

MASER

EPN-TAP services

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






























MASER & EPN-TAP

- MASER (Measuring, Analysing & Simulating Emissions in the Radio range) is offering access to a series of tools and databases related to low frequency radioastronomy (a few kHz to a few 10 MHz).
- MASER web site: <https://maser.lesia.obspm.fr>
- Dedicated TAP servers:
<http://voparis-tap-maser.obspm.fr>
<http://vogate.obs-nancay.fr>
- Gitlab repository for service description:
<https://voparis-gitlab.obspm.fr/vespa/dachs/services/padc/voparis-tap-maser>

TAP services

- space borne observations (Voyager/PRA, Cassini/RPWS, Wind/Waves, STEREO, Juno...),
- ground based observations (NenuFAR, NDA, LOFAR-FR606, ORFEES, NRH, RadioJOVE...)
- catalogues (TFCat)
- simulations (ExPRES)

  voyager_pra  Maintainer
  stereo_waves  Maintainer
  tfcat  Maintainer
  wind_waves  Maintainer
  expres  Maintainer
  cassini_rpws  Maintainer
  NenuFAR 
  NDA 
  FR606 
  VO-ORFEES  VO EPN-TAP for ORFEES
  VO-NRH  VO EPN-TAP for NRH

Not all RD public yet

Not all on VESPA portal

EPN-TAP service configuration

- DaCHS servers (v2.3)
- Resource configuration using CustomGrammar (external python script parsing data files)
- Subjects in IVOA/UAT keywords (not updated in Registry yet)

