Virtual Observatory
Paris Data Centre

Europlanet Research Infrastructure
IDIS Integrated and Distributed Information System
Planetary Dynamics and Extraterrestrial Matter

The Europlanet VO environment

http://voparis-europlanet.obspm.fr/

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EPN-TAP

USERS

COMPUTERS

REC

InProgress

USER LAYER

Browser Based Apps | Desktop Apps | Script Based Apps

USING

Resource Metadata

VOResource

REGISTR

UCD

Semantics

VO Query Languages

STC

Utypes

Units

epn-core

VO CORE

Data Models

DATA ACCESS

Tap

PROTOCOLS

TAP RegExt

VOSI

Formats

Resource Identifier

VOTable

SHARING

Data and Metadata Collection

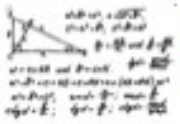
Storage

Computation

RESOURCE LAYER

20101004
IVOA Architecture

PROVIDERS



Basics

DAL is based on TAP using DaCHS
DM Core is called epn-core
Close to obs-core with 19 mandatory parameters:

- Resource Type
- Data Product Type
- Target Name
- Target Class
- Time min/max
- Time Sampling Step
- Exposure Time
- Spectral Range
- Spectral Sampling Step
- Spectral Resolution
- Spatial Coordinates (c1,c2,c3)
- Spatial Resolution
- Spatial Frame Type
- Incidence Angle
- Emergence Angle
- Phase Angle
- Instrument Host Name
- Instrument Name
- Measurement Type

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VO client

- Queries the VO registry (uses VO-Paris registry)

  As TAP Regext is not yet implemented:
  Select TAP service where id contain “epn_%”
  Find schema using shortname in VOResource

- Uses all EPN set of parameters to make standardized query

- Python application (Django)

- Parallel AJAX query to multiple resources (“Query all VO” button)

- Web SAMP Profile (samp.js)

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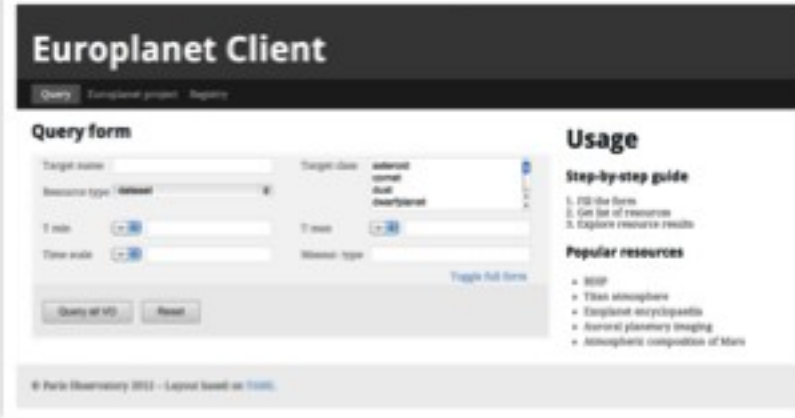
VO client

1.



2.

3.

VO Registry

VOTable
SAMP
HTML

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Planetary file format

- No standard such as astronomical FITS => use of PDS + ASCII files

- Need converter to use VO client

not easy to read PDS => use of IDL library

- Need to convert to OGC compatible format GEOTIFF

Use of UWS service/client

- A way to use IDL/GDL from a separate program
- Use of interface done for UWS 1.0 and the associated infrastructure
- Use of generic client to access, submit job and send results to Aladin

JAVA UWS Client available at http://vo-web.obspm.fr/tool.php

Service description

Use of WADL Web Application Description Language

Describe method (always the same per UWS1.0)
Describe Input/Output parameters in a simple way
Example at http://voparis-uws.obspm.fr/wadl-v1.0/
For transforming PDS images to FITS with WCS

Entry parameters are defined like:

```
<param style="query" name="pds" type="xs:anyURI" required="true">
<doc>PDS file (IMG extension)</doc>
</param>
<param style="query" name="geo" type="xs:anyURI" required="true">
<doc>PDS file (GEO extension)</doc>
</param>
```

