VOSpec and photometry

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Introduction

- Task to include photometry data in VO context

- This is an old and recurrent request of astrophysical community. One of the main topics raised during community workshops. One of the topics raised by the IVOA Take-up Committee

- First task, creation of a simple data model that add the missing boxes to handle photometry into VO (See Salgado talk at DM)

- Creation of servers providing photometric data and giving access to photometry filter details. Two partners on this task: SVO & CDS (see DM session and also S. Derriere presentation at Apps2)

- Modification of a SSA client (VOSpec v6.5b3) to consume these services as a probe of concept and extensible to operational use

- Content of this presentation is more on how we are doing it than in what we are doing it!

Photometry use case I:
Synthetic Photometry
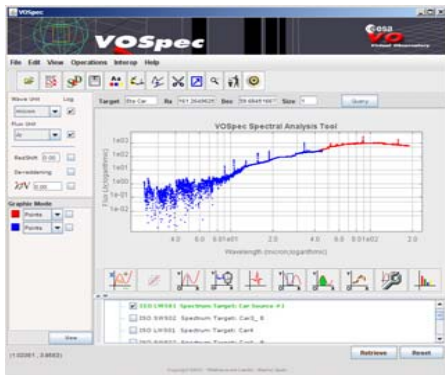
**Give me list of registered Filters
(possible constrained by wavelength range)**

Response, VOTable (VOResource?)

Show filters so user can select

Give Details for a certain filter list

**Response, VOTable (VOResource?)
Including link to Transmission curve**

**Use filter
Details to create synthetic photometry points using real/model
spectra as input**

**FILTER
PROFILE
SERVICE
(SVO)**
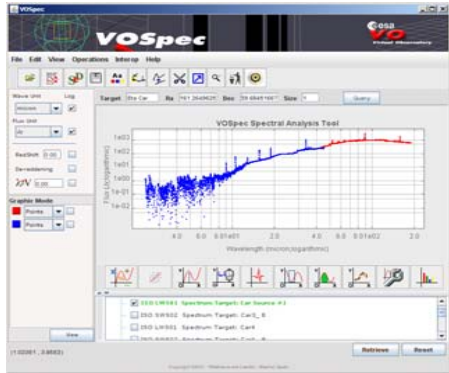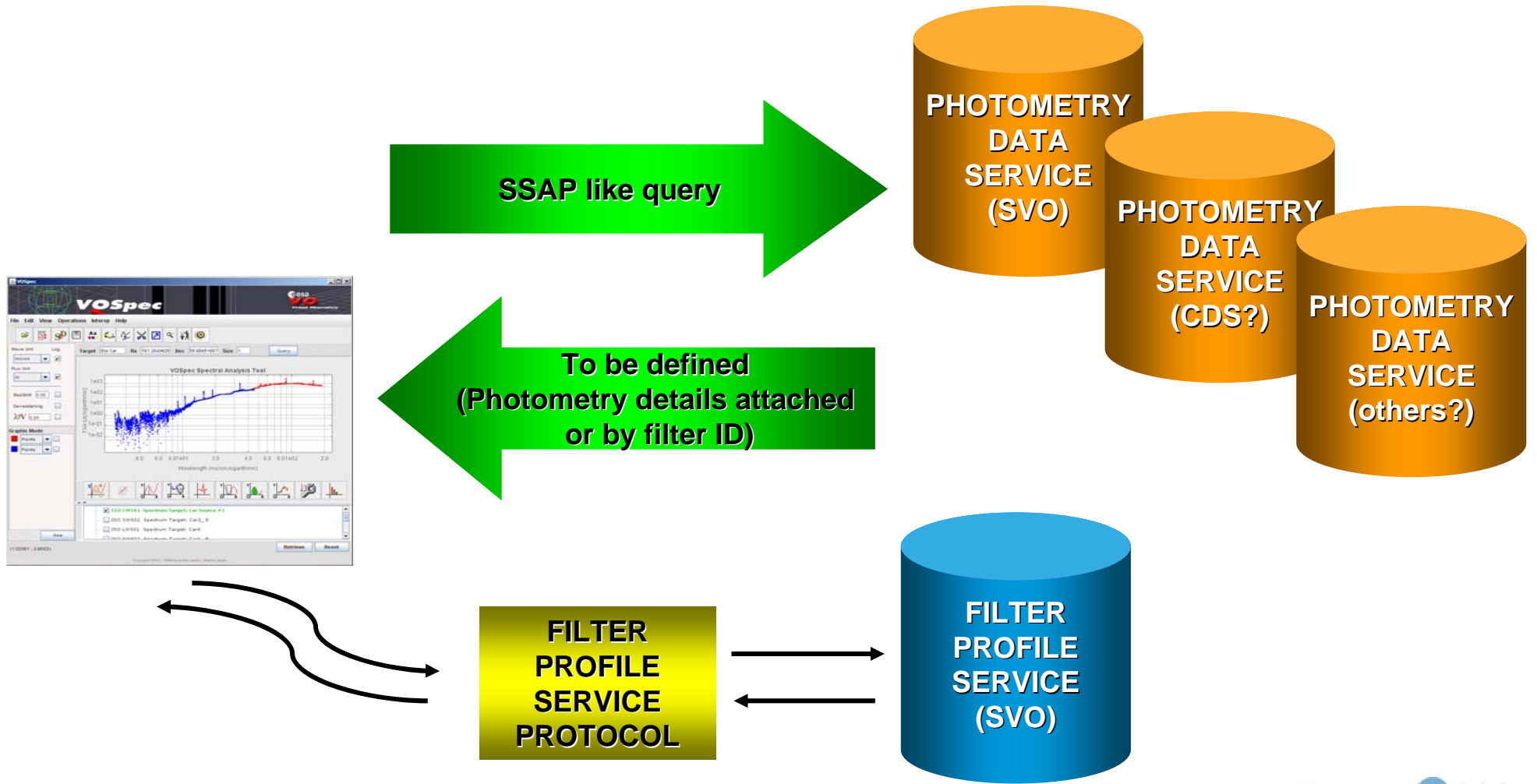
**FILTER
PROFILE
SERVICE
PROTOCOL**

