

Schema documentation for spase-2_2_2.xsd

february 28, 2012

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Namespace: "http://www.spase-group.org/data/schema"

Schema(s)

Main schema spase-2_2.xsd

Namespace	http://www.spase-group.org/data/schema
Properties	attribute form default: unqualified element form default: qualified
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element(s)

Element Spase

Namespace	http://www.spase-group.org/data/schema
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Diagram											
Type	Spase										
Properties	content: complex										
Model	Version , ResourceEntity+										
Children	ResourceEntity, Version										
Instance	<pre><Spase lang="en"> <Version>{1,1}</Version> <ResourceEntity>{1,unbounded}</ResourceEntity> </Spase></pre>										
Attributes	<table border="1"> <thead> <tr> <th>QName</th> <th>Type</th> <th>Fixed</th> <th>Default</th> <th>Use</th> </tr> </thead> <tbody> <tr> <td>lang</td> <td>xsd:string</td> <td></td> <td>en</td> <td>optional</td> </tr> </tbody> </table>	QName	Type	Fixed	Default	Use	lang	xsd:string		en	optional
QName	Type	Fixed	Default	Use							
lang	xsd:string		en	optional							
Source	<code><xsd:element name="Spase" type="Spase" /></code>										
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd										

Element Version

Namespace	http://www.spase-group.org/data/schema
Annotations	<p>Indicates the release identifier. When used to indicate the release of the SPASE data model, it is 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).</p>
Diagram	
Type	enumVersion
Properties	content: simple
Facets	enumeration 2.2.2
Used by	Complex Type Spase
Source	<pre><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 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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

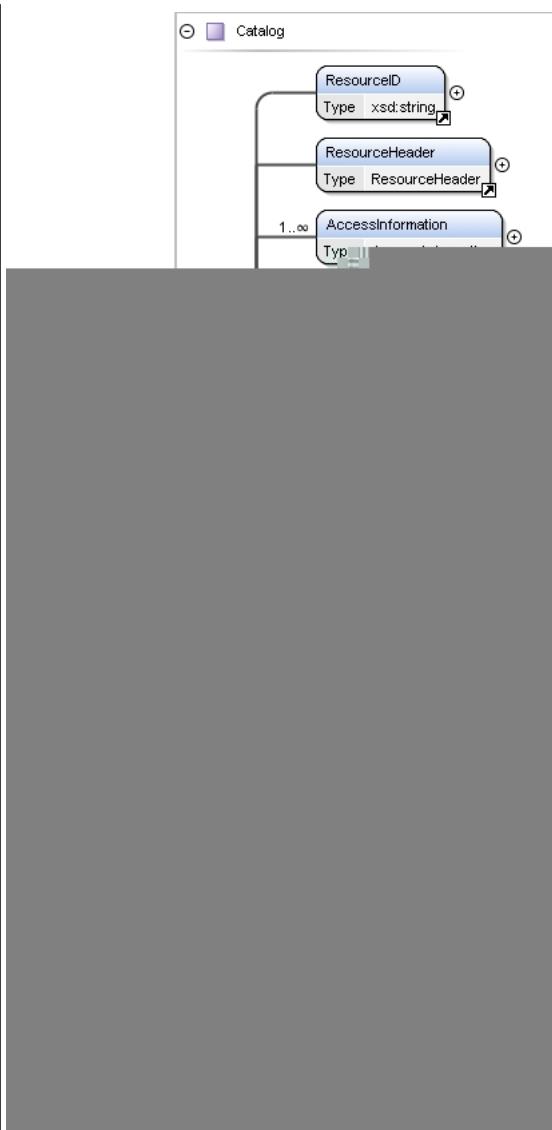
Element ResourceEntity

Namespace	http://www.spase-group.org/data/schema
Diagram	<pre> classDiagram class ResourceEntity { <<Abstract true>> } class Annotation { <<Type Annotation>> } class Catalog { <<Type Catalog>> } class DisplayData { <<Type DisplayData>> } class Document { <<Type Document>> } class Granule { <<Type Granule>> } class Instrument { <<Type Instrument>> } class NumericalData { <<Type NumericalData>> } class Observatory { <<Type Observatory>> } class Person { <<Type Person>> } class Registry { <<Type Registry>> } class Repository { <<Type Repository>> } class Service { <<Type Service>> } ResourceEntity < -- Annotation ResourceEntity < -- Catalog ResourceEntity < -- DisplayData ResourceEntity < -- Document ResourceEntity < -- Granule ResourceEntity < -- Instrument ResourceEntity < -- NumericalData ResourceEntity < -- Observatory ResourceEntity < -- Person ResourceEntity < -- Registry ResourceEntity < -- Repository ResourceEntity < -- Service </pre>
Properties	abstract: true
Substitution Group	<ul style="list-style-type: none"> • Catalog • DisplayData • NumericalData • Document • Granule • Instrument • Observatory • Person • Registry • Repository • Service • Annotation
Used by	Complex Type Spase
Source	<xsd:element name="ResourceEntity" abstract="true"/>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element Catalog

Namespace	http://www.spase-group.org/data/schema
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Diagram



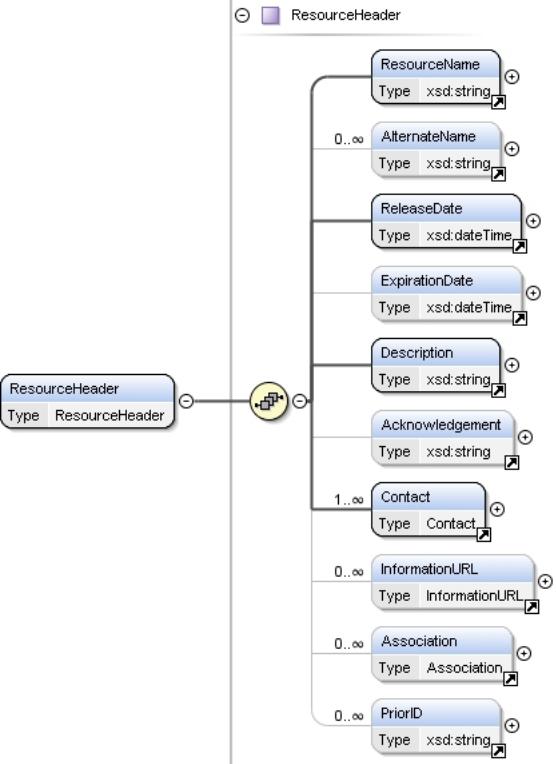
Type	Catalog
Properties	content: complex
Substitution Group Affiliation	• ResourceEntity
Model	ResourceID , ResourceHeader , AccessInformation+ , ProviderResourceName{0,1} , ProviderVersion{0,1} , InstrumentID* , PhenomenonType+ , TimeSpan{0,1} , Caveats{0,1} , Keyword* , InputResourceID* , Parameter* , Extension*
Children	AccessInformation, Caveats, Extension, InputResourceID, InstrumentID, Keyword, Parameter, PhenomenonType, ProviderResourceName, ProviderVersion, ResourceHeader, ResourceID, TimeSpan
Instance	<pre> <Catalog> <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> </pre>
Source	<code><xsd:element name="Catalog" type="Catalog" substitutionGroup="ResourceEntity"/></code>

Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd
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Element ResourceID

Namespace	http://www.spase-group.org/data/schema
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
Properties	content: simple
Used by	Complex Types Annotation, Catalog, DisplayData, Document, Granule, Instrument, NumericalData, Observatory, Person, Registry, Repository, Service
Source	<pre><xsd:element name="ResourceID" type="xsd:string"> <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:element></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Element ResourceHeader

Namespace	http://www.spase-group.org/data/schema
Diagram	
Type	ResourceHeader
Properties	content: complex

Used by	Complex Types Annotation, Catalog, DisplayData, Document, Instrument, NumericalData, Observatory, Registry, Repository, Service
Model	ResourceName , AlternateName* , ReleaseDate , ExpirationDate{0,1} , Description , Acknowledgement{0,1} , Contact+

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, Person, ResourceHeader
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element ExpirationDate

Namespace	http://www.spase-group.org/data/schema
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	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element Description

Namespace	http://www.spase-group.org/data/schema
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, Parameter, ResourceHeader, Structure
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element Acknowledgement

Namespace	http://www.spase-group.org/data/schema
Annotations	The individual, group or organization which should be acknowledged when the data is used in or contributes to a presentation or publication.
Diagram	<pre> classDiagram class Acknowledgement { <<xsd:string>> } Acknowledgement < -- xsd:string </pre>
Type	xsd:string
Properties	content: simple
Used by	Complex Types AccessInformation, ResourceHeader
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element Contact

Namespace	http://www.spase-group.org/data/schema
Diagram	<pre> classDiagram class Contact { <<Contact>> <<xsd:complexType>> <<PersonID>> <<Role>> } Contact < -- Contact Contact < -- PersonID Contact < -- Role </pre>
Type	Contact
Properties	content: complex
Used by	Complex Type ResourceHeader
Model	PersonID , Role+
Children	PersonID, Role
Instance	<pre><Contact> <PersonID>{1,1}</PersonID> <Role>{1,unbounded}</Role> </Contact></pre>
Source	<pre><xsd:element name="Contact" type="Contact"/></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element PersonID

Namespace	http://www.spase-group.org/data/schema
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Annotations	The identifier assigned to a Person description.
Diagram	A UML class diagram fragment showing a class named "PersonID" with a multiplicity of 0..1 at its end and a "xsd:string" type at the other end, connected by a directed association.
Type	xsd:string
Properties	content: simple
Used by	Complex Type Contact
Source	<pre><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></pre>
Schema location	file:///C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element Role

Namespace	http://www.spase-group.org/data/schema																																						
Annotations	The assigned or assumed function or position of an individual.																																						
Diagram	A UML class diagram fragment showing a class named "Role" with a multiplicity of 0..1 at its end and an "enumRole" type at the other end, connected by a directed association.																																						
Type	enumRole																																						
Properties	content: simple																																						
Facets	<table border="1"> <tr> <td>enumeration</td> <td>ArchiveSpecialist</td> <td>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.</td> </tr> <tr> <td>enumeration</td> <td>CoInvestigator</td> <td>An individual who is a scientific peer and major participant in an investigation.</td> </tr> <tr> <td>enumeration</td> <td>Contributor</td> <td>An entity responsible for making contributions to the content of the resource.</td> </tr> <tr> <td>enumeration</td> <td>DataProducer</td> <td>An individual who generated the resource and is familiar with its provenance.</td> </tr> <tr> <td>enumeration</td> <td>DeputyPI</td> <td>An individual who is an administrative or scientific leader for an investigation operating under the supervision of a Principal Investigator.</td> </tr> <tr> <td>enumeration</td> <td>FormerPI</td> <td>An individual who had served as the administrative and scientific lead for an investigation, but no longer assumes that role.</td> </tr> <tr> <td>enumeration</td> <td>GeneralContact</td> <td>An individual who can provide information on a range of subjects or who can direct you to a domain expert.</td> </tr> <tr> <td>enumeration</td> <td>MetadataContact</td> <td>An individual who can affect a change in the metadata describing a resource.</td> </tr> <tr> <td>enumeration</td> <td>PrincipalInvestigator</td> <td>An individual who is the administrative and scientific lead for an investigation.</td> </tr> <tr> <td>enumeration</td> <td>ProjectScientist</td> <td>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.</td> </tr> <tr> <td>enumeration</td> <td>Publisher</td> <td>An individual, organization, institution or government department responsible for the production and dissemination of a document.</td> </tr> <tr> <td>enumeration</td> <td>Scientist</td> <td>An individual who is an expert in the phenomenon</td> </tr> </table>			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
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.																																					
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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>
Schema location		file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Element InformationURL

Namespace	http://www.spase-group.org/data/schema
Diagram	<pre> classDiagram class InformationURL { Name : xsd:string URL : xsd:string Description : xsd:string Language : xsd:string } InformationURL < -- InformationURL </pre>
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> <Name>{0,1}</Name> <URL>{1,1}</URL> <Description>{0,1}</Description> <Language>{0,1}</Language> </InformationURL>
Source	<xsd:element name="InformationURL" type="InformationURL" />
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Element Name

Namespace	http://www.spase-group.org/data/schema
Annotations	A language unit by which a person or thing is known.
Diagram	<pre> classDiagram class Name { Type : xsd:string } Name < -- Name </pre>
Type	xsd:string
Properties	content: simple
Used by	Complex Types AccessURL, Element, InformationURL, Parameter
Source	<xsd:element name="Name" type="xsd:string"> <xsd:annotation>

	<pre><xsd:documentation xml:lang="en">A language unit by which a person or thing is known.</xsd:documentation> </xsd:annotation> </xsd:element></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element URL

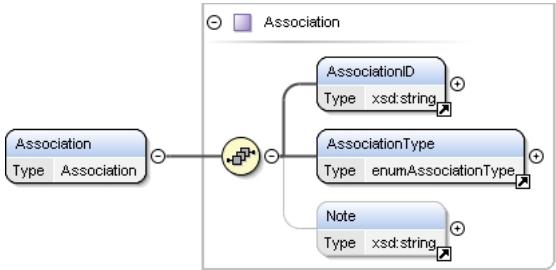
Namespace	http://www.spase-group.org/data/schema
Annotations	<p>Uniform Resource Locator (URL) is the global address of documents and other resources on the World Wide Web. The first part of the address indicates what protocol to use, and the second part specifies the IP address or the domain name where the resource is located followed by the pathname of the resource.</p> <p>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.</p>
Diagram	<pre> classDiagram class URL { <<xsd:string>> } URL < -- xsd:string </pre>
Type	xsd:string
Properties	content: simple
Used by	Complex Types AccessURL, InformationURL, Source
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element Language

Namespace	http://www.spase-group.org/data/schema
Annotations	The two character indicator of language selected from the ISO 630-1 codes for the representation of names of languages.
Diagram	<pre> classDiagram class Language { <<xsd:string>> } Language < -- xsd:string </pre>
Type	xsd:string
Properties	content: simple
Used by	Complex Types AccessURL, InformationURL
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element Association

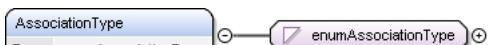
Namespace	http://www.spase-group.org/data/schema
-----------	--

Diagram	
Type	Association
Properties	content: complex
Used by	Complex Type ResourceHeader
Model	AssociationID , AssociationType , Note{0,1}
Children	AssociationID, AssociationType, Note
Instance	<pre><Association> <AssociationID>{1,1}</AssociationID> <AssociationType>{1,1}</AssociationType> <Note>{0,1}</Note> </Association></pre>
Source	<code><xsd:element name="Association" type="Association"/></code>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element AssociationID

Namespace	http://www.spase-group.org/data/schema
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	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element AssociationType

Namespace	http://www.spase-group.org/data/schema												
Annotations	A characterization of the role or purpose of an associated resource.												
Diagram													
Type	enumAssociationType												
Properties	content: simple												
Facets	<table border="1"> <tr> <td>enumeration</td> <td>ChildEventOf</td> <td>A descendant or caused by another resource.</td> </tr> <tr> <td>enumeration</td> <td>DerivedFrom</td> <td>A transformed or altered version of a resource instance.</td> </tr> <tr> <td>enumeration</td> <td>ObservedBy</td> <td>Detected or originating from another resource.</td> </tr> <tr> <td>enumeration</td> <td>Other</td> <td>Not classified with more specific terms. The</td> </tr> </table>	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
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
	enumeration	RevisionOf
Used by	Complex Type	Association
Source	<pre><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></pre>	
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd	

Element Note

Namespace	http://www.spase-group.org/data/schema
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	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Element PriorID

Namespace	http://www.spase-group.org/data/schema
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	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Element AccessInformation

Namespace	http://www.spase-group.org/data/schema
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Diagram	<pre> classDiagram class AccessInformation { RepositoryID : xsd:string Availability : enumAvailability AccessRights : enumAccessRights <-->* AccessURL : AccessURL+ } class AccessURL { Format : enumFormat Encoding : enumEncoding DataExtent : DataExtent Acknowledgement : xsd:string } </pre>
Type	AccessInformation
Properties	content: complex
Used by	Complex Types Catalog, DisplayData, Document, NumericalData
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> <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" />
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element RepositoryID

Namespace	http://www.spase-group.org/data/schema
Annotations	The identifier of an Repository resource.
Diagram	<pre> classDiagram class RepositoryID { Type : xsd:string } </pre>
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>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element Availability

Namespace	http://www.spase-group.org/data/schema
-----------	--

Annotations	An indication of the method or service which may be used to access the resource.				
Diagram	<pre> classDiagram class Availability { <<enumAvailability>> } class enumAvailability { <<Type>> } Availability < -- enumAvailability </pre>				
Type	enumAvailability				
Properties	content: simple				
Facets	enumeration	Offline	Not directly accessible electronically. This includes resources which may be moved to an on-line status in response to a given request.		
	enumeration	Online	Directly accessible electronically.		
Used by	Complex Type	AccessInformation			
Source	<pre> <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> </pre>				
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd				

Element AccessRights

Namespace	http://www.spase-group.org/data/schema				
Annotations	Permissions granted or denied by the host of a product to allow other users to access and use the resource.				
Diagram	<pre> classDiagram class AccessRights { <<enumAccessRights>> } class enumAccessRights { <<Type>> } AccessRights < -- enumAccessRights </pre>				
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	<pre> <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> </pre>				
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd				

Element AccessURL

Namespace	http://www.spase-group.org/data/schema		
Diagram	<pre> classDiagram class AccessURL { <<AccessURL>> <<Type>> <<AccessURL>> } class Name { <<xsd:string>> } class URL { <<xsd:string>> } class ProductKey { <<xsd:string>> } class Description { <<xsd:string>> } class Language { <<xsd:string>> } AccessURL "0..>"--> Name AccessURL "0..>"--> URL AccessURL "0..>"--> ProductKey AccessURL "0..>"--> Description AccessURL "0..>"--> Language </pre>		
Properties	content: complex		

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	<pre><AccessURL> <Name>{0,1}</Name> <URL>{1,1}</URL> <ProductKey>{0,unbounded}</ProductKey> <Description>{0,1}</Description> <Language>{0,1}</Language> </AccessURL></pre>
Source	<xsd:element name="AccessURL" type="AccessURL" />
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element ProductKey

Namespace	http://www.spase-group.org/data/schema
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	<pre> classDiagram class ProductKey { Type xsd:string } xsd:string ProductKey "1" -- "0..1" xsd:string </pre>
Type	xsd:string
Properties	content: simple
Used by	Complex Type AccessURL
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element Format

Namespace	http://www.spase-group.org/data/schema												
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	<pre> classDiagram class Format { Type enumFormat } enumFormat Format "1" -- "0..1" enumFormat </pre>												
Type	enumFormat												
Properties	content: simple												
Facets	<table> <tr> <td>enumeration</td> <td>AVI</td> <td>Audio Video Interleave (AVI) a digital format for movies that conforms to the Microsoft Windows Resource Interchange File Format (RIFF).</td> </tr> <tr> <td>enumeration</td> <td>Binary</td> <td>A direct representation of the bits which may be stored in memory on a computer.</td> </tr> <tr> <td>enumeration</td> <td>CDF</td> <td>Common Data Format (CDF). A binary storage format developed at Goddard Space Flight Center (GSFC).</td> </tr> <tr> <td>enumeration</td> <td>CEF</td> <td>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.</td> </tr> </table>	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	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 Markup Language (XML). A structured format for representing information. See < http://www.w3.org/XML/ >
Used by	Complex Type AccessInformation	
Source	<pre><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></pre>	
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd	

Element Encoding

Namespace	http://www.spase-group.org/data/schema	
Annotations	A set of unambiguous rules that establishes the representation of information within a file.	
Diagram	<pre> classDiagram class Encoding { <<Encoding>> <<Type>> <<enumEncoding>> } Encoding < -- enumEncoding </pre>	
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	<pre><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></pre>	
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd	

