



Alternative to vespa portal spatial search using MOC

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Refine your search

ADQL Query

Data Services



Main Parameters

Target Name

Target Class

Dataproduct Type

Instrument Host Name

Instrument Name

- ▾

Processing level

Time

Location
































































Spectral

Illumination

Data Reference

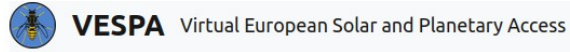
Optional

Reset

abs_cs - Data for numerical modeling of planetary atmospheres 13 results			
AMDA - Planetary and heliophysics plasma data at CDP/AMDA 2539504 results			
APIS - Auroral Planetary Imaging and Spectroscopy 74535 results			
BaseCom - The Nançay Cometary Database 6886 results			
bass2000 - Bass2000 solar survey archive 370931 results			
BDIP - IAU database of historical planetary images 16906 results			
cassini_jupiter - Cassini RPWS/HFR Calibrated Jupiter Flyby Dataset 7 results			
CLIMSO - CLIMSO coronagraphs at Pic du Midi de Bigorre 2943730 results			
cpstasm - CLUSTER STAFF-SA Spectral Matrix Data 11688 results			
DynAstVO - Asteroid orbital database and ephemerides 31320 results			
eit_syn - Synchronous synoptic maps of the solar corona from EIT/SoHO 18482 results			
ExoPlanet - Extrasolar Planets Encyclopaedia 5335 results			
Exotopo - Simulated Topography of Exoplanets 1800 results			
expres - ExPRES Simulation Database 100581 results			
Gaia-DEM - Thermal structure maps of the solar corona from SDO 746364 results			
GEM_Mars - Profiles from Mars Global Climate Model 1399680 results			
HFC1AR - Heliophysics Feature Catalog active regions 1194277 results			
HFC1T3 - Heliophysics Feature Catalog type 3 radio bursts 90845 results			
hrsc3nd - HRSC nadir images of Mars 4093 results			
hst_planeto - Planetary data from the Hubble Space Telescope 52768 results			
IKS - IR spectroscopy of comet Halley 206 results			

Prototype interface

<http://voparis-elasticsearch.obspm.fr/dev3>



Search [Results](#)

Simple query

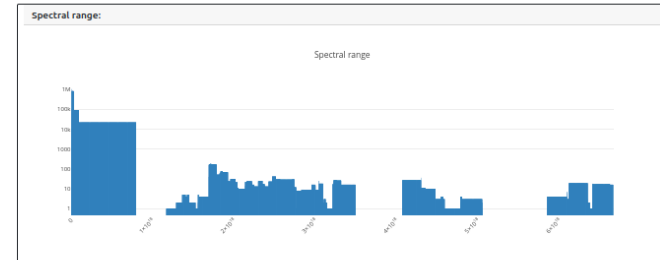
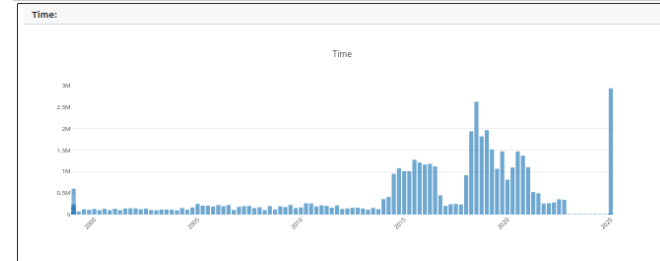
Enter query

[Submit](#)

Time:

Spectral range:

Missions	Instruments	Services	Datatype	Target region	Target class	Target name



Missions	Instruments	Services	Datatype
ExoMars 2016 1452049	CaSSIS 8911344	pse 2810133	ci 5374374
Simulation 2325584	ACS 4253417	mid 993277	pr 426494
Rosetta 226844	Mars Climate Database 6992272	climso 280770	im 534433
GMP, GA, Pic du Midi 283780	VS.3 1092272	AMDAADB 435683	ts 267760
SOHO 184843	ROSINA 683484	gem_mars 424944	ds 128707
SDO 137043	GEM-Mars_VS2 130769	mpc 237274	sc 32420
Mars Express 140004	AA 37040	hfctar_majrim 117247	mo 3240
	OSIRIS 334306	hfctar 110728	ma 4240

