Status of EpnCore Vocabularies

B Cecconi, E David

(ObsParis, OPAL project)

List of vocabularies

- particle-spectral-type
- product-type (mapped to IVOA product-type)
- small-body-dynamical-class (early draft)
- spatial-frame-type
- spectroscopy-geometry-type (under development)
- target-class (related to IVOA object-type)
- processing-level (still private)

EpnCore 2.0 : particle-spectral-type

- Definition : *A vocabulary for describing the spectral axis of Mass spectrometer data.*
- Terms :

Term	Label	Description	Parent	More
energy (Preliminary)	Energy	Energy spectroscopy axis (provided in eV)		
mass (Preliminary)	Mass	Mass spectroscopy axis (in amu)		
mass_charge (Preliminary)	Mass/Charge	Mass per charge spectroscopy axis (in amu/qe)		

EpnCore 2.0 : product-type

- Scope : same scope as IVOA product-type, but different terms.
- Terms :

Term	Label	Description	Parent	More
ca (Preliminary)	Catalogue	Applies to a granule providing a catalogue of object parameters, a list of features, a table of granules in another TAP service, a list of events... The result metadata table of a service query can be considered as a catalogue. Catalogues can be provided as VOtable (possibly containing multiple tables, although this is not supported by SAMP). It is good practice to describe the type of data included in the catalogue using a hash-separated-list (e.g., a table of spectra should be described by ca#sp, so that it will respond to a query for spectra).		seeAlso
ci (Preliminary)	Catalogue Item	applies when the service itself provides a catalogue with entries described as individual granules, in particular when there is no associated file (e. g., a list of asteroid properties or spectral lines). Catalogue_item can be limited to scalar quantities (including strings), and possibly to a single element. This organization allows the user to search inside the catalogue from the TAP query interface. In practice, Spice kernels are identified as catalogue_items because they are usually associated to a set of scalar parameters (this point TBC).		
cu (Preliminary)	Cube	Multidimensional data with 3 or more axes, e.g., all that is not described by other 3D data types such as spectral cube or volume. This is intended to accommodate unusual data with multiple dimensions. This can be used for 3D ancillary data associated to spectral cubes, e.g., providing the coordinates or illumination angles for each spectrum.		Same As
ds (Preliminary)	Dynamic Spectrum	Consecutive spectral measurements through time, organized primarily as a time series. This typically implies successive spectra of the same target / field of view.		Same As
ev (Preliminary)	Event	Introduces individual VOevents formatted according to IVOA standard (or possibly events with other formatting, TBC).		
im (Preliminary)	Image	Scalar field with two spatial axes, or association of several such fields, e.g., images with multiple color planes, from multichannel or filter cameras. Preview images (e.g. map with axis and caption) also belong here. Conversely, vectorial 2D fields are described as spatial_vector (sv).		Same As
ma	Map	scalar field / rasters with two spatial axes covering a large area and projected either on the sky or on a planetary body, associated to		

EpnCore 2.0 : spatial-frame-type

- Definition : Provides the "flavor" of the coordinate system, which defines the nature of the spatial coordinates (c1,c2,c3) in the EPNCore table and queries, and the way they are defined.
- Terms : « body » , « cartesian », « celestial », « cylindrical », « healpix », « none », « spherical »
- Term definitions to be cleaned-up (still too EpnCore specific)

- Heliophysics (IHDEA) told us they would reuse this vocabulary.

EpnCore 2.0 : spectroscopy-geometry-type

- Definition : A vocabulary for describing the illumination and observation geometry for spectral measurements.
- Terms : (still missing all the other « SeeAlso »)

Term	Label	Description	Parent	More
biconical (Preliminary)	Biconical	Conical solid angle illumination, and conical solid angle flux collection.		
bidirectional (Preliminary)	Bidirectional	Directional (collimated) illumination, and directional (collimated) flux collection.		seeAlso
bihemispherical (Preliminary)	bihemispherical	Hemispherical illumination, and Hemispherical flux collection."		
conical (Preliminary)	Conical	Conical solid angle geometry configuration.		
conical-directional (Preliminary)	Conical-Directional	Conical solid angle illumination, and directional (collimated) flux collection.		
conical-hemispherical (Preliminary)	Conical-Hemispherical	Conical solid angle illumination, and hemispherical flux collection.		
direct (Preliminary)	Direct	Direct (therefore in emission).		
directional (Preliminary)	Directional	Directional (collimated) geometry configuration.		
directional-conical (Preliminary)	Directional-Conical	Directional (collimated) illumination, and conical solid angle flux collection.		

