Model Artifact Description with SPASE 2.6.0

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https://spase-group.org/

SPASE Space Physics Archive Search and Extract

HOME DATA MODEL DOCUMENTS TOOLS SCHOOL SERVICES ABOUT

The SPASE Group (spase@groups.io)
- A community group responsible for the SPASE information model
- Meets bi-weekly, virtually
- Open to all interested

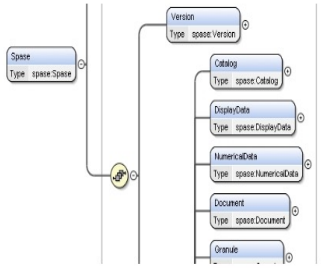
Support

Need advice or more information about using the SPASE Information Model?
Send an email (spase-support@groups.io) to our experts.

Email questions & suggestions: spase-support@groups.io

Announcements

2023-08-03: Version 2.6.0 of the SPASE Base model is released.

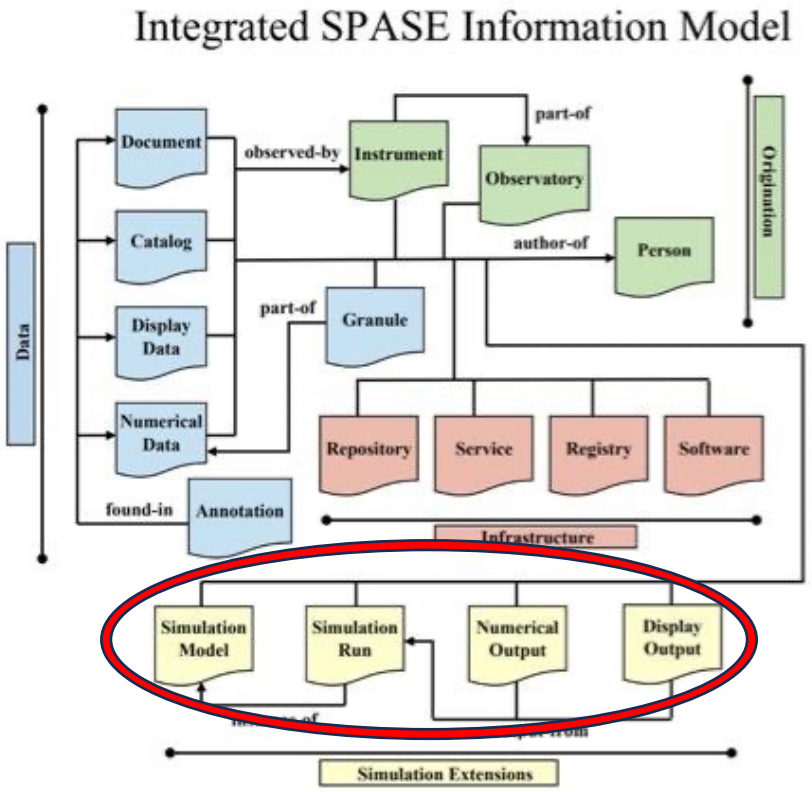


