# The simplest TimeSeries
# A light curve

```
<!--
    Here are the data; We have one independant (Time) and three dependant Observables (ra-dec, flux, mag . the two latter come with their error
  -->
<GROUP name="TimeSeriesData">
    <FIELDref ref="JD"/>
    <FIELDref ref="MAGV"/>
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      <TD>17.0860</TD>
    </TR>
    <TR>
      <TD>2454082.8886</TD>
      <TD>17.0880</TD>
    </TR>
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      <TD>17.0860</TD>
    </TR>
    <TR>
      <TD>2454082.8902</TD>
      <TD>17.1260</TD>
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      <TD>17.0990</TD>
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    <TR>
      <TD>2454082.8918</TD>
      <TD>17.0430</TD>
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      <TD>17.0650</TD>
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      <TD>2454082.8934</TD>
      <TD>17.0330</TD>
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```
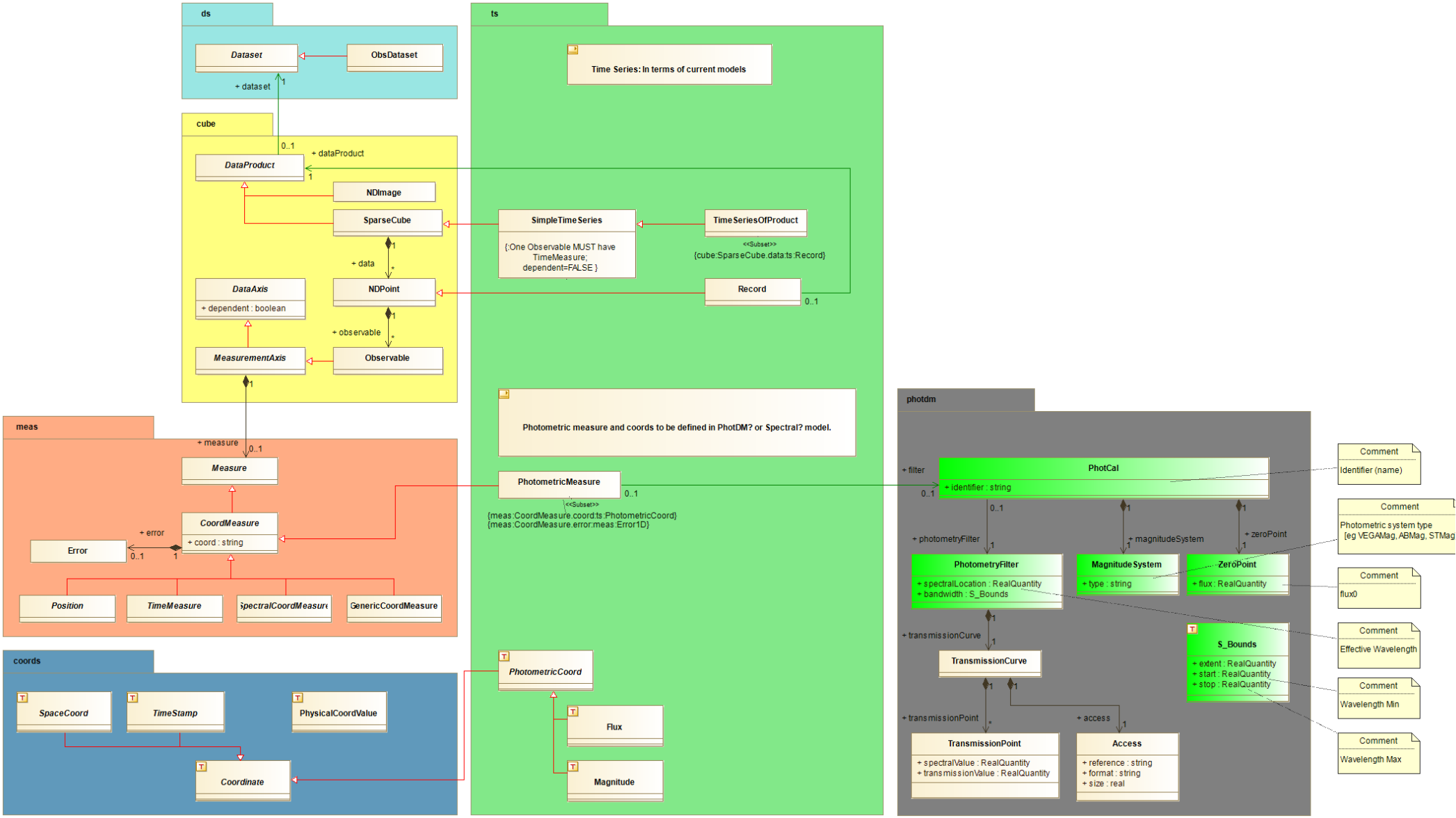
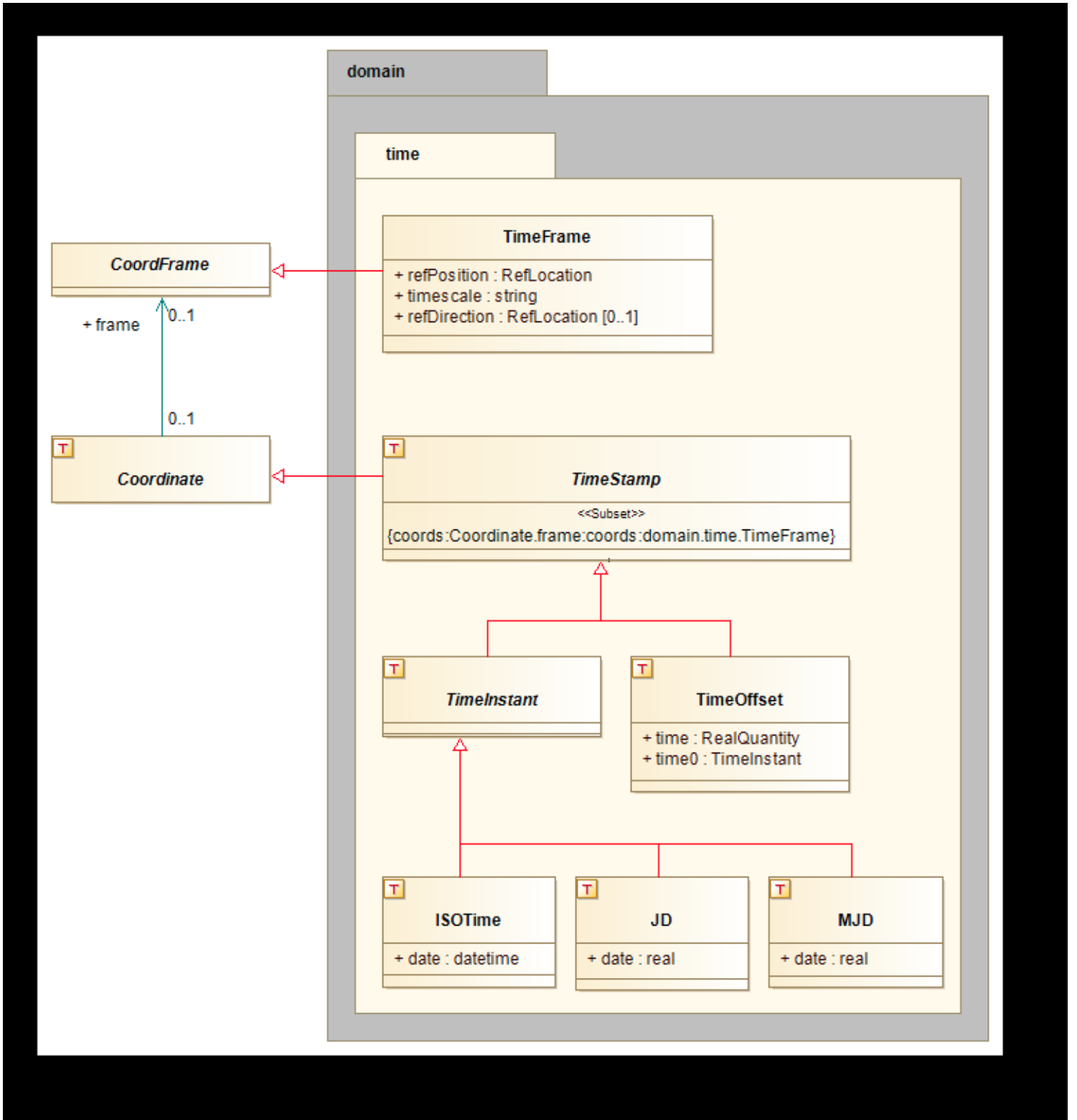

# TimeSeries datamodel



STC Coords

Temporal

domain



# 2 utypes derived from the models

```
−<TABLE ID="data" name="TimeSeriesData" utype="ts:TimeSeriesData">
  −<!--
      Here are the data; We have one independant (Time) and three dependant Observables (ra-dec, flux, mag . the two latter come with their error
    -->
  −<FIELD ID="JD" datatype="double" name="JD" ucd="time;obs.exposure" unit="d" utype="ts:TimeSeries.NDPoint.Observable.TimeMeasure.JD" ref="tif">
      <DESCRIPTION>Epoch at midpoint of observation in julian date</DESCRIPTION>
    </FIELD>
  −<FIELD ID="MAGV" datatype="float" name="MAGV" ucd="phot.flux" unit="mag" utype="ts:TimeSeries.NDPoint.Observable.PhotometricMeasure.Magnitude" ref="phot">
      <DESCRIPTION>V magnitude</DESCRIPTION>
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      −<TR>
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```
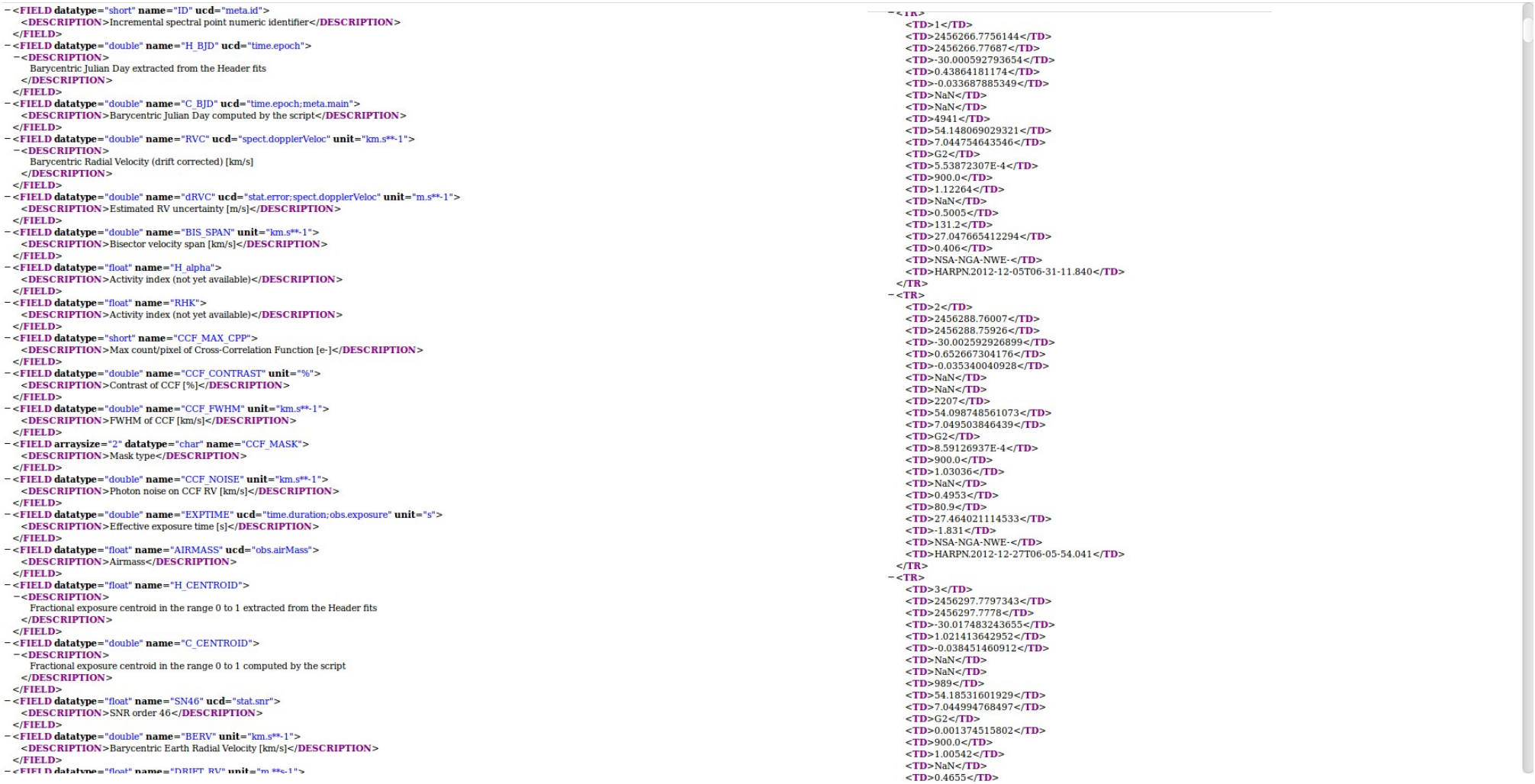

# GAPS a lot of varying attributes



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- <FIELD datatype="short" name="ID" ucd="meta.id">
    <DESCRIPTION>Incremental spectral point numeric identifier</DESCRIPTION>
  </FIELD>
- <FIELD datatype="double" name="H_BJD" ucd="time.epoch">
  - <DESCRIPTION>
      Barycentric Julian Day extracted from the Header fits
    </DESCRIPTION>
  </FIELD>
- <FIELD datatype="double" name="C_BJD" ucd="time.epoch;meta.main">
    <DESCRIPTION>Barycentric Julian Day computed by the script</DESCRIPTION>
  </FIELD>
- <FIELD datatype="double" name="RVC" ucd="spect.dopplerVeloc" unit="km.s**-1">
  - <DESCRIPTION>
      Barycentric Radial Velocity (drift corrected) [km/s]
    </DESCRIPTION>
  </FIELD>
- <FIELD datatype="double" name="dRVC" ucd="stat.error;spect.dopplerVeloc" unit="m.s**-1">
    <DESCRIPTION>Estimated RV uncertainty [m/s]</DESCRIPTION>
  </FIELD>
- <FIELD datatype="double" name="BIS_SPAN" unit="km.s**-1">
    <DESCRIPTION>Bisector velocity span [km/s]</DESCRIPTION>
  </FIELD>
- <FIELD datatype="float" name="H_alpha">
    <DESCRIPTION>Activity index (not yet available)</DESCRIPTION>
  </FIELD>
- <FIELD datatype="float" name="RHK">
    <DESCRIPTION>Activity index (not yet available)</DESCRIPTION>
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- <FIELD datatype="short" name="CCF_MAX_CPP">
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- <FIELD datatype="double" name="CCF_CONTRAST" unit="%">
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- <FIELD datatype="double" name="CCF_FWHM" unit="km.s**-1">
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- <FIELD arraysize="2" datatype="char" name="CCF_MASK">
    <DESCRIPTION>Mask type</DESCRIPTION>
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- <FIELD datatype="double" name="CCF_NOISE" unit="km.s**-1">
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- <FIELD datatype="double" name="EXPTIME" ucd="time.duration;obs.exposure" unit="s">
    <DESCRIPTION>Effective exposure time [s]</DESCRIPTION>
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- <FIELD datatype="float" name="AIRMASS" ucd="obs.airMass">
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- <FIELD datatype="float" name="H_CENTROID">
  - <DESCRIPTION>
      Fractional exposure centroid in the range 0 to 1 extracted from the Header fits
    </DESCRIPTION>
  </FIELD>
- <FIELD datatype="double" name="C_CENTROID">
  - <DESCRIPTION>
      Fractional exposure centroid in the range 0 to 1 computed by the script
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  </FIELD>
- <FIELD datatype="float" name="SN46" ucd="stat.snr">
    <DESCRIPTION>SNR order 46</DESCRIPTION>
  </FIELD>
- <FIELD datatype="double" name="BERV" unit="km.s**-1">
    <DESCRIPTION>Barycentric Earth Radial Velocity [km/s]</DESCRIPTION>
  </FIELD>
- <FIELD datatype="float" name="DRIFT_RV" unit="m.s**-1">
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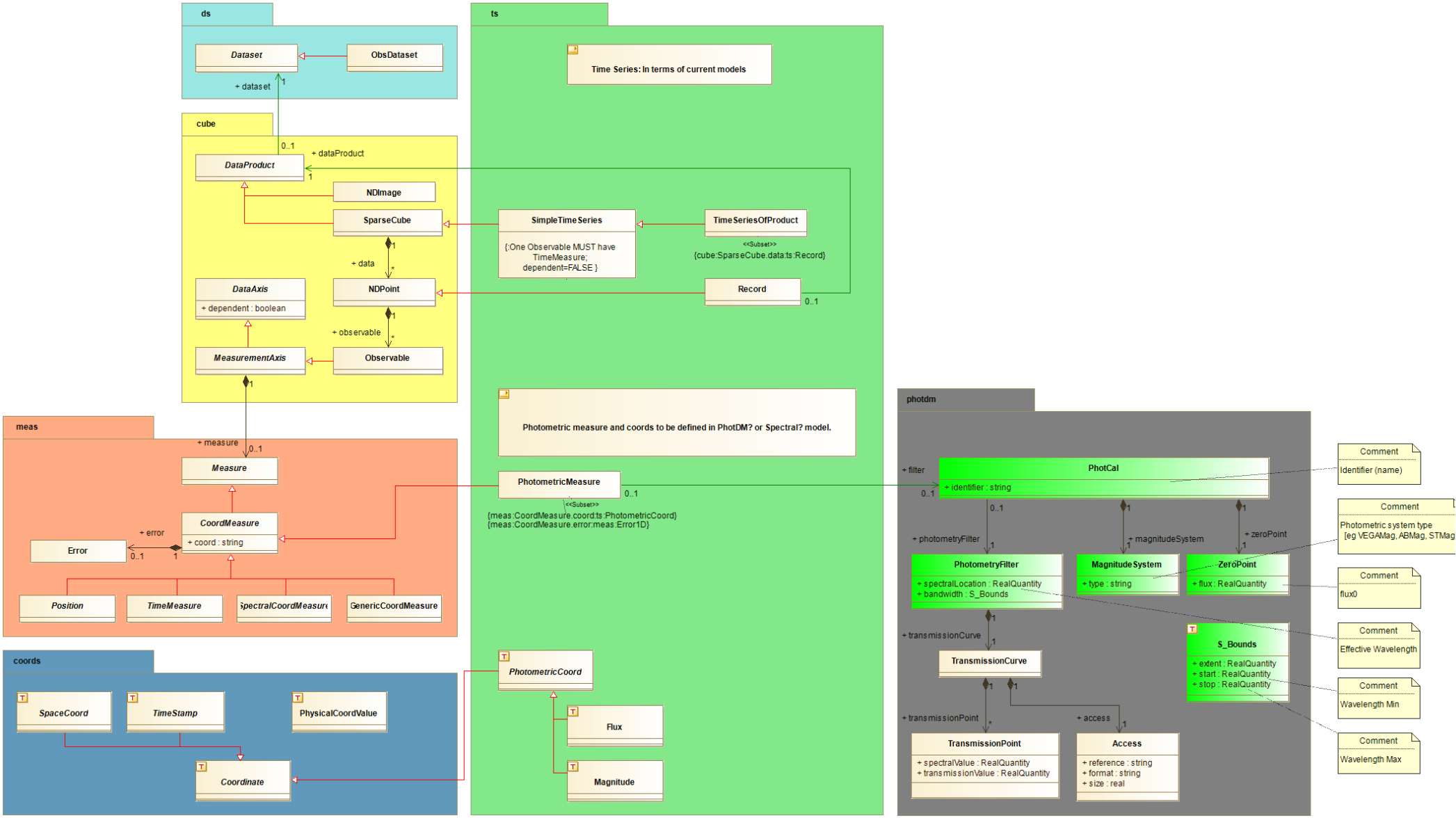
```

# TimeSeries datamodel



# Adding RadialVelocity Extensions to the datamodel

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  −<GROUP ID="phot" name="Phot" ucd="phot" utype="photdm:PhotometryFilter">
    −<DESCRIPTION>
        The Phot group is made of 2 columns: mean frequency and filter designation
      </DESCRIPTION>
      <PARAM ID="wl" name="wavelength" utype="photdm:PhotometryFilter.SpectralAxis.Coverage.Location.Value" datatype="float" unit="nm" value="545"/>
      <PARAM ID="flt" name="filter" utype="photdm:PhotometryFilter.identifier" datatype="char" arraysize="*" value="Johnson_V"/>
    </GROUP>
  </GROUP>
−<TABLE name="GAPS-TimeSeries-KP7" nrows="97">
  −<FIELD datatype="short" name="ID" ucd="meta.id">
      <DESCRIPTION>Incremental spectral point numeric identifier</DESCRIPTION>
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  −<FIELD datatype="double" name="H_BJD" ucd="time.epoch" utype="ts:TimeSeries.NDPoint.Observable.TimeMeasure.JD">
    −<DESCRIPTION>
        Barycentric Julian Day extracted from the Header fits
      </DESCRIPTION>
    </FIELD>
  −<FIELD datatype="double" name="C_BJD" ucd="time.epoch;meta.main" utype="ts:TimeSeries.NDPoint.Observable.TimeMeasure.JD">
      <DESCRIPTION>Barycentric Julian Day computed by the script</DESCRIPTION>
    </FIELD>
  −<FIELD datatype="double" name="RVC" ucd="spect.dopplerVeloc" unit="km.s**-1" utype="ts:TimeSeries.NDPoint.Observable.GenericMeasure.DopplerVelocity.value">
    −<DESCRIPTION>
        Barycentric Radial Velocity (drift corrected) [km/s]
      </DESCRIPTION>
    </FIELD>
  −<FIELD datatype="double" name="dRVC" ucd="stat.error;spect.dopplerVeloc" unit="m.s**-1" utype="ts:TimeSeries.NDPoint.Observable.GenericMeasure.DopplerVelocity.error">
      <DESCRIPTION>Estimated RV uncertainty [m/s]</DESCRIPTION>
    </FIELD>
  −<FIELD datatype="double" name="BIS_SPAN" ucd="spect.dopplerVecoc;spect.resolution" unit="km.s**-1" utype="ts:TimeSeries.NDPoint.Observable.GenericMeasure.DopplerRsolution.value">
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# Is there a reasonable extension for Activity index ?

## From another datamodel maybe ?

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−<TABLE name="GAPS-TimeSeries-KP7" nrows="97">
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      <DESCRIPTION>Incremental spectral point numeric identifier</DESCRIPTION>
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    −<DESCRIPTION>
        Barycentric Julian Day extracted from the Header fits
      </DESCRIPTION>
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  −<FIELD datatype="double" name="C_BJD" ucd="time.epoch;meta.main" utype="ts:TimeSeries.NDPoint.Observable.TimeMeasure.JD">