Content overview

```
'phys.flux.density;em.radio;phys.polarization': 19246,  
'em.radio;phys.polarization': 2899,  
'phys.flux.density;em.radio': 20034,  
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'pos.bodyrc.lat;pos.distance;pos.bodyrc.lon': 1,  
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'em.radio;meta.modelled': 20000,  
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'image/fits': 2824,  
'application/cdf': 1,  
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'application/json': 6674,  
'text/ascii': 17  
  
'Station de Radioastronomie de Nancay': 22145,  
'SRN': 22145,  
'Cassini': 25113,  
'Juno': 14846,  
'Voyager1': 48,  
'VOYAGER 1': 5,  
'VOYAGER 2': 12,  
'Wind': 31  
  
'Jupiter': 49975,  
'Sun': 32185,  
'Saturn': 20007,  
'Io': 6884,  
'Europa': 6945,  
'Ganymede': 6147,  
'Neptune': 1,  
'Uranus': 1,  
'Earth': 31  
  
'dynamic-spectrum': 62125, 'image': 75
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Example with NDA collection

The screenshot shows the VESPA web interface. At the top, there's a navigation bar with various menu items like 'VESPA', 'forums', 'Mission', etc. Below that is a banner for 'VESPA Virtual European Solar and Planetary Access' featuring images of planets. The main content area is titled 'Back To Services Results' and 'Results in service NDA Obs. Database'. A green box contains a description of the 'NDA Obs. Database - Nancay Decameter Array observation database'. Below this is a table of search results with columns for granule_uid, dataproduct_type, target_name, time_min (d), time_max (d), access_url, and datalink. The table shows several entries for 'Sun' with dynamic spectrum data. On the right side, there are sections for 'Plotting tools' (TOPCAT, Aladin, SPLAT, CASSIS, 3DView) and 'Example queries' (Saturn in March 2012). At the bottom right, there are two small spectral plot images.

