source	<xsd:complexType name="DisplayData"> <xsd:annotation> <xsd:documentation xml:lang="en">A graphical representation of data wherein the underlying numeric values are not (readily) accessible for analysis.. Examples are line plots and spectrograms. A Display Data resource is a type of "data product" which is a set of data that is uniformly processed and formatted, from one or more instruments, typically spanning the full duration of the observations of the relevant instrument(s). A data product may consist of a collection of granules of successive time spans, but may be a single high-level entity.</xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="ResourceID" minOccurs="1" maxOccurs="1"/> <xsd:element ref="ResourceHeader" minOccurs="1" maxOccurs="1"/> <xsd:element ref="AccessInformation" minOccurs="1" maxOccurs="unbounded"/> <xsd:element ref="ProcessingLevel" minOccurs="0" maxOccurs="1"/> <xsd:element ref="ProviderResourceName" minOccurs="0" maxOccurs="1"/> <xsd:element ref="ProviderProcessingLevel" minOccurs="0" maxOccurs="1"/> <xsd:element ref="ProviderVersion" minOccurs="0" maxOccurs="1"/> <xsd:element ref="InstrumentID" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="MeasurementType" minOccurs="1" maxOccurs="unbounded"/> <xsd:element ref="TemporalDescription" minOccurs="0" maxOccurs="1"/> <xsd:element ref="SpectralRange" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="DisplayCadence" minOccurs="0" maxOccurs="1"/> <xsd:element ref="ObservedRegion" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="Caveats" minOccurs="0" maxOccurs="1"/> <xsd:element ref="Keyword" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="InputResourceID" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="Parameter" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="Extension" minOccurs="0" maxOccurs="unbounded"/> </xsd:sequence> </xsd:complexType>

Complex Type `TemporalDescription`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A characterization of the time over which the measurement was taken.
Diagram	
Used by	Element TemporalDescription
Model	TimeSpan , Cadence{0,1} , Exposure{0,1}
Children	Cadence, Exposure, TimeSpan
Source	<xsd:complexType name="TemporalDescription"> <xsd:annotation> <xsd:documentation xml:lang="en">A characterization of the time over which the measurement was taken.</xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="TimeSpan" minOccurs="1" maxOccurs="1"/> <xsd:element ref="Cadence" minOccurs="0" maxOccurs="1"/> <xsd:element ref="Exposure" minOccurs="0" maxOccurs="1"/> </xsd:sequence> </xsd:complexType>

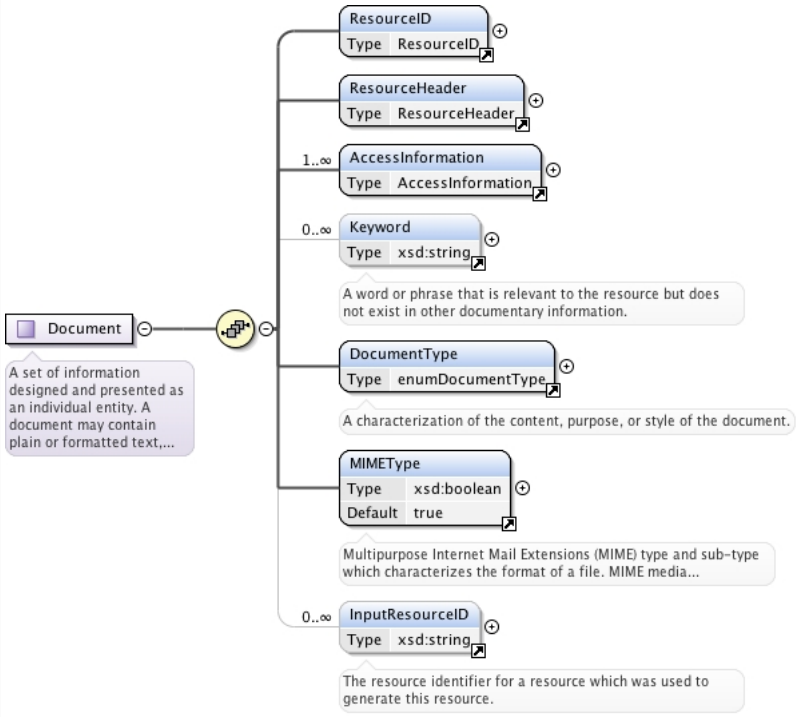
Complex Type `NumericalData`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Data stored as numerical values in a specified format. A Numerical Data resource is a type of "data product" which is a set of data that is uniformly processed and formatted, from one or more instruments, typically spanning the full duration of the observations of the relevant instrument(s). A data product may consist of a collection of granules of successive time spans, but may be a single high-level entity.

Diagram	
Used by	Element NumericalData

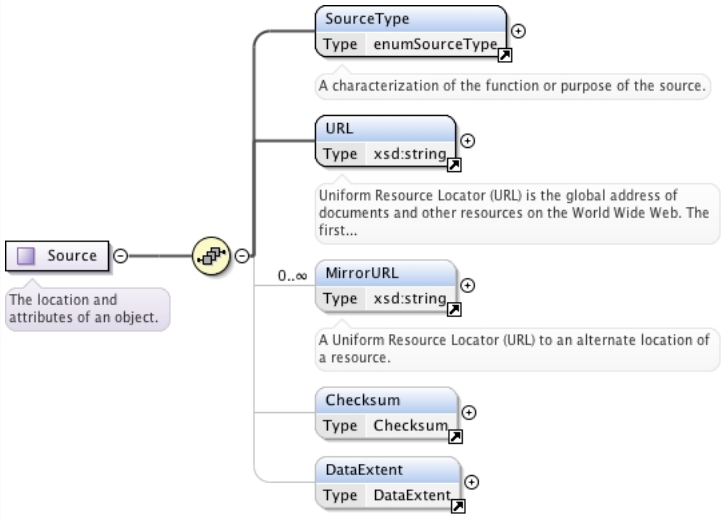
Model	ResourceID , ResourceHeader , AccessInformation+ , ProcessingLevel{0,1} , ProviderResourceName{0,1} , ProviderProcessingLevel{0,1} , ProviderVersion{0,1} , InstrumentID* , MeasurementType+ , TemporalDescription{0,1} , SpectralRange* , ObservedRegion* , Caveats{0,1} , Keyword* , InputResourceID* , Parameter* , Extension*
Children	AccessInformation, Caveats, Extension, InputResourceID, InstrumentID, Keyword, MeasurementType, ObservedRegion, Parameter, ProcessingLevel, ProviderProcessingLevel, ProviderResourceName, ProviderVersion, ResourceHeader, ResourceID, SpectralRange, TemporalDescription
Source	<xsd:complexType name="NumericalData"> <xsd:annotation> <xsd:documentation xml:lang="en">Data stored as numerical values in a specified format. A Numerical Data resource is a type of "data product" which is a set of data that is uniformly processed and formatted, from one or more instruments, typically spanning the full duration of the observations of the relevant instrument(s). A data product may consist of a collection of granules of successive time spans, but may be a single high-level entity.</xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="ResourceID" minOccurs="1" maxOccurs="1"/> <xsd:element ref="ResourceHeader" minOccurs="1" maxOccurs="1"/> <xsd:element ref="AccessInformation" minOccurs="1" maxOccurs="unbounded"/> <xsd:element ref="ProcessingLevel" minOccurs="0" maxOccurs="1"/> <xsd:element ref="ProviderResourceName" minOccurs="0" maxOccurs="1"/> <xsd:element ref="ProviderProcessingLevel" minOccurs="0" maxOccurs="1"/> <xsd:element ref="ProviderVersion" minOccurs="0" maxOccurs="1"/> <xsd:element ref="InstrumentID" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="MeasurementType" minOccurs="1" maxOccurs="unbounded"/> <xsd:element ref="TemporalDescription" minOccurs="0" maxOccurs="1"/> <xsd:element ref="SpectralRange" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="ObservedRegion" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="Caveats" minOccurs="0" maxOccurs="1"/> <xsd:element ref="Keyword" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="InputResourceID" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="Parameter" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="Extension" minOccurs="0" maxOccurs="unbounded"/> </xsd:sequence> </xsd:complexType>

Complex Type `Document`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A set of information designed and presented as an individual entity. A document may contain plain or formatted text, in-line graphics, sound, other multimedia data, or hypermedia references. A Document resource is intended for use on digital objects that have no other identifier (e.g., DOI or ISBN).
Diagram	

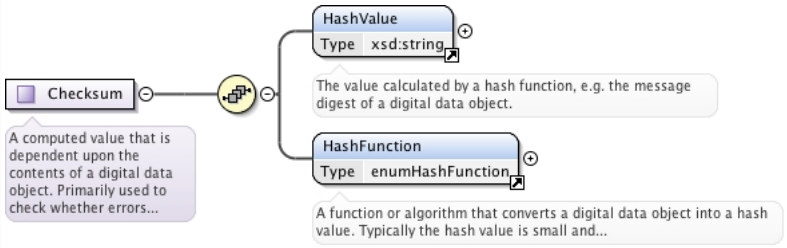
Used by	Element Document
Model	ResourceID , ResourceHeader , AccessInformation+ , Keyword* , DocumentType , MIMEType , InputResourceID*
Children	AccessInformation, DocumentType, InputResourceID, Keyword, MIMEType, ResourceHeader, ResourceID
Source	<xsd:complexType name="Document"> <xsd:annotation> <xsd:documentation xml:lang="en">A set of information designed and presented as an individual entity. A document may contain plain or formatted text, in-line graphics, sound, other multimedia data, or hypermedia references. A Document resource is intended for use on digital objects that have no other identifier (e.g., DOI or ISBN).</xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="ResourceID" minOccurs="1" maxOccurs="1"/> <xsd:element ref="ResourceHeader" minOccurs="1" maxOccurs="1"/> <xsd:element ref="AccessInformation" minOccurs="1" maxOccurs="unbounded"/> <xsd:element ref="Keyword" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="DocumentType" minOccurs="1" maxOccurs="1"/> <xsd:element ref="MIMEType" minOccurs="1" maxOccurs="1"/> <xsd:element ref="InputResourceID" minOccurs="0" maxOccurs="unbounded"/> </xsd:sequence> </xsd:complexType>

Complex Type Source

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The location and attributes of an object.
Diagram	
Used by	Element Source
Model	SourceType , URL , MirrorURL* , Checksum{0,1} , DataExtent{0,1}
Children	Checksum, DataExtent, MirrorURL, SourceType, URL
Source	<xsd:complexType name="Source"> <xsd:annotation> <xsd:documentation xml:lang="en">The location and attributes of an object.</xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="SourceType" minOccurs="1" maxOccurs="1"/> <xsd:element ref="URL" minOccurs="1" maxOccurs="1"/> <xsd:element ref="MirrorURL" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="Checksum" minOccurs="0" maxOccurs="1"/> <xsd:element ref="DataExtent" minOccurs="0" maxOccurs="1"/> </xsd:sequence> </xsd:complexType>

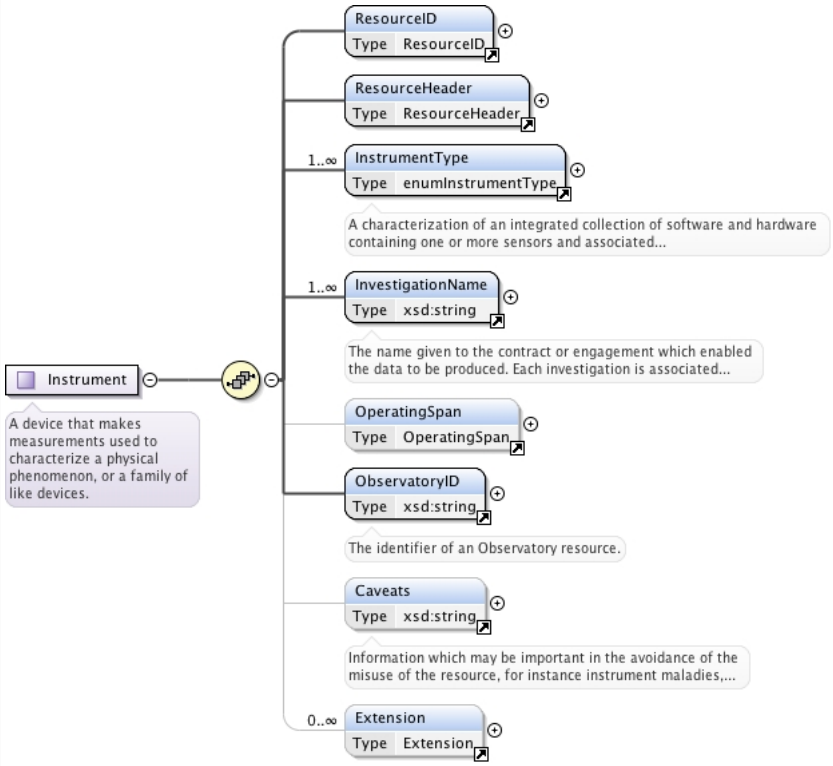
Complex Type Checksum

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A computed value that is dependent upon the contents of a digital data object. Primarily used to check whether errors or alterations have occurred during the transmission or storage

	of a data object.
Diagram	
Used by	Element Checksum
Model	HashValue , HashFunction
Children	HashFunction, HashValue

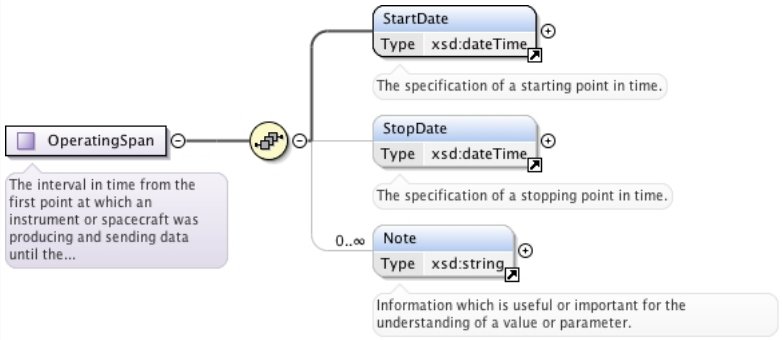
Source	`<xsd:complexType name="Checksum">`
	`  <xsd:annotation>`
	`  <xsd:documentation xml:lang="en">A computed value that is dependent upon the contents of a digital data object. Primarily used to check whether errors or alterations have occurred during the transmission or storage of a data object.</xsd:documentation>`
	`  </xsd:annotation>`
	`  <xsd:sequence>`
	`  <xsd:element ref="HashValue" minOccurs="1" maxOccurs="1"/>`
	`  <xsd:element ref="HashFunction" minOccurs="1" maxOccurs="1"/>`
	`  </xsd:sequence>`
	`</xsd:complexType>`

Complex Type `Instrument`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A device that makes measurements used to characterize a physical phenomenon, or a family of like devices.
Diagram	
Used by	Element Instrument
Model	ResourceID , ResourceHeader , InstrumentType+ , InvestigationName+ , OperatingSpan{0,1} , ObservatoryID , Caveats{0,1} , Extension*
Children	Caveats, Extension, InstrumentType, InvestigationName, ObservatoryID, OperatingSpan, ResourceHeader, ResourceID
Source	`<xsd:complexType name="Instrument">` `  <xsd:annotation>`

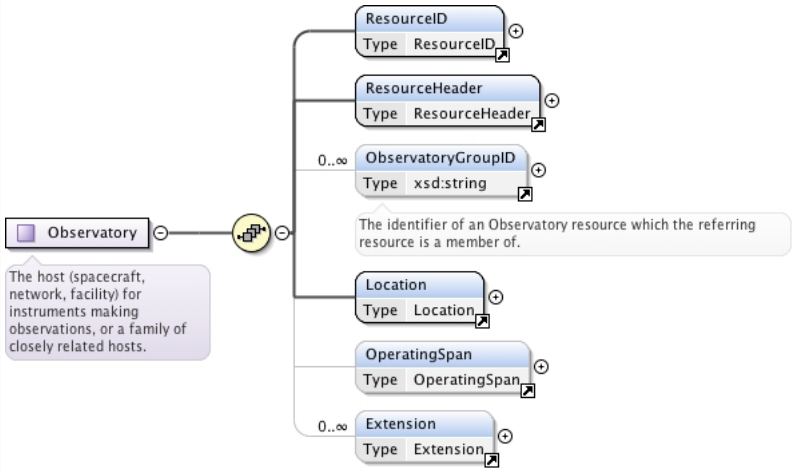
```
    <xsd:documentation xml:lang="en">A device that makes measurements used to characterize a
 physical phenomenon, or a family of like devices.</xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element ref="ResourceID" minOccurs="1" maxOccurs="1"/>
    <xsd:element ref="ResourceHeader" minOccurs="1" maxOccurs="1"/>
    <xsd:element ref="InstrumentType" minOccurs="1" maxOccurs="unbounded"/>
    <xsd:element ref="InvestigationName" minOccurs="1" maxOccurs="unbounded"/>
    <xsd:element ref="OperatingSpan" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="ObservatoryID" minOccurs="1" maxOccurs="1"/>
    <xsd:element ref="Caveats" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="Extension" minOccurs="0" maxOccurs="unbounded"/>
  </xsd:sequence>
</xsd:complexType>
```

Complex Type `OperatingSpan`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The interval in time from the first point at which an instrument or spacecraft was producing and sending data until the last such time, ignoring possible gaps.
Diagram	
Used by	Element OperatingSpan
Model	StartDate , StopDate{0,1} , Note*
Children	Note, StartDate, StopDate
Source	<xsd:complexType name="OperatingSpan"> <xsd:annotation> <xsd:documentation xml:lang="en">The interval in time from the first point at which an instrument or spacecraft was producing and sending data until the last such time, ignoring possible gaps.</xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="StartDate" minOccurs="1" maxOccurs="1"/> <xsd:element ref="StopDate" minOccurs="0" maxOccurs="1"/> <xsd:element ref="Note" minOccurs="0" maxOccurs="unbounded"/> </xsd:sequence> </xsd:complexType>

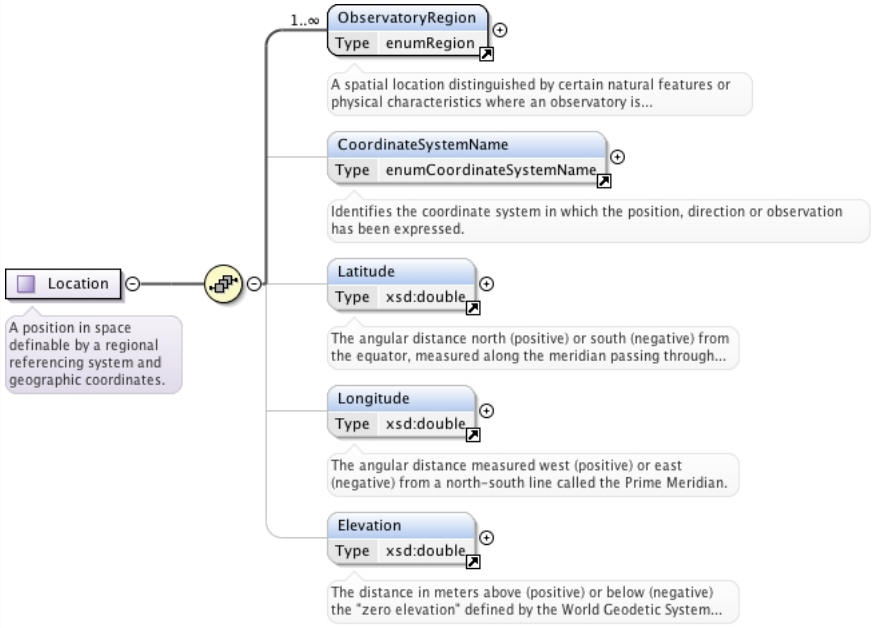
Complex Type `Observatory`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The host (spacecraft, network, facility) for instruments making observations, or a family of closely related hosts.

Diagram	
Used by	Element Observatory
Model	ResourceID , ResourceHeader , ObservatoryGroupID* , Location , OperatingSpan{0,1} , Extension*
Children	Extension, Location, ObservatoryGroupID, OperatingSpan, ResourceHeader, ResourceID

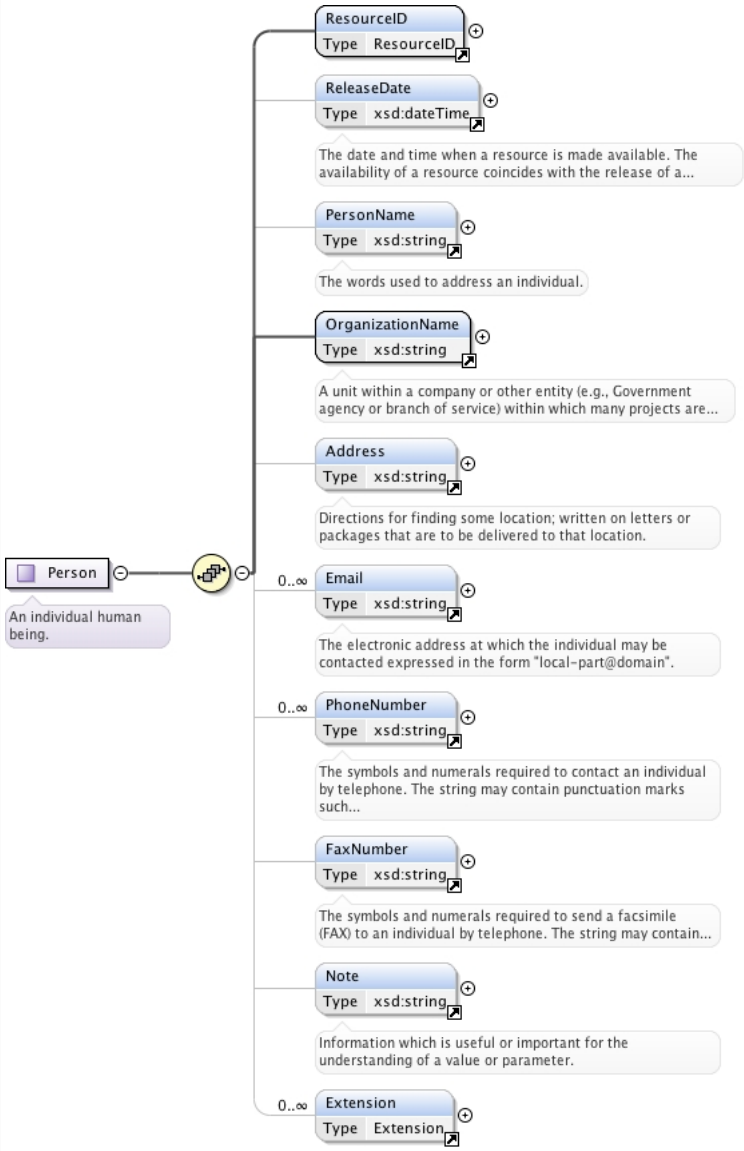
Source	`<xsd:complexType name="Observatory">`
	`<xsd:annotation>`
	`<xsd:documentation xml:lang="en">The host (spacecraft, network, facility) for instruments making observations, or a family of closely related hosts.</xsd:documentation>`
	`</xsd:annotation>`
	`<xsd:sequence>`
	`<xsd:element ref="ResourceID" minOccurs="1" maxOccurs="1"/>`
	`<xsd:element ref="ResourceHeader" minOccurs="1" maxOccurs="1"/>`
	`<xsd:element ref="ObservatoryGroupID" minOccurs="0" maxOccurs="unbounded"/>`
	`<xsd:element ref="Location" minOccurs="1" maxOccurs="1"/>`
	`<xsd:element ref="OperatingSpan" minOccurs="0" maxOccurs="1"/>`
	`<xsd:element ref="Extension" minOccurs="0" maxOccurs="unbounded"/>`
	`</xsd:sequence>`
	`</xsd:complexType>`

Complex Type `Location`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A position in space definable by a regional referencing system and geographic coordinates.
Diagram	
Used by	Element Location
Model	ObservatoryRegion+ , CoordinateSystemName{0,1} , Latitude{0,1} , Longitude{0,1} , Elevation{0,1}

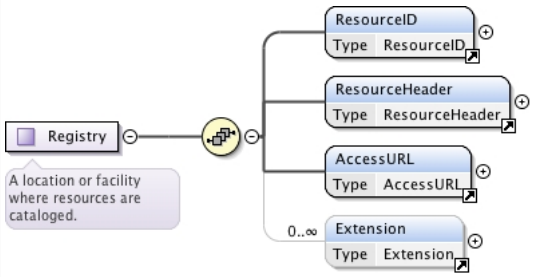
Children	CoordinateSystemName, Elevation, Latitude, Longitude, ObservatoryRegion
Source	<xsd:complexType name="Location"> <xsd:annotation> <xsd:documentation xml:lang="en">A position in space definable by a regional referencing system and geographic coordinates.</xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="ObservatoryRegion" minOccurs="1" maxOccurs="unbounded"/> <xsd:element ref="CoordinateSystemName" minOccurs="0" maxOccurs="1"/> <xsd:element ref="Latitude" minOccurs="0" maxOccurs="1"/> <xsd:element ref="Longitude" minOccurs="0" maxOccurs="1"/> <xsd:element ref="Elevation" minOccurs="0" maxOccurs="1"/> </xsd:sequence> </xsd:complexType>

Complex Type `Person`

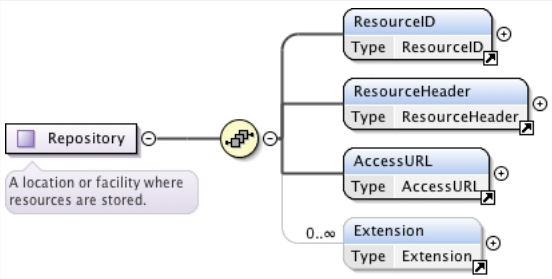
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	An individual human being.
Diagram	
Used by	Element Person
Model	ResourceID , ReleaseDate{0,1} , PersonName{0,1} , OrganizationName , Address{0,1} , Email* , PhoneNumber* , FaxNumber{0,1} , Note{0,1} , Extension*
Children	Address, Email, Extension, FaxNumber, Note, OrganizationName, PersonName, PhoneNumber, ReleaseDate, ResourceID
Source	<xsd:complexType name="Person">

```
  <xsd:annotation>
    <xsd:documentation xml:lang="en">An individual human being.</xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element ref="ResourceID" minOccurs="1" maxOccurs="1"/>
    <xsd:element ref="ReleaseDate" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="PersonName" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="OrganizationName" minOccurs="1" maxOccurs="1"/>
    <xsd:element ref="Address" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="Email" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element ref="PhoneNumber" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element ref="FaxNumber" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="Note" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="Extension" minOccurs="0" maxOccurs="unbounded"/>
  </xsd:sequence>
</xsd:complexType>
```

Complex Type `Registry`

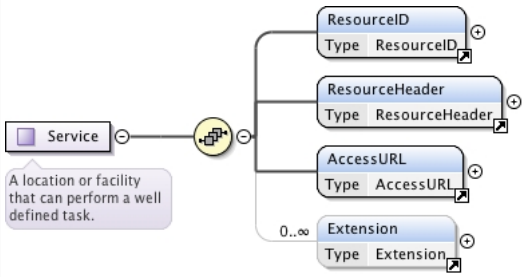
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A location or facility where resources are cataloged.
Diagram	
Used by	Element Registry
Model	ResourceID , ResourceHeader , AccessURL , Extension*
Children	AccessURL, Extension, ResourceHeader, ResourceID
Source	<xsd:complexType name="Registry"> <xsd:annotation> <xsd:documentation xml:lang="en">A location or facility where resources are cataloged.</xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="ResourceID" minOccurs="1" maxOccurs="1"/> <xsd:element ref="ResourceHeader" minOccurs="1" maxOccurs="1"/> <xsd:element ref="AccessURL" minOccurs="1" maxOccurs="1"/> <xsd:element ref="Extension" minOccurs="0" maxOccurs="unbounded"/> </xsd:sequence> </xsd:complexType>

Complex Type `Repository`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A location or facility where resources are stored.
Diagram	
Used by	Element Repository
Model	ResourceID , ResourceHeader , AccessURL , Extension*
Children	AccessURL, Extension, ResourceHeader, ResourceID

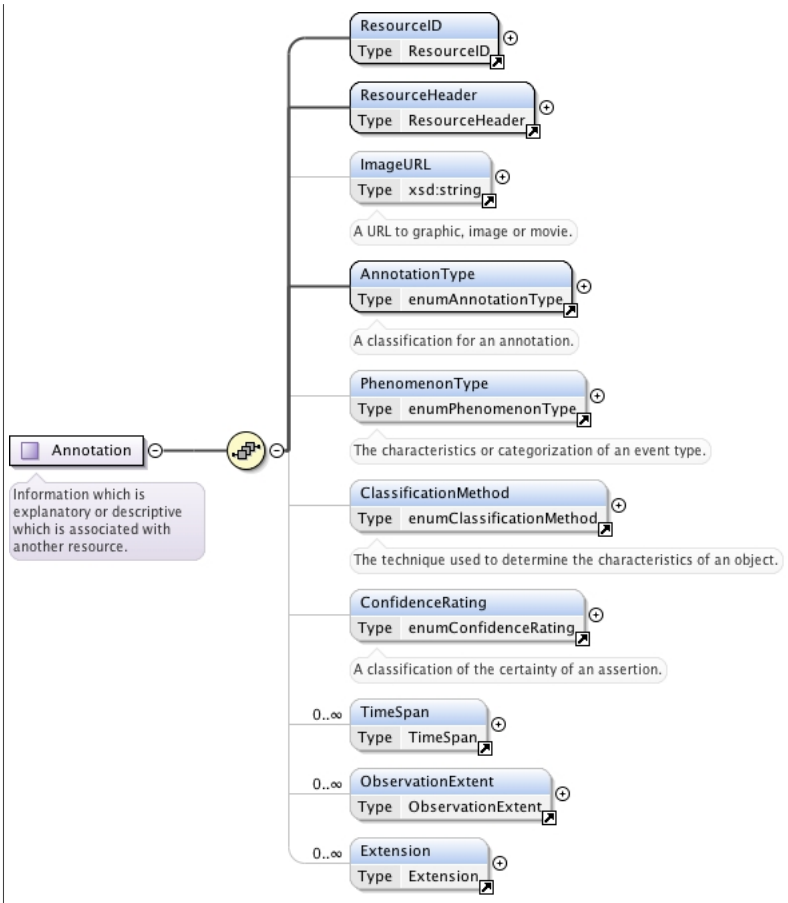
Source	<xsd:complexType name="Repository"> <xsd:annotation> <xsd:documentation xml:lang="en">A location or facility where resources are stored.</ xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="ResourceID" minOccurs="1" maxOccurs="1"/> <xsd:element ref="ResourceHeader" minOccurs="1" maxOccurs="1"/> <xsd:element ref="AccessURL" minOccurs="1" maxOccurs="1"/> <xsd:element ref="Extension" minOccurs="0" maxOccurs="unbounded"/> </xsd:sequence> </xsd:complexType>

Complex Type `Service`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A location or facility that can perform a well defined task.
Diagram	
Used by	Element Service
Model	ResourceID , ResourceHeader , AccessURL , Extension*
Children	AccessURL, Extension, ResourceHeader, ResourceID
Source	<xsd:complexType name="Service"> <xsd:annotation> <xsd:documentation xml:lang="en">A location or facility that can perform a well defined task.</ xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="ResourceID" minOccurs="1" maxOccurs="1"/> <xsd:element ref="ResourceHeader" minOccurs="1" maxOccurs="1"/> <xsd:element ref="AccessURL" minOccurs="1" maxOccurs="1"/> <xsd:element ref="Extension" minOccurs="0" maxOccurs="unbounded"/> </xsd:sequence> </xsd:complexType>

Complex Type `Annotation`

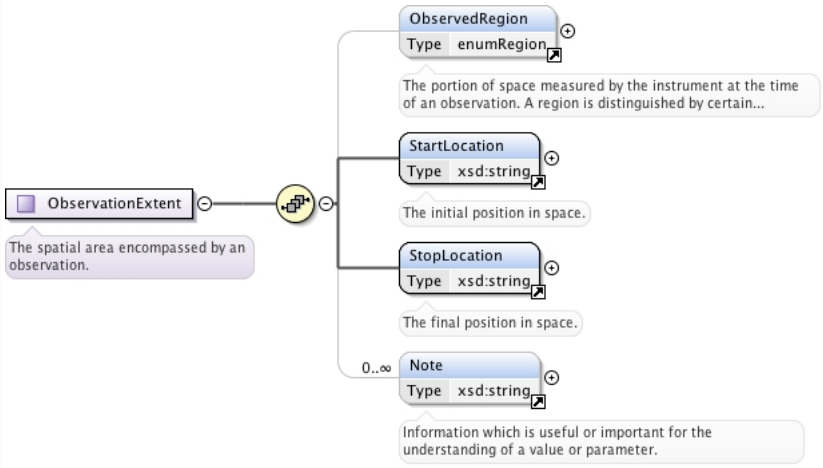
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Information which is explanatory or descriptive which is associated with another resource.

Diagram	
Used by	Element Annotation
Model	ResourceID , ResourceHeader , ImageURL{0,1} , AnnotationType , PhenomenonType{0,1} , ClassificationMethod{0,1} , ConfidenceRating{0,1} , TimeSpan* , ObservationExtent* , Extension*
Children	AnnotationType, ClassificationMethod, ConfidenceRating, Extension, ImageURL, ObservationExtent, PhenomenonType, ResourceHeader, ResourceID, TimeSpan

Source	`<xsd:complexType name="Annotation">`
	`  <xsd:annotation>`
	`  <xsd:documentation xml:lang="en">Information which is explanatory or descriptive which is associated with another resource.</xsd:documentation>`
	`  </xsd:annotation>`
	`  <xsd:sequence>`
	`  <xsd:element ref="ResourceID" minOccurs="1" maxOccurs="1"/>`
	`  <xsd:element ref="ResourceHeader" minOccurs="1" maxOccurs="1"/>`
	`  <xsd:element ref="ImageURL" minOccurs="0" maxOccurs="1"/>`
	`  <xsd:element ref="AnnotationType" minOccurs="1" maxOccurs="1"/>`
	`  <xsd:element ref="PhenomenonType" minOccurs="0" maxOccurs="1"/>`
	`  <xsd:element ref="ClassificationMethod" minOccurs="0" maxOccurs="1"/>`
	`  <xsd:element ref="ConfidenceRating" minOccurs="0" maxOccurs="1"/>`
	`  <xsd:element ref="TimeSpan" minOccurs="0" maxOccurs="unbounded"/>`
	`  <xsd:element ref="ObservationExtent" minOccurs="0" maxOccurs="unbounded"/>`
	`  <xsd:element ref="Extension" minOccurs="0" maxOccurs="unbounded"/>`
	`  </xsd:sequence>`
	`</xsd:complexType>`

Complex Type `ObservationExtent`

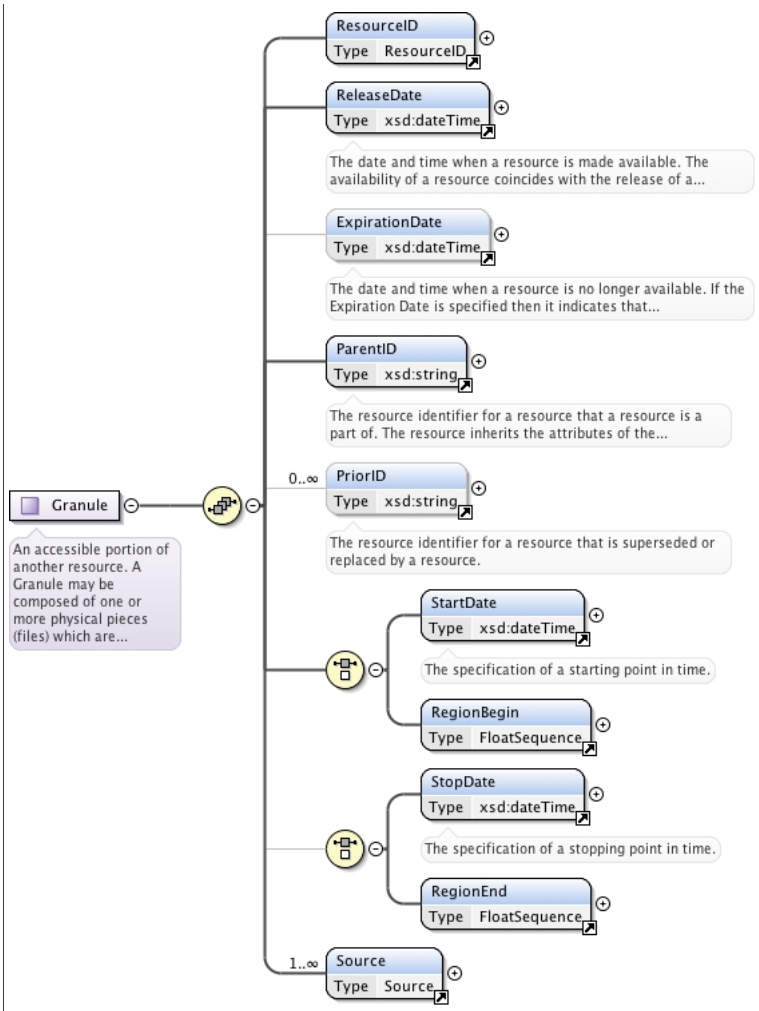
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	`The spatial area encompassed by an observation.`

Diagram	
Used by	Element ObservationExtent
Model	ObservedRegion{0,1} , StartLocation , StopLocation , Note*
Children	Note, ObservedRegion, StartLocation, StopLocation

Source	`<xsd:complexType name="ObservationExtent">`
	`  <xsd:annotation>`
	`  <xsd:documentation xml:lang="en">The spatial area encompassed by an observation.</xsd:documentation>`
	`  </xsd:annotation>`
	`  <xsd:sequence>`
	`  <xsd:element ref="ObservedRegion" minOccurs="0" maxOccurs="1"/>`
	`  <xsd:element ref="StartLocation" minOccurs="1" maxOccurs="1"/>`
	`  <xsd:element ref="StopLocation" minOccurs="1" maxOccurs="1"/>`
	`  <xsd:element ref="Note" minOccurs="0" maxOccurs="unbounded"/>`
	`  </xsd:sequence>`
	`</xsd:complexType>`

Complex Type `Granule`

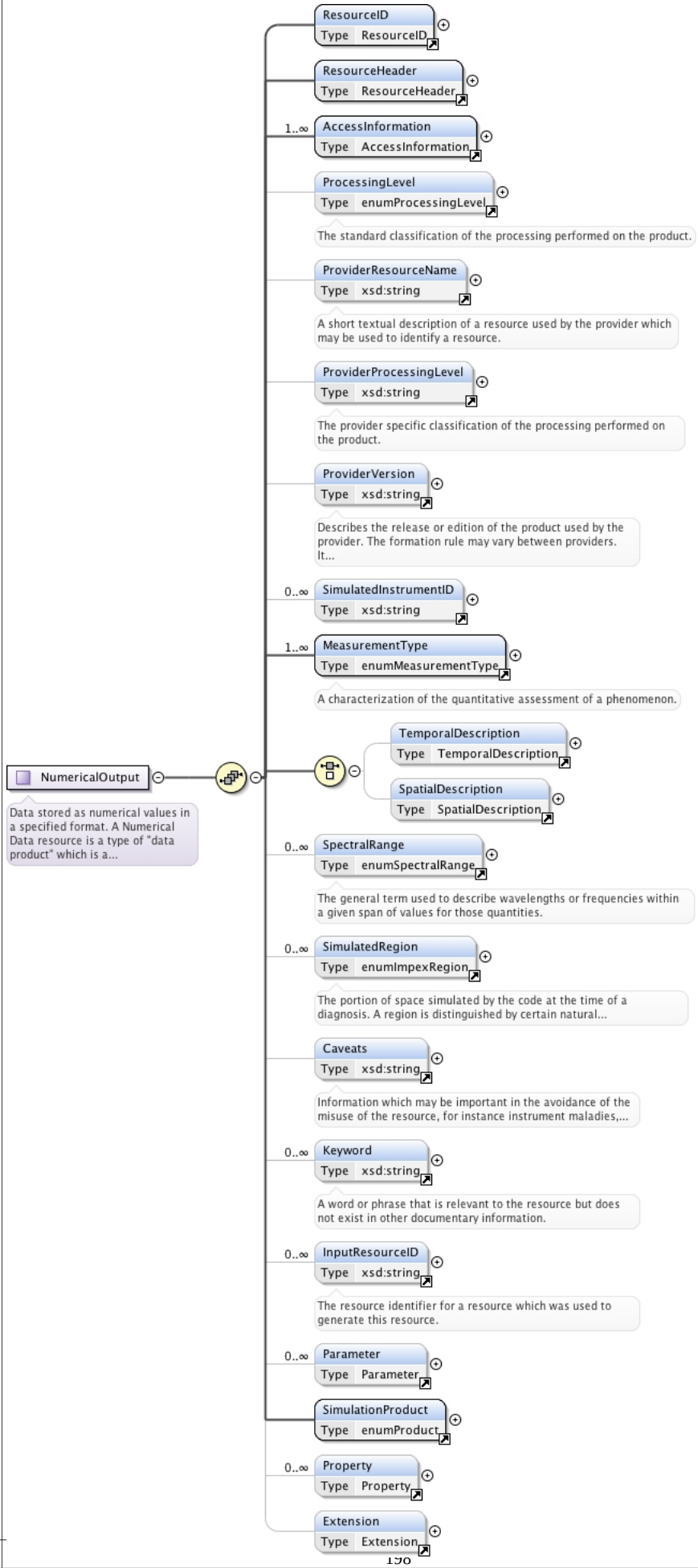
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	An accessible portion of another resource. A Granule may be composed of one or more physical pieces (files) which are considered inseparable. For example, a data storage format that maintains metadata and binary data in separate, but tightly coupled files. Granules should not be used to group files that have simple relationships or which are associated through a parent resource. For example, each file containing a time interval data for a Numerical Data resource would each be considered a Granule. The ParentID of a Granule resource must be a NumericalData resource. The attributes of a Granule supersede the corresponding attributes in the NumericalData resource.

