

Data Models WG

Session 1

XML Schema Guidelines

Converging the Models

Observation and Characterization

Session 2

Catalogs

Spacetime Coordinates

Spacetime Coordinates (STC)

V1.0 proposal on twiki since July

Relatively little comment received

All in favor say aye?

STC 1

The CoordSystem object: what frame are we in?

```
<coordSys id="CS">  
  <timeFrame><TT/><GEOCENTER/></timeFrame>  
  <spaceFrame><ICRS/><BARYCENTER/><SPHERICAL naxes="2"/></spaceFrame>  
  <spectralFrame><HELIOCENTER/></spectralFrame>  
</coordSys>
```

STC 2

The Coordinate object: a single named coordinate value with error, or a resolution, or a sampling precision or a combination of these

```
<ScalarCoordinate unit="nT">  
<name>B</name><CValue>5.0</CValue><CError>0.2</CError>  
</ScalarCoordinate>  
  
■  
<ScalarCoordinate unit="MHz">  
<name>frequency</name><CResolution>10.2</CResolution>  
</ScalarCoordinate>
```

STC 3

Specialized Coordinate objects

```
<Position unit="deg">
  <name>ICRS</name>
  <CValue2>14.382 -20.182</CValue2>
  <CError2>0.182 -1.201</CError2>
</Position>

<Time>
  <TimeInstant>
    <TimeScale>TT</TimeScale><ISOTime>2004-Sep-30T05:30:00.0123</ISOTime>
  </TimeInstant>
</Time>

<Time unit="d">
  <TimeInstant>
    <TimeScale>TDB</TimeScale><MJDTTime>28503.21231</MJDTTime>
  </TimeInstant>
  <CError>0.28</CError>
</Time>
```

STC 4

Coords object: the aggregation

```
<coords coord_system_id="CS">
  <Time unit="d">
    <name>Time</name>
    <TimeInstant>
      <TimeScale>TDB</TimeScale><MJDTime>28503.21231</MJDTime>
    </TimeInstant>
    <CError>0.28</CError>
  </Time>
  <Position unit="deg">
    <name>ICRS</name>
    <CValue2>14.382 -20.182</CValue2> <CError2>0.182 -1.201</CError2>
  </Position>
  <Spectral unit="Angstrom">
    <name>Wavelength</name><CValue>4402.3</CValue>
  </Spectral>
</coords>
```