      <DESCRIPTION>Barycentric Julian Day computed by the script</DESCRIPTION>
    </FIELD>
  −<FIELD datatype="double" name="RVC" ucd="spect.dopplerVeloc" unit="km.s**-1" utype="ts:TimeSeries.NDPoint.Observable.GenericMeasure.DopplerVelocity.value">
    −<DESCRIPTION>
        Barycentric Radial Velocity (drift corrected) [km/s]
      </DESCRIPTION>
    </FIELD>
  −<FIELD datatype="double" name="dRVC" ucd="stat.error;spect.dopplerVeloc" unit="m.s**-1" utype="ts:TimeSeries.NDPoint.Observable.GenericMeasure.DopplerVelocity.error">
      <DESCRIPTION>Estimated RV uncertainty [m/s]</DESCRIPTION>
    </FIELD>
  −<FIELD datatype="double" name="BIS_SPAN" ucd="spect.dopplerVecoc;spect.resolution" unit="km.s**-1" utype="ts:TimeSeries.NDPoint.Observable.GenericMeasure.DopplerRsolution.value">
      <DESCRIPTION>Bisector velocity span [km/s]</DESCRIPTION>
    </FIELD>
  −<FIELD datatype="float" name="H_alpha" ucd="meta.code">
      <DESCRIPTION>Activity index (not yet available)</DESCRIPTION>
    </FIELD>
  −<FIELD datatype="float" name="RHK" ucd="meta.code">
      <DESCRIPTION>Activity index (not yet available)</DESCRIPTION>
    </FIELD>
  −<FIELD datatype="short" name="CCF_MAX_CBP">
```
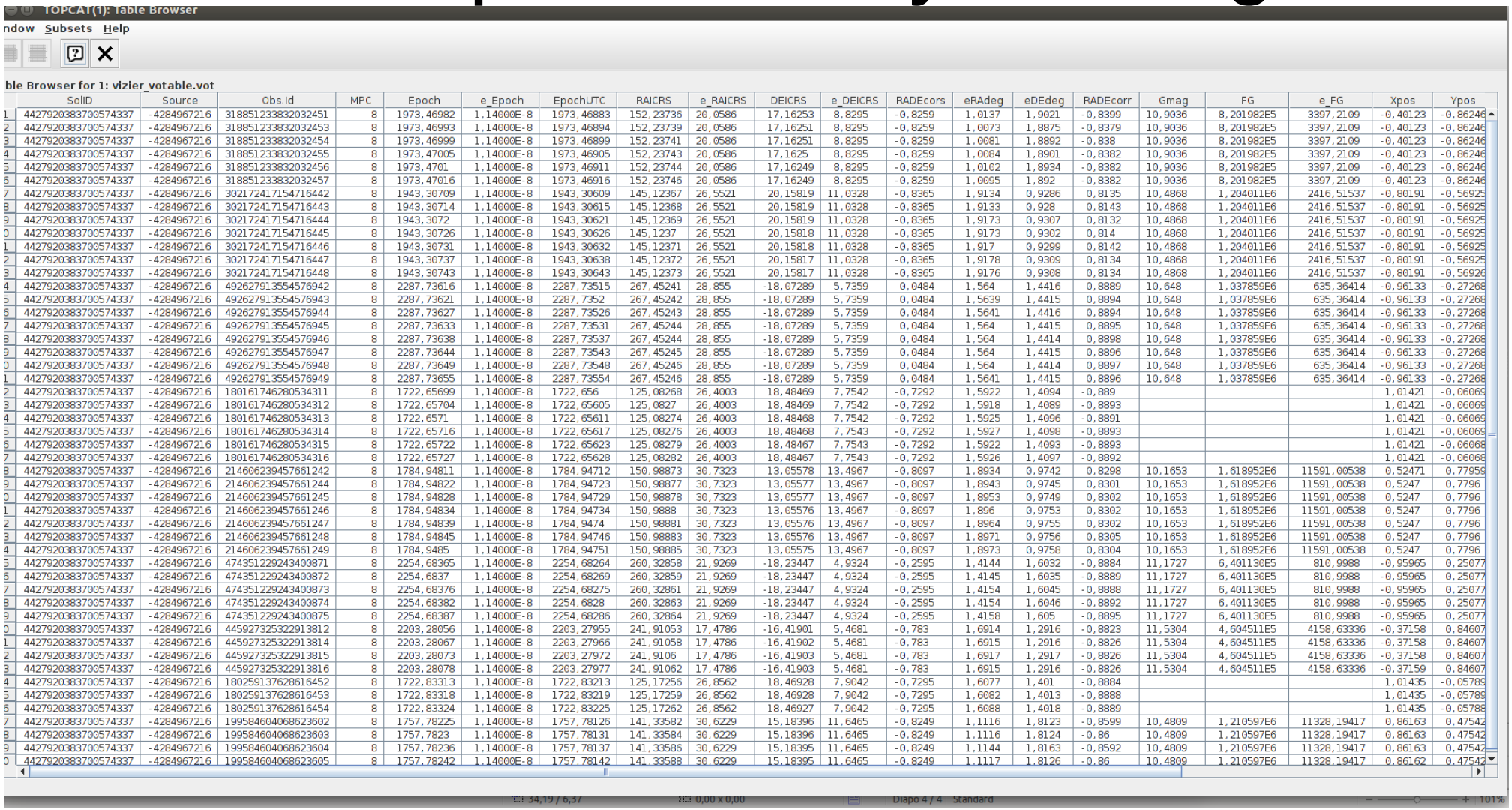

# GAIA DR2 asteroid timeSeries
# Ra, dec, fluxes are varying
# Cartesian positions x,y,z also given


TOPCAT(1): Table Browser

ndow Subsets Help

ble Browser for 1: vizier_votable.vot

| | SolID | Source | Obs.Id | MPC | Epoch | e_Epoch | EpochUTC | RAICRS | e_RAICRS | DEICRS | e_DEICRS | RADEcors | eRAdeg | eDEdeg | RADEcorr | Gmag | FG | e_FG | Xpos | Ypos |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4427920383700574337 | -4284967216 | 318851233832032451 | 8 | 1973,46982 | 1,14000E-8 | 1973,46883 | 152,23736 | 20,0586 | 17,16253 | 8,8295 | -0,8259 | 1,0137 | 1,9021 | -0,8399 | 10,9036 | 8,201982E5 | 3397,2109 | -0,40123 | -0,86246 |
| 2 | 4427920383700574337 | -4284967216 | 318851233832032453 | 8 | 1973,46993 | 1,14000E-8 | 1973,46894 | 152,23739 | 20,0586 | 17,16251 | 8,8295 | -0,8259 | 1,0073 | 1,8875 | -0,8379 | 10,9036 | 8,201982E5 | 3397,2109 | -0,40123 | -0,86246 |
| 3 | 4427920383700574337 | -4284967216 | 318851233832032454 | 8 | 1973,46999 | 1,14000E-8 | 1973,46899 | 152,23741 | 20,0586 | 17,16251 | 8,8295 | -0,8259 | 1,0081 | 1,8892 | -0,838 | 10,9036 | 8,201982E5 | 3397,2109 | -0,40123 | -0,86246 |
| 4 | 4427920383700574337 | -4284967216 | 318851233832032455 | 8 | 1973,47005 | 1,14000E-8 | 1973,46905 | 152,23743 | 20,0586 | 17,1625 | 8,8295 | -0,8259 | 1,0084 | 1,8901 | -0,8382 | 10,9036 | 8,201982E5 | 3397,2109 | -0,40123 | -0,86246 |
| 5 | 4427920383700574337 | -4284967216 | 318851233832032456 | 8 | 1973,4701 | 1,14000E-8 | 1973,46911 | 152,23744 | 20,0586 | 17,16249 | 8,8295 | -0,8259 | 1,0102 | 1,8934 | -0,8382 | 10,9036 | 8,201982E5 | 3397,2109 | -0,40123 | -0,86246 |
| 6 | 4427920383700574337 | -4284967216 | 318851233832032457 | 8 | 1973,47016 | 1,14000E-8 | 1973,46916 | 152,23746 | 20,0586 | 17,16249 | 8,8295 | -0,8259 | 1,0095 | 1,892 | -0,8382 | 10,9036 | 8,201982E5 | 3397,2109 | -0,40123 | -0,86246 |
| 7 | 4427920383700574337 | -4284967216 | 302172417154716442 | 8 | 1943,30709 | 1,14000E-8 | 1943,30609 | 145,12367 | 26,5521 | 20,15819 | 11,0328 | -0,8365 | 1,9134 | 0,9286 | 0,8135 | 10,4868 | 1,204011E6 | 2416,51537 | -0,80191 | -0,56925 |
| 8 | 4427920383700574337 | -4284967216 | 302172417154716443 | 8 | 1943,30714 | 1,14000E-8 | 1943,30615 | 145,12368 | 26,5521 | 20,15819 | 11,0328 | -0,8365 | 1,9133 | 0,928 | 0,8143 | 10,4868 | 1,204011E6 | 2416,51537 | -0,80191 | -0,56925 |
| 9 | 4427920383700574337 | -4284967216 | 302172417154716444 | 8 | 1943,3072 | 1,14000E-8 | 1943,30621 | 145,12369 | 26,5521 | 20,15819 | 11,0328 | -0,8365 | 1,9173 | 0,9307 | 0,8132 | 10,4868 | 1,204011E6 | 2416,51537 | -0,80191 | -0,56925 |
