



IVOA time domain

Time series : discovery and data access

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Dave Morris



Time series data discovery

Three ways that users could discover time-series:

- Search results for sources may include links to associated time series
 - Simple URLs in the results
 - DataLink references to other services
- Extension of ObsCore search criteria to include time domain criteria
 - Time specific search criteria (TimeCore)
- Combination of position and time domain search criteria
- DAL working group road map for extending the DAL protocols:

[TimeSeries Discovery and Access DAL procedure](#)



Time series data model

Work in progress :

July 2018, meeting in Strasbourg

Different proposals converged into a single model for time series:

http://wiki.ivoa.net/internal/IVOA/IvoaVOEvent/TS_overview.png

Details of the model should be published end of October for discussion at the next IVOA meeting in November.



Time series data serialization

Three proposals for data serialization based on n D cube

- Utypes – using utypes to reference roles in the data model
- VODML – using the full VODML extensions to VOTable
- VODML lite – using a simplified subset of the VODML extensions

The data section of the VOTable is the same in all three cases.

The header section of the VOTable tells the recipient how to interpret the data as a cube by identifying the independent and dependent axes.

Time series data serialization

Three proposals for data serialization based on n D cube.

Examples of Gaia DR2 light-curves are included in the test data used for evaluating the proposals.

If all of the proposed serializations work for all of the science use cases, what else should we use as selection criteria ?

- Is time-series of positions a valid case ?
- Are there other criteria you think we should apply ?

Time series data serialization

- Technical details of a serialization format are driven by functionality provided by client applications.
- The reason for serializing the data is to transfer it to the client application.

What client applications do we want to use to analyze Gaia time series data ?