

Photometry Data Model v1.1

MIVOT serialization

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Mivot serialisation for PhotDM, M.Louys, DM WG, IVOA interop Oct 2022



□ PhotDM version 1.1

- became an IVOA recommendation this week (2022, Oct18th)
- is a revision of PhotDM version 1.0 with VODML definition
- preserves most classes and attributes
- uses simple value attributes

Proposed recommendation :

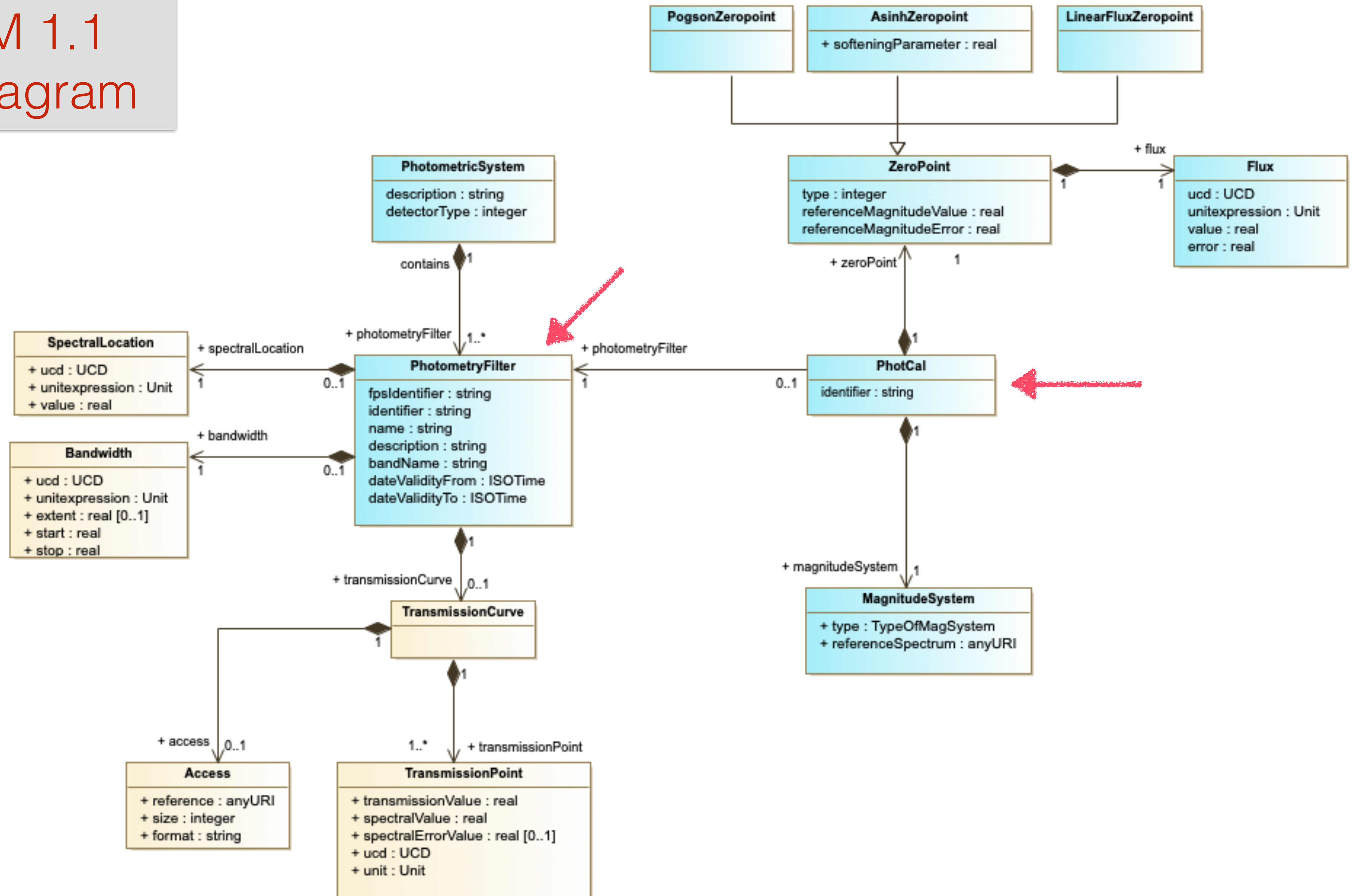
<https://ivoa.net/documents/PHOTDM/20221007/index.html>

Linked documents

- VODML xml document : <https://ivoa.net/xml/VODML/Phot-v1.1.vodml.xml>
- Data model html documentation :
 - ▶ https://wiki.ivoa.net/internal/IVOA/PhotDM11RFC/Photv1_1_PR_20220520.html



PhotDM 1.1 Class diagram



□ Serialisation of Photometry Objects

- Metadata for Photometric Calibration **PhotCal +PhotometryFilter** classes
 - exemple in the spec :appendix D.3.1 Photometric calibration: example 1
 - ▶ file in GitHub : <https://github.com/ivoa-std/PhotDM/blob/master/serializations/photdm.2MASS.2MASS.Ks.xml>
 - ▶ the set of 2MASS filters gathered as a PhotometricSystem Object :
 - ▶ https://github.com/ivoa-std/PhotDM/blob/master/serializations/2MASS_PhotSys.xml
 - exemple: XMM filters , seen as a rectangular filter profile within the bandwidth.
 - ▶ <https://github.com/ivoa-std/PhotDM/blob/master/serializations/photdm.XMMSL2.XMMSL2.EB6.xml>



□ Filter profile service output

- The SVO Filter profile service initially supported the PhotDM version 1.0 specification
- A wrapper to annotate SVO fps query response using the MIVOT PhotDM1.1 description is proposed as a prototype here :
 - ▶ https://github.com/ivoa/modelinstanceinvot-code/tree/package/photdm_builder
- This can be an alternative way to use SVO Filter data while the upgrade to PhotDM1.1 will be achieved.



□ PhotDM classes as building blocks

- Photometry classes from PhotDM 1.1, as well as Coords and Measurement data model classes can be serialized as data model components within the MANGO data model (work in progress).
- With the MIVOT syntax, the descriptions of the various metadata components can be provided, on top of a TAP query response, for instance.
 - see ‘On the fly annotation of TAP responses’ presented at ADASS conference in 2021
 - <https://wiki.ivoa.net/internal/IVOA/TapandTheDMs/B3-001-Part-MANGO-annotation-prototype-MLouys.pdf>





**Thanks for your
attention**

Comments ? Questions ?