Diagram	
Used by	Element Granule
Model	ResourceID , ReleaseDate , ExpirationDate{0,1} , ParentID , PriorID* , (StartDate | RegionBegin) , (StopDate | RegionEnd) , Source+
Children	ExpirationDate, ParentID, PriorID, RegionBegin, RegionEnd, ReleaseDate, ResourceID, Source, StartDate, StopDate
Source	`<xsd:complexType name="Granule">` `  <xsd:annotation>` ` <xsd:documentation xml:lang="en">An accessible portion of another resource. A Granule may be composed of one or more physical pieces (files) which are considered inseparable. For example, a data storage format that maintains metadata and binary data in separate, but tightly coupled files. Granules should not be used to group files that have simple relationships or which are associated through a parent resource. For example, each file containing a time interval data for a Numerical Data resource would each be considered a Granule. The ParentID of a Granule resource must be a NumericalData resource. The attributes of a Granule supersede the corresponding attributes in the NumericalData resource.</xsd:documentation>` ` </xsd:annotation>` ` <xsd:sequence>` ` <xsd:element ref="ResourceID" minOccurs="1" maxOccurs="1"/>` ` <xsd:element ref="ReleaseDate" minOccurs="1" maxOccurs="1"/>` ` <xsd:element ref="ExpirationDate" minOccurs="0" maxOccurs="1"/>` ` <xsd:element ref="ParentID" minOccurs="1" maxOccurs="1"/>` ` <xsd:element ref="PriorID" minOccurs="0" maxOccurs="unbounded"/>` ` <xsd:choice>` ` <xsd:element ref="StartDate" minOccurs="1" maxOccurs="1"/>` ` <xsd:element ref="RegionBegin"/>` ` </xsd:choice>` ` <xsd:choice minOccurs="0">` ` <xsd:element ref="StopDate" minOccurs="1" maxOccurs="1"/>` ` <xsd:element ref="RegionEnd" minOccurs="1"/>` ` </xsd:choice>` ` <xsd:element ref="Source" minOccurs="1" maxOccurs="unbounded"/>` ` </xsd:sequence>` `</xsd:complexType>`

Complex Type `NumericalOutput`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Data stored as numerical values in a specified format. A Numerical Data resource is a type of "data product" which is a set of data that is uniformly processed and formatted, from one or more instruments, typically spanning the full duration of the observations of the relevant instrument(s). A data product may consist of a collection of granules of successive time spans, but may be a single high-level entity.

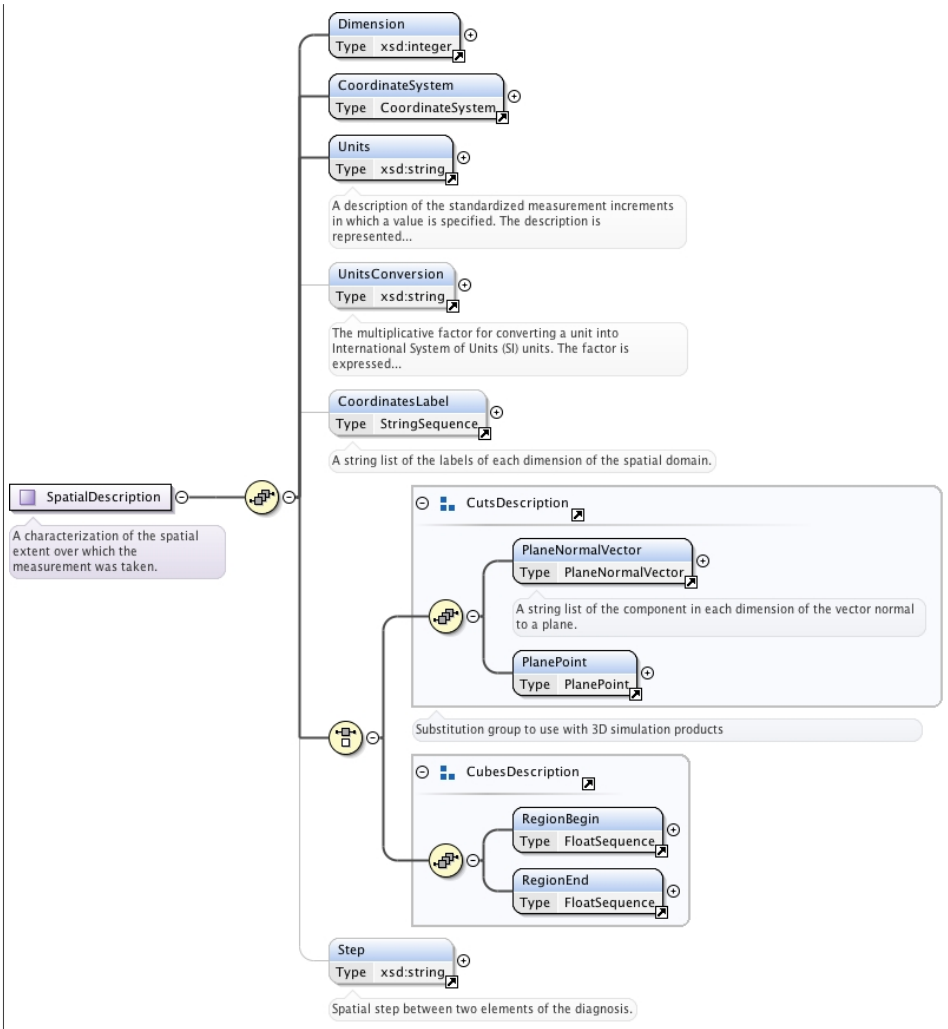
Diagram


NumericalOutput
Data stored as numerical values in a specified format. A Numerical Data resource is a type of "data product" which is a...
ResourceID
Type ResourceID
ResourceHeader
Type ResourceHeader
1..∞ AccessInformation
Type AccessInformation
ProcessingLevel
Type enumProcessingLevel
The standard classification of the processing performed on the product.
ProviderResourceName
Type xsd:string
A short textual description of a resource used by the provider which may be used to identify a resource.
ProviderProcessingLevel
Type xsd:string
The provider specific classification of the processing performed on the product.
ProviderVersion
Type xsd:string
Describes the release or edition of the product used by the provider. The formation rule may vary between providers. It...
0..∞ SimulatedInstrumentID
Type xsd:string
1..∞ MeasurementType
Type enumMeasurementType
A characterization of the quantitative assessment of a phenomenon.
TemporalDescription
Type TemporalDescription
SpatialDescription
Type SpatialDescription
0..∞ SpectralRange
Type enumSpectralRange
The general term used to describe wavelengths or frequencies within a given span of values for those quantities.
0..∞ SimulatedRegion
Type enumImpexRegion
The portion of space simulated by the code at the time of a diagnosis. A region is distinguished by certain natural...
Caveats
Type xsd:string
Information which may be important in the avoidance of the misuse of the resource, for instance instrument maladies,...
0..∞ Keyword
Type xsd:string
A word or phrase that is relevant to the resource but does not exist in other documentary information.
0..∞ InputResourceID
Type xsd:string
The resource identifier for a resource which was used to generate this resource.
0..∞ Parameter
Type Parameter
SimulationProduct
Type enumProduct
0..∞ Property
Type Property
Extension
Type Extension

Used by	Element NumericalOutput
Model	ResourceID , ResourceHeader , AccessInformation+ , ProcessingLevel{0,1} , ProviderResourceName{0,1} , ProviderProcessingLevel{0,1} , ProviderVersion{0,1} , SimulatedInstrumentID* , MeasurementType+ , (TemporalDescription{0,1} | SpatialDescription{0,1}) , SpectralRange* , SimulatedRegion* , Caveats{0,1} , Keyword* , InputResourceID* , Parameter* , SimulationProduct , Property* , Extension{0,1}
Children	AccessInformation, Caveats, Extension, InputResourceID, Keyword, MeasurementType, Parameter, ProcessingLevel, Property, ProviderProcessingLevel, ProviderResourceName, ProviderVersion, ResourceHeader, ResourceID, SimulatedInstrumentID, SimulatedRegion, SimulationProduct, SpatialDescription, SpectralRange, TemporalDescription
Source	<xsd:complexType name="NumericalOutput"> <xsd:annotation> <xsd:documentation xml:lang="en">Data stored as numerical values in a specified format. A Numerical Data resource is a type of "data product" which is a set of data that is uniformly processed and formatted, from one or more instruments, typically spanning the full duration of the observations of the relevant instrument(s). A data product may consist of a collection of granules of successive time spans, but may be a single high-level entity.</xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="ResourceID" minOccurs="1" maxOccurs="1"/> <xsd:element ref="ResourceHeader" minOccurs="1" maxOccurs="1"/> <xsd:element ref="AccessInformation" minOccurs="1" maxOccurs="unbounded"/> <xsd:element ref="ProcessingLevel" minOccurs="0" maxOccurs="1"/> <xsd:element ref="ProviderResourceName" minOccurs="0" maxOccurs="1"/> <xsd:element ref="ProviderProcessingLevel" minOccurs="0" maxOccurs="1"/> <xsd:element ref="ProviderVersion" minOccurs="0" maxOccurs="1"/> <xsd:element ref="SimulatedInstrumentID" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="MeasurementType" minOccurs="1" maxOccurs="unbounded"/> <xsd:choice> <xsd:element ref="TemporalDescription" minOccurs="0" maxOccurs="1"/> <xsd:element ref="SpatialDescription" minOccurs="0" maxOccurs="1"/> </xsd:choice> <xsd:element ref="SpectralRange" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="SimulatedRegion" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="Caveats" minOccurs="0" maxOccurs="1"/> <xsd:element ref="Keyword" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="InputResourceID" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="Parameter" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="SimulationProduct"/> <xsd:element maxOccurs="unbounded" minOccurs="0" ref="Property"/> <xsd:element minOccurs="0" ref="Extension"/> </xsd:sequence> </xsd:complexType>

Complex Type SpatialDescription

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A characterization of the spatial extent over which the measurement was taken.

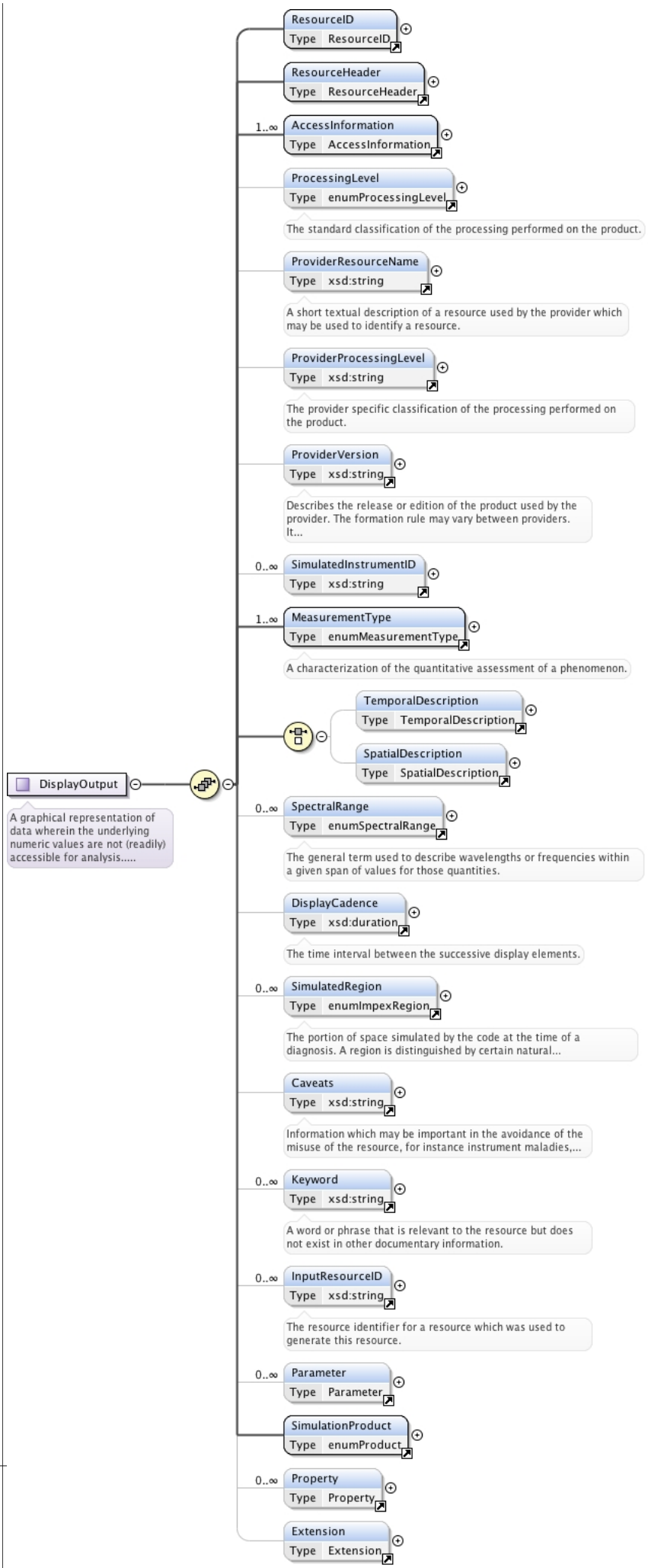
Diagram	
Used by	Element SpatialDescription
Model	Dimension , CoordinateSystem , Units , UnitsConversion{0,1} , CoordinatesLabel{0,1} , ((PlaneNormalVector , PlanePoint) | (RegionBegin , RegionEnd)) , Step{0,1}
Children	CoordinateSystem, CoordinatesLabel, Dimension, PlaneNormalVector, PlanePoint, RegionBegin, RegionEnd, Step, Units, UnitsConversion
Source	<xsd:complexType name="SpatialDescription"> <xsd:annotation> <xsd:documentation xml:lang="en">A characterization of the spatial extent over which the measurement was taken.</xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="Dimension" minOccurs="1" maxOccurs="1"/> <xsd:element ref="CoordinateSystem" minOccurs="1" maxOccurs="1"/> <xsd:element ref="Units" minOccurs="1" maxOccurs="1"/> <xsd:element ref="UnitsConversion" minOccurs="0" maxOccurs="1"/> <xsd:element ref="CoordinatesLabel" minOccurs="0" maxOccurs="1"/> <xsd:choice> <xsd:group ref="CutsDescription"/> <xsd:group ref="CubesDescription"/> </xsd:choice> <xsd:element ref="Step" minOccurs="0" maxOccurs="1"/> </xsd:sequence> </xsd:complexType>

Complex Type `DisplayOutput`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A graphical representation of data wherein the underlying numeric values are not (readily) accessible for analysis.. Examples are line plots and spectrograms. A Display Data resource is a type of "data product" which is a set

	of data that is uniformly processed and formatted, from one or more instruments, typically spanning the full duration of the observations of the relevant instrument(s). A data product may consist of a collection of granules of successive time spans, but may be a single high-level entity.

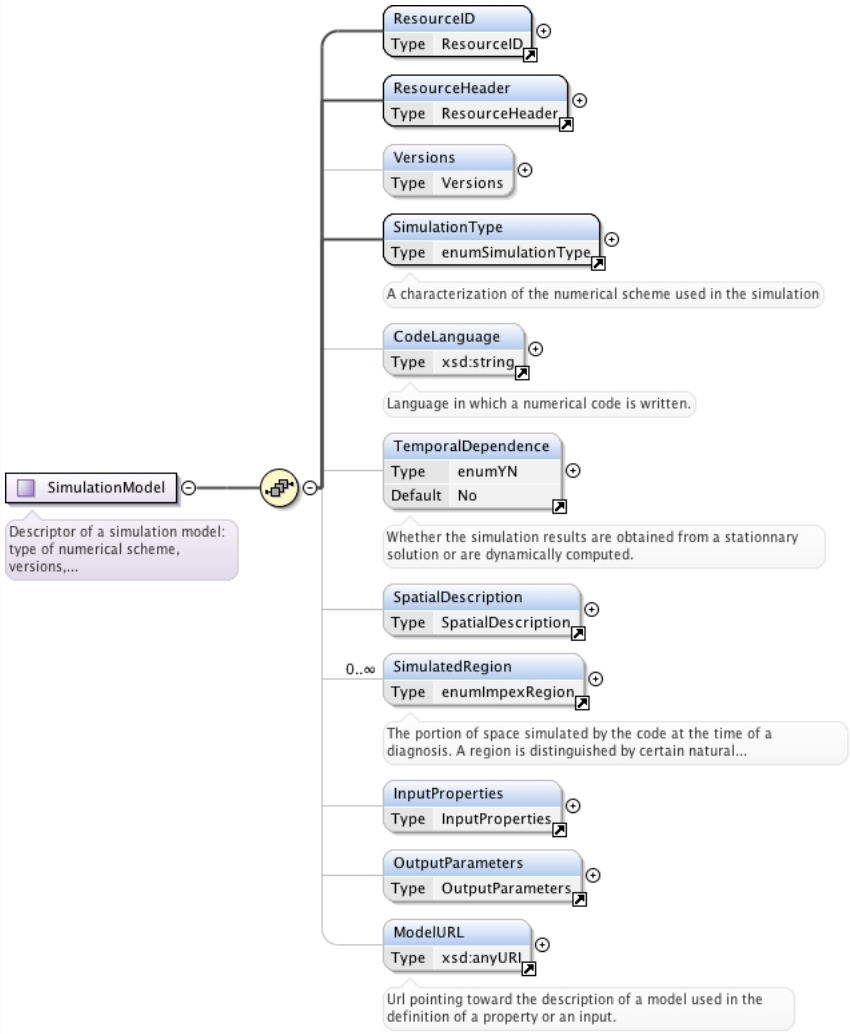
Diagram


DisplayOutput
A graphical representation of data wherein the underlying numeric values are not (readily) accessible for analysis.....
ResourceID
Type ResourceID
ResourceHeader
Type ResourceHeader
1..∞
AccessInformation
Type AccessInformation
ProcessingLevel
Type enumProcessingLevel
The standard classification of the processing performed on the product.
ProviderResourceName
Type xsd:string
A short textual description of a resource used by the provider which may be used to identify a resource.
ProviderProcessingLevel
Type xsd:string
The provider specific classification of the processing performed on the product.
ProviderVersion
Type xsd:string
Describes the release or edition of the product used by the provider. The formation rule may vary between providers. It...
0..∞
SimulatedInstrumentID
Type xsd:string
1..∞
MeasurementType
Type enumMeasurementType
A characterization of the quantitative assessment of a phenomenon.
TemporalDescription
Type TemporalDescription
SpatialDescription
Type SpatialDescription
0..∞
SpectralRange
Type enumSpectralRange
The general term used to describe wavelengths or frequencies within a given span of values for those quantities.
DisplayCadence
Type xsd:duration
The time interval between the successive display elements.
0..∞
SimulatedRegion
Type enumImpexRegion
The portion of space simulated by the code at the time of a diagnosis. A region is distinguished by certain natural...
Caveats
Type xsd:string
Information which may be important in the avoidance of the misuse of the resource, for instance instrument maladies,...
0..∞
Keyword
Type xsd:string
A word or phrase that is relevant to the resource but does not exist in other documentary information.
0..∞
InputResourceID
Type xsd:string
The resource identifier for a resource which was used to generate this resource.
0..∞
Parameter
Type Parameter
SimulationProduct
Type enumProduct
0..∞
Property
Type Property
Extension
Type Extension

Used by	Element DisplayOutput
Model	ResourceID , ResourceHeader , AccessInformation+ , ProcessingLevel{0,1} , ProviderResourceName{0,1} , ProviderProcessingLevel{0,1} , ProviderVersion{0,1} , SimulatedInstrumentID* , MeasurementType+ , (TemporalDescription{0,1} | SpatialDescription{0,1}) , SpectralRange* , DisplayCadence{0,1} , SimulatedRegion* , Caveats{0,1} , Keyword* , InputResourceID* , Parameter* , SimulationProduct , Property* , Extension{0,1}
Children	AccessInformation, Caveats, DisplayCadence, Extension, InputResourceID, Keyword, MeasurementType, Parameter, ProcessingLevel, Property, ProviderProcessingLevel, ProviderResourceName, ProviderVersion, ResourceHeader, ResourceID, SimulatedInstrumentID, SimulatedRegion, SimulationProduct, SpatialDescription, SpectralRange, TemporalDescription
Source	<xsd:complexType name="DisplayOutput"> <xsd:annotation> <xsd:documentation xml:lang="en">A graphical representation of data wherein the underlying numeric values are not (readily) accessible for analysis.. Examples are line plots and spectrograms. A Display Data resource is a type of "data product" which is a set of data that is uniformly processed and formatted, from one or more instruments, typically spanning the full duration of the observations of the relevant instrument(s). A data product may consist of a collection of granules of successive time spans, but may be a single high-level entity.</ xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="ResourceID" minOccurs="1" maxOccurs="1"/> <xsd:element ref="ResourceHeader" minOccurs="1" maxOccurs="1"/> <xsd:element ref="AccessInformation" minOccurs="1" maxOccurs="unbounded"/> <xsd:element ref="ProcessingLevel" minOccurs="0" maxOccurs="1"/> <xsd:element ref="ProviderResourceName" minOccurs="0" maxOccurs="1"/> <xsd:element ref="ProviderProcessingLevel" minOccurs="0" maxOccurs="1"/> <xsd:element ref="ProviderVersion" minOccurs="0" maxOccurs="1"/> <xsd:element ref="SimulatedInstrumentID" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="MeasurementType" minOccurs="1" maxOccurs="unbounded"/> <xsd:choice> <xsd:element ref="TemporalDescription" minOccurs="0" maxOccurs="1"/> <xsd:element ref="SpatialDescription" minOccurs="0" maxOccurs="1"/> </xsd:choice> <xsd:element ref="SpectralRange" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="DisplayCadence" minOccurs="0" maxOccurs="1"/> <xsd:element ref="SimulatedRegion" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="Caveats" minOccurs="0" maxOccurs="1"/> <xsd:element ref="Keyword" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="InputResourceID" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="Parameter" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="SimulationProduct"/> <xsd:element maxOccurs="unbounded" minOccurs="0" ref="Property"/> <xsd:element minOccurs="0" ref="Extension"/> </xsd:sequence> </xsd:complexType>

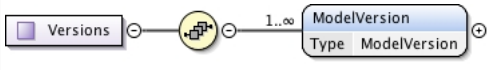
Complex Type `SimulationModel`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Descriptor of a simulation model: type of numerical scheme, versions,...

Diagram	
Used by	Element SimulationModel
Model	ResourceID , ResourceHeader , Versions{0,1} , SimulationType , CodeLanguage{0,1} , TemporalDependence{0,1} , SpatialDescription{0,1} , SimulatedRegion* , InputProperties{0,1} , OutputParameters{0,1} , ModelURL{0,1}
Children	CodeLanguage, InputProperties, ModelURL, OutputParameters, ResourceHeader, ResourceID, SimulatedRegion, SimulationType, SpatialDescription, TemporalDependence, Versions

Source	`<xsd:complexType name="SimulationModel">`
	`  <xsd:annotation>`
	`  <xsd:documentation>Descriptor of a simulation model: type of numerical scheme, versions,...</xsd:documentation>`
	`  </xsd:annotation>`
	`  <xsd:sequence>`
	`  <xsd:element ref="ResourceID"/>`
	`  <xsd:element ref="ResourceHeader" minOccurs="1" maxOccurs="1"/>`
	`  <xsd:element name="Versions" type="Versions" minOccurs="0"/>`
	`  <xsd:element ref="SimulationType" minOccurs="1" maxOccurs="1"/>`
	`  <xsd:element ref="CodeLanguage" minOccurs="0" maxOccurs="1"/>`
	`  <xsd:element minOccurs="0" ref="TemporalDependence"/>`
	`  <xsd:element minOccurs="0" ref="SpatialDescription"/>`
	`  <xsd:element maxOccurs="unbounded" minOccurs="0" ref="SimulatedRegion"/>`
	`  <xsd:element minOccurs="0" ref="InputProperties"/>`
	`  <xsd:element minOccurs="0" ref="OutputParameters"/>`
	`  <xsd:element minOccurs="0" ref="ModelURL"/>`
	`  </xsd:sequence>`
	`</xsd:complexType>`

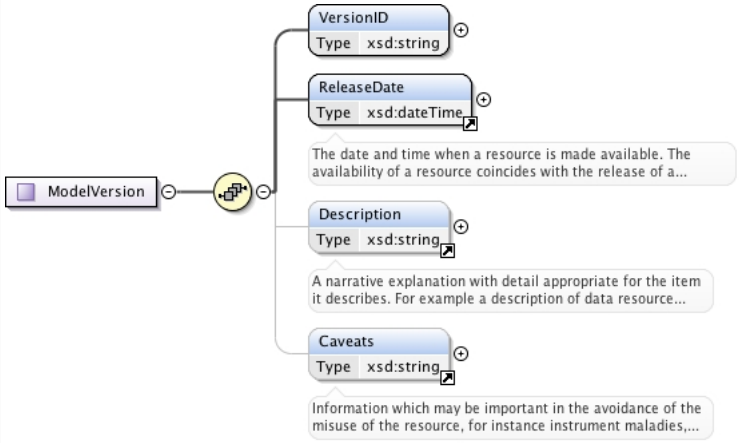
Complex Type `Versions`

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	

Used by	Element SimulationModel/Versions
Model	ModelVersion+
Children	ModelVersion

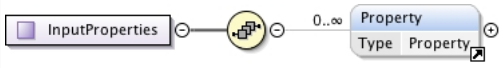
Source	`<xsd:complexType name="Versions">`
	`  <xsd:sequence>`
	`  <xsd:element name="ModelVersion" type="ModelVersion" maxOccurs="unbounded"/>`
	`  </xsd:sequence>`
	`</xsd:complexType>`

Complex Type `ModelVersion`

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Used by	Element Versions/ModelVersion
Model	VersionID , ReleaseDate , Description{0,1} , Caveats{0,1}
Children	Caveats, Description, ReleaseDate, VersionID

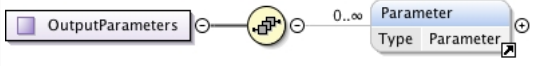
Source	`<xsd:complexType name="ModelVersion">`
	`  <xsd:sequence>`
	`  <xsd:element name="VersionID" type="xsd:string"/>`
	`  <xsd:element ref="ReleaseDate" minOccurs="1" maxOccurs="1"/>`
	`  <xsd:element minOccurs="0" ref="Description"/>`
	`  <xsd:element minOccurs="0" ref="Caveats"/>`
	`  </xsd:sequence>`
	`</xsd:complexType>`

Complex Type `InputProperties`

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Used by	Element InputProperties
Model	Property*
Children	Property

Source	`<xsd:complexType name="InputProperties">`
	`  <xsd:sequence>`
	`  <xsd:element maxOccurs="unbounded" minOccurs="0" ref="Property"/>`
	`  </xsd:sequence>`
	`</xsd:complexType>`

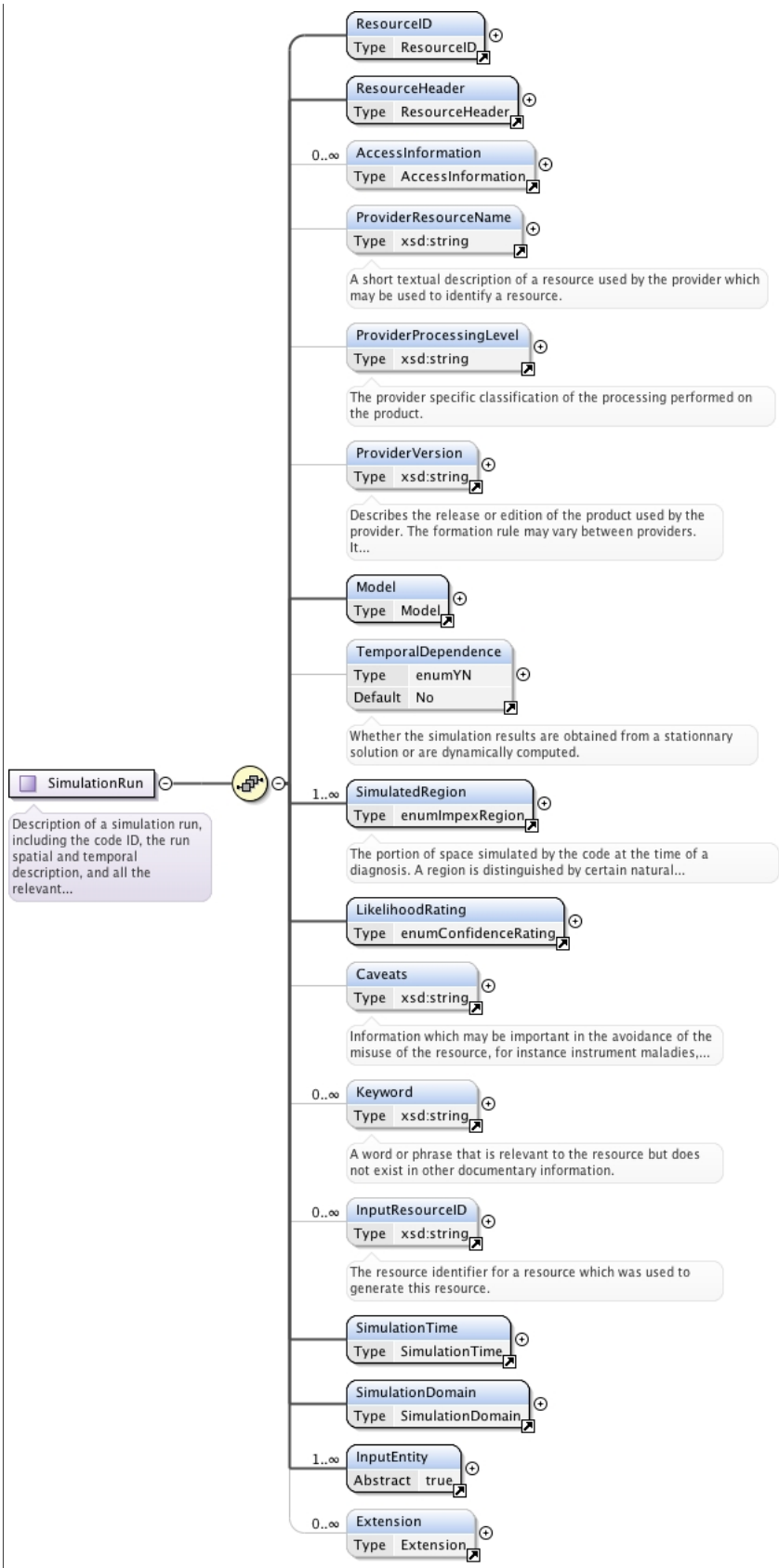
Complex Type `OutputParameters`

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Used by	Element OutputParameters

Model	Parameter*
Children	Parameter
Source	<xsd:complexType name="OutputParameters"> <xsd:sequence> <xsd:element ref="Parameter" maxOccurs="unbounded" minOccurs="0"/> </xsd:sequence> </xsd:complexType>

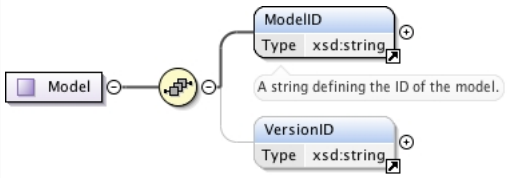
Complex Type `SimulationRun`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Description of a simulation run, including the code ID, the run spatial and temporal description, and all the relevant inputs.

Diagram	
Used by	Element SimulationRun
Model	ResourceID , ResourceHeader , AccessInformation* , ProviderResourceName{0,1} , ProviderProcessingLevel{0,1} , ProviderVersion{0,1} , Model , TemporalDependence{0,1} , SimulatedRegion+ , LikelihoodRating , Caveats{0,1} , Keyword* , InputResourceID* , SimulationTime , SimulationDomain , InputEntity+ , Extension*

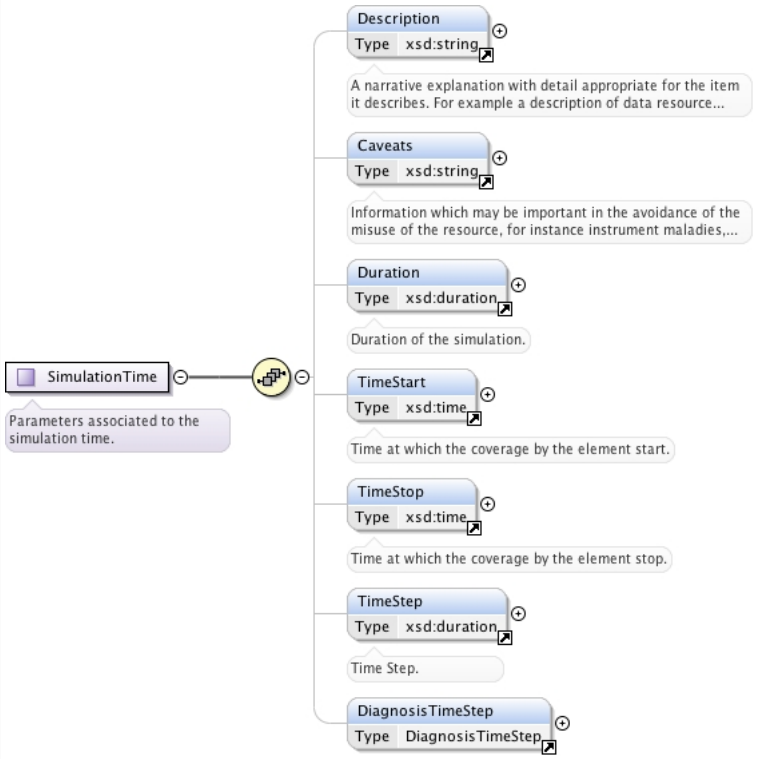
Children	AccessInformation, Caveats, Extension, InputEntity, InputResourceID, Keyword, LikelihoodRating, Model, ProviderProcessingLevel, ProviderResourceName, ProviderVersion, ResourceHeader, ResourceID, SimulatedRegion, SimulationDomain, SimulationTime, TemporalDependence
Source	<xsd:complexType name="SimulationRun"> <xsd:annotation> <xsd:documentation xml:lang="en">Description of a simulation run, including the code ID, the run spatial and temporal description, and all the relevant inputs.</xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="ResourceID" minOccurs="1" maxOccurs="1"/> <xsd:element ref="ResourceHeader" minOccurs="1" maxOccurs="1"/> <xsd:element ref="AccessInformation" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="ProviderResourceName" minOccurs="0" maxOccurs="1"/> <xsd:element ref="ProviderProcessingLevel" minOccurs="0" maxOccurs="1"/> <xsd:element ref="ProviderVersion" minOccurs="0" maxOccurs="1"/> <xsd:element ref="Model"/> <xsd:element ref="TemporalDependence" minOccurs="0" maxOccurs="1"/> <xsd:element ref="SimulatedRegion" minOccurs="1" maxOccurs="unbounded"/> <xsd:element ref="LikelihoodRating"/> <xsd:element ref="Caveats" minOccurs="0" maxOccurs="1"/> <xsd:element ref="Keyword" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="InputResourceID" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="SimulationTime"/> <xsd:element ref="SimulationDomain"/> <xsd:element ref="InputEntity" minOccurs="1" maxOccurs="unbounded"/> <xsd:element ref="Extension" minOccurs="0" maxOccurs="unbounded"/> </xsd:sequence> </xsd:complexType>

Complex Type `Model`

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Used by	Element Model
Model	ModelID , VersionID{0,1}
Children	ModelID, VersionID
Source	<xsd:complexType name="Model"> <xsd:sequence> <xsd:element ref="ModelID"/> <xsd:element minOccurs="0" ref="VersionID"/> </xsd:sequence> </xsd:complexType>

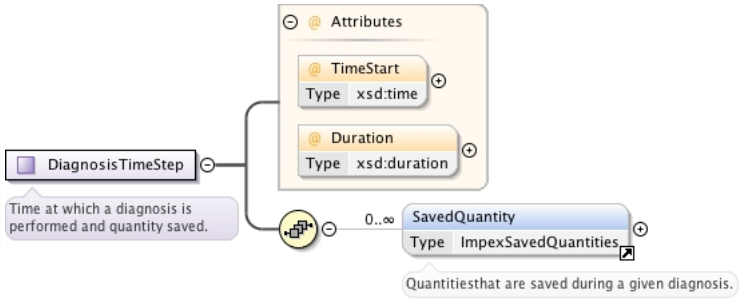
Complex Type `SimulationTime`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Parameters associated to the simulation time.

Diagram	
Used by	Element SimulationTime
Model	Description{0,1} , Caveats{0,1} , Duration{0,1} , TimeStart{0,1} , TimeStop{0,1} , TimeStep{0,1} , DiagnosisTimeStep{0,1}
Children	Caveats, Description, DiagnosisTimeStep, Duration, TimeStart, TimeStep, TimeStop

Source	`<xsd:complexType name="SimulationTime">`
	`  <xsd:annotation>`
	`  <xsd:documentation xml:lang="en">Parameters associated to the simulation time.</xsd:documentation>`
	`  </xsd:annotation>`
	`  <xsd:sequence>`
	`  <xsd:element ref="Description" minOccurs="0" maxOccurs="1"/>`
	`  <xsd:element ref="Caveats" minOccurs="0" maxOccurs="1"/>`
	`  <xsd:element ref="Duration" minOccurs="0" maxOccurs="1"/>`
	`  <xsd:element ref="TimeStart" minOccurs="0" maxOccurs="1"/>`
	`  <xsd:element ref="TimeStop" minOccurs="0" maxOccurs="1"/>`
	`  <xsd:element ref="TimeStep" minOccurs="0" maxOccurs="1"/>`
	`  <xsd:element ref="DiagnosisTimeStep" minOccurs="0"/>`
	`  </xsd:sequence>`
	`</xsd:complexType>`

Complex Type `DiagnosisTimeStep`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	`Time at which a diagnosis is performed and quantity saved.`
Diagram	
Used by	Element DiagnosisTimeStep
Model	SavedQuantity*
Children	SavedQuantity

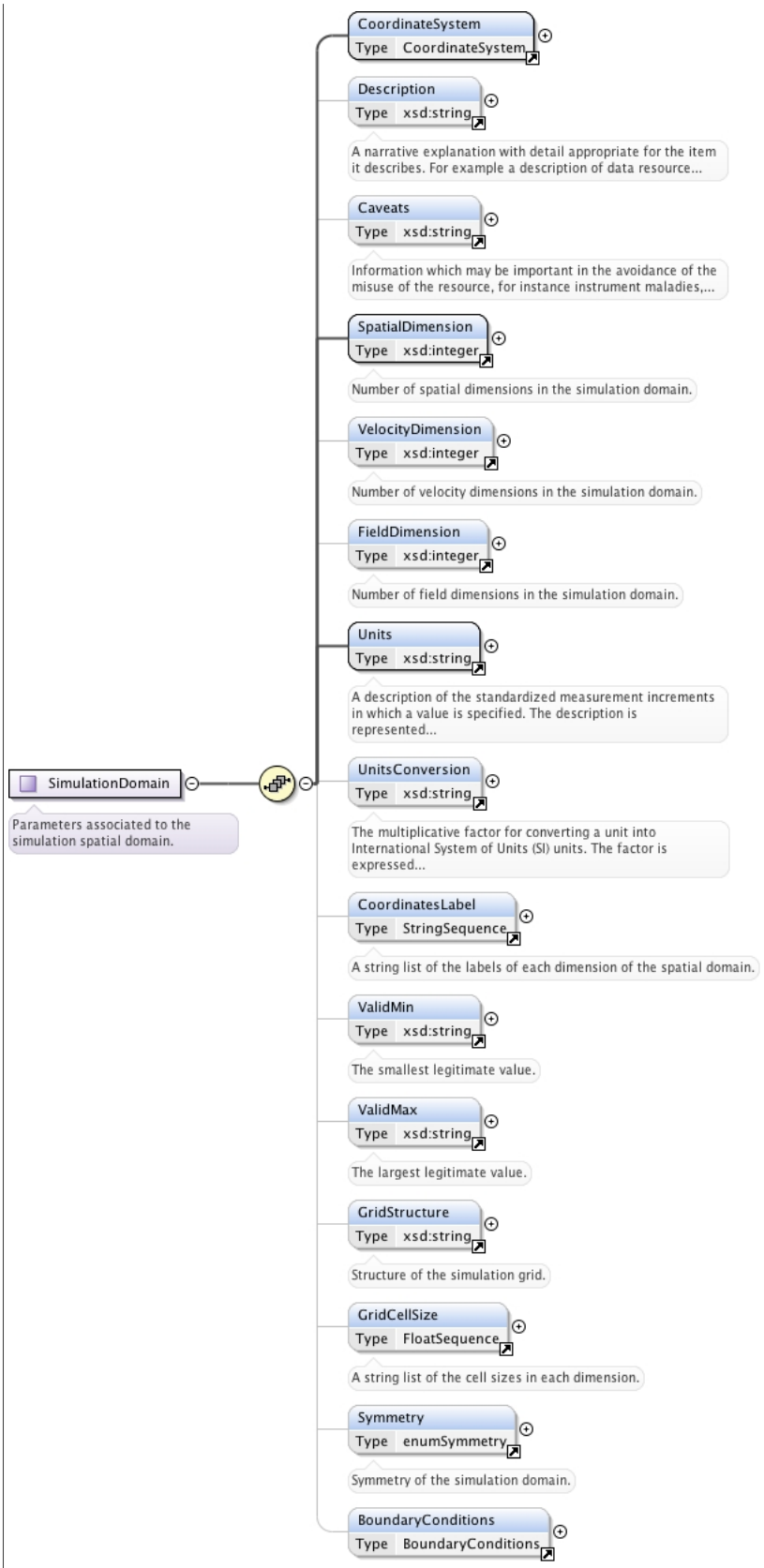
Attributes	**QName**	**Type**	**Use**	
	Duration	xsd:duration	optional	
	TimeStart	xsd:time	optional	

Source

```
<xsd:complexType name="DiagnosisTimeStep">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Time at which a diagnosis is performed and quantity saved.</
xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element ref="SavedQuantity" minOccurs="0" maxOccurs="unbounded"/>
  </xsd:sequence>
  <xsd:attribute name="TimeStart" type="xsd:time"/>
  <xsd:attribute name="Duration" type="xsd:duration"/>
</xsd:complexType>
```

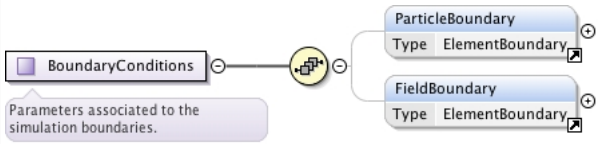
Complex Type `SimulationDomain`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	`Parameters associated to the simulation spatial domain.`

Diagram	
Used by	Element SimulationDomain
Model	CoordinateSystem , Description{0,1} , Caveats{0,1} , SpatialDimension , VelocityDimension{0,1} , FieldDimension{0,1} , Units , UnitsConversion{0,1} , CoordinatesLabel{0,1} , ValidMin{0,1} , ValidMax{0,1} , GridStructure{0,1} , GridCellSize{0,1} , Symmetry{0,1} , BoundaryConditions{0,1}

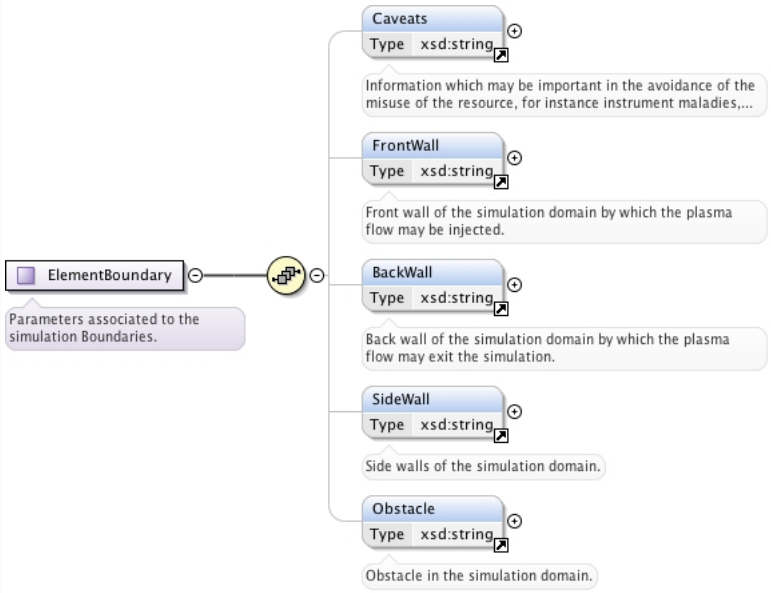
Children	BoundaryConditions, Caveats, CoordinateSystem, CoordinatesLabel, Description, FieldDimension, GridCellSize, GridStructure, SpatialDimension, Symmetry, Units, UnitsConversion, ValidMax, ValidMin, VelocityDimension
Source	<xsd:complexType name="SimulationDomain"> <xsd:annotation> <xsd:documentation xml:lang="en">Parameters associated to the simulation spatial domain.</xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="CoordinateSystem" minOccurs="1" maxOccurs="1"/> <xsd:element ref="Description" minOccurs="0" maxOccurs="1"/> <xsd:element ref="Caveats" minOccurs="0" maxOccurs="1"/> <xsd:element ref="SpatialDimension" minOccurs="1" maxOccurs="1"/> <xsd:element ref="VelocityDimension" minOccurs="0" maxOccurs="1"/> <xsd:element ref="FieldDimension" minOccurs="0" maxOccurs="1"/> <xsd:element ref="Units" minOccurs="1" maxOccurs="1"/> <xsd:element ref="UnitsConversion" minOccurs="0" maxOccurs="1"/> <xsd:element ref="CoordinatesLabel" minOccurs="0" maxOccurs="1"/> <xsd:element ref="ValidMin" minOccurs="0" maxOccurs="1"/> <xsd:element ref="ValidMax" minOccurs="0" maxOccurs="1"/> <xsd:element ref="GridStructure" minOccurs="0" maxOccurs="1"/> <xsd:element ref="GridCellSize" minOccurs="0" maxOccurs="1"/> <xsd:element ref="Symmetry" minOccurs="0" maxOccurs="1"/> <xsd:element ref="BoundaryConditions" minOccurs="0" maxOccurs="1"/> </xsd:sequence> </xsd:complexType>

Complex Type `BoundaryConditions`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Parameters associated to the simulation boundaries.
Diagram	
Used by	Element BoundaryConditions
Model	ParticleBoundary{0,1} , FieldBoundary{0,1}
Children	FieldBoundary, ParticleBoundary
Source	<xsd:complexType name="BoundaryConditions"> <xsd:annotation> <xsd:documentation xml:lang="en">Parameters associated to the simulation boundaries.</xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="ParticleBoundary" minOccurs="0" maxOccurs="1"/> <xsd:element ref="FieldBoundary" minOccurs="0" maxOccurs="1"/> </xsd:sequence> </xsd:complexType>

Complex Type `ElementBoundary`

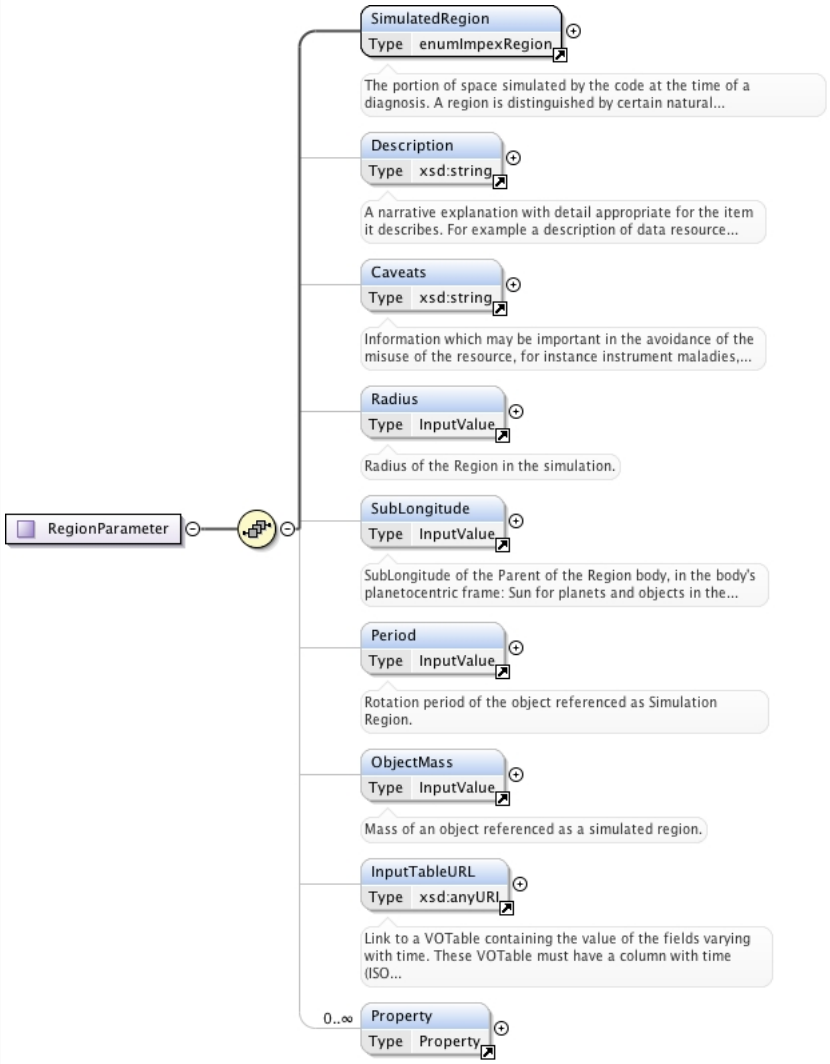
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Parameters associated to the simulation Boundaries.