Target region	Target class	Target name
atmosphere 635409	planet 1148189	Mars 4758419
craters 281245	star 748432	67P 802737
chromosphere 181118	comet 707390	Sun 426420
corona 122215	asteroid 112145	sun 943388
Magnetosphere 4200	satellite 4200	Earth 209787
Aurora 9233	interplanetary_medium 7689	Venus 163740
photosphere 3781	Planet 1948	interplanetary_medium 127488
		Moon 112171



Mix between registry and TAP EPN metadata

<http://voparis-elasticsearch.obspm.fr/dev3>

- **From registry**
 - **Subject (keywords)**
 - **description**
- **from EPN-TAP**
 - **dataprodukt-type replace by definition example**
"ts": "time_series measurements organized primarily as a function of time (with exception of dynamical spectra and movies, i. e. usually a scalar quantity). Typical examples of time series include space-borne dust detector measurements, daily or seasonal curves measured at a given location (e. g. a lander), and light curves."



Mix between registry and TAP EPN metadata

<http://voparis-elasticsearch.obspm.fr/dev3>

- **from EPN TAP also**
 - **Object name and class, target-region**
 - **dataprodect_type (image, spectrum, event ...)**
 - **feature name**
 - **obs_mode**
 - **instrument name**
 - **instrument_host_name**
 - **detector_name**
 - **service name**
 - **bib_reference**
 - **(measurement_type) replace by their definition**

<http://voparis-elasticsearch.obspm.fr/dev3>

- **Facet result of selection**
- **Mix search between Registry and TAP**
- **Usage of UCD as semantic in simple search**

I want to find sun data that are flux of particle

Search [Results](#)

Simple query

flux + particles + Sun

Submit

Missions

STEREO **2824**
B

Instruments

SWEA **2824**

Services

AMDADB **7895**

Datatype

time_series **7895**

Target region

7895

Target class

interplanetary_medium **7895**

We want to have spatial filter

<https://voparis-explore.obspm.fr>

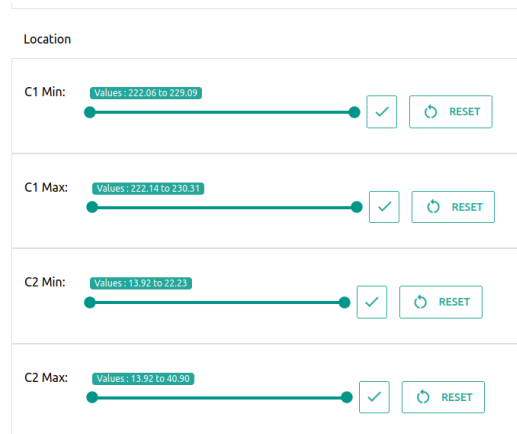
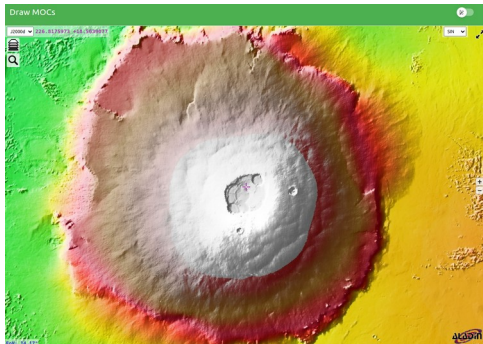


Choose a target

BROWSE HELP

target_name

- First we need to select a body with map
- Use of Aladin Lite to get spatial range