Output parameters like:

```
<option value="0" mediaType="image/fits"/>
```

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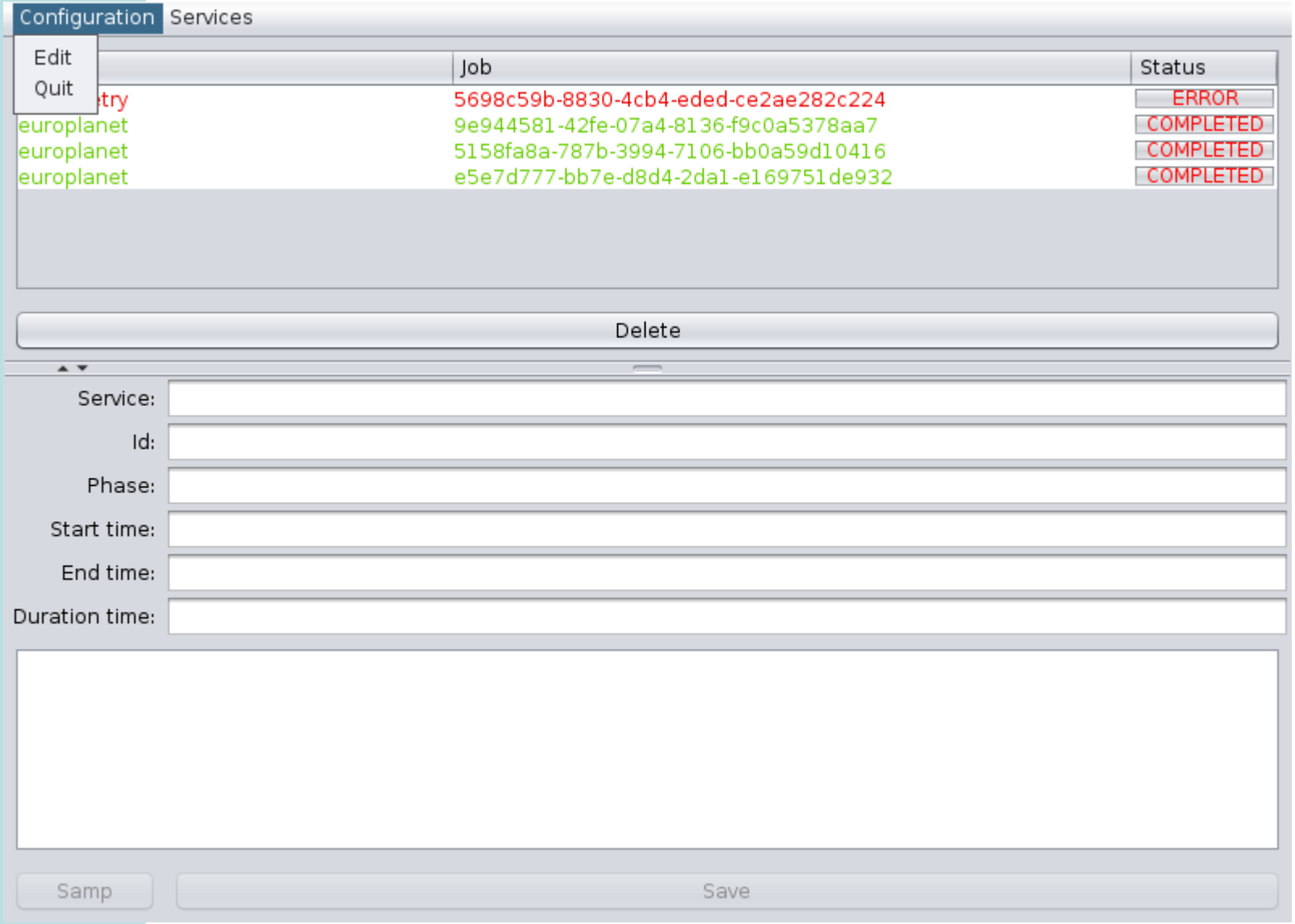
UWS client by R. Haigron

Work on java 7.

Ask R. Haigron for the jar, code can be shared



UWS client by R. Haigron

Configuration:

- Provide the WADL description of your services
- Provide your favourite VO SAMP-compatible application to display the data

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UWS cl

(*) pds ine/datasource/AMI_EAE1_002820_00039_00035.IMG Browse

(*) geo ne/datasource/AMI_EAE2_002820_00039_00035.GEO Browse

Create Joblist

Configuration Services

Service	Job	Status
astrometry	5698c59b-8830-4cb4-eded-ce2ae282c224	ERROR
europlanet	9e944581-42fe-07a4-8136-f9c0a5378aa7	COMPLETED
europlanet	5158fa8a-787b-3994-7106-bb0a59d10416	COMPLETED
europlanet	e5e7d777-bb7e-d8d4-2da1-e169751de932	COMPLETED
europlanet	d81675d6-47fa-5414-19c8-ce6422036784	COMPLETED

Delete

Service: europlanet

Id: d81675d6-47fa-5414-19c8-ce6422036784

Phase: COMPLETED

Start time: 2012-10-10T16:41:30Z

End time:

