Use Cases for dataproduct-type

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New dataproduct_type use cases

- In the context of DataLink 1.1, if the link is towards a dataproduct we can use the content_qualifier term to specify the type of this dataproduct

- Can be timeseries, spectra

  - Light curve and velocity curves are TimeSeries.

  - One is mapping flux, the other one radial velocity

  - For double stars or exoplanets the analysis software will be very different

  - And last but not least we want the user to be able to read a standard definition of the type.

- In the radio domain can be images, but also …

New dataproduct_type use cases

- In the radio domain, an be images, but also ….

  - … velocity fields, dispersion maps, etc. may be obtained from spectral cubes as moment 0, 1, 2, etc.

  - Is that still images ? No → need specific terms

  - Again you may inform the user with a correct definition about the nature of the dataproduct

  - An then wou will not apply the same software on velocity fields (find rotation curves) and images (segmentation)

Proposed new terms

- « Velocity curve » and « light curve » as children of « timeseries »

- « velocity field » as a sibling of « image »

Dataproduct-type as SKOS vocabulary

- Hierarchical organization of dataproduct types is not enough

- SKOS proposal allows some datatype to have several « parents ». (Spectrum and TimeSeries for dynamical spectra

- Useful for selection of datasets in ObsTAP/SIA. We can select on narrow terms or on parents according to the science case.

- Useful to prepare client in DataLink context (new content_qualifier term)

- Behind these relationship are properties of dataproduct

Dataproduct-type as SKOS vocabulary

- In the new proposed we have two different type of properties

  - Which sampled data axes are independent?

  - Which sampled data axes are dependent (= observable) ?

- New term DynamicSpectra have time (TimeSeries) and spectral (spectrum) axes sampled and independent.

  - Other properties not relevant today

    - Which independent axes are sparsed and which are regular

    - Table or bitmap organization

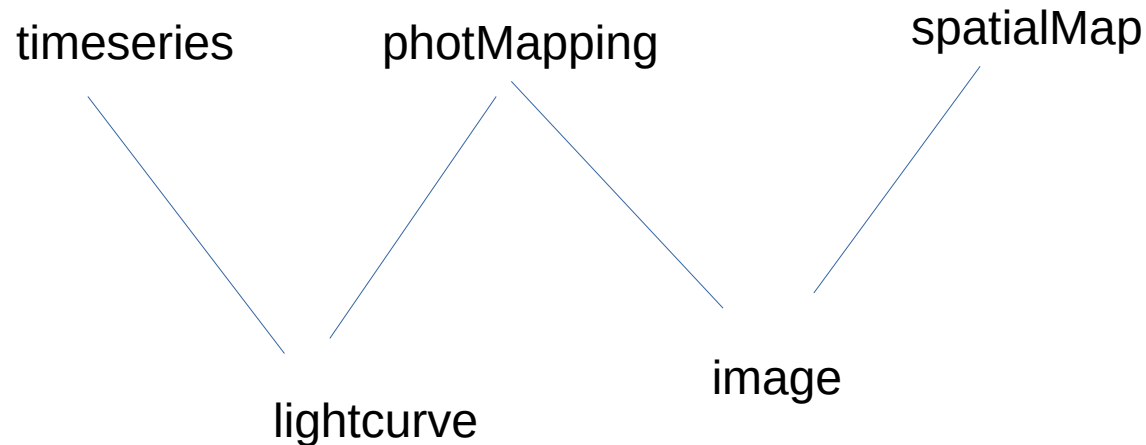- New terms for « velocity » and « Photometric » observables ?

Dataproduct-type as SKOS vocabulary

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- « photMapping » and « VelocityMapping »

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- New term for spatial maps (reserve image for fluxes)

- « photMapping », « VelocityMapping » and « spatialMap »

timeseries   photMapping   spatialMap

lightcurve   image

Dataproduct-type as SKOS vocabulary

- New terms for « velocity » and « Photometric » observables ?

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timeseries   velocityMapping   spatialMap

velocityField

velocitycurve