Non sécurisé — vespa.obspm.fr/planetary/data/display/?&resource_id=ivo://vopx

VESPA Virtual European Solar and Planetary Access

Form Query

EPN-TAP Services Custom Service

Main Parameters

Target Name

Target Class

Dataproduct Type

Instrument Host Name

Instrument Name

Processing level

Time

Location

Spectral

Illumination

Data Reference

Submit Reset

Afficher un menu

Back To Services Results

Results in service NDA Obs. Database

NDA Obs. Database - Nancay Decameter Array observation database

Dynamic Spectra of the Routine observation of Jupiter with the Nancay Decameter Array. This dataset contains two series of dynamic spectra recorded on each of the Nancay decameter sub-arrays (i.e. on Left Hand and Right Hand Polarization). The receiver is sampling from 10 MHz to 40 MHz with 75 kHz steps on the spectral axis. It records one spectrum every second on each polarization. The list of observation frequencies is provided.

Credits:
Creators: Baptiste Cecconi
Contributors: Andrée Coffre, Emmanuel Théas, PADC
Publisher: Station de Radioastronomie de Nançay (SRN)

Show 50 entries

Column visibility Show all Hide all

Select All in current page Reset Selection

granule_uid	dataproduct_type	target_name	time_min (d)	time_max (d)	access_url	datalink
S991231_cdf	dynamic_spectrum	Sun	1999-12-31T07:54:05.290	1999-12-31T14:40:59.390	http://realtime.obs-...	SEND
S991230_cdf	dynamic_spectrum	Sun	1999-12-30T08:01:00.189	1999-12-30T14:43:59.240	http://realtime.obs-...	SEND
S991229_cdf	dynamic_spectrum	Sun	1999-12-29T07:57:00.159	1999-12-29T14:47:59.209	http://realtime.obs-...	SEND
S991228_cdf	dynamic_spectrum	Sun	1999-12-28T07:57:00.170	1999-12-28T14:51:58.749	http://realtime.obs-...	SEND
S991227_cdf	dynamic_spectrum	Sun	1999-12-27T08:59:00.239	1999-12-27T14:55:59.310	http://realtime.obs-...	SEND