Element DataExtent

Namespace	http://www.spase-group.org/data/schema
Diagram	<pre> classDiagram class DataExtent { <<DataExtent>> <<Type DataExtent>> } class Quantity { <<Quantity>> <<Type xsd:double>> } class Units { <<Units>> <<Type xsd:string>> } class Per { <<Per>> <<Type xsd:duration>> } DataExtent < -- Quantity DataExtent < -- Units DataExtent < -- Per </pre>
Type	DataExtent
Properties	content: complex
Used by	Complex Types AccessInformation, Source
Model	Quantity , Units{0,1} , Per{0,1}
Children	Per, Quantity, Units
Instance	<pre> <DataExtent> <Quantity>{1,1}</Quantity> <Units>{0,1}</Units> <Per>{0,1}</Per> </DataExtent> </pre>
Source	<pre><xsd:element name="DataExtent" type="DataExtent" /></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element Quantity

Namespace	http://www.spase-group.org/data/schema
Annotations	A value that describes a characteristic of a system.
Diagram	<pre> classDiagram class Quantity { <<Quantity>> <<Type xsd:double>> } class xsd_double { <<xsd:double>> } Quantity < -- xsd_double </pre>
Type	xsd:double
Properties	content: simple
Used by	Complex Type DataExtent
Source	<pre><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></pre>

	</xsd:element>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element Units

Namespace	http://www.spase-group.org/data/schema
Annotations	<p>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></p>
Diagram	<pre> classDiagram class Units { <<xsd:string>> } class xsd:string Units "1" -- "0..1" xsd:string </pre>
Type	xsd:string
Properties	content: simple
Used by	Complex Types AzimuthalAngleRange, DataExtent, Element, EnergyRange, FrequencyRange, Parameter, PolarAngleRange, WavelengthRange
Source	<pre> <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> </pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element Per

Namespace	http://www.spase-group.org/data/schema
Annotations	The time interval over which a characterization applies. For example, the number of bytes generated each day.
Diagram	<pre> classDiagram class Per { <<xsd:duration>> } class xsd:duration Per "1" -- "0..1" xsd:duration </pre>
Type	xsd:duration
Properties	content: simple
Used by	Complex Type DataExtent
Source	<pre> <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> </pre>

Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd
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Element ProviderResourceName

Namespace	http://www.spase-group.org/data/schema
Annotations	A short textual description of a resource used by the provider which may be used to identify a resource.
Diagram	A UML class diagram fragment showing the 'ProviderResourceName' element. It is a simple string type represented by a rounded rectangle with a purple border and a small icon, connected to a larger rounded rectangle labeled 'xsd:string' by a line with an open circle at the connection point.
Type	xsd:string
Properties	content: simple
Used by	Complex Types Catalog, DisplayData, NumericalData
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element ProviderVersion

Namespace	http://www.spase-group.org/data/schema
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	A UML class diagram fragment showing the 'ProviderVersion' element. It is a simple string type represented by a rounded rectangle with a purple border and a small icon, connected to a larger rounded rectangle labeled 'xsd:string' by a line with an open circle at the connection point.
Type	xsd:string
Properties	content: simple
Used by	Complex Types Catalog, DisplayData, NumericalData
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element InstrumentID

Namespace	http://www.spase-group.org/data/schema
Annotations	The identifier of an Instrument resource.
Diagram	A UML class diagram fragment showing the 'InstrumentID' element. It is a simple string type represented by a rounded rectangle with a purple border and a small icon, connected to a larger rounded rectangle labeled 'xsd:string' by a line with an open circle at the connection point.
Type	xsd:string
Properties	content: simple
Used by	Complex Types Catalog, DisplayData, NumericalData
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element PhenomenonType

Namespace	http://www.spase-group.org/data/schema		
Annotations	The characteristics or categorization of an event type.		
Diagram	<pre> classDiagram class PhenomenonType { <<Type>> } enum enumPhenomenonType { <<enumPhenomenonType>> } PhenomenonType < -- enumPhenomenonType </pre>		
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	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

		<p>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.</p>
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">	

	<pre><xsd:annotation> <xsd:documentation xml:lang="en">The characteristics or categorization of an event type.</xsd:documentation> </xsd:annotation></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element TimeSpan

Namespace	http://www.spase-group.org/data/schema
Diagram	<pre> classDiagram class TimeSpan { StartDate : xsd:dateTime StopDateEntity : {Abstract true} Note : xsd:string } TimeSpan < -- TimeSpan </pre>
Type	TimeSpan
Properties	content: complex
Used by	Complex Types Annotation, Catalog, TemporalDescription
Model	StartDate , StopDateEntity , Note*
Children	Note, StartDate, StopDateEntity
Instance	<pre> <TimeSpan> <StartDate>{1,1}</StartDate> <StopDateEntity>{1,1}</StopDateEntity> <Note>{0..unbounded}</Note> </TimeSpan> </pre>
Source	<xsd:element name="TimeSpan" type="TimeSpan" />
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element StartDate

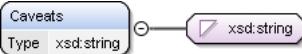
Namespace	http://www.spase-group.org/data/schema
Annotations	The specification of a starting point in time.
Diagram	<pre> classDiagram class StartDate { Type : xsd:dateTime } </pre>
Type	xsd:dateTime
Properties	content: simple
Used by	Complex Types Granule, OperatingSpan, TimeSpan
Source	<pre> <xsd:element 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> </pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element StopDateEntity

Namespace	http://www.spase-group.org/data/schema
Diagram	<pre> classDiagram class StopDateEntity { Abstract : true } class RelativeStopDate { Type : xsd:duration } class StopDate { Type : xsd:dateTime } StopDateEntity < -- RelativeStopDate StopDateEntity < -- StopDate </pre>
Properties	abstract: true

Substitution Group	<ul style="list-style-type: none"> RelativeStopDate StopDate
Used by	Complex Type TimeSpan
Source	<xsd:element name="StopDateEntity" abstract="true"/>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element Caveats

Namespace	http://www.spase-group.org/data/schema
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, Instrument, NumericalData, Parameter
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element Keyword

Namespace	http://www.spase-group.org/data/schema
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, Document,

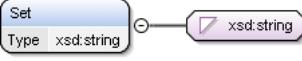
	</xsd:annotation> </xsd:element>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element Parameter

Namespace	http://www.spase-group.org/data/schema
Diagram	
Type	Parameter
Properties	content: complex
Used by	Complex Types Catalog, DisplayData, NumericalData
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
Children	Cadence, Caveats, CoordinateSystem, Description, FillValue, Name, ParameterEntity, ParameterKey, RenderingHints, Set, Structure, Units, UnitsConversion, ValidMax, ValidMin
Instance	<pre> <Parameter> <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> </pre>

	<pre><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> </Parameter></pre>
Source	<xsd:element name="Parameter" type="Parameter" />
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Element set

Namespace	http://www.spase-group.org/data/schema
Annotations	A collection of items for a particular purpose.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Type Parameter
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Element ParameterKey

Namespace	http://www.spase-group.org/data/schema
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
Properties	content: simple
Used by	Complex Types Element, Parameter
Source	<pre><xsd:element name="ParameterKey" type="xsd:string"> <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:element></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Element Cadence

Namespace	http://www.spase-group.org/data/schema
Annotations	The time interval between the start of successive measurements.
Diagram	
Type	xsd:duration

Properties	content: simple
Used by	Complex Types Parameter, TemporalDescription
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Element UnitsConversion

Namespace	http://www.spase-group.org/data/schema
Annotations	<p>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, presumably nT, to Tesla. Another example is: "1.0e+3>m/s" which converts a velocity expressed in kilometers per second to meters per second.</p>
Diagram	<pre> classDiagram class UnitsConversion { <<xsd:string>> } </pre>
Type	xsd:string
Properties	content: simple
Used by	Complex Types Element, Parameter
Source	<pre><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, presumably 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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Element CoordinateSystem

Namespace	http://www.spase-group.org/data/schema
Diagram	<pre> classDiagram class CoordinateSystem { CoordinateRepresentation CoordinateSystemName } class CoordinateRepresentation { <<enumCoordinateRepresentation>> } class CoordinateSystemName { <<enumCoordinateSystemName>> } </pre>
Type	CoordinateSystem
Properties	content: complex
Used by	Complex Type Parameter

Model	CoordinateRepresentation , CoordinateSystemName
Children	CoordinateRepresentation, CoordinateSystemName
Instance	<pre><CoordinateSystem> <CoordinateRepresentation>{1,1}</CoordinateRepresentation> <CoordinateSystemName>{1,1}</CoordinateSystemName> </CoordinateSystem></pre>
Source	<pre><xsd:element name="CoordinateSystem" type="CoordinateSystem" /></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element CoordinateRepresentation

Namespace	http://www.spase-group.org/data/schema				
Annotations	The method or form for specifying a given point or vector in a given coordinate system.				
Diagram	<pre> classDiagram class CoordinateRepresentation { <<CoordinateRepresentation>> <<CoordinateSystem>> <<CoordinateRepresentation>>{1,1} <<CoordinateSystemName>>{1,1} } class enumCoordinateRepresentation { <<enumCoordinateRepresentation>> } CoordinateRepresentation < -- enumCoordinateRepresentation </pre>				
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	<pre><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></pre>				
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd				

Element CoordinateSystemName

Namespace	http://www.spase-group.org/data/schema		
Annotations	Identifies the coordinate system in which the position, direction or observation has been expressed.		
Diagram	<pre> classDiagram class CoordinateSystemName { <<CoordinateSystemName>> <<CoordinateRepresentation>> <<CoordinateSystemName>>{1,1} } class enumCoordinateSystemName { <<enumCoordinateSystemName>> } CoordinateSystemName < -- enumCoordinateSystemName </pre>		
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

		<p>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></p>
enumeration	Carrington	<p>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.</p>
enumeration	DM	<p>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></p>
enumeration	GEI	<p>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</p>
enumeration	GEO	<p>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.</p>
enumeration	GSE	<p>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.</p>
enumeration	GSEQ	<p>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</p>
enumeration	GSM	<p>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</p>
enumeration	HAE	<p>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.</p>

		See Hapgood, 1992.
enumeration	HCC	<p>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.</p> <p>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.</p>
enumeration	HCI	Heliographic Carrington Inertial.
enumeration	HCR	<p>Heliocentric Radial - A 3-D orthonormal coordinate system that is primarily intended to specify with two dimensions a point on the solar disk.</p> <p>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.</p> <p>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 = $\arctan(-y/x)$]</p>
enumeration	HEE	<p>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</p>
enumeration	HEEQ	<p>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.</p>
enumeration	HG	<p>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</p>
enumeration	HGI	<p>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</p>
enumeration	HPC	<p>Helio-projective 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</p>

		<p>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.</p> <p>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].</p>
enumeration	HPR	<p>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.</p> <p>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)].</p>
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	LGM	<p>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)</p>
enumeration	MAG	<p>Geomagnetic - geocentric. Z axis is parallel to the geomagnetic dipole axis, positive north.</p> <p>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></p>
enumeration	MFA	<p>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></p>
enumeration	RTN	

		<p style="text-align: right;">motion. N (normal) is R x T.</p>
enumeration	SC	<p>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.</p>
enumeration	SE	<p>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></p>
enumeration	SM	<p>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.</p>
enumeration	SR	<p>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></p>
enumeration	SR2	<p>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></p>
enumeration	SSE	<p>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.</p>
enumeration	SSE_L	<p>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.</p>
enumeration	SpacecraftOrbitPlane	<p>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.</p>
enumeration	WGS84	<p>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.</p>
Used by	Complex Types	CoordinateSystem, Location
Source	<pre> <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> </pre>	
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd	

Element RenderingHints

Namespace	http://www.spase-group.org/data/schema
Diagram	<pre> classDiagram class RenderingHints { DisplayType AxisLabel RenderingAxis Index ValueFormat ScaleMin ScaleMax ScaleType } class DisplayType { enumDisplayType } class AxisLabel { xsd:string } class RenderingAxis { enumRenderingAxis } class Index { typeSequence } class ValueFormat { xsd:string } class ScaleMin { xsd:double } class ScaleMax { xsd:double } class ScaleType { enumScaleType } RenderingHints < -- DisplayType RenderingHints < -- AxisLabel RenderingHints < -- RenderingAxis RenderingHints < -- Index RenderingHints < -- ValueFormat RenderingHints < -- ScaleMin RenderingHints < -- ScaleMax RenderingHints < -- ScaleType </pre>
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> <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"/>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element DisplayType

Namespace	http://www.spase-group.org/data/schema						
Annotations	The general styling or type of plot that is suitable for the variable.						
Diagram	<pre> classDiagram class DisplayType { enumDisplayType } class enumDisplayType { Image Plasmagram } DisplayType < -- enumDisplayType </pre>						
Type	enumDisplayType						
Properties	content: simple						
Facets	<table border="1"> <tr> <td>enumeration</td> <td>Image</td> <td>A two-dimensional representation of data with values at each element of the array related to an intensity or a color.</td> </tr> <tr> <td>enumeration</td> <td>Plasmagram</td> <td>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.</td> </tr> </table>	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	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	<pre><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></pre>		
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd		

Element AxisLabel

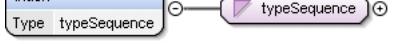
Namespace	http://www.spase-group.org/data/schema		
Annotations	A short character string (approximately 10 characters, but preferably 6 characters - more only if absolutely required for clarity) which can be used to label a y-axis for a plot or to provide a heading for a data listing.		
Diagram	<pre> classDiagram class AxisLabel { <<xsd:string>> } class xsd:string AxisLabel "1" -- "0..1" xsd:string </pre>		
Type	xsd:string		
Properties	content: simple		
Used by	Complex Type	RenderingHints	
Source	<pre><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></pre>		
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd		

Element RenderingAxis

Namespace	http://www.spase-group.org/data/schema		
Annotations	A reference component of a plot or rendering of data. A plot typically is a 2-dimensional rendering with a horizontal and vertical axis. A third dimension can be introduced with a color coding of the rendered data.		
Diagram	<pre> classDiagram class RenderingAxis { <<enumRenderingAxis>> } class enumRenderingAxis RenderingAxis "1" -- "0..1" enumRenderingAxis </pre>		
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	<pre><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 vertical axis. A third dimension can be introduced with a color coding of the rendered data.</xsd:documentation> </xsd:annotation> </xsd:element></pre>	
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd	

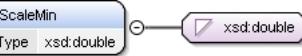
Element Index

Namespace	http://www.spase-group.org/data/schema
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	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

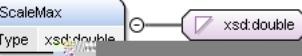
Element ValueFormat

Namespace	http://www.spase-group.org/data/schema
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 Element, RenderingHints
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

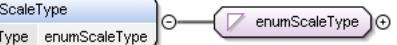
Element ScaleMin

Namespace	http://www.spase-group.org/data/schema
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	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element ScaleMax

Namespace	http://www.spase-group.org/data/schema
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	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element ScaleType

Namespace	http://www.spase-group.org/data/schema						
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	<table> <tr> <td>enumeration</td> <td>LinearScale</td> <td>Intervals which are equally spaced.</td> </tr> <tr> <td>enumeration</td> <td>LogScale</td> <td>Intervals which are spaced proportionally to the logarithms of the values being represented.</td> </tr> </table>	enumeration	LinearScale	Intervals which are equally spaced.	enumeration	LogScale	Intervals which are spaced proportionally to the logarithms of the values being represented.
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	<pre><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></pre>						
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd						

Element Structure

Namespace	http://www.spase-group.org/data/schema
Diagram	<pre> classDiagram class Structure { <<Structure>> <<Type>> Structure } class Size { <<Size>> <<Type>> typeSequence } class Description { <<Description>> <<Type>> xsd:string } class Element { <<Element>> <<Type>> Element } Structure "0..1" --> "0..1" Size : Structure "0..1" --> "0..1" Description : Structure "0..infinity" --> "0..infinity" Element : </pre>
Type	Structure
Properties	content: complex
Used by	Complex Type Parameter
Model	Size , Description{0,1} , Element*
Children	Description, Element, Size
Instance	<pre> <Structure> <Size>{1,1}</Size> <Description>{0,1}</Description> <Element>{0,unbounded}</Element> </Structure> </pre>
Source	<code><xsd:element name="Structure" type="Structure"/></code>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element Size

Namespace	http://www.spase-group.org/data/schema
Annotations	<p>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.</p>
Diagram	<pre> classDiagram class Size { <<Size>> <<Type>> typeSequence } class typeSequence { <<typeSequence>> } Size "0..1" --> "1..1" typeSequence : </pre>
Type	typeSequence
Properties	content: simple
Used by	Complex Type Structure
Source	<pre> <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> </pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element Element

Namespace	http://www.spase-group.org/data/schema
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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	<pre><Element> <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></pre>
Source	<code><xsd:element name="Element" type="Element" /></code>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element Qualifier

Namespace	http://www.spase-group.org/data/schema		
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.Elevation	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 a 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.

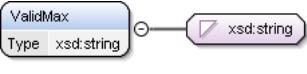
enumeration	Parallel	Having the same direction as a given direction
enumeration	Peak	The maximum value for the quantity in question, over a period of time which is usually equal to the cadence.
enumeration	Perpendicular	At right angles to a given direction.
enumeration	Perturbation	Variations in the 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 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, Mixed, Particle, Support, Wave
Source		<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd	

Element ValidMin

Namespace	http://www.spase-group.org/data/schema
Annotations	The smallest legitimate value.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Types Element, Parameter
Source	<pre><xsd:element name="ValidMin" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">The smallest legitimate value.</xsd:documentation> </xsd:annotation> </xsd:element></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element ValidMax

Namespace	http://www.spase-group.org/data/schema
Annotations	The largest legitimate value.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Types Element, Parameter
Source	<pre><xsd:element name="ValidMax" type="xsd:string"> <xsd:annotation></pre>

	<pre> <xsd:documentation xml:lang="en">The largest legitimate value.</xsd:documentation> </xsd:annotation> </xsd:element> </pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Element FillValue

Namespace	http://www.spase-group.org/data/schema
Annotations	A value that indicates that a quantity is undefined.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Types Element, Parameter
Source	<pre> <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> </pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Element ParameterEntity

Namespace	http://www.spase-group.org/data/schema
Diagram	
Properties	abstract: true
Substitution Group	<ul style="list-style-type: none"> • Field • Particle • Wave • Mixed • Support
Used by	Complex Type Parameter
Source	<xsd:element name="ParameterEntity" abstract="true" />
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Element Extension

Namespace	http://www.spase-group.org/data/schema
Diagram	

Type	Extension	
Properties	content: complex	
Used by	Complex Types	Annotation, Catalog, DisplayData, Instrument, NumericalData, Observatory, Person, Registry, Repository, Service
Model	ANY element from ANY namespace	
Source	<xsd:element name="Extension" type="Extension"/>	
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd	

Element Field

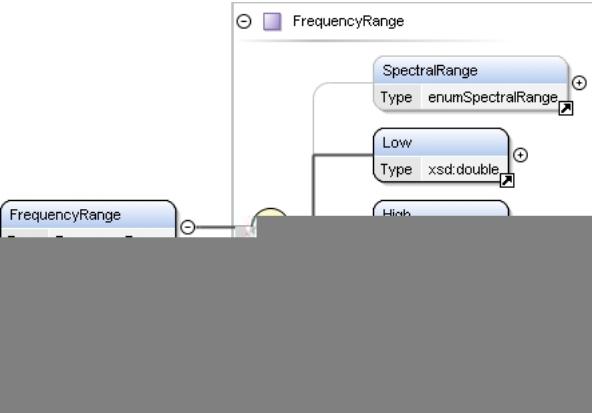
Namespace	http://www.spase-group.org/data/schema
Diagram	<pre> classDiagram class Field { <<Field>> <<ParameterEntity Abstract true>> <<Substitution Group>> <<Qualifier Type enumQualifier>> <<FieldQuantity Type enumFieldQuantity>> <<FrequencyRange Type FrequencyRange>> } Field < -- Qualifier Field < -- FieldQuantity Field < -- FrequencyRange Qualifier *--> Field FieldQuantity *--> Field FrequencyRange *--> Field </pre>
Type	Field
Properties	content: complex
Substitution Group Affiliation	• ParameterEntity
Model	Qualifier*, FieldQuantity, FrequencyRange{0,1}
Children	FieldQuantity, FrequencyRange, Qualifier
Instance	<Field> <Qualifier>{0,unbounded}</Qualifier> <FieldQuantity>{1,1}</FieldQuantity> <FrequencyRange>{0,1}</FrequencyRange> </Field>
Source	<xsd:element name="Field" type="Field" substitutionGroup="ParameterEntity"/>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element FieldQuantity

Namespace	http://www.spase-group.org/data/schema									
Annotations	The physical attribute of the field.									
Diagram	<pre> classDiagram class FieldQuantity { <<FieldQuantity Type enumFieldQuantity>> } FieldQuantity < -- enumFieldQuantity </pre>									
Type	enumFieldQuantity									
Properties	content: simple									
Facets	<table border="1"> <tr> <td>enumeration</td> <td>Current</td> <td>The flow of electrons through a conductor caused by a potential difference.</td> </tr> <tr> <td>enumeration</td> <td>Electric</td> <td>The physical attribute that exerts an electrical force.</td> </tr> <tr> <td>enumeration</td> <td>Electromagnetic</td> <td>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</td> </tr> </table>	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
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 Type	Field
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>	
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd	

Element FrequencyRange

Namespace	http://www.spase-group.org/data/schema
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> <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" />
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element SpectralRange

Namespace	http://www.spase-group.org/data/schema
Annotations	The general term used to describe wavelengths or frequencies within a given span of values for those quantities.