VOSpec and Filter Profile Service: Synthetic photometry

DEMO1

Photometry use case II: Photometry Data Services

SSAP like query

To be defined
(Photometry details attached
or by filter ID)

PHOTOMETRY
DATA
SERVICE
(SVO)

PHOTOMETRY
DATA
SERVICE
(CDS?)

PHOTOMETRY
DATA
SERVICE
(others?)

FILTER
PROFILE
SERVICE
PROTOCOL

FILTER
PROFILE
SERVICE
(SVO)

Photometry use case II: Photometry Data Services

Cone Search like query

VOTable + Groups

PHOTOMETRY DATA SERVICE (CDS)

FILTER PROFILE SERVICE PROTOCOL

FILTER PROFILE SERVICE (SVO)
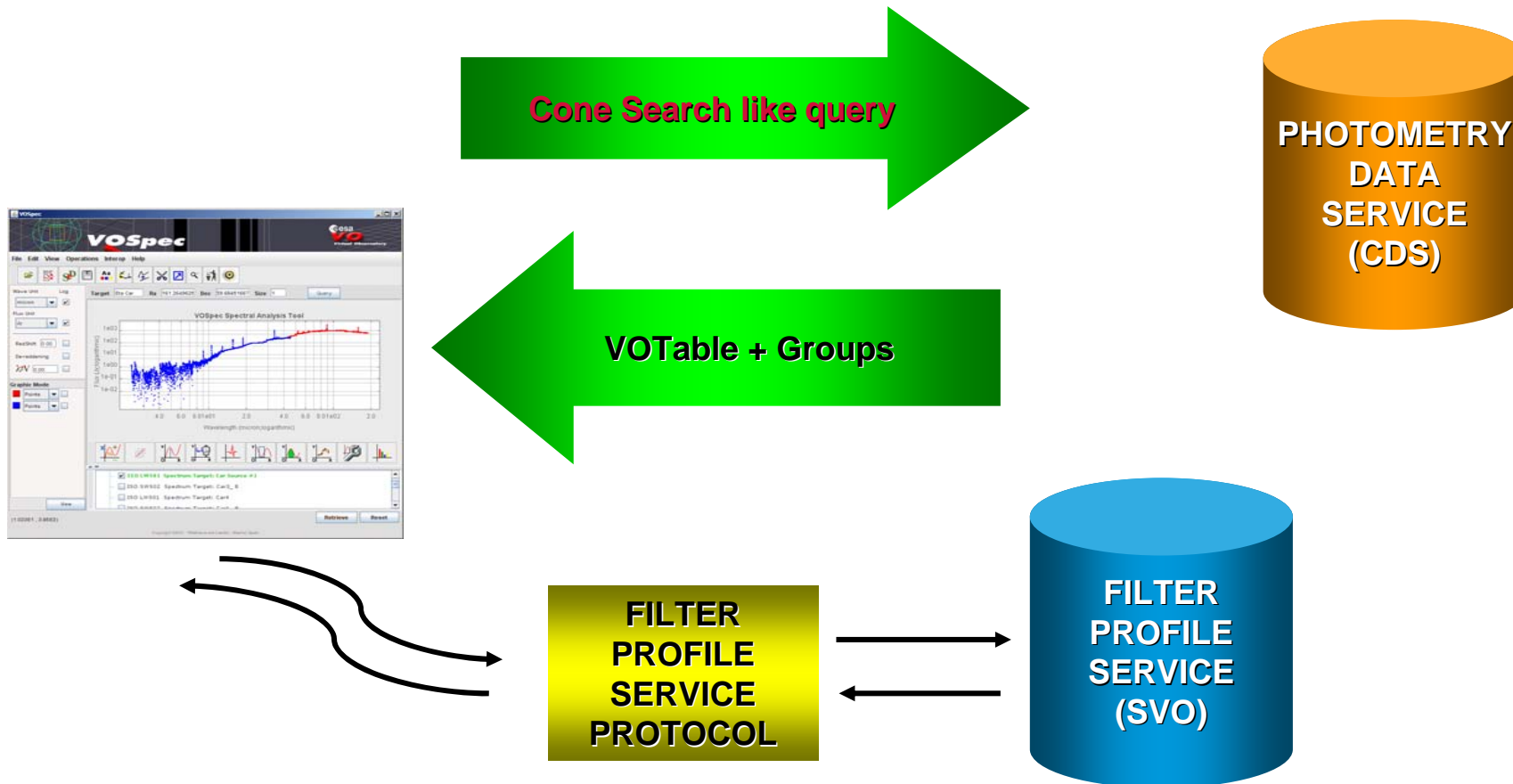
Cone search approach and note

- As part of EuroVO-ICE activities, a note on how to add photometry characterization in groups in a VOTable output of a catalog query response

- These groups, including the relevant utypes of the Photometry DM WD are used in VOSpec to handle the photometric information

- More than 200 catalogs are being adapted in Vizier to include this information (acknowledge to F. Ochsenbein and S. Derriere) (ASU syntax for queries)

- Some of them have been already included in VOSpec. Server selector to be modified to handle properly so many catalogs

- UGC2826_2MASS_phot.xml

- UGC2826_NVSS_phot.xml

VOSpec and Catalogs

DEMO2

Conclusions

- The access to photometric data was an old requirement from the community

- Main source of photometry comes from catalogs

- Combination of a specific Photometry DM, the already existing Spectrum DM, and DAL protocols can make this a reality

- 3 DAL protocols possible candidates: Cone Search with a relevant extension, SSAP and, possible in the future, TAP using that extension

- A new capability (photometry) has been presented to DAL on a note (S. Derriere et al) and explored on the server and client sides

- For the first time, we are trying to access photometric data in a agreed IVOA environment and a specific standard can now be developed in this line

THANK YOU

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