S991226_cdf	dynamic_spectrum	Sun	1999-12-26T07:52:05.290	1999-12-26T14:59:59.369	http://realtime.obs-...	SEND
S991225_cdf	dynamic_spectrum	Sun	1999-12-25T07:51:05.240	1999-12-25T15:03:59.280	http://realtime.obs-...	SEND

Plotting tools

- TOPCAT
- Aladin
- SPLAT
- CASSIS
- 3DView

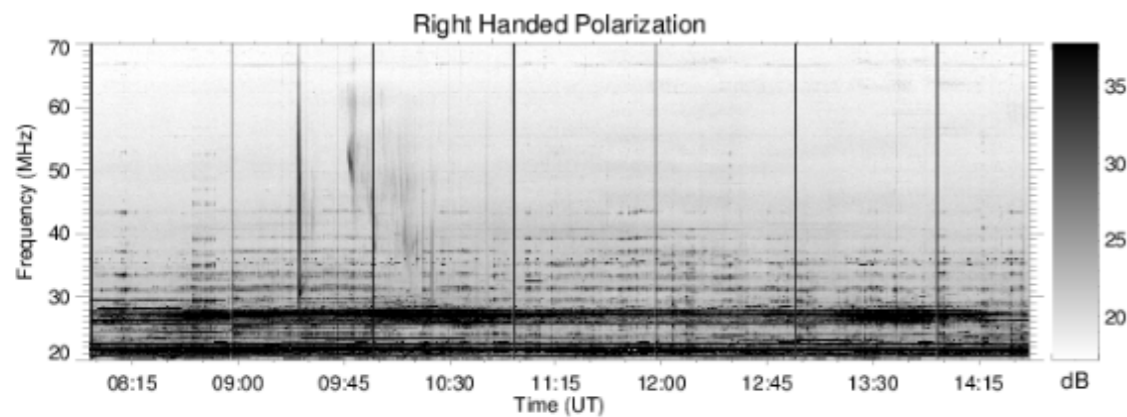
Example queries

Saturn in March 2012

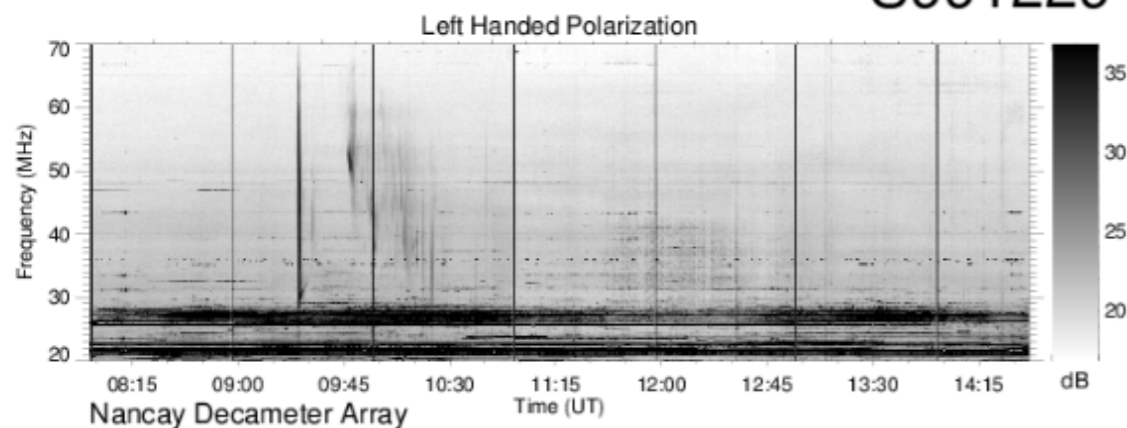
Help

Help

Table links



S991229

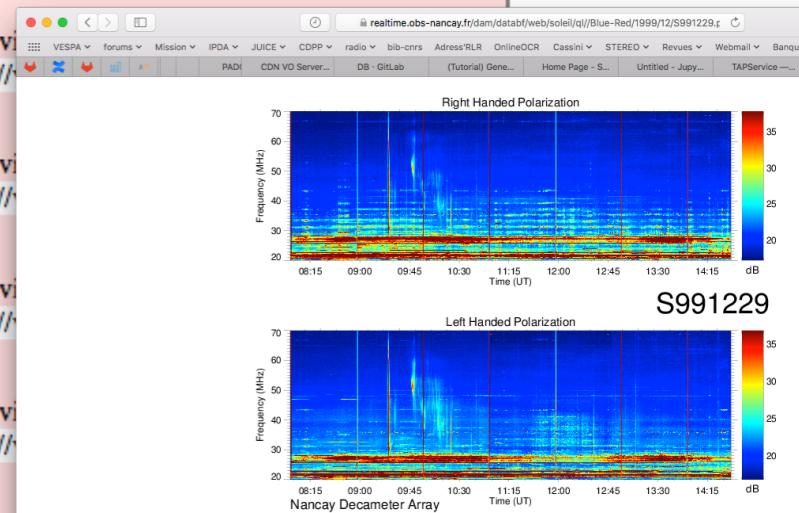


Where?	Description	What?
Link	Das2 access (Left-Hand polarization)	#cutout ivo://vopdc.obspm/~?nda/S991229_cdf
Link	Das2 access (Right-Hand polarization)	#cutout ivo://vopdc.obspm/~?nda/S991229_cdf
Link	Das2 access (differential polarization)	#cutout ivo://vopdc.obspm/~?nda/S991229_cdf

Afficher un menu

Where?	Description	What?
Link	Das2 access (Left-Hand polarization)	#cutout ivo://vopdc.obspm/~?nda/S991229_cdf
Link	Das2 access (Right-Hand polarization)	#cutout ivo://vopdc.obspm/~?nda/S991229_cdf
Link	Das2 access (differential polarization)	#cutout ivo://vopdc.obspm/~?nda/S991229_cdf
Link	PDF Preview (Greyscale)	#preview ivo://vopdc.obspm/~?nda/S991229_cdf
Link	PDF Preview (Color)	#preview ivo://vopdc.obspm/~?nda/S991229_cdf
Link	PNG Preview (Greyscale)	#preview ivo://vopdc.obspm/~?nda/S991229_cdf
Link	PNG Preview (Color)	#preview ivo://vopdc.obspm/~?nda/S991229_cdf
Link	PNG Thumbnail (Greyscale)	#preview ivo://vopdc.obspm/~?nda/S991229_cdf
Link	PNG Thumbnail (Color)	#preview ivo://vopdc.obspm/~?nda/S991229_cdf
Link	RT1 raw data file	#prog ivo://vopdc.obspm/~?nda/S991229_cdf
Link	The full dataset.	#this ivo://vopdc.obspm/~?nda/S991229_cdf
Link	A preview for the dataset.	#preview ivo://vopdc.obspm/~?nda/S991229_cdf

Afficher un menu



Example with NDA collection (target_name=Jupiter)