Diagram	
Used by	Elements FieldBoundary, ParticleBoundary
Model	Caveats{0,1} , FrontWall{0,1} , BackWall{0,1} , SideWall{0,1} , Obstacle{0,1}
Children	BackWall, Caveats, FrontWall, Obstacle, SideWall

Source	`<xsd:complexType name="ElementBoundary">`
	`  <xsd:annotation>`
	`  <xsd:documentation xml:lang="en">Parameters associated to the simulation Boundaries.</xsd:documentation>`
	`  </xsd:annotation>`
	`  <xsd:sequence>`
	`  <xsd:element ref="Caveats" minOccurs="0" maxOccurs="1"/>`
	`  <xsd:element ref="FrontWall" minOccurs="0" maxOccurs="1"/>`
	`  <xsd:element ref="BackWall" minOccurs="0" maxOccurs="1"/>`
	`  <xsd:element ref="SideWall" minOccurs="0" maxOccurs="1"/>`
	`  <xsd:element ref="Obstacle" minOccurs="0" maxOccurs="1"/>`
	`  </xsd:sequence>`
	`</xsd:complexType>`

Complex Type `RegionParameter`

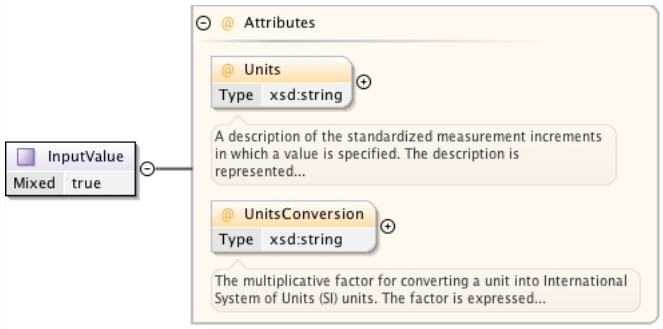
Namespace	http://impex-fp7.oeaw.ac.at

Diagram	
Used by	Element RegionParameter
Model	SimulatedRegion , Description{0,1} , Caveats{0,1} , Radius{0,1} , SubLongitude{0,1} , Period{0,1} , ObjectMass{0,1} , InputTableURL{0,1} , Property*
Children	Caveats, Description, InputTableURL, ObjectMass, Period, Property, Radius, SimulatedRegion, SubLongitude

Source	`<xsd:complexType name="RegionParameter">`
	`  <xsd:sequence>`
	`  <xsd:element ref="SimulatedRegion"/>`
	`  <xsd:element minOccurs="0" ref="Description"/>`
	`  <xsd:element minOccurs="0" ref="Caveats"/>`
	`  <xsd:element minOccurs="0" ref="Radius">`
	`  <xsd:annotation>`
	`  <xsd:documentation>Radius of the Region in the simulation.</xsd:documentation>`
	`  </xsd:annotation>`
	`  </xsd:element>`
	`  <xsd:element minOccurs="0" ref="SubLongitude">`
	`  <xsd:annotation>`
	`  <xsd:documentation>SubLongitude of the Parent of the Region body, in the body's planetocentric frame: Sun for planets and objects in the solar wind, Parent planet for satellites.</xsd:documentation>`
	`  </xsd:annotation>`
	`  </xsd:element>`
	`  <xsd:element minOccurs="0" ref="Period">`
	`  <xsd:annotation>`
	`  <xsd:documentation>Rotation period of the object referenced as Simulation Region.</xsd:documentation>`
	`  </xsd:annotation>`
	`  </xsd:element>`
	`  <xsd:element minOccurs="0" ref="ObjectMass"/>`
	`  <xsd:element minOccurs="0" ref="InputTableURL">`
	`  <xsd:annotation>`
	`  <xsd:documentation>Link to a VOTable containing the value of the fields varying with time. These VOTable must have a column with time (ISO or Julian), defined by the correct ucd and`

```
 xtype, and columns for each time-varying field which names corresponding to that of the field.</
xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element maxOccurs="unbounded" minOccurs="0" ref="Property"/>
  </xsd:sequence>
</xsd:complexType>
```

Complex Type `InputValue`

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Properties	mixed: `true`
Used by	Elements: ObjectMass, Period, PopulationDensity, PopulationFlowSpeed, PopulationTemperature, ProductionRate, Radius, SubLongitude, TotalProductionRate
Model	

Attributes

QName	Type	Use	
Units	xsd:string	optional	

```
A description of the standardized measurement
increments in which a value is specified.
The description is represented as a mathematical
phrase. Units should be represented by widely
accepted representation. For example, units
should conform to the International System
of Units (SI) which is maintained by BIPM
(Bureau International des Poids et Mesures
(see <http://www.bipm.fr/> ) when appropriate
or use tokens like "Re" to represent units
of the Radius of the Earth. Within a phrase
the circumflex (^) is used to indicate a power,
a star (*) is used to indicate multiplication
and a slash (/) division. When symbols are
not separated by a mathematical operator,
multiplication is assumed. Symbols for base
units can be found at: <http://www.bipm.fr/en/si/si_brochure/chapter2/2-1/
#symbols>
and those for common derived units can be
found at: <http://www.bipm.fr/en/si/derived_units/2-2-2.html>
```

UnitsConversion	xsd:string	optional	

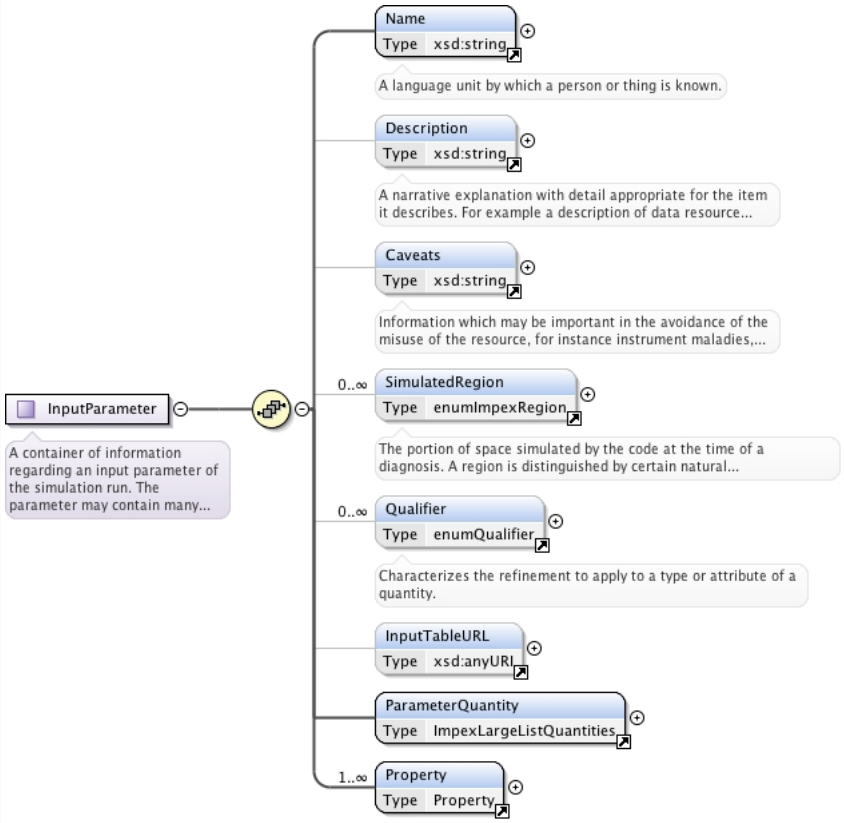
```
The multiplicative factor for converting a
unit into International System of Units (SI)
units. The factor is expressed in the form
"number > x", where "number" is a numerical
value and "x" is the appropriate SI units.
The basic SI units are Enumerated: m (meter),
N (newton), kg (kilogram), Pa (pascal), s
(second), Hz (hertz), A (ampere), V (volt),
K (kelvin), W (watt), rad (radian), J (joule),
sr (steradian), C (coulomb), T (tesla), ohm
(ohm), mho (mho or seimens), H (henry), and
F (farad). Two useful units which are not
SI units are: degree (angle), and unitless
(no units). An example is: "1.0E-5>T" which
converts the units, presumable nT, to tesla.
Another example is: "1.0e+3>m/s" which converts
a velocity expressed in kilometers per second
to meters per second.
```

Source

```
<xsd:complexType mixed="true" name="InputValue">
  <xsd:attribute name="Units" type="xsd:string">
    <xsd:annotation>
```

```
      <xsd:documentation xml:lang="en">A description of the standardized measurement increments
 in which a value is specified. The description is represented as a mathematical phrase. Units
 should be represented by widely accepted representation. For example, units should conform to the
 International System of Units (SI) which is maintained by BIPM (Bureau International des Poids et
 Mesures (see <http://www.bipm.fr/> ) when appropriate or use tokens like "Re" to represent units of
 the Radius of the Earth. Within a phrase the circumflex (^) is used to indicate a power, a star (*)
 is used to indicate multiplication and a slash (/) division. When symbols are not separated by a
 mathematical operator, multiplication is assumed. Symbols for base units can be found at: <http://
www.bipm.fr/en/si/si_brochure/chapter2/2-1/#symbols> and those for common derived units can be found
 at: <http://www.bipm.fr/en/si/derived_units/2-2-2.html></xsd:documentation>
    </xsd:annotation>
  </xsd:attribute>
  <xsd:attribute name="UnitsConversion" type="xsd:string">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">The multiplicative factor for converting a unit into
 International System of Units (SI) units. The factor is expressed in the form "number > x",
 where "number" is a numerical value and "x" is the appropriate SI units. The basic SI units are
 Enumerated: m (meter), N (newton), kg (kilogram), Pa (pascal), s (second), Hz (hertz), A (ampere),
 V (volt), K (kelvin), W (watt), rad (radian), J (joule), sr (steradian), C (coulomb), T (tesla),
 ohm (ohm), mho (mho or seimens), H (henry), and F (farad). Two useful units which are not SI units
 are: degree (angle), and unitless (no units). An example is: "1.0E-5>T" which converts the units,
 presumable nT, to tesla. Another example is: "1.0e+3>m/s" which converts a velocity expressed in
 kilometers per second to meters per second.</xsd:documentation>
    </xsd:annotation>
  </xsd:attribute>
</xsd:complexType>
```

Complex Type `InputParameter`

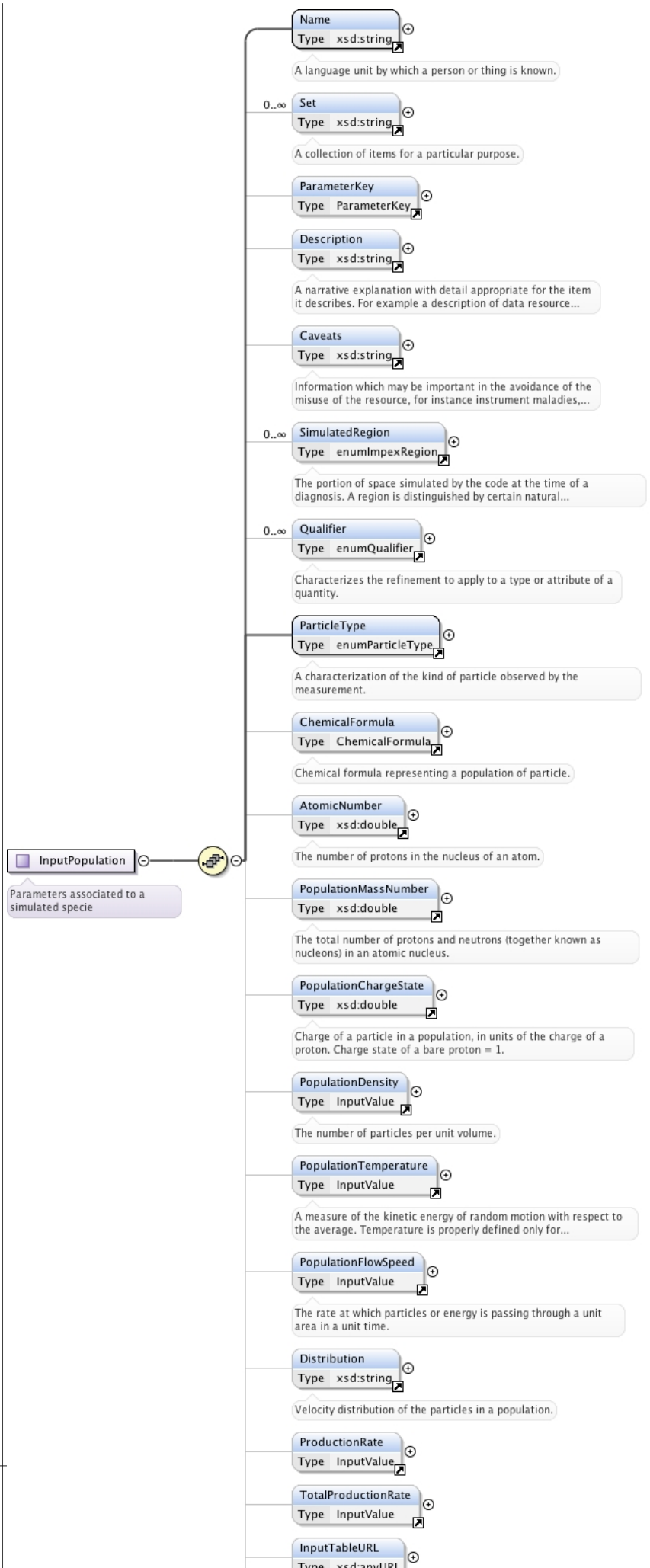
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A container of information regarding an input parameter of the simulation run. The parameter may contain many properties.
Diagram	
Used by	Element InputParameter
Model	Name , Description{0,1} , Caveats{0,1} , SimulatedRegion* , Qualifier* , InputTableURL{0,1} , ParameterQuantity , Property+
Children	Caveats, Description, InputTableURL, Name, ParameterQuantity, Property, Qualifier, SimulatedRegion
Source	<xsd:complexType name="InputParameter"> <xsd:annotation> <xsd:documentation xml:lang="en">A container of information regarding an input parameter of the simulation run. The parameter may contain many properties.</xsd:documentation> </xsd:annotation>

```
  <xsd:sequence>
    <xsd:element ref="Name" minOccurs="1" maxOccurs="1"/>
    <xsd:element ref="Description" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="Caveats" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="SimulatedRegion" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element maxOccurs="unbounded" minOccurs="0" ref="Qualifier"/>
    <xsd:element ref="InputTableURL" minOccurs="0"/>
    <xsd:element ref="ParameterQuantity"/>
    <xsd:element ref="Property" minOccurs="1" maxOccurs="unbounded"/>
  </xsd:sequence>
</xsd:complexType>
```

Complex Type `InputPopulation`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	`Parameters associated to a simulated specie`

Diagram


InputPopulation
Parameters associated to a simulated specie
Name
Type xsd:string
A language unit by which a person or thing is known.
0..∞
Set
Type xsd:string
A collection of items for a particular purpose.
ParameterKey
Type ParameterKey
Description
Type xsd:string
A narrative explanation with detail appropriate for the item it describes. For example a description of data resource...
Caveats
Type xsd:string
Information which may be important in the avoidance of the misuse of the resource, for instance instrument maladies,...
0..∞
SimulatedRegion
Type enumImpexRegion
The portion of space simulated by the code at the time of a diagnosis. A region is distinguished by certain natural...
0..∞
Qualifier
Type enumQualifier
Characterizes the refinement to apply to a type or attribute of a quantity.
ParticleType
Type enumParticleType
A characterization of the kind of particle observed by the measurement.
ChemicalFormula
Type ChemicalFormula
Chemical formula representing a population of particle.
AtomicNumber
Type xsd:double
The number of protons in the nucleus of an atom.
PopulationMassNumber
Type xsd:double
The total number of protons and neutrons (together known as nucleons) in an atomic nucleus.
PopulationChargeState
Type xsd:double
Charge of a particle in a population, in units of the charge of a proton. Charge state of a bare proton = 1.
PopulationDensity
Type InputValue
The number of particles per unit volume.
PopulationTemperature
Type InputValue
A measure of the kinetic energy of random motion with respect to the average. Temperature is properly defined only for...
PopulationFlowSpeed
Type InputValue
The rate at which particles or energy is passing through a unit area in a unit time.
Distribution
Type xsd:string
Velocity distribution of the particles in a population.
ProductionRate
Type InputValue
TotalProductionRate
Type InputValue
InputTableURL

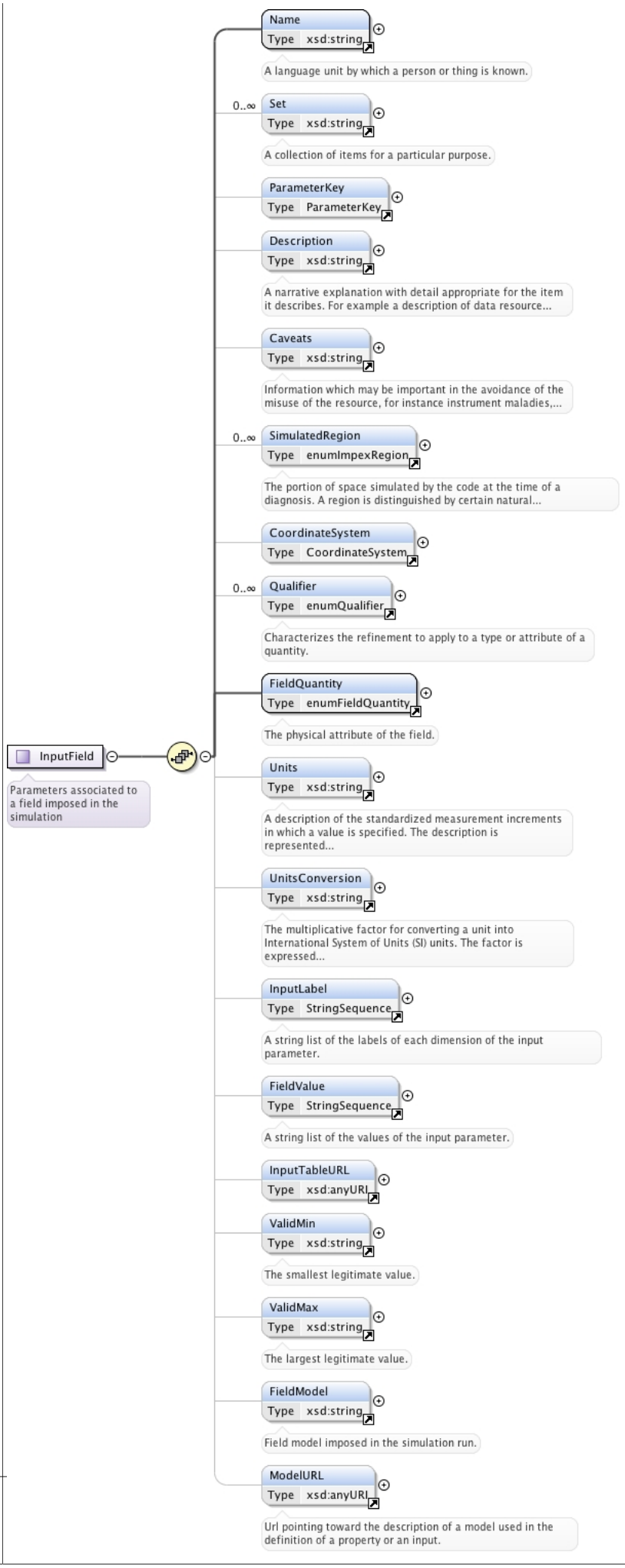
Used by	Element InputPopulation
Model	Name , Set* , ParameterKey{0,1} , Description{0,1} , Caveats{0,1} , SimulatedRegion* , Qualifier* , ParticleType , ChemicalFormula{0,1} , AtomicNumber{0,1} , PopulationMassNumber{0,1} , PopulationChargeState{0,1} , PopulationDensity{0,1} , PopulationTemperature{0,1} , PopulationFlowSpeed{0,1} , Distribution{0,1} , ProductionRate{0,1} , TotalProductionRate{0,1} , InputTableURL{0,1} , Profile{0,1} , ModelURL{0,1}
Children	AtomicNumber, Caveats, ChemicalFormula, Description, Distribution, InputTableURL, ModelURL, Name, ParameterKey, ParticleType, PopulationChargeState, PopulationDensity, PopulationFlowSpeed, PopulationMassNumber, PopulationTemperature, ProductionRate, Profile, Qualifier, Set, SimulatedRegion, TotalProductionRate
Source	

```
<xsd:complexType name="InputPopulation">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Parameters associated to a simulated specie</xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element ref="Name" minOccurs="1" maxOccurs="1"/>
    <xsd:element ref="Set" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element ref="ParameterKey" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="Description" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="Caveats" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="SimulatedRegion" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element maxOccurs="unbounded" minOccurs="0" ref="Qualifier"/>
    <xsd:element ref="ParticleType"/>
    <xsd:element minOccurs="0" ref="ChemicalFormula"/>
    <xsd:element minOccurs="0" ref="AtomicNumber"/>
    <xsd:element ref="PopulationMassNumber" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="PopulationChargeState" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="PopulationDensity" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="PopulationTemperature" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="PopulationFlowSpeed" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="Distribution" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="ProductionRate" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="TotalProductionRate" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="InputTableURL" minOccurs="0"/>
    <xsd:element ref="Profile" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="ModelURL" minOccurs="0" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

Complex Type `InputField`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	`Parameters associated to a field imposed in the simulation`

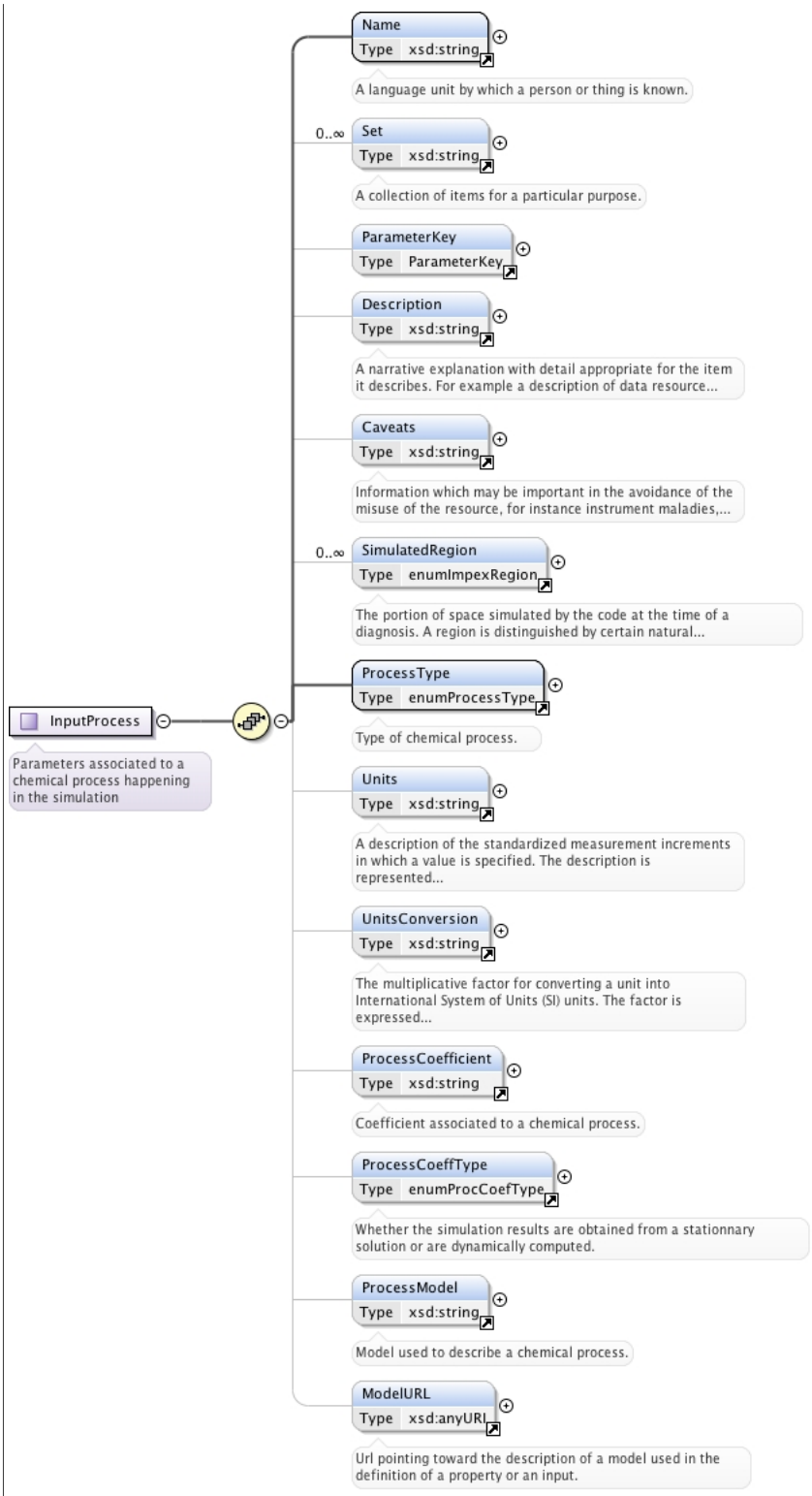
Diagram


InputField
Parameters associated to a field imposed in the simulation
Name
Type xsd:string
A language unit by which a person or thing is known.
0..∞
Set
Type xsd:string
A collection of items for a particular purpose.
ParameterKey
Type ParameterKey
Description
Type xsd:string
A narrative explanation with detail appropriate for the item it describes. For example a description of data resource...
Caveats
Type xsd:string
Information which may be important in the avoidance of the misuse of the resource, for instance instrument maladies,...
0..∞
SimulatedRegion
Type enumImpexRegion
The portion of space simulated by the code at the time of a diagnosis. A region is distinguished by certain natural...
CoordinateSystem
Type CoordinateSystem
0..∞
Qualifier
Type enumQualifier
Characterizes the refinement to apply to a type or attribute of a quantity.
FieldQuantity
Type enumFieldQuantity
The physical attribute of the field.
Units
Type xsd:string
A description of the standardized measurement increments in which a value is specified. The description is represented...
UnitsConversion
Type xsd:string
The multiplicative factor for converting a unit into International System of Units (SI) units. The factor is expressed...
InputLabel
Type StringSequence
A string list of the labels of each dimension of the input parameter.
FieldValue
Type StringSequence
A string list of the values of the input parameter.
InputTableURL
Type xsd:anyURI
ValidMin
Type xsd:string
The smallest legitimate value.
ValidMax
Type xsd:string
The largest legitimate value.
FieldModel
Type xsd:string
Field model imposed in the simulation run.
ModelURL
Type xsd:anyURI
Url pointing toward the description of a model used in the definition of a property or an input.

Used by	Element InputField
Model	Name , Set* , ParameterKey{0,1} , Description{0,1} , Caveats{0,1} , SimulatedRegion* , CoordinateSystem{0,1} , Qualifier* , FieldQuantity , Units{0,1} , UnitsConversion{0,1} , InputLabel{0,1} , FieldValue{0,1} , InputTableURL{0,1} , ValidMin{0,1} , ValidMax{0,1} , FieldModel{0,1} , ModelURL{0,1}
Children	Caveats, CoordinateSystem, Description, FieldModel, FieldQuantity, FieldValue, InputLabel, InputTableURL, ModelURL, Name, ParameterKey, Qualifier, Set, SimulatedRegion, Units, UnitsConversion, ValidMax, ValidMin
Source	<xsd:complexType name="InputField"> <xsd:annotation> <xsd:documentation xml:lang="en">Parameters associated to a field imposed in the simulation</xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="Name" minOccurs="1" maxOccurs="1"/> <xsd:element ref="Set" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="ParameterKey" minOccurs="0" maxOccurs="1"/> <xsd:element ref="Description" minOccurs="0" maxOccurs="1"/> <xsd:element ref="Caveats" minOccurs="0" maxOccurs="1"/> <xsd:element ref="SimulatedRegion" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="CoordinateSystem" minOccurs="0" maxOccurs="1"/> <xsd:element maxOccurs="unbounded" minOccurs="0" ref="Qualifier"/> <xsd:element ref="FieldQuantity" minOccurs="1" maxOccurs="1"/> <xsd:element ref="Units" minOccurs="0" maxOccurs="1"/> <xsd:element ref="UnitsConversion" minOccurs="0" maxOccurs="1"/> <xsd:element ref="InputLabel" minOccurs="0" maxOccurs="1"/> <xsd:element ref="FieldValue" minOccurs="0" maxOccurs="1"/> <xsd:element minOccurs="0" ref="InputTableURL"/> <xsd:element ref="ValidMin" minOccurs="0" maxOccurs="1"/> <xsd:element ref="ValidMax" minOccurs="0" maxOccurs="1"/> <xsd:element ref="FieldModel" minOccurs="0" maxOccurs="1"/> <xsd:element ref="ModelURL" minOccurs="0" maxOccurs="1"/> </xsd:sequence> </xsd:complexType>

Complex Type `InputProcess`

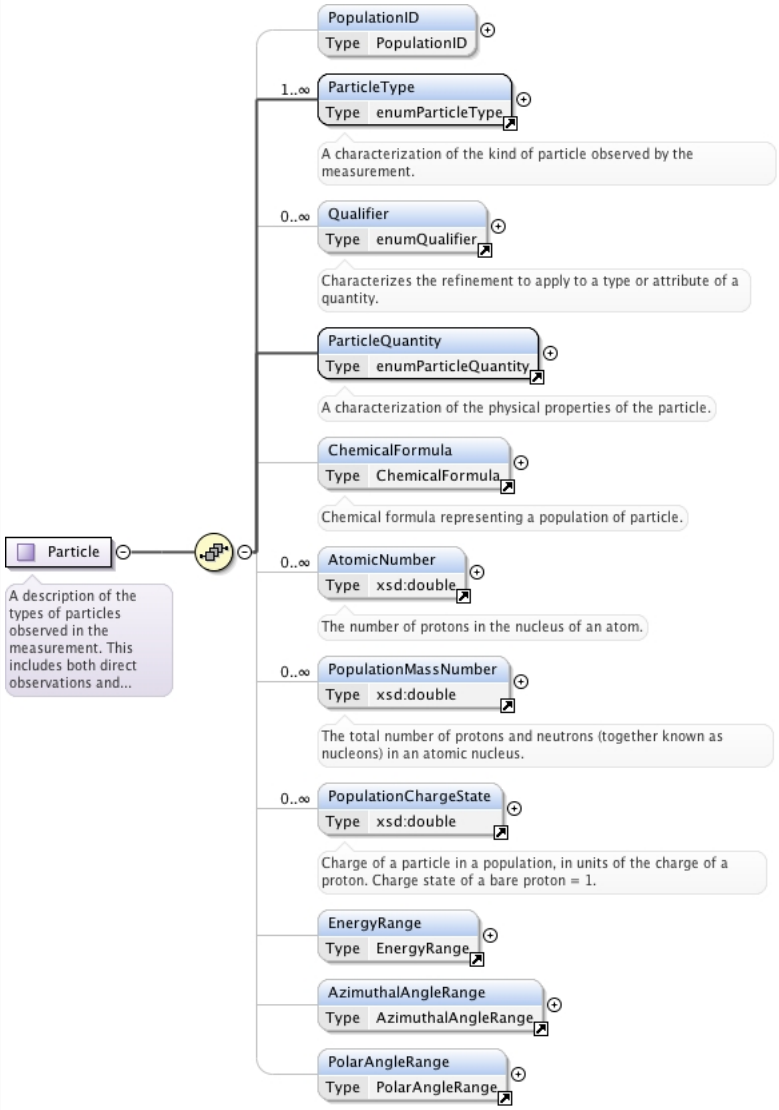
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Parameters associated to a chemical process happening in the simulation

Diagram	
Used by	Element InputProcess
Model	Name , Set* , ParameterKey{0,1} , Description{0,1} , Caveats{0,1} , SimulatedRegion* , ProcessType , Units{0,1} , UnitsConversion{0,1} , ProcessCoefficient{0,1} , ProcessCoeffType{0,1} , ProcessModel{0,1} , ModelURL{0,1}
Children	Caveats, Description, ModelURL, Name, ParameterKey, ProcessCoeffType, ProcessCoefficient, ProcessModel, ProcessType, Set, SimulatedRegion, Units, UnitsConversion

Source	`<xsd:complexType name="InputProcess">`
	`  <xsd:annotation>`
	`  <xsd:documentation xml:lang="en">Parameters associated to a chemical process happening in the simulation</xsd:documentation>`
	`  </xsd:annotation>`

```
  <xsd:sequence>
    <xsd:element ref="Name" minOccurs="1" maxOccurs="1"/>
    <xsd:element ref="Set" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element ref="ParameterKey" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="Description" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="Caveats" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="SimulatedRegion" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element ref="ProcessType" minOccurs="1" maxOccurs="1"/>
    <xsd:element ref="Units" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="UnitsConversion" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="ProcessCoefficient" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="ProcessCoeffType" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="ProcessModel" minOccurs="0" maxOccurs="1"/>
    <xsd:element ref="ModelURL" minOccurs="0" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

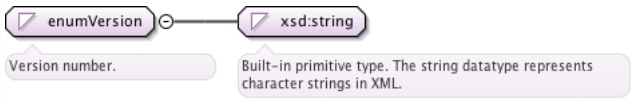
Complex Type `Particle`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A description of the types of particles observed in the measurement. This includes both direct observations and inferred observations.
Diagram	
Used by	Element Particle
Model	PopulationID{0,1} , ParticleType+ , Qualifier* , ParticleQuantity , ChemicalFormula{0,1} , AtomicNumber* , PopulationMassNumber* , PopulationChargeState* , EnergyRange{0,1} , AzimuthalAngleRange{0,1} , PolarAngleRange{0,1}
Children	AtomicNumber, AzimuthalAngleRange, ChemicalFormula, EnergyRange, ParticleQuantity, ParticleType, PolarAngleRange, PopulationChargeState, PopulationID, PopulationMassNumber, Qualifier

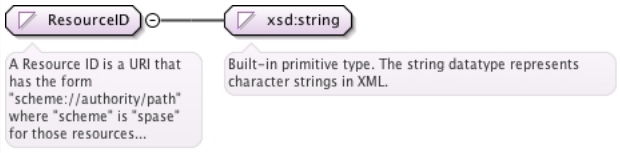
Source	<xsd:complexType name="Particle"> <xsd:annotation> <xsd:documentation xml:lang="en">A description of the types of particles observed in the measurement. This includes both direct observations and inferred observations.</xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element minOccurs="0" name="PopulationID" type="PopulationID"/> <xsd:element maxOccurs="unbounded" minOccurs="1" ref="ParticleType"/> <xsd:element maxOccurs="unbounded" minOccurs="0" ref="Qualifier"/> <xsd:element maxOccurs="1" minOccurs="1" ref="ParticleQuantity"/> <xsd:element minOccurs="0" ref="ChemicalFormula"/> <xsd:element maxOccurs="unbounded" minOccurs="0" ref="AtomicNumber"/> <xsd:element minOccurs="0" ref="PopulationMassNumber" maxOccurs="unbounded"/> <xsd:element minOccurs="0" ref="PopulationChargeState" maxOccurs="unbounded"/> <xsd:element maxOccurs="1" minOccurs="0" ref="EnergyRange"/> <xsd:element maxOccurs="1" minOccurs="0" ref="AzimuthalAngleRange"/> <xsd:element maxOccurs="1" minOccurs="0" ref="PolarAngleRange"/> </xsd:sequence> </xsd:complexType>

Simple Type(s)

Simple Type `enumVersion`

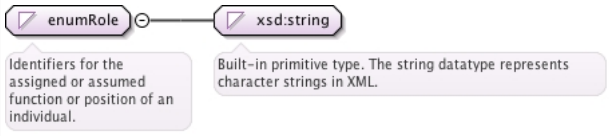
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Version number.
Diagram	
Type	restriction of xsd:string
Facets	enumeration 2.2.2
Used by	Element Version
Source	<xsd:simpleType name="enumVersion"> <xsd:annotation> <xsd:documentation xml:lang="en">Version number.</xsd:documentation> </xsd:annotation> <xsd:restriction base="xsd:string"> <xsd:enumeration value="2.2.2"/> </xsd:restriction> </xsd:simpleType>

Simple Type `ResourceID`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A Resource ID is a URI that has the form "scheme://authority/path" where "scheme" is "spase" for those resources administered through the SPASE framework, "authority" is the unique identifier for the resource provider registered within the SPASE framework and "path" is the unique identifier of the resource within the context of the "authority". The resource ID must be unique within the SPASE framework.
Diagram	
Type	xsd:string
Used by	Element ResourceID
Source	<xsd:simpleType name="ResourceID"> <xsd:annotation> <xsd:documentation xml:lang="en">A Resource ID is a URI that has the form "scheme://authority/path" where "scheme" is "spase" for those resources administered through the SPASE framework, "authority" is the unique identifier for the resource provider registered within the SPASE framework and "path" is the unique identifier of the resource within the context of the "authority". The resource ID must be unique within the SPASE framework.</xsd:documentation> </xsd:annotation> <xsd:restriction base="xsd:string"/>

```
</xsd:simpleType>
```

Simple Type enumRole

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers for the assigned or assumed function or position of an individual.
Diagram	
Type	restriction of xsd:string

Facets

enumeration	ArchiveSpecialist	An individual who is an expert on a collection of resources and may also be knowledgeable of the phenomenon and related physics represented by the resources. This includes librarians, curators, archive scientists and other experts.
enumeration	CoInvestigator	An individual who is a scientific peer and major participant in an investigation.
enumeration	Contributor	An entity responsible for making contributions to the content of the resource.
enumeration	DataProducer	An individual who generated the resource and is familiar with its provenance.
enumeration	DeputyPI	An individual who is an administrative or scientific leader for an investigation operating under the supervision of a Principal Investigator.
enumeration	FormerPI	An individual who had served as the administrative and scientific lead for an investigation, but no longer assumes that role.
enumeration	GeneralContact	An individual who can provide information on a range of subjects or who can direct you to a domain expert.
enumeration	MetadataContact	An individual who can affect a change in the metadata describing a resource.
enumeration	PrincipalInvestigator	An individual who is the administrative and scientific lead for an investigation.
enumeration	ProjectScientist	An individual who is an expert in the phenomenon and related physics explored by the project. A project scientist may also have a managerial role within the project.
enumeration	Publisher	An individual, organization, institution or government department responsible for the production and dissemination of a document.
enumeration	Scientist	An individual who is an expert in the phenomenon and related physics represented by the resource.
enumeration	TeamLeader	An individual who is the designated leader of an investigation.
enumeration	TeamMember	An individual who is a major participant in an investigation.
enumeration	TechnicalContact	An individual who can provide specific information with regard to the resource or supporting software

Used by	Element	Role

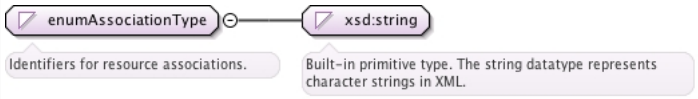
Source

```
<xsd:simpleType name="enumRole">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for the assigned or assumed function or position of
 an individual.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="ArchiveSpecialist">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An individual who is an expert on a collection of resources
 and may also be knowledgeable of the phenomenon and related physics represented by the resources.
 This includes librarians, curators, archive scientists and other experts.</xsd:documentation>
      </xsd:annotation>
```

```
    </xsd:enumeration>
    <xsd:enumeration value="CoInvestigator">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An individual who is a scientific peer and major
 participant in an investigation.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Contributor">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An entity responsible for making contributions to the
 content of the resource.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="DataProducer">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An individual who generated the resource and is familiar
 with its provenance.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="DeputyPI">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An individual who is an administrative or scientific
 leader for an investigation operating under the supervision of a Principal Investigator.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="FormerPI">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An individual who had served as the administrative and
 scientific lead for an investigation, but no longer assumes that role.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="GeneralContact">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An individual who can provide information on a range of
 subjects or who can direct you to a domain expert.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="MetadataContact">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An individual who can affect a change in the metadata
 describing a resource.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="PrincipalInvestigator">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An individual who is the administrative and scientific lead
 for an investigation.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="ProjectScientist">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An individual who is an expert in the phenomenon and
 related physics explored by the project. A project scientist may also have a managerial role within
 the project.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Publisher">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An individual, organization, institution or government
 department responsible for the production and dissemination of a document.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Scientist">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An individual who is an expert in the phenomenon and
 related physics represented by the resource.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="TeamLeader">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An individual who is the designated leader of an
 investigation.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="TeamMember">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An individual who is a major participant in an
 investigation.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="TechnicalContact">
      <xsd:annotation>
```

```
        <xsd:documentation xml:lang="en">An individual who can provide specific information with
 regard to the resource or supporting software</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type enumAssociationType

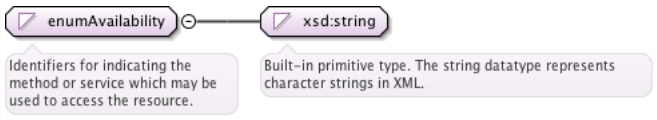
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers for resource associations.
Diagram	
Type	restriction of xsd:string
Facets	enumeration ChildEventOf — A descendant or caused by another resource. enumeration DerivedFrom — A transformed or altered version of a resource instance. enumeration ObservedBy — Detected or originating from another resource. enumeration Other — Not classified with more specific terms. The context of its usage may be described in related text. enumeration PartOf — A portion of a larger resource. enumeration RevisionOf — A modified version of a resource instance.
Used by	Element AssociationType

Source

```
<xsd:simpleType name="enumAssociationType">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for resource associations.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="ChildEventOf">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A descendant or caused by another resource.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="DerivedFrom">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A transformed or altered version of a resource instance.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="ObservedBy">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Detected or originating from another resource.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Other">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Not classified with more specific terms. The context of its
 usage may be described in related text.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="PartOf">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A portion of a larger resource.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="RevisionOf">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A modified version of a resource instance.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type enumAvailability

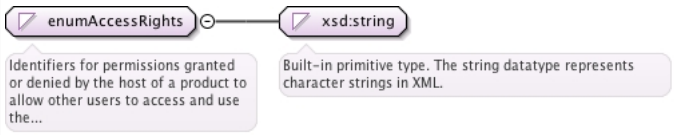
Namespace	http://impex-fp7.oeaw.ac.at

Annotations	Identifiers for indicating the method or service which may be used to access the resource.
Diagram	
Type	restriction of xsd:string
Facets	enumeration Offline — Not directly accessible electronically. This includes resources which may to be moved to an on-line status in response to a given request. enumeration Online — Directly accessible electronically.
Used by	Element Availability

Source

```
<xsd:simpleType name="enumAvailability">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for indicating the method or service which may be
 used to access the resource.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Offline">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Not directly accessible electronically. This includes
 resources which may to be moved to an on-line status in response to a given request.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Online">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Directly accessible electronically.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

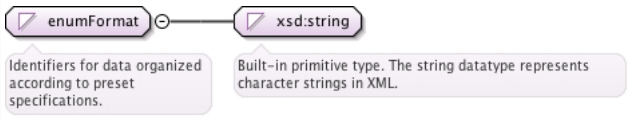
Simple Type enumAccessRights

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers for permissions granted or denied by the host of a product to allow other users to access and use the resource.
Diagram	
Type	restriction of xsd:string
Facets	enumeration Open — Access is granted to everyone. enumeration Restricted — Access to the product is regulated and requires some form of identification.
Used by	Element AccessRights

Source

```
<xsd:simpleType name="enumAccessRights">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for permissions granted or denied by the host of a
 product to allow other users to access and use the resource.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Open">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Access is granted to everyone.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Restricted">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Access to the product is regulated and requires some form
 of identification.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type enumFormat

Namespace	http://impex-fp7.oeaw.ac.at		
Annotations	Identifiers for data organized according to preset specifications.		
Diagram			
Type	restriction of xsd:string		
Facets	enumeration	AVI	Audio Video Interleave (AVI) a digital format for movies that conforms to the Microsoft Windows Resource Interchange File Format (RIFF).
	enumeration	Binary	A direct representation of the bits which may be stored in memory on a computer.
	enumeration	CDF	Common Data Format (CDF). A binary storage format developed at Goddard Space Flight Center (GSFC).
	enumeration	CEF	Cluster Exchange Format (CEF) is a self-documenting ASCII format designed for the exchange of data. There are two versions of CEF which are not totally compatible.
	enumeration	CEF1	Cluster Exchange Format (CEF), version 1, is a self-documenting ASCII format designed for the exchange of data. The metadata contains information compatible with the ISTP recommendations for CDF.
	enumeration	CEF2	Cluster Exchange Format (CEF), version 2, is a self-documenting ASCII format designed for the exchange of data and introduced for Cluster Active Archive. Compared to version 1, the metadata description of vectors and tensors is different.
	enumeration	Excel	A Microsoft spreadsheet format used to hold a variety of data in tables which can include calculations.
	enumeration	FITS	Flexible Image Transport System (FITS) is a digital format primarily designed to store scientific data sets consisting of multi-dimensional arrays (1-D spectra, 2-D images or 3-D data cubes) and 2-dimensional tables containing rows and columns of data.
	enumeration	GIF	Graphic Interchange Format (GIF) first introduced in 1987 by CompuServe. GIF uses LZW compression and images are limited to 256 colours.
	enumeration	HDF	Hierarchical Data Format
	enumeration	HDF4	Hierarchical Data Format, Version 4
	enumeration	HDF5	Hierarchical Data Format, Version 5
	enumeration	HTML	A text file containing structured information represented in the HyperText Mark-up Language (HTML). See <http://www.w3.org/MarkUp/>
	enumeration	Hardcopy	A permanent reproduction, or copy in the form of a physical object, of any media suitable for direct use by a person.
	enumeration	Hardcopy.Film	An image recording medium on which usually a "negative" analog image is registered. A "positive" image can be recovered or reproduced from film, which is usually made of flexible materials for ease of storage and transportation.
	enumeration	Hardcopy.Microfiche	A sheet of microfilm on which many pages of material have been photographed; a magnification system is used to read the material.
	enumeration	Hardcopy.Microfilm	Film rolls on which materials are photographed at greatly reduced size; a magnification system is used to read the material.
	enumeration	Hardcopy.Photograph	An image (positive or negative) registered

		on a piece of photo-sensitive paper
enumeration	Hardcopy.PhotographicPlate	A rigid (typically glass) medium that functions like film. Its rigidity is for guarding against image distortion due to medium deformation (caused by heat and humidity). Photographic plates are often used for astronomical photography.
enumeration	Hardcopy.Print	A sheet of any written or printed material which may include notes or graphics. Multiple printed pages may be bound into a manuscript or book.
enumeration	IDFS	Instrument Data File Set (IDFS) is a set of files written in a prescribed format which contain data, timing data, and meta-data. IDFS was developed at Southwest Research Institute (SwRI).
enumeration	IDL	Interactive Data Language (IDL) save set. IDL is a proprietary format.
enumeration	JPEG	A binary format for still images defined by the Joint Photographic Experts Group
enumeration	MATLAB_4	MATLAB Workspace save set, version 4. MAT-files are double-precision, binary, MATLAB format files. MATLAB is a proprietary product of The MathWorks.
enumeration	MATLAB_6	MATLAB Workspace save set, version 6. MAT-files are double-precision, binary, MATLAB format files. MATLAB is a proprietary product of The MathWorks.
enumeration	MATLAB_7	MATLAB Workspace save set, version 7. MAT-files are double-precision, binary, MATLAB format files. Version 7 includes data compression and Unicode encoding. MATLAB is a proprietary product of The MathWorks.
enumeration	MPEG	A digital format for movies defined by the Motion Picture Experts Group
enumeration	NCAR	The National Center for Atmospheric Research (NCAR) format. A complete description of that standard is given in appendix C of the "Report on Establishment & Operation of the Incoherent-Scatter Data Base", dated August 23, 1984, obtainable from NCAR, P.O. Box 3000 Boulder, Colorado 80307-3000.
enumeration	NetCDF	Unidata Program Center's Network Common Data Form (NetCDF). A self-describing portable data format for array-oriented data access. See <http://my.unidata.ucar.edu/content/software/netcdf>
enumeration	PDF	A document expressed in the Portable Document Format (PDF) as defined by Adobe.
enumeration	PNG	A digital format for still images. Portable Network Graphics (PNG)
enumeration	Postscript	A page description programming language created by Adobe Systems Inc. that is a device-independent industry standard for representing text and graphics.
enumeration	QuickTime	A format for digital movies, as defined by Apple Computer. See <http://developer.apple.com/quicktime/>
enumeration	TIFF	A binary format for still pictures. Tagged Image Format File (TIFF). Originally developed by Aldus and now controlled by Adobe.
enumeration	Text	A sequence of characters which may have an imposed structure or organization.
enumeration	Text.ASCII	A sequence of characters that adheres to American Standard Code for Information Interchange (ASCII) which is an 7-bit character-coding scheme.
enumeration	Text.Unicode	Text in multi-byte Unicode format.
enumeration	UDF	Universal Data Format (UDF). The Optical Technology

			Storage Association's Universal Disk Format, based on ISO 13346. See <http://www.osta.org/specs/index.htm>
	enumeration	VOTable	A proposed IVOA standard designed as a flexible storage and exchange format for tabular data.
	enumeration	XML	eXtensible Mark-up Language (XML). A structured format for representing information. See <http://www.w3.org/XML/>

Used by	Element	Format

Source

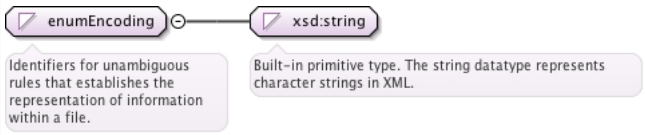
```
<xsd:simpleType name="enumFormat">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for data organized according to preset
 specifications.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="AVI">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Audio Video Interleave (AVI) a digital format for movies
 that conforms to the Microsoft Windows Resource Interchange File Format (RIFF).</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Binary">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A direct representation of the bits which may be stored in
 memory on a computer.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="CDF">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Common Data Format (CDF). A binary storage format developed
 at Goddard Space Flight Center (GSFC).</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="CEF">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Cluster Exchange Format (CEF) is a self-documenting ASCII
 format designed for the exchange of data. There are two versions of CEF which are not totally
 compatible.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="CEF1">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Cluster Exchange Format (CEF), version 1, is a self-
documenting ASCII format designed for the exchange of data. The metadata contains information
 compatible with the ISTP recommendations for CDF.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="CEF2">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Cluster Exchange Format (CEF), version 2, is a self-
documenting ASCII format designed for the exchange of data and introduced for Cluster Active
 Archive. Compared to version 1, the metadata description of vectors and tensors is different.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Excel">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A Microsoft spreadsheet format used to hold a variety of
 data in tables which can include calculations.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="FITS">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Flexible Image Transport System (FITS) is a digital format
 primarily designed to store scientific data sets consisting of multi-dimensional arrays (1-D
 spectra, 2-D images or 3-D data cubes) and 2-dimensional tables containing rows and columns of
 data.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="GIF">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Graphic Interchange Format (GIF) first introduced in 1987
 by CompuServe. GIF uses LZW compression and images are limited to 256 colours.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="HDF">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Hierarchical Data Format</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
```

```
    <xsd:enumeration value="HDF4">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Hierarchical Data Format, Version 4</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="HDF5">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Hierarchical Data Format, Version 5</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="HTML">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A text file containing structured information represented
 in the HyperText Mark-up Language (HTML). See <http://www.w3.org/MarkUp/></xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Hardcopy">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A permanent reproduction, or copy in the form of a physical
 object, of any media suitable for direct use by a person.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Hardcopy.Film">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An image recording medium on which usually a "negative"
 analog image is registered. A "positive" image can be recovered or reproduced from film, which is
 usually made of flexible materials for ease of storage and transportation.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Hardcopy.Microfiche">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A sheet of microfilm on which many pages of material have
 been photographed; a magnification system is used to read the material.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Hardcopy.Microfilm">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Film rolls on which materials are photographed at greatly
 reduced size; a magnification system is used to read the material.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Hardcopy.Photograph">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An image (positive or negative) registered on a piece of
 photo-sensitive paper</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Hardcopy.PhotographicPlate">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A rigid (typically glass) medium that functions like film.
 Its rigidity is for guarding against image distortion due to medium deformation (caused by heat and
 humidity). Photographic plates are often used for astronomical photography.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Hardcopy.Print">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A sheet of any written or printed material which may
 include notes or graphics. Multiple printed pages may be bound into a manuscript or book.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="IDFS">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Instrument Data File Set (IDFS) is a set of files written
 in a prescribed format which contain data, timing data, and meta-data. IDFS was developed at
 Southwest Research Institute (SwRI).</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="IDL">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Interactive Data Language (IDL) save set. IDL is a
 proprietary format.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="JPEG">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A binary format for still images defined by the Joint
 Photographic Experts Group</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="MATLAB_4">
      <xsd:annotation>
```

```
        <xsd:documentation xml:lang="en">MATLAB Workspace save set, version 4. MAT-files are
 double-precision, binary, MATLAB format files. MATLAB is a proprietary product of The MathWorks.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="MATLAB_6">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">MATLAB Workspace save set, version 6. MAT-files are
 double-precision, binary, MATLAB format files. MATLAB is a proprietary product of The MathWorks.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="MATLAB_7">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">MATLAB Workspace save set, version 7. MAT-files are double-
precision, binary, MATLAB format files. Version 7 includes data compression and Unicode encoding.
 MATLAB is a proprietary product of The MathWorks.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="MPEG">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A digital format for movies defined by the Motion Picture
 Experts Group</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="NCAR">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The National Center for Atmospheric Research (NCAR) format.
 A complete description of that standard is given in appendix C of the "Report on Establishment &
 Operation of the Incoherent- Scatter Data Base", dated August 23, 1984, obtainable from NCAR, P.O.
 Box 3000 Boulder, Colorado 80307-3000.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="NetCDF">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Unidata Program Center's Network Common Data Form
 (NetCDF). A self-describing portable data format for array-oriented data access. See <http://
my.unidata.ucar.edu/content/software/netcdf></xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="PDF">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A document expressed in the Portable Document Format (PDF)
 as defined by Adobe.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="PNG">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A digital format for still images. Portable Network
 Graphics (PNG)</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Postscript">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A page description programming language created by Adobe
 Systems Inc. that is a device-independent industry standard for representing text and graphics.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="QuickTime">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A format for digital movies, as defined by Apple Computer.
 See <http://developer.apple.com/quicktime/></xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="TIFF">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A binary format for still pictures. Tagged Image Format
 File (TIFF). Originally developed by Aldus and now controlled by Adobe.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Text">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A sequence of characters which may have an imposed
 structure or organization.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Text.ASCII">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A sequence of characters that adheres to American
 Standard Code for Information Interchange (ASCII) which is an 7-bit character-coding scheme.</
xsd:documentation>
      </xsd:annotation>
```

```
    </xsd:enumeration>
    <xsd:enumeration value="Text.Unicode">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Text in multi-byte Unicode format.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="UDF">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Universal Data Format (UDF). The Optical Technology
 Storage Association's Universal Disk Format, based on ISO 13346. See <http://www.osta.org/specs/
index.htm></xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="VOTable">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A proposed IVOA standard designed as a flexible storage and
 exchange format for tabular data.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="XML">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">eXtensible Mark-up Language (XML). A structured format for
 representing information. See <http://www.w3.org/XML/></xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type enumEncoding

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers for unambiguous rules that establishes the representation of information within a file.
Diagram	
Type	restriction of xsd:string

Facets

enumeration	ASCII	A sequence of characters that adheres to American Standard Code for Information Interchange (ASCII) which is an 7-bit character-coding scheme.
enumeration	BZIP2	An open standard algorithm by Julian Seward using Burrows-Wheeler block sorting and Huffman coding. See <http://www.bzip.org/>
enumeration	Base64	A data encoding scheme whereby binary-encoded data is converted to printable ASCII characters. It is defined as a MIME content transfer encoding for use in Internet e-mail. The only characters used are the upper- and lower-case Roman alphabet characters (A-Z, a-z), the numerals (0-9), and the "+" and "/" symbols, with the "=" symbol as a special suffix (padding) code.
enumeration	GZIP	An open standard algorithm distributed by GHU based on LZ77 and Huffman coding. See <http://www.gnu.org/software/gzip/gzip.html> or <http://www.gzip.org/>
enumeration	None	A lack or absence of anything.
enumeration	S3_BUCKET	A container of objects that comply with the Amazon Simple Storage Service (S3) specifications. A bucket has a unique, user-assigned key (name). A bucket can contain any number of objects with an aggregate size of 5 gigabytes. A bucket may be accompanied by up to 2 kilobytes of metadata.
enumeration	TAR	A file format used to collate collections of files into one larger file, for distribution or archiving, while preserving file system information such as user and group permissions, dates, and directory structures. The format was standardized by POSIX.1-1988 and later POSIX.1-2001.

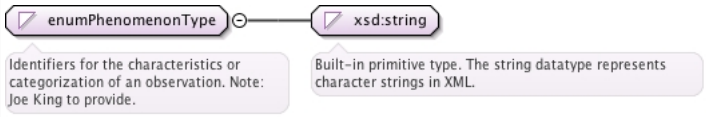
	enumeration	Unicode	Text in multi-byte Unicode format.
	enumeration	ZIP	An open standard for compression which is a variation of the LZW method and was originally used in the PKZIP utility.
Used by	Element	Encoding	

Source

```
<xsd:simpleType name="enumEncoding">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for unambiguous rules that establishes the
 representation of information within a file.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="ASCII">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A sequence of characters that adheres to American
 Standard Code for Information Interchange (ASCII) which is an 7-bit character-coding scheme.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="BZIP2">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An open standard algorithm by Julian Seward using Burrows-
Wheeler block sorting and Huffman coding. See <http://www.bzip.org/></xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Base64">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A data encoding scheme whereby binary-encoded data is
 converted to printable ASCII characters. It is defined as a MIME content transfer encoding for
 use in Internet e-mail. The only characters used are the upper- and lower-case Roman alphabet
 characters (A-Z, a-z), the numerals (0-9), and the "+" and "/" symbols, with the "=" symbol as a
 special suffix (padding) code.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="GZIP">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An open standard algorithm distributed by GHU based on LZ77
 and Huffman coding. See <http://www.gnu.org/software/gzip/gzip.html> or <http://www.gzip.org/></
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="None">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A lack or absence of anything.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="S3_BUCKET">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A container of objects that comply with the Amazon Simple
 Storage Service (S3) specifications. A bucket has a unique, user-assigned key (name). A bucket can
 contain any number of objects with an aggregate size of 5 gigabytes. A bucket may be accompanied by
 up to 2 kilobytes of metadata.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="TAR">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A file format used to collate collections of files into one
 larger file, for distribution or archiving, while preserving file system information such as user
 and group permissions, dates, and directory structures. The format was standardized by POSIX.1-1988
 and later POSIX.1-2001.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Unicode">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Text in multi-byte Unicode format.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="ZIP">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An open standard for compression which is a variation of
 the LZW method and was originally used in the PKZIP utility.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type enumPhenomenonType

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers for the characteristics or categorization

	of an observation. Note: Joe King to provide.
Diagram	
Type	restriction of xsd:string
Facets	enumeration ActiveRegion — A localized, transient volume of the solar atmosphere in which PLAGEs, SUNSPOTS, FACULAe, FLAREs, etc. may be observed. enumeration Aurora — An atmospheric phenomenon consisting of bands of light caused by charged solar particles following the earth's magnetic lines of force. enumeration BowShockCrossing — A crossing of the boundary between the undisturbed (except for foreshock effects) solar wind and the shocked, decelerated solar wind of the magnetosheath. enumeration CoronalHole — An extended region of the corona, exceptionally low in density and associated with unipolar photospheric regions. A coronal hole can be an "open" magnetic field in the corona and (perhaps) inner heliosphere which has a faster than average outflow (wind); A region of lower than "quiet" ion and electron density in the corona; or a region of lower peak electron temperature in the corona than in the "quiet" corona. enumeration CoronalMassEjection — A solar event (CME) that involves a burst of plasma ejected into the interplanetary medium. CME's may be observed remotely relatively near the sun or in situ in the interplanetary medium. The latter type of observations are often referred to as Interplanetary CME's (ICME's). enumeration EITWave — A wave in the corona of the Sun which produce shock waves on the Sun's chromosphere (Moreton Waves). EIT Waves are produced by large solar flare and expand outward at about 1,000 km/s. It usually appears as a slowly moving diffuse arc of brightening in H-alpha, and may travel for several hundred thousand km. enumeration EnergeticSolarParticleEvent — An enhancement of interplanetary fluxes of energetic ions accelerated by interplanetary shocks and/or solar flares. enumeration ForbushDecrease — A rapid decrease in the observed galactic cosmic ray intensity following the passage of an outwardly convecting interplanetary magnetic field disturbance, such as those associated with large CME's, that sweep some galactic cosmic rays away from Earth. enumeration GeomagneticStorm — A magnetospheric disturbance typically defined by variations in the horizontal component of the Earth's surface magnetic field. The variation typically starts with a field enhancement associated with a solar wind pressure pulse and continues with a field depression associated with an enhancement of the diamagnetic magnetospheric ring current. enumeration InterplanetaryShock — A shock propagating generally anti-sunward through the slower solar wind, often seen in front of CME-associated plasma clouds. enumeration MagneticCloud — A transient event observed in the solar wind characterized as a region of enhanced magnetic field strength, smooth rotation of the magnetic field vector and low proton density and temperature. enumeration MagnetopauseCrossing — A crossing of the interface between the shocked solar wind in the magnetosheath and the magnetic field and plasma in the magnetosphere. enumeration RadioBurst — Emissions of the sun in radio wavelengths from centimeters to dekameters, under both

			quiet and disturbed conditions. Radio Bursts can be "Type I" consisting of many short, narrow-band bursts in the metric range (300 - 50 MHz).; "Type II" consisting of narrow-band emission that begins in the meter range (300 MHz) and sweeps slowly (tens of minutes) toward dekameter wavelengths (10 MHz).; "Type III" consisting of narrow-band bursts that sweep rapidly (seconds) from decimeter to dekameter wavelengths (500 - 0.5 MHz); and "Type IV" consisting of a smooth continuum of broad-band bursts primarily in the meter range (300 - 30 MHz).
	enumeration	SectorBoundaryCrossing	A sector boundary crossing is a transit by a spacecraft across the heliospheric current sheet separating the dominantly outward (away-from-the-sun) interplanetary magnetic field of one hemisphere of the heliosphere from the dominantly inward (toward-the-sun) polarity of the other hemisphere. Such crossings have multi-day intervals of opposite IMF dominant polarities on either side.
	enumeration	SolarFlare	An explosive event in the Sun's atmosphere which produces electromagnetic radiation across the electromagnetic spectrum at multiple wavelengths from long-wave radio to the shortest wavelength gamma rays.
	enumeration	SolarWindExtreme	Intervals of unusually large or small values of solar wind attributes such as flow speed and ion density.
	enumeration	StreamInteractionRegion	The region (SIR) where two solar wind streams, typically having differing characteristics and solar sources, abut up against (and possibly partially interpenetrate) each other.
	enumeration	Substorm	A process by which plasma in the magnetotail becomes energized at a fast rate.
Used by	Element	PhenomenonType	

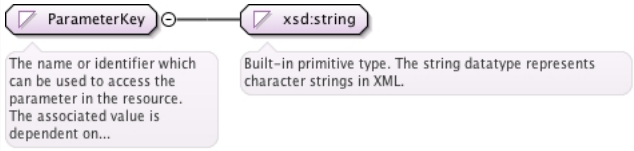
Source

```
<xsd:simpleType name="enumPhenomenonType">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for the characteristics or categorization of an
 observation. Note: Joe King to provide.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="ActiveRegion">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A localized, transient volume of the solar atmosphere in
 which PLAGEs, SUNSPOTS, FACULAe, FLAREs, etc. may be observed.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Aurora">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An atmospheric phenomenon consisting of bands of
 light caused by charged solar particles following the earth's magnetic lines of force.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="BowShockCrossing">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A crossing of the boundary between the undisturbed (except
 for foreshock effects) solar wind and the shocked, decelerated solar wind of the magnetosheath.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="CoronalHole">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An extended region of the corona, exceptionally low in
 density and associated with unipolar photospheric regions. A coronal hole can be an "open" magnetic
 field in the corona and (perhaps) inner heliosphere which has a faster than average outflow (wind);
 A region of lower than "quiet" ion and electron density in the corona; or a region of lower peak
 electron temperature in the corona than in the "quiet" corona.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="CoronalMassEjection">
      <xsd:annotation>
```

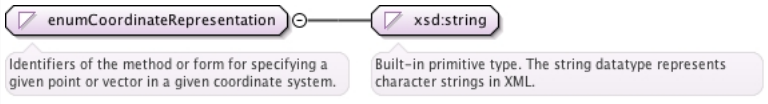
```
        <xsd:documentation xml:lang="en">A solar event (CME) that involves a burst of plasma
 ejected into the interplanetary medium. CME's may be observed remotely relatively near the sun
 or in situ in the interplanetary medium. The latter type of observations are often referred to as
 Interplanetary CME's (ICME's).</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="EITWave">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A wave in the corona of the Sun which produce shock waves
 on the Sun's chromosphere (Moreton Waves). EIT Waves are produced by large solar flare and expand
 outward at about 1,000 km/s. It usually appears as a slowly moving diffuse arc of brightening in H-
alpha, and may travel for several hundred thousand km.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="EnergeticSolarParticleEvent">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An enhancement of interplanetary fluxes of energetic ions
 accelerated by interplanetary shocks and/or solar flares.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="ForbushDecrease">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A rapid decrease in the observed galactic cosmic
 ray intensity following the passage of an outwardly convecting interplanetary magnetic field
 disturbance, such as those associated with large CME's, that sweep some galactic cosmic rays away
 from Earth.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="GeomagneticStorm">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A magnetospheric disturbance typically defined by
 variations in the horizontal component of the Earth's surface magnetic field. The variation
 typically starts with a field enhancement associated with a solar wind pressure pulse and continues
 with a field depression associated with an enhancement of the diamagnetic magnetospheric ring
 current.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="InterplanetaryShock">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A shock propagating generally anti-sunward through the
 slower solar wind, often seen in front of CME-associated plasma clouds.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="MagneticCloud">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A transient event observed in the solar wind characterized
 as a region of enhanced magnetic field strength, smooth rotation of the magnetic field vector and
 low proton density and temperature.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="MagnetopauseCrossing">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A crossing of the interface between the shocked solar wind
 in the magnetosheath and the magnetic field and plasma in the magnetosphere.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="RadioBurst">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Emissions of the sun in radio wavelengths from centimeters
 to dekameters, under both quiet and disturbed conditions. Radio Bursts can be "Type I" consisting
 of many short, narrow-band bursts in the metric range (300 - 50 MHz).; "Type II" consisting
 of narrow-band emission that begins in the meter range (300 MHz) and sweeps slowly (tens of
 minutes) toward dekameter wavelengths (10 MHz).; "Type III" consisting of narrow-band bursts
 that sweep rapidly (seconds) from decimeter to dekameter wavelengths (500 - 0.5 MHz); and "Type
 IV" consisting of a smooth continuum of broad-band bursts primarily in the meter range (300 - 30
 MHz).</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="SectorBoundaryCrossing">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A sector boundary crossing is a transit by a spacecraft
 across the heliospheric current sheet separating the dominantly outward (away-from-the-sun)
 interplanetary magnetic field of one hemisphere of the heliosphere from the dominantly inward
 (toward-the-sun) polarity of the other hemisphere. Such crossings have multi-day intervals of
 opposite IMF dominant polarities on either side.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="SolarFlare">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An explosive event in the Sun's atmosphere which produces
 electromagnetic radiation across the electromagnetic spectrum at multiple wavelengths from long-
wave radio to the shortest wavelength gamma rays.</xsd:documentation>
      </xsd:annotation>
```

```
    </xsd:enumeration>
    <xsd:enumeration value="SolarWindExtreme">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Intervals of unusually large or small values of solar wind
 attributes such as flow speed and ion density.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="StreamInteractionRegion">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region (SIR) where two solar wind streams, typically
 having differing characteristics and solar sources, abut up against (and possibly partially
 interpenetrate) each other.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Substorm">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A process by which plasma in the magnetotail becomes
 energized at a fast rate.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type `ParameterKey`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	The name or identifier which can be used to access the parameter in the resource. The associated value is dependent on the service used to access the resource. For columnar ASCII data, use "Column_X" for a single-element parameter and "Column_X-Column_Y" for a multi-element parameter, where X and Y are the relevant column index. The first column index is 1.
Diagram	
Type	xsd:string
Used by	Element ParameterKey
Source	`<xsd:simpleType name="ParameterKey">` `  <xsd:annotation>` ` <xsd:documentation xml:lang="en">The name or identifier which can be used to access the parameter in the resource. The associated value is dependent on the service used to access the resource. For columnar ASCII data, use "Column_X" for a single-element parameter and "Column_X-Column_Y" for a multi-element parameter, where X and Y are the relevant column index. The first column index is 1.</xsd:documentation>` ` </xsd:annotation>` ` <xsd:restriction base="xsd:string"/>` `</xsd:simpleType>`

Simple Type `enumCoordinateRepresentation`

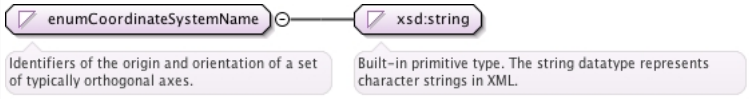
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers of the method or form for specifying a given point or vector in a given coordinate system.
Diagram	
Type	restriction of xsd:string
Facets	enumeration `Cartesian` — A representation in which a position vector or a measured vector (e.g., field or flow) is specified by its components along the base axes of the coordinate system. enumeration `Cylindrical` — A coordinate representation of a position vector or measured vector (field or flow) by its k-component, the magnitude of its projection

			into the i-j plane, and the azimuthal angle of the i-j plane projection.
	enumeration	Spherical	A coordinate representation of a position vector or of a measured vector by its magnitude and two direction angles. The angles are relative to the base axes of the coordinate system used. Typically the angles are phi [azimuth angle, =arctan (j/i)] and theta, where theta may be a polar angle, arctan {[SQRT(i^2+j^2)]/k}, or an elevation angle, arctan [k/SQRT (i^2+j^2)].
Used by	Element	CoordinateRepresentation	

Source

```
<xsd:simpleType name="enumCoordinateRepresentation">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers of the method or form for specifying a given point
 or vector in a given coordinate system.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Cartesian">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A representation in which a position vector or a measured
 vector (e.g., field or flow) is specified by its components along the base axes of the coordinate
 system.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Cylindrical">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A coordinate representation of a position vector or
 measured vector (field or flow) by its k-component, the magnitude of its projection into the i-j
 plane, and the azimuthal angle of the i-j plane projection.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Spherical">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A coordinate representation of a position vector or of
 a measured vector by its magnitude and two direction angles. The angles are relative to the base
 axes of the coordinate system used. Typically the angles are phi [azimuth angle, =arctan (j/i)] and
 theta, where theta may be a polar angle, arctan {[SQRT(i^2+j^2)]/k}, or an elevation angle, arctan
 [k/SQRT (i^2+j^2)].</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type enumCoordinateSystemName

Namespace	http://impex-fp7.oeaw.ac.at		
Annotations	Identifiers of the origin and orientation of a set of typically orthogonal axes.		
Diagram			
Type	restriction of xsd:string		
Facets	enumeration	CGM	Corrected Geomagnetic - A coordinate system from a spatial point with GEO radial distance and geomagnetic latitude and longitude, follow the epoch-appropriate IGRF/DGRF model field vector through to the point where the field line crosses the geomagnetic dipole equatorial plane. Then trace the dipole magnetic field vector Earthward from that point on the equatorial plane, in the same hemisphere as the original point, until the initial radial distance is reached. Designate the dipole latitude and longitude at that point as the CGM latitude and longitude of the original point. See <http://nssdc.gsfc.nasa.gov/space/cgm/cgmm_des.html>
	enumeration	Carrington	A coordinate system which is centered at the Sun and is "fixed" with respect to the synodic rotation rate; the mean synodic value is about 27.2753 days. The Astronomical Almanac gives a value for Carrington longitude of 349.03 degrees at 0000 UT on 1 January 1995.
	enumeration	CSO	A generic body-Centered Solar Orbital (CSO) frame

		related to comets and asteroids. The frame is defined as a two-vector style dynamic frame as follows: The position of the sun relative to the body is the primary vector: the X axis points from the body to the sun. The inertially referenced velocity of the sun relative to the body is the secondary vector: the Y axis is the component of this velocity vector orthogonal to the X axis. The Z axis is X cross Y, completing the right-handed reference frame. All vectors are geometric: no aberration corrections are used.
enumeration	DM	Dipole Meridian - A coordinate system centered at the observation point. Z axis is parallel to the Earth's dipole axis, positive northward. X is in the plane defined by Z and the line linking the observation point with the Earth's center. Y is positive eastward. See <http://cdpp.cnes.fr/00428.pdf>
enumeration	GEI	Geocentric Equatorial Inertial - A coordinate system where the Z axis is along Earth's spin vector, positive northward. X axis points towards the first point of Aries (from the Earth towards the Sun at the vernal equinox). See Russell, 1971
enumeration	GEO	Geographic - geocentric corotating - A coordinate system where the Z axis is along Earth's spin vector, positive northward. X axis lies in Greenwich meridian, positive towards Greenwich. See Russell, 1971.
enumeration	GPHIO	In this Cartesian coordinate system, X is along the flow direction, Y is along the Ganymede–Jupiter vector, and Z is along the spin axis. These coordinates are analogous to the earth-centered GSE coordinates that relate to the direction of flow of the solar wind onto Earth’s environment.
enumeration	GSE	Geocentric Solar Ecliptic - A coordinate system where the X axis is from Earth to Sun. Z axis is normal to the ecliptic, positive northward. See Russell, 1971.
enumeration	GSEQ	Geocentric Solar Equatorial - A coordinate system where the X axis is from Earth to Sun. Y axis is parallel to solar equatorial plane. Z axis is positive northward. See Russell, 1971
enumeration	GSM	Geocentric Solar Magnetospheric - A coordinate system where the X axis is from Earth to Sun, Z axis is northward in a plane containing the X axis and the geomagnetic dipole axis. See Russell, 1971
enumeration	HAE	Heliocentric Aries Ecliptic - A coordinate system where the Z axis is normal to the ecliptic plane, positive northward. X axis is positive towards the first point of Aries (from Earth to Sun at vernal equinox). Same as SE below. See Hapgood, 1992.
enumeration	HCC	Heliocentric Cartesian - A 3-D orthonormal coordinate system that is primarily intended to specify with two dimensions a point on the solar disk. The Z axis points toward the observer. The Y axis lies in the plane defined by the solar spin vector and the Z axis, positive northward. The X axis is perpendicular to the Y and Z axes, positive toward solar west. Standard representation for this system is via the point's x and y values, expressed either as physical distances or as fractions of the solar disk radius.
enumeration	HCI	Heliographic Carrington Inertial.
enumeration	HCR	Heliocentric Radial - A 3-D orthonormal coordinate

		system that is primarily intended to specify with two dimensions a point on the solar disk. The Z axis points toward the observer. The Y axis lies in the plane defined by the solar spin vector and the Z axis, positive northward. The X axis is perpendicular to the Y and Z axes, positive toward solar west. Standard representation for this system is via the point's distance rho from the Z axis [Rho = SQRT(x**2 + y**2)] and its phase angle psi measured counterclockwise from the +Y axis [psi = arctan (-y/x)]
enumeration	HEE	Heliocentric Earth Ecliptic - A coordinate system where the Z axis is normal to the ecliptic plane, positive northward. X axis points from Sun to Earth. See Hapgood, 1992
enumeration	HEEQ	Heliocentric Earth Equatorial - A coordinate system where the Z axis is normal to the solar equatorial plane, positive northward. X axis is generally Earthward in the plane defined by the Z axis and the Sun-Earth direction. See Hapgood, 1992.
enumeration	HG	Heliographic - A heliocentric rotating coordinate system where the Z axis is normal to the solar equatorial plane, positive northward. X, Y axes rotate with a 25.38 day period. The zero longitude (X axis) is defined as the longitude that passed through the ascending node of the solar equator on the ecliptic plane on 1 January, 1854 at 12 UT. See <http://nssdc.gsfc.nasa.gov/space/helios/coor_des.html>
enumeration	HGI	Heliographic Inertial - A heliocentric coordinate system where the Z axis is normal to the solar equatorial plane, positive northward. X axis is along the intersection line between solar equatorial and ecliptic planes. The X axis was positive at SE longitude of 74.367 deg on Jan 1, 1900. (See SE below.) See <http://nssdc.gsfc.nasa.gov/space/helios/coor_des.html>
enumeration	HPC	Helioprojective Cartesian = A 3-D orthonormal (left-handed) coordinate system that is primarily intended to specify with two dimensions a point on the solar disk. The Z axis points from the observer to the center of the solar disk. The Y axis lies in the plane defined by the solar spin vector and the Z axis, positive northward. The X axis is perpendicular to the Y and Z axes, positive toward solar west. Given as the distance between the observer and the center of the solar disk, the standard representation of an (x,y) point on the solar disk is via the point's longitude angle [arctan (x/d)] and latitude angle [arctan y/d].
enumeration	HPR	Helioprojective Radial - A 3-D orthonormal (left-handed) coordinate system that is primarily intended to specify with two dimensions a point on the solar disk. The Z axis points from the observer to the center of the solar disk. The Y axis lies in the plane defined by the solar spin vector and the Z axis, positive northward. The X axis is perpendicular to the Y and Z axes, positive toward solar west. Given as the distance between the observer and the center of the solar disk, the standard representation for this system of an (x,y) point on the solar disk is via the point's latitude angle theta {= arctan [SQRT(x**2 + y**2)]/d]} or equivalent declination parameter delta (= theta - 90 deg), and its phase angle psi as measured counter- clockwise from the +Y axis [psi = arctan (-y/x)].
enumeration	HSM	TBD
enumeration	J2000	An astronomical coordinate system which uses the mean equator and equinox of Julian date 2451545.0 TT (Terrestrial Time), or January 1, 2000, noon TT. (aka J2000) to define a celestial reference frame.