Diagram	<pre> classDiagram class SpectralRange { <<enumSpectralRange>> } enumSpectralRange < -- SpectralRange </pre>	
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 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 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 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, FrequencyRange, NumericalData, WavelengthRange
Source	<pre> <xsd:element name="SpectralRange" type="enumSpectralRange"> <xsd:annotation> </pre>	

	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

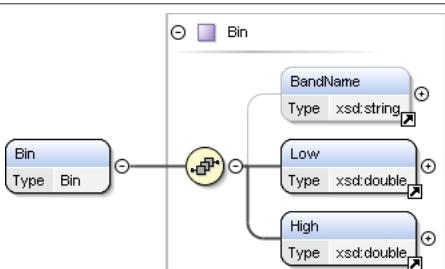
Element Low

Namespace	http://www.spase-group.org/data/schema
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	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element High

Namespace	http://www.spase-group.org/data/schema
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	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element Bin

Namespace	http://www.spase-group.org/data/schema
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> <BandName>{0,1}</BandName> <Low>{1,1}</Low> <High>{1,1}</High> </Bin>	
Source	<xsd:element name="Bin" type="Bin"/>	
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd	

Element BandName

Namespace	http://www.spase-group.org/data/schema	
Annotations	A common or provider assigned name for a range of values.	
Diagram	<pre> classDiagram class BandName { <<xsd:string>> } BandName --> xsd:string </pre>	
Type	xsd:string	
Properties	content: simple	
Used by	Complex Type Bin	
Source	<xsd:element name="BandName" type="xsd:string"> <xsd:annotation> <xsd:documentation xml:lang="en">A common or provider assigned name for a range of values.</xsd:documentation> </xsd:annotation> </xsd:element>	
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd	

Element Particle

Namespace	http://www.spase-group.org/data/schema	
Diagram	<pre> classDiagram class Particle { <<Particle>> <<ParticleType>> <<Qualifer>> <<ParticleQuantity>> <<AtomicNumber>> <<EnergyRange>> <<AzimuthalAngleRange>> <<PolarAngleRange>> } Particle --> ParticleType : 1..∞ Particle --> Qualifer : 0..∞ Particle --> ParticleQuantity Particle --> AtomicNumber : 0..∞ Particle --> EnergyRange Particle --> AzimuthalAngleRange Particle --> PolarAngleRange </pre>	
Type	Particle	
Properties	content: complex	

Substitution Group	• ParameterEntity
Affiliation	
Model	ParticleType+, Qualifier*, ParticleQuantity, AtomicNumber*, EnergyRange{0,1}, AzimuthalAngleRange{0,1}, PolarAngleRange{0,1}
Children	AtomicNumber, AzimuthalAngleRange, EnergyRange, ParticleQuantity, ParticleType, PolarAngleRange, Qualifier
Instance	<pre><Particle> <ParticleType>{1,unbounded}</ParticleType> <Qualifier>{0,unbounded}</Qualifier> <ParticleQuantity>{1,1}</ParticleQuantity> <AtomicNumber>{0,unbounded}</AtomicNumber> <EnergyRange>{0,1}</EnergyRange> <AzimuthalAngleRange>{0,1}</AzimuthalAngleRange> <PolarAngleRange>{0,1}</PolarAngleRange> </Particle></pre>
Source	<code><xsd:element name="Particle" type="Particle" substitutionGroup="ParameterEntity" /></code>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element ParticleType

Namespace	http://www.spase-group.org/data/schema																													
Annotations	A characterization of the kind of particle observed by the measurement.																													
Diagram	<pre> classDiagram class ParticleType class Type class enumParticleType ParticleType < -- Type ParticleType < -- enumParticleType enumParticleType *--> 0..1 </pre>																													
Type	enumParticleType																													
Properties	content: simple																													
Facets	<table border="1"> <tr> <td>enumeration</td> <td>Aerosol</td> <td>A suspension of fine solid or liquid particles in a gas.</td> </tr> <tr> <td>enumeration</td> <td>AlphaParticle</td> <td>A positively charged nuclear particle that consists of two protons and two neutrons.</td> </tr> <tr> <td>enumeration</td> <td>Atom</td> <td>Matter consisting of a nucleus surrounded by electrons which has no net charge.</td> </tr> <tr> <td>enumeration</td> <td>Dust</td> <td>Free microscopic particles of solid material.</td> </tr> <tr> <td>enumeration</td> <td>Electron</td> <td>An elementary particle consisting of a charge of negative electricity equal to about 1.602×10^{-19} Coulomb and having a mass when at rest of about 9.109534×10^{-28} gram.</td> </tr> <tr> <td>enumeration</td> <td>Ion</td> <td>An atom that has acquired a net electric charge by gaining or losing one or more electrons. (Note: $Z>2$)</td> </tr> <tr> <td>enumeration</td> <td>Molecule</td> <td>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</td> </tr> <tr> <td>enumeration</td> <td>Neutron</td> <td>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 (1.673×10^{-24} gram.)</td> </tr> <tr> <td>enumeration</td> <td>Proton</td> <td>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 1.673×10^{-24} gram.</td> </tr> </table>			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 1.602×10^{-19} Coulomb and having a mass when at rest of about 9.109534×10^{-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 (1.673×10^{-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 1.673×10^{-24} gram.
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Used by	Complex Types	Mixed, Particle																												
Source	<code><xsd:element name="ParticleType" type="enumParticleType"></code> <code> <xsd:annotation></code> <code> <xsd:documentation xml:lang="en">A characterization of the kind of particle observed by the measurement.</xsd:documentation></code> <code> </xsd:annotation></code>																													

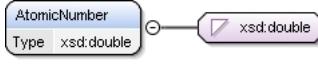
	</xsd:element>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element ParticleQuantity

Namespace	http://www.spase-group.org/data/schema		
Annotations	A characterization of the physical properties of the particle.		
Diagram	<pre> classDiagram class ParticleQuantity { <<enumParticleQuantity>> } class enumParticleQuantity ParticleQuantity "1" --> "1" enumParticleQuantity </pre>		
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.

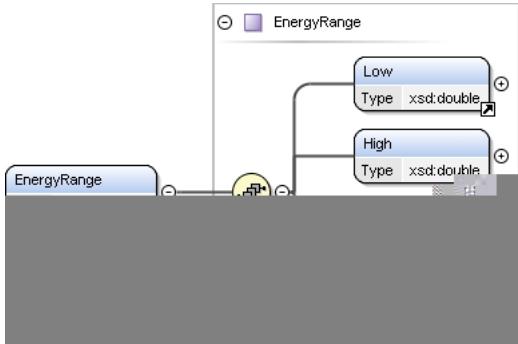
		in unit time, possibly also per unit energy (or equivalent) and/or per unit look direction.
enumeration	ParticleRadius	The mean radius for a Gaussian distribution of particles with an axial ratio of 2 and a distribution width that varies as 0.5 radius. A value of zero means no cloud was detected.
enumeration	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	<pre><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></pre>	
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd	

Element AtomicNumber

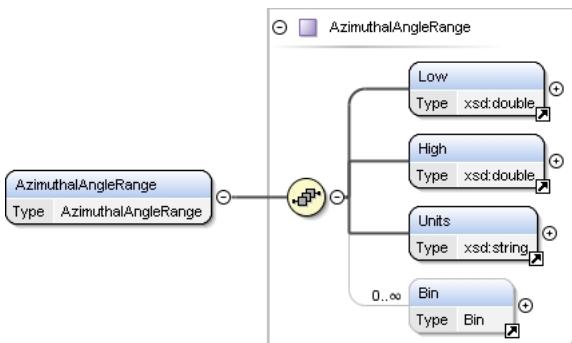
Namespace	http://www.spase-group.org/data/schema
Annotations	The number of protons in the nucleus of an atom.
Diagram	
Type	xsd:double
Properties	content: simple
Used by	Complex Type Particle
Source	<pre><xsd:element name="AtomicNumber" type="xsd:double"> <xsd:annotation> <xsd:documentation xml:lang="en">The number of protons in the nucleus of an atom.</xsd:documentation> </xsd:annotation> </xsd:element></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element EnergyRange

Namespace	http://www.spase-group.org/data/schema
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Diagram	
Type	EnergyRange
Properties	content: complex
Used by	Complex Types Particle, Wave
Model	Low , High , Units , Bin*
Children	Bin, High, Low, Units
Instance	<pre><EnergyRange> <Low>{1,1}</Low> <High>{1,1}</High> <Units>{1,1}</Units> <Bin>{0,unbounded}</Bin> </EnergyRange></pre>
Source	<code><xsd:element name="EnergyRange" type="EnergyRange" /></code>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element AzimuthalAngleRange

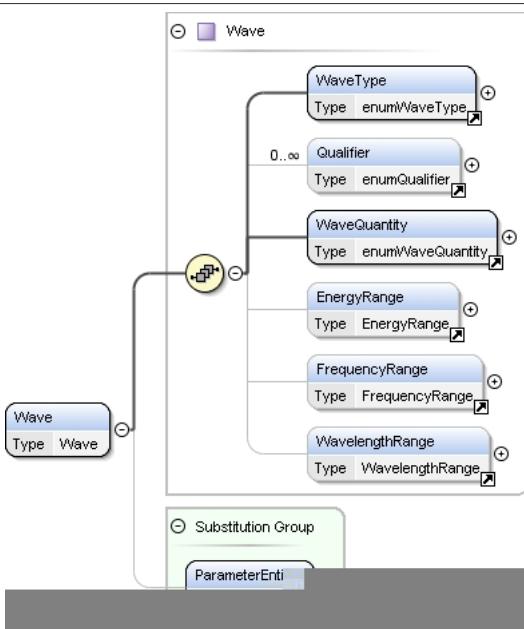
Namespace	http://www.spase-group.org/data/schema
Diagram	
Type	AzimuthalAngleRange
Properties	content: complex
Used by	Complex Type Particle
Model	Low , High , Units , Bin*
Children	Bin, High, Low, Units
Instance	<pre><AzimuthalAngleRange> <Low>{1,1}</Low> <High>{1,1}</High> <Units>{1,1}</Units> <Bin>{0,unbounded}</Bin> </AzimuthalAngleRange></pre>
Source	<code><xsd:element name="AzimuthalAngleRange" type="AzimuthalAngleRange" /></code>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element PolarAngleRange

Namespace	http://www.spase-group.org/data/schema
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Diagram	
Type	PolarAngleRange
Properties	content: complex
Used by	Complex Type Particle
Model	Low , High , Units , Bin*
Children	Bin, High, Low, Units
Instance	<pre><PolarAngleRange> <Low>{1,1}</Low> <High>{1,1}</High> <Units>{1,1}</Units> <Bin>{0,unbounded}</Bin> </PolarAngleRange></pre>
Source	<code><xsd:element name="PolarAngleRange" type="PolarAngleRange" /></code>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element Wave

Namespace	http://www.spase-group.org/data/schema
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	<pre><Wave> <WaveType>{1,1}</WaveType> <Qualifier>{0,unbounded}</Qualifier> <WaveQuantity>{1,1}</WaveQuantity></pre>

	<pre><EnergyRange>{0,1}</EnergyRange> <FrequencyRange>{0,1}</FrequencyRange> <WavelengthRange>{0,1}</WavelengthRange> </Wave></pre>
Source	<xsd:element name="Wave" type="Wave" substitutionGroup="ParameterEntity"/>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element WaveType

Namespace	http://www.spase-group.org/data/schema																				
Annotations	A characterization of the carrier or phenomenon of wave information observed by the measurement.																				
Diagram	<pre> classDiagram class WaveType { <<Type enumWaveType>> } class enumWaveType WaveType "1" -- "0..1" enumWaveType </pre>																				
Type	enumWaveType																				
Properties	content: simple																				
Facets	<table border="1"> <tr> <td>enumeration</td> <td>Electromagnetic</td> <td>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.</td> </tr> <tr> <td>enumeration</td> <td>Electrostatic</td> <td>Collective longitudinal electric-field and plasma oscillations trapped within a body of plasma.</td> </tr> <tr> <td>enumeration</td> <td>Hydrodynamic</td> <td>Periodic or quasi-periodic oscillations of fluid quantities.</td> </tr> <tr> <td>enumeration</td> <td>MHD</td> <td>Hydrodynamic waves in a magnetized plasma in which the background magnetic field plays a key role in controlling the wave propagation characteristics.</td> </tr> <tr> <td>enumeration</td> <td>Photon</td> <td>Electromagnetic waves detected by techniques that utilize their corpuscular character (e.g., CCD, CMOS, photomultipliers).</td> </tr> <tr> <td>enumeration</td> <td>PlasmaWaves</td> <td>Self-consistent collective oscillations of particles and fields (electric and magnetic) in a plasma.</td> </tr> </table>			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.
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enumeration	PlasmaWaves	Self-consistent collective oscillations of particles and fields (electric and magnetic) in a plasma.																			
Used by	Complex Type	Wave																			
Source	<pre><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></pre>																				
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd																				

Element WaveQuantity

Namespace	http://www.spase-group.org/data/schema								
Annotations	A characterization of the physical properties of a wave.								
Diagram	<pre> classDiagram class WaveQuantity { <<Type enumWaveQuantity>> } class enumWaveQuantity WaveQuantity "1" -- "0..1" enumWaveQuantity </pre>								
Type	enumWaveQuantity								
Properties	content: simple								
Facets	<table border="1"> <tr> <td>enumeration</td> <td>ACElectricField</td> <td>Alternating electric field component of a wave.</td> </tr> <tr> <td>enumeration</td> <td>ACMagneticField</td> <td>Alternating magnetic field component of a wave.</td> </tr> </table>			enumeration	ACElectricField	Alternating electric field component of a wave.	enumeration	ACMagneticField	Alternating magnetic field component of a wave.
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	Gyrfrequency	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>		
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd		

Element WavelengthRange

Namespace	http://www.spase-group.org/data/schema
Diagram	<pre> classDiagram class WavelengthRange { SpectralRange Low High Units <<WavelengthRange>> } </pre>
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> <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" />
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Element Mixed

Namespace	http://www.spase-group.org/data/schema
Diagram	<pre> classDiagram class Mixed { MixedQuantity ParticleType Qualifier <<ParameterEntity>> } </pre>
Type	Mixed

Properties	content: complex
Substitution Group Affiliation	• ParameterEntity
Model	MixedQuantity , ParticleType* , Qualifier*
Children	MixedQuantity, ParticleType, Qualifier
Instance	<pre><Mixed> <MixedQuantity>{1,1}</MixedQuantity> <ParticleType>{0,unbounded}</ParticleType> <Qualifier>{0,unbounded}</Qualifier> </Mixed></pre>
Source	<code><xsd:element name="Mixed" type="Mixed" substitutionGroup="ParameterEntity" /></code>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Element MixedQuantity

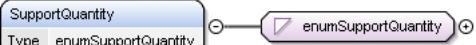
Namespace	http://www.spase-group.org/data/schema																													
Annotations	A characterization of the combined attributes of a quantity.																													
Diagram	<pre> classDiagram class MixedQuantity { Type enumMixedQuantity } class enumMixedQuantity MixedQuantity "1" --> "1" enumMixedQuantity </pre>																													
Type	enumMixedQuantity																													
Properties	content: simple																													
Facets	<table border="1"> <tr> <td>enumeration</td> <td>AkasofuEpsilon</td> <td>A measure of the magnetopause energy flux and an indicator of the solar wind power available for subsequent magnetospheric energization. Defined as: $V*B^2*l^2\sin(\theta/2)^4$ 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.</td> </tr> <tr> <td>enumeration</td> <td>AlfvenMachNumber</td> <td>The ratio of the bulk flow speed to the Alfvén speed.</td> </tr> <tr> <td>enumeration</td> <td>AlfvenVelocity</td> <td>Phase velocity of the Alfvén 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 (μ_0).</td> </tr> <tr> <td>enumeration</td> <td>FrequencyToGyrofrequency</td> <td>Ratio of the characteristic frequency of a medium to gyrofrequency of a particle.</td> </tr> <tr> <td>enumeration</td> <td>MagnetosonicMachNumber</td> <td>The ratio of the velocity of fast mode waves to the Alfvén velocity.</td> </tr> <tr> <td>enumeration</td> <td>Other</td> <td>Not classified with more specific terms. The context of its usage may be described in related text.</td> </tr> <tr> <td>enumeration</td> <td>PlasmaBeta</td> <td>The ratio of the plasma pressure (nkT) to the magnetic pressure ($B^2/2\mu_0$) of the SUM(nkT)/($B^2/2\mu_0$).</td> </tr> <tr> <td>enumeration</td> <td>TotalPressure</td> <td>In an MHD fluid it is the number density (N) times Boltzmann constant times the temperature in Kelvin.</td> </tr> <tr> <td>enumeration</td> <td>VCrossB</td> <td>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.</td> </tr> </table>			enumeration	AkasofuEpsilon	A measure of the magnetopause energy flux and an indicator of the solar wind power available for subsequent magnetospheric energization. Defined as: $V*B^2*l^2\sin(\theta/2)^4$ 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 Alfvén speed.	enumeration	AlfvenVelocity	Phase velocity of the Alfvén 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 (μ_0).	enumeration	FrequencyToGyrofrequency	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 Alfvén 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 ($B^2/2\mu_0$) of the SUM(nkT)/($B^2/2\mu_0$).	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.
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Used by	Complex Type	Mixed																												
Source	<code><xsd:element name="MixedQuantity" type="enumMixedQuantity"></code> <code> <xsd:annotation></code> <code> <xsd:documentation xml:lang="en">A characterization of the combined attributes of a quantity.</xsd:documentation></code>																													

	</xsd:annotation> </xsd:element>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element Support

Namespace	http://www.spase-group.org/data/schema
Diagram	
Type	Support
Properties	content: complex
Substitution Group Affiliation	• ParameterEntity
Model	Qualifier*, SupportQuantity
Children	Qualifier, SupportQuantity
Instance	<pre><Support> <Qualifier>{0,unbounded}</Qualifier> <SupportQuantity>{1,1}</SupportQuantity> </Support></pre>
Source	<pre><xsd:element name="Support" type="Support" substitutionGroup="ParameterEntity"/></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element SupportQuantity

Namespace	http://www.spase-group.org/data/schema															
Annotations	A characterization of the support information.															
Diagram																
Type	enumSupportQuantity															
Properties	content: simple															
Facets	<table border="0"> <tr> <td>enumeration</td> <td>InstrumentMode</td> <td>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.</td> </tr> <tr> <td>enumeration</td> <td>Other</td> <td>Not classified with more specific terms. The context of its usage may be described in related text.</td> </tr> <tr> <td>enumeration</td> <td>Positional</td> <td>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.</td> </tr> <tr> <td>enumeration</td> <td>Temporal</td> <td>Pertaining to time.</td> </tr> <tr> <td>enumeration</td> <td>Velocity</td> <td>Rate of change of position. Also used for the average velocity of a collection of particles, also referred to as "bulk velocity".</td> </tr> </table>	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".
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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		<pre><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></pre>
Schema location		file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element DisplayData

Namespace	http://www.spase-group.org/data/schema
Diagram	 <p>The diagram shows a UML class named 'DisplayData'. It has a single attribute named 'ResourceId' of type 'xsd:string'. The attribute is highlighted with a blue selection bar.</p>

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	<pre><DisplayData> <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></pre>
Source	<pre><xsd:element name="DisplayData" type="DisplayData" substitutionGroup="ResourceEntity" /></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element ProcessingLevel

Namespace	http://www.spase-group.org/data/schema											
Annotations	The standard classification of the processing performed on the product.											
Diagram	<pre> classDiagram class ProcessingLevel { Type enumProcessingLevel } enumProcessingLevel <-- O--> ProcessingLevel </pre>											
Type	enumProcessingLevel											
Properties	content: simple											
Facets	<table border="1"> <tr> <td>enumeration</td> <td>Calibrated</td> <td>Data wherein sensor outputs have been convolved with instrument response function, often irreversibly, to yield data in physical units.</td> </tr> <tr> <td>enumeration</td> <td>Raw</td> <td>Data in its original state with no processing to account for calibration!!!</td> </tr> <tr> <td>enumeration</td> <td>Uncalibrated</td> <td>Duplicate data are removed from the data stream and data are time ordered. Values are not adjusted for any potential biases or external factors.</td> </tr> </table>			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.
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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, NumericalData										
Source	<pre><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></pre>											
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd											

Element ProviderProcessingLevel

Namespace	http://www.spase-group.org/data/schema
Annotations	The provider specific classification of the processing performed on the product.
Diagram	<pre> classDiagram class ProviderProcessingLevel { <<xsd:string>> } </pre>
Type	xsd:string
Properties	content: simple
Used by	Complex Types DisplayData, NumericalData
Source	<pre> <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> </pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element MeasurementType

Namespace	http://www.spase-group.org/data/schema																											
Annotations	A characterization of the quantitative assessment of a phenomenon.																											
Diagram	<pre> classDiagram class MeasurementType { <<enumMeasurementType>> } </pre>																											
Type	enumMeasurementType																											
Properties	content: simple																											
Facets	<table border="1"> <tr> <td>enumeration</td> <td>ActivityIndex</td> <td>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.</td> </tr> <tr> <td>enumeration</td> <td>Dopplergram</td> <td>A map or image depicting the spatial distribution of line-of-sight velocities of the observed object.</td> </tr> <tr> <td>enumeration</td> <td>Dust</td> <td>Free microscopic particles of solid material.</td> </tr> <tr> <td>enumeration</td> <td>ElectricField</td> <td>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.</td> </tr> <tr> <td>enumeration</td> <td>EnergeticParticles</td> <td>Pieces of matter that are moving very fast. Energetic particles include protons, electrons, neutrons, neutrinos, the nuclei of atoms, and other sub-atomic particles.</td> </tr> <tr> <td>enumeration</td> <td>Ephemeris</td> <td>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.</td> </tr> <tr> <td>enumeration</td> <td>ImageIntensity</td> <td>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.</td> </tr> <tr> <td>enumeration</td> <td>InstrumentStatus</td> <td>A quantity directly related to the operation or function of an instrument.</td> </tr> <tr> <td>enumeration</td> <td>IonComposition</td> <td>In situ measurements of the relative flux or density of electrically charged particles</td> </tr> </table>	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
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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, NumericalData	
Source		<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd	

Element TemporalDescription

Namespace	http://www.spase-group.org/data/schema
Diagram	<pre> classDiagram class TemporalDescription { <<Complex Type>> } class TimeSpan { <<Simple Type xsd:duration>> } class Cadence { <<Simple Type xsd:duration>> } class Exposure { <<Simple Type xsd:duration>> } TemporalDescription "0..1" -- "1..1" TimeSpan TemporalDescription "0..1" -- "1..1" Cadence TemporalDescription "0..1" -- "1..1" Exposure </pre>
Type	TemporalDescription
Properties	content: complex
Used by	Complex Types DisplayData, NumericalData
Model	TimeSpan , Cadence{0,1} , Exposure{0,1}
Children	Cadence, Exposure, TimeSpan
Instance	<pre><TemporalDescription> <TimeSpan>{1,1}</TimeSpan> <Cadence>{0,1}</Cadence> <Exposure>{0,1}</Exposure> </TemporalDescription></pre>
Source	<pre><xsd:element name="TemporalDescription" type="TemporalDescription"/></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element Exposure

Namespace	http://www.spase-group.org/data/schema
Annotations	The time interval over which an individual measurement is taken.
Diagram	<pre> classDiagram class Exposure { <<Simple Type xsd:duration>> } class xsd:duration Exposure --> xsd:duration </pre>
Type	xsd:duration
Properties	content: simple
Used by	Complex Type TemporalDescription
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element DisplayCadence

Namespace	http://www.spase-group.org/data/schema
Annotations	The time interval between the successive display elements.
Diagram	
Type	xsd:duration
Properties	content: simple
Used by	Complex Type DisplayData
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element ObservedRegion

Namespace	http://www.spase-group.org/data/schema																								
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	<table> <tr> <td>enumeration</td> <td>Asteroid</td> <td>A small extraterrestrial body consisting mostly of rock and metal that is in orbit around the sun.</td> </tr> <tr> <td>enumeration</td> <td>Comet</td> <td>A relatively small extraterrestrial body consisting of a frozen mass that travels around the sun in a highly elliptical orbit.</td> </tr> <tr> <td>enumeration</td> <td>Earth</td> <td>The third planet from the sun in our solar system.</td> </tr> <tr> <td>enumeration</td> <td>Earth.Magnetsheath</td> <td>The region between the bow shock and the magnetopause, characterized by very turbulent plasma.</td> </tr> <tr> <td>enumeration</td> <td>Earth.Magnetosphere</td> <td>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.</td> </tr> <tr> <td>enumeration</td> <td>Earth.Magnetosphere.Magnetotail</td> <td>Region on the night side of the body where the magnetic field is stretched backwards by the force of the solar wind. For Earth, the magnetotail begins at a night-side radial distance of 10 Re ($X > -10Re$).</td> </tr> <tr> <td>enumeration</td> <td>Earth.Magnetosphere.Main</td> <td>The region of the magnetosphere where the magnetic field lines are closed, but does not include the gaseous region gravitationally bound to the body.</td> </tr> <tr> <td>enumeration</td> <td>Earth.Magnetosphere.Polar</td> <td>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</td> </tr> </table>	enumeration	Asteroid	A small extraterrestrial body consisting mostly of rock and metal that is in orbit around the sun.	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.Magnetsheath	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	Region on the night side of the body where the magnetic field 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
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		the auroral zone.
enumeration	Earth.Magnetosphere.RadiationBelt	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 atmosphere 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.IonosphereLayer	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.IonosphereRegion	A region 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.IonosphereRegionF	The F region 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.IonosphereRegionT	The T region is 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	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	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	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

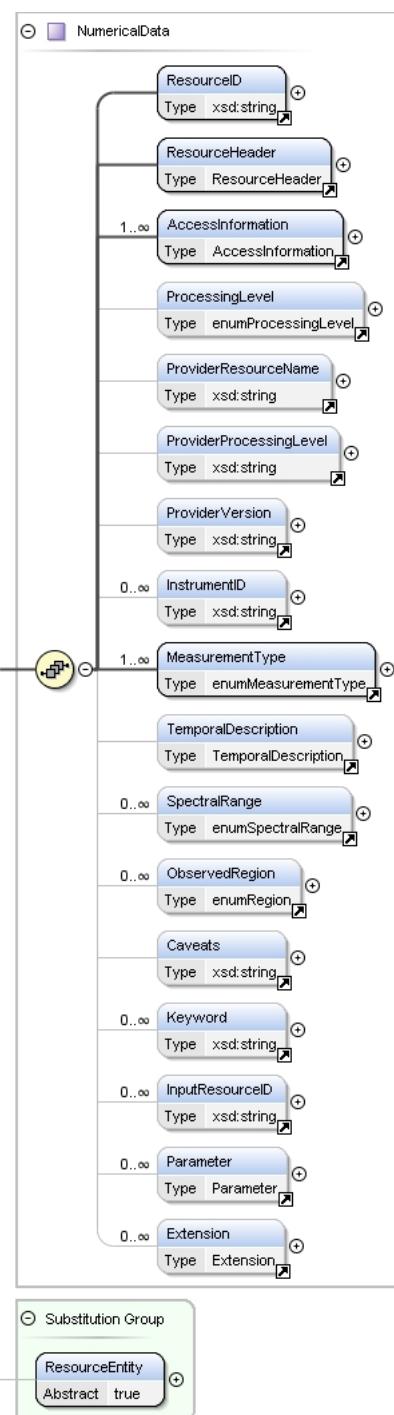
		increases with height. The stratosphere contains the ozone layer.
enumeration	Earth.NearSurface.Thermosphere	The layer of the atmosphere that extends from the Mesosphere to 640+ km, temperature increasing with height.
enumeration	Earth.NearSurface.Troposphere	The lowest layer of the atmosphere which 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	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	Jupiter	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	Neptune	The seventh planet from the sun in our solar system.
enumeration	Pluto	The ninth (sub)planet from the sun in our solar system.
enumeration	Saturn	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	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	<pre><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></pre>		
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd		

Element NumericalData

Namespace	http://www.spase-group.org/data/schema
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Diagram



Type	<code>NumericalData</code>
Properties	content: complex
Substitution Group Affiliation	<ul style="list-style-type: none"> • <code>ResourceEntity</code>
Model	<code>ResourceID</code> , <code>ResourceHeader</code> , <code>AccessInformation</code> + , <code>ProcessingLevel</code> {0,1} , <code>ProviderResourceName</code> {0,1} , <code>ProviderProcessingLevel</code> {0,1} , <code>ProviderVersion</code> {0,1} , <code>InstrumentID</code> * , <code>MeasurementType</code> + , <code>TemporalDescription</code> {0,1} , <code>SpectralRange</code> * , <code>ObservedRegion</code> * , <code>Caveats</code> {0,1} , <code>Keyword</code> * , <code>InputResourceID</code> * , <code>Parameter</code> * , <code>Extension</code> *
Children	<code>AccessInformation</code> , <code>Caveats</code> , <code>Extension</code> , <code>InputResourceID</code> , <code>InstrumentID</code> , <code>Keyword</code> , <code>MeasurementType</code> , <code>ObservedRegion</code> , <code>Parameter</code> , <code>ProcessingLevel</code> , <code>ProviderProcessingLevel</code> , <code>ProviderResourceName</code> , <code>ProviderVersion</code> , <code>ResourceHeader</code> , <code>ResourceID</code> , <code>SpectralRange</code> , <code>TemporalDescription</code>
Instance	<pre><NumericalData> <ResourceID>{1,1}</ResourceID> <ResourceHeader>{1,1}</ResourceHeader></pre>

	<pre> <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> </pre>
Source	<xsd:element name="NumericalData" type="NumericalData" substitutionGroup="ResourceEntity" />
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element Document

Namespace	http://www.spase-group.org/data/schema
Diagram	<pre> classDiagram class Document { ResourceID : xsd:string ResourceHeader : ResourceHeader AccessInformation : AccessInformation Keyword : xsd:string DocumentType : enumDocumentType MIMEType : xsd:boolean InputResourceID : xsd:string } class Substitution Group { ResourceEntity : Abstract true } </pre>
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	<pre> <Document> <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> </pre>
Source	<xsd:element name="Document" type="Document" substitutionGroup="ResourceEntity" />
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element DocumentType

Namespace	http://www.spase-group.org/data/schema																					
Annotations	A characterization of the content, purpose, or style of the document.																					
Diagram	<pre> classDiagram class DocumentType { <<DocumentType>> <<enumDocumentType>> } class enumDocumentType { <<enumDocumentType>> } DocumentType < -- enumDocumentType </pre>																					
Type	enumDocumentType																					
Properties	content: simple																					
Facets	<table border="1"> <tr> <td>enumeration</td> <td>Other</td> </tr> <tr> <td>enumeration</td> <td>Poster</td> <td>A set of information arranged on a single page or sheet, typically in a large format.</td> </tr> <tr> <td>enumeration</td> <td>Presentation</td> <td>A set of information that is used when communicating to an audience.</td> </tr> <tr> <td>enumeration</td> <td>Report</td> <td>A document which describes the findings of some individual or group.</td> </tr> <tr> <td>enumeration</td> <td>Specification</td> <td>A detailed description of the requirements and other aspects of an object or component that may be used to develop an implementation.</td> </tr> <tr> <td>enumeration</td> <td>TechnicalNote</td> <td>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.</td> </tr> <tr> <td>enumeration</td> <td>WhitePaper</td> <td>An authoritative report giving information or proposals on an issue.</td> </tr> </table>		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.
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	<pre> <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> </pre>																					
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd																					

Element MIMEType

Namespace	http://www.spase-group.org/data/schema					
Annotations	<p>Multipurpose Internet Mail Extensions (MIME) type and sub-type which characterizes the format of a file. MIME media types are defined 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.</p>					
Diagram	<pre> classDiagram class MIMEType { <<MIMEType>> <<xsd:boolean>> } class xsd:boolean { <<xsd:boolean>> } MIMEType < -- xsd:boolean </pre>					
Type	xsd:boolean					
Properties	<table border="1"> <tr> <td>content:</td> <td>simple</td> </tr> <tr> <td>default:</td> <td>true</td> </tr> </table>		content:	simple	default:	true
content:	simple					
default:	true					
Used by	Complex Type	Document				
Source	<pre> <xsd:element name="MIMEType" type="xsd:boolean" default="true"> </pre>					

	<pre> <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> </pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element Granule

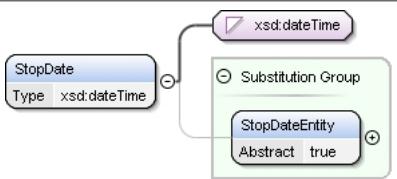
Namespace	http://www.spase-group.org/data/schema
Diagram	
Type	Granule
Properties	content: complex
Substitution Group Affiliation	• ResourceEntity
Model	ResourceID , ReleaseDate , ExpirationDate{0,1} , ParentID , PriorID* , StartDate , StopDate , Source+
Children	ExpirationDate, ParentID, PriorID, ReleaseDate, ResourceID, Source, StartDate, StopDate
Instance	<pre> <Granule> <ResourceID>{1,1}</ResourceID> <ReleaseDate>{1,1}</ReleaseDate> <ExpirationDate>{0,1}</ExpirationDate> <ParentID>{1,1}</ParentID> <PriorID>{0,unbounded}</PriorID> <StartDate>{1,1}</StartDate> <StopDate>{1,1}</StopDate> <Source>{1,unbounded}</Source> </Granule> </pre>
Source	<xsd:element name="Granule" type="Granule" substitutionGroup="ResourceEntity"/>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element ParentID

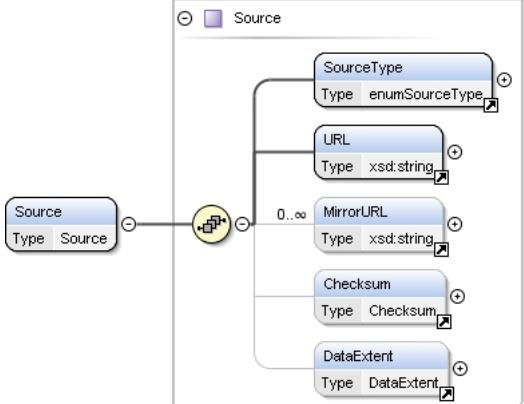
Namespace	http://www.spase-group.org/data/schema
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Annotations	The resource identifier for a resource that a resource is a part of. The resource inherits the attributes of the referenced resource. Attributes defined in the resource override attributes of the parent in the manner prescribed by the containing resource.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Type Granule
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Element StopDate

Namespace	http://www.spase-group.org/data/schema
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	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Element Source

Namespace	http://www.spase-group.org/data/schema
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	<pre><Source> <SourceType>{1,1}</SourceType> <URL>{1,1}</URL> <MirrorURL>{0,unbounded}</MirrorURL> <Checksum>{0,1}</Checksum> <DataExtent>{0,1}</DataExtent> </Source></pre>
Source	<code><xsd:element name="Source" type="Source" /></code>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element SourceType

Namespace	http://www.spase-group.org/data/schema																	
Annotations	A characterization of the function or purpose of the source.																	
Diagram	<pre> classDiagram class SourceType { <<SourceType>> <<Type>> } class enumSourceType { <<enumSourceType>> } SourceType "1" --> "1" enumSourceType </pre>																	
Type	enumSourceType																	
Properties	content: simple																	
Facets	<table border="1"> <tr> <td>enumeration</td> <td>Ancillary</td> <td>A complementary item which can be subordinate, subsidiary, auxiliary, supplementary to the primary item.</td> </tr> <tr> <td>enumeration</td> <td>Browse</td> <td>A representation of an image which is suitable to reveal most or all of the details of the image.</td> </tr> <tr> <td>enumeration</td> <td>Data</td> <td>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.</td> </tr> <tr> <td>enumeration</td> <td>Layout</td> <td>The structured arrangement of items in a collection.</td> </tr> <tr> <td>enumeration</td> <td>Thumbnail</td> <td>A small representation of an image which is suitable to infer what the full-sized imaged is like.</td> </tr> </table>			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.
enumeration	Ancillary	A complementary item which can be subordinate, subsidiary, auxiliary, supplementary to the primary item.																
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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	<code><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></code>																	
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd																	

Element MirrorURL

Namespace	http://www.spase-group.org/data/schema		
Annotations	A Uniform Resource Locator (URL) to an alternate location of a resource.		
Diagram	<pre> classDiagram class MirrorURL { <<MirrorURL>> <<Type>> } class xsd:string { <<xsd:string>> } MirrorURL "1" --> "1" xsd:string </pre>		
Type	xsd:string		

Properties	content: simple
Used by	Complex Type Source
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element Checksum

Namespace	http://www.spase-group.org/data/schema
Diagram	<pre> classDiagram class Checksum { HashValue HashFunction } HashValue "1..1" --> "1..1" Checksum HashFunction "1..1" --> "1..1" Checksum </pre>
Type	Checksum
Properties	content: complex
Used by	Complex Type Source
Model	HashValue , HashFunction
Children	HashFunction, HashValue
Instance	<pre><Checksum> <HashValue>{1,1}</HashValue> <HashFunction>{1,1}</HashFunction> </Checksum></pre>
Source	<pre><xsd:element name="Checksum" type="Checksum" /></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element HashValue

Namespace	http://www.spase-group.org/data/schema
Annotations	The value calculated by a hash function, e.g. the message digest of a digital data object.
Diagram	<pre> classDiagram class HashValue { xsd:string } HashValue --> xsd:string </pre>
Type	xsd:string
Properties	content: simple
Used by	Complex Type Checksum
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element HashFunction

Namespace	http://www.spase-group.org/data/schema
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	<pre> classDiagram class HashFunction { enumHashFunction } HashFunction --> enumHashFunction </pre>

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	<pre><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></pre>				
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd				

Element Instrument

Namespace	http://www.spase-group.org/data/schema		
Diagram	<pre> classDiagram class Instrument { ResourceID : xsd:string ResourceHeader : ResourceHeader 1..∞ InstrumentType : enumInstrumentType 1..∞ InvestigationName : xsd:string OperatingSpan : OperatingSpan ObservatoryID : xsd:string Caveats : xsd:string 0..∞ Extension : Extension } Instrument < -- ResourceEntity : Abstract true Instrument "2" --> "2" Instrument </pre>		
Type	Instrument		
Properties	content: complex		
Substitution Group Affiliation	<ul style="list-style-type: none"> ResourceEntity 		
Model	ResourceID, ResourceHeader, InstrumentType+, InvestigationName+, OperatingSpan{0,1}, ObservatoryID, Caveats{0,1}, Extension*		
Children	Caveats, Extension, InstrumentType, InvestigationName, ObservatoryID, OperatingSpan, ResourceHeader, ResourceID		

