How to retrieve datalinks from a selection of granules using TOPCAT

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Example of SPICAM service

On this example, we want to gather votables from the datalinks of a subsection of the 'EPN-TAP service 'spicam' using TOPCAT.

We can only gather datalinks with a common name at a time.

Load a subset of your EPN-TAP service on topcat

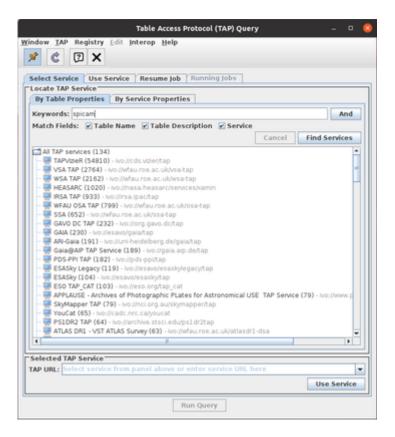
Using topcat TAP access

• Open Topcat software

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Table List	Current Table Properties Label: Location: Name: Rows: Columns: Sort Order: V Row Subset: V Activation Actions:	
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and search for SPICAM service :



• Then make an adql query on this service, here we want to obtain a subset of 10 granules of this service

	Table Access Protocol (TAP) Query -		8
Window IAP Registry Edit	Interop Help		_
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Select Service Use Service	Resume Job Running Jobs	_	_
Metadata Find:	Service Schema STable Scolumns Officers	Hints	16
Name Descrip Or		1	1
R LATMOS TAP (7)	it Interop Help		
🕈 🗂 spicam (1)	1		
spicam.epn_core tap_schema (6)	Description:		
- III tap_schema.colum			
 III tap_schema.group: III tap_schema.key_cc 			
- III tap_schema.keys	The following description of SPICAM has been adapted from:		
 III tap_schema.schem III tap_schema.tables 			
- III cap_scriema.cables		-	
4 P			-
Service Capabilities			
Query Language: ADQL-2.1	Max Rows: 20000 (default) V Uploads: 20Mb		
ADQL Text		_	=
Mode: Synchronous 💌	i i i i i i i i i i i i i i i i i i i	0	
1			
SELECT TOP 10 * FROM spicam	.epn_core		
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Examples ()	I	nfo ⊠	
	Run Query		

· Click 'run query', it will load the subset of the epn_core service on the main topcat window

	TOPCAT – 🗆 😣
	Windows VO Interop Help Image: Second state s
Table List 1: TAP_1_spicam.epn_core	Current Table Properties Label: TAP_1_spicam.epn_core Location: TAP_1_spicam.epn_core Name: epn_core Rows: 10 Columns: 61 Sort Order: Row Subset: All Activation Actions: 0 / 8
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Using VESPA portal

You can also obtain the subset of your service using VESPA portal.

- Open Topcat
 Open VESPA portal
 Click on your service (here, SPICAM)
 Use the portal query criterions or ADQL to obtain your subset
 On the bottom of query page, click on All metadata > send tables

VESPA Virtual European Solar and	d Planetary Access							O Help -
Time	orbit2888A1_temp_MC	Dsimulations	profile		Mars	2006-04-11T06:09:11.232	2006-04-11T06:09:11.232	http://vo.projet
Location	orbit2888A1_co2dens_	SPICAMmeasurements	profile		Mars	2006-04-11T06:09:11.232	2006-04-11T06:09:11.232	http://vo.projet
Illumination	orbit2888A1_co2dens_	MCDsimulations	profile		Mars	2006-04-11T06:09:11.232	2006-04-11T06:09:11.232	http://vo.projet
Data Reference	orbit2779A1_temp_SP	CAMmeasurements	profile		Mars	2006-03-11T16:56:34.079	2006-03-11T16:56:34.079	http://vo.projet
Other	orbit2779A1_temp_MC	Dsimulations	profile		Mars	2006-03-11T16:56:34.079	2006-03-11T16:56:34.079	http://vo.projet
Reset Submit	orbit2779A1_co2dens_	SPICAMmeasurements	profile		Mars	2006-03-11T16:56:34.079	2006-03-11T16:56:34.079	http://vo.projet
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	orbit2775A1_temp_SP	VCAMmeasurements	profile		Mars	2006-03-10T15:12:18.719	2006-03-10T15:12:18.719	http://vo.projet
	orbit2775A1_temp_MC	Dsimulations	profile		Mars	2006-03-10T15:12:18.719	2006-03-10T15:12:18.719	http://vo.projet
	Showing 1 to 10 of 148 e	entries					Page 1	of 15
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				Download Send Table				
	ADQL query:				_			
	VOTable Result	picam.epn_core WHE	8E "mars	_year" = 28				

• Or, if you have selected the wanted granules manually, Metadata Selection > send tables

VESPA Virtual Europe	an Solar and Planetary Access								0	Help -
ime	orbit2888A1_temp	MCD simulations	profile		Mars	2006-04-11T06:09:11.232	2006-04-11	T06:09:11.232	http://	vo.pro
ocation										
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ther	orbit2779A1_temp	MCD simulations	profile		Mars	2006-03-11T16:56:34.079	2006-03-11	T16:56:34.079	http://	vo.pr
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	orbit2775A1_temp	SPICAMmeasurements	profile		Mars	2006-03-10T15:12:18.719	2006-03-10	T15:12:18.719		
	orbit2775A1_temp	orbit2775A1_temp_MCDsimulations		profile		2006-03-10T15:12:18.719	2006-03-10T15:12:18.719		http://vo.pr	
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	ADQL query:									
	SELECT * FROM	spicam.epn_core W	HERE "mars	_year" = 28						
	VOTable Res									

• The subset of the epn_core table will be loaded on topcat

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Table List 1: spicam	Current Table Properties Label: spicam Location: samp:spicam Name: spicam Rows: 4 Columns: 61 Sort Order: Row Subset: All Activation Actions: 0 / 6	
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Use the datalink service

Now, to interrogate the datalink service :

- Open the table of the epn_core subset previously loaded on one side.
- On the other side, open the action windows by clicking the action
 Check 'View Datalink Table'

т	DPCAT(1): Activation Actions — 🛛 😣
Window Actions Help	
Activation Actions for 1: TAP_1	spicam.epn_core Description View a referenced DataLink table Configuration Datalink Table URL
 Send Sky Coordinate Display HiPS cutout Send HiPS cutout Display image Display image region 	Links Table Location: datalink_url Links Service Links Endpoint: Datalink ID: granule_uid
Load Table Plot Table Send FITS Image Send Spectrum Download URL	Status Invoke now on row 1
Results Seq Row Status Message	

- Click on one row of the epn_core table, the datalink table will be displayed
- In this service, the datalink service is a list of links that points on votables, you can click on a type of datalink in the list. For this example, we will use the "coldmin" type of link. Then, select the action you want to do with this link. In this case, we want to load the votable.

Use the datalink service on one row

To load the datalink's "coldmin" votable for the selected granule of the epn_core table, click 'invoke'.

	aLink Table		tivation - View Data	itilik tabte	- 0
	semantics	1	content type	content length	ID
1	#this	climavr : Associated MCD simul	application/x-votable		orbit04435A02 aerosols
2	#this	climmin : Associated MCD simu	application/x-votable		orbit04435A02 aerosols
3	#this	climmax : Associated MCD sim	application/x-votable		orbit04435A02 aerosols
4	#this	strmmin : Associated MCD sim	application/x-votable		orbit04435A02 aerosols
5	#this	strmavr : Associated MCD sim	application/x-votable		orbit04435A02 aerosols
6	#this	strmmax: Associated MCD sim	application/x-votable		orbit04435A02_aerosols
7	#this	warmmax : Associated MCD si	application/x-votable		orbit04435A02_aerosols
8	#this	coldmin : Associated MCD simu	application/x-votable		orbit04435A02_aerosols
9	#this	MY24 : Associated MCD simula	application/x-votable		orbit04435A02_aerosols
10	#this	MY25 : Associated MCD simula	application/x-votable		orbit04435A02_aerosols_
11	#this	MY26 : Associated MCD simula	application/x-votable		orbit04435A02_aerosols
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Row ixe Row	Link Type d Access Uf Detail	RL L: http://vo.projet.latmos.ipsl.fr:80	080/cgi-bin/mcd4spica	m.py?profiletype=	aerosols&orbit=04435A
Row ixe Row	Link Type d Access Uf Detail Access URI		080/cgi-bin/mcd4spica	m.py?profiletype=	aerosols&orbit=04435A
Row Fixe Row Co	Link Type d Access Uf Detail Access URI	.: http://vo.projet.latmos.ipsl.fr:8 e: application/x-votable	080/cgi-bin/mcd4spica	m.py?profiletype=	aerosols&orbit=04435A
Row Fixe Row Cont	Link Type d Access Uf Detail Access URI ontent Type ent Length	L: http://vo.projet.latmos.ipsl.fr:8 e: application/x-votable			
Row Fixe Row Cont	Link Type d Access Uf Detail Access URI ontent Type ent Length	L: http://vo.projet.latmos.ipsl.fr:8 e: application/x-votable h: n: coldmin : Associated MCD simu			
Row Fixe Row Cont	Link Type d Access Uf Detail Access UR ontent Type ent Length Description Semantice	L: http://vo.projet.latmos.ipsl.fr:8 e: application/x-votable h: n: coldmin : Associated MCD simu	lation results for Cold	scenario, dusty a	atmosphere, solar EUV mir
Row Fixe Row Cont	Link Type d Access Uf Detail Access UR ontent Type ent Length Description Semantice	thtp://vo.projet.latmos.ipsl.fr:8 application/x-votable coldmin : Associated MCD simu #this rojet.latmos.ipsl.fr:8080/cgi-bin/m	llation results for Cold	scenario, dusty a	atmosphere, solar EUV mir