Location

C1 Min: Values : 222.06 to 229.09

C1 Max: Values : 222.14 to 230.31

C2 Min: Values : 13.92 to 22.23

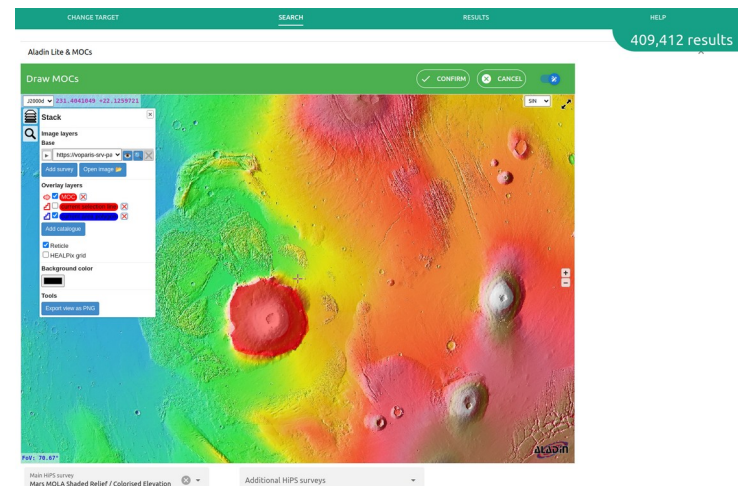
C2 Max: Values : 13.92 to 40.90

Less than 70 results manageable
Filtering is not user friendly

We want to have spatial filter

- We need to have map, to select a region
- we need to choose the body first
- Use of Aladin Lite to interact spatially

<https://voparis-explore.obspm.fr>

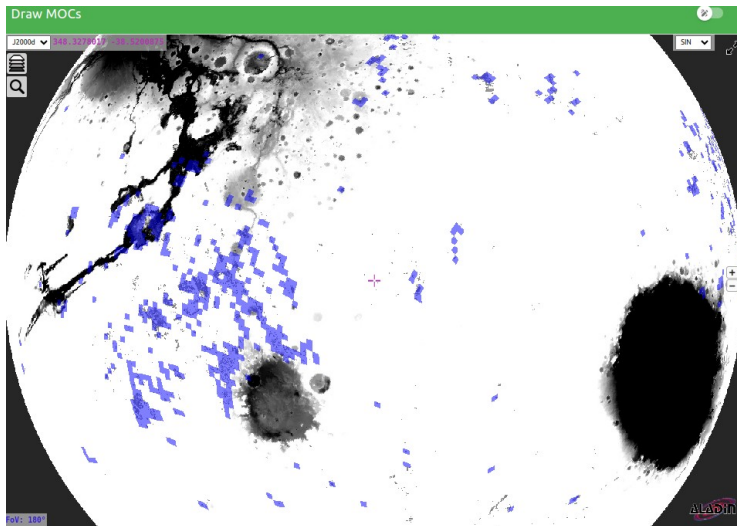


How to mix region and metadata selection

- **First select the metadata**
- **draw a region in Aladin Lite and transform it into MOC (Multi-Order Coverage map)**
- **Then compare (using intersection) the drawing MOC with all results**
- **First idea : iterate on all results using mocpy library : not the good idea with more than 10000 candidates**

Play with more complex regions

- Select in add moc to hips idoc_P_omega_olivine_op1
- transform selected **HIPS to MOC**



Main HIPS survey: Mars MGS MOLA Elevation Model 463m (MEGRD)
 Additional HIPS surveys: idoc_P_omega_olivine_osp1

Add MOC from HIPS: idoc_P_omega_olivine_osp1

Values: 1.0259 to 1.1050

MOC order: 8

Choose HIPS server: <https://voparis-srv-paris.obspm.fr/vo/planeto/>

Done

How to mix query on elasticsearch and MOC filtering...

- Develop an Elastic search plugin to introduce MOC mapping ?

=> Not so easy to develop and maintain

=> Proposition from P. Fernique and F-X. Pineau **use mocset tool**

As we can prepare a mocset for each service intersect could be very quick.(less than 1s)

Try to combine it with elasticsearch query

Next interop