Instance	<pre><Instrument> <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></pre>
Source	<code><xsd:element name="Instrument" type="Instrument" substitutionGroup="ResourceEntity" /></code>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element InstrumentType

Namespace	http://www.spase-group.org/data/schema		
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	<pre> classDiagram class InstrumentType { <<InstrumentType>> <<Type>> <<enumInstrumentType>> } class enumInstrumentType { <<enumInstrumentType>> } InstrumentType < -- enumInstrumentType </pre>		
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	QuadrисphericalAnalyser	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 flourescences 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	SpacecraftPotentialController	An instrument to control the electric potential of a spacecraft with respect to the ambient plasma by emitting a variable current of positive

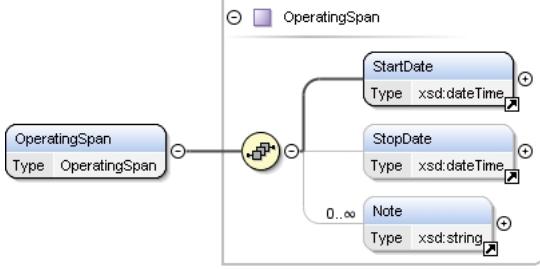
		ions.
enumeration	SpectralPowerReceiver	A radio receiver which determines the power spectral density of the electric or magnetic field, or both, at one or more frequencies.
enumeration	Spectrometer	An instrument that measures the component wavelengths of light (or other electromagnetic radiation) by 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	<pre><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></pre>	
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd	

Element InvestigationName

Namespace	http://www.spase-group.org/data/schema
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	A UML class diagram fragment showing a class named 'InvestigationName' with a multiplicity of 0..1. It has a directed association to another class represented by a rectangle with a diagonal line, with the type 'xsd:string' indicated below the association line.
Type	xsd:string
Properties	content: simple
Used by	Complex Type
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element OperatingSpan

Namespace	http://www.spase-group.org/data/schema
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Diagram	
Type	OperatingSpan
Properties	content: complex
Used by	Complex Types Instrument, Observatory
Model	StartDate , StopDate{0,1} , Note*
Children	Note, StartDate, StopDate
Instance	<pre><OperatingSpan> <StartDate>{1,1}</StartDate> <StopDate>{0,1}</StopDate> <Note>{0,unbounded}</Note> </OperatingSpan></pre>
Source	<code><xsd:element name="OperatingSpan" type="OperatingSpan" /></code>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

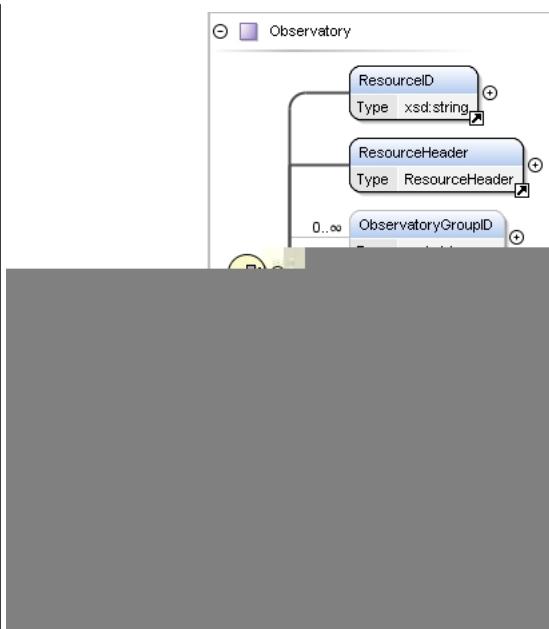
Element ObservatoryID

Namespace	http://www.spase-group.org/data/schema
Annotations	The identifier of an Observatory resource.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Type Instrument
Source	<code><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></code>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element Observatory

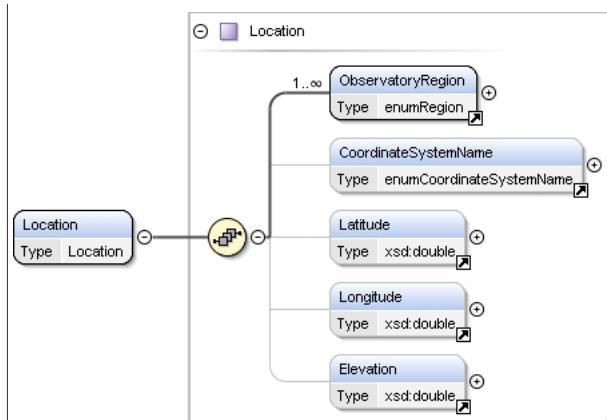
Namespace	http://www.spase-group.org/data/schema
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Diagram



Type	Observatory
Properties	content: complex
Substitution Group Affiliation	• ResourceEntity
Model	ResourceID , ResourceHeader , ObservatoryGroupID* , Location , OperatingSpan{0,1} , Extension*
Children	Extension, Location, ObservatoryGroupID h W n 0 G6.8244 8460800171 9.1639995 Tm [(,)] TJ 1 040.8244 8460800171 9.16399956

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> <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" />
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element ObservatoryRegion

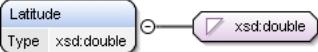
Namespace	http://www.spase-group.org/data/schema																				
Annotations	A spatial location distinguished by certain natural features or physical characteristics where an observatory is located.																				
Diagram																					
Type	enumRegion																				
Properties	content: simple																				
Facets	<table border="1"> <tr> <td>enumeration</td> <td>Asteroid</td> <td>A small extraterrestrial body consisting mostly of rock and metal that is in orbit around the sun.</td> </tr> <tr> <td>enumeration</td> <td>Comet</td> <td>A relatively small extraterrestrial body consisting of a frozen mass that travels around the sun in a highly elliptical orbit.</td> </tr> <tr> <td>enumeration</td> <td>Earth</td> <td>The third planet from the sun in our solar system.</td> </tr> <tr> <td>enumeration</td> <td>Earth.Magnetsheath</td> <td>The region between the bow shock and the magnetopause, characterized by very turbulent plasma.</td> </tr> <tr> <td>enumeration</td> <td>Earth.Magnetosphere</td> <td>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.</td> </tr> <tr> <td>enumeration</td> <td>Earth.Magnetosphere.Magnetotail</td> <td>The tail on the night side of the body where the magnetic field is stretched backwards by the force of the solar wind. For Earth, the magnetotail begins at a night-side radial</td> </tr> </table>			enumeration	Asteroid	A small extraterrestrial body consisting mostly of rock and metal that is in orbit around the sun.	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.Magnetsheath	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 tail on the night side of the body where the magnetic field is stretched backwards by the force of the solar wind. For Earth, the magnetotail begins at a night-side radial
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enumeration	Earth.Magnetosphere.Magnetotail	The tail on the night side of the body where the magnetic field 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	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	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.IonosphereDawnRegion	The dawn 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.IonosphereDuskRegion	The dusk region of the ionosphere occurring at 90-150km above the ground. One of several layers in the ionosphere. Also called the The Kennelly-Heaviside layer.
enumeration	Earth.NearSurface.IonosphereFRegion	A region containing 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.IonosphereF1Region	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	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.SouthAtmosphericRegion	The 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	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	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	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	Jupiter	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	Neptune	The seventh planet from the sun in our solar system.
enumeration	Pluto	The ninth (sub)planet from the sun in our solar system.
enumeration	Saturn	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 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	<pre><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></pre>	
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd	

Element Latitude

Namespace	http://www.spase-group.org/data/schema
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
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element Longitude

Namespace	http://www.spase-group.org/data/schema
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	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

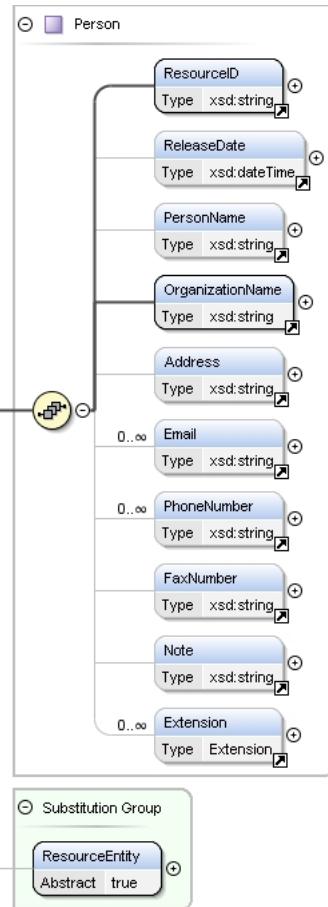
Element Elevation

Namespace	http://www.spase-group.org/data/schema
Annotations	The distance in meters above (positive) or below (negative) the "zero elevation" defined by the World Geodetic System reference frame (WGS84).
Diagram	<pre> classDiagram class Elevation { <<xsd:double>> } Elevation < -- xsd:double </pre>
Type	xsd:double
Properties	content: simple
Used by	Complex Type Location
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element Person

Namespace	http://www.spase-group.org/data/schema
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Diagram



Type	Person
Properties	content: complex
Substitution Group Affiliation	<ul style="list-style-type: none"> • 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	<pre> <Person> <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> </pre>
Source	<code><xsd:element name="Person" type="Person" substitutionGroup="ResourceEntity" /></code>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element PersonName

Namespace	http://www.spase-group.org/data/schema
Annotations	The words used to address an individual.
Diagram	
Type	xsd:string

Properties	content: simple
Used by	Complex Type Person
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element OrganizationName

Namespace	http://www.spase-group.org/data/schema
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	A UML class diagram element. It consists of a rounded rectangle labeled "OrganizationName" above a smaller rectangle labeled "Type xsd:string". A line connects them with a hollow circle at the "OrganizationName" end.
Type	xsd:string
Properties	content: simple
Used by	Complex Type Person
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element Address

Namespace	http://www.spase-group.org/data/schema
Annotations	Directions for finding some location; written on letters or packages that are to be delivered to that location.
Diagram	A UML class diagram element. It consists of a rounded rectangle labeled "Address" above a smaller rectangle labeled "Type xsd:string". A line connects them with a hollow circle at the "Address" end.
Type	xsd:string
Properties	content: simple
Used by	Complex Type Person
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element Email

Namespace	http://www.spase-group.org/data/schema
Annotations	The electronic address at which the individual may be contacted expressed in the form "local-part@domain".
Diagram	A UML class diagram element. It consists of a rounded rectangle labeled "Email" above a smaller rectangle labeled "Type xsd:string". A line connects them with a hollow circle at the "Email" end.
Type	xsd:string

Properties	content: simple
Used by	Complex Type Person
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element PhoneNumber

Namespace	http://www.spase-group.org/data/schema
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	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

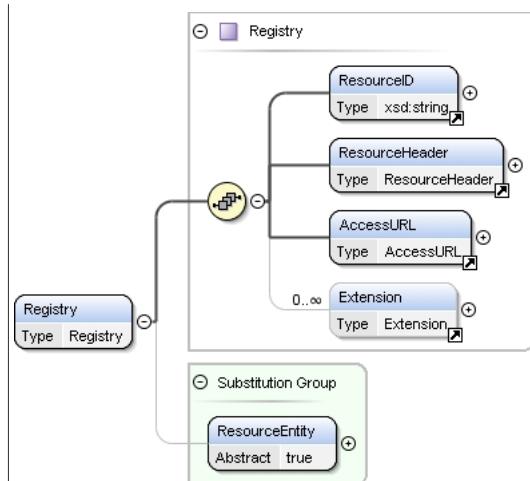
Element FaxNumber

Namespace	http://www.spase-group.org/data/schema
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	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element Registry

Namespace	http://www.spase-group.org/data/schema
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Diagram

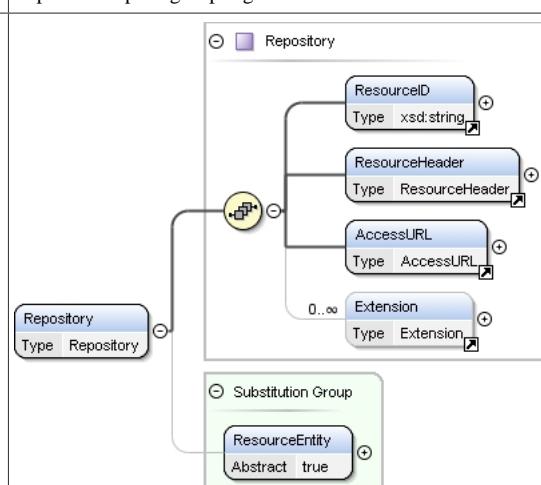


Type	Registry
Properties	content: complex
Substitution Group Affiliation	• ResourceEntity
Model	ResourceID , ResourceHeader , AccessURL , Extension*
Children	AccessURL, Extension, ResourceHeader, ResourceID

Instance	<Registry> <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"/>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Element Repository

Namespace	http://www.spase-group.org/data/schema
Diagram	



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

Instance	<Repository> <ResourceID>{1,1}</ResourceID> <ResourceHeader>{1,1}</ResourceHeader>
----------	--

	<pre><AccessURL>{1,1}</AccessURL> <Extension>{0,unbounded}</Extension> </Repository></pre>
Source	<code><xsd:element name="Repository" type="Repository" substitutionGroup="ResourceEntity" /></code>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

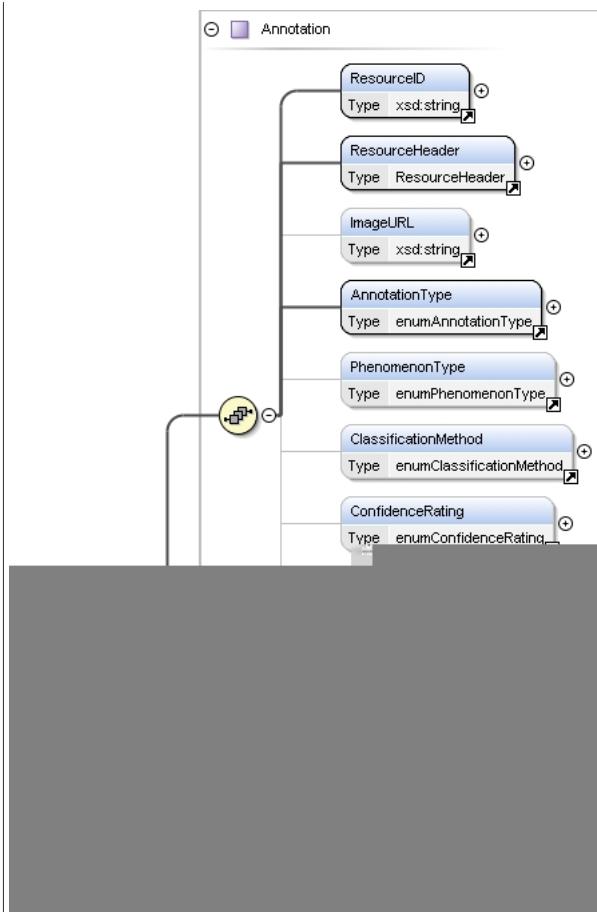
Element Service

Namespace	http://www.spase-group.org/data/schema
Diagram	<pre> classDiagram class Service { ResourceID : xsd:string ResourceHeader : ResourceHeader AccessURL : AccessURL Extension : Extension } class Service { <<Service>> <<Service>> } class Substitution Group { ResourceEntity Abstract : true } Service < -- Service Service < -- Substitution Group </pre>
Type	Service
Properties	content: complex
Substitution Group Affiliation	<ul style="list-style-type: none"> • ResourceEntity
Model	ResourceID , ResourceHeader , AccessURL , Extension*
Children	AccessURL, Extension, ResourceHeader, ResourceID
Instance	<pre><Service> <ResourceID>{1,1}</ResourceID> <ResourceHeader>{1,1}</ResourceHeader> <AccessURL>{1,1}</AccessURL> <Extension>{0,unbounded}</Extension> </Service></pre>
Source	<code><xsd:element name="Service" type="Service" substitutionGroup="ResourceEntity" /></code>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element Annotation

Namespace	http://www.spase-group.org/data/schema
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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	<pre> <Annotation> <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> </pre>
Source	<xsd:element name="Annotation" type="Annotation" substitutionGroup="ResourceEntity" />
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element ImageURL

Namespace	http://www.spase-group.org/data/schema
Annotations	A URL to graphic, image or movie.

Properties	content: simple
Used by	Complex Type Annotation
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Element AnnotationType

Namespace	http://www.spase-group.org/data/schema											
Annotations	A classification for an annotation.											
Diagram	<pre> graph LR AT[AnnotationType Type enumAnnotationType] --> EAT[enumAnnotationType] </pre>											
Type	enumAnnotationType											
Properties	content: simple											
Facets	<table> <tr> <td>enumeration</td> <td>Anomaly</td> <td>An interval where measurements or observations may be adversely affected.</td> </tr> <tr> <td>enumeration</td> <td>Event</td> <td>An action or observation which occurs at a point in time.</td> </tr> <tr> <td>enumeration</td> <td>Feature</td> <td>A prominent or distinctive characteristic that occurs at a location or persists over a period of time.</td> </tr> </table>			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.
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	<pre><xsd:element name="AnnotationType" type="enumAnnotationType"> <xsd:annotation> <xsd:documentation xml:lang="en">A classification for an annotation.</xsd:documentation> </xsd:annotation> </xsd:element></pre>											
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd											

Element ClassificationMethod

Namespace	http://www.spase-group.org/data/schema											
Annotations	The technique used to determine the characteristics of an object.											
Diagram	<pre> graph LR CM[ClassificationMethod Type enumClassificationMethod] --> ECM[enumClassificationMethod] </pre>											
Type	enumClassificationMethod											
Properties	content: simple											
Facets	<table> <tr> <td>enumeration</td> <td>Automatic</td> <td>Determined by the analysis or assessment performed by a program or server.</td> </tr> <tr> <td>enumeration</td> <td>Inferred</td> <td>Determined by the analysis of other information or resources.</td> </tr> <tr> <td>enumeration</td> <td>Inspection</td> <td>Determined by the analysis or assessment performed by a person.</td> </tr> </table>			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.
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	<pre><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></pre>											

Schema location

file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Element ConfidenceRating

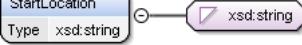
Namespace	http://www.spase-group.org/data/schema														
Annotations	A classification of the certainty of an assertion.														
Diagram	<pre> classDiagram class ConfidenceRating { <<enumConfidenceRating>> } enumConfidenceRating < -- ConfidenceRating </pre>														
Type	enumConfidenceRating														
Properties	content: simple														
Facets	<table> <tr> <td>enumeration</td> <td>Probable</td> <td>Likely given the available evidence. Considered in the range of 4-7 on a scale of 0-10.</td> </tr> <tr> <td>enumeration</td> <td>Strong</td> <td>Highly likely given the available evidence. Considered in the range of 7-10 on a scale of 0-10.</td> </tr> <tr> <td>enumeration</td> <td>Unlikely</td> <td>Not likely given the available evidence. Considered in the range of 0 on a scale of 0-10.</td> </tr> <tr> <td>enumeration</td> <td>Weak</td> <td>Slightly likely given the available evidence. Considered in the range of 1-4 on a scale of 0-10.</td> </tr> </table>			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.
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	<pre> <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> </pre>														
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd														

Element ObservationExtent

Namespace	http://www.spase-group.org/data/schema				
Diagram	<pre> classDiagram class ObservationExtent { <<ObservationExtent>> <<enumRegion>> <<xsd:string>> <<xsd:string>> <<xsd:string>> } enumRegion < -- ObservationExtent xsd:string < -- StartLocation xsd:string < -- StopLocation xsd:string < -- Note </pre>				
Type	ObservationExtent				
Properties	content: complex				
Used by	Complex Type	Annotation			
Model	ObservedRegion{0,1} , StartLocation , StopLocation , Note*				
Children	Note, ObservedRegion, StartLocation, StopLocation				
Instance	<pre> <ObservationExtent> <ObservedRegion>{0,1}</ObservedRegion> <StartLocation>{1,1}</StartLocation> <StopLocation>{1,1}</StopLocation> <Note>{0,unbounded}</Note> </ObservationExtent> </pre>				
Source	<pre> <xsd:element name="ObservationExtent" type="ObservationExtent"/> </pre>				

Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd
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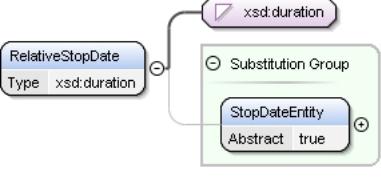
Element StartLocation

Namespace	http://www.spase-group.org/data/schema
Annotations	The initial position in space.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Type ObservationExtent
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Element StopLocation

Namespace	http://www.spase-group.org/data/schema
Annotations	The final position in space.
Diagram	
Type	xsd:string
Properties	content: simple
Used by	Complex Type ObservationExtent
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Element RelativeStopDate

Namespace	http://www.spase-group.org/data/schema
Annotations	An indication of the nominal end date relative to the present.
Diagram	
Type	xsd:duration
Properties	content: simple
Substitution Group Affiliation	• StopDateEntity
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Complex Type(s)

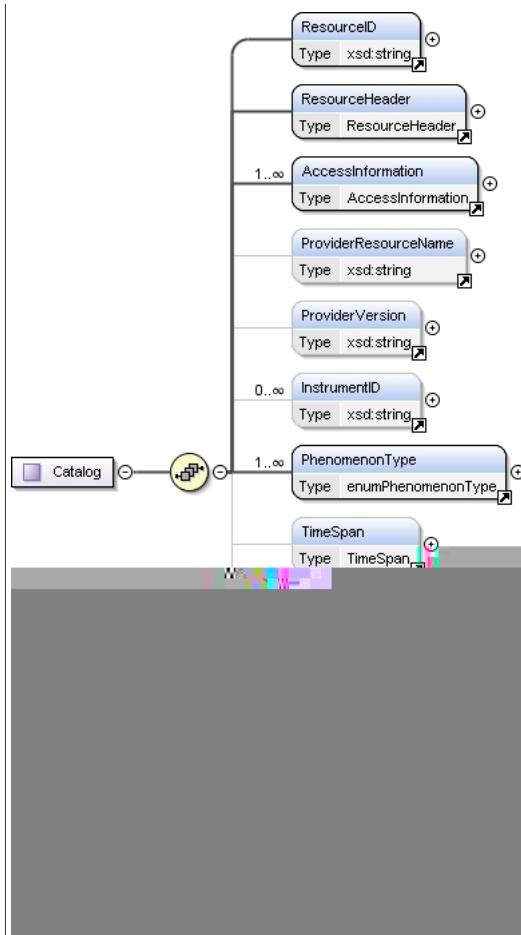
Complex Type Spase

Namespace	http://www.spase-group.org/data/schema										
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	<pre> classDiagram class Spase { @ attributes @ lang : xsd:string @ lang .Default en Version Version.Type enumVersion 1..oo ResourceEntity ResourceEntity.Abstract true } </pre>										
Used by	Element Spase										
Model	Version , ResourceEntity+										
Children	ResourceEntity, Version										
Attributes	<table border="1"> <thead> <tr> <th>QName</th><th>Type</th><th>Fixed</th><th>Default</th><th>Use</th></tr> </thead> <tbody> <tr> <td>lang</td><td>xsd:string</td><td></td><td>en</td><td>optional</td></tr> </tbody> </table>	QName	Type	Fixed	Default	Use	lang	xsd:string		en	optional
QName	Type	Fixed	Default	Use							
lang	xsd:string		en	optional							
Source	<pre> <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> </pre>										
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd										

Complex Type Catalog

Namespace	http://www.spase-group.org/data/schema
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	<pre> <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> </pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Complex Type ResourceHeader

Namespace	http://www.spase-group.org/data/schema
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	<pre> <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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Complex Type Contact

Namespace	http://www.spase-group.org/data/schema
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	A UML class diagram fragment. A purple rounded rectangle labeled "Contact" has a multiplicity of "1..>" at its end of a directed association line pointing to a yellow circle with a cross-hair icon. From this yellow circle, two directed association lines branch out: one to a blue rounded rectangle labeled "PersonID" with a type of "xsd:string", and another to a blue rounded rectangle labeled "Role" with a type of "enumRole". Both "PersonID" and "Role" have a multiplicity of "+".
Used by	Element Contact
Model	PersonID , Role+
Children	PersonID, Role
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Complex Type InformationURL

Namespace	http://www.spase-group.org/data/schema
Annotations	Attributes of the method of acquiring additional information.
Diagram	A UML class diagram fragment. A purple rounded rectangle labeled "InformationURL" has a multiplicity of "1..>" at its end of a directed association line pointing to a yellow circle with a cross-hair icon. From this yellow circle, four directed association lines branch out to blue rounded rectangles: "Name" (type "xsd:string"), "URL" (type "xsd:string"), "Description" (type "xsd:string"), and "Language" (type "xsd:string"). All four children have a multiplicity of "+".
Used by	Element InformationURL
Model	Name{0,1} , URL , Description{0,1} , Language{0,1}
Children	Description, Language, Name, URL
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Complex Type Association

Namespace	http://www.spase-group.org/data/schema
Annotations	Attributes of a relationship a resource has with another resource.
Diagram	A UML class diagram fragment. A purple rounded rectangle labeled "Association" has a multiplicity of "1..>" at its end of a directed association line pointing to a yellow circle with a cross-hair icon. From this yellow circle, three directed association lines branch out to blue rounded rectangles: "AssociationID" (type "xsd:string"), "AssociationType" (type "enumAssociationType"), and "Note" (type "xsd:string"). All three children have a multiplicity of "+".

Used by	Element	Association
Model	AssociationID , AssociationType , Note{0,1}	
Children	AssociationID, AssociationType, Note	
Source	<pre><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></pre>	
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd	

Complex Type AccessInformation

Namespace	http://www.spase-group.org/data/schema	
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	<pre><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></pre>	
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd	

Complex Type AccessURL

Namespace	http://www.spase-group.org/data/schema
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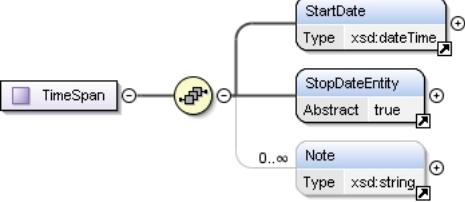
Annotations	Attributes of the method for accessing a resource including a URL, name and description.
Diagram	<pre> classDiagram class AccessURL { Name URL ProductKey Description Language } AccessURL < --> ProductKey </pre>
Used by	Element AccessURL
Model	Name{0,1} , URL , ProductKey* , Description{0,1} , Language{0,1}
Children	Description, Language, Name, ProductKey, URL
Source	<pre> <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> </pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Complex Type DataExtent

Namespace	http://www.spase-group.org/data/schema
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	<pre> classDiagram class DataExtent { Quantity Units Per } DataExtent < --> Per </pre>
Used by	Element DataExtent
Model	Quantity , Units{0,1} , Per{0,1}
Children	Per, Quantity, Units
Source	<pre> <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> </pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Complex Type TimeSpan

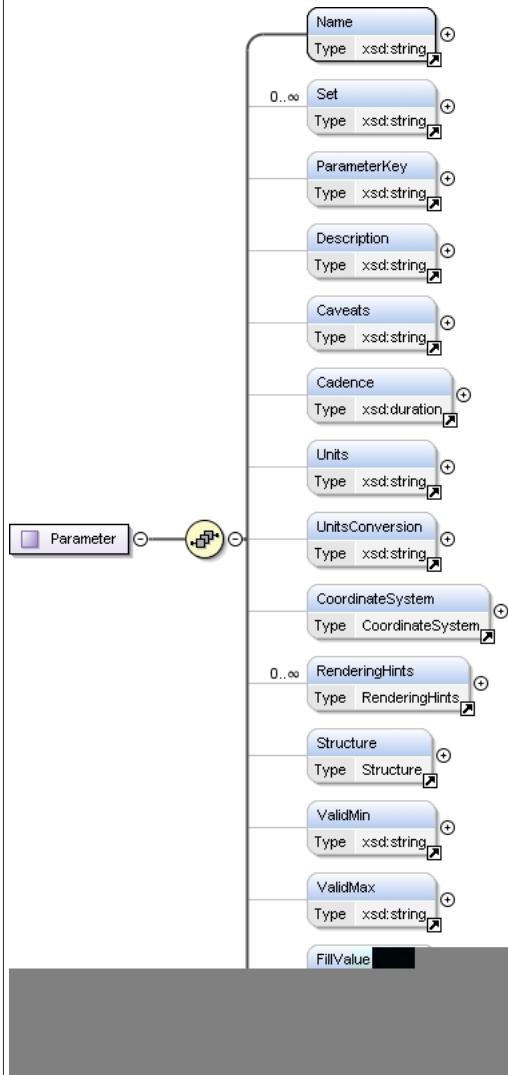
Namespace	http://www.spase-group.org/data/schema
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Annotations	The duration of an interval in time.
Diagram	
Used by	Element TimeSpan
Model	StartDate , StopDateEntity , Note*
Children	Note, StartDate, StopDateEntity
Source	<pre><xsd:complexType name="TimeSpan"> <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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Complex Type Parameter

Namespace	http://www.spase-group.org/data/schema
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