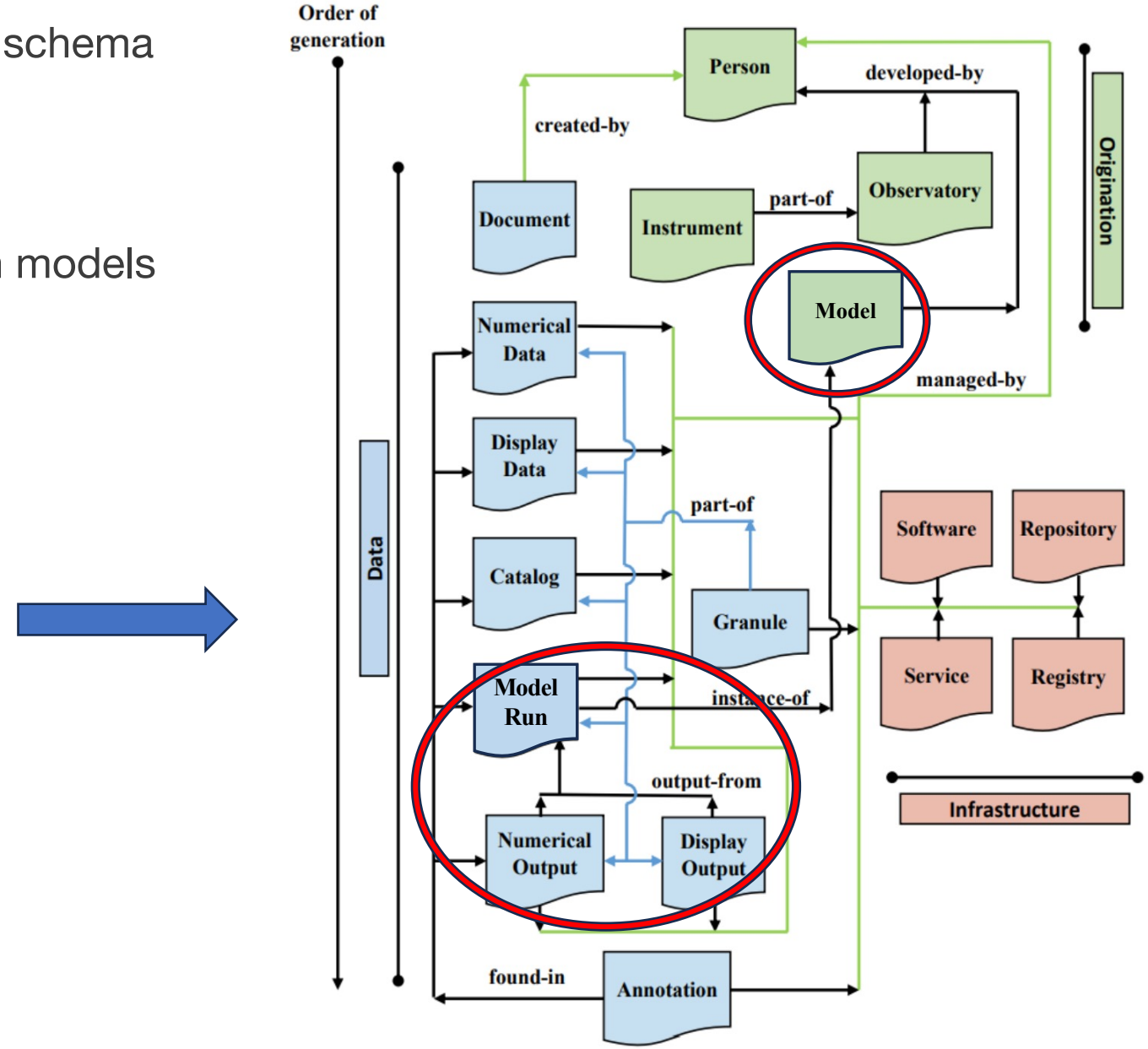
Data Model

Get details of the SPASE Data Model, which provides terms and syntax for uniform descriptions of Heliophysics resources, including Observatories, Instruments, People, Repositories, and (most centrally) Numerical Data products, An extended set of terms deals with simulations and models. A Dictionary of the terms is provided, along with the XML schema documents used to validate SPASE descriptio
Use of the SPASE base data model along with the simulation extensions are a COSPAR recommendation.

Major Changes in SPASE 2.6.0

- Incorporation of simulation extensions (both schema and dictionary) into SPASE base model
- Generalized model description schema to accommodate both empirical and simulation models