| 10 | 4427920383700574337 | -4284967216 | 302172417154716445 | 8 | 1943,30726 | 1,14000E-8 | 1943,30626 | 145,1237 | 26,5521 | 20,15818 | 11,0328 | -0,8365 | 1,9173 | 0,9302 | 0,814 | 10,4868 | 1,204011E6 | 2416,51537 | -0,80191 | -0,56925 |
| 11 | 4427920383700574337 | -4284967216 | 302172417154716446 | 8 | 1943,30731 | 1,14000E-8 | 1943,30632 | 145,12371 | 26,5521 | 20,15818 | 11,0328 | -0,8365 | 1,917 | 0,9299 | 0,8142 | 10,4868 | 1,204011E6 | 2416,51537 | -0,80191 | -0,56925 |
| 12 | 4427920383700574337 | -4284967216 | 302172417154716447 | 8 | 1943,30737 | 1,14000E-8 | 1943,30638 | 145,12372 | 26,5521 | 20,15817 | 11,0328 | -0,8365 | 1,9178 | 0,9309 | 0,8134 | 10,4868 | 1,204011E6 | 2416,51537 | -0,80191 | -0,56925 |
| 13 | 4427920383700574337 | -4284967216 | 302172417154716448 | 8 | 1943,30743 | 1,14000E-8 | 1943,30643 | 145,12373 | 26,5521 | 20,15817 | 11,0328 | -0,8365 | 1,9176 | 0,9308 | 0,8134 | 10,4868 | 1,204011E6 | 2416,51537 | -0,80191 | -0,56926 |
| 14 | 4427920383700574337 | -4284967216 | 492627913554576942 | 8 | 2287,73616 | 1,14000E-8 | 2287,73515 | 267,45241 | 28,855 | -18,07289 | 5,7359 | 0,0484 | 1,564 | 1,4416 | 0,8889 | 10,648 | 1,037859E6 | 635,36414 | -0,96133 | -0,27268 |
| 15 | 4427920383700574337 | -4284967216 | 492627913554576943 | 8 | 2287,73621 | 1,14000E-8 | 2287,7352 | 267,45242 | 28,855 | -18,07289 | 5,7359 | 0,0484 | 1,5639 | 1,4415 | 0,8894 | 10,648 | 1,037859E6 | 635,36414 | -0,96133 | -0,27268 |
| 16 | 4427920383700574337 | -4284967216 | 492627913554576944 | 8 | 2287,73627 | 1,14000E-8 | 2287,73526 | 267,45243 | 28,855 | -18,07289 | 5,7359 | 0,0484 | 1,5641 | 1,4416 | 0,8894 | 10,648 | 1,037859E6 | 635,36414 | -0,96133 | -0,27268 |
| 17 | 4427920383700574337 | -4284967216 | 492627913554576945 | 8 | 2287,73633 | 1,14000E-8 | 2287,73531 | 267,45244 | 28,855 | -18,07289 | 5,7359 | 0,0484 | 1,564 | 1,4415 | 0,8895 | 10,648 | 1,037859E6 | 635,36414 | -0,96133 | -0,27268 |
| 18 | 4427920383700574337 | -4284967216 | 492627913554576946 | 8 | 2287,73638 | 1,14000E-8 | 2287,73537 | 267,45244 | 28,855 | -18,07289 | 5,7359 | 0,0484 | 1,564 | 1,4414 | 0,8898 | 10,648 | 1,037859E6 | 635,36414 | -0,96133 | -0,27268 |
| 19 | 4427920383700574337 | -4284967216 | 492627913554576947 | 8 | 2287,73644 | 1,14000E-8 | 2287,73543 | 267,45245 | 28,855 | -18,07289 | 5,7359 | 0,0484 | 1,564 | 1,4415 | 0,8896 | 10,648 | 1,037859E6 | 635,36414 | -0,96133 | -0,27268 |
| 20 | 4427920383700574337 | -4284967216 | 492627913554576948 | 8 | 2287,73649 | 1,14000E-8 | 2287,73548 | 267,45246 | 28,855 | -18,07289 | 5,7359 | 0,0484 | 1,564 | 1,4414 | 0,8897 | 10,648 | 1,037859E6 | 635,36414 | -0,96133 | -0,27268 |
| 21 | 4427920383700574337 | -4284967216 | 492627913554576949 | 8 | 2287,73655 | 1,14000E-8 | 2287,73554 | 267,45246 | 28,855 | -18,07289 | 5,7359 | 0,0484 | 1,5641 | 1,4415 | 0,8896 | 10,648 | 1,037859E6 | 635,36414 | -0,96133 | -0,27268 |
| 22 | 4427920383700574337 | -4284967216 | 180161746280534311 | 8 | 1722,65699 | 1,14000E-8 | 1722,656 | 125,08268 | 26,4003 | 18,48469 | 7,7542 | -0,7292 | 1,5922 | 1,4094 | -0,889 | | | | 1,01421 | -0,06069 |
| 23 | 4427920383700574337 | -4284967216 | 180161746280534312 | 8 | 1722,65704 | 1,14000E-8 | 1722,65605 | 125,0827 | 26,4003 | 18,48469 | 7,7542 | -0,7292 | 1,5918 | 1,4089 | -0,8893 | | | | 1,01421 | -0,06069 |
| 24 | 4427920383700574337 | -4284967216 | 180161746280534313 | 8 | 1722,6571 | 1,14000E-8 | 1722,65611 | 125,08274 | 26,4003 | 18,48468 | 7,7542 | -0,7292 | 1,5925 | 1,4096 | -0,8891 | | | | 1,01421 | -0,06069 |
| 25 | 4427920383700574337 | -4284967216 | 180161746280534314 | 8 | 1722,65716 | 1,14000E-8 | 1722,65617 | 125,08276 | 26,4003 | 18,48468 | 7,7543 | -0,7292 | 1,5927 | 1,4098 | -0,8893 | | | | 1,01421 | -0,06069 |
| 26 | 4427920383700574337 | -4284967216 | 180161746280534315 | 8 | 1722,65722 | 1,14000E-8 | 1722,65623 | 125,08279 | 26,4003 | 18,48467 | 7,7543 | -0,7292 | 1,5922 | 1,4093 | -0,8893 | | | | 1,01421 | -0,06068 |