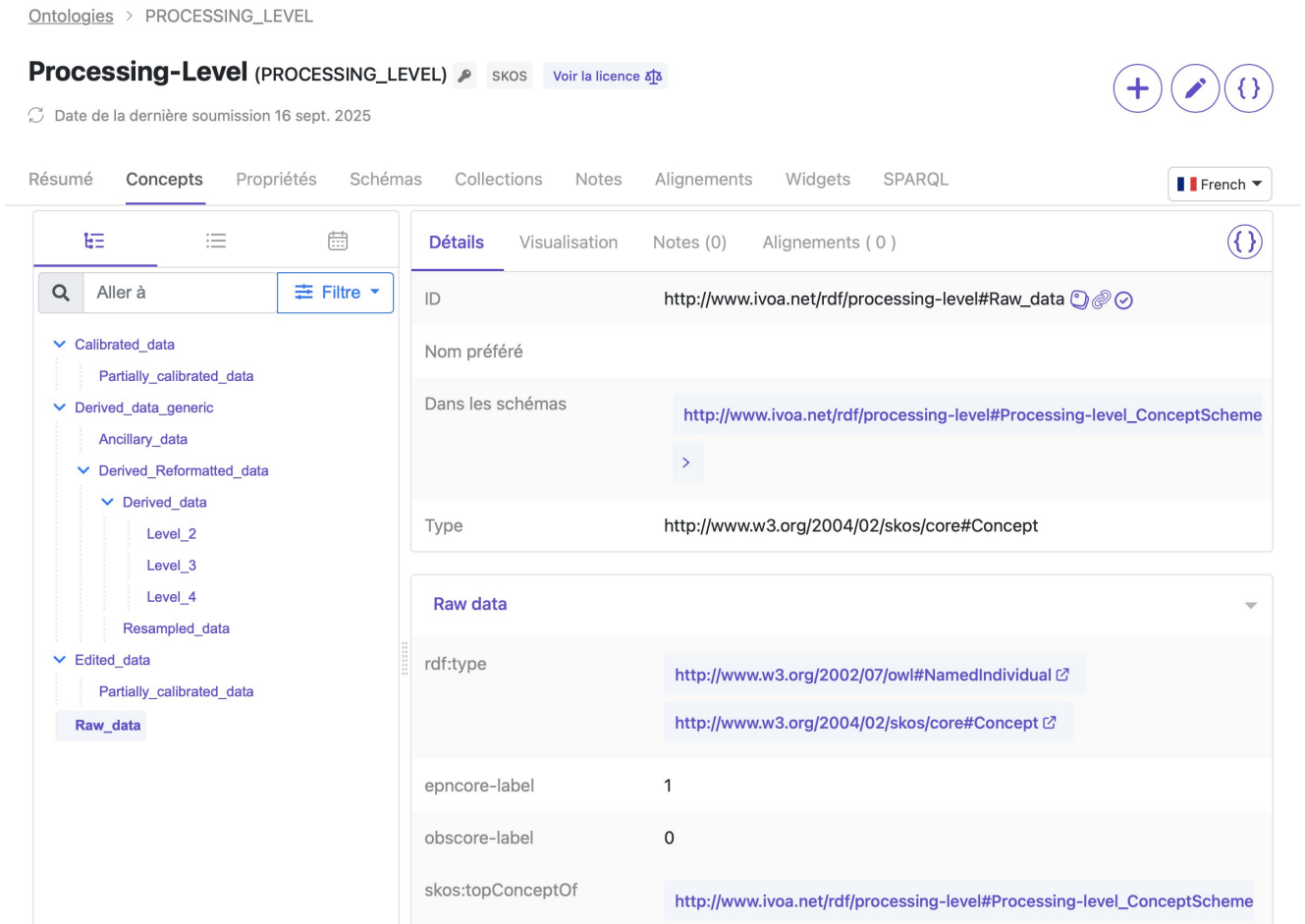
EpnCore 2.0 : target-class

- Definition : This vocabulary lists the types of targets.
- Overlap with IVOA object-type, but difference scope
  - target-class is about observations (it contains a « calibration » term)
  - object-type is about the physical objects
- Terms :

Term	Label	Description	Parent	More
asteroid (Preliminary)	Asteroid	Asteroid		Related
calibration (Preliminary)	Calibration	Calibration is used for observations only related to instrument or signal calibration, including dark current, flat field, reference sample (in lab), etc. Use of "calibration" with planetary bodies is left to data providers.		
comet (Preliminary)	Comet	Comet		Related
dwarf_planet (Preliminary)	Dwarf Planet	Dwarf Planet		Related
exoplanet (Preliminary)	Exoplanet	Extra-solar Planet		Same As

EpnCore 2.0 : processing-level

- Definition : A vocabulary of data processing levels.
- Example :



EpnCore 2.0 : small-body-dynamical-class

- Still not finalized. Early version, not discussed with community
- Requires coordination with several groups (planned for January)

Term	Label	Description	Parent	More
amor (Preliminary)	Amor	Amor Near Earth Object	#neo	
apollo (Preliminary)	Apollo	Apollo Near Earth Object	#neo	
asteroid (Preliminary)	Asteroid	Asteroid		Same As Narrower
aten (Preliminary)	Aten	Aten Near Earth Object	#neo	
atira (Preliminary)	Atira	Atira Near Earth Object	#neo	
centaur (Preliminary)	Centaur	Centaur	#asteroid	