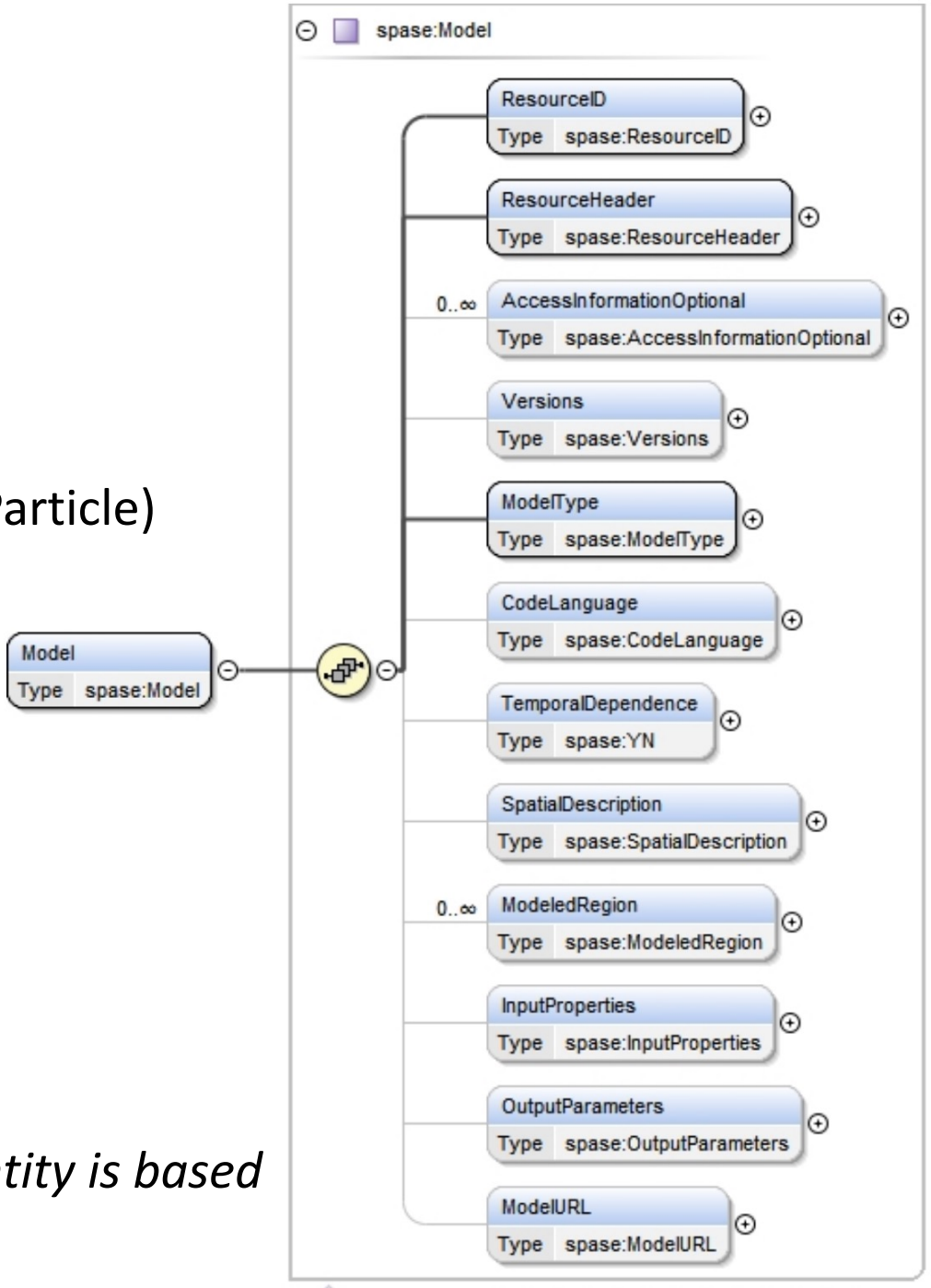
Model Description Schema

Required fields (dark lines)

- *ResourceID*
- *ResourceHeader*
- *ModelType* (Empirical, Hybrid, MHD, PIC, Paraboloid, TestParticle)

Optional fields (light-gray lines)

- *AccessInformationOptional*
- *Versions*
- *CodeLanguage*
- *TemporalDependence (Y/N)*
- *SpatialDescription – Spatial resolution description*
- *ModeledRegion*
- *InputProperties*
- *OutputParameters*
- *ModelURL – URL to model on which a property/input quantity is based*