| 27 | 4427920383700574337 | -4284967216 | 180161746280534316 | 8 | 1722,65727 | 1,14000E-8 | 1722,65628 | 125,08282 | 26,4003 | 18,48467 | 7,7543 | -0,7292 | 1,5926 | 1,4097 | -0,8892 | | | | 1,01421 | -0,06068 |
| 28 | 4427920383700574337 | -4284967216 | 214606239457661242 | 8 | 1784,94811 | 1,14000E-8 | 1784,94712 | 150,98873 | 30,7323 | 13,05578 | 13,4967 | -0,8097 | 1,8934 | 0,9742 | 0,8298 | 10,1653 | 1,618952E6 | 11591,00538 | 0,52471 | 0,77959 |
| 29 | 4427920383700574337 | -4284967216 | 214606239457661244 | 8 | 1784,94822 | 1,14000E-8 | 1784,94723 | 150,98877 | 30,7323 | 13,05577 | 13,4967 | -0,8097 | 1,8943 | 0,9745 | 0,8301 | 10,1653 | 1,618952E6 | 11591,00538 | 0,5247 | 0,7796 |
| 30 | 4427920383700574337 | -4284967216 | 214606239457661245 | 8 | 1784,94828 | 1,14000E-8 | 1784,94729 | 150,98878 | 30,7323 | 13,05577 | 13,4967 | -0,8097 | 1,8953 | 0,9749 | 0,8302 | 10,1653 | 1,618952E6 | 11591,00538 | 0,5247 | 0,7796 |
| 31 | 4427920383700574337 | -4284967216 | 214606239457661246 | 8 | 1784,94834 | 1,14000E-8 | 1784,94734 | 150,9888 | 30,7323 | 13,05576 | 13,4967 | -0,8097 | 1,896 | 0,9753 | 0,8302 | 10,1653 | 1,618952E6 | 11591,00538 | 0,5247 | 0,7796 |
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| 33 | 4427920383700574337 | -4284967216 | 214606239457661248 | 8 | 1784,94845 | 1,14000E-8 | 1784,94746 | 150,98883 | 30,7323 | 13,05576 | 13,4967 | -0,8097 | 1,8971 | 0,9756 | 0,8305 | 10,1653 | 1,618952E6 | 11591,00538 | 0,5247 | 0,7796 |
| 34 | 4427920383700574337 | -4284967216 | 214606239457661249 | 8 | 1784,9485 | 1,14000E-8 | 1784,94751 | 150,98885 | 30,7323 | 13,05575 | 13,4967 | -0,8097 | 1,8973 | 0,9758 | 0,8304 | 10,1653 | 1,618952E6 | 11591,00538 | 0,5247 | 0,7796 |
| 35 | 4427920383700574337 | -4284967216 | 474351229243400871 | 8 | 2254,68365 | 1,14000E-8 | 2254,68264 | 260,32858 | 21,9269 | -18,23447 | 4,9324 | -0,2595 | 1,4144 | 1,6032 | -0,8884 | 11,1727 | 6,401130E5 | 810,9988 | -0,95965 | 0,25077 |
| 36 | 4427920383700574337 | -4284967216 | 474351229243400872 | 8 | 2254,6837 | 1,14000E-8 | 2254,68269 | 260,32859 | 21,9269 | -18,23447 | 4,9324 | -0,2595 | 1,4145 | 1,6035 | -0,8889 | 11,1727 | 6,401130E5 | 810,9988 | -0,95965 | 0,25077 |
| 37 | 4427920383700574337 | -4284967216 | 474351229243400873 | 8 | 2254,68376 | 1,14000E-8 | 2254,68275 | 260,32861 | 21,9269 | -18,23447 | 4,9324 | -0,2595 | 1,4154 | 1,6045 | -0,8888 | 11,1727 | 6,401130E5 | 810,9988 | -0,95965 | 0,25077 |
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| 39 | 4427920383700574337 | -4284967216 | 474351229243400875 | 8 | 2254,68387 | 1,14000E-8 | 2254,68286 | 260,32864 | 21,9269 | -18,23447 | 4,9324 | -0,2595 | 1,4158 | 1,605 | -0,8895 | 11,1727 | 6,401130E5 | 810,9988 | -0,95965 | 0,25077 |
| 40 | 4427920383700574337 | -4284967216 | 445927325322913812 | 8 | 2203,28056 | 1,14000E-8 | 2203,27955 | 241,91053 | 17,4786 | -16,41901 | 5,4681 | -0,783 | 1,6914 | 1,2916 | -0,8823 | 11,5304 | 4,604511E5 | 4158,63336 | -0,37158 | 0,84607 |
| 41 | 4427920383700574337 | -4284967216 | 445927325322913814 | 8 | 2203,28067 | 1,14000E-8 | 2203,27966 | 241,91058 | 17,4786 | -16,41902 | 5,4681 | -0,783 | 1,6915 | 1,2916 | -0,8826 | 11,5304 | 4,604511E5 | 4158,63336 | -0,37158 | 0,84607 |
| 42 | 4427920383700574337 | -4284967216 | 445927325322913815 | 8 | 2203,28073 | 1,14000E-8 | 2203,27972 | 241,9106 | 17,4786 | -16,41903 | 5,4681 | -0,783 | 1,6917 | 1,2917 | -0,8826 | 11,5304 | 4,604511E5 | 4158,63336 | -0,37158 | 0,84607 |
| 43 | 4427920383700574337 | -4284967216 | 445927325322913816 | 8 | 2203,28078 | 1,14000E-8 | 2203,27977 | 241,91062 | 17,4786 | -16,41903 | 5,4681 | -0,783 | 1,6915 | 1,2916 | -0,8826 | 11,5304 | 4,604511E5 | 4158,63336 | -0,37159 | 0,84607 |