Duration time: 2012-10-17T16:41:30Z

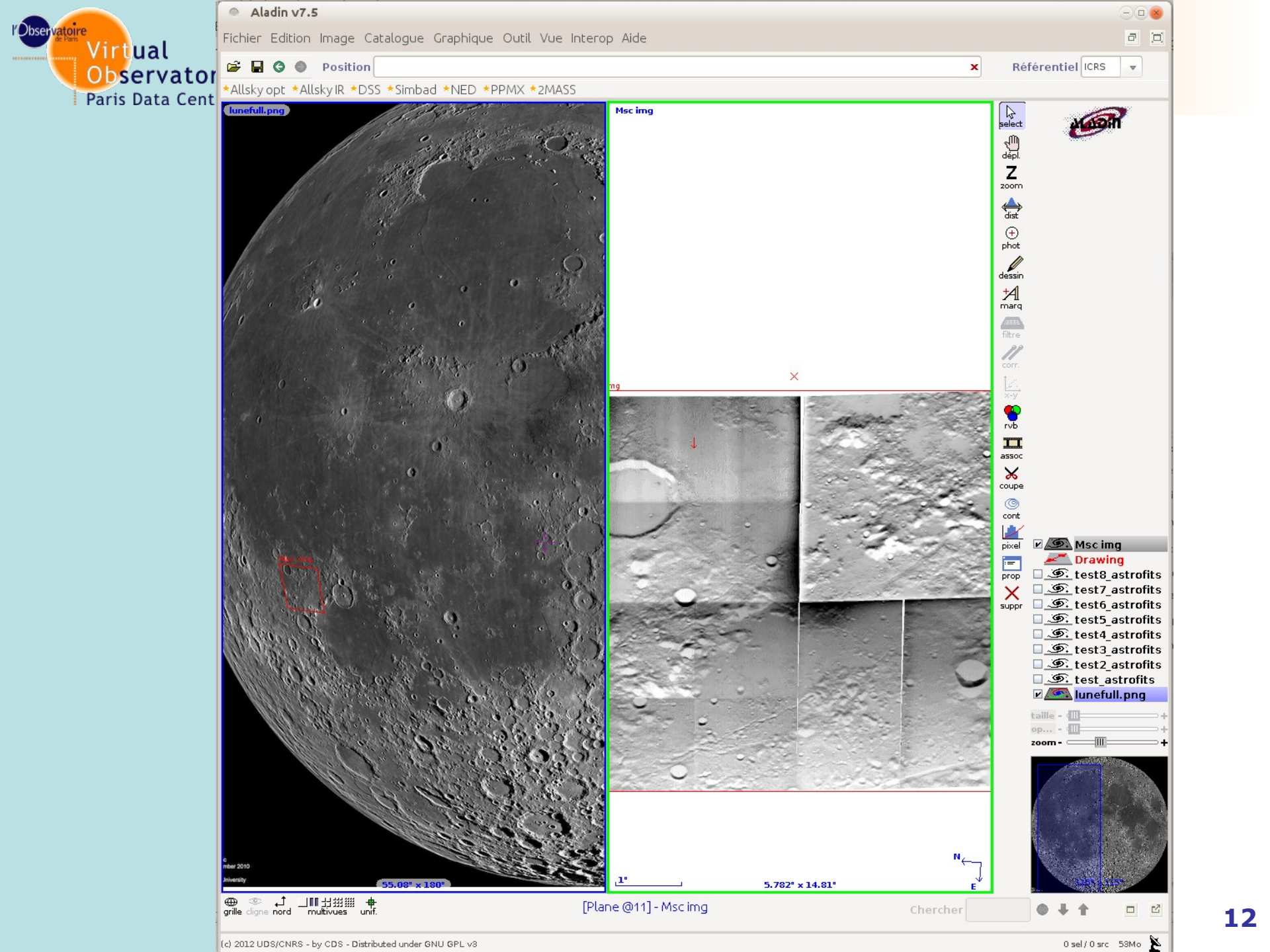
Parameters

pds

geo: http://voparis-uws.obspm.fr/uws-v1.0/pdstoaladin/d81675d6-47fa-5414-19c8-ce6422036784/parameters/geo