The screenshot shows the VESPA web interface. At the top is a navigation menu with various service categories like VESPA, forums, Mission, IPDA, JUICE, CDPP, radio, bib-cnrs, Adress'RLR, OnlineOCR, Cassini, STEREO, Revues, Webmail, Banques, bibli, English, and YT->MP4. Below the navigation is a banner for VESPA (Virtual European Solar and Planetary Access) featuring images of planets and a hand cursor pointing at Jupiter.

The main content area is titled "Back To Services Results" and "Results in service NDA Obs. Database". A green box highlights the following information:

NDA Obs. Database - Nancy Decameter Array observation database
Dynamic Spectra of the Routine observation of Jupiter with the Nancy Decameter Array. This dataset contains two series of dynamic spectra recorded on each of the Nancy decameter sub-arrays (i.e. on Left Hand and Right Hand Polarization). The receiver is sampling from 10 MHz to 40 MHz with 75 kHz steps on the spectral axis. It records one spectrum every second on each polarization. The list of observation frequencies is provided.

Credits:
Creators: Baptiste Cecconi
Contributors: Andrée Coffre, Emmanuel Théas, PADC
Publisher: Station de Radioastronomie de Nançay (SRN)

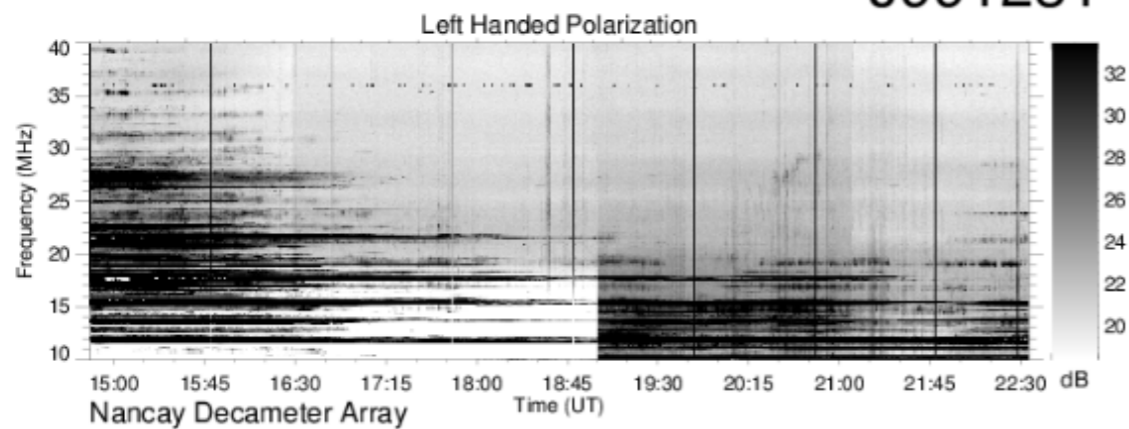
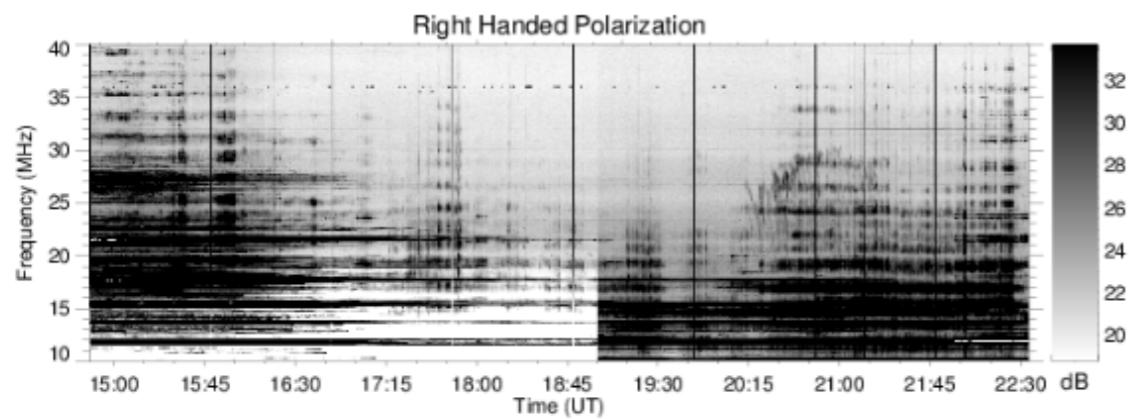
Below the green box, there are controls for "Show 10 entries" and "Column visibility" (Show all, Hide all). A table displays the search results:

granule_uid	dataproduct_type	target_name	time_min (d)	time_max (d)	access_url	datalink
J991231_cdf	dynamic_spectrum	Jupiter	1999-12-31T14:48:00.219	1999-12-31T22:47:59.280	http://realtime.obs-...	SEND
J991230_cdf	dynamic_spectrum	Jupiter	1999-12-30T14:51:00.199	1999-12-30T22:50:59.259	http://realtime.obs-...	SEND
J991229_cdf	dynamic_spectrum	Jupiter	1999-12-29T14:55:00.090	1999-12-29T22:54:59.140	http://realtime.obs-...	SEND