| 44 | 4427920383700574337 | -4284967216 | 180259137628616452 | 8 | 1722,83313 | 1,14000E-8 | 1722,83213 | 125,17256 | 26,8562 | 18,46928 | 7,9042 | -0,7295 | 1,6077 | 1,401 | -0,8884 | | | | 1,01435 | -0,05789 |
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| 47 | 4427920383700574337 | -4284967216 | 199584604068623602 | 8 | 1757,78225 | 1,14000E-8 | 1757,78126 | 141,33582 | 30,6229 | 15,18396 | 11,6465 | -0,8249 | 1,1116 | 1,8123 | -0,8599 | 10,4809 | 1,210597E6 | 11328,19417 | 0,86163 | 0,47542 |
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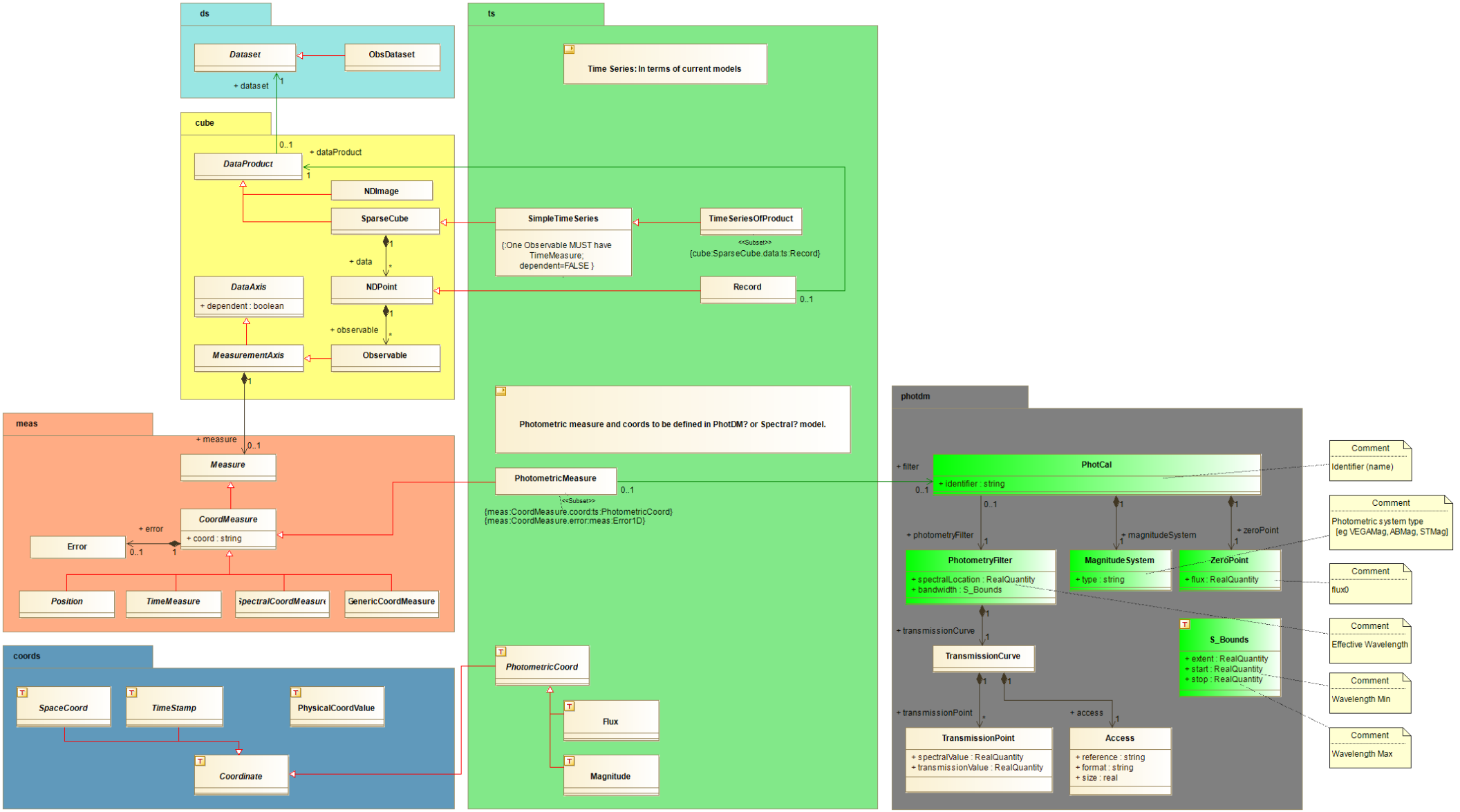
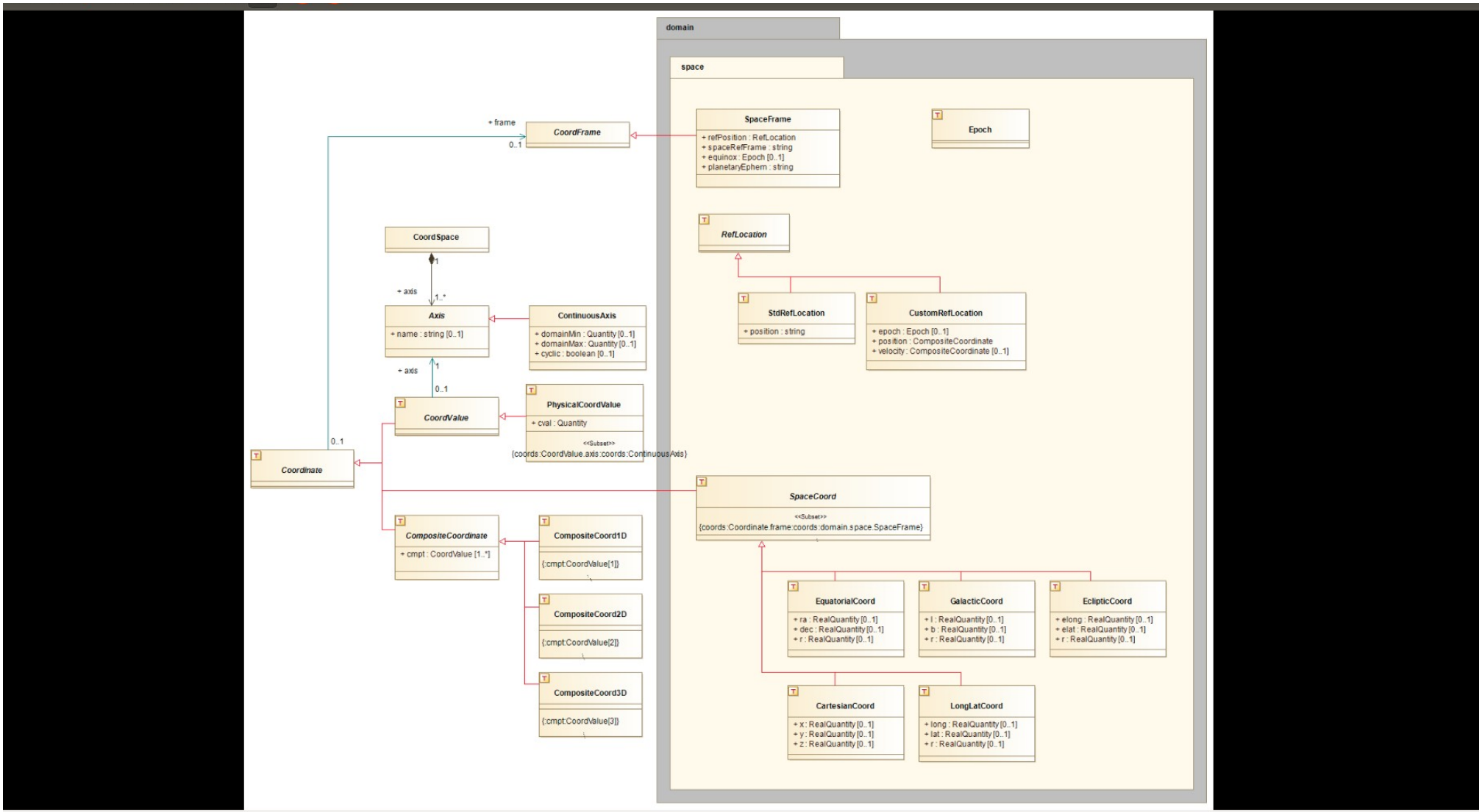
| 49 | 4427920383700574337 | -4284967216 | 199584604068623604 | 8 | 1757,78236 | 1,14000E-8 | 1757,78137 | 141,33586 | 30,6229 | 15,18395 | 11,6465 | -0,8249 | 1,1144 | 1,8163 | -0,8592 | 10,4809 | 1,210597E6 | 11328,19417 | 0,86163 | 0,47542 |
| 50 | 4427920383700574337 | -4284967216 | 199584604068623605 | 8 | 1757,78242 | 1,14000E-8 | 1757,78142 | 141,33588 | 30,6229 | 15,18395 | 11,6465 | -0,8249 | 1,1117 | 1,8126 | -0,86 | 10,4809 | 1,210597E6 | 11328,19417 | 0,86162 | 0,47542 |

# TimeSeries datamodel



# STC Coords spatial domain



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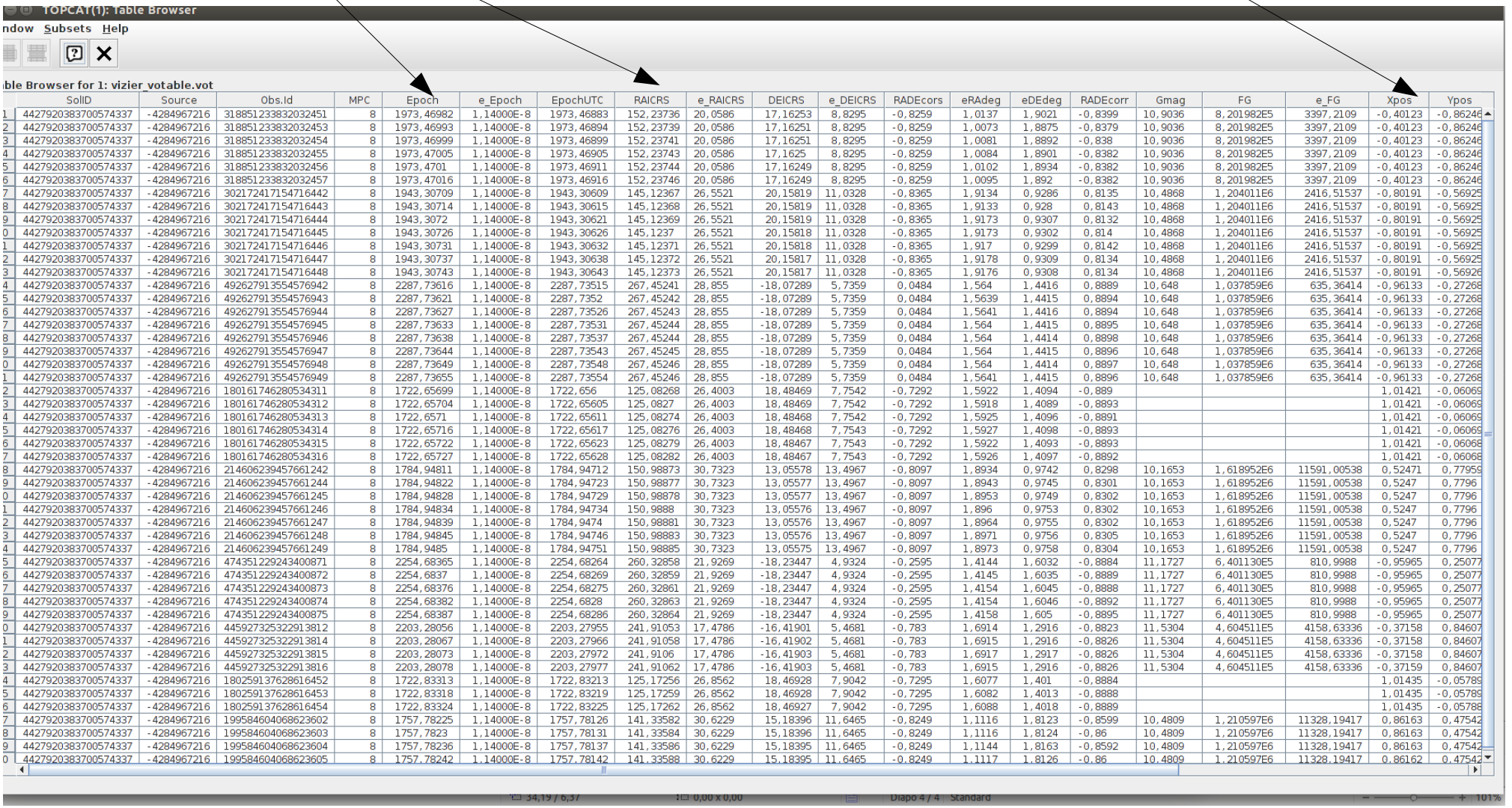


| | SolID | Source | Obs.Id | MPC | Epoch | e_Epoch | EpochUTC | RAICRS | e_RAICRS | DEICRS | e_DEICRS | RADEcors | eRAdeg | eDEdeg | RADEcorr | Gmag | FG | e_FG | Xpos | Ypos |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4427920383700574337 | -4284967216 | 318851233832032451 | 8 | 1973,46982 | 1,14000E-8 | 1973,46883 | 152,23736 | 20,0586 | 17,16253 | 8,8295 | -0,8259 | 1,0137 | 1,9021 | -0,8399 | 10,9036 | 8,201982E5 | 3397,2109 | -0,40123 | -0,86246 |
| 2 | 4427920383700574337 | -4284967216 | 318851233832032453 | 8 | 1973,46993 | 1,14000E-8 | 1973,46894 | 152,23739 | 20,0586 | 17,16251 | 8,8295 | -0,8259 | 1,0073 | 1,8875 | -0,8379 | 10,9036 | 8,201982E5 | 3397,2109 | -0,40123 | -0,86246 |
| 3 | 4427920383700574337 | -4284967216 | 318851233832032454 | 8 | 1973,46999 | 1,14000E-8 | 1973,46899 | 152,23741 | 20,0586 | 17,16251 | 8,8295 | -0,8259 | 1,0081 | 1,8892 | -0,838 | 10,9036 | 8,201982E5 | 3397,2109 | -0,40123 | -0,86246 |
| 4 | 4427920383700574337 | -4284967216 | 318851233832032455 | 8 | 1973,47005 | 1,14000E-8 | 1973,46905 | 152,23743 | 20,0586 | 17,1625 | 8,8295 | -0,8259 | 1,0084 | 1,8901 | -0,8382 | 10,9036 | 8,201982E5 | 3397,2109 | -0,40123 | -0,86246 |
| 5 | 4427920383700574337 | -4284967216 | 318851233832032456 | 8 | 1973,4701 | 1,14000E-8 | 1973,46911 | 152,23744 | 20,0586 | 17,16249 | 8,8295 | -0,8259 | 1,0102 | 1,8934 | -0,8382 | 10,9036 | 8,201982E5 | 3397,2109 | -0,40123 | -0,86246 |
| 6 | 4427920383700574337 | -4284967216 | 318851233832032457 | 8 | 1973,47016 | 1,14000E-8 | 1973,46916 | 152,23746 | 20,0586 | 17,16249 | 8,8295 | -0,8259 | 1,0095 | 1,892 | -0,8382 | 10,9036 | 8,201982E5 | 3397,2109 | -0,40123 | -0,86246 |
| 7 | 4427920383700574337 | -4284967216 | 302172417154716442 | 8 | 1943,30709 | 1,14000E-8 | 1943,30609 | 145,12367 | 26,5521 | 20,15819 | 11,0328 | -0,8365 | 1,9134 | 0,9286 | 0,8135 | 10,4868 | 1,204011E6 | 2416,51537 | -0,80191 | -0,56925 |
| 8 | 4427920383700574337 | -4284967216 | 302172417154716443 | 8 | 1943,30714 | 1,14000E-8 | 1943,30615 | 145,12368 | 26,5521 | 20,15819 | 11,0328 | -0,8365 | 1,9133 | 0,928 | 0,8143 | 10,4868 | 1,204011E6 | 2416,51537 | -0,80191 | -0,56925 |
| 9 | 4427920383700574337 | -4284967216 | 302172417154716444 | 8 | 1943,3072 | 1,14000E-8 | 1943,30621 | 145,12369 | 26,5521 | 20,15819 | 11,0328 | -0,8365 | 1,9173 | 0,9307 | 0,8132 | 10,4868 | 1,204011E6 | 2416,51537 | -0,80191 | -0,56925 |
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| 11 | 4427920383700574337 | -4284967216 | 302172417154716446 | 8 | 1943,30731 | 1,14000E-8 | 1943,30632 | 145,12371 | 26,5521 | 20,15818 | 11,0328 | -0,8365 | 1,917 | 0,9299 | 0,8142 | 10,4868 | 1,204011E6 | 2416,51537 | -0,80191 | -0,56925 |
