

## Current State of 'STC-2':

From the content of the original STC model, we have extracted 3 component models. Each of these have been revamped to focus on that specific area of interest, and to reduce the scope to a minimal set of requirements.

coords: Astronomical Coordinates and Systems

Coordinate spaces = axes and coordinates

Frames = origin and orientation of coordinate space

Specialized coordinates for common Space and Time data

meas: Measurements model

Base measurement model combining coordinates with associated errors.

trans: Transform model

Facilitates the definition of virtual data (eg: image axes)

These models are directly used by the Cube model to represent both sparse cubes and pixelated images. They can be used and extended in other models in other contexts. A Region model would use Coordinates, the Spectral model can extend Measurement to define Luminosity, which can then automatically be used in a Cube. With these models, we can fully describe event lists and images, and we have shown how a TimeSeries model can be defined as a small extension/specialization of a Cube.

## What are we looking for?

One or more individuals who have experience working with coordinates, measurements and transforms, to serve as a domain specialist resource. These models are fairly generic, leaving very specialized content to be described in the model where that content is relevant, however, the space and time domains do have special structure which is described in the coordinates model. So, it would be best if one resource has particular interest and expertise in the space and time domains. The least exercised piece involves utilizing the Transform model in the Cube model for image axes and such, this will likely be the short term focus. For all models, the domain specialist will be asked to:

- participate in discussions with the modeler, describing the domain, the entities involved and their relations. For this version of the models, we are pretty much past this stage. It would come into play as the model evolves in the future.
- address specific questions from the modeler regarding topics which come up during the development and exercising of the models. For example, we recently had a question come up where a user questioned the recursive relation in the modeling of TimeOffset and TimeFrame. This came down to a simple question which would be directed to this domain resource... *"If I have 2 TimeOffsets, both in TDB-Barycenter, but with different zero points.. are these considered, by the community, to be in the same Time Frame?"* This support is needed now.
- provide for the standard document. Assist in documenting the model, by providing scientific context in the descriptions of the various model elements and relations, describing 'best practices' in common usage, etc. Again, this role applies more to future updates of the model.

## What is NOT required?

- Knowledge of data modeling practices or UML diagram generation. Though a familiarity with UML diagrams would make review and discussion sessions easier.
- A big time commitment. This is a supportive role to the data modeler, and should not be a heavy drain on time. Most interaction will take place at the beginning of the modeling effort, and during document generation.