

Data Product type

A trial for a consistent definition of the possible set of KEYWORDS

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I have tried to formalize a construction of what we could use to define the various observation products available in archives.

This list tackles only the observations we consider to query in the Use-case document provided at http://www.ivoa.net/internal/IVOA/ObsDMCoreComponents/TAPObsDM_ScienceUseCasesv6.doc.

These are the categories I considered

1 multiplicity

(single)

multi (time,band, object)

2 acquisition mode

(direct)

Polarimetric

Interferometric

3 type mandatory

Spectrum

Imaging

SpectroImaging

EventList

SourceList

SED

4 dimension (when needed)

1D

2D

3D

5 <**timedependant**> (time series means there are several acquisitions at various time steps, explained on TimeAxis.)

(not time spanned)

TimeList

productType = Expression | EventList | SourceList | SED

Expression = (| multiband) (| polarimetric| interferometric) (**Spectrum | Imaging | SpectroImaging**) (1D | 2D | 3D) (| TimeList)

Construction rule :

Expression :: <multiplicity><observable><type><dimension><timedependant>

Fields in Expression are needed only to disambiguate, for instance in Spectrum.

Imaging is always 2D, no need to mention it. (unless you find some counter-examples)

Valid Instances:

Spectrum1D

Spectrum2D

Spectrum1DTimeList

Spectrum2DTimeList

Imaging

always 2D in space

MultibandImaging (2D+ lambda)
PolarimetricImaging (2D + nPol axes)
ImagingTimeList (2D+ t)

SpectroImaging (s, wave sampled)
SpectroImagingTimeList (s, t, w sampled)
SpectroPolarimetricImaging

InterferometricImaging

EventList
SourceList
SED

Questions: Do we need InterferometricCube ?