| 12 | 4427920383700574337 | -4284967216 | 302172417154716447 | 8 | 1943,30737 | 1,14000E-8 | 1943,30638 | 145,12372 | 26,5521 | 20,15817 | 11,0328 | -0,8365 | 1,9178 | 0,9309 | 0,8134 | 10,4868 | 1,204011E6 | 2416,51537 | -0,80191 | -0,56925 |
| 13 | 4427920383700574337 | -4284967216 | 302172417154716448 | 8 | 1943,30743 | 1,14000E-8 | 1943,30643 | 145,12373 | 26,5521 | 20,15817 | 11,0328 | -0,8365 | 1,9176 | 0,9308 | 0,8134 | 10,4868 | 1,204011E6 | 2416,51537 | -0,80191 | -0,56926 |
| 14 | 4427920383700574337 | -4284967216 | 49262791355457694 2 | 8 | 2287,73616 | 1,14000E-8 | 2287,73515 | 267,45241 | 28,855 | -18,07289 | 5,7359 | 0,0484 | 1,564 | 1,4416 | 0,8889 | 10,648 | 1,037859E6 | 635,36414 | -0,96133 | -0,27268 |
| 15 | 4427920383700574337 | -4284967216 | 49262791355457694 3 | 8 | 2287,73621 | 1,14000E-8 | 2287,7352 | 267,45242 | 28,855 | -18,07289 | 5,7359 | 0,0484 | 1,5639 | 1,4415 | 0,8894 | 10,648 | 1,037859E6 | 635,36414 | -0,96133 | -0,27268 |
| 16 | 4427920383700574337 | -4284967216 | 49262791355457694 4 | 8 | 2287,73627 | 1,14000E-8 | 2287,73526 | 267,45243 | 28,855 | -18,07289 | 5,7359 | 0,0484 | 1,5641 | 1,4416 | 0,8894 | 10,648 | 1,037859E6 | 635,36414 | -0,96133 | -0,27268 |
| 17 | 4427920383700574337 | -4284967216 | 49262791355457694 5 | 8 | 2287,73633 | 1,14000E-8 | 2287,73531 | 267,45244 | 28,855 | -18,07289 | 5,7359 | 0,0484 | 1,564 | 1,4415 | 0,8895 | 10,648 | 1,037859E6 | 635,36414 | -0,96133 | -0,27268 |
| 18 | 4427920383700574337 | -4284967216 | 49262791355457694 6 | 8 | 2287,73638 | 1,14000E-8 | 2287,73537 | 267,45244 | 28,855 | -18,07289 | 5,7359 | 0,0484 | 1,564 | 1,4414 | 0,8898 | 10,648 | 1,037859E6 | 635,36414 | -0,96133 | -0,27268 |
| 19 | 4427920383700574337 | -4284967216 | 49262791355457694 7 | 8 | 2287,73644 | 1,14000E-8 | 2287,73543 | 267,45245 | 28,855 | -18,07289 | 5,7359 | 0,0484 | 1,564 | 1,4415 | 0,8896 | 10,648 | 1,037859E6 | 635,36414 | -0,96133 | -0,27268 |
| 20 | 4427920383700574337 | -4284967216 | 49262791355457694 8 | 8 | 2287,73649 | 1,14000E-8 | 2287,73548 | 267,45246 | 28,855 | -18,07289 | 5,7359 | 0,0484 | 1,564 | 1,4414 | 0,8897 | 10,648 | 1,037859E6 | 635,36414 | -0,96133 | -0,27268 |
| 21 | 4427920383700574337 | -4284967216 | 49262791355457694 9 | 8 | 2287,73655 | 1,14000E-8 | 2287,73554 | 267,45246 | 28,855 | -18,07289 | 5,7359 | 0,0484 | 1,5641 | 1,4415 | 0,8896 | 10,648 | 1,037859E6 | 635,36414 | -0,96133 | -0,27268 |
| 22 | 4427920383700574337 | -4284967216 | 18016174628053431 1 | 8 | 1722,65699 | 1,14000E-8 | 1722,656 | 125,08268 | 26,4003 | 18,48469 | 7,7542 | -0,7292 | 1,5922 | 1,4094 | -0,889 | | | | 1,01421 | -0,06069 |
| 23 | 4427920383700574337 | -4284967216 | 18016174628053431 2 | 8 | 1722,65704 | 1,14000E-8 | 1722,65605 | 125,0827 | 26,4003 | 18,48469 | 7,7542 | -0,7292 | 1,5918 | 1,4089 | -0,8893 | | | | 1,01421 | -0,06069 |
| 24 | 4427920383700574337 | -4284967216 | 18016174628053431 3 | 8 | 1722,6571 | 1,14000E-8 | 1722,65611 | 125,08274 | 26,4003 | 18,48468 | 7,7542 | -0,7292 | 1,5925 | 1,4096 | -0,8891 | | | | 1,01421 | -0,06069 |
| 25 | 4427920383700574337 | -4284967216 | 18016174628053431 4 | 8 | 1722,65716 | 1,14000E-8 | 1722,65617 | 125,08276 | 26,4003 | 18,48468 | 7,7543 | -0,7292 | 1,5927 | 1,4098 | -0,8893 | | | | 1,01421 | -0,06069 |
| 26 | 4427920383700574337 | -4284967216 | 18016174628053431 5 | 8 | 1722,65722 | 1,14000E-8 | 1722,65623 | 125,08279 | 26,4003 | 18,48467 | 7,7543 | -0,7292 | 1,5922 | 1,4093 | -0,8893 | | | | 1,01421 | -0,06068 |
| 27 | 4427920383700574337 | -4284967216 | 18016174628053431 6 | 8 | 1722,65727 | 1,14000E-8 | 1722,65628 | 125,08282 | 26,4003 | 18,48467 | 7,7543 | -0,7292 | 1,5926 | 1,4097 | -0,8892 | | | | 1,01421 | -0,06068 |