Children

Cadence, Caveats, CoordinateSystem, Description, FillValue, Name, ParameterEntity, ParameterKey, 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" minOccur="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:sequence>
</xsd:complexType>

```

Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd
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Complex Type CoordinateSystem

Namespace	http://www.spase-group.org/data/schema
Annotations	The specification of the orientation of a set of (typically) orthogonal base axes.
Diagram	<pre> classDiagram class CoordinateSystem { <<CoordinateSystem>> } class CoordinateRepresentation { <<CoordinateRepresentation>> } class CoordinateSystemName { <<CoordinateSystemName>> } CoordinateSystem "3" --> "2..3" CoordinateRepresentation CoordinateSystem "3" --> "2..3" CoordinateSystemName </pre>
Used by	Element CoordinateSystem
Model	CoordinateRepresentation , CoordinateSystemName
Children	CoordinateRepresentation, CoordinateSystemName
Source	<pre> <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> </pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Complex Type RenderingHints

Namespace	http://www.spase-group.org/data/schema
Annotations	Attributes to aid in the rendering of parameter.
Diagram	<pre> classDiagram class RenderingHints { <<RenderingHints>> } class DisplayType { <<DisplayType>> } class AxisLabel { <<AxisLabel>> } class RenderingAxis { <<RenderingAxis>> } class Index { <<Index>> } class ValueFormat { <<ValueFormat>> } RenderingHints "3" --> "2..3" DisplayType RenderingHints "3" --> "2..3" AxisLabel RenderingHints "3" --> "2..3" RenderingAxis RenderingHints "3" --> "2..3" Index RenderingHints "3" --> "2..3" ValueFormat </pre>
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	<pre> <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:sequence> </xsd:complexType> </pre>

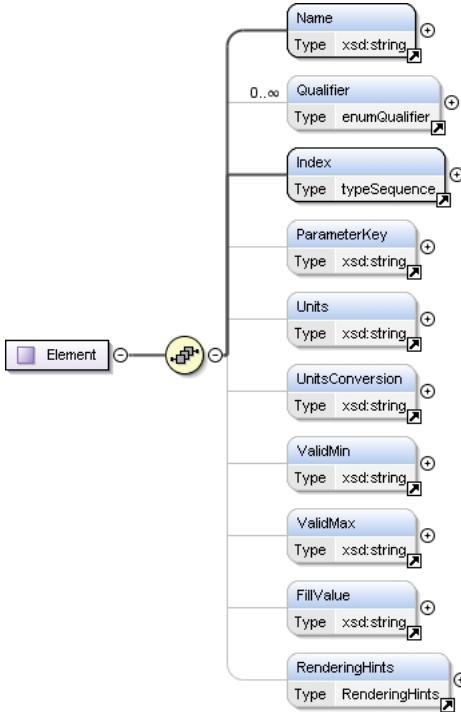
	<pre> <xsd:element ref="AxisLabel" minOccurs="0" maxOccurs="1"/> <xsd:element ref="RenderingAxis" minOccurs="0" maxOccurs="1"/> <xsd:element ref="Index" minOccurs="0" maxOccurs="1"/> <xsd:element ref="ValueFormat" minOccurs="0" maxOccurs="1"/> <xsd:element ref="ScaleMin" minOccurs="0" maxOccurs="1"/> <xsd:element ref="ScaleMax" minOccurs="0" maxOccurs="1"/> <xsd:element ref="ScaleType" minOccurs="0" maxOccurs="1"/> </xsd:sequence> </xsd:complexType> </pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Complex Type Structure

Namespace	http://www.spase-group.org/data/schema
Annotations	The organization and relationship of individual values within a quantity.
Diagram	<pre> classDiagram class Structure { Size Description Element } class Structure { <<Structure>> <<Size>> <<Description>> <<Element>> } </pre>
Used by	Element Structure
Model	Size , Description{0,1} , Element*
Children	Description, Element, Size
Source	<pre> <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> </pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Complex Type Element

Namespace	http://www.spase-group.org/data/schema
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	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Complex Type Extension

Namespace	http://www.spase-group.org/data/schema
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	<pre><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.</xsd:documentation> </xsd:annotation></pre>

	<p>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.</p> <pre></xsd:documentation> </xsd:annotation> <xsd:sequence> <xsd:any minOccurs="0" /> </xsd:sequence> </xsd:complexType></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Complex Type Field

Namespace	http://www.spase-group.org/data/schema
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	<pre> classDiagram class Field { <<Field>> <<FieldQuantity>> <<FrequencyRange>> <<Qualifier>> } Field < -- FieldQuantity Field < -- FrequencyRange Field < -- Qualifier * 0..oo </pre>
Used by	Element Field
Model	Qualifier*, FieldQuantity, FrequencyRange{0,1}
Children	FieldQuantity, FrequencyRange, Qualifier
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Complex Type FrequencyRange

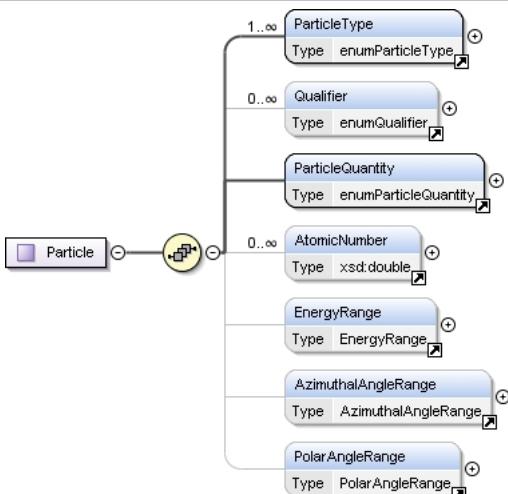
Namespace	http://www.spase-group.org/data/schema
Annotations	The range of possible values for the observed frequency.
Diagram	<pre> classDiagram class FrequencyRange { <<FrequencyRange>> <<SpectralRange>> <<Low>> <<High>> <<Units>> <<Bin>> } FrequencyRange < -- SpectralRange FrequencyRange < -- Low FrequencyRange < -- High FrequencyRange < -- Units FrequencyRange < -- Bin * 0..oo </pre>
Used by	Element FrequencyRange
Model	SpectralRange{0,1}, Low, High, Units, Bin*
Children	Bin, High, Low, SpectralRange, Units
Source	<pre><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></pre>

	<pre> </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> </pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Complex Type Bin

Namespace	http://www.spase-group.org/data/schema
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	<pre> <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> </pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Complex Type Particle

Namespace	http://www.spase-group.org/data/schema
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	ParticleType+ , Qualifier* , ParticleQuantity , AtomicNumber* , EnergyRange{0,1} , AzimuthalAngleRange{0,1} , PolarAngleRange{0,1}

Children	AtomicNumber, AzimuthalAngleRange, EnergyRange, ParticleQuantity, ParticleType, PolarAngleRange, Qualifier
Source	<pre><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 ref="ParticleType" minOccurs="1" maxOccurs="unbounded"/> <xsd:element ref="Qualifier" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="ParticleQuantity" minOccurs="1" maxOccurs="1"/> <xsd:element ref="AtomicNumber" minOccurs="0" maxOccurs="unbounded"/> <xsd:element ref="EnergyRange" minOccurs="0" maxOccurs="1"/> <xsd:element ref="AzimuthalAngleRange" minOccurs="0" maxOccurs="1"/> <xsd:element ref="PolarAngleRange" minOccurs="0" maxOccurs="1"/> </xsd:sequence> </xsd:complexType></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Complex Type EnergyRange

Namespace	http://www.spase-group.org/data/schema
Annotations	The minimum and maximum energy values of the particles represented by a given "physical parameter" description.
Diagram	<pre> classDiagram class EnergyRange { Low : xsd:double High : xsd:double Units : xsd:string Bin : Bin } </pre>
Used by	Element EnergyRange
Model	Low , High , Units , Bin*
Children	Bin, High, Low, Units
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Complex Type AzimuthalAngleRange

Namespace	http://www.spase-group.org/data/schema
Annotations	The range of possible azimuthal angles for a group of energy observations. Default units are degrees.
Diagram	<pre> classDiagram class AzimuthalAngleRange { Low : xsd:double High : xsd:double Units : xsd:string Bin : Bin } </pre>

Used by	Element AzimuthalAngleRange
Model	Low , High , Units , Bin*
Children	Bin, High, Low, Units
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Complex Type PolarAngleRange

Namespace	http://www.spase-group.org/data/schema
Annotations	The range of possible polar angles for a group of energy observations. Defaults units are degrees.
Diagram	<pre> classDiagram class PolarAngleRange { Low : xsd:double High : xsd:double Units : xsd:string Bin : Bin* } </pre>
Used by	Element PolarAngleRange
Model	Low , High , Units , Bin*
Children	Bin, High, Low, Units
Source	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Complex Type Wave

Namespace	http://www.spase-group.org/data/schema
Annotations	Periodic or quasi-periodic (AC) variations of physical quantities in time and space, capable of propagating or being trapped within particular regimes.

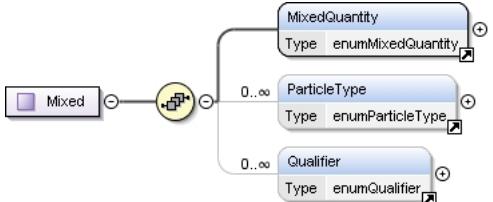
Diagram	
Used by	Element Wave
Model	WaveType , Qualifier* , WaveQuantity , EnergyRange{0,1} , FrequencyRange{0,1} , WavelengthRange{0,1}
Children	EnergyRange, FrequencyRange, Qualifier, WaveQuantity, WaveType, WavelengthRange
Source	<pre><xsd:complexType name="Wave"> <xsd:annotation> <xsd:documentation 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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Complex Type WavelengthRange

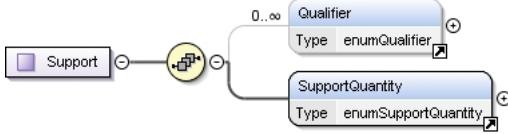
Namespace	http://www.spase-group.org/data/schema
Annotations	The range of possible values for the observed wavelength.
Diagram	
Used by	Element WavelengthRange
Model	SpectralRange{0,1} , Low , High , Units* , Bin*
Children	Bin, High, Low, SpectralRange, Units
Source	<pre><xsd:complexType name="WavelengthRange"> <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></pre>

	</xsd:sequence> </xsd:complexType>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Complex Type Mixed

Namespace	http://www.spase-group.org/data/schema
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	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Complex Type Support

Namespace	http://www.spase-group.org/data/schema
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	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Complex Type DisplayData

Namespace	http://www.spase-group.org/data/schema
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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	<pre> classDiagram class DisplayData { ResourceID ResourceHeader AccessInformation ProcessingLevel ProviderResourceName ProviderProcessingLevel ProviderVersion InstrumentID MeasurementType TemporalDescription SpectralRange DisplayCadence ObservedRegion Caveats Keyword InputResourceID Parameter Extension } </pre>
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	<pre> <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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Complex Type TemporalDescription

Namespace	http://www.spase-group.org/data/schema
Annotations	A characterization of the time over which the measurement was taken.
Diagram	<pre> classDiagram class TemporalDescription { <<A characterization of the time over which the measurement was taken.>> } class TimeSpan { <<TimeSpan
Type xsd:duration</xsdl:duration>> } class Cadence { <<Cadence
Type xsd:duration</xsdl:duration>> } class Exposure { <<Exposure
Type xsd:duration</xsdl:duration>> } TemporalDescription < -- TimeSpan TemporalDescription < -- Cadence TemporalDescription < -- Exposure </pre>
Used by	Element TemporalDescription
Model	TimeSpan , Cadence{0,1} , Exposure{0,1}
Children	Cadence, Exposure, TimeSpan
Source	<pre> <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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Complex Type NumericalData

Namespace	http://www.spase-group.org/data/schema
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	<pre> classDiagram class NumericalData { ResourceID ResourceHeader AccessInformation ProcessingLevel ProviderResourceName ProviderProcessingLevel ProviderVersion InstrumentID MeasurementType TemporalDescription SpectralRange ObservedRegion Caveats Keyword InputResourceID Parameter Extension } NumericalData < -- ResourceID NumericalData < -- ResourceHeader NumericalData < -- AccessInformation NumericalData < -- ProcessingLevel NumericalData < -- ProviderResourceName NumericalData < -- ProviderProcessingLevel NumericalData < -- ProviderVersion NumericalData < -- InstrumentID NumericalData < -- MeasurementType NumericalData < -- TemporalDescription NumericalData < -- SpectralRange NumericalData < -- ObservedRegion NumericalData < -- Caveats NumericalData < -- Keyword NumericalData < -- InputResourceID NumericalData < -- Parameter NumericalData < -- Extension </pre>
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	<pre> <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:sequence> </xsd:complexType> </pre>

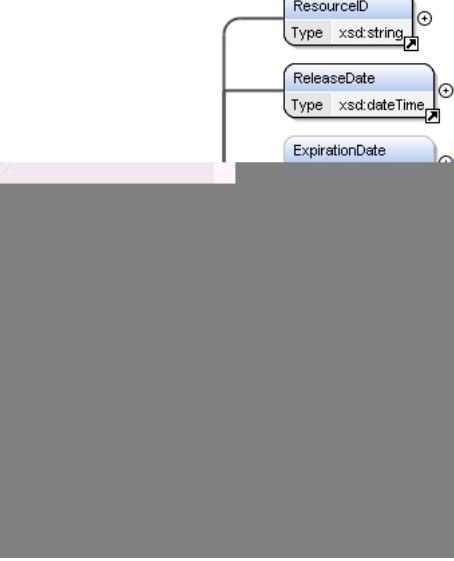
	<pre> <xsd:element ref="ProviderProcessingLevel" minOccurs="0" maxOccurs="1" /> <xsd:element ref="ProviderVersion" minOccurs="0" maxOccurs="1" /> <xsd:element ref="InstrumentID" minOccurs="0" maxOccurs="unbounded" /> <xsd:element ref="MeasurementType" minOccurs="1" maxOccurs="unbounded" /> <xsd:element 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> </pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Complex Type Document

Namespace	http://www.spase-group.org/data/schema
Annotations	<p>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).</p>
Diagram	<pre> classDiagram class Document { ResourceID : xsd:string ResourceHeader : ResourceHeader AccessInformation : AccessInformation Keyword : xsd:string DocumentType : enumDocumentType MIMETYPE : xsd:boolean InputResourceID : InputResourceID } </pre>
Used by	Element Document
Model	ResourceID , ResourceHeader , AccessInformation+ , Keyword* , DocumentType , MIMETYPE , InputResourceID*
Children	AccessInformation, DocumentType, InputResourceID, Keyword, MIMETYPE, ResourceHeader, ResourceID
Source	<pre> <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> </pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Complex Type Granule

Namespace	http://www.spase-group.org/data/schema
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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	 A UML class diagram illustrating the structure of a Granule. It shows three elements: 'ResourceID' (xsd:string), 'ReleaseDate' (xsd:dateTime), and 'ExpirationDate'. Arrows indicate dependencies from 'ExpirationDate' to 'ResourceID' and from 'ReleaseDate' to 'ResourceID'. A large gray rectangular box covers the bottom half of the diagram area.
Used by	Element Granule
Model	ResourceID , ReleaseDate , ExpirationDate{0,1} , ParentID , PriorID* , StartDate , StopDate , Source+
Children	ExpirationDate, ParentID, PriorID, ReleaseDate, ResourceID, Source, StartDate, StopDate
Source	<pre> <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:element ref="StartDate" minOccurs="1" maxOccurs="1"/> <xsd:element ref="StopDate" minOccurs="1" maxOccurs="1"/> <xsd:element ref="Source" minOccurs="1" maxOccurs="unbounded"/> </xsd:sequence> </xsd:complexType></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Complex Type Source

Namespace	http://www.spase-group.org/data/schema
Annotations	The location and attributes of an object.

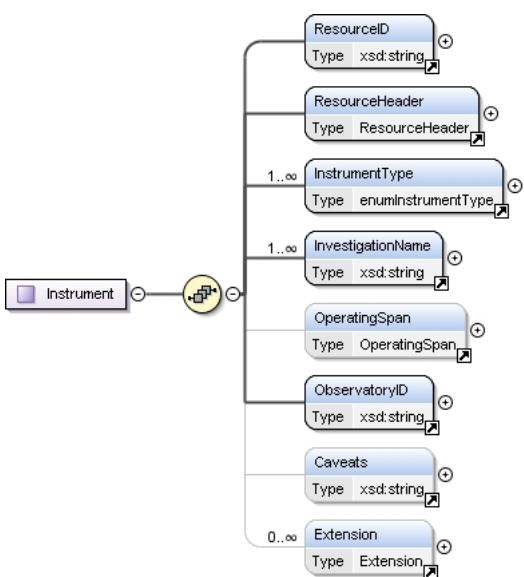
Diagram	
Used by	Element Source
Model	SourceType , URL , MirrorURL* , Checksum{0,1} , DataExtent{0,1}
Children	Checksum, DataExtent, MirrorURL, SourceType, URL
Source	<pre><xsd:complexType name="Source"> <xsd:annotation> <xsd:documentation xml:lang="en">The location and attributes of an object.</xsd:documentation> </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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Complex Type Checksum

Namespace	http://www.spase-group.org/data/schema
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	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Complex Type Instrument

Namespace	http://www.spase-group.org/data/schema
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	<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Complex Type OperatingSpan

Namespace	http://www.spase-group.org/data/schema
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	<pre><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></pre>

	<pre> </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> </pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Complex Type Observatory

Namespace	http://www.spase-group.org/data/schema
Annotations	The host (spacecraft, network, facility) for instruments making observations, or a family of closely related hosts.
Diagram	<pre> classDiagram class Observatory class ResourceID class ResourceHeader class ObservatoryGroupID class Location class OperatingSpan class Extension Observatory "0..∞" -- "1" ResourceID : ResourceID Observatory "0..∞" -- "1" ResourceHeader : ResourceHeader Observatory "0..∞" -- "1" ObservatoryGroupID : ObservatoryGroupID Observatory "0..∞" -- "1" Location : Location Observatory "0..∞" -- "1" OperatingSpan : OperatingSpan Observatory "0..∞" -- "1" Extension : Extension </pre>
Used by	Element Observatory
Model	ResourceID , ResourceHeader , ObservatoryGroupID* , Location , OperatingSpan{0,1} , Extension*
Children	Extension, Location, ObservatoryGroupID, OperatingSpan, ResourceHeader, ResourceID
Source	<pre> <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> </pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Complex Type Location

Namespace	http://www.spase-group.org/data/schema
Annotations	A position in space definable by a regional referencing system and geographic coordinates.
Diagram	<pre> classDiagram class Location class ObservatoryRegion class CoordinateSystemName class Latitude class Longitude class Elevation Location "1..∞" -- "1" ObservatoryRegion : ObservatoryRegion Location "1..∞" -- "1" CoordinateSystemName : CoordinateSystemName Location "1..∞" -- "1" Latitude : Latitude Location "1..∞" -- "1" Longitude : Longitude Location "1..∞" -- "1" Elevation : Elevation </pre>

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		<pre><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></pre>
Schema location		file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Complex Type Person

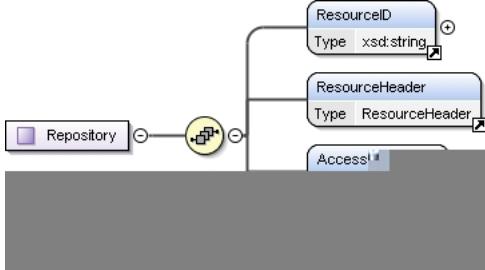
Namespace	http://www.spase-group.org/data/schema	
Annotations	An individual human being.	
Diagram	<pre> classDiagram class Person { ResourceID ReleaseDate PersonName OrganizationName Address Email PhoneNumber FaxNumber Note Extension } Person "0..∞" -- "1" ResourceID Person "0..∞" -- "1" ReleaseDate Person "0..∞" -- "1" PersonName Person "0..∞" -- "1" OrganizationName Person "0..∞" -- "1" Address Person "0..∞" -- "1" Email Person "0..∞" -- "1" PhoneNumber Person "0..∞" -- "1" FaxNumber Person "0..∞" -- "1" Note Person "0..∞" -- "1" Extension </pre>	
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		<pre><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></pre>

	</xsd:sequence> </xsd:complexType>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Complex Type Registry

Namespace	http://www.spase-group.org/data/schema
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	<pre> <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> </pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Complex Type Repository

Namespace	http://www.spase-group.org/data/schema
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	<pre> <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> </pre>

Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd
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Complex Type Service

Namespace	http://www.spase-group.org/data/schema
Annotations	A location or facility that can perform a well defined task.
Diagram	<pre> classDiagram class Service class ResourceID { Type xsd:string } class ResourceHeader { Type ResourceHeader } class AccessURL { Type AccessURL } class Extension { Type Extension } Service "0..1" -- "0..oo" ResourceID Service "0..1" -- "0..oo" ResourceHeader Service "0..1" -- "0..oo" AccessURL Service "0..1" -- "0..oo" Extension </pre>
Used by	Element Service
Model	ResourceID , ResourceHeader , AccessURL , Extension*
Children	AccessURL, Extension, ResourceHeader, ResourceID
Source	<pre> <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> </pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Complex Type Annotation

Namespace	http://www.spase-group.org/data/schema
Annotations	Information which is explanatory or descriptive which is associated with another resource.
Diagram	<pre> classDiagram class Annotation class ResourceID { Type xsd:string } class ResourceHeader { Type ResourceHeader } class ImageURL { Type xsd:string } class AnnotationType { Type enumAnnotationType } class PhenomenonType { Type enumPhenomenonType } class ClassificationMethod { Type enumClassificationMethod } class ConfidenceRating { Type enumConfidenceRating } class TimeSpan { Type TimeSpan } class ObservationExtent { Type ObservationExtent } class Extension { Type Extension } Annotation "0..1" -- "0..1" ResourceID Annotation "0..1" -- "0..1" ResourceHeader Annotation "0..1" -- "0..1" ImageURL Annotation "0..1" -- "0..1" AnnotationType Annotation "0..1" -- "0..1" PhenomenonType Annotation "0..1" -- "0..1" ClassificationMethod Annotation "0..1" -- "0..1" ConfidenceRating Annotation "0..1" -- "0..1" Extension Annotation "0..1" -- "0..oo" TimeSpan Annotation "0..1" -- "0..oo" ObservationExtent </pre>

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		<pre><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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd	

Complex Type ObservationExtent

Namespace	http://www.spase-group.org/data/schema	
Annotations	The spatial area encompassed by an observation.	
Diagram	<pre> classDiagram class ObservationExtent class ObservedRegion { <<enumRegion>> } class StartLocation { <<xsd:string>> } class StopLocation { <<xsd:string>> } class Note { <<xsd:string>> } ObservationExtent < -- ObservedRegion ObservationExtent < -- StartLocation ObservationExtent < -- StopLocation ObservationExtent < -- Note </pre>	
Used by	Element	ObservationExtent
Model	ObservedRegion{0,1} , StartLocation , StopLocation , Note*	
Children	Note, ObservedRegion, StartLocation, StopLocation	
Source	<pre><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></pre>	
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd	

Simple Type(s)

Simple Type enumVersion

Namespace	http://www.spase-group.org/data/schema	
Annotations	Version number.	
Diagram	<pre> classDiagram class enumVersion class xsd:string enumVersion < -- xsd:string </pre>	
Type	restriction of xsd:string	
Facets	enumeration	2.2.2

Used by	Element	Version
Source	<pre><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></pre>	
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd	

Simple Type enumRole

Namespace	http://www.spase-group.org/data/schema																																														
Annotations	Identifiers for the assigned or assumed function or position of an individual.																																														
Diagram	<pre> classDiagram class enumRole { <<xsd:annotation>> <<xsd:restriction base="xsd:string">> } class xsd:string enumRole < -- xsd:string </pre>																																														
Type	restriction of xsd:string																																														
Facets	<table border="1"> <tbody> <tr> <td>enumeration</td> <td>ArchiveSpecialist</td> <td>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.</td> </tr> <tr> <td>enumeration</td> <td>CoInvestigator</td> <td>An individual who is a scientific peer and major participant in an investigation.</td> </tr> <tr> <td>enumeration</td> <td>Contributor</td> <td>An entity responsible for making contributions to the content of the resource.</td> </tr> <tr> <td>enumeration</td> <td>DataProducer</td> <td>An individual who generated the resource and is familiar with its provenance.</td> </tr> <tr> <td>enumeration</td> <td>DeputyPI</td> <td>An individual who is an administrative or scientific leader for an investigation operating under the supervision of a Principal Investigator.</td> </tr> <tr> <td>enumeration</td> <td>FormerPI</td> <td>An individual who had served as the administrative and scientific lead for an investigation, but no longer assumes that role.</td> </tr> <tr> <td>enumeration</td> <td>GeneralContact</td> <td>An individual who can provide information on a range of subjects or who can direct you to a domain expert.</td> </tr> <tr> <td>enumeration</td> <td>MetadataContact</td> <td>An individual who can affect a change in the metadata describing a resource.</td> </tr> <tr> <td>enumeration</td> <td>PrincipalInvestigator</td> <td>An individual who is the administrative and scientific lead for an investigation.</td> </tr> <tr> <td>enumeration</td> <td>ProjectScientist</td> <td>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.</td> </tr> <tr> <td>enumeration</td> <td>Publisher</td> <td>An individual, organization, institution or government department responsible for the production and dissemination of a document.</td> </tr> <tr> <td>enumeration</td> <td>Scientist</td> <td>An individual who is an expert in the phenomenon and related physics represented by the resource.</td> </tr> <tr> <td>enumeration</td> <td>TeamLeader</td> <td>An individual who is the designated leader of an investigation.</td> </tr> <tr> <td>enumeration</td> <td>TeamMember</td> <td>An individual who is a major participant in an investigation.</td> </tr> <tr> <td>enumeration</td> <td>TechnicalContact</td> <td>An individual who can provide specific information with regard to the resource or supporting</td> </tr> </tbody> </table>		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
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enumeration	TechnicalContact	An individual who can provide specific information with regard to the resource or supporting																																													

Used by	Element	Role	software
Source		<pre> <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"> </pre>	

	<pre> <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> </pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Simple Type enumAssociationType

Namespace	http://www.spase-group.org/data/schema	
Annotations	Identifiers for resource associations.	
Diagram	<pre> classDiagram class enumAssociationType { <<Identifiers for resource associations.>> } class xsd { <<Simple types defined by XML Schema 1.1>> } enumAssociationType < -- xsd:string </pre>	
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	<pre> <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:enumeration> </xsd:restriction> </xsd:simpleType> </pre>	

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<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>
  
```

Schema location file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Simple Type enumAvailability

Namespace	http://www.spase-group.org/data/schema				
Annotations	Identifiers for indicating the method or service which may be used to access the resource.				
Diagram	<pre> classDiagram class enumAvailability { <<Identifiers for indicating the method or service which may be used to access the resource.>> } class xsd.string enumAvailability < -- xsd.string </pre>				
Type	restriction of xsd:string				
Facets	enumeration	Offline	Not directly accessible electronically. This includes resources which may be moved to an on-line status in response to a given request.		
	enumeration	Online	Directly accessible electronically.		
Used by	Element	Availability			
Source	<pre> <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 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> </pre>				
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd				

Simple Type enumAccessRights

Namespace	http://www.spase-group.org/data/schema		
Annotations	Identifiers for permissions granted or denied by the host of a product to allow other users to access and use the resource.		
Diagram	<pre> classDiagram class enumAccessRights { <<Identifiers for permissions granted or denied by the host of a product to allow other users to access and use the resource.>> } class xsd.string enumAccessRights < -- xsd.string </pre>		
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		<pre> <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> </pre>
Schema location		file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Simple Type enumFormat

Namespace	http://www.spase-group.org/data/schema		
Annotations	Identifiers for data organized according to preset specifications.		
Diagram	<pre> classDiagram class enumFormat class xsd.string enumFormat "1" -- "0..1" xsd.string </pre>		
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	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	<pre> <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:restriction> </xsd:simpleType></pre>	

```
<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="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>
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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>
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        <xsd:annotation>
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a proprietary format.</xsd:documentation>
        </xsd:annotation>
    </xsd:enumeration>
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        <xsd:annotation>
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Joint Photographic Experts Group</xsd:documentation>
        </xsd:annotation>
    </xsd:enumeration>
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        <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

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compression and Unicode encoding. MATLAB is a proprietary product of The MathWorks.</
xsd:documentation>
</xsd:annotation>
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<xsd:annotation>
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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
<a href="http://my.unidata.ucar.edu/content/software/netcdf"></xsd:documentation>
</xsd:annotation>
</xsd:enumeration>
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<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 <a href="http://developer.apple.com/quicktime"></xsd:documentation>
</xsd:annotation>
</xsd:enumeration>
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<xsd:annotation>
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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 <a href="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 Markup Language (XML). A structured format for representing information. See <http://www.w3.org/XML/></xsd:documentation>
  </xsd:annotation>
</xsd:enumeration>
</xsd:restriction>
</xsd:simpleType>

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Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd
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Simple Type enumEncoding

Namespace	http://www.spase-group.org/data/schema		
Annotations	Identifiers for unambiguous rules that establishes the representation of information within a file.		
Diagram	<pre> classDiagram class enumEncoding class xsd.string enumEncoding "1" --> "1" xsd.string </pre>		
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		<pre> <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></pre>
Schema location		file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Simple Type enumPhenomenonType

Namespace	http://www.spase-group.org/data/schema	
Annotations	Identifiers for the characteristics or categorization of an observation. Note: Joe King to provide.	
Diagram	<pre> classDiagram enumPhenomenonType < -- xsd:string </pre>	
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 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 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

		<p>and continues with a field depression associated with an enhancement of the diamagnetic magnetospheric ring current.</p>
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	<pre><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></pre>	

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</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>

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<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>

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Schema location file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Simple Type

	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			<pre> <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></pre>
Schema location			file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Simple Type enumCoordinateSystemName

Namespace	http://www.spase-group.org/data/schema		
Annotations	Identifiers of the origin and orientation of a set of typically orthogonal axes.		
Diagram	<pre> classDiagram class enumCoordinateSystemName { <<restriction of xsd:string>> } class xsd:string enumCoordinateSystemName --o xsd:string </pre>		
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	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	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

		<p>northward. The X axis is perpendicular to the Y and Z axes, positive toward solar west.</p> <p>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.</p>
enumeration	HCI	Heliographic Carrington Inertial.
enumeration	HCR	<p>Heliocentric Radial - A 3-D orthonormal coordinate system that is primarily intended to specify with two dimensions a point on the solar disk.</p> <p>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.</p> <p>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 = $\arctan(-y/x)$]</p>
enumeration	HEE	<p>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</p>
enumeration	HEEQ	<p>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.</p>
enumeration	HG	<p>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</p>
enumeration	HGI	<p>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</p>
enumeration	HPC	<p>Helio-projective 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.</p> <p>Given as the distance between the observer and the center of the solar disk, the standard</p>

		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	<p>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.</p> <p>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)].</p>
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	LGM	<p>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)</p>
enumeration	MAG	<p>Geomagnetic - geocentric. Z axis is parallel to the geomagnetic dipole axis, positive north.</p> <p>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></p>
enumeration	MFA	<p>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></p>
enumeration	RTN	<p>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.</p>
enumeration	SC	<p>Spacecraft - A coordinate system defined by the spacecraft geometry and/or spin. Often has Z axis parallel to spacecraft spin vector.</p> <p>X and Y axes may or may not corotate with the spacecraft. See SR and SR2 below.</p>
enumeration	SE	Solar Ecliptic - A heliocentric coordinate

		<p>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></p>
enumeration	SM	<p>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.</p>
enumeration	SR	<p>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></p>
enumeration	SR2	<p>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></p>
enumeration	SSE	<p>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.</p>
enumeration	SSE_L	<p>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.</p>
enumeration	SpacecraftOrbitPlane	<p>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.</p>
enumeration	WGS84	<p>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.</p>
Used by	Element	CoordinateSystemName
Source	<pre> <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"> </pre>	

```

<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="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 <a href="http://cdpp.cnes.fr/00428.pdf"></a></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="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
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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 [$\text{Rho} = \sqrt{x^2 + y^2}$] and its phase angle psi measured counterclockwise from the +Y axis [$\text{psi} = \arctan(-y/x)$].