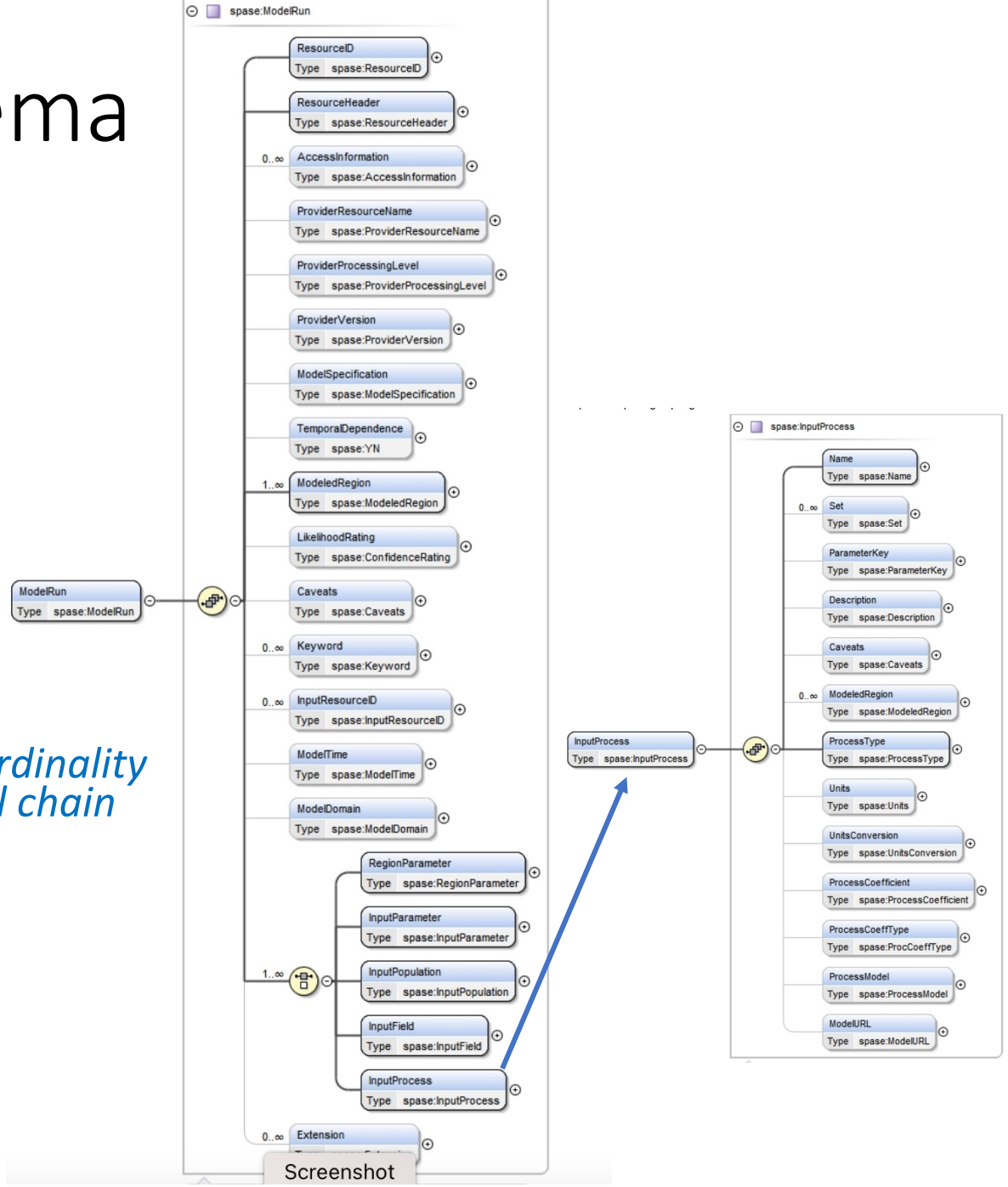
ModelRun Description Schema

Required fields (linked by dark lines)

- *ResourceID*
- *ResourceHeader*
- *ModeledRegion - RegionParameter*
- *InputParameter*
- *InputPopulation*
- *InputField*
- *InputProcess*

Selected optional fields (linked by light-gray lines)