| 28 | 4427920383700574337 | -4284967216 | 21460623945766124 2 | 8 | 1784,94811 | 1,14000E-8 | 1784,94712 | 150,98873 | 30,7323 | 13,05578 | 13,4967 | -0,8097 | 1,8934 | 0,9742 | 0,8298 | 10,1653 | 1,618952E6 | 11591,00538 | 0,52471 | 0,77959 |
| 29 | 4427920383700574337 | -4284967216 | 21460623945766124 4 | 8 | 1784,94822 | 1,14000E-8 | 1784,94723 | 150,98877 | 30,7323 | 13,05577 | 13,4967 | -0,8097 | 1,8943 | 0,9745 | 0,8301 | 10,1653 | 1,618952E6 | 11591,00538 | 0,5247 | 0,7796 |
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| 31 | 4427920383700574337 | -4284967216 | 21460623945766124 6 | 8 | 1784,94834 | 1,14000E-8 | 1784,94734 | 150,9888 | 30,7323 | 13,05576 | 13,4967 | -0,8097 | 1,896 | 0,9753 | 0,8302 | 10,1653 | 1,618952E6 | 11591,00538 | 0,5247 | 0,7796 |
| 32 | 4427920383700574337 | -4284967216 | 21460623945766124 7 | 8 | 1784,94839 | 1,14000E-8 | 1784,9474 | 150,98881 | 30,7323 | 13,05576 | 13,4967 | -0,8097 | 1,8964 | 0,9755 | 0,8302 | 10,1653 | 1,618952E6 | 11591,00538 | 0,5247 | 0,7796 |
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| 35 | 4427920383700574337 | -4284967216 | 4743512292434008 71 | 8 | 2254,68365 | 1,14000E-8 | 2254,68264 | 260,32858 | 21,9269 | -18,23447 | 4,9324 | -0,2595 | 1,4144 | 1,6032 | -0,8884 | 11,1727 | 6,401130E5 | 810,9988 | -0,95965 | 0,25077 |
| 36 | 4427920383700574337 | -4284967216 | 4743512292434008 72 | 8 | 2254,6837 | 1,14000E-8 | 2254,68269 | 260,32859 | 21,9269 | -18,23447 | 4,9324 | -0,2595 | 1,4145 | 1,6035 | -0,8889 | 11,1727 | 6,401130E5 | 810,9988 | -0,95965 | 0,25077 |
| 37 | 4427920383700574337 | -4284967216 | 4743512292434008 73 | 8 | 2254,68376 | 1,14000E-8 | 2254,68275 | 260,32861 | 21,9269 | -18,23447 | 4,9324 | -0,2595 | 1,4154 | 1,6045 | -0,8888 | 11,1727 | 6,401130E5 | 810,9988 | -0,95965 | 0,25077 |
| 38 | 4427920383700574337 | -4284967216 | 4743512292434008 74 | 8 | 2254,68382 | 1,14000E-8 | 2254,6828 | 260,32863 | 21,9269 | -18,23447 | 4,9324 | -0,2595 | 1,4154 | 1,6046 | -0,8892 | 11,1727 | 6,401130E5 | 810,9988 | -0,95965 | 0,25077 |
| 39 | 4427920383700574337 | -4284967216 | 4743512292434008 75 | 8 | 2254,68387 | 1,14000E-8 | 2254,68286 | 260,32864 | 21,9269 | -18,23447 | 4,9324 | -0,2595 | 1,4158 | 1,605 | -0,8895 | 11,1727 | 6,401130E5 | 810,9988 | -0,95965 | 0,25077 |
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| 41 | 4427920383700574337 | -4284967216 | 4459273252291381 4 | 8 | 2203,28067 | 1,14000E-8 | 2203,27966 | 241,91058 | 17,4786 | -16,41902 | 5,4681 | -0,783 | 1,6915 | 1,2916 | -0,8826 | 11,5304 | 4,604511E5 | 4158,63336 | -0,37158 | 0,84607 |
| 42 | 4427920383700574337 | -4284967216 | 4459273252291381 5 | 8 | 2203,28073 | 1,14000E-8 | 2203,27972 | 241,9106 | 17,4786 | -16,41903 | 5,4681 | -0,783 | 1,6917 | 1,2917 | -0,8826 | 11,5304 | 4,604511E5 | 4158,63336 | -0,37158 | 0,84607 |
| 43 | 4427920383700574337 | -4284967216 | 4459273252291381 6 | 8 | 2203,28078 | 1,14000E-8 | 2203,27977 | 241,91062 | 17,4786 | -16,41903 | 5,4681 | -0,783 | 1,6915 | 1,2916 | -0,8826 | 11,5304 | 4,604511E5 | 4158,63336 | -0,37159 | 0,84607 |
| 44 | 4427920383700574337 | -4284967216 | 1802591376286164 52 | 8 | 1722,83313 | 1,14000E-8 | 1722,83213 | 125,17256 | 26,8562 | 18,46928 | 7,9042 | -0,7295 | 1,6077 | 1,401 | -0,8884 | | | | 1,01435 | -0,05789 |
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| 47 | 4427920383700574337 | -4284967216 | 1995846040686236 02 | 8 | 1757,78225 | 1,14000E-8 | 1757,78126 | 141,33582 | 30,6229 | 15,18396 | 11,6465 | -0,8249 | 1,1116 | 1,8123 | -0,8599 | 10,4809 | 1,210597E6 | 11328,19417 | 0,86163 | 0,47542 |
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Proposed utypes derived from the TimeSeries datamodel and from STC

# Excerpt of a VOSI tableset (Tap schema like) for an instance template
# Annotating FIELDS of the template with the datamodel


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# Utypes stored in a structured xml document