enumeration	JSM	Jovian Solar Magnetospheric - A coordinate system where the X axis is from Jupiter to Sun, Z axis is northward in a plane containing the X axis and the Jovian dipole axis.
enumeration	JSO	Coordinate Sytem Related to Jupiter Jovian Solar Orbital (X anti-sunward, Y along the orbital velocity direction)
enumeration	KSM	Kronian Solar Magnetospheric - A coordinate system where the X axis is from Saturn to Sun, Z axis is northward in a plane containing the X axis and the Kronian dipole axis.
enumeration	KSO	Coordinate Sytem Related to Saturn Kronian Solar Orbital (X anti-sunward, Y along the orbital velocity direction)
enumeration	LGM	Local Geomagnetic - A coordinate system used mainly for Earth surface or near Earth surface magnetic field data. X axis northward from observation point in a geographic meridian. Z axis downward towards Earth's center. In this system, H (total horizontal component) = SQRT (Bx^2 + By^2) and D (declination angle) = arctan (By/Bx)
enumeration	MAG	Geomagnetic - geocentric. Z axis is parallel to the geomagnetic dipole axis, positive north. X is in the plane defined by the Z axis and the Earth's rotation axis. If N is a unit vector from the Earth's center to the north geographic pole, the signs of the X and Y axes are given by Y = N x Z, X = Y x Z.. See Russell, 1971, and <http:// cdpp.cnes.fr/00428.pdf>
enumeration	MFA	Magnetic Field Aligned - A coordinate system spacecraft-centered system with Z in the direction of the ambient magnetic field vector. X is in the plane defined by Z and the spacecraft-Sun line, positive sunward. See <http:// cdpp.cnes.fr/00428.pdf>
enumeration	MSO	Mars or Mercury Solar Orbital coordinate system. The X axis points from the center of the planet to the Sun; the Z axis is perpendicular to the orbital plane of the planet and parallel to the angular momentum vector. The Y axis completes the right-handed coordinate system.
enumeration	RTN	Radial Tangential Normal. Typically centered at a spacecraft. Used for IMF and plasma V vectors. R (radial) axis is radially away from the Sun, T (tangential) axis is normal to the plane formed by R and the Sun's spin vector, positive in the direction of planetary motion. N (normal) is R x T.
enumeration	SC	Spacecraft - A coordinate system defined by the spacecraft geometry and/or spin. Often has Z axis parallel to spacecraft spin vector. X and Y axes may or may not corotate with the spacecraft. See SR and SR2 below.
enumeration	SE	Solar Ecliptic - A heliocentric coordinate system where the Z axis is normal to the ecliptic plane, positive northward. X axis is positive towards the first point of Aries (from Earth to Sun at vernal equinox). Same as HAE above. See <http://nssdc.gsfc.nasa.gov/space/helios/ coor_des.html>
enumeration	SM	Solar Magnetic - A geocentric coordinate system where the Z axis is northward along Earth's dipole axis, X axis is in plane of z axis and Earth-Sun line, positive sunward. See Russell, 1971.
enumeration	SR	Spin Reference - A special case of a Spacecraft (SC) coordinate system for a spinning spacecraft. Z is parallel to the spacecraft spin vector. X and Y rotate with the spacecraft. See <http:// cdpp.cnes.fr/00428.pdf>

	enumeration	SR2	Spin Reference 2 - A special case of a Spacecraft (SC) coordinate system for a spinning spacecraft. Z is parallel to the spacecraft spin vector. X is in the plane defined by Z and the spacecraft-Sun line, positive sunward. See <http://cdpp.cnes.fr/00428.pdf>
	enumeration	SSE	Spacecraft Solar Ecliptic - A coordinate system used for deep space spacecraft, for example Helios. - X axis from spacecraft to Sun. Z axis normal to ecliptic plane, positive northward. Note: Angle between normals to ecliptic and to Helios orbit plane ~ 0.25 deg.
	enumeration	SSE_L	Selenocentric Solar Ecliptic. The X axis points from the center of the Earth's moon to the sun, the Z axis is normal to the ecliptic plane, positive northward. And the Y axis completes the right-handed set of axes.
	enumeration	SpacecraftOrbitPlane	A coordinate system where X lies in the plane normal to and in the direction of motion of the spacecraft, Z is normal to this plane and Y completes the triad in a right-handed coordinate system.
	enumeration	TIIS	In this Cartesian coordinate system, X is along the flow direction, Y is along the Titan–Saturn vector, and Z is along the spin axis. These coordinates are analogous to the earth-centered GSE coordinates that relate to the direction of flow of the solar wind onto Earth’s environment.
	enumeration	VSO	Venus Solar Orbital coordinate system. The X axis points from the center of the planet to the Sun; The Z axis is perpendicular to the orbital plane of the planet and parallel to the angular momentum vector. The Y axis completes the right-handed coordinate system.
	enumeration	WGS84	The World Geodetic System (WGS) defines a reference frame for the earth, for use in geodesy and navigation. The WGS84 uses the zero meridian as defined by the Bureau International de l'Heure.
Used by	Element	CoordinateSystemName	

Source

```
<xsd:simpleType name="enumCoordinateSystemName">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers of the origin and orientation of a set of typically
 orthogonal axes.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="CGM">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Corrected Geomagnetic - A coordinate system from a spatial
 point with GEO radial distance and geomagnetic latitude and longitude, follow the epoch-appropriate
 IGRF/DGRF model field vector through to the point where the field line crosses the geomagnetic
 dipole equatorial plane. Then trace the dipole magnetic field vector Earthward from that point
 on the equatorial plane, in the same hemisphere as the original point, until the initial radial
 distance is reached. Designate the dipole latitude and longitude at that point as the CGM latitude
 and longitude of the original point. See <http://nssdc.gsfc.nasa.gov/space/cgm/cgmm_des.html></
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Carrington">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A coordinate system which is centered at the Sun and is
 "fixed" with respect to the synodic rotation rate; the mean synodic value is about 27.2753 days.
 The Astronomical Almanac gives a value for Carrington longitude of 349.03 degrees at 0000 UT on 1
 January 1995.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="CSO">
      <xsd:annotation>
```

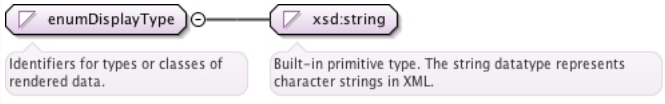
```
        <xsd:documentation xml:lang="en">A generic body-Centered Solar Orbital (CSO) frame related
 to comets and asteroids. The frame is defined as a two-vector style dynamic frame as follows: The
 position of the sun relative to the body is the primary vector: the X axis points from the body
 to the sun. The inertially referenced velocity of the sun relative to the body is the secondary
 vector: the Y axis is the component of this velocity vector orthogonal to the X axis. The Z axis
 is X cross Y, completing the right-handed reference frame. All vectors are geometric: no aberration
 corrections are used.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="DM">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Dipole Meridian - A coordinate system centered at the
 observation point. Z axis is parallel to the Earth's dipole axis, positive northward. X is in
 the plane defined by Z and the line linking the observation point with the Earth's center. Y is
 positive eastward. See <http://cdpp.cnes.fr/00428.pdf></xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="GEI">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Geocentric Equatorial Inertial - A coordinate system
 where the Z axis is along Earth's spin vector, positive northward. X axis points towards the
 first point of Aries (from the Earth towards the Sun at the vernal equinox). See Russell, 1971</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="GEO">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Geographic - geocentric corotating - A coordinate system
 where the Z axis is along Earth's spin vector, positive northward. X axis lies in Greenwich
 meridian, positive towards Greenwich. See Russell, 1971.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="GPHIO">
      <xsd:annotation>
        <xsd:documentation>In this Cartesian coordinate system, X is along the flow direction, Y is
 along the Ganymede–Jupiter vector, and Z is along the spin axis. These coordinates are analogous
 to the earth-centered GSE coordinates that relate to the direction of flow of the solar wind onto
 Earth’s environment.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="GSE">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Geocentric Solar Ecliptic - A coordinate system where the
 X axis is from Earth to Sun. Z axis is normal to the ecliptic, positive northward. See Russell,
 1971.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="GSEQ">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Geocentric Solar Equatorial - A coordinate system where
 the X axis is from Earth to Sun. Y axis is parallel to solar equatorial plane. Z axis is positive
 northward. See Russell, 1971</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="GSM">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Geocentric Solar Magnetospheric - A coordinate system
 where the X axis is from Earth to Sun, Z axis is northward in a plane containing the X axis and the
 geomagnetic dipole axis. See Russell, 1971</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="HAE">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Heliocentric Aries Ecliptic - A coordinate system where
 the Z axis is normal to the ecliptic plane, positive northward. X axis is positive towards the
 first point of Aries (from Earth to Sun at vernal equinox). Same as SE below. See Hapgood, 1992.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="HCC">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Heliocentric Cartesian - A 3-D orthonormal coordinate
 system that is primarily intended to specify with two dimensions a point on the solar disk. The Z
 axis points toward the observer. The Y axis lies in the plane defined by the solar spin vector and
 the Z axis, positive northward. The X axis is perpendicular to the Y and Z axes, positive toward
 solar west. Standard representation for this system is via the point's x and y values, expressed
 either as physical distances or as fractions of the solar disk radius.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="HCI">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Heliographic Carrington Inertial.</xsd:documentation>
      </xsd:annotation>
```

```
    </xsd:enumeration>
    <xsd:enumeration value="HCR">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Heliocentric Radial - A 3-D orthonormal coordinate system
 that is primarily intended to specify with two dimensions a point on the solar disk. The Z axis
 points toward the observer. The Y axis lies in the plane defined by the solar spin vector and the
 Z axis, positive northward. The X axis is perpendicular to the Y and Z axes, positive toward solar
 west. Standard representation for this system is via the point's distance rho from the Z axis [Rho
 = SQRT(x**2 + y**2)] and its phase angle psi measured counterclockwise from the +Y axis [psi =
 arctan (-y/x)]</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="HEE">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Heliocentric Earth Ecliptic - A coordinate system where the
 Z axis is normal to the ecliptic plane, positive northward. X axis points from Sun to Earth. See
 Hapgood, 1992</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="HEEQ">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Heliocentric Earth Equatorial - A coordinate system
 where the Z axis is normal to the solar equatorial plane, positive northward. X axis is generally
 Earthward in the plane defined by the Z axis and the Sun-Earth direction. See Hapgood, 1992.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="HG">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Heliographic - A heliocentric rotating coordinate system
 where the Z axis is normal to the solar equatorial plane, positive northward. X, Y axes rotate with
 a 25.38 day period. The zero longitude (X axis) is defined as the longitude that passed through the
 ascending node of the solar equator on the ecliptic plane on 1 January, 1854 at 12 UT. See <http://
nssdc.gsfc.nasa.gov/space/helios/coor_des.html></xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="HGI">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Heliographic Inertial - A heliocentric coordinate system
 where the Z axis is normal to the solar equatorial plane, positive northward. X axis is along
 the intersection line between solar equatorial and ecliptic planes. The X axis was positive at
 SE longitude of 74.367 deg on Jan 1, 1900. (See SE below.) See <http://nssdc.gsfc.nasa.gov/space/
helios/coor_des.html></xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="HPC">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Helioprojective Cartesian = A 3-D orthonormal (left-
handed) coordinate system that is primarily intended to specify with two dimensions a point on the
 solar disk. The Z axis points from the observer to the center of the solar disk. The Y axis lies
 in the plane defined by the solar spin vector and the Z axis, positive northward. The X axis is
 perpendicular to the Y and Z axes, positive toward solar west. Given as the distance between the
 observer and the center of the solar disk, the standard representation of an (x,y) point on the
 solar disk is via the point's longitude angle [arctan (x/d)] and latitude angle [arctan y/d].</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="HPR">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Helioprojective Radial - A 3-D orthonormal (left-handed)
 coordinate system that is primarily intended to specify with two dimensions a point on the solar
 disk. The Z axis points from the observer to the center of the solar disk. The Y axis lies in
 the plane defined by the solar spin vector and the Z axis, positive northward. The X axis is
 perpendicular to the Y and Z axes, positive toward solar west. Given as the distance between the
 observer and the center of the solar disk, the standard representation for this system of an (x,y)
 point on the solar disk is via the point's latitude angle theta {= arctan [SQRT(x**2 + y**2)]/d]}
 or equivalent declination parameter delta (= theta - 90 deg), and its phase angle psi as measured
 counter- clockwise from the +Y axis [psi = arctan (-y/x)].</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="HSM">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">TBD</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="J2000">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An astronomical coordinate system which uses the mean
 equator and equinox of Julian date 2451545.0 TT (Terrestrial Time), or January 1, 2000, noon TT.
 (aka J2000) to define a celestial reference frame.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="JSM">
```

```
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Jovian Solar Magnetospheric - A coordinate system where the
 X axis is from Jupiter to Sun, Z axis is northward in a plane containing the X axis and the Jovian
 dipole axis.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="JSO">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Coordinate Sytem Related to Jupiter Jovian Solar Orbital (X
 anti-sunward, Y along the orbital velocity direction)</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="KSM">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Kronian Solar Magnetospheric - A coordinate system where
 the X axis is from Saturn to Sun, Z axis is northward in a plane containing the X axis and the
 Kronian dipole axis.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="KSO">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Coordinate Sytem Related to Saturn Kronian Solar Orbital (X
 anti-sunward, Y along the orbital velocity direction)</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="LGM">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Local Geomagnetic - A coordinate system used mainly for
 Earth surface or near Earth surface magnetic field data. X axis northward from observation point in
 a geographic meridian. Z axis downward towards Earth's center. In this system, H (total horizontal
 component) = SQRT (Bx^2 + By^2) and D (declination angle) = arctan (By/Bx)</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="MAG">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Geomagnetic - geocentric. Z axis is parallel to the
 geomagnetic dipole axis, positive north. X is in the plane defined by the Z axis and the Earth's
 rotation axis. If N is a unit vector from the Earth's center to the north geographic pole, the
 signs of the X and Y axes are given by Y = N x Z, X = Y x Z.. See Russell, 1971, and <http://
cdpp.cnes.fr/00428.pdf></xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="MFA">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Magnetic Field Aligned - A coordinate system spacecraft-
centered system with Z in the direction of the ambient magnetic field vector. X is in the plane
 defined by Z and the spacecraft-Sun line, positive sunward. See <http://cdpp.cnes.fr/00428.pdf></
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="MSO">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Mars or Mercury Solar Orbital coordinate system. The X axis
 points from the center of the planet to the Sun; the Z axis is perpendicular to the orbital plane
 of the planet and parallel to the angular momentum vector. The Y axis completes the right-handed
 coordinate system.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="RTN">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Radial Tangential Normal. Typically centered at a
 spacecraft. Used for IMF and plasma V vectors. R (radial) axis is radially away from the Sun, T
 (tangential) axis is normal to the plane formed by R and the Sun's spin vector, positive in the
 direction of planetary motion. N (normal) is R x T.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="SC">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Spacecraft - A coordinate system defined by the spacecraft
 geometry and/or spin. Often has Z axis parallel to spacecraft spin vector. X and Y axes may or may
 not corotate with the spacecraft. See SR and SR2 below.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="SE">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Solar Ecliptic - A heliocentric coordinate system where
 the Z axis is normal to the ecliptic plane, positive northward. X axis is positive towards the
 first point of Aries (from Earth to Sun at vernal equinox). Same as HAE above. See <http://
nssdc.gsfc.nasa.gov/space/helios/coor_des.html></xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="SM">
      <xsd:annotation>
```

```
        <xsd:documentation xml:lang="en">Solar Magnetic - A geocentric coordinate system where the
 Z axis is northward along Earth's dipole axis, X axis is in plane of z axis and Earth-Sun line,
 positive sunward. See Russell, 1971.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="SR">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Spin Reference - A special case of a Spacecraft (SC)
 coordinate system for a spinning spacecraft. Z is parallel to the spacecraft spin vector. X and Y
 rotate with the spacecraft. See <http://cdpp.cnes.fr/00428.pdf></xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="SR2">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Spin Reference 2 - A special case of a Spacecraft
 (SC) coordinate system for a spinning spacecraft. Z is parallel to the spacecraft spin vector.
 X is in the plane defined by Z and the spacecraft-Sun line, positive sunward. See <http://
cdpp.cnes.fr/00428.pdf></xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="SSE">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Spacecraft Solar Ecliptic - A coordinate system used
 for deep space spacecraft, for example Helios. - X axis from spacecraft to Sun. Z axis normal to
 ecliptic plane, positive northward. Note: Angle between normals to ecliptic and to Helios orbit
 plane ~ 0.25 deg.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="SSE_L">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Selenocentric Solar Ecliptic. The X axis points from
 the center of the Earth's moon to the sun, the Z axis is normal to the ecliptic plane, positive
 northward. And the Y axis completes the right-handed set of axes.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="SpacecraftOrbitPlane">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A coordinate system where X lies in the plane normal to and
 in the direction of motion of the spacecraft, Z is normal to this plane and Y completes the triad
 in a right-handed coordinate system.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="TIIS">
      <xsd:annotation>
        <xsd:documentation>In this Cartesian coordinate system, X is along the flow direction, Y is
 along the Titan–Saturn vector, and Z is along the spin axis. These coordinates are analogous to the
 earth-centered GSE coordinates that relate to the direction of flow of the solar wind onto Earth’s
 environment.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="VSO">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Venus Solar Orbital coordinate system. The X axis points
 from the center of the planet to the Sun; The Z axis is perpendicular to the orbital plane of
 the planet and parallel to the angular momentum vector. The Y axis completes the right-handed
 coordinate system.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="WGS84">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The World Geodetic System (WGS) defines a reference frame
 for the earth, for use in geodesy and navigation. The WGS84 uses the zero meridian as defined by
 the Bureau International de l'Heure.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type `enumDisplayType`

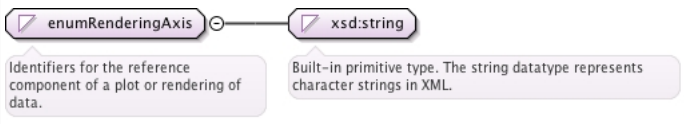
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	`Identifiers for types or classes of rendered data.`
Diagram	
Type	restriction of xsd:string
Facets	enumeration `Image` A two-dimensional representation of data with

			values at each element of the array related to an intensity or a color.
	enumeration	Plasmagram	The characterization of signal strengths in active sounding measurements as a function of virtual range or signal delay time and sounding frequency. A Plasmagram is also referred to as an Ionogram.
	enumeration	Spectrogram	The characterization of signal strengths as a function of frequency (or energy) and time.
	enumeration	StackPlot	A representation of data showing multiple sets of observations on a single plot, possibly offsetting each plot by some uniform amount.
	enumeration	TimeSeries	A representation of data showing a set of observations taken at different points in time and charted as a time series.
	enumeration	WaveForm	Spatial or temporal variations of wave amplitude over wave-period timescales.
Used by	Element	DisplayType	

Source

```
<xsd:simpleType name="enumDisplayType">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for types or classes of rendered data.</
xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Image">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A two-dimensional representation of data with values at
 each element of the array related to an intensity or a color.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Plasmagram">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The characterization of signal strengths in active
 sounding measurements as a function of virtual range or signal delay time and sounding frequency. A
 Plasmagram is also referred to as an Ionogram.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Spectrogram">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The characterization of signal strengths as a function of
 frequency (or energy) and time.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="StackPlot">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A representation of data showing multiple sets
 of observations on a single plot, possibly offsetting each plot by some uniform amount.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="TimeSeries">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A representation of data showing a set of observations
 taken at different points in time and charted as a time series.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="WaveForm">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Spatial or temporal variations of wave amplitude over wave-
period timescales.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type enumRenderingAxis

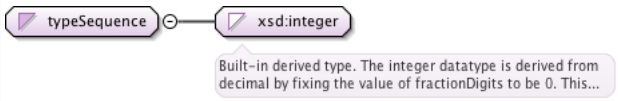
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers for the reference component of a plot or rendering of data.
Diagram	

Type	restriction of xsd:string		
Facets	enumeration	ColorBar	A spectrum or set of colors used to represent data values.
	enumeration	Horizontal	Parallel to or in the plane of the horizon or a base line.
	enumeration	Vertical	Perpendicular to the plane of the horizon or a base line.
Used by	Element	RenderingAxis	

Source

```
<xsd:simpleType name="enumRenderingAxis">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for the reference component of a plot or rendering
 of data.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="ColorBar">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A spectrum or set of colors used to represent data
 values.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Horizontal">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Parallel to or in the plane of the horizon or a base
 line.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Vertical">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Perpendicular to the plane of the horizon or a base line.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

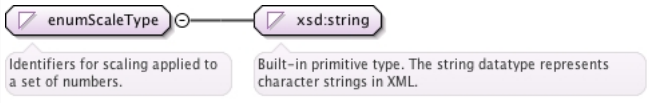
Simple Type typeSequence

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	list of xsd:integer
Used by	Elements: Index, Size

Source

```
<xsd:simpleType name="typeSequence">
  <xsd:list itemType="xsd:integer"/>
</xsd:simpleType>
```

Simple Type enumScaleType

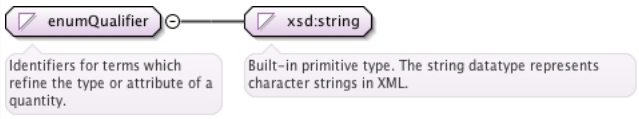
Namespace	http://impex-fp7.oeaw.ac.at		
Annotations	Identifiers for scaling applied to a set of numbers.		
Diagram			
Type	restriction of xsd:string		
Facets	enumeration	LinearScale	Intervals which are equally spaced.
	enumeration	LogScale	Intervals which are spaced proportionally to the logarithms of the values being represented.
Used by	Element	ScaleType	

Source

```
<xsd:simpleType name="enumScaleType">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for scaling applied to a set of numbers.</
xsd:documentation>
  </xsd:annotation>
```

```
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="LinearScale">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Intervals which are equally spaced.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="LogScale">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Intervals which are spaced proportionally to the logarithms
 of the values being represented.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type `enumQualifier`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	`Identifiers for terms which refine the type or attribute of a quantity.`
Diagram	
Type	restriction of xsd:string

Facets

enumeration	`Anisotropy`	`Direction-dependent property.`
enumeration	`Array`	`A sequence of values corresponding to the elements in a rectilinear, n-dimension matrix. Each value can be referenced by a unique index.`
enumeration	`Average`	`The statistical mean; the sum of a set of values divided by the number of values in the set.`
enumeration	`Characteristic`	`A quantity which can be easily identified and measured in a given environment.`
enumeration	`Circular`	`Relative to polarization, right-hand circularly polarized light is defined such that the electric field is rotating clockwise as seen by an observer towards whom the wave is moving. Left-hand circularly polarized light is defined such that the electric field is rotating counterclockwise as seen by an observer towards whom the wave is moving. The polarization of magnetohydrodynamic waves is specified with respect to the ambient mean magnetic field : right-hand polarized waves have a transverse electric field component which turns in a right-handed sense (that of the gyrating electrons) around the magnetic field.`
enumeration	`Column`	`A two-dimensional measure of a quantity. The column is the area over which the quantity is measured.`
enumeration	`Component`	`Projection of a vector along one of the base axes of a coordinate system.`
enumeration	`Component.I`	`Projection of a vector along the first named axis of a coordinate system. Typically the X axis, but could be the R axis for an RTN coordinate system.`
enumeration	`Component.J`	`Projection of a vector along the second named axis of a coordinate system. Typically the Y axis, but could be the T axis for an RTN coordinate system.`
enumeration	`Component.K`	`Projection of a vector along the third named axis of a coordinate system. Typically the Z axis, but could be the N axis for an RTN coordinate system.`
enumeration	`Core`	`The central or main part of an object or calculated distribution. For example, the part of a distribution of particles at low energies that is a thermal`

		(Maxwellian) population.
enumeration	CrossSpectrum	The Fourier transform of the cross correlation of two physical or empirical observations.
enumeration	Deviation	The difference between an observed value and the expected value of a quantity.
enumeration	Differential	A measurement within a narrow range of energy and/or solid angle.
enumeration	Direction	The spatial relation between an object and another object, the orientation of the object or the course along which the object points or moves.
enumeration	DirectionAngle	The angle between a position vector or measured vector (or one of its projections onto a plane) and one of the base axes of the coordinate system.
enumeration	DirectionAngle.AzimuthAngle	The angle between the projection into the i-j plane of a position or measured vector and the i-axis of the coordinate system. Mathematically defined as arctan(j/i).
enumeration	DirectionAngle.ElevationAngle	The angle between the position or measured vector and the i-j plane of the coordinate system. Mathematically defined as arctan(k/SQRT(i^2+j^2)).
enumeration	DirectionAngle.PolarAngle	The angle between the position or measured vector and the k-axis of the coordinate system. Mathematically defined as arctan([SQRT(i^2+j^2)]/k).
enumeration	Directional	A measurement within a narrow range of solid angle.
enumeration	FieldAligned	The component of a quantity which is oriented in the same direction of a field.
enumeration	Fit	Values that make an model agree with the data.
enumeration	Group	An assemblage of values that a certain relation or common characteristic.
enumeration	Halo	The part of an object or distribution surrounding some central body or distribution. For example, the particles above the core energies that show enhancements above the thermal population. Typically, a "power law tail" shows a break from the core Maxwellian at a particular energy.
enumeration	Integral	A flux measurement in a broad range of energy and solid angle.
enumeration	Integral.Area	Integration over the extent of a planar region, or of the surface of a solid.
enumeration	Integral.Bandwidth	Integration over the width a frequency band.
enumeration	Integral.SolidAngle	Integration over the angle in three-dimensional space that an object subtends at a point.
enumeration	LineOfSight	The line of sight is the line that connects the observer with the observed object. This expression is often used with measurements of Doppler velocity and magnetic field in magnetograms, where only the component of the vector field directed along the line of sight is measured.
enumeration	Linear	Polarization where the E-field vector is confined to a given plane
enumeration	Magnitude	A measure of the strength of a vector quantity or length of its representational vector.
enumeration	Maximum	The largest value of a batch or sample or the upper bound of a probability distribution.
enumeration	Median	The measure of central tendency of a set of n. values computed by ordering the values and taking the value at position (n. + 1) / 2 when n. is odd or the arithmetic mean of the values at positions n. / 2 and (n. / 2) + 1 when n. is even.
enumeration	Minimum	The smallest value of a batch or sample or the lower bound of a probability distribution.

enumeration	Moment	Parameters determined by integration over a distribution function convolved with a power of velocity.
enumeration	Parallel	Having the same direction as a given direction
enumeration	Peak	The maximum value for the quantity in question, over a period of time which is usually equal to the cadence.
enumeration	Perpendicular	At right angles to a given direction.
enumeration	Perturbation	Variations in the state of a system.
enumeration	Phase	A point or portion in a recurring series of changes.
enumeration	PhaseAngle	Phase difference between two or more waves, normally expressed in degrees.
enumeration	Projection	A measure of the length of a position or measured vector as projected into a plane of the coordinate system.
enumeration	Projection.IJ	A measure of the length of a position or measured vector projected into the i-j (typically X-Y) plane of the coordinate system.
enumeration	Projection.IK	A measure of the length of a position or measured vector projected into the i-k (typically X-Z) plane of the coordinate system.
enumeration	Projection.JK	A measure of the length of a position or measured vector projected into the j-k (typically Y-Z) plane of the coordinate system.
enumeration	Pseudo	Similar to or having the appearance of something else. Can be used to indicate an estimation or approximation of a particular quantity.
enumeration	Ratio	The relative magnitudes of two quantities.
enumeration	Scalar	A quantity that is completely specified by its magnitude and has no direction.
enumeration	Spectral	Characterized as a range or continuum of frequencies
enumeration	StandardDeviation	The square root of the average of the squares of deviations about the mean of a set of data. Standard deviation is a statistical measure of spread or variability.
enumeration	StokesParameters	A set of four parameters (usually called I,Q, U and V) which describe the polarization state of an electromagnetic wave propagating through space.
enumeration	Strahl	A distribution of particles concentrated in a narrow energy band. The band may be may be aligned with a secondary feature. For example, it may occur in a narrow cone aligned with the mean magnetic field direction.
enumeration	Superhalo	The part of an object or distribution surrounding some central body or distribution evident in a second break in the distribution function (e.g., a different power law). It consists of a population at a higher energies than for a halo.
enumeration	Symmetric	Equal distribution about one or more axes.
enumeration	Tensor	A generalized linear "quantity" or "geometrical entity" that can be expressed as a multi-dimensional array relative to a choice of basis of the particular space on which it is defined.
enumeration	Total	The summation of quantities over all possible species.
enumeration	Trace	The sum of the elements on the main diagonal (the diagonal from the upper left to the lower right) of a square matrix.
enumeration	Uncertainty	A statistically defined discrepancy between a measured quantity and the true value of that quantity that cannot be corrected by calculation or calibration.
enumeration	Variance	A measure of dispersion of a set of data points

			around their mean value. The expectation value of the squared deviations from the mean.
	enumeration	Vector	A set of parameter values each along some independent variable (e.g., components of a field in three orthogonal spatial directions; atmospheric temperature values at several altitudes, or at a given latitude and longitude;).

Used by

Element	Qualifier

Source

```
<xsd:simpleType name="enumQualifier">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for terms which refine the type or attribute of a
 quantity.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Anisotropy">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Direction-dependent property.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Array">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A sequence of values corresponding to the elements
 in a rectilinear, n-dimension matrix. Each value can be referenced by a unique index.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Average">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The statistical mean; the sum of a set of values divided by
 the number of values in the set.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Characteristic">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A quantity which can be easily identified and measured in a
 given environment.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Circular">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Relative to polarization, right-hand circularly polarized
 light is defined such that the electric field is rotating clockwise as seen by an observer towards
 whom the wave is moving. Left-hand circularly polarized light is defined such that the electric
 field is rotating counterclockwise as seen by an observer towards whom the wave is moving. The
 polarization of magnetohydrodynamic waves is specified with respect to the ambient mean magnetic
 field : right-hand polarized waves have a transverse electric field component which turns in a
 right-handed sense (that of the gyrating electrons) around the magnetic field.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Column">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A two-dimensional measure of a quantity. The column is the
 area over which the quantity is measured.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Component">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Projection of a vector along one of the base axes of a
 coordinate system.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Component.I">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Projection of a vector along the first named axis of a
 coordinate system. Typically the X axis, but could be the R axis for an RTN coordinate system.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Component.J">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Projection of a vector along the second named axis of a
 coordinate system. Typically the Y axis, but could be the T axis for an RTN coordinate system.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Component.K">
      <xsd:annotation>
```

```
        <xsd:documentation xml:lang="en">Projection of a vector along the third named axis of a
 coordinate system. Typically the Z axis, but could be the N axis for an RTN coordinate system.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Core">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The central or main part of an object or calculated
 distribution. For example, the part of a distribution of particles at low energies that is a
 thermal (Maxwellian) population.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="CrossSpectrum">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The Fourier transform of the cross correlation of two
 physical or empirical observations.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Deviation">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The difference between an observed value and the expected
 value of a quantity.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Differential">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A measurement within a narrow range of energy and/or solid
 angle.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Direction">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The spatial relation between an object and another
 object, the orientation of the object or the course along which the object points or moves.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="DirectionAngle">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The angle between a position vector or measured vector
 (or one of its projections onto a plane) and one of the base axes of the coordinate system.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="DirectionAngle.AzimuthAngle">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The angle between the projection into the i-j plane of
 a position or measured vector and the i-axis of the coordinate system. Mathematically defined as
 arctan(j/i).</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="DirectionAngle.ElevationAngle">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The angle between the position or measured vector and
 the i-j plane of the coordinate system. Mathematically defined as arctan(k/SQRT(i^2+j^2)).</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="DirectionAngle.PolarAngle">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The angle between the position or measured vector and
 the k-axis of the coordinate system. Mathematically defined as arctan([SQRT(i^2+j^2)]/k).</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Directional">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A measurement within a narrow range of solid angle.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="FieldAligned">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The component of a quantity which is oriented in the same
 direction of a field.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Fit">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Values that make an model agree with the data.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
```

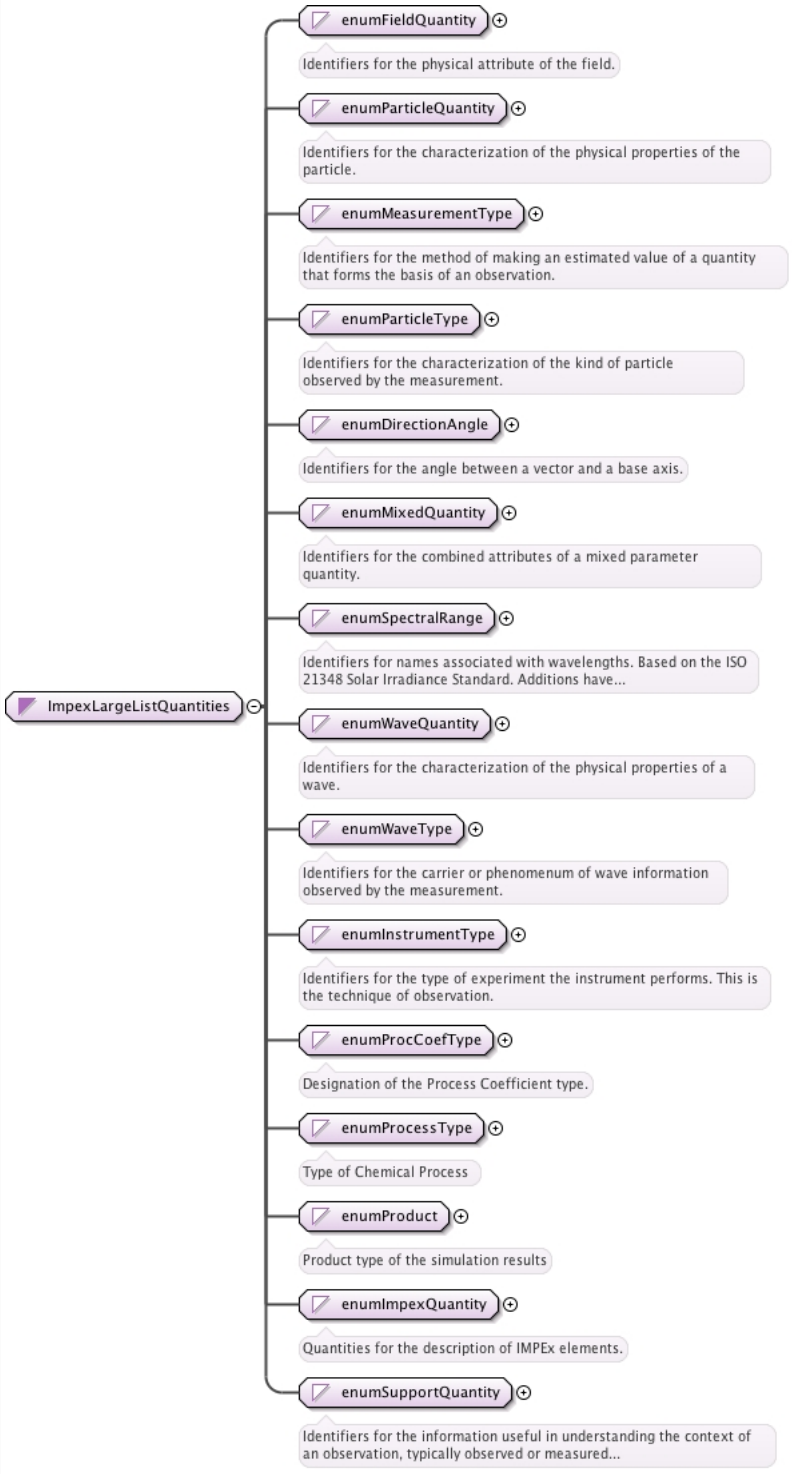
```
    <xsd:enumeration value="Group">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An assemblage of values that a certain relation or common
 characteristic.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Halo">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The part of an object or distribution surrounding some
 central body or distribution. For example, the particles above the core energies that show
 enhancements above the thermal population. Typically, a "power law tail" shows a break from the
 core Maxwellian at a particular energy.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Integral">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A flux measurement in a broad range of energy and solid
 angle.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Integral.Area">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Integration over the extent of a planar region, or of the
 surface of a solid.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Integral.Bandwidth">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Integration over the width a frequency band.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Integral.SolidAngle">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Integration over the angle in three-dimensional space that
 an object subtends at a point.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="LineOfSight">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The line of sight is the line that connects the observer
 with the observed object. This expression is often used with measurements of Doppler velocity and
 magnetic field in magnetograms, where only the component of the vector field directed along the
 line of sight is measured.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Linear">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Polarization where the E-field vector is confined to a
 given plane</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Magnitude">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A measure of the strength of a vector quantity or length of
 its representational vector.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Maximum">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The largest value of a batch or sample or the upper bound
 of a probability distribution.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Median">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The measure of central tendency of a set of n. values
 computed by ordering the values and taking the value at position (n. + 1) / 2 when n. is odd
 or the arithmetic mean of the values at positions n. / 2 and (n. / 2) + 1 when n. is even.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Minimum">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The smallest value of a batch or sample or the lower bound
 of a probability distribution.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Moment">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Parameters determined by integration over a distribution
 function convolved with a power of velocity.</xsd:documentation>
      </xsd:annotation>
```

```
    </xsd:enumeration>
    <xsd:enumeration value="Parallel">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Having the same direction as a given direction</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Peak">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The maximum value for the quantity in question, over a
 period of time which is usually equal to the cadence.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Perpendicular">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">At right angles to a given direction.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Perturbation">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Variations in the state of a system.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Phase">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A point or portion in a recurring series of changes.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="PhaseAngle">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Phase difference between two or more waves, normally
 expressed in degrees.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Projection">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A measure of the length of a position or measured vector as
 projected into a plane of the coordinate system.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Projection.IJ">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A measure of the length of a position or measured vector
 projected into the i-j (typically X-Y) plane of the coordinate system.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Projection.IK">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A measure of the length of a position or measured vector
 projected into the i-k (typically X-Z) plane of the coordinate system.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Projection.JK">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A measure of the length of a position or measured vector
 projected into the j-k (typically Y-Z) plane of the coordinate system.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Pseudo">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Similar to or having the appearance of something else. Can
 be used to indicate an estimation or approximation of a particular quantity.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Ratio">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The relative magnitudes of two quantities.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Scalar">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A quantity that is completely specified by its magnitude
 and has no direction.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Spectral">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Characterized as a range or continuum of frequencies</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
```

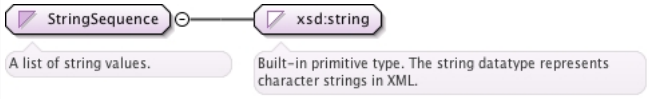
```
    <xsd:enumeration value="StandardDeviation">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The square root of the average of the squares of deviations
 about the mean of a set of data. Standard deviation is a statistical measure of spread or
 variability.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="StokesParameters">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A set of four parameters (usually called I,Q, U and V)
 which describe the polarization state of an electromagnetic wave propagating through space.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Strahl">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A distribution of particles concentrated in a narrow energy
 band. The band may be may be aligned with a secondary feature. For example, it may occur in a
 narrow cone aligned with the mean magnetic field direction.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Superhalo">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The part of an object or distribution surrounding some
 central body or distribution evident in a second break in the distribution function (e.g.,
 a different power law). It consists of a population at a higher energies than for a halo.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Symmetric">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Equal distribution about one or more axes.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Tensor">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A generalized linear "quantity" or "geometrical entity"
 that can be expressed as a multi-dimensional array relative to a choice of basis of the particular
 space on which it is defined.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Total">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The summation of quantities over all possible species.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Trace">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The sum of the elements on the main diagonal (the diagonal
 from the upper left to the lower right) of a square matrix.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Uncertainty">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A statistically defined discrepancy between a measured
 quantity and the true value of that quantity that cannot be corrected by calculation or
 calibration.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Variance">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A measure of dispersion of a set of data points
 around their mean value. The expectation value of the squared deviations from the mean.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Vector">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A set of parameter values each along some independent
 variable (e.g., components of a field in three orthogonal spatial directions; atmospheric
 temperature values at several altitudes, or at a given latitude and longitude;).</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type `ImpexLargeListQuantities`

Namespace	http://impex-fp7.oeaw.ac.at

Diagram	
Type	union of(enumFieldQuantity, enumParticleQuantity, enumMeasurementType, enumParticleType, enumDirectionAngle, enumMixedQuantity, enumSpectralRange, enumWaveQuantity, enumWaveType, enumInstrumentType, enumProcCoefType, enumProcessType, enumProduct, enumImpexQuantity, enumSupportQuantity)
Used by	Elements ParameterQuantity, PropertyQuantity
Source	<xsd:simpleType name="ImpexLargeListQuantities"> <xsd:union memberTypes="enumFieldQuantity enumParticleQuantity enumMeasurementType enumParticleType enumDirectionAngle enumMixedQuantity enumSpectralRange enumWaveQuantity enumWaveType enumInstrumentType enumProcCoefType enumProcessType enumProduct enumImpexQuantity enumSupportQuantity"/> </xsd:simpleType>

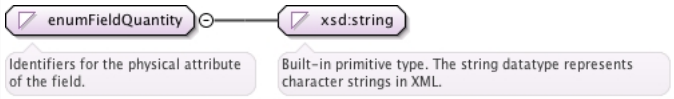
Simple Type `StringSequence`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A list of string values.
Diagram	
Type	list of xsd:string
Used by	Elements: CoordinatesLabel, FieldValue, InputLabel, PropertyLabel, PropertyValue

Source

```
<xsd:simpleType name="StringSequence">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">A list of string values.</xsd:documentation>
  </xsd:annotation>
  <xsd:list itemType="xsd:string"/>
</xsd:simpleType>
```

Simple Type `enumFieldQuantity`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers for the physical attribute of the field.
Diagram	
Type	restriction of xsd:string

Facets

enumeration	Current	The flow of electrons through a conductor caused by a potential difference.
enumeration	Electric	The physical attribute that exerts an electrical force.
enumeration	Electromagnetic	Electric and magnetic field variations in time and space that propagate through a medium or a vacuum with the wave's propagation, electric field, and magnetic field vectors forming an orthogonal triad. Waves in this category are detected by having their field quantities measured.
enumeration	Gyrofrequency	The number of gyrations around a magnetic guiding center (field line) a charged particle makes per unit time due to the Lorentz force.
enumeration	Magnetic	The physical attribute attributed to a magnet or its equivalent.
enumeration	PlasmaFrequency	A number-density-dependent characteristic frequency of a plasma.
enumeration	Potential	A field which obeys Laplace's Equation.
enumeration	PoyntingFlux	Electromagnetic energy flux transported by a wave characterized as the rate of energy transport per unit area per steradian.

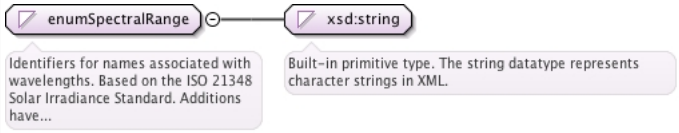
Used by	Element: FieldQuantity

Source

```
<xsd:simpleType name="enumFieldQuantity">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for the physical attribute of the field.</
xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Current">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The flow of electrons through a conductor caused by a
 potential difference.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Electric">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The physical attribute that exerts an electrical force.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
```

```
    <xsd:enumeration value="Electromagnetic">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Electric and magnetic field variations in time and space
 that propagate through a medium or a vacuum with the wave's propagation, electric field, and
 magnetic field vectors forming an orthogonal triad. Waves in this category are detected by having
 their field quantities measured.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Gyrofrequency">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The number of gyrations around a magnetic guiding center
 (field line) a charged particle makes per unit time due to the Lorentz force.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Magnetic">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The physical attribute attributed to a magnet or its
 equivalent.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="PlasmaFrequency">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A number-density-dependent characteristic frequency of a
 plasma.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Potential">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A field which obeys Laplace's Equation.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="PoyntingFlux">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Electromagnetic energy flux transported by a wave
 characterized as the rate of energy transport per unit area per steradian.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type enumSpectralRange