• It will load the associated votable on topcat

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rTable List	Current Table Properties	
1: TAP_1_spicam.epn_core 2: mcd4spicam.py?profile	Label: mcd4spicam.py?profiletype=aerosols&orbit=04435A0 Location: http://vo.projet.latmos.ipsl.fr:8080/cgi-bin/mcd4spica Name: mcd4spicam.py?profiletype=aerosols&orbit=04435A Rows: 51 Columns: 5 Sort Order:	
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Use the datalink service on a whole sample

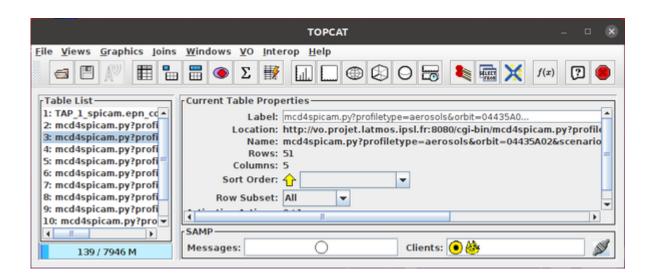
To load all votables corresponding to "coldmin" datalink for the whole selection of the epn_core service :

• Check the 'Auto-Invoke' checkbox on the datalink table

	semantics	description	content type	content length	ID	
1	#this	climavr : Associated MCD simul	application/x-votable		orbit04435A02 aeros	ols I
2	#this	climmin : Associated MCD simu	application/x-votable		orbit04435A02 aeros	
3	#this	climmax : Associated MCD sim	application/x-votable		orbit04435A02 aeros	ols I
4	#this	strmmin : Associated MCD sim	application/x-votable		orbit04435A02 aeros	ols
5	#this	strmavr : Associated MCD sim	application/x-votable		orbit04435A02 aeros	ols
6	#this	strmmax: Associated MCD sim	application/x-votable		orbit04435A02 aeros	ols
7	#this	warmmax : Associated MCD si	application/x-votable		orbit04435A02 aeros	ols
8	#this	coldmin : Associated MCD simu	application/x-votable		orbit04435A02 aeros	ols
9	#this	MY24 : Associated MCD simula	application/x-votable		orbit04435A02_aeros	ols
10	#this	MY25 : Associated MCD simula	application/x-votable		orbit04435A02 aeros	ols
11	#this	MY26 : Associated MCD simula	application/x-votable		orbit04435A02_aeros	ols
10	•				130100100	•
	ntent Type	: http://vo.projet.latmos.ipsl.fr:8 : application/x-votable				
Cont	ent Length Descriptior	: coldmin : Associated MCD simu	lation results for Cold			
Cont	Description Semantic	s: #this				
Co Cont	Description Semantic				bit=04435A02&scena	rio=

• Return on the action window and click the "invoke selected action on all rows" button

All corresponding votables will be loaded on topcat



To go futher

You can select other types of actions to do with the datalinks on the datalink window.

The "auto Invoke" button is not available for datalinks with a form.