J991228_cdf	dynamic_spectrum	Jupiter	1999-12-28T14:59:00.169	1999-12-28T22:58:59.240	http://realtime.obs-...	SEND
J991227_cdf	dynamic_spectrum	Jupiter	1999-12-27T15:03:00.170	1999-12-27T23:02:59.259	http://realtime.obs-...	SEND
J991226_cdf	dynamic_spectrum	Jupiter	1999-12-26T15:07:00.150	1999-12-26T19:07:09.199	http://realtime.obs-...	SEND
J991225_cdf	dynamic_spectrum	Jupiter	1999-12-25T15:11:00.180	1999-12-25T23:10:59.229	http://realtime.obs-...	SEND

On the left side, there are "Main Parameters" including Target Name (Jupiter), Target Class, Dataproduct Type, Instrument Host Name, Instrument Name, and Processing level. At the bottom left are "Submit" and "Reset" buttons, and a link "Afficher un menu".

On the right side, there are "Plotting tools" (TOPCAT, Aladin, SPLAT, CASSIS, 3DView), "Example queries" (Saturn in March 2012), and "Help".

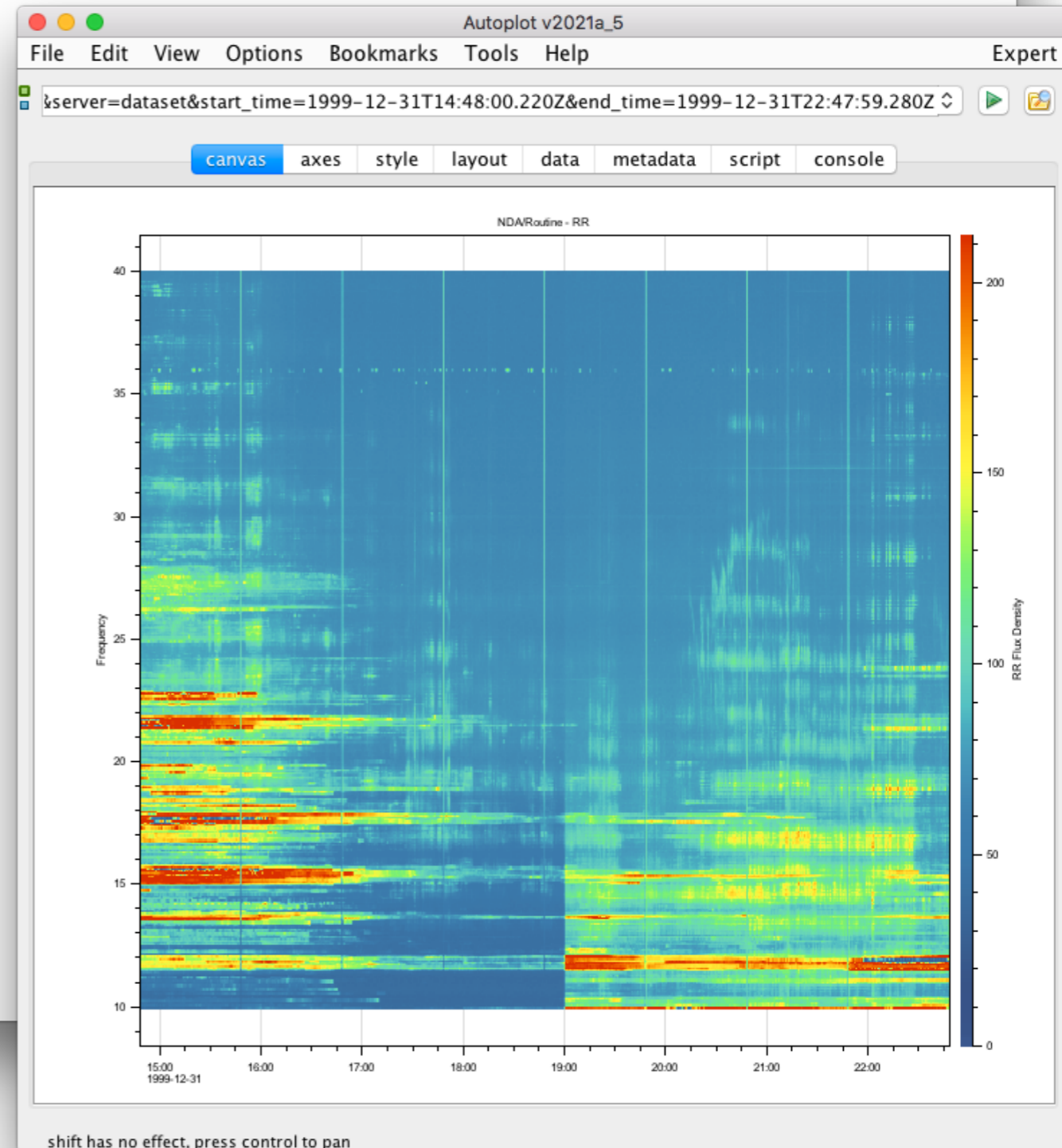
Table links



J991231

Where?	Description	What?
Link	Das2 access (Left-Hand polarization)	#cutout ivo://vopdc.obspm/~?nda/J991231_cdf
Link	Das2 access (Right-Hand polarization)	#cutout ivo://vopdc.obspm/~?nda/J991231_cdf
Link	Das2 access (differential polarization)	#cutout ivo://vopdc.obspm/~?nda/J991231_cdf

Afficher un menu



Autoplot

Example with Voyager/PRA collection

Back To Services Results
Results in service **voyager_pra**

voyager_pra - Voyager PRA Datasets
Voyager PRA (Planetary Radio Astronomy) Datasets catalog. The dataset are originally published by several data centers: NASA/PDS, NASA/NSSDC, NASA/GSFC, Univ. Iowa and CNES/SERAD.
Credits:
Creators: Baptiste Ceconi
Publisher: Paris Astronomical Data Centre

Show 10 entries

granule_uid	dataprodct_type	target_name	time_min (d)	time_max (d)	access_url	datalink_url
VG2-U-PRA-3-RDR-LOWBAND-6SEC-V1.0:VG2_URN_PRA_6SEC.TAB	dynamic_spectrum	Uranus	1986-01-19T00:00:00.000	1986-01-31T00:00:00.000	http://maser.obspm.fr/...	http://voparis-tap-m...