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers for names associated with wavelengths. Based on the ISO 21348 Solar Irradiance Standard. Additions have been made to extend the frequency ranges to include those used in space physics. Those additions are indicated in blue text. The "Total Solar Irradiance" category has not been included since it is a type of measurement and not a specific spectral range. See Appendix A - Comparison of Spectrum Domains for a comparison of the spectral ranges with other systems.
Diagram	
Type	restriction of xsd:string
Facets	enumeration CaK — A spectrum with a wavelength of range centered near 393.5 nm. VSO nickname: Ca-K image with range of 391.9 nm to 395.2 nm. enumeration ExtremeUltraviolet — A spectrum with a wavelength range of 10.0 nm to 125.0nm. VSO nickname: EUV image with a range of of 10.0 nm to 125.0 nm enumeration FarUltraviolet — A spectrum with a wavelength range of 122 nm to 200.0nm. VSO nickname: FUV image with a range of 122.0 nm to 200 nm enumeration GammaRays — Photons with a wavelength range: 0.00001 to 0.001 nm enumeration Halpha — A spectrum with a wavelength range centered at 656.3 nm. VSO nickname: H-alpha image with a spectrum range of of 655.8 nm to 656.8 nm. enumeration HardXrays — Photons with a wavelength range: 0.001 to 0.1 nm and an energy range of 12 keV to 120

			keV
	enumeration	He10830	A spectrum with a wavelength range centered at 1082.9 nm. VSO nickname: He 10830 image with a range of 1082.5 nm to 1083.3 nm.
	enumeration	He304	A spectrum centered around the resonance line of ionised helium at 304 Angstrom (30.4 nm).
	enumeration	Infrared	Photons with a wavelength range: 760 to 1.00x10^6 nm
	enumeration	K7699	A spectrum with a wavelength range centred at 769.9 nm. VSO nickname: K-7699 dopplergram with a range of 769.8 nm to 770.0 nm.
	enumeration	LBHBand	Lyman-Birge-Hopfield band in the far ultraviolet range with wavelength range of 140nm to 170 nm.
	enumeration	Microwave	Photons with a wavelength range: 1.00x10^6 to 1.50x10^7 nm
	enumeration	NaD	A spectrum with a wavelength range of centered at 589.3 nm. VSO nickname: Na-D image with a range of 588.8 nm to 589.8 nm.
	enumeration	Ni6768	A spectrum with a wavelength range centered at 676.8 nm. VSO nickname: Ni-6768 dopplergram with a range of of 676.7 nm to 676.9 nm.
	enumeration	Optical	Photons with a wavelength range: 380 to 760 nm
	enumeration	RadioFrequency	Photons with a wavelength range: 100,000 to 1.00x10^11 nm
	enumeration	SoftXRays	X-Rays with an energy range of 0.12 keV to 12 keV.
	enumeration	Ultraviolet	Photons with a wavelength range: 10 to 400 nm.
	enumeration	WhiteLight	Photons with a wavelength in the visible range for humans.
	enumeration	XRays	Photons with a wavelength range: 0.001 <= x < 10 nm
Used by	Element	SpectralRange	

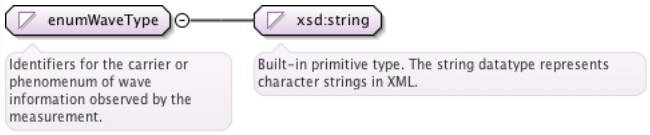
Source

```
<xsd:simpleType name="enumSpectralRange">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for names associated with wavelengths. Based on the
 ISO 21348 Solar Irradiance Standard. Additions have been made to extend the frequency ranges to
 include those used in space physics. Those additions are indicated in blue text. The "Total Solar
 Irradiance" category has not been included since it is a type of measurement and not a specific
 spectral range. See Appendix A - Comparison of Spectrum Domains for a comparison of the spectral
 ranges with other systems.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="CaK">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A spectrum with a wavelength of range centered near 393.5
 nm. VSO nickname: Ca-K image with range of 391.9 nm to 395.2 nm.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="ExtremeUltraviolet">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A spectrum with a wavelength range of 10.0 nm to 125.0nm.
 VSO nickname: EUV image with a range of of 10.0 nm to 125.0 nm</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="FarUltraviolet">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A spectrum with a wavelength range of 122 nm to 200.0nm.
 VSO nickname: FUV image with a range of 122.0 nm to 200 nm</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="GammaRays">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Photons with a wavelength range: 0.00001 to 0.001 nm</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Halpha">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A spectrum with a wavelength range centered at 656.3 nm.
 VSO nickname: H-alpha image with a spectrum range of of 655.8 nm to 656.8 nm.</xsd:documentation>
```

```
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="HardXrays">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Photons with a wavelength range: 0.001 to 0.1 nm and an
 energy range of 12 keV to 120 keV</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="He10830">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A spectrum with a wavelength range centered at 1082.9 nm.
 VSO nickname: He 10830 image with a range of 1082.5 nm to 1083.3 nm.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="He304">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A spectrum centered around the resonance line of ionised
 helium at 304 Angstrom (30.4 nm).</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Infrared">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Photons with a wavelength range: 760 to 1.00x10^6 nm</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="K7699">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A spectrum with a wavelength range centred at 769.9 nm. VSO
 nickname: K-7699 dopplergram with a range of 769.8 nm to 770.0 nm.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="LBHBand">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Lyman-Birge-Hopfield band in the far ultraviolet range with
 wavelength range of 140nm to 170 nm.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Microwave">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Photons with a wavelength range: 1.00x10^6 to 1.50x10^7
 nm</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="NaD">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A spectrum with a wavelength range of centered at 589.3 nm.
 VSO nickname: Na-D image with a range of 588.8 nm to 589.8 nm.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Ni6768">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A spectrum with a wavelength range centered at 676.8 nm.
 VSO nickname: Ni-6768 dopplergram with a range of of 676.7 nm to 676.9 nm.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Optical">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Photons with a wavelength range: 380 to 760 nm</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="RadioFrequency">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Photons with a wavelength range: 100,000 to 1.00x10^11 nm</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="SoftXRays">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">X-Rays with an energy range of 0.12 keV to 12 keV.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Ultraviolet">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Photons with a wavelength range: 10 to 400 nm.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="WhiteLight">
      <xsd:annotation>
```

```
        <xsd:documentation xml:lang="en">Photons with a wavelength in the visible range for
 humans.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="XRays">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Photons with a wavelength range: 0.001 <= x < 10 nm</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type enumWaveType

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers for the carrier or phenomenum of wave information observed by the measurement.
Diagram	
Type	restriction of xsd:string

Facets

enumeration	Electromagnetic	Electric and magnetic field variations in time and space that propagate through a medium or a vacuum with the wave's propagation, electric field, and magnetic field vectors forming an orthogonal triad. Waves in this category are detected by having their field quantities measured.
enumeration	Electrostatic	Collective longitudinal electric-field and plasma oscillations trapped within a body of plasma.
enumeration	Hydrodynamic	Periodic or quasi-periodic oscillations of fluid quantities.
enumeration	MHD	Hydrodynamic waves in a magnetized plasma in which the background magnetic field plays a key role in controlling the wave propagation characteristics.
enumeration	Photon	Electromagnetic waves detected by techniques that utilize their corpuscular character (e.g., CCD, CMOS, photomultipliers).
enumeration	PlasmaWaves	Self-consistent collective oscillations of particles and fields (electric and magnetic) in a plasma.

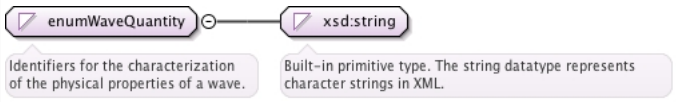
Used by	Element	WaveType

Source

```
<xsd:simpleType name="enumWaveType">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for the carrier or phenomenum of wave information
 observed by the measurement.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Electromagnetic">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Electric and magnetic field variations in time and space
 that propagate through a medium or a vacuum with the wave's propagation, electric field, and
 magnetic field vectors forming an orthogonal triad. Waves in this category are detected by having
 their field quantities measured.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Electrostatic">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Collective longitudinal electric-field and plasma
 oscillations trapped within a body of plasma.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Hydrodynamic">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Periodic or quasi-periodic oscillations of fluid
 quantities.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="MHD">
```

```
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Hydrodynamic waves in a magnetized plasma in which the
 background magnetic field plays a key role in controlling the wave propagation characteristics.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Photon">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Electromagnetic waves detected by techniques that utilize
 their corpuscular character (e.g., CCD, CMOS, photomultipliers).</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="PlasmaWaves">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Self-consistent collective oscillations of particles and
 fields (electric and magnetic) in a plasma.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type `enumWaveQuantity`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers for the characterization of the physical properties of a wave.
Diagram	
Type	restriction of xsd:string

Facets

enumeration	ACElectricField	Alternating electric field component of a wave.
enumeration	ACMagneticField	Alternating magnetic field component of a wave.
enumeration	Absorption	Decrease of radiant energy (relative to the background continuum spectrum).
enumeration	Albedo	The ratio of reflected radiation from the surface to incident radiation upon it.
enumeration	DopplerFrequency	Change in the frequency of a propagating wave due to motion of the source, the observer, the reflector, or the propagation medium.
enumeration	Emissivity	The energy emitted spontaneously per unit bandwidth (typically frequency) per unit time per unit mass of source. Emissivity is usually integrated over all directions/solid angles.
enumeration	EnergyFlux	The amount of energy passing through a unit area in a unit time.
enumeration	EquivalentWidth	The spectral width of a total absorption line having the amount of absorbed radiant energy being equivalent to that in an observed absorption line.
enumeration	Frequency	The number of occurrences of a repeating event per unit time.
enumeration	Gyrofrequency	The number of gyrations around a magnetic guiding center (field line) a charged particle makes per unit time due to the Lorentz force.
enumeration	Intensity	The measurement of radiant or wave energy per unit detector area per unit bandwidth per unit solid angle per unit time.
enumeration	LineDepth	The measure of the amount of absorption below the continuum (depth) in a particular wavelength or frequency in an absorption spectrum.
enumeration	MagneticField	A region of space near a magnetized body where magnetic forces can be detected (as measured by methods such as Zeeman splitting, etc.).
enumeration	ModeAmplitude	In helioseismology the magnitude of oscillation of waves of a particular geometry.
enumeration	PlasmaFrequency	A number-density-dependent characteristic frequency of a plasma.

	enumeration	Polarization	Direction of the electric vector of an electromagnetic wave. The wave can be linearly polarized in any direction perpendicular to the direction of travel, circularly polarized (clockwise or counterclockwise), unpolarized, or mixtures of the above.
	enumeration	PoyntingFlux	Electromagnetic energy flux transported by a wave characterized as the rate of energy transport per unit area per steradian.
	enumeration	PropagationTime	Time difference between transmission and reception of a wave in an active wave experiment.
	enumeration	StokesParameters	A set of four parameters (usually called I,Q, U and V) which describe the polarization state of an electromagnetic wave propagating through space.
	enumeration	Velocity	Rate of change of position. Also used for the average velocity of a collection of particles, also referred to as "bulk velocity".
	enumeration	Wavelength	The peak-to-peak distance over one wave period.
Used by	Element	WaveQuantity	

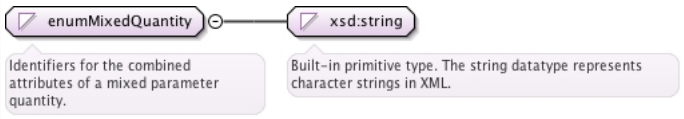
Source

```
<xsd:simpleType name="enumWaveQuantity">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for the characterization of the physical properties
 of a wave.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="ACElectricField">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Alternating electric field component of a wave.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="ACMagneticField">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Alternating magnetic field component of a wave.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Absorption">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Decrease of radiant energy (relative to the background
 continuum spectrum).</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Albedo">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The ratio of reflected radiation from the surface to
 incident radiation upon it.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="DopplerFrequency">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Change in the frequency of a propagating wave due to motion
 of the source, the observer, the reflector, or the propagation medium.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Emissivity">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The energy emitted spontaneously per unit bandwidth
 (typically frequency) per unit time per unit mass of source. Emissivity is usually integrated over
 all directions/solid angles.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="EnergyFlux">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The amount of energy passing through a unit area in a unit
 time.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="EquivalentWidth">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The spectral width of a total absorption line having
 the amount of absorbed radiant energy being equivalent to that in an observed absorption line.</
xsd:documentation>
      </xsd:annotation>
```

```
    </xsd:enumeration>
    <xsd:enumeration value="Frequency">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The number of occurrences of a repeating event per unit
 time.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Gyrofrequency">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The number of gyrations around a magnetic guiding center
 (field line) a charged particle makes per unit time due to the Lorentz force.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Intensity">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The measurement of radiant or wave energy per unit detector
 area per unit bandwidth per unit solid angle per unit time.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="LineDepth">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The measure of the amount of absorption below the continuum
 (depth) in a particular wavelength or frequency in an absorption spectrum.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="MagneticField">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A region of space near a magnetized body where magnetic
 forces can be detected (as measured by methods such as Zeeman splitting, etc.).</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="ModeAmplitude">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">In helioseismology the magnitude of oscillation of waves of
 a particular geometry.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="PlasmaFrequency">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A number-density-dependent characteristic frequency of a
 plasma.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Polarization">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Direction of the electric vector of an electromagnetic
 wave. The wave can be linearly polarized in any direction perpendicular to the direction of travel,
 circularly polarized (clockwise or counterclockwise), unpolarized, or mixtures of the above.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="PoyntingFlux">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Electromagnetic energy flux transported by a wave
 characterized as the rate of energy transport per unit area per steradian.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="PropagationTime">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Time difference between transmission and reception of a
 wave in an active wave experiment.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="StokesParameters">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A set of four parameters (usually called I,Q, U and V)
 which describe the polarization state of an electromagnetic wave propagating through space.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Velocity">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Rate of change of position. Also used for the average
 velocity of a collection of particles, also referred to as "bulk velocity".</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Wavelength">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The peak-to-peak distance over one wave period.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
```

```
</xsd:simpleType>
```

Simple Type enumMixedQuantity

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers for the combined attributes of a mixed parameter quantity.
Diagram	
Type	restriction of xsd:string

Facets

enumeration	AkasofuEpsilon	A measure of the magnetopause energy flux and an indicator of the solar wind power available for subsequent magnetospheric energization. Defined as: V*B^2*l^2sin(theta/2)^4 where B is the IMF, l is an empirical scaling parameter equal to 7 RE, and theta = tan(BY /BZ)^-1 the IMF clock angle.
enumeration	AlfvenMachNumber	The ratio of the bulk flow speed to the Alfven speed.
enumeration	AlfvenVelocity	Phase velocity of the Alfven wave; In SI units it is the velocity of the magnetic field divided by the square root of the mass density times the permeability of free space (mu).
enumeration	FrequencyToGyrofrequencyRatio	The ratio of the characteristic frequency of a medium to gyrofrequency of a particle.
enumeration	MagnetosonicMachNumber	The ratio of the velocity of fast mode waves to the Alfven velocity.
enumeration	Other	Not classified with more specific terms. The context of its usage may be described in related text.
enumeration	PlasmaBeta	The ratio of the plasma pressure (nkT) to the magnetic pressure (B^2/2mu0) of the SUM(nkT)/(B^2/2mu0).
enumeration	TotalPressure	In an MHD fluid it is the number density (N) times Boltzmann constant times the temperature in Kelvin.
enumeration	VCrossB	The cross product of the charge velocity (V) and the magnetic field (B). It is the electric field exerted on a point charge by a magnetic field.

Used by

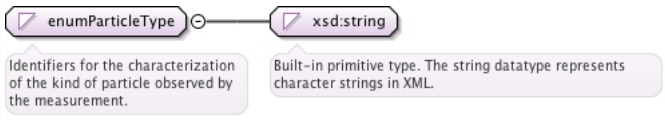
Element	MixedQuantity

Source

```
<xsd:simpleType name="enumMixedQuantity">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for the combined attributes of a mixed parameter
 quantity.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="AkasofuEpsilon">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A measure of the magnetopause energy flux and an indicator
 of the solar wind power available for subsequent magnetospheric energization. Defined as:
 V*B^2*l^2sin(theta/2)^4 where B is the IMF, l is an empirical scaling parameter equal to 7 RE, and
 theta = tan(BY /BZ)^-1 the IMF clock angle.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="AlfvenMachNumber">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The ratio of the bulk flow speed to the Alfven speed.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="AlfvenVelocity">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Phase velocity of the Alfven wave; In SI units it is
 the velocity of the magnetic field divided by the square root of the mass density times the
 permeability of free space (mu).</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
```

```
    <xsd:enumeration value="FrequencyToGyrofrequencyRatio">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The ratio of the characteristic frequency of a medium to
 gyrofrequency of a particle.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="MagnetosonicMachNumber">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The ratio of the velocity of fast mode waves to the Alfven
 velocity.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Other">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Not classified with more specific terms. The context of its
 usage may be described in related text.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="PlasmaBeta">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The ratio of the plasma pressure (nkT) to the magnetic
 pressure (B^2/2mu0) of the SUM(nkT)/(B^2/2mu0).</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="TotalPressure">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">In an MHD fluid it is the number density (N) times
 Boltzmann constant times the temperature in Kelvin.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="VCrossB">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The cross product of the charge velocity (V) and the
 magnetic field (B). It is the electric field exerted on a point charge by a magnetic field.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type `enumParticleType`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers for the characterization of the kind of particle observed by the measurement.
Diagram	
Type	restriction of xsd:string

Facets

enumeration	Aerosol	A suspension of fine solid or liquid particles in a gas.
enumeration	AlphaParticle	A positively charged nuclear particle that consists of two protons and two neutrons.
enumeration	Atom	Matter consisting of a nucleus surrounded by electrons which has no net charge.
enumeration	Dust	Free microscopic particles of solid material.
enumeration	Electron	An elementary particle consisting of a charge of negative electricity equal to about 1.602 x 10^(-19) Coulomb and having a mass when at rest of about 9.109534 x 10^(-28) gram.
enumeration	Ion	An atom that has acquired a net electric charge by gaining or losing one or more electrons.(Note: Z>2)
enumeration	Molecule	A group of atoms so united and combined by chemical affinity that they form a complete, integrated whole, being the smallest portion of any particular compound that can exist in a free state
enumeration	Neutron	An elementary particle that has no net charge and is a constituent of atomic nuclei, and that has a mass slightly large than a proton (1.673 x 10^(-24) gram.)

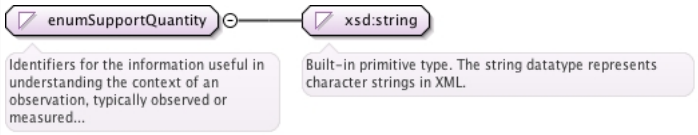
	enumeration	Proton	An elementary particle that is a constituent of all atomic nuclei, that carries a positive charge numerically equal to the charge of an electron, and that has a mass of 1.673 x 10^(-24) gram.
Used by	Element	ParticleType	

Source

```
<xsd:simpleType name="enumParticleType">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for the characterization of the kind of particle
 observed by the measurement.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Aerosol">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A suspension of fine solid or liquid particles in a gas.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="AlphaParticle">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A positively charged nuclear particle that consists of two
 protons and two neutrons.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Atom">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Matter consisting of a nucleus surrounded by electrons
 which has no net charge.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Dust">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Free microscopic particles of solid material.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Electron">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An elementary particle consisting of a charge of negative
 electricity equal to about 1.602 x 10^(-19) Coulomb and having a mass when at rest of about
 9.109534 x 10^(-28) gram.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Ion">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An atom that has acquired a net electric charge by gaining
 or losing one or more electrons.(Note: Z>2)</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Molecule">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A group of atoms so united and combined by chemical
 affinity that they form a complete, integrated whole, being the smallest portion of any particular
 compound that can exist in a free state</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Neutron">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An elementary particle that has no net charge and is a
 constituent of atomic nuclei, and that has a mass slightly large than a proton (1.673 x 10^(-24)
 gram.)</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Proton">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An elementary particle that is a constituent of all atomic
 nuclei, that carries a positive charge numerically equal to the charge of an electron, and that has
 a mass of 1.673 x 10^(-24) gram.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type enumSupportQuantity

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers for the information useful in understanding the context of an observation, typically observed or measured coincidentally

	with a physical observation.
Diagram	
Type	restriction of xsd:string

Facets

enumeration	InstrumentMode	An indication of a state (mode) in which the instrument is operating. How a mode influences the interpretation and representation of data is described in instrument related documentation.
enumeration	Other	Not classified with more specific terms. The context of its usage may be described in related text.
enumeration	Positional	The specification of the location of an object or measurement within a reference coordinate system. The position is usually expressed as a set of values corresponding to the location along a set of orthogonal axes together with the date/time of the observation.
enumeration	Temporal	Pertaining to time.
enumeration	Velocity	Rate of change of position. Also used for the average velocity of a collection of particles, also referred to as "bulk velocity".

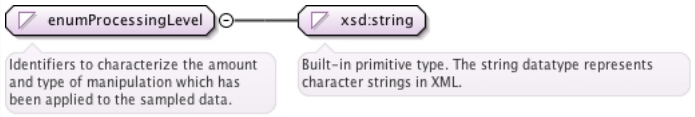
Used by	Element	SupportQuantity

Source

```
<xsd:simpleType name="enumSupportQuantity">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for the information useful in understanding
 the context of an observation, typically observed or measured coincidentally with a physical
 observation.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="InstrumentMode">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An indication of a state (mode) in which the instrument
 is operating. How a mode influences the interpretation and representation of data is described in
 instrument related documentation.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Other">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Not classified with more specific terms. The context of its
 usage may be described in related text.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Positional">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The specification of the location of an object or
 measurement within a reference coordinate system. The position is usually expressed as a set of
 values corresponding to the location along a set of orthogonal axes together with the date/time of
 the observation.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Temporal">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Pertaining to time.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Velocity">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Rate of change of position. Also used for the average
 velocity of a collection of particles, also referred to as "bulk velocity".</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type enumProcessingLevel

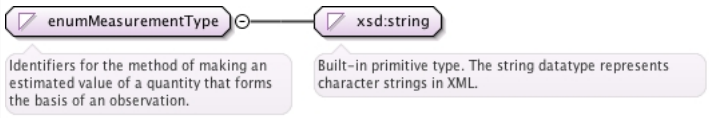
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers to characterize the amount and type of manipulation which has been applied to the sampled data.

Diagram			
Type	restriction of xsd:string		
Facets	enumeration	`Calibrated`	Data wherein sensor outputs have been convolved with instrument response function, often irreversibly, to yield data in physical units.
	enumeration	`Raw`	Data in its original state with no processing to account for calibration!!!
	enumeration	`Uncalibrated`	Duplicate data are removed from the data stream and data are time ordered. Values are not adjusted for any potential biases or external factors.
Used by	Element	ProcessingLevel	

Source

```
<xsd:simpleType name="enumProcessingLevel">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers to characterize the amount and type of manipulation
 which has been applied to the sampled data.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Calibrated">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Data wherein sensor outputs have been convolved
 with instrument response function, often irreversibly, to yield data in physical units.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Raw">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Data in its original state with no processing to account
 for calibration!!!</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Uncalibrated">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Duplicate data are removed from the data stream and
 data are time ordered. Values are not adjusted for any potential biases or external factors.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type `enumMeasurementType`

Namespace	http://impex-fp7.oeaw.ac.at		
Annotations	`Identifiers for the method of making an estimated value of a quantity that forms the basis of an observation.`		
Diagram			
Type	restriction of xsd:string		
Facets	enumeration	`Current`	Direct measurement of the electric curreny
	enumeration	`ActivityIndex`	An indication, derived from one or more measurements, of the level of activity of an object or region, such as sunspot number, F10.7 flux, Dst, or the Polar Cap Indices.
	enumeration	`Dopplergram`	A map or image depicting the spatial distribution of line-of-sight velocities of the observed object.
	enumeration	`Dust`	Free microscopic particles of solid material.
	enumeration	`ElectricField`	A region of space around a charged particle, or between two voltages within which a force is exerted on charged objects in its vicinity. An electric field is the electric force per

		unit charge.
enumeration	EnergeticParticles	Pieces of matter that are moving very fast. Energetic particles include protons, electrons, neutrons, neutrinos, the nuclei of atoms, and other sub-atomic particles.
enumeration	Ephemeris	The spatial coordinates of a body as a function of time. When used as an Instrument Type it represents the process or methods used to generate spatial coordinates.
enumeration	ImageIntensity	Measurements of the two-dimensional distribution of the intensity of photons from some region or object such as the Sun or the polar auroral regions; can be in any wavelength band, and polarized, etc.
enumeration	InstrumentStatus	A quantity directly related to the operation or function of an instrument.
enumeration	IonComposition	In situ measurements of the relative flux or density of electrically charged particles in the space environment. May give simple fluxes, but full distribution functions are sometimes measured.
enumeration	Irradiance	Irradiance - A radiometric term for the power of electromagnetic radiation at a surface, per unit area. "Irradiance" is used when the electromagnetic radiation is incident on the surface. Irradiance data may be reported in any units (i.e. counts/s) due to, for example, being at a particular wavelength, or to being a not-fully-calibrated relative measurement.
enumeration	MagneticField	A region of space near a magnetized body where magnetic forces can be detected (as measured by methods such as Zeeman splitting, etc.).
enumeration	Magnetogram	Measurements of the vector or line-of-sight magnetic field determined from remote sensing measurements of the detailed structure of spectral lines, including their splitting and polarization. ("Magnetogram.")
enumeration	NeutralAtomImages	Measurements of neutral atom fluxes as a function of look direction; often related to remote energetic charged particles that lose their charge through charge-exchange and then reach the detector on a line-of-sight trajectory.
enumeration	NeutralGas	Measurements of neutral atomic and molecular components of a gas.
enumeration	Profile	Measurements of a quantity as a function of height above an object such as the limb of a body.
enumeration	Radiance	A radiometric measurement that describes the amount of electromagnetic radiation that passes through or is emitted from a particular area, and falls within a given solid angle in a specified direction. They are used to characterize both emission from diffuse sources and reflection from diffuse surfaces.
enumeration	Spectrum	The distribution of a characteristic of a physical system or phenomenon, such as the energy emitted by a radiant source, arranged in the order of wavelengths.
enumeration	ThermalPlasma	Measurements of the plasma in the energy regime where the most of the plasma occurs. May be the basic fluxes in the form of distribution functions or the derived bulk parameters (density, flow velocity, etc.).
enumeration	Waves	Data resulting from observations of wave experiments and natural wave phenomena. Wave experiments are typically active and natural wave phenomena are passive. Examples of wave experiments include coherent/incoherent scatter radars, radio soundings, VLF propagation studies, ionospheric scintillation of beacon satellite signals, etc. Examples of natural wave phenomena include micropulsations, mesospheric gravity

			waves, auroral/plasmaspheric hiss, Langmuir waves, AKR, Jovian decametric radiation, solar radio bursts, etc.
	enumeration	Waves.Active	Exerting an influence or producing a change or effect. An active measurement is one which produces a transmission or excitation as a part of the measurement cycle.
	enumeration	Waves.Passive	Movement or effect produced by outside influence. A passive measurement is one which does not produce a transmission or excitation as a part of the measurement cycle.
Used by	Element	MeasurementType	

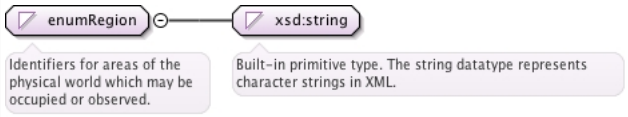
Source

```
<xsd:simpleType name="enumMeasurementType">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for the method of making an estimated value of a
 quantity that forms the basis of an observation.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Current">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Direct measurement of the electric curreny</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="ActivityIndex">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An indication, derived from one or more measurements, of
 the level of activity of an object or region, such as sunspot number, F10.7 flux, Dst, or the Polar
 Cap Indices.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Dopplergram">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A map or image depicting the spatial distribution of line-
of-sight velocities of the observed object.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Dust">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Free microscopic particles of solid material.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="ElectricField">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A region of space around a charged particle, or between two
 voltages within which a force is exerted on charged objects in its vicinity. An electric field is
 the electric force per unit charge.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="EnergeticParticles">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Pieces of matter that are moving very fast. Energetic
 particles include protons, electrons, neutrons, neutrinos, the nuclei of atoms, and other sub-
atomic particles.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Ephemeris">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The spatial coordinates of a body as a function of time.
 When used as an Instrument Type it represents the process or methods used to generate spatial
 coordinates.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="ImageIntensity">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Measurements of the two-dimensional distribution of the
 intensity of photons from some region or object such as the Sun or the polar auroral regions; can
 be in any wavelength band, and polarized, etc.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="InstrumentStatus">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A quantity directly related to the operation or function of
 an instrument.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="IonComposition">
      <xsd:annotation>
```

```
        <xsd:documentation xml:lang="en">In situ measurements of the relative flux or density
 of electrically charged particles in the space environment. May give simple fluxes, but full
 distribution functions are sometimes measured.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Irradiance">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Irradiance - A radiometric term for the power
 of electromagnetic radiation at a surface, per unit area. "Irradiance" is used when the
 electromagnetic radiation is incident on the surface. Irradiance data may be reported in any units
 (i.e. counts/s) due to, for example, being at a particular wavelength, or to being a not-fully-
calibrated relative measurement.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="MagneticField">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A region of space near a magnetized body where magnetic
 forces can be detected (as measured by methods such as Zeeman splitting, etc.).</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Magnetogram">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Measurements of the vector or line-of-sight magnetic field
 determined from remote sensing measurements of the detailed structure of spectral lines, including
 their splitting and polarization. ("Magnetogram.")</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="NeutralAtomImages">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Measurements of neutral atom fluxes as a function of look
 direction; often related to remote energetic charged particles that lose their charge through
 charge-exchange and then reach the detector on a line-of-sight trajectory.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="NeutralGas">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Measurements of neutral atomic and molecular components of
 a gas.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Profile">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Measurements of a quantity as a function of height above an
 object such as the limb of a body.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Radiance">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A radiometric measurement that describes the amount of
 electromagnetic radiation that passes through or is emitted from a particular area, and falls
 within a given solid angle in a specified direction. They are used to characterize both emission
 from diffuse sources and reflection from diffuse surfaces.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Spectrum">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The distribution of a characteristic of a physical
 system or phenomenon, such as the energy emitted by a radiant source, arranged in the order of
 wavelengths.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="ThermalPlasma">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Measurements of the plasma in the energy regime where the
 most of the plasma occurs. May be the basic fluxes in the form of distribution functions or the
 derived bulk parameters (density, flow velocity, etc.).</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Waves">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Data resulting from observations of wave experiments
 and natural wave phenomena. Wave experiments are typically active and natural wave phenomena
 are passive. Examples of wave experiments include coherent/incoherent scatter radars, radio
 soundings, VLF propagation studies, ionospheric scintillation of beacon satellite signals, etc.
 Examples of natural wave phenomena include micropulsations, mesospheric gravity waves, auroral/
plasmaspheric hiss, Langmuir waves, AKR, Jovian decametric radiation, solar radio bursts, etc.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Waves.Active">
      <xsd:annotation>
```

```
        <xsd:documentation xml:lang="en">Exerting an influence or producing a change or effect. An
 active measurement is one which produces a transmission or excitation as a part of the measurement
 cycle.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Waves.Passive">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Movement or effect produced by outside influence. A passive
 measurement is one which does not produce a transmission or excitation as a part of the measurement
 cycle.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type enumRegion

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers for areas of the physical world which may be occupied or observed.
Diagram	
Type	restriction of xsd:string

Facets

enumeration	Asteroid	A small extraterrestrial body consisting mostly of rock and metal that is in orbit around the sun.
enumeration	Callisto	A moon of the planet Jupiter, the second largest after Ganymede and the third-largest in the solar system
enumeration	Comet	A relatively small extraterrestrial body consisting of a frozen mass that travels around the sun in a highly elliptical orbit.
enumeration	Earth	The third planet from the sun in our solar system.
enumeration	Earth.Magnetosheath	The region between the bow shock and the magnetopause, characterized by very turbulent plasma.
enumeration	Earth.Magnetosphere	The region of space above the atmosphere or surface of the planet, and bounded by the magnetopause, that is under the direct influence of the planet's magnetic field.
enumeration	Earth.Magnetosphere.Magnetotail	The region on the night side of the body where the magnetic filed is stretched backwards by the force of the solar wind. For Earth, the magnetotail begins at a night-side radial distance of 10 Re (X > -10Re).
enumeration	Earth.Magnetosphere.Main	The region of the magnetosphere where the magnetic field lines are closed, but does not include the gaseous region gravitationally bound to the body.
enumeration	Earth.Magnetosphere.Polar	The region near the pole of a body. For a magnetosphere the polar region is the area where magnetic field lines are open and includes the auroral zone.
enumeration	Earth.Magnetosphere.RadiationBelt	The region within a magnetosphere where high-energy particles could potentially be trapped in a magnetic field.
enumeration	Earth.NearSurface	The gaseous and possibly ionized environment of a body extending from the surface to some specified altitude. For the Earth, this altitude is 2000 km.
enumeration	Earth.NearSurface.Atmosphere	The neutral gases surrounding a body that extends from the surface and is bound to the body by virtue of the gravitational attraction.
enumeration	Earth.NearSurface.AuroralRegion	The region in the atmospheric where electrically-charged particles bombarding the upper atmosphere of a planet in the presence of a magnetic

		field produce an optical phenomenon.
enumeration	Earth.NearSurface.EquatorialRegion	A region centered on the equator and limited in latitude by approximately 23 degrees north and south of the equator.
enumeration	Earth.NearSurface.Ionosphere	The charged or ionized gases surrounding a body that are nominally bound to the body by virtue of the gravitational attraction.
enumeration	Earth.NearSurface.Ionosphere.DRegion	The region of the ionosphere that exists approximately 50 to 95 km above the surface of the Earth. One of several layers in the ionosphere.
enumeration	Earth.NearSurface.Ionosphere.ERegion	A layer of ionised gas occurring at 90-150km above the ground. One of several layers in the ionosphere. Also called the The Kennelly-Heaviside layer.
enumeration	Earth.NearSurface.Ionosphere.FRegion	A layer that contains ionized gases at a height of around 150-800 km above sea level, placing it in the thermosphere. the F region has the highest concentration of free electrons and ions anywhere in the atmosphere. It may be thought of as comprising two layers, the F1-and F2-layers. One of several layers in the ionosphere. Also known as the Appleton layer.
enumeration	Earth.NearSurface.Ionosphere.Topside	The region at the upper most areas of the ionosphere.
enumeration	Earth.NearSurface.Mesosphere	The layer of the atmosphere that extends from the Stratosphere to a range of 80 km to 85 km, temperature decreasing with height.
enumeration	Earth.NearSurface.Plasmasphere	A region of the magnetosphere consisting of low energy (cool) plasma. It is located above the ionosphere. The outer boundary of the plasmasphere is known as the plasmapause, which is defined by an order of magnitude drop in plasma density.
enumeration	Earth.NearSurface.PolarCap	The areas of the globe surrounding the poles and consisting of the region north of 60 degrees north latitude an the region south of 60 degrees south latitude.
enumeration	Earth.NearSurface.SouthAtlanticAnomalyRegion	The area where the Earth's inner van Allen radiation belt makes its closest approach to the planet's surface. The result is that, for a given altitude, the radiation intensity is higher over this region than elsewhere.
enumeration	Earth.NearSurface.Stratosphere	The layer of the atmosphere that extends from the troposphere to about 30 km, temperature increases with height. The stratosphere contains the ozone layer.
enumeration	Earth.NearSurface.Thermosphere	The layer of the atmosphere that extends from the Mesosphere to 640+ km, temperature increasing with height.
enumeration	Earth.NearSurface.Troposphere	The lowest layer of the atmosphere which begins at the surface and extends to between 7 km (4.4 mi) at the poles and 17 km (10.6 mi) at the equator, with some variation due to weather factors.
enumeration	Earth.Surface	The outermost area of a solid object.
enumeration	Enceladus	One of the innermost moons of Saturn.
enumeration	Europa	The sixth-closest moon of the planet Jupiter
enumeration	Ganymede	The biggest moon of Jupiter planet in our solar system.
enumeration	Heliosphere	The solar atmosphere extending roughly from the outer corona to the edge of the solar plasma at the heliopause separating primarily solar plasma from interstellar plasma.
enumeration	Heliosphere.Heliosheath	The region extending radially outward from the heliospheric termination shock and in which the decelerated solar wind plasma is still significant.
enumeration	Heliosphere.Inner	The region of the heliosphere extending radially

		outward from the solar coronal base to just inside 1 AU.
enumeration	Heliosphere.NearEarth	The heliospheric region near the Earth which extends to and includes the area near the L1 and L2 Lagrange point.
enumeration	Heliosphere.Outer	The region of the heliosphere extending radially outward from just outside 1 AU to the heliospheric termination shock.
enumeration	Heliosphere.Remote1AU	A roughly toroidal region that includes the Earth's orbit, but exclusive of the region near the Earth.
enumeration	Interstellar	The region between stars outside of the star's heliopause.
enumeration	Io	The innermost of the four Galilean moons of the planet Jupiter
enumeration	Jupiter	The fifth planet from the sun in our solar system.
enumeration	Jupiter.Magnetosphere	The magnetosphere of the fifth planet from the sun in our solar system.
enumeration	Mars	The forth planet from the sun in our solar system.
enumeration	Mercury	The first planet from the sun in our solar system.
enumeration	Mercury.Magnetosphere	The magnetosphere of the first planet from the sun in our solar system.
enumeration	Neptune	The seventh planet from the sun in our solar system.
enumeration	Planet	There are eigth planets in the solar system.
enumeration	Planet.Magnetosphere	The magnetosphere of one of the planets in the solar system.
enumeration	Pluto	The ninth (sub)planet from the sun in our solar system.
enumeration	Rhea	The second-largest moon of Saturn and the ninth largest moon in the Solar System
enumeration	Saturn	The sixth planet from the sun in our solar system.
enumeration	Saturn.Magnetosphere	The magnetosphere of the sixth planet from the sun in our solar system.
enumeration	Sun	The star upon which our solar system is centered.
enumeration	Sun.Chromosphere	The region of the Sun's (or a star's) atmosphere above the temperature minimum and below the Transition Region. The solar chromosphere is approximately 400 km to 2100 km above the photosphere, and characterized by temperatures from 4500 - 28000 K.
enumeration	Sun.Corona	The outermost atmospheric region of the Sun or a star, characterized by ionization temperatures above 10^5 K. The solar corona starts at about 2100 km above the photosphere; there is no generally defined upper limit.
enumeration	Sun.Interior	The region inside the body which is not visible from outside the body.
enumeration	Sun.Photosphere	The atmospheric layer of the Sun or a star from which continuum radiation, especially optical, is emitted to space. For the Sun, the photosphere is about 500 km thick.
enumeration	Sun.TransitionRegion	A very narrow (<100 km) layer between the chromosphere and the corona where the temperature rises abruptly from about 8000 to about 500,000 K.
enumeration	Titan	The largest moon of Saturn
enumeration	Uranus	The eighth planet from the sun in our solar system.
enumeration	Venus	The second planet from the sun in our solar system.

Used by	Elements	ObservatoryRegion, ObservedRegion

Source

```
<xsd:simpleType name="enumRegion">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for areas of the physical world which may be
 occupied or observed.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Asteroid">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A small extraterrestrial body consisting mostly of rock and
 metal that is in orbit around the sun.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Callisto">
      <xsd:annotation>
        <xsd:documentation>A moon of the planet Jupiter, the second largest after Ganymede and the
 third-largest in the solar system</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Comet">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A relatively small extraterrestrial body consisting of a
 frozen mass that travels around the sun in a highly elliptical orbit.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Earth">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The third planet from the sun in our solar system.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Earth.Magnetosheath">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region between the bow shock and the magnetopause,
 characterized by very turbulent plasma.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Earth.Magnetosphere">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region of space above the atmosphere or surface of
 the planet, and bounded by the magnetopause, that is under the direct influence of the planet's
 magnetic field.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Earth.Magnetosphere.Magnetotail">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region on the night side of the body where the magnetic
 filed is stretched backwards by the force of the solar wind. For Earth, the magnetotail begins at a
 night-side radial distance of 10 Re (X > -10Re).</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Earth.Magnetosphere.Main">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region of the magnetosphere where the magnetic field
 lines are closed, but does not include the gaseous region gravitationally bound to the body.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Earth.Magnetosphere.Polar">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region near the pole of a body. For a magnetosphere
 the polar region is the area where magnetic field lines are open and includes the auroral zone.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Earth.Magnetosphere.RadiationBelt">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region within a magnetosphere where high-energy
 particles could potentially be trapped in a magnetic field.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Earth.NearSurface">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The gaseous and possibly ionized environment of a body
 extending from the surface to some specified altitude. For the Earth, this altitude is 2000 km.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Earth.NearSurface.Atmosphere">
      <xsd:annotation>
```

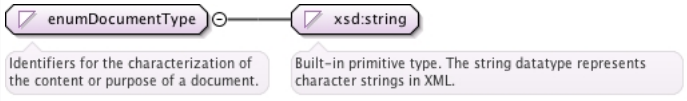
```
        <xsd:documentation xml:lang="en">The neutral gases surrounding a body that extends from the
 surface and is bound to the body by virtue of the gravitational attraction.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Earth.NearSurface.AuroralRegion">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region in the atmospheric where electrically-charged
 particles bombarding the upper atmosphere of a planet in the presence of a magnetic field produce
 an optical phenomenon.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Earth.NearSurface.EquatorialRegion">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A region centered on the equator and limited in latitude by
 approximately 23 degrees north and south of the equator.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Earth.NearSurface.Ionosphere">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The charged or ionized gases surrounding a body that are
 nominally bound to the body by virtue of the gravitational attraction.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Earth.NearSurface.Ionosphere.DRegion">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The layer of the ionosphere that exists approximately 50 to
 95 km above the surface of the Earth. One of several layers in the ionosphere.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Earth.NearSurface.Ionosphere.ERegion">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A layer of ionised gas occurring at 90-150km above the
 ground. One of several layers in the ionosphere. Also called the The Kennelly-Heaviside layer.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Earth.NearSurface.Ionosphere.FRegion">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A layer that contains ionized gases at a height of
 around 150-800 km above sea level, placing it in the thermosphere. the F region has the highest
 concentration of free electrons and ions anywhere in the atmosphere. It may be thought of as
 comprising two layers, the F1-and F2-layers. One of several layers in the ionosphere. Also known as
 the Appleton layer.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Earth.NearSurface.Ionosphere.Topside">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region at the upper most areas of the ionosphere.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Earth.NearSurface.Mesosphere">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The layer of the atmosphere that extends from the
 Stratosphere to a range of 80 km to 85 km, temperature decreasing with height.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Earth.NearSurface.Plasmasphere">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A region of the magnetosphere consisting of low energy
 (cool) plasma. It is located above the ionosphere. The outer boundary of the plasmasphere is
 known as the plasmapause, which is defined by an order of magnitude drop in plasma density.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Earth.NearSurface.PolarCap">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The areas of the globe surrounding the poles and consisting
 of the region north of 60 degrees north latitude an the region south of 60 degrees south
 latitude.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Earth.NearSurface.SouthAtlanticAnomalyRegion">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region where the Earth's inner van Allen radiation belt
 makes its closest approach to the planet's surface. The result is that, for a given altitude, the
 radiation intensity is higher over this region than elsewhere.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Earth.NearSurface.Stratosphere">
      <xsd:annotation>
```

```
        <xsd:documentation xml:lang="en">The layer of the atmosphere that extends from the
troposphere to about 30 km, temperature increases with height. The stratosphere contains the ozone
layer.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Earth.NearSurface.Thermosphere">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The layer of the atmosphere that extends from the
Mesosphere to 640+ km, temperature increasing with height.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Earth.NearSurface.Troposphere">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The lowest layer of the atmosphere which begins at the
surface and extends to between 7 km (4.4 mi) at the poles and 17 km (10.6 mi) at the equator, with
some variation due to weather factors.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Earth.Surface">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The outermost area of a solid object.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Enceladus">
      <xsd:annotation>
        <xsd:documentation>One of the innermost moons of Saturn.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Europa">
      <xsd:annotation>
        <xsd:documentation>The sixth-closest moon of the planet Jupiter</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Ganymede">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The biggest moon of Jupiter planet in our solar system.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Heliosphere">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The solar atmosphere extending roughly from the outer
corona to the edge of the solar plasma at the heliopause separating primarily solar plasma from
interstellar plasma.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Heliosphere.Heliosheath">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region extending radially outward from the heliospheric
termination shock and in which the decelerated solar wind plasma is still significant.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Heliosphere.Inner">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region of the heliosphere extending radially outward
from the solar coronal base to just inside 1 AU.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Heliosphere.NearEarth">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The heliospheric region near the Earth which extends to and
includes the area near the L1 and L2 Lagrange point.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Heliosphere.Outer">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region of the heliosphere extending radially outward
from just outside 1 AU to the heliospheric termination shock.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Heliosphere.Remote1AU">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A roughly toroidal region that includes the Earth's orbit,
but exclusive of the region near the Earth.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Interstellar">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region between stars outside of the star's
heliopause.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
```

```
    <xsd:enumeration value="Io">
      <xsd:annotation>
        <xsd:documentation>The innermost of the four Galilean moons of the planet Jupiter</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Jupiter">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The fifth planet from the sun in our solar system.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Jupiter.Magnetosphere">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The magnetosphere of the fifth planet from the sun in our
 solar system.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Mars">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The forth planet from the sun in our solar system.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Mercury">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The first planet from the sun in our solar system.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Mercury.Magnetosphere">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The magnetosphere of the first planet from the sun in our
 solar system.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Neptune">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The seventh planet from the sun in our solar system.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Planet">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">There are eigth planets in the solar system.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Planet.Magnetosphere">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The magnetosphere of one of the planets in the solar
 system.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Pluto">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The ninth (sub)planet from the sun in our solar system.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Rhea">
      <xsd:annotation>
        <xsd:documentation>The second-largest moon of Saturn and the ninth largest moon in the Solar
 System</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Saturn">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The sixth planet from the sun in our solar system.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Saturn.Magnetosphere">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The magnetosphere of the sixth planet from the sun in our
 solar system.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Sun">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The star upon which our solar system is centered.</
xsd:documentation>
      </xsd:annotation>
```

```
    </xsd:enumeration>
    <xsd:enumeration value="Sun.Chromosphere">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region of the Sun's (or a star's) atmosphere above
 the temperature minimum and below the Transition Region. The solar chromosphere is approximately
 400 km to 2100 km above the photosphere, and characterized by temperatures from 4500 - 28000 K.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Sun.Corona">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The outermost atmospheric region of the Sun or a star,
 characterized by ionization temperatures above 10^5 K. The solar corona starts at about 2100 km
 above the photosphere; there is no generally defined upper limit.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Sun.Interior">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region inside the body which is not visible from
 outside the body.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Sun.Photosphere">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The atmospheric layer of the Sun or a star from which
 continuum radiation, especially optical, is emitted to space. For the Sun, the photosphere is about
 500 km thick.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Sun.TransitionRegion">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A very narrow (<100 km) layer between the chromosphere
 and the corona where the temperature rises abruptly from about 8000 to about 500,000 K.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Titan">
      <xsd:annotation>
        <xsd:documentation>The largest moon of Saturn</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Uranus">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The eighth planet from the sun in our solar system.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Venus">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The second planet from the sun in our solar system.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type enumDocumentType

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers for the characterization of the content or purpose of a document.
Diagram	
Type	restriction of xsd:string

Facets

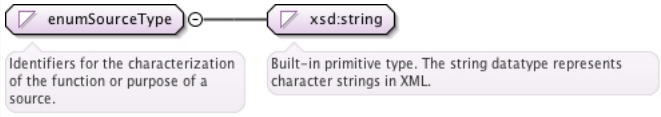
enumeration	Other	
enumeration	Poster	A set of information arranged on a single page or sheet, typically in a large format.
enumeration	Presentation	A set of information that is used when communicating to an audience.
enumeration	Report	A document which describes the findings of some individual or group.
enumeration	Specification	A detailed description of the requirements and other aspects of an object or component

			that may be used to develop an implementation.
	enumeration	TechnicalNote	A document summarizing the performance and other technical characteristics of a product, machine, component, subsystem or software in sufficient detail to be used by an engineer or researcher.
	enumeration	WhitePaper	An authoritative report giving information or proposals on an issue.
Used by	Element	DocumentType	

Source

```
<xsd:simpleType name="enumDocumentType">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for the characterization of the content or purpose
 of a document.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Other">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
        </xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Poster">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A set of information arranged on a single page or sheet,
 typically in a large format.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Presentation">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A set of information that is used when communicating to an
 audience.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Report">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A document which describes the findings of some individual
 or group.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Specification">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A detailed description of the requirements and
 other aspects of an object or component that may be used to develop an implementation.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="TechnicalNote">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A document summarizing the performance and other technical
 characteristics of a product, machine, component, subsystem or software in sufficient detail to be
 used by an engineer or researcher.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="WhitePaper">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An authoritative report giving information or proposals on
 an issue.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type enumSourceType

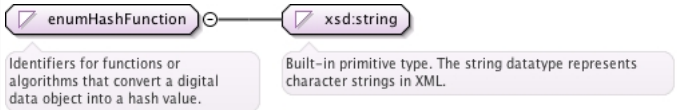
Namespace	http://impex-fp7.oeaw.ac.at		
Annotations	Identifiers for the characterization of the function or purpose of a source.		
Diagram			
Type	restriction of xsd:string		
Facets	enumeration	Ancillary	A complementary item which can be subordinate, subsidiary, auxiliary, supplementary to the primary item.

	enumeration	Browse	A representation of an image which is suitable to reveal most or all of the details of the image.
	enumeration	Data	A collection of organized information, usually the results of experience, observation or experiment, or a set of premises. This may consist of numbers, words, or images, particularly as measurements or observations of a set of variables.
	enumeration	Layout	The structured arrangement of items in a collection.
	enumeration	Thumbnail	A small representation of an image which is suitable to infer what the full-sized imaged is like.
Used by	Element	SourceType	

Source

```
<xsd:simpleType name="enumSourceType">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for the characterization of the function or purpose
 of a source.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Ancillary">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A complementary item which can be subordinate, subsidiary,
 auxiliary, supplementary to the primary item.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Browse">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A representation of an image which is suitable to reveal
 most or all of the details of the image.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Data">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A collection of organized information, usually the results
 of experience, observation or experiment, or a set of premises. This may consist of numbers, words,
 or images, particularly as measurements or observations of a set of variables.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Layout">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The structured arrangement of items in a collection.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Thumbnail">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A small representation of an image which is suitable to
 infer what the full-sized imaged is like.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type enumHashFunction

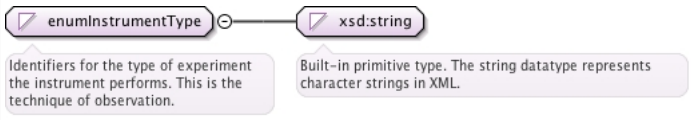
Namespace	http://impex-fp7.oeaw.ac.at		
Annotations	Identifiers for functions or algorithms that convert a digital data object into a hash value.		
Diagram			
Type	restriction of xsd:string		
Facets	enumeration	MD5	Message Digest 5 (MD5) is a 128-bit message digest algorithm created in 1991 by Professor Ronald Rivest.
	enumeration	SHA1	Secure Hash Algorithm (SHA), a 160-bit message digest algorithm developed by the NSA and described in Federal Information Processing Standard (FIPS) publication 180-1.

	enumeration	SHA256	Secure Hash Algorithm (SHA), a 256-bit message digest algorithm developed by the NSA and described in Federal Information Processing Standard (FIPS) publication 180-1.
Used by	Element	HashFunction	

Source

```
<xsd:simpleType name="enumHashFunction">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for functions or algorithms that convert a digital
 data object into a hash value.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="MD5">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Message Digest 5 (MD5) is a 128-bit message digest
 algorithm created in 1991 by Professor Ronald Rivest.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="SHA1">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Secure Hash Algorithm (SHA), a 160-bit message digest
 algorithm developed by the NSA and described in Federal Information Processing Standard (FIPS)
 publication 180-1.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="SHA256">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Secure Hash Algorithm (SHA), a 256-bit message digest
 algorithm developed by the NSA and described in Federal Information Processing Standard (FIPS)
 publication 180-1.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type `enumInstrumentType`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers for the type of experiment the instrument performs. This is the technique of observation.
Diagram	

Type	restriction of xsd:string		
Facets	enumeration	Antenna	A sensor used to measure electric potential.
	enumeration	Channeltron	An instrument that detects electrons, ions, and UV-radiation, according to the principle of a secondary emission multiplier. It is typically used in electron spectroscopy and mass spectrometry.
	enumeration	Coronograph	An instrument which can image things very close to the Sun by using a disk to block the Sun's bright surface which reveals the faint solar corona and other celestial objects.
	enumeration	DoubleSphere	A dipole antenna of which the active (sensor) elements are small spheres located at the ends of two wires deployed in the equatorial plane, on opposite sides of a spinning spacecraft.
	enumeration	DustDetector	An instrument which determines the mass and speed of ambient dust particles.
	enumeration	ElectronDriftInstrument	An active experiment to measure the electron drift velocity based on sensing the displacement of a weak beam of electrons after one gyration in the ambient magnetic field.
	enumeration	ElectrostaticAnalyser	An instrument which uses charged plates to analyze the mass, charge and kinetic energies of charged particles which enter the instrument.
	enumeration	EnergeticParticleInstrument	An instrument that measures fluxes of charged particles as a function of time, direction of motion, mass, charge and/or species.

enumeration	FaradayCup	An instrument consisting of an electrode from which electrical current is measured while a charged particle beam (electrons or ions) impinges on it. Used to determine energy spectrum and sometimes ion composition of the impinging particles.
enumeration	FluxFeedback	A search coil whose bandwidth and signal/noise ratio are increased by the application of negative feedback at the sensor (flux) level by driving a collocated coil with a signal from the preamplifier.
enumeration	FourierTransformSpectrograph	An instrument that determines the spectra of a radiative source, using time-domain measurements and a Fourier transform.
enumeration	GeigerMuellerTube	An instrument which measures density of ionizing radiation based on interactions with a gas.
enumeration	Imager	An instrument which samples the radiation from an area at one or more spectral ranges emitted or reflected by an object.
enumeration	ImagingSpectrometer	An instrument which is a multispectral scanner with a very large number of channels (64-256 channels) with very narrow band widths.
enumeration	Interferometer	An instrument to study the properties of two or more waves from the pattern of interference created by their superposition.
enumeration	IonChamber	A device in which the collected electrical charge from ionization in a gas-filled cavity is taken to be the proportion to some parameter (e.g. dose or exposure) of radiation field
enumeration	IonDrift	A device which measures the current produced by the displacement of ambient ions on a grid, thereby allowing the determination of the ion trajectory and velocity.
enumeration	LangmuirProbe	A monopole antenna associated with an instrument. The instrument applies a potential to the antenna which is swept to determine the voltage/current characteristic. This provides information about the plasma surrounding the probe and spacecraft.
enumeration	LongWire	A dipole antenna whose active (sensor) elements are two wires deployed in the equatorial plane on opposite sides of a spinning spacecraft, and whose length is several times greater than the spacecraft diameter.
enumeration	Magnetometer	An instrument which measures the ambient magnetic field.
enumeration	MassSpectrometer	An instrument which distinguishes chemical species in terms of their different isotopic masses.
enumeration	MicrochannelPlate	An instrument used for the detection of elementary particles, ions, ultraviolet rays and soft X-rays constructed from very thin conductive glass capillaries.
enumeration	MultispectralImager	An instrument which captures images at multiple spectral ranges.
enumeration	NeutralAtomImager	An instrument which measures the quantity and properties of neutral particles over a range of angles. Measured properties can include mass and energy.
enumeration	NeutralParticleDetector	An instrument which measures the quantity and properties of neutral particles. Measured properties can include mass and plasma bulk densities.
enumeration	ParticleCorrelator	An instrument which correlates particle flux to help identify wave/particle interactions.
enumeration	ParticleDetector	An instrument which detects particle flux!!!
enumeration	Photometer	An instrument which measures the strength of electromagnetic radiation within a spectral band which can range from ultraviolet to infrared

			and includes the visible spectrum.
	enumeration	Photopolarimeter	An instrument which measures the intensity and polarization or radiant energy. A photopolarimeter is a combination of a photometer and a polarimeter.
	enumeration	Platform	A collection of components which can be positioned and oriented as a single unit. A platform may contain other platforms. For example, a spacecraft is a platform which may have components that can be articulated and are also considered platforms.
	enumeration	ProportionalCounter	An instrument which measures energy of ionization radiation based on interactions with a gas.
	enumeration	QuadrisphericalAnalyser	An instrument used for the 3-D detection of plasma, energetic electrons and ions, and for positive-ion composition measurements.
	enumeration	Radar	An instrument that uses directional properties of returned power to infer spatial and/or other characteristics of a remote object.
	enumeration	Radiometer	An instrument for detecting or measuring radiant energy. Radiometers are commonly limited to infrared radiation.
	enumeration	ResonanceSounder	A combination of a radio receiver and a pulsed transmitter used to study the plasma surrounding a spacecraft by identifying resonances or cut-offs (of the wave dispersion relation), whose frequencies are related to the ambient plasma density and magnetic field. When the transmitter is off it is essentially a high frequency-resolution spectral power receiver.
	enumeration	RetardingPotentialAnalyser	An instrument which measures ion temperatures and ion concentrations using a planar ion trap.
	enumeration	Riometer	An instrument which measure the signal strength in various directions of the galactic radio signals. Variations in these signals are influenced by solar flare activity and geomagnetic storm and substorm processes.
	enumeration	ScintillationDetector	An instrument which detects flouresences of a material which is excited by high energy (ionizing) electromagnetic or charged particle radiation.
	enumeration	SearchCoil	An instrument which measures the time variation of the magnetic flux threading a loop by measurement of the electric potential difference induced between the ends of the wire.
	enumeration	Sounder	An instrument which measures the radiances from an object. A sounder may measure radiances at multiple spectral ranges.
	enumeration	SpacecraftPotentialControl	An instrument to control the electric potential of a spacecraft with respect to the ambient plasma by emitting a variable current of positive ions.
	enumeration	SpectralPowerReceiver	A radio receiver which determines the power spectral density of the electric or magnetic field, or both, at one or more frequencies.
	enumeration	Spectrometer	An instrument that measures the component wavelengths of light (or other electromagnetic radiation) by splitting the light up into its component wavelengths.
	enumeration	TimeOfFlight	An instrument which measures the time it takes for a particle to travel between two detectors.
	enumeration	Unspecified	A value which is not provided.
	enumeration	WaveformReceiver	A radio receiver which outputs the value of one or more components of the electric and/or magnetic field as a function of time.
Used by	Element	InstrumentType	

Source

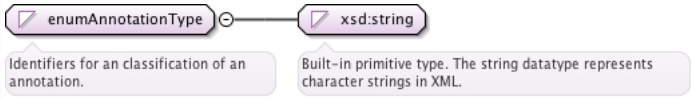
```
<xsd:simpleType name="enumInstrumentType">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for the type of experiment the instrument performs.
 This is the technique of observation.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Antenna">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A sensor used to measure electric potential.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Channeltron">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An instrument that detects electrons, ions, and UV-
radiation, according to the principle of a secondary emission multiplier. It is typically used in
 electron spectroscopy and mass spectrometry.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Coronograph">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An instrument which can image things very close to the Sun
 by using a disk to block the Sun's bright surface which reveals the faint solar corona and other
 celestial objects.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="DoubleSphere">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A dipole antenna of which the active (sensor) elements are
 small spheres located at the ends of two wires deployed in the equatorial plane, on opposite sides
 of a spinning spacecraft.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="DustDetector">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An instrument which determines the mass and speed of
 ambient dust particles.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="ElectronDriftInstrument">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An active experiment to measure the electron drift velocity
 based on sensing the displacement of a weak beam of electrons after one gyration in the ambient
 magnetic field.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="ElectrostaticAnalyser">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An instrument which uses charged plates to analyze
 the mass, charge and kinetic energies of charged particles which enter the instrument.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="EnergeticParticleInstrument">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An instrument that measures fluxes of charged particles as
 a function of time, direction of motion, mass, charge and/or species.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="FaradayCup">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An instrument consisting of an electrode from which
 electrical current is measured while a charged particle beam (electrons or ions) impinges on it.
 Used to determine energy spectrum and sometimes ion composition of the impinging particles.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="FluxFeedback">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A search coil whose bandwidth and signal/noise ratio
 are increased by the application of negative feedback at the sensor (flux) level by driving a
 collocated coil with a signal from the preamplifier.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="FourierTransformSpectrograph">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An instrument that determines the spectra of a radiative
 source, using time-domain measurements and a Fourier transform.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="GeigerMuellerTube">
      <xsd:annotation>
```

```
        <xsd:documentation xml:lang="en">An instrument which measures density of ionizing radiation
 based on interactions with a gas.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Imager">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An instrument which samples the radiation from an area at
 one or more spectral ranges emitted or reflected by an object.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="ImagingSpectrometer">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An instrument which is a multispectral scanner with a very
 large number of channels (64-256 channels) with very narrow band widths.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Interferometer">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An instrument to study the properties of two or more waves
 from the pattern of interference created by their superposition.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="IonChamber">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A device in which the collected electrical charge from
 ionization in a gas-filled cavity is taken to be the proportion to some parameter (e.g. dose or
 exposure) of radiation field</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="IonDrift">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A device which measures the current produced by the
 displacement of ambient ions on a grid, thereby allowing the determination of the ion trajectory
 and velocity.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="LangmuirProbe">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A monopole antenna associated with an instrument. The
 instrument applies a potential to the antenna which is swept to determine the voltage/current
 characteristic. This provides information about the plasma surrounding the probe and spacecraft.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="LongWire">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A dipole antenna whose active (sensor) elements are two
 wires deployed in the equatorial plane on opposite sides of a spinning spacecraft, and whose length
 is several times greater than the spacecraft diameter.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Magnetometer">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An instrument which measures the ambient magnetic field.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="MassSpectrometer">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An instrument which distinguishes chemical species in terms
 of their different isotopic masses.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="MicrochannelPlate">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An instrument used for the detection of elementary
 particles, ions, ultraviolet rays and soft X-rays constructed from very thin conductive glass
 capillaries.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="MultispectralImager">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An instrument which captures images at multiple spectral
 ranges.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="NeutralAtomImager">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An instrument which measures the quantity and properties
 of neutral particles over a range of angles. Measured properties can include mass and energy.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
```

```
    <xsd:enumeration value="NeutralParticleDetector">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An instrument which measures the quantity and properties
 of neutral particles. Measured properties can include mass and plasma bulk densities.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="ParticleCorrelator">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An instrument which correlates particle flux to help
 identify wave/particle interactions.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="ParticleDetector">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An instrument which detects particle flux!!!</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Photometer">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An instrument which measures the strength of
 electromagnetic radiation within a spectral band which can range from ultraviolet to infrared and
 includes the visible spectrum.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Photopolarimeter">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An instrument which measures the intensity and polarization
 or radiant energy. A photopolarimeter is a combination of a photometer and a polarimeter.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Platform">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A collection of components which can be positioned and
 oriented as a single unit. A platform may contain other platforms. For example, a spacecraft is
 a platform which may have components that can be articulated and are also considered platforms.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="ProportionalCounter">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An instrument which measures energy of ionization radiation
 based on interactions with a gas.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="QuadrisphericalAnalyser">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An instrument used for the 3-D detection of plasma,
 energetic electrons and ions, and for positive-ion composition measurements.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Radar">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An instrument that uses directional properties of returned
 power to infer spatial and/or other characteristics of a remote object.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Radiometer">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An instrument for detecting or measuring radiant energy.
 Radiometers are commonly limited to infrared radiation.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="ResonanceSounder">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A combination of a radio receiver and a pulsed transmitter
 used to study the plasma surrounding a spacecraft by identifying resonances or cut-offs (of the
 wave dispersion relation), whose frequencies are related to the ambient plasma density and magnetic
 field. When the transmitter is off it is essentially a high frequency-resolution spectral power
 receiver.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="RetardingPotentialAnalyser">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An instrument which measures ion temperatures and ion
 concentrations using a planar ion trap.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Riometer">
      <xsd:annotation>
```

```
        <xsd:documentation xml:lang="en">An instrument which measure the signal strength in various
 directions of the galactic radio signals. Variations in these signals are influenced by solar flare
 activity and geomagnetic storm and substorm processes.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="ScintillationDetector">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An instrument which detects flouresences of a material
 which is excited by high energy (ionizing) electromagnetic or charged particle radiation.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="SearchCoil">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An instrument which measures the time variation of the
 magnetic flux threading a loop by measurement of the electric potential difference induced between
 the ends of the wire.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Sounder">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An instrument which measures the radiances from an object.
 A sounder may measure radiances at multiple spectral ranges.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="SpacecraftPotentialControl">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An instrument to control the electric potential of a
 spacecraft with respect to the ambient plasma by emitting a variable current of positive ions.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="SpectralPowerReceiver">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A radio receiver which determines the power spectral
 density of the electric or magnetic field, or both, at one or more frequencies.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Spectrometer">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An instrument that measures the component wavelengths
 of light (or other electromagnetic radiation) by splitting the light up into its component
 wavelengths.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="TimeOfFlight">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An instrument which measures the time it takes for a
 particle to travel between two detectors.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Unspecified">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A value which is not provided.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="WaveformReceiver">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A radio receiver which outputs the value of one or more
 components of the electric and/or magnetic field as a function of time.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type enumAnnotationType

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers for an classification of an annotation.
Diagram	
Type	restriction of xsd:string

Facets

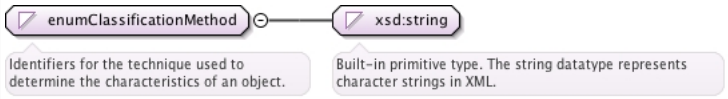
enumeration	Anomaly	An interval where measurements or observations may be adversely affected.
enumeration	Event	An action or observation which occurs at a point in time.

	enumeration	Feature	A prominent or distinctive characteristic that occurs at a location or persists over a period of time.
Used by	Element	AnnotationType	

Source

```
<xsd:simpleType name="enumAnnotationType">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for an classification of an annotation.</
xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Anomaly">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An interval where measurements or observations may be
 adversely affected.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Event">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An action or observation which occurs at a point in time.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Feature">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A prominent or distinctive characteristic that occurs at a
 location or persists over a period of time.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type `enumClassificationMethod`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers for the technique used to determine the characteristics of an object.
Diagram	

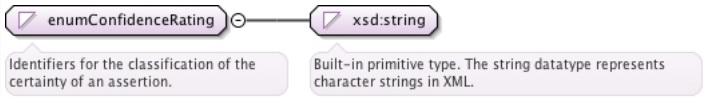
Type	restriction of xsd:string		
Facets	enumeration	Automatic	Determined by the analysis or assessment performed by a program or server.
	enumeration	Inferred	Determined by the analysis of other information or resources.
	enumeration	Inspection	Determined by the analysis or assessment performed by a person.
Used by	Element	ClassificationMethod	

Source

```
<xsd:simpleType name="enumClassificationMethod">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for the technique used to determine the
 characteristics of an object.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Automatic">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Determined by the analysis or assessment performed by a
 program or server.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Inferred">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Determined by the analysis of other information or
 resources.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Inspection">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Determined by the analysis or assessment performed by a
 person.</xsd:documentation>
      </xsd:annotation>
```

```
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type enumConfidenceRating

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers for the classification of the certainty of an assertion.
Diagram	
Type	restriction of xsd:string

Facets

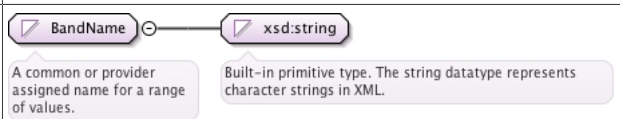
enumeration	Probable	Likely given the available evidence. Considered in the range of 4-7 on a scale of 0-10.
enumeration	Strong	Highly likely given the available evidence. Considered in the range of 7-10 on a scale of 0-10.
enumeration	Unlikely	Not likely given the available evidence. Considered in the range of 0 on a scale of 0-10.
enumeration	Weak	Slightly likely given the available evidence. Considered in the range of 1-4 on a scale of 0-10.

Used by: Elements — ConfidenceRating, LikelihoodRating

Source

```
<xsd:simpleType name="enumConfidenceRating">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for the classification of the certainty of an
 assertion.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Probable">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Likely given the available evidence. Considered in the
 range of 4-7 on a scale of 0-10.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Strong">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Highly likely given the available evidence. Considered in
 the range of 7-10 on a scale of 0-10.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Unlikely">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Not likely given the available evidence. Considered in the
 range of 0 on a scale of 0-10.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Weak">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Slightly likely given the available evidence. Considered in
 the range of 1-4 on a scale of 0-10.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

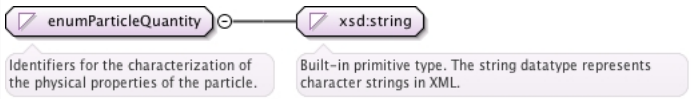
Simple Type BandName

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A common or provider assigned name for a range of values.
Diagram	
Type	xsd:string
Source	

```
<xsd:simpleType name="BandName">
  <xsd:annotation>
```

```
    <xsd:documentation xml:lang="en">A common or provider assigned name for a range of values.</
xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string"/>
</xsd:simpleType>
```

Simple Type `enumParticleQuantity`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers for the characterization of the physical properties of the particle.
Diagram	
Type	restriction of xsd:string

Facets

enumeration	ArrivalDirection	An angular measure of the direction from which an energetic particle or photon was incident on a detector. The angles may be measured in any coordinate system.
enumeration	AtomicNumberDetected	The number of protons in the nucleus of an atom as determined by a detector.
enumeration	AverageChargeState	A measure of the composite deficit (positive) or excess (negative) of electrons with respect to protons.
enumeration	ChargeState	Charge of a fully or partially stripped ion, in units of the charge of a proton. Charge state of a bare proton = 1.
enumeration	CountRate	The number of events per unit time.
enumeration	Counts	The number of detection events occurring in a detector over the detector accumulation time.
enumeration	Energy	The capacity for doing work as measured by the capability of doing work (potential energy) or the conversion of this capability to motion (kinetic energy)
enumeration	EnergyDensity	The amount of energy per unit volume.
enumeration	EnergyFlux	The amount of energy passing through a unit area in a unit time.
enumeration	FlowSpeed	The rate at which particles or energy is passing through a unit area in a unit time.
enumeration	FlowVelocity	The volume of matter passing through a unit area perpendicular to the direction of flow in a unit of time.
enumeration	Fluence	The time integral of a flux. A fluence does not have any "per unit time" in its units.
enumeration	Gyrofrequency	The number of gyrations around a magnetic guiding center (field line) a charged particle makes per unit time due to the Lorentz force.
enumeration	HeatFlux	Flow of thermal energy through a gas or plasma; typically computed as third moment of a distribution function.
enumeration	Mass	The measure of inertia (mass) of individual objects (e.g., aerosols).
enumeration	MassDensity	The mass of particles per unit volume.
enumeration	MassNumber	The total number of protons and neutrons (together known as nucleons) in an atomic nucleus.
enumeration	NumberDensity	The number of particles per unit volume.
enumeration	NumberFlux	The number of particles passing a unit area in unit time, possibly also per unit energy (or equivalent) and/or per unit look direction.
enumeration	ParticleRadius	The mean radius for a Gaussian distribution of particles with an axial ratio of 2 and a distribution width that varies as 0.5 radius. A value of zero means no cloud was detected.
enumeration	PhaseSpaceDensity	The number of particles per unit volume in

			the six-dimensional space of position and velocity.
	enumeration	PlasmaFrequency	A number-density-dependent characteristic frequency of a plasma.
	enumeration	Pressure	The force per unit area exerted by a particle distribution or field.
	enumeration	SonicMachNumber	The ratio of the bulk flow speed to the speed of sound in the medium.
	enumeration	SoundSpeed	The speed at which sound travels through a medium.
	enumeration	Temperature	A measure of the kinetic energy of random motion with respect to the average. Temperature is properly defined only for an equilibrium particle distribution (Maxwellian distribution).
	enumeration	ThermalSpeed	For a Maxwellian distribution, the difference between the mean speed and the speed within which ~69% (one sigma) of all the members of the speed distribution occur.
	enumeration	Velocity	Rate of change of position. Also used for the average velocity of a collection of particles, also referred to as "bulk velocity".
Used by	Element	ParticleQuantity	

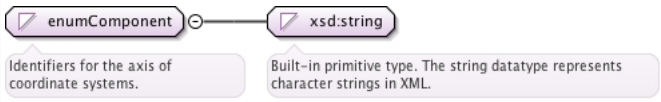
Source

```
<xsd:simpleType name="enumParticleQuantity">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for the characterization of the physical properties
 of the particle.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="ArrivalDirection">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An angular measure of the direction from which an energetic
 particle or photon was incident on a detector. The angles may be measured in any coordinate
 system.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="AtomicNumberDetected">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The number of protons in the nucleus of an atom as
 determined by a detector.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="AverageChargeState">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A measure of the composite deficit (positive) or excess
 (negative) of electrons with respect to protons.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="ChargeState">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Charge of a fully or partially stripped ion, in units of
 the charge of a proton. Charge state of a bare proton = 1.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="CountRate">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The number of events per unit time.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Counts">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The number of detection events occurring in a detector over
 the detector accumulation time.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Energy">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The capacity for doing work as measured by the capability
 of doing work (potential energy) or the conversion of this capability to motion (kinetic energy)</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="EnergyDensity">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The amount of energy per unit volume.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
```

```
    <xsd:enumeration value="EnergyFlux">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The amount of energy passing through a unit area in a unit
 time.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="FlowSpeed">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The rate at which particles or energy is passing through a
 unit area in a unit time.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="FlowVelocity">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The volume of matter passing through a unit area
 perpendicular to the direction of flow in a unit of time.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Fluence">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The time integral of a flux. A fluence does not have any
 "per unit time" in its units.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Gyrofrequency">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The number of gyrations around a magnetic guiding center
 (field line) a charged particle makes per unit time due to the Lorentz force.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="HeatFlux">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Flow of thermal energy through a gas or plasma; typically
 computed as third moment of a distribution function.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Mass">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The measure of inertia (mass) of individual objects (e.g.,
 aerosols).</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="MassDensity">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The mass of particles per unit volume.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="MassNumber">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The total number of protons and neutrons (together known as
 nucleons) in an atomic nucleus.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="NumberDensity">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The number of particles per unit volume.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="NumberFlux">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The number of particles passing a unit area in unit time,
 possibly also per unit energy (or equivalent) and/or per unit look direction.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="ParticleRadius">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The mean radius for a Gaussian distribution of particles
 with an axial ratio of 2 and a distribution width that varies as 0.5 radius. A value of zero means
 no cloud was detected.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="PhaseSpaceDensity">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The number of particles per unit volume in the six-
dimensional space of position and velocity.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="PlasmaFrequency">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A number-density-dependent characteristic frequency of a
 plasma.</xsd:documentation>
      </xsd:annotation>
```

```
    </xsd:enumeration>
    <xsd:enumeration value="Pressure">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The force per unit area exerted by a particle distribution
 or field.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="SonicMachNumber">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The ratio of the bulk flow speed to the speed of sound in
 the medium.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="SoundSpeed">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The speed at which sound travels through a medium.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Temperature">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A measure of the kinetic energy of random motion
 with respect to the average. Temperature is properly defined only for an equilibrium particle
 distribution (Maxwellian distribution).</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="ThermalSpeed">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">For a Maxwellian distribution, the difference between the
 mean speed and the speed within which ~69% (one sigma) of all the members of the speed distribution
 occur.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Velocity">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Rate of change of position. Also used for the average
 velocity of a collection of particles, also referred to as "bulk velocity".</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type enumComponent

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers for the axis of coordinate systems.
Diagram	
Type	restriction of xsd:string

Facets

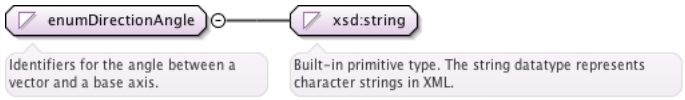
enumeration	I	Projection of a vector along the first named axis of a coordinate system. Typically the X axis, but could be the R axis for an RTN coordinate system.
enumeration	J	Projection of a vector along the second named axis of a coordinate system. Typically the Y axis, but could be the T axis for an RTN coordinate system.
enumeration	K	Projection of a vector along the third named axis of a coordinate system. Typically the Z axis, but could be the N axis for an RTN coordinate system.

Source

```
<xsd:simpleType name="enumComponent">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for the axis of coordinate systems.</
xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="I">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Projection of a vector along the first named axis of a
 coordinate system. Typically the X axis, but could be the R axis for an RTN coordinate system.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="J">
```

```
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Projection of a vector along the second named axis of a
 coordinate system. Typically the Y axis, but could be the T axis for an RTN coordinate system.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="K">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Projection of a vector along the third named axis of a
 coordinate system. Typically the Z axis, but could be the N axis for an RTN coordinate system.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type `enumDirectionAngle`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers for the angle between a vector and a base axis.
Diagram	
Type	restriction of xsd:string

Facets

enumeration	AzimuthAngle	The angle between the projection into the i-j plane of a position or measured vector and the i-axis of the coordinate system. Mathematically defined as arctan(j/i).
enumeration	ElevationAngle	The angle between the position or measured vector and the i-j plane of the coordinate system. Mathematically defined as arctan(k/SQRT(i^2+j^2)).
enumeration	PolarAngle	The angle between the position or measured vector and the k-axis of the coordinate system. Mathematically defined as arctan([SQRT(i^2+j^2)]/k).

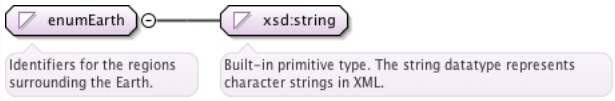
Source

```
<xsd:simpleType name="enumDirectionAngle">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for the angle between a vector and a base axis.</
xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="AzimuthAngle">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The angle between the projection into the i-j plane of
 a position or measured vector and the i-axis of the coordinate system. Mathematically defined as
 arctan(j/i).</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="ElevationAngle">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The angle between the position or measured vector and
 the i-j plane of the coordinate system. Mathematically defined as arctan(k/SQRT(i^2+j^2)).</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="PolarAngle">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The angle between the position or measured vector and
 the k-axis of the coordinate system. Mathematically defined as arctan([SQRT(i^2+j^2)]/k).</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type `enumEarth`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers for the regions surrounding the Earth.

Diagram



Type: restriction of xsd:string

Facets

enumeration	Magnetosheath	The region between the bow shock and the magnetopause, characterized by very turbulent plasma.
enumeration	Magnetosphere	The region of space above the atmosphere or surface of the planet, and bounded by the magnetopause, that is under the direct influence of the planet's magnetic field.
enumeration	Magnetosphere.Magnetotail	The region on the night side of the body where the magnetic filed is stretched backwards by the force of the solar wind. For Earth, the magnetotail begins at a night-side radial distance of 10 Re (X > -10Re).
enumeration	Magnetosphere.Main	The region of the magnetosphere where the magnetic field lines are closed, but does not include the gaseous region gravitationally bound to the body.
enumeration	Magnetosphere.Polar	The region near the pole of a body. For a magnetosphere the polar region is the area where magnetic field lines are open and includes the auroral zone.
enumeration	Magnetosphere.RadiationBelt	The region within a magnetosphere where high-energy particles could potentially be trapped in a magnetic field.
enumeration	NearSurface	The gaseous and possibly ionized environment of a body extending from the surface to some specified altitude. For the Earth, this altitude is 2000 km.
enumeration	NearSurface.Atmosphere	The neutral gases surrounding a body that extends from the surface and is bound to the body by virtue of the gravitational attraction.
enumeration	NearSurface.AuroralRegion	The region in the atmospheric where electrically-charged particles bombarding the upper atmosphere of a planet in the presence of a magnetic field produce an optical phenomenon.
enumeration	NearSurface.EquatorialRegion	A region centered on the equator and limited in latitude by approximately 23 degrees north and south of the equator.
enumeration	NearSurface.Ionosphere	The charged or ionized gases surrounding a body that are nominally bound to the body by virtue of the gravitational attraction.
enumeration	NearSurface.Ionosphere.DRegion	The layer of the ionosphere that exists approximately 50 to 95 km above the surface of the Earth. One of several layers in the ionosphere.
enumeration	NearSurface.Ionosphere.ERegion	A layer of ionised gas occurring at 90-150km above the ground. One of several layers in the ionosphere. Also called the The Kennelly-Heaviside layer.
enumeration	NearSurface.Ionosphere.FRegion	A layer that contains ionized gases at a height of around 150-800 km above sea level, placing it in the thermosphere. the F region has the highest concentration of free electrons and ions anywhere in the atmosphere. It may be thought of as comprising two layers, the F1-and F2-layers. One of several layers in the ionosphere. Also known as the Appleton layer.
enumeration	NearSurface.Ionosphere.Topside	The region at the upper most areas of the ionosphere.
enumeration	NearSurface.Mesosphere	The layer of the atmosphere that extends from the Stratosphere to a range of 80 km to 85 km, temperature decreasing with height.
enumeration	NearSurface.Plasmasphere	A region of the magnetosphere consisting of low energy (cool) plasma. It is located above

			the ionosphere. The outer boundary of the plasmasphere is known as the plasmapause, which is defined by an order of magnitude drop in plasma density.
	enumeration	NearSurface.PolarCap	The areas of the globe surrounding the poles and consisting of the region north of 60 degrees north latitude an the region south of 60 degrees south latitude.
	enumeration	NearSurface.SouthAtlanticAnomalyRegion	The location where the Earth's inner van Allen radiation belt makes its closest approach to the planet's surface. The result is that, for a given altitude, the radiation intensity is higher over this region than elsewhere.
	enumeration	NearSurface.Stratosphere	The layer of the atmosphere that extends from the troposphere to about 30 km, temperature increases with height. The stratosphere contains the ozone layer.
	enumeration	NearSurface.Thermosphere	The layer of the atmosphere that extends from the Mesosphere to 640+ km, temperature increasing with height.
	enumeration	NearSurface.Troposphere	The lowest layer of the atmosphere which begins at the surface and extends to between 7 km (4.4 mi) at the poles and 17 km (10.6 mi) at the equator, with some variation due to weather factors.
	enumeration	Surface	The outermost area of a solid object.

