Obscore DM v 1.1

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Points for the current update

1. Dimensions of the axes along which data are spanned
   - s_dim1 *Spatial*
   - s_dim2
   - em_dim *Spectral*
   - t_dim *Temporal*
   - pol_dim *Polarization*
2. Wording for these quantities: samples , elements , bins, ?
3. How to accomodate dimensions for an event list :
   - number of events?
4. Previous intermediate version had Utypes strings fixed

More use-cases asked in Sesto (1)

Appendix A. in the ObsCore specification

Use case 3.10

Show me a list of all data, For a selected list of SDSS objects that satisfies:
1. DataType=Cube with 3 dimensions   *dataproduct_type = cube*
2. Axes includes WAVE   *em_ucd=em.wl*
3. Axes includes more than 200 pixels along each spatial axis
                                             s_dim1 and s_dim2 > 200
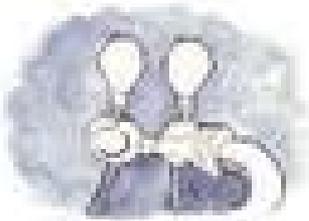4. Spatial resolution better than 2 arcsec   *s_resolution <2*

More use-cases asked in Sesto (2)

Use case 4.3

Show me a list of all data matching a particular event (e.g. gamma ray burst) in time interval and space:

1. DataType=time series
2. RA includes 16.00 hours
3. DEC includes +41.00
4. Time start > MJD 54221 and Time stop < MJD 55800
5. Number of time slots > 1000

SELECT TOP 100 ivoa.ObsCore.access_url,ivoa.ObsCore.obs_id FROM ivoa.ObsCore WHERE
(CONTAINS(POINT('ICRS', ivoa.ObsCore.s_ra, ivoa.ObsCore.s_dec), CIRCLE('ICRS', 10.684667, +41.268750, 0.016666666666666666)) = 1)
AND ivoa.ObsCore.dataproduct_type = 'timeseries'
AND ivoa.ObsCore.t_resolution > 60
AND ivoa.ObsCore.t_min > 54221
AND ivoa.ObsCore.t_max < 55800
AND t_dim > 1000

Tested in TapHandle on ObsTAP services

Event list use-cases

Show me a list of all event lists observed in the XMM data collection within the region covered by a particular image of GALEX data collection.

1. DataType = event list
2. Region contains polygon P1 extracted from the foot print of a particular GALEX image
3. Data collection= XMM
4. Instrument name=EPN

```
SELECT xmm.access_url,xmm.obs_id
FROM ivoa.ObsCore AS xmm
JOIN ivoa.ObsCore as galex
ON (CONTAINS(REGION(galex.s_region),
REGION(xmm.s_region)) = 1)
WHERE  xmm.dataproduct_type = 'eventlist'
  AND galex.facility_name = 'GALEX'
  AND galex.dataproduct_type = 'image'
  AND xmm.facility_name = 'XMM'
  AND xmm.instrument_name = 'EPN'
```

Data content search

- All characterisation axes are supported
  - s, em, t, pol
- More dedicated parameters
  - Detection limit
  - SNR
  - Nb of sources in an image field
  - Number of Events
  - …

are not part of Obscore Data Model

How to advertise use-case and working examples

- ?An example Web page attached to TapHandle?

- ? An implementation note?

- ? Other

Document release schedule

- Update from this discussion

- Will be uploaded on ivoa.net/Documents
- Will be circulated on dm mailing list

- Discussion page at
http://wiki.ivoa.net/twiki/bin/view/IVOA/ObsCoreDMvOnedotOne

- By 10 November 2015