Light Curves and TAP

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Aim

- SVO proposal of a data model for defining a TAP service for Light Curves.
- Experience at SVO Scientific Data Center:
  - OMC Archive
  - COROT Public Archive
- How should a Light Curve TAP access look like?
- What is expected to have in
  - TAP_SCHEMA.tables
  - TAP_SCHEMA.columns

  for Light Curves?

Data Model Overview

- Light Curve DM: based upon Spectral Data Model and SSA Model
- Needed Data Elements inferred from the OMC and CORoT archive interfaces

LightCurve

Target

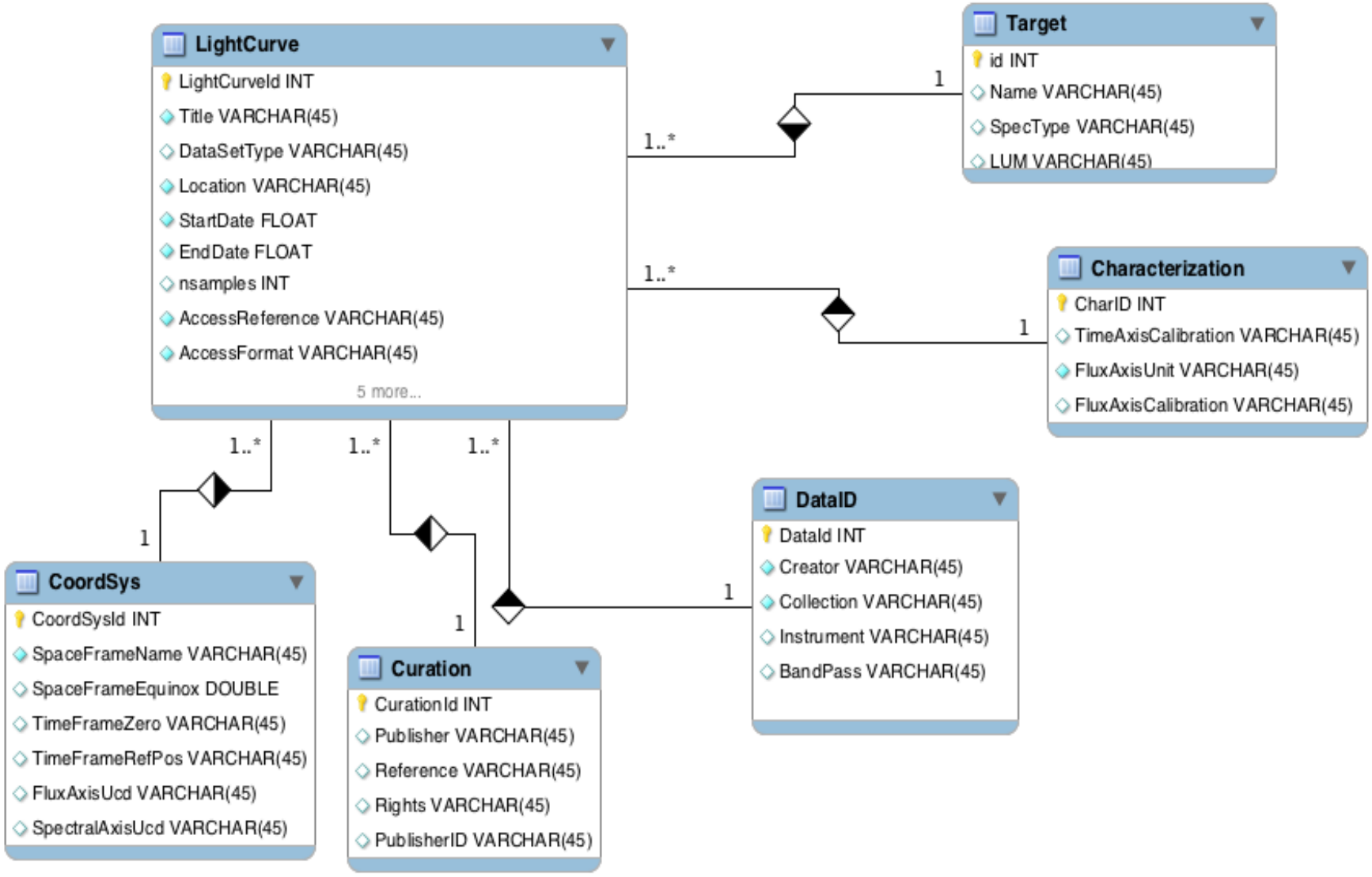
CoordSys

Curation

DataID

Characterization

E-R: Logic View



TAP_SCHEMA.tables

schema_name	table_name	table_type	description
TAP_SCHEMA	LightCurve	view	Def nes a Light Curve
	Target	view	Info and data from the Target
	DataID	view	DataSet Identif cation Metadata
	Characterization	view	Characterization Metadata
	CoordSys	view	CoordinateSystemCharacterization
	Curation	view	Data publisher identif cation

TAP_SCHEMA.columns

table_name	column_name	description	unit	ucd	utype	datatype
LightCurve	Title	Dataset title	unitless	meta.id	DataID.Title	varchar
	DatsetType	Dataset type: timeseries	unitless	meta.id;clss	Observation.DataProductType	varchar
	Location	Observed position	deg	pos.eq	Char.SpatialAxis.Coverage.Location.Value	float
	StartDate	Start time	d	time.start	Char.Time.Axis.Coverage.Bounds.Start	float
	EndDate	StopTime	d	time.stop	Char.Time.Axis.Coverage.Bounds.Stop	float
	nsamples	Number of samples	unitless	meta.number	Dataset.Length	int
	AccessReference	URI (URL) to access the dataset	unitless	meta.ref.url	Access.Reference	varchar
	AccessFormat	MIME type of dataset	unitless	meta.code.mime	Access.Format	varchar

ObsCore + TAP

- VO Interface to allow data providers to simply describe their observation metadata stored in DBMS systems and provide query mechanism for users to discover, then retrieve the data products.
- TAP: appropriate implementation layer.
- Timeseries.LightCurves discovering.

table_name	column_name	data_type	units	utype
ivoa.ObsCore	dataproduct_type	adql:VARCHAR	NULL	Observation.DataProductType **timeseries.LightCurve**

Future Work

- Include the Photometry Model (CoordSys.Band.*) as of *Time Series Data in the VO Note (2010-12-02)*
- TAP Service based upon the modelled Light Curves for COROT and OMC.

Thanks