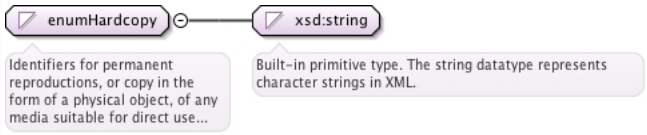
Source

```
<xsd:simpleType name="enumEarth">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for the regions surrounding the Earth.</
xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Magnetosheath">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region between the bow shock and the magnetopause,
 characterized by very turbulent plasma.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Magnetosphere">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region of space above the atmosphere or surface of
 the planet, and bounded by the magnetopause, that is under the direct influence of the planet's
 magnetic field.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Magnetosphere.Magnetotail">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region on the night side of the body where the magnetic
 filed is stretched backwards by the force of the solar wind. For Earth, the magnetotail begins at a
 night-side radial distance of 10 Re (X > -10Re).</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Magnetosphere.Main">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region of the magnetosphere where the magnetic field
 lines are closed, but does not include the gaseous region gravitationally bound to the body.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Magnetosphere.Polar">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region near the pole of a body. For a magnetosphere
 the polar region is the area where magnetic field lines are open and includes the auroral zone.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Magnetosphere.RadiationBelt">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region within a magnetosphere where high-energy
 particles could potentially be trapped in a magnetic field.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="NearSurface">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The gaseous and possibly ionized environment of a body
 extending from the surface to some specified altitude. For the Earth, this altitude is 2000 km.</
xsd:documentation>
      </xsd:annotation>
```

```
    </xsd:enumeration>
    <xsd:enumeration value="NearSurface.Atmosphere">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The neutral gases surrounding a body that extends from the
 surface and is bound to the body by virtue of the gravitational attraction.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="NearSurface.AuroralRegion">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region in the atmospheric where electrically-charged
 particles bombarding the upper atmosphere of a planet in the presence of a magnetic field produce
 an optical phenomenon.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="NearSurface.EquatorialRegion">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A region centered on the equator and limited in latitude by
 approximately 23 degrees north and south of the equator.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="NearSurface.Ionosphere">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The charged or ionized gases surrounding a body that are
 nominally bound to the body by virtue of the gravitational attraction.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="NearSurface.Ionosphere.DRegion">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The layer of the ionosphere that exists approximately 50 to
 95 km above the surface of the Earth. One of several layers in the ionosphere.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="NearSurface.Ionosphere.ERegion">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A layer of ionised gas occurring at 90-150km above the
 ground. One of several layers in the ionosphere. Also called the The Kennelly-Heaviside layer.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="NearSurface.Ionosphere.FRegion">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A layer that contains ionized gases at a height of
 around 150-800 km above sea level, placing it in the thermosphere. the F region has the highest
 concentration of free electrons and ions anywhere in the atmosphere. It may be thought of as
 comprising two layers, the F1-and F2-layers. One of several layers in the ionosphere. Also known as
 the Appleton layer.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="NearSurface.Ionosphere.Topside">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region at the upper most areas of the ionosphere.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="NearSurface.Mesosphere">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The layer of the atmosphere that extends from the
 Stratosphere to a range of 80 km to 85 km, temperature decreasing with height.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="NearSurface.Plasmasphere">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A region of the magnetosphere consisting of low energy
 (cool) plasma. It is located above the ionosphere. The outer boundary of the plasmasphere is
 known as the plasmapause, which is defined by an order of magnitude drop in plasma density.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="NearSurface.PolarCap">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The areas of the globe surrounding the poles and consisting
 of the region north of 60 degrees north latitude an the region south of 60 degrees south
 latitude.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="NearSurface.SouthAtlanticAnomalyRegion">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region where the Earth's inner van Allen radiation belt
 makes its closest approach to the planet's surface. The result is that, for a given altitude, the
 radiation intensity is higher over this region than elsewhere.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="NearSurface.Stratosphere">
```

```
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The layer of the atmosphere that extends from the
 troposphere to about 30 km, temperature increases with height. The stratosphere contains the ozone
 layer.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="NearSurface.Thermosphere">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The layer of the atmosphere that extends from the
 Mesosphere to 640+ km, temperature increasing with height.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="NearSurface.Troposphere">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The lowest layer of the atmosphere which begins at the
 surface and extends to between 7 km (4.4 mi) at the poles and 17 km (10.6 mi) at the equator, with
 some variation due to weather factors.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Surface">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The outermost area of a solid object.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type enumHardcopy

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers for permanent reproductions, or copy in the form of a physical object, of any media suitable for direct use by a person.
Diagram	
Type	restriction of xsd:string

Facets

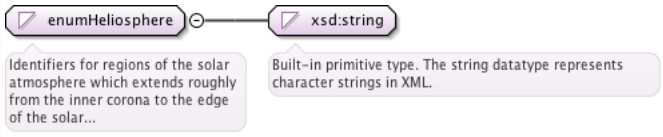
enumeration	Film	An image recording medium on which usually a "negative" analog image is registered. A "positive" image can be recovered or reproduced from film, which is usually made of flexible materials for ease of storage and transportation.
enumeration	Microfiche	A sheet of microfilm on which many pages of material have been photographed; a magnification system is used to read the material.
enumeration	Microfilm	Film rolls on which materials are photographed at greatly reduced size; a magnification system is used to read the material.
enumeration	Photograph	An image (positive or negative) registered on a piece of photo-sensitive paper
enumeration	PhotographicPlate	A rigid (typically glass) medium that functions like film. Its rigidity is for guarding against image distortion due to medium deformation (caused by heat and humidity). Photographic plates are often used for astronomical photography.
enumeration	Print	A sheet of any written or printed material which may include notes or graphics. Multiple printed pages may be bound into a manuscript or book.

Source

```
<xsd:simpleType name="enumHardcopy">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for permanent reproductions, or copy in the form of
 a physical object, of any media suitable for direct use by a person.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Film">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An image recording medium on which usually a "negative"
 analog image is registered. A "positive" image can be recovered or reproduced from film, which is
 usually made of flexible materials for ease of storage and transportation.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
```

```
    <xsd:enumeration value="Microfiche">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A sheet of microfilm on which many pages of material have
 been photographed; a magnification system is used to read the material.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Microfilm">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Film rolls on which materials are photographed at greatly
 reduced size; a magnification system is used to read the material.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Photograph">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">An image (positive or negative) registered on a piece of
 photo-sensitive paper</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="PhotographicPlate">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A rigid (typically glass) medium that functions like film.
 Its rigidity is for guarding against image distortion due to medium deformation (caused by heat and
 humidity). Photographic plates are often used for astronomical photography.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Print">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A sheet of any written or printed material which may
 include notes or graphics. Multiple printed pages may be bound into a manuscript or book.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type `enumHeliosphere`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers for regions of the solar atmosphere which extends roughly from the inner corona to the edge of the solar plasma at the heliopause separating primarily solar plasma from interstellar plasma.
Diagram	
Type	restriction of xsd:string

Facets

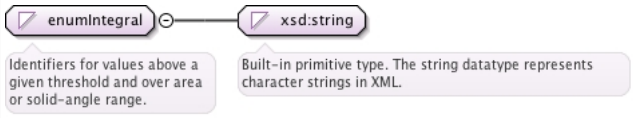
enumeration	Heliosheath	The region extending radially outward from the heliospheric termination shock and in which the decelerated solar wind plasma is still significant.
enumeration	Inner	The region of the heliosphere extending radially outward from the solar coronal base to just inside 1 AU.
enumeration	NearEarth	The heliospheric region near the Earth which extends to and includes the area near the L1 and L2 Lagrange point.
enumeration	Outer	The region of the heliosphere extending radially outward from just outside 1 AU to the heliospheric termination shock.
enumeration	Remote1AU	A roughly toroidal region that includes the Earth's orbit, but exclusive of the region near the Earth.

Source

```
<xsd:simpleType name="enumHeliosphere">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for regions of the solar atmosphere which extends
 roughly from the inner corona to the edge of the solar plasma at the heliopause separating
 primarily solar plasma from interstellar plasma.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Heliosheath">
      <xsd:annotation>
```

```
        <xsd:documentation xml:lang="en">The region extending radially outward from the heliospheric
 termination shock and in which the decelerated solar wind plasma is still significant.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Inner">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region of the heliosphere extending radially outward
 from the solar coronal base to just inside 1 AU.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="NearEarth">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The heliospheric region near the Earth which extends to and
 includes the area near the L1 and L2 Lagrange point.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Outer">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region of the heliosphere extending radially outward
 from just outside 1 AU to the heliospheric termination shock.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Remote1AU">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A roughly toroidal region that includes the Earth's orbit,
 but exclusive of the region near the Earth.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type `enumIntegral`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers for values above a given threshold and over area or solid-angle range.
Diagram	
Type	restriction of xsd:string

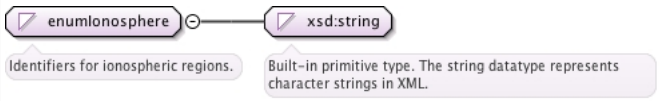
Facets

enumeration	Area	Integration over the extent of a planar region, or of the surface of a solid.
enumeration	Bandwidth	Integration over the width a frequency band.
enumeration	SolidAngle	Integration over the angle in three-dimensional space that an object subtends at a point.

Source

```
<xsd:simpleType name="enumIntegral">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for values above a given threshold and over area or
 solid-angle range.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Area">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Integration over the extent of a planar region, or of the
 surface of a solid.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Bandwidth">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Integration over the width a frequency band.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="SolidAngle">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Integration over the angle in three-dimensional space that
 an object subtends at a point.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type enumIonosphere

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers for ionospheric regions.
Diagram	
Type	restriction of xsd:string

Facets

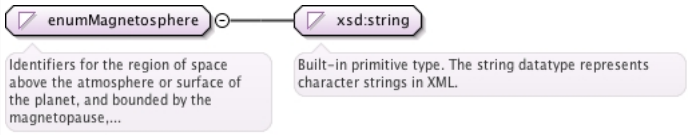
enumeration	DRegion	The layer of the ionosphere that exists approximately 50 to 95 km above the surface of the Earth. One of several layers in the ionosphere.
enumeration	ERegion	A layer of ionised gas occurring at 90-150km above the ground. One of several layers in the ionosphere. Also called the The Kennelly-Heaviside layer.
enumeration	FRegion	A layer that contains ionized gases at a height of around 150-800 km above sea level, placing it in the thermosphere. the F region has the highest concentration of free electrons and ions anywhere in the atmosphere. It may be thought of as comprising two layers, the F1-and F2-layers. One of several layers in the ionosphere. Also known as the Appleton layer.
enumeration	Topside	The region at the upper most areas of the ionosphere.

Source

```
<xsd:simpleType name="enumIonosphere">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for ionospheric regions.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="DRegion">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The layer of the ionosphere that exists approximately 50 to
 95 km above the surface of the Earth. One of several layers in the ionosphere.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="ERegion">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A layer of ionised gas occurring at 90-150km above the
 ground. One of several layers in the ionosphere. Also called the The Kennelly-Heaviside layer.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="FRegion">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A layer that contains ionized gases at a height of
 around 150-800 km above sea level, placing it in the thermosphere. the F region has the highest
 concentration of free electrons and ions anywhere in the atmosphere. It may be thought of as
 comprising two layers, the F1-and F2-layers. One of several layers in the ionosphere. Also known as
 the Appleton layer.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Topside">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region at the upper most areas of the ionosphere.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type enumMagnetosphere

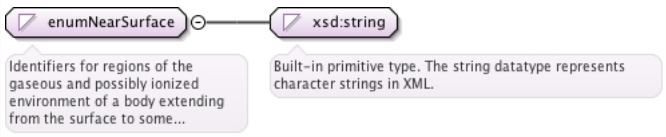
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers for the region of space above the atmosphere or surface of the planet, and bounded by the magnetopause, that is under the direct influence of planet's magnetic field.

Diagram	
Type	restriction of xsd:string
Facets	enumeration `Magnetotail` — The region on the night side of the body where the magnetic filed is stretched backwards by the force of the solar wind. For Earth, the magnetotail begins at a night-side radial distance of 10 Re (X > -10Re). enumeration `Main` — The region of the magnetosphere where the magnetic field lines are closed, but does not include the gaseous region gravitationally bound to the body. enumeration `Polar` — The region near the pole of a body. For a magnetosphere the polar region is the area where magnetic field lines are open and includes the auroral zone. enumeration `RadiationBelt` — The region within a magnetosphere where high-energy particles could potentially be trapped in a magnetic field.

Source

```
<xsd:simpleType name="enumMagnetosphere">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for the region of space above the atmosphere or
 surface of the planet, and bounded by the magnetopause, that is under the direct influence of
 planet's magnetic field.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Magnetotail">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region on the night side of the body where the magnetic
 filed is stretched backwards by the force of the solar wind. For Earth, the magnetotail begins at a
 night-side radial distance of 10 Re (X > -10Re).</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Main">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region of the magnetosphere where the magnetic field
 lines are closed, but does not include the gaseous region gravitationally bound to the body.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Polar">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region near the pole of a body. For a magnetosphere
 the polar region is the area where magnetic field lines are open and includes the auroral zone.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="RadiationBelt">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region within a magnetosphere where high-energy
 particles could potentially be trapped in a magnetic field.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type `enumNearSurface`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	`Identifiers for regions of the gaseous and possibly ionized environment of a body extending from the surface to some specified altitude.`
Diagram	
Type	restriction of xsd:string
Facets	enumeration `Atmosphere` — The neutral gases surrounding a body that

			extends from the surface and is bound to the body by virtue of the gravitational attraction.
	enumeration	AuroralRegion	The region in the atmospheric where electrically-charged particles bombarding the upper atmosphere of a planet in the presence of a magnetic field produce an optical phenomenon.
	enumeration	EquatorialRegion	A region centered on the equator and limited in latitude by approximately 23 degrees north and south of the equator.
	enumeration	Ionosphere	The charged or ionized gases surrounding a body that are nominally bound to the body by virtue of the gravitational attraction.
	enumeration	Ionosphere.DRegion	The layer of the ionosphere that exists approximately 50 to 95 km above the surface of the Earth. One of several layers in the ionosphere.
	enumeration	Ionosphere.ERegion	A layer of ionised gas occurring at 90-150km above the ground. One of several layers in the ionosphere. Also called the The Kennelly-Heaviside layer.
	enumeration	Ionosphere.FRegion	A layer that contains ionized gases at a height of around 150-800 km above sea level, placing it in the thermosphere. the F region has the highest concentration of free electrons and ions anywhere in the atmosphere. It may be thought of as comprising two layers, the F1-and F2-layers. One of several layers in the ionosphere. Also known as the Appleton layer.
	enumeration	Ionosphere.Topside	The region at the upper most areas of the ionosphere.
	enumeration	Mesosphere	The layer of the atmosphere that extends from the Stratosphere to a range of 80 km to 85 km, temperature decreasing with height.
	enumeration	Plasmasphere	A region of the magnetosphere consisting of low energy (cool) plasma. It is located above the ionosphere. The outer boundary of the plasmasphere is known as the plasmapause, which is defined by an order of magnitude drop in plasma density.
	enumeration	PolarCap	The areas of the globe surrounding the poles and consisting of the region north of 60 degrees north latitude an the region south of 60 degrees south latitude.
	enumeration	SouthAtlanticAnomalyRegion	The region where the Earth's inner van Allen radiation belt makes its closest approach to the planet's surface. The result is that, for a given altitude, the radiation intensity is higher over this region than elsewhere.
	enumeration	Stratosphere	The layer of the atmosphere that extends from the troposphere to about 30 km, temperature increases with height. The stratosphere contains the ozone layer.
	enumeration	Thermosphere	The layer of the atmosphere that extends from the Mesosphere to 640+ km, temperature increasing with height.
	enumeration	Troposphere	The lowest layer of the atmosphere which begins at the surface and extends to between 7 km (4.4 mi) at the poles and 17 km (10.6 mi) at the equator, with some variation due to weather factors.

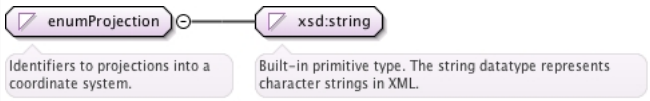
Source

```
<xsd:simpleType name="enumNearSurface">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for regions of the gaseous and possibly ionized
 environment of a body extending from the surface to some specified altitude.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Atmosphere">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The neutral gases surrounding a body that extends from the
 surface and is bound to the body by virtue of the gravitational attraction.</xsd:documentation>
      </xsd:annotation>
```

```
    </xsd:enumeration>
    <xsd:enumeration value="AuroralRegion">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region in the atmospheric where electrically-charged
 particles bombarding the upper atmosphere of a planet in the presence of a magnetic field produce
 an optical phenomenon.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="EquatorialRegion">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A region centered on the equator and limited in latitude by
 approximately 23 degrees north and south of the equator.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Ionosphere">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The charged or ionized gases surrounding a body that are
 nominally bound to the body by virtue of the gravitational attraction.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Ionosphere.DRegion">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The layer of the ionosphere that exists approximately 50 to
 95 km above the surface of the Earth. One of several layers in the ionosphere.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Ionosphere.ERegion">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A layer of ionised gas occurring at 90-150km above the
 ground. One of several layers in the ionosphere. Also called the The Kennelly-Heaviside layer.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Ionosphere.FRegion">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A layer that contains ionized gases at a height of
 around 150-800 km above sea level, placing it in the thermosphere. the F region has the highest
 concentration of free electrons and ions anywhere in the atmosphere. It may be thought of as
 comprising two layers, the F1-and F2-layers. One of several layers in the ionosphere. Also known as
 the Appleton layer.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Ionosphere.Topside">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region at the upper most areas of the ionosphere.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Mesosphere">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The layer of the atmosphere that extends from the
 Stratosphere to a range of 80 km to 85 km, temperature decreasing with height.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Plasmasphere">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A region of the magnetosphere consisting of low energy
 (cool) plasma. It is located above the ionosphere. The outer boundary of the plasmasphere is
 known as the plasmapause, which is defined by an order of magnitude drop in plasma density.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="PolarCap">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The areas of the globe surrounding the poles and consisting
 of the region north of 60 degrees north latitude an the region south of 60 degrees south
 latitude.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="SouthAtlanticAnomalyRegion">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region where the Earth's inner van Allen radiation belt
 makes its closest approach to the planet's surface. The result is that, for a given altitude, the
 radiation intensity is higher over this region than elsewhere.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Stratosphere">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The layer of the atmosphere that extends from the
 troposphere to about 30 km, temperature increases with height. The stratosphere contains the ozone
 layer.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
```

```
    <xsd:enumeration value="Thermosphere">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The layer of the atmosphere that extends from the
 Mesosphere to 640+ km, temperature increasing with height.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Troposphere">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The lowest layer of the atmosphere which begins at the
 surface and extends to between 7 km (4.4 mi) at the poles and 17 km (10.6 mi) at the equator, with
 some variation due to weather factors.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type `enumProjection`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers to projections into a coordinate system.
Diagram	
Type	restriction of xsd:string

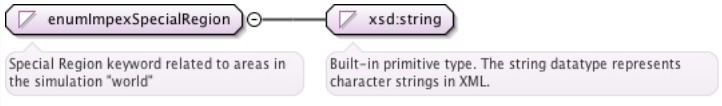
Facets

enumeration	IJ	A measure of the length of a position or measured vector projected into the i-j (typically X-Y) plane of the coordinate system.
enumeration	IK	A measure of the length of a position or measured vector projected into the i-k (typically X-Z) plane of the coordinate system.
enumeration	JK	A measure of the length of a position or measured vector projected into the j-k (typically Y-Z) plane of the coordinate system.

Source

```
<xsd:simpleType name="enumProjection">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers to projections into a coordinate system.</
xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="IJ">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A measure of the length of a position or measured vector
 projected into the i-j (typically X-Y) plane of the coordinate system.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="IK">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A measure of the length of a position or measured vector
 projected into the i-k (typically X-Z) plane of the coordinate system.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="JK">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A measure of the length of a position or measured vector
 projected into the j-k (typically Y-Z) plane of the coordinate system.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type `enumImpexSpecialRegion`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Special Region keyword related to areas in the simulation "world"
Diagram	
Type	restriction of xsd:string

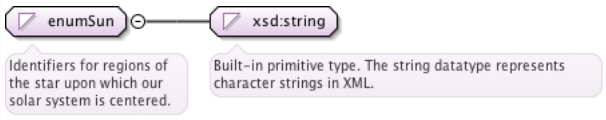
Facets

enumeration	Incident	Direction-dependent property.

Source

```
<xsd:simpleType name="enumImpexSpecialRegion">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Special Region keyword related to areas in the simulation
 "world"</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Incident">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Direction-dependent property.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type enumSun

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers for regions of the star upon which our solar system is centered.
Diagram	
Type	restriction of xsd:string

Facets

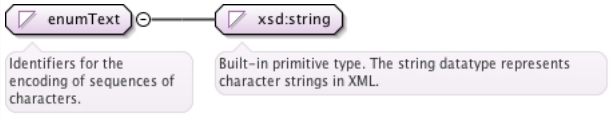
enumeration	Chromosphere	The region of the Sun's (or a star's) atmosphere above the temperature minimum and below the Transition Region. The solar chromosphere is approximately 400 km to 2100 km above the photosphere, and characterized by temperatures from 4500 - 28000 K.
enumeration	Corona	The outermost atmospheric region of the Sun or a star, characterized by ionization temperatures above 10^5 K. The solar corona starts at about 2100 km above the photosphere; there is no generally defined upper limit.
enumeration	Interior	The region inside the body which is not visible from outside the body.
enumeration	Photosphere	The atmospheric layer of the Sun or a star from which continuum radiation, especially optical, is emitted to space. For the Sun, the photosphere is about 500 km thick.
enumeration	TransitionRegion	A very narrow (<100 km) layer between the chromosphere and the corona where the temperature rises abruptly from about 8000 to about 500,000 K.

Source

```
<xsd:simpleType name="enumSun">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for regions of the star upon which our solar system
 is centered.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Chromosphere">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region of the Sun's (or a star's) atmosphere above
 the temperature minimum and below the Transition Region. The solar chromosphere is approximately
 400 km to 2100 km above the photosphere, and characterized by temperatures from 4500 - 28000 K.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Corona">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The outermost atmospheric region of the Sun or a star,
 characterized by ionization temperatures above 10^5 K. The solar corona starts at about 2100 km
 above the photosphere; there is no generally defined upper limit.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Interior">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">The region inside the body which is not visible from
 outside the body.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Photosphere">
      <xsd:annotation>
```

```
        <xsd:documentation xml:lang="en">The atmospheric layer of the Sun or a star from which
 continuum radiation, especially optical, is emitted to space. For the Sun, the photosphere is about
 500 km thick.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="TransitionRegion">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A very narrow (<100 km) layer between the chromosphere
 and the corona where the temperature rises abruptly from about 8000 to about 500,000 K.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

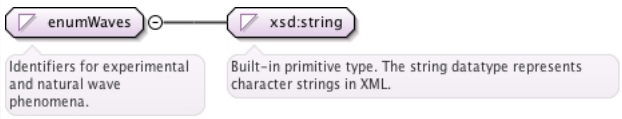
Simple Type enumText

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers for the encoding of sequences of characters.
Diagram	
Type	restriction of xsd:string
Facets	enumeration ASCII — A sequence of characters that adheres to American Standard Code for Information Interchange (ASCII) which is an 7-bit character-coding scheme. enumeration Unicode — Text in multi-byte Unicode format.

Source

```
<xsd:simpleType name="enumText">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for the encoding of sequences of characters.</
xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="ASCII">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A sequence of characters that adheres to American
 Standard Code for Information Interchange (ASCII) which is an 7-bit character-coding scheme.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Unicode">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Text in multi-byte Unicode format.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type enumWaves

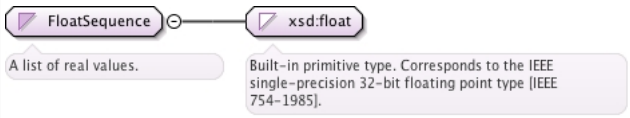
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers for experimental and natural wave phenomena.
Diagram	
Type	restriction of xsd:string
Facets	enumeration Active — Exerting an influence or producing a change or effect. An active measurement is one which produces a transmission or excitation as a part of the measurement cycle. enumeration Passive — Movement or effect produced by outside influence. A passive measurement is one which does not produce a transmission or excitation as a part of the measurement cycle.

Source

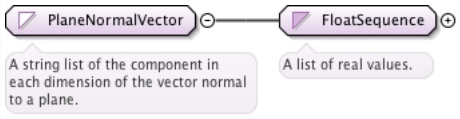
```
<xsd:simpleType name="enumWaves">
```

```
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for experimental and natural wave phenomena.</
xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Active">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Exerting an influence or producing a change or effect. An
 active measurement is one which produces a transmission or excitation as a part of the measurement
 cycle.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Passive">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Movement or effect produced by outside influence. A passive
 measurement is one which does not produce a transmission or excitation as a part of the measurement
 cycle.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type `FloatSequence`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A list of real values.
Diagram	
Type	list of xsd:float
Used by	Elements: GridCellSize, RegionBegin, RegionEnd Simple Types: PlaneNormalVector, PlanePoint
Source	<xsd:simpleType name="FloatSequence"> <xsd:annotation> <xsd:documentation xml:lang="en">A list of real values.</xsd:documentation> </xsd:annotation> <xsd:list itemType="xsd:float"/> </xsd:simpleType>

Simple Type `PlaneNormalVector`

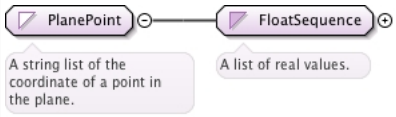
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	A string list of the component in each dimension of the vector normal to a plane.
Diagram	
Type	FloatSequence

Type hierarchy	• xsd:float
	  • FloatSequence
	  • PlaneNormalVector

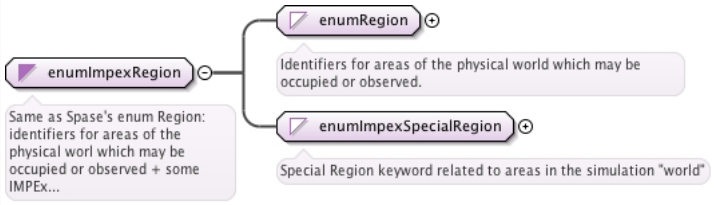
Used by	Element: PlaneNormalVector
Source	<xsd:simpleType name="PlaneNormalVector"> <xsd:annotation> <xsd:documentation>A string list of the component in each dimension of the vector normal to a plane.</xsd:documentation> </xsd:annotation> <xsd:restriction base="FloatSequence"/> </xsd:simpleType>

Simple Type `PlanePoint`

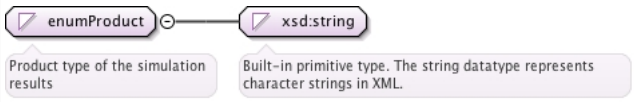
Namespace	http://impex-fp7.oeaw.ac.at

Annotations	A string list of the coordinate of a point in the plane.
Diagram	
Type	FloatSequence
Type hierarchy	• xsd:float • FloatSequence • PlanePoint
Used by	Element PlanePoint
Source	<xsd:simpleType name="PlanePoint"> <xsd:annotation> <xsd:documentation>A string list of the coordinate of a point in the plane.</xsd:documentation> </xsd:annotation> <xsd:restriction base="FloatSequence"/> </xsd:simpleType>

Simple Type enumImpexRegion

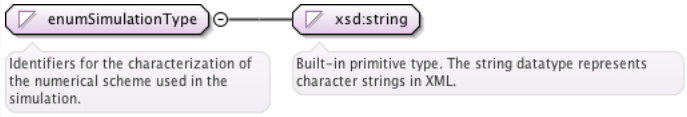
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Same as Spase's enum Region: identifiers for areas of the physical worl which may be occupied or observed + some IMPEx Special Region keyword related to areas in the simulation "world"
Diagram	
Type	union of(enumRegion, enumImpexSpecialRegion)
Used by	Element SimulatedRegion
Source	<xsd:simpleType name="enumImpexRegion"> <xsd:annotation> <xsd:documentation>Same as Spase's enum Region: identifiers for areas of the physical worl which may be occupied or observed + some IMPEx Special Region keyword related to areas in the simulation "world"</xsd:documentation> </xsd:annotation> <xsd:union memberTypes="enumRegion enumImpexSpecialRegion"/> </xsd:simpleType>

Simple Type enumProduct

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Product type of the simulation results
Diagram	
Type	restriction of xsd:string
Facets	enumeration 3DCubes enumeration 2DCuts enumeration TimeSeries enumeration SpatialSeries enumeration Lines enumeration Spectra
Used by	Element SimulationProduct
Source	<xsd:simpleType name="enumProduct"> <xsd:annotation>

```
    <xsd:documentation xml:lang="en">Product type of the simulation results</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="3DCubes"/>
    <xsd:enumeration value="2DCuts"/>
    <xsd:enumeration value="TimeSeries"/>
    <xsd:enumeration value="SpatialSeries"/>
    <xsd:enumeration value="Lines"/>
    <xsd:enumeration value="Spectra"/>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type enumSimulationType

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Identifiers for the characterization of the numerical scheme used in the simulation.
Diagram	
Type	restriction of xsd:string

Facets

enumeration	Analytic	
enumeration	Hybrid	A numerical scheme simulating ions as particles and electrons as a fluid.
enumeration	MHD	A numerical scheme simulating the plasma as a fluid.
enumeration	PIC	A numerical scheme simulating ions and electrons as macroparticles.
enumeration	Test_Particle	A numerical scheme simulating the motion of charged particles in a prescribed field.
enumeration	Paraboloid	

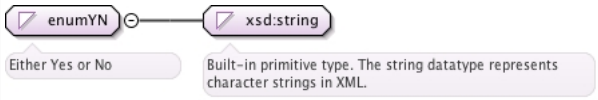
Used by	Element	SimulationType

Source

```
<xsd:simpleType name="enumSimulationType">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Identifiers for the characterization of the numerical scheme
 used in the simulation.</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Analytic">
      <xsd:annotation>
        <xsd:documentation xml:lang="en"/>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Hybrid">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A numerical scheme simulating ions as particles and
 electrons as a fluid.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="MHD">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A numerical scheme simulating the plasma as a fluid.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="PIC">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A numerical scheme simulating ions and electrons as
 macroparticles.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Test_Particle">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">A numerical scheme simulating the motion of charged
 particles in a prescribed field.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Paraboloid">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
        </xsd:documentation>
```

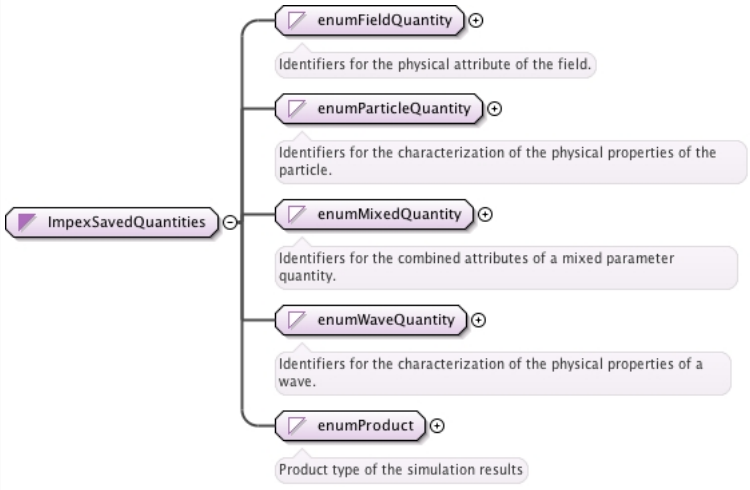
```
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type enumYN

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Either Yes or No
Diagram	
Type	restriction of xsd:string
Facets	enumeration Yes enumeration No
Used by	Element TemporalDependence

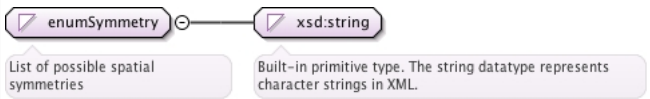
Source	`<xsd:simpleType name="enumYN">`
	`  <xsd:annotation>`
	`  <xsd:documentation xml:lang="en">Either Yes or No</xsd:documentation>`
	`  </xsd:annotation>`
	`  <xsd:restriction base="xsd:string">`
	`  <xsd:enumeration value="Yes"/>`
	`  <xsd:enumeration value="No"/>`
	`  </xsd:restriction>`
	`</xsd:simpleType>`

Simple Type ImpexSavedQuantities

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Type	union of(enumFieldQuantity, enumParticleQuantity, enumMixedQuantity, enumWaveQuantity, enumProduct)
Used by	Element SavedQuantity

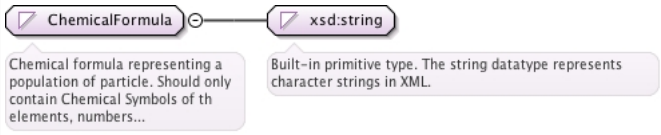
Source	`<xsd:simpleType name="ImpexSavedQuantities">`
	`  <xsd:union memberTypes="enumFieldQuantity enumParticleQuantity enumMixedQuantity enumWaveQuantity enumProduct"/>`
	`</xsd:simpleType>`

Simple Type enumSymmetry

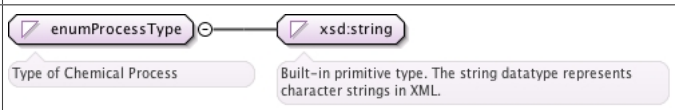
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	List of possible spatial symmetries
Diagram	

Type	restriction of xsd:string
Facets	enumeration None — No Symmetry. enumeration Axial — Axial symmetry. enumeration Plane — Symmetry across a plane. enumeration Central — Central Symmetry.
Used by	Element Symmetry
Source	<xsd:simpleType name="enumSymmetry"> <xsd:annotation> <xsd:documentation xml:lang="en">List of possible spatial symmetries</xsd:documentation> </xsd:annotation> <xsd:restriction base="xsd:string"> <xsd:enumeration value="None"> <xsd:annotation> <xsd:documentation xml:lang="en">No Symmetry.</xsd:documentation> </xsd:annotation> </xsd:enumeration> <xsd:enumeration value="Axial"> <xsd:annotation> <xsd:documentation xml:lang="en">Axial symmetry.</xsd:documentation> </xsd:annotation> </xsd:enumeration> <xsd:enumeration value="Plane"> <xsd:annotation> <xsd:documentation xml:lang="en">Symmetry across a plane.</xsd:documentation> </xsd:annotation> </xsd:enumeration> <xsd:enumeration value="Central"> <xsd:annotation> <xsd:documentation xml:lang="en">Central Symmetry.</xsd:documentation> </xsd:annotation> </xsd:enumeration> </xsd:restriction> </xsd:simpleType>

Simple Type ChemicalFormula

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Chemical formula representing a population of particle. Should only contain Chemical Symbols of th elements, numbers and Parenthesis: exemple O, O2, CO2,... Charge should be specifed elsewhere. Note: use small case x, for undefined number of a given atom in a molecule (e.g. NOx), and W for water group if needed (H2O, OH, H3O,...).
Diagram	
Type	xsd:string
Used by	Element ChemicalFormula
Source	<xsd:simpleType name="ChemicalFormula"> <xsd:annotation> <xsd:documentation>Chemical formula representing a population of particle. Should only contain Chemical Symbols of th elements, numbers and Parenthesis: exemple O, O2, CO2,... Charge should be specifed elsewhere. Note: use small case x, for undefined number of a given atom in a molecule (e.g. NOx), and W for water group if needed (H2O, OH, H3O,...).</xsd:documentation> </xsd:annotation> <xsd:restriction base="xsd:string"/> </xsd:simpleType>

Simple Type enumProcessType

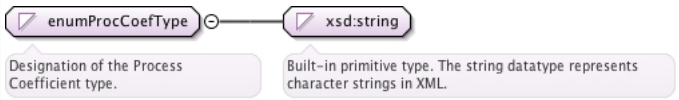
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Type of Chemical Process
Diagram	
Type	restriction of xsd:string

Facets	enumeration	ChargeExchange	Chemical process involving a charge transfer from an ion (which becomes neutral) to a neutral (which becomes ionized).
	enumeration	ElectronImpact	Chemical process by which a neutral is ionized thanks to the energy from the impact of an electron.
	enumeration	PhotoIonization	Chemical process by which a neutral is ionized thanks to the energy from a photon.
	enumeration	DissociativeRecombination	Chemical process by which an ion is neutralized by capturing an electron, and splits in two new neutral species.
Used by	Element	ProcessType	

Source

```
<xsd:simpleType name="enumProcessType">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Type of Chemical Process</xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="ChargeExchange">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Chemical process involving a charge transfer from an ion
 (which becomes neutral) to a neutral (which becomes ionized).</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="ElectronImpact">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Chemical process by which a neutral is ionized thanks to
 the energy from the impact of an electron.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="PhotoIonization">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Chemical process by which a neutral is ionized thanks to
 the energy from a photon.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="DissociativeRecombination">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Chemical process by which an ion is neutralized by
 capturing an electron, and splits in two new neutral species.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type enumProcCoefType

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Designation of the Process Coefficient type.
Diagram	

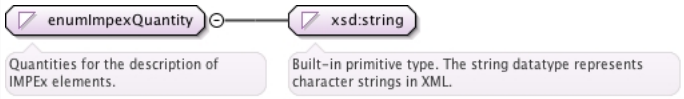
Type	restriction of xsd:string		
Facets	enumeration	CrossSection	Cross section of the reaction, when the reaction implies the collision of two particles.
	enumeration	Frequency	Reaction frequency: number of reaction per unit of time.
	enumeration	Rate	Reaction rate: reaction production per unit of time.
	enumeration	Other	Anything else.
Used by	Element	ProcessCoeffType	

Source

```
<xsd:simpleType name="enumProcCoefType">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">Designation of the Process Coefficient type.</
xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="CrossSection">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Cross section of the reaction, when the reaction implies
 the collision of two particles.</xsd:documentation>
```

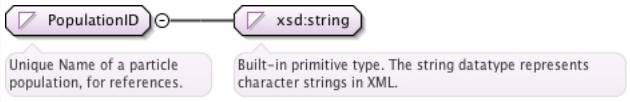
```
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Frequency">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Reaction frequency: number of reaction per unit of time.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Rate">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Reaction rate: reaction production per unit of time.</
xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
    <xsd:enumeration value="Other">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">Anything else.</xsd:documentation>
      </xsd:annotation>
    </xsd:enumeration>
  </xsd:restriction>
</xsd:simpleType>
```

Simple Type `enumImpexQuantity`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Quantities for the description of IMPEx elements.
Diagram	
Type	restriction of xsd:string
Facets	enumeration SolarUVFlux enumeration IMFClockAngle

Source	`<xsd:simpleType name="enumImpexQuantity">`
	`  <xsd:annotation>`
	`  <xsd:documentation xml:lang="en">Quantities for the description of IMPEx elements.</xsd:documentation>`
	`  </xsd:annotation>`
	`  <xsd:restriction base="xsd:string">`
	`  <xsd:enumeration value="SolarUVFlux"/>`
	`  <xsd:enumeration value="IMFClockAngle"/>`
	`  </xsd:restriction>`
	`</xsd:simpleType>`

Simple Type `PopulationID`

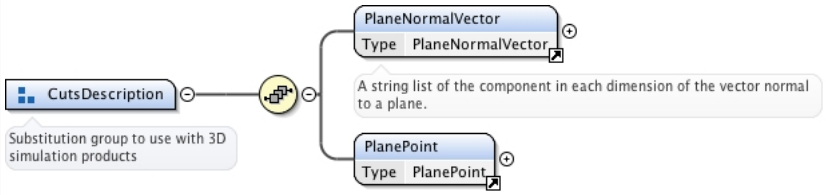
Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Unique Name of a particle population, for references.
Diagram	
Type	xsd:string
Used by	Elements Particle/PopulationID, PopulationID

Source	`<xsd:simpleType name="PopulationID">`
	`  <xsd:annotation>`
	`  <xsd:documentation xml:lang="en">Unique Name of a particle population, for references.</xsd:documentation>`
	`  </xsd:annotation>`
	`  <xsd:restriction base="xsd:string"/>`
	`</xsd:simpleType>`

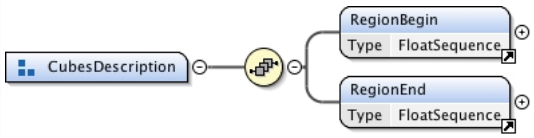
Element Group(s)

Element Group `CutsDescription`

Namespace	http://impex-fp7.oeaw.ac.at
Annotations	Substitution group to use with 3D simulation products

Diagram	
Used by	Complex Type SpatialDescription
Model	PlaneNormalVector , PlanePoint
Children	PlaneNormalVector, PlanePoint
Source	<xsd:group name="CutsDescription"> <xsd:annotation> <xsd:documentation>Substitution group to use with 3D simulation products</xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:element ref="PlaneNormalVector" minOccurs="1" maxOccurs="1"/> <xsd:element ref="PlanePoint"/> </xsd:sequence> </xsd:group>

Element Group `CubesDescription`

Namespace	http://impex-fp7.oeaw.ac.at
Diagram	
Used by	Complex Type SpatialDescription
Model	RegionBegin , RegionEnd
Children	RegionBegin, RegionEnd
Source	<xsd:group name="CubesDescription"> <xsd:sequence> <xsd:element ref="RegionBegin" minOccurs="1" maxOccurs="1"/> <xsd:element ref="RegionEnd" minOccurs="1" maxOccurs="1"/> </xsd:sequence> </xsd:group>

Namespace: ""

Attribute(s)

Attribute `Spase / @lang`

Namespace	No namespace
Type	xsd:string
Properties	default: en
Used by	Complex Type Spase
Source	<xsd:attribute name="lang" type="xsd:string" default="en"/>

Attribute `DiagnosisTimeStep / @TimeStart`

Namespace	No namespace
Type	xsd:time
Properties	content: simple
Used by	Complex Type DiagnosisTimeStep
Source	<xsd:attribute name="TimeStart" type="xsd:time"/>

Attribute `DiagnosisTimeStep / @Duration`

Namespace	No namespace

Type	xsd:duration
Properties	content: simple
Used by	Complex Type DiagnosisTimeStep
Source	`<xsd:attribute name="Duration" type="xsd:duration"/>`

Attribute `InputValue / @Units`

Namespace	No namespace
Annotations	A description of the standardized measurement increments in which a value is specified. The description is represented as a mathematical phrase. Units should be represented by widely accepted representation. For example, units should conform to the International System of Units (SI) which is maintained by BIPM (Bureau International des Poids et Mesures (see <http://www.bipm.fr/>) when appropriate or use tokens like "Re" to represent units of the Radius of the Earth. Within a phrase the circumflex (^) is used to indicate a power, a star (*) is used to indicate multiplication and a slash (/) division. When symbols are not separated by a mathematical operator, multiplication is assumed. Symbols for base units can be found at: <http://www.bipm.fr/en/si/si_brochure/chapter2/2-1/#symbols> and those for common derived units can be found at: <http://www.bipm.fr/en/si/derived_units/2-2-2.html>
Type	xsd:string
Properties	content: simple
Used by	Complex Type InputValue
Source	`<xsd:attribute name="Units" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">A description of the standardized measurement increments in which a value is specified. The description is represented as a mathematical phrase. Units should be represented by widely accepted representation. For example, units should conform to the International System of Units (SI) which is maintained by BIPM (Bureau International des Poids et Mesures (see <http://www.bipm.fr/>) when appropriate or use tokens like "Re" to represent units of the Radius of the Earth. Within a phrase the circumflex (^) is used to indicate a power, a star (*) is used to indicate multiplication and a slash (/) division. When symbols are not separated by a mathematical operator, multiplication is assumed. Symbols for base units can be found at: <http://www.bipm.fr/en/si/si_brochure/chapter2/2-1/#symbols> and those for common derived units can be found at: <http://www.bipm.fr/en/si/derived_units/2-2-2.html></xsd:documentation> </xsd:annotation> </xsd:attribute>`

Attribute `InputValue / @UnitsConversion`

Namespace	No namespace
Annotations	The multiplicative factor for converting a unit into International System of Units (SI) units. The factor is expressed in the form "number > x", where "number" is a numerical value and "x" is the appropriate SI units. The basic SI units are Enumerated: m (meter), N (newton), kg (kilogram), Pa (pascal), s (second), Hz (hertz), A (ampere), V (volt), K (kelvin), W (watt), rad (radian), J (joule), sr (steradian), C (coulomb), T (tesla), ohm (ohm), mho (mho or seimens), H (henry), and F (farad). Two useful units which are not SI units are: degree (angle), and unitless (no units). An example is: "1.0E-5>T" which converts the units, presumable nT, to tesla. Another example is: "1.0e+3>m/s" which converts a velocity expressed in kilometers per second to meters per second.
Type	xsd:string
Properties	content: simple
Used by	Complex Type InputValue

Source

```
<xsd:attribute name="UnitsConversion" type="xsd:string">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">The multiplicative factor for converting a unit into
 International System of Units (SI) units. The factor is expressed in the form "number > x",
 where "number" is a numerical value and "x" is the appropriate SI units. The basic SI units are
 Enumerated: m (meter), N (newton), kg (kilogram), Pa (pascal), s (second), Hz (hertz), A (ampere),
 V (volt), K (kelvin), W (watt), rad (radian), J (joule), sr (steradian), C (coulomb), T (tesla),
 ohm (ohm), mho (mho or seimens), H (henry), and F (farad). Two useful units which are not SI units
 are: degree (angle), and unitless (no units). An example is: "1.0E-5>T" which converts the units,
 presumable nT, to tesla. Another example is: "1.0e+3>m/s" which converts a velocity expressed in
 kilometers per second to meters per second.</xsd:documentation>
  </xsd:annotation>
</xsd:attribute>
```