VG2-S-PRA-3-RDR-LOWBAND-6SEC-V1.0:PRA_V.TAB	dynamic_spectrum	Saturn	1981-09-08T00:00:45.999	1981-09-28T23:59:08.000	http://maser.obspm.f...	http://voparis-tap-m...
VG2-S-PRA-3-RDR-LOWBAND-6SEC-V1.0:PRA_IV.TAB	dynamic_spectrum	Saturn	1981-08-14T00:00:00.000	1981-09-07T23:59:58.000	http://maser.obspm.f...	http://voparis-tap-m...
VG2-S-PRA-3-RDR-LOWBAND-6SEC-V1.0:PRA_III.TAB	dynamic_spectrum	Saturn	1981-07-22T00:00:00.999	1981-08-13T23:59:12.000	http://maser.obspm.f...	http://voparis-tap-m...
VG2-S-PRA-3-RDR-LOWBAND-6SEC-V1.0:PRA_II.TAB	dynamic_spectrum	Saturn	1981-07-01T00:00:04.000	1981-07-21T23:59:13.000	http://maser.obspm.f...	http://voparis-tap-m...
VG2-S-PRA-3-RDR-LOWBAND-6SEC-V1.0:PRA_I.TAB	dynamic_spectrum	Saturn	1981-06-05T00:00:00.000	1981-06-30T23:59:15.999	http://maser.obspm.f...	http://voparis-tap-m...
VG2-S-PRA-3-RDR-LOWBAND-6SEC-V1.0:PRA.TAB	dynamic_spectrum	Saturn	1981-06-24T00:00:46.999	1981-08-31T22:05:33.999	http://maser.obspm.f...	http://voparis-tap-m...
VG2-N-PRA-3-RDR-LOWBAND-6SEC-V1.0:VG2_NEP_PRA_6SEC	dynamic_spectrum	Neptune	1989-08-11T00:00:00.000	1989-08-31T00:00:00.000	http://maser.obspm.f...	http://voparis-tap-m...

Table links

Where?	Description	What?
Link	Data Product	#this VG2-U-PRA-3-RDR-LOWBAND-6SEC-V1.0:
Link	Label File	#documentation VG2-U-PRA-3-RDR-LOWBAND-6SEC-V1.0:VG2_URN_PRA_6SEC.TAB
Link	Data Collection repository	#parent VG2-U-PRA-3-RDR-LOWBAND-6SEC-V1.0:V

Index of /data/voyager/pr...

Name	Last modified	Size	Description
Parent Directory		-	
AAREADME.TXT	2013-02-06 10:40	15K	
CATALOG/	2013-02-06 11:12	-	
CHECKSUMS.TXT	2020-04-19 18:15	2.5K	
DATA/	2013-02-06 11:12	-	
DOCUMENT/	2013-02-06 11:12	-	
ERRATA.TXT	2012-02-03 09:51	6.0K	

Summary

- MASER: solar system radioastronomy
EPN-TAP + Datalink 👍
- EPN-TAP:
 - search engine for local data management tools
 - data discovery