</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="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="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) = $\sqrt{B_x^2 + B_y^2}$ and D (declination angle) = $\arctan(B_y/B_x)$.</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 <a href="http://cdpp.cnes.fr/00428.pdf"></a></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
<a href="http://cdpp.cnes.fr/00428.pdf"></a></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.</a></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.</a>
</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 <a href="http://nssdc.gsfc.nasa.gov/space/helios/coor_des.html"></a></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.</a></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 <a href="http://cdpp.cnes.fr/00428.pdf"></a></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
<a href="http://cdpp.cnes.fr/00428.pdf"></a></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 normals nor.79

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	<pre> <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="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> </pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Simple Type enumDisplayType

Namespace	http://www.spase-group.org/data/schema		
Annotations	Identifiers for types or classes of rendered data.		
Diagram	<pre> classDiagram enumDisplayType < -- xsd:string </pre>		
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	<pre> <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:restriction> </xsd:simpleType> </pre>		

	<pre> <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> </pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Simple Type enumRenderingAxis

Namespace	http://www.spase-group.org/data/schema										
Annotations	Identifiers for the reference component of a plot or rendering of data.										
Diagram											
Type	restriction of xsd:string										
Facets	<table> <tr> <td>enumeration</td> <td>ColorBar</td> <td>A spectrum or set of colors used to represent data values.</td> </tr> <tr> <td>enumeration</td> <td>Horizontal</td> <td>Parallel to or in the plane of the horizon or a base line.</td> </tr> <tr> <td>enumeration</td> <td>Vertical</td> <td>Perpendicular to the plane of the horizon or a base line.</td> </tr> </table>		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.
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	<pre> <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> </pre>										
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd										

Simple Type typeSequence

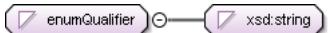
Namespace	http://www.spase-group.org/data/schema	
Diagram		

Type	list of xsd:integer	
Used by	Elements	Index, Size
Source	<xsd:simpleType name="typeSequence"> <xsd:list itemType="xsd:integer"/> </xsd:simpleType>	
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd	

Simple Type enumScaleType

Namespace	http://www.spase-group.org/data/schema							
Annotations	Identifiers for scaling applied to a set of numbers.							
Diagram								
Type	restriction of xsd:string							
Facets	<table> <tr> <td>enumeration</td> <td>LinearScale</td> <td>Intervals which are equally spaced.</td> </tr> <tr> <td>enumeration</td> <td>LogScale</td> <td>Intervals which are spaced proportionally to the logarithms of the values being represented.</td> </tr> </table>		enumeration	LinearScale	Intervals which are equally spaced.	enumeration	LogScale	Intervals which are spaced proportionally to the logarithms of the values being represented.
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	<pre><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></pre>							
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd							

Simple Type enumQualifier

Namespace	http://www.spase-group.org/data/schema																
Annotations	Identifiers for terms which refine the type or attribute of a quantity.																
Diagram																	
Type	restriction of xsd:string																
Facets	<table> <tr> <td>enumeration</td> <td>Anisotropy</td> <td>Direction-dependent property.</td> </tr> <tr> <td>enumeration</td> <td>Array</td> <td>A sequence of values corresponding to the elements in a rectilinear, n-dimension matrix. Each value can be referenced by a unique index.</td> </tr> <tr> <td>enumeration</td> <td>Average</td> <td>The statistical mean; the sum of a set of values divided by the number of values in the set.</td> </tr> <tr> <td>enumeration</td> <td>Characteristic</td> <td>A quantity which can be easily identified and measured in a given environment.</td> </tr> <tr> <td>enumeration</td> <td>Circular</td> <td>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.</td> </tr> </table>		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.
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 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 a 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 part cWrquantitytem.

		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		<pre> <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> </pre>

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<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>

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        </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>
    
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        </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>

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        </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 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">

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	<pre> <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> </pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Simple Type enumFieldQuantity

Namespace	http://www.spase-group.org/data/schema	
Annotations	Identifiers for the physical attribute of the field.	
Diagram	<pre> classDiagram enumFieldQuantity < -- xsd:string </pre>	
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	<pre> <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:restriction> </pre>	

	<pre> </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> </pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Simple Type enumSpectralRange

Namespace	http://www.spase-group.org/data/schema		
Annotations	<p>Identifiers for names associated with wavelengths.</p> <p>Based on the ISO 21348 Solar Irradiance Standard.</p> <p>Additions have been made to extend the frequency ranges to include those used in space physics.</p> <p>Those additions are indicated in blue text.</p> <p>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.</p>		
Diagram	<pre> classDiagram class enumSpectralRange { <<xs:string>> } class xsd:string enumSpectralRange < -- xsd:string </pre>		
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 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 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 1.00×10^6 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: 1.00×10^6 to 1.50×10^7 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 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 1.00×10^{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: $0.001 \leq x < 10$ nm
Used by	Element	SpectralRange
Source	<pre> <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 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:restriction> </xsd:simpleType></pre>	

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        </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 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>
    
```

	<pre> </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> </pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Simple Type enumParticleType

Namespace	http://www.spase-group.org/data/schema	
Annotations	Identifiers for the characterization of the kind of particle observed by the measurement.	
Diagram	<pre> classDiagram enumParticleType < -- xsd:string </pre>	
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 1.602×10^{-19} Coulomb and having a mass when at rest of about 9.109534×10^{-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 (1.673×10^{-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 1.673×10^{-24} gram.	
Used by	Element	ParticleType
Source	<pre> <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> </pre>	

```

<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>

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Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd
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Simple Type enumParticleQuantity

Namespace	http://www.spase-group.org/data/schema		
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

		<p>motion with respect to the average. Temperature is properly defined only for an equilibrium particle distribution (Maxwellian distribution).</p>
	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		<pre><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></pre>

```

<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> Tm [(<xsd: 0 0 -1 0 341.85198975 Tm [(      )] TJ 0 0 0-42.2519989 Tm [(<-1 25.2000007
</xsd:annotation>
</xsd:enumeration>
<xsd:enumeration value="99.9847 56.2519989 Tm [(<xsd:documentation)] TJ 517647 0.298039 re TJ 517647 099998

```

	<pre> </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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Simple Type enumWaveType

Namespace	http://www.spase-group.org/data/schema		
Annotations	Identifiers for the carrier or phenomenon of wave information observed by the measurement.		
Diagram	<pre> classDiagram class enumWaveType { <<enumeration>> } class xsd.string { <<restriction of xsd:string>> } enumWaveType < -- xsd.string </pre>		
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		<pre> <xsd:simpleType name="enumWaveType"> <xsd:annotation> <xsd:documentation xml:lang="en">Identifiers for the carrier or phenomenon 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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd	

Simple Type enumWaveQuantity

Namespace	http://www.spase-group.org/data/schema																				
Annotations	Identifiers for the characterization of the physical properties of a wave.																				
Diagram																					
Type	restriction of xsd:string																				
Facets	<table border="1"> <tbody> <tr> <td>enumeration</td> <td>ACElectricField</td> <td>Alternating electric field component of a wave.</td> </tr> <tr> <td>enumeration</td> <td>ACMagneticField</td> <td>Alternating magnetic field component of a wave.</td> </tr> <tr> <td>enumeration</td> <td>Absorption</td> <td>Decrease of radiant energy (relative to the background continuum spectrum).</td> </tr> <tr> <td>enumeration</td> <td>Albedo</td> <td>The ratio of reflected radiation from the surface to incident radiation upon it.</td> </tr> <tr> <td>enumeration</td> <td>DopplerFrequency</td> <td>Change in the frequency of a propagating wave due to motion of the source, the observer, the reflector, or the propagation medium.</td> </tr> <tr> <td>enumeration</td> <td>Emissivity</td> <td>The energy emitted spontaneously per unit bandwidth (typically frequency) per unit time</td> </tr> </tbody> </table>			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
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	<pre> <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></pre>	

```

<xsd:documentation xml:lang="en">Alternating electric field component of a wave.</
xsd:documentation>
</xsd:enumeration>
<xsd:enumeration value="ACMagneticField">
<xsd:annotation>
<xsd:documentation xml:lang="en">Alternating magnetic field component of a wave.</
xsd:documentation>
</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>

```

Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd
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Simple Type enumMixedQuantity

Namespace	http://www.spase-group.org/data/schema		
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: $V \cdot B^2 \cdot l^2 \sin(\theta/2)^4$ 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 Alfvén 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 (μ_0).
	enumeration	FrequencyToGyrofrequencyRatio	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 Alfvén 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 ($B^2/2\mu_0$) of the plasma.
	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			<pre> <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: $V^*B^2*1^2sin(theta/2)^4$ where B is the IMF, 1 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 Alfvén speed.</xsd:documentation> </xsd:annotation> </xsd:enumeration> <xsd:enumeration value="AlfvenVelocity"> <xsd:annotation> <xsd:documentation xml:lang="en">Phase velocity of the Alfvén 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 (μ_0).</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 Alfvén 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> </pre>

```

<xsd:documentation xml:lang="en">The ratio of the plasma pressure (nkT) to the magnetic pressure ( $B^2/2\mu_0$ ) of the SUM(nkT)/( $B^2/2\mu_0$ ).</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>

```

Schema location file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Simple Type enumSupportQuantity

Namespace	http://www.spase-group.org/data/schema		
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	<pre> <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:restriction> </pre>		

```

        </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>

```

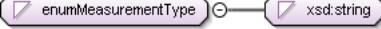
Schema location file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Simple Type enumProcessingLevel

Namespace	http://www.spase-group.org/data/schema		
Annotations	Identifiers to characterize the amount and type of manipulation which has been applied to the sampled data.		
Diagram	<pre> classDiagram enumProcessingLevel < -- xsd:string </pre>		
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	<pre> <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> </pre>		

	</xsd:simpleType>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Simple Type enumMeasurementType

Namespace	http://www.spase-group.org/data/schema
Annotations	Identifiers for the method of making an estimated value of a quantity that forms the basis of an observation.
Diagram	 A UML class diagram fragment showing two rounded rectangles. The left one is purple with the text 'enumMeasurementType' and has a hollow circle to its right. A solid line connects it to the second rectangle, which is also purple and contains 'xsd:string'.
Type	restriction of xsd:string
Facets	

		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		<pre><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="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></pre>

```

        </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

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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>
```

Schema location file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Simple Type enumRegion

Namespace	http://www.spase-group.org/data/schema		
Annotations	Identifiers for areas of the physical world which may be occupied or observed.		
Diagram	<pre> graph LR enumRegion --- xsdString style enumRegion fill:#e0e0ff,stroke:#808080,stroke-width:1px style xsdString fill:#e0e0ff,stroke:#808080,stroke-width:1px </pre>		
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	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.Magnetsheath	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 field 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 atmosphere 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.IonosphereDRegion	The D 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.IonosphereERegion	The E Region of the ionosphere occurring at 90-150km above the ground. One of several layers in the ionosphere. Also called the The Kennelly-Heaviside layer.
enumeration	Earth.NearSurface.IonosphereFRegion	The F Region 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 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 and the region south of 60 degrees south latitude.
enumeration	Earth.NearSurface.SouthAtlanticAnomalyRegion	Atmospheric anomaly region 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	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	Jupiter	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	Neptune	The seventh planet from the sun in our solar system.
enumeration	Pluto	The ninth (sub)planet from the sun in our solar system.
enumeration	Saturn	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	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		<pre><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="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></pre>

```

<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 field 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">

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<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="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>

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        </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="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="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="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="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="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="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>

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<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="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>

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Schema location file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Simple Type enumDocumentType

Namespace	http://www.spase-group.org/data/schema																				
Annotations	Identifiers for the characterization of the content or purpose of a document.																				
Diagram																					
Type	restriction of xsd:string																				
Facets	<table border="1"> <tr> <td>enumeration</td> <td>Other</td> <td></td> </tr> <tr> <td>enumeration</td> <td>Poster</td> <td>A set of information arranged on a single page or sheet, typically in a large format.</td> </tr> <tr> <td>enumeration</td> <td>Presentation</td> <td>A set of information that is used when communicating to an audience.</td> </tr> <tr> <td>enumeration</td> <td>Report</td> <td>A document which describes the findings of some individual or group.</td> </tr> <tr> <td>enumeration</td> <td>Specification</td> <td>A detailed description of the requirements and other aspects of an object or component that may be used to develop an implementation.</td> </tr> <tr> <td>enumeration</td> <td>TechnicalNote</td> <td>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</td> </tr> </table>			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
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			<pre> <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">A set of identifiers for the characterization of the content or purpose of a document.</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></pre>
Schema location			file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Simple Type enumSourceType

Namespace	http://www.spase-group.org/data/schema		
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			<pre> <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></pre>
Schema location			file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Simple Type enumHashFunction

Namespace	http://www.spase-group.org/data/schema		
Annotations	Identifiers for functions or algorithms that convert a digital data object into a hash value.		
Diagram	<pre> classDiagram class enumHashFunction { <<Identifier for functions or algorithms that convert a digital data object into a hash value. >> } class xsd:string enumHashFunction "1" *-- "1" xsd:string </pre>		
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	<pre><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></pre>		
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd		

Simple Type enumInstrumentType

Namespace	http://www.spase-group.org/data/schema		
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	FourierTransformSpectrometer	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	QuadrисphericalAnalyser	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 flourescences 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	SpacecraftPotentialController	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	<pre><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:restriction> </xsd:simpleType></pre>	

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<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>

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        </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">

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<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="QuadrisphereAnalyser">
  <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 flourescences 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>

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	<pre> </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> </pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Simple Type enumAnnotationType

Namespace	http://www.spase-group.org/data/schema		
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	<pre> <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> </pre>		

	<pre> </xsd:annotation> </xsd:enumeration> </xsd:restriction> </xsd:simpleType></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Simple Type enumClassificationMethod

Namespace	http://www.spase-group.org/data/schema				
Annotations	Identifiers for the technique used to determine the characteristics of an object.				
Diagram	<pre> classDiagram class enumClassificationMethod { <<Identifiers for the technique used to determine the characteristics of an object.>> } class xsd:string enumClassificationMethod < -- xsd:string </pre>				
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	<pre> <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></pre>				
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd				

Simple Type enumConfidenceRating

Namespace	http://www.spase-group.org/data/schema		
Annotations	Identifiers for the classification of the certainty of an assertion.		
Diagram	<pre> classDiagram class enumConfidenceRating { <<Identifiers for the classification of the certainty of an assertion.>> } class xsd:string enumConfidenceRating < -- xsd:string </pre>		
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	Element	ConfidenceRating	
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>	
Schema location		file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd	

Simple Type enumComponent

Namespace	http://www.spase-group.org/data/schema		
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>		

	<pre> <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> </pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Simple Type enumDirectionAngle

Namespace	http://www.spase-group.org/data/schema		
Annotations	Identifiers for the angle between a vector and a base axis.		
Diagram	<pre> classDiagram enumDirectionAngle < -- xsd:string </pre>		
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	<pre> <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> </pre>		
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd		

Simple Type enumEarth

Namespace	http://www.spase-group.org/data/schema	
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 field 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.RadiationBelts 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 atmosphere 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 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	NearSurface.Ionosphere.ERegion Region 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 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	NearSurface.Ionosphere.Topside	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 and the region south of 60 degrees south latitude.
enumeration	NearSurface.SouthAtlanticMagneticRegion	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	<pre> <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="Magnetsheath"> <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 field 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:restriction> </xsd:simpleType> </pre>	

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        </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 atmosphere 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>
    
```

	<pre> </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> </pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Simple Type enumHardcopy

Namespace	http://www.spase-group.org/data/schema		
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>	
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd	

Simple Type enumHeliosphere

Namespace	http://www.spase-group.org/data/schema
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	<pre> classDiagram enumHeliosphere < -- xsd:string </pre>		
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	<pre> <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> </pre>		
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd		

Simple Type enumIntegral

Namespace	http://www.spase-group.org/data/schema		
Annotations	Identifiers for values above a given threshold and over area or solid-angle range.		
Diagram	<pre> classDiagram enumIntegral < -- xsd:string </pre>		
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
	enumeration	SolidAngle
Source	<pre><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></pre>	
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd	

Simple Type enumIonosphere

Namespace	http://www.spase-group.org/data/schema	
Annotations	Identifiers for ionospheric regions.	
Diagram	<pre> classDiagram class enumIonosphere { <<Identifiers for ionospheric regions>> } class xsd.string enumIonosphere < -- xsd.string </pre>	
Type	restriction of xsd:string	
Facets	enumeration DRegion enumeration ERegion enumeration FRegion enumeration Topside	<p>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.</p> <p>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.</p> <p>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.</p> <p>The region at the upper most areas of the ionosphere.</p>
Source	<pre><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:restriction> </xsd:simpleType></pre>	

	<pre> </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> </pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Simple Type enumMagnetosphere

Namespace	http://www.spase-group.org/data/schema		
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 field 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	<pre> <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 field 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"> </pre>		

```

<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>

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Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd
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Simple Type enumNearSurface

Namespace	http://www.spase-group.org/data/schema		
Annotations	Identifiers for regions of the gaseous and possibly ionized environment of a body extending from the surface to some specified altitude.		
Diagram	<pre> classDiagram class enumNearSurface { <<enum>> } class xsd:string { <<string>> } enumNearSurface < -- xsd:string </pre>		
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 atmosphere 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 and 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	<pre><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"></pre>	

	<pre> <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></pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2_2.xsd

Simple Type enumProjection

Namespace	http://www.spase-group.org/data/schema
Annotations	Identifiers to projections into a coordinate system.

Diagram	<pre> classDiagram enumProjection "○" -- "xsd:string" </pre>		
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	<pre> <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> </pre>		
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd		

Simple Type enumSun

Namespace	http://www.spase-group.org/data/schema		
Annotations	Identifiers for regions of the star upon which our solar system is centered.		
Diagram	<pre> classDiagram enumSun "○" -- "xsd:string" </pre>		
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	<pre> <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></pre>	
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd	

Simple Type

	<pre> </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> </pre>
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd

Simple Type enumWaves

Namespace	http://www.spase-group.org/data/schema		
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	<pre> <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> </pre>		
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd		

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" />
Schema location	file:/C:/Projects/spase/java/model-tools/bin/spase-2_2.xsd