Results

Samp Save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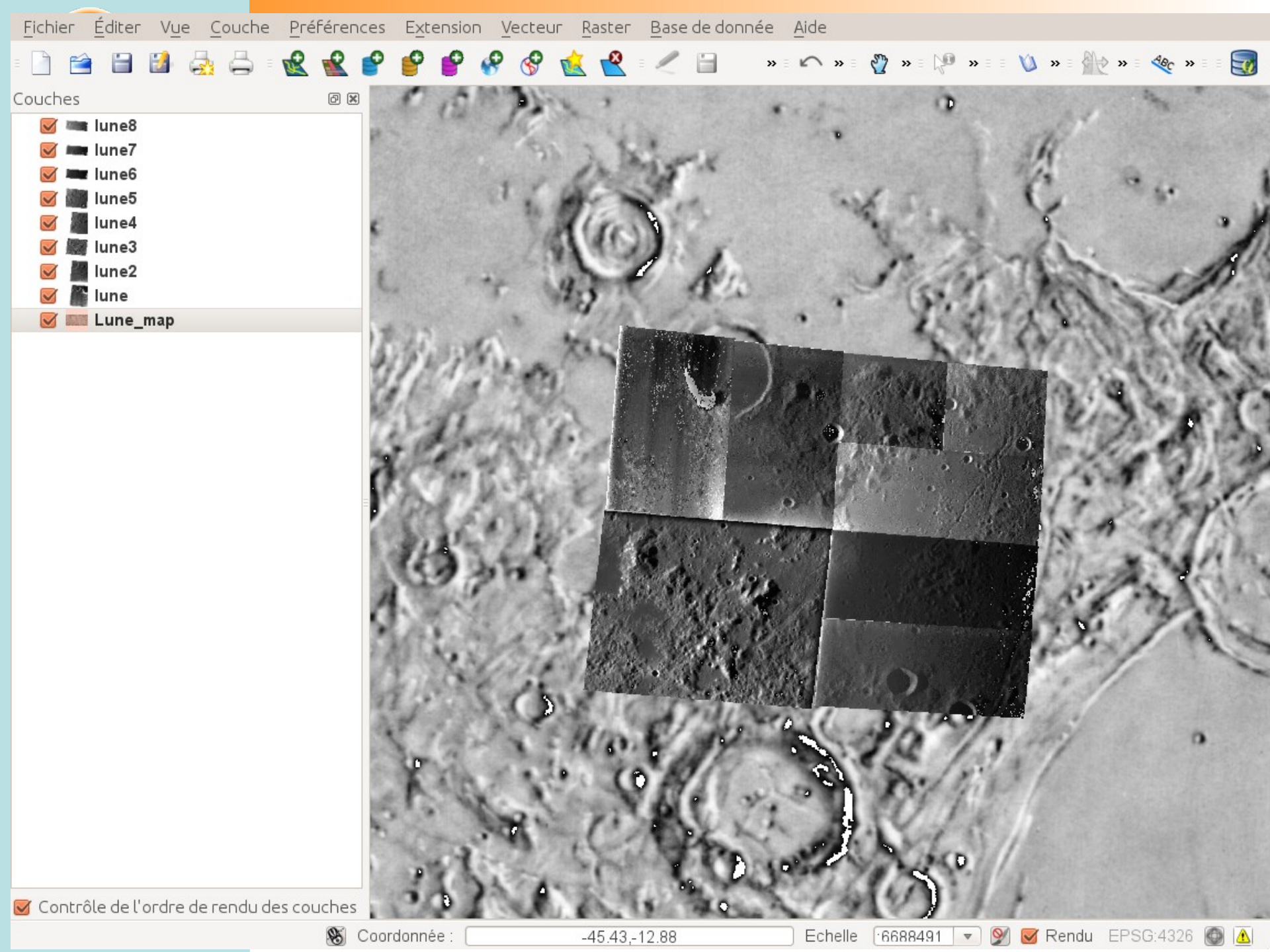
Aladin v7.5
Fichier Edition Image Catalogue Graphique Outil Vue Interop Aide
Position
Référentiel ICRS
Allsky opt Allsky IR DSS Simbad NED PPMX 2MASS
lunefull.png
Msc img
select
dépl.
zoom
dist
phot
dessin
marq
filtre
corr.
rvb
assoc
coupe
cont
pixel
prop
suppr
Msc img
Drawing
test8_astrofits
test7_astrofits
test6_astrofits
test5_astrofits
test4_astrofits
test3_astrofits
test2_astrofits
test_astrofits
lunefull.png
taille
zoom
55.08° x 180°
5.782° x 14.81°
grille
cligne
nord
multivues
unif.
[Plane @11] - Msc img
Chercher
(c) 2012 UDS/CNRS - by CDS - Distributed under GNU GPL v3
0 sel / 0 src
53Mo


Fichier
Éditer
Vue
Couche
Préférences
Extension
Vecteur
Raster
Base de donnée
Aide
Couches
lune8
lune7
lune6
lune5
lune4
lune3
lune2
lune
Lune_map
Contrôle de l'ordre de rendu des couches
Coordonnée :
-45.43,-12.88
Echelle
6688491
Rendu
EPSG:4326

Conclusion

- Parts of the VO environment can easily be reused for other disciplines
- Tools and services can also be reused
- Specific developments for planetology, plasma, solar physic and others project should also be of great interest for the IVOA.