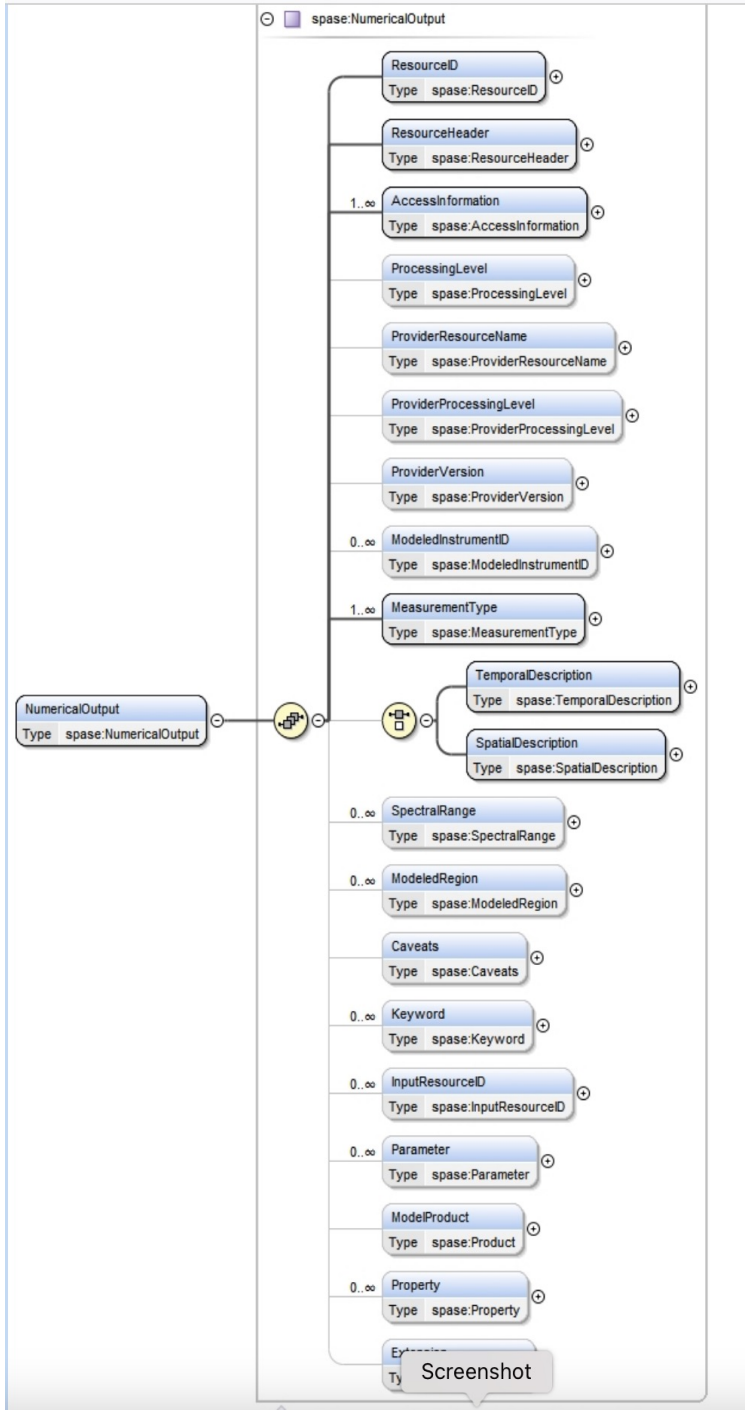
- *ModelSpecification - Model_ID, Version*
  (*should be made required with cardinality "more than one" to enable model chain description*)
- *InputResourceID*
- *ModelDomain*
- *ModelTime*
- *AccessInformation*
- *Caveat*
- *…*



NumericalOutput Description Schema

Descriptions of *NumericalOutput* from models are analogous to *NumericalData* descriptions, except some differences:

NumericalData	*NumericalOutput*
InstrumentID	*ModelInstrumentID*
ObservedRegion	*ModeledRegion*
SpatialCoverage (Spatial volume covered by the data)	*SpatialDescription* (description of spatial extent over which a measurement is taken)
	ModelProduct (1-D, 2-D, 3-D, spatial or time series, spectra, etc.)
	InputResourceID
	ModelRunID (missing?)



DisplayOutput Description Schema

Descriptions of *DisplayOutput* from models are analogous to *DisplayData* descriptions, except some differences:

DisplayData	*DisplayOutput*
InstrumentID	*ModelInstrumentID*
ObservedRegion	*ModeledRegion*
SpatialCoverage (Spatial volume covered by the data)	*SpatialDescription* (description of spatial extent over which a measurement is taken)
	ModelProduct (1-D, 2-D, 3-D, spatial or time series, spectra, etc.)
	InputResourceID
	ModelRunID (missing?)