

*EPN-TAP services: looking for and plotting Titan
atmospheric profiles*

v1.3, 6/1/2017

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VESPA

Virtual European Solar and Planetary Access

[All VO](#)[Custom resource](#)[Direct Query](#)[Advanced Query](#)[Help](#)

Submit

Reset

Main Parameters

Target Name

Titan

Granule UID

Granule GID

Obs ID

Time selection

Data range is included in

Time Min

Target Class

Asteroid

Comet

Dwarf Planet

Exoplanet

Dataproduct Type

Catalog

Cube

Dynamic Spectrum

Measurement Type

The range between

Time Max

Location

Spectral

Time

Photometry

Instrument

Optional

Submit

Reset

Plotting tools

TOPCAT

Aladin

SPLAT

CASSIS

Example queries

Saturn in March 2012

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Contact : support.apntap@obspm.fr

PADC

























france

EUROPLANET

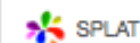
<http://vespa.obspm.fr>

Go to VESPA main user interface, search for "Titan" and submit



EPN Resources	
APIS - Auroral Planetary Imaging and Spectroscopy 1023 results	   
Titan - Vertical Profiles in Titan Middle Atmosphere 1430 results	   
USGS_WMS - USGS WMS 3 results	   
AMDA - CDPD AMDA DataBase 0 result	 
BASECOM - The Nançay Cometary Database 0 result	 
BDIP - Base de Données d'Images Planétaires 0 result	 
CRISM - CRISM data from Earth Server 2 0 result	 
ExoPlanet - Extrasolar Planets Encyclopaedia 0 result	 
HFC1AR - Heliophysics Feature Catalog active regions 0 result	 

Plotting tools



Example queries

Saturn in March
2012

click title to get a
description of the service

click here to get
a list of results

VESPA results are
grouped by data
service —
select "Titan"
service for Cassini/
CIRS data



Results in service titan

Show 10 entries

click here to see
all columns

Column visibility Show all Hide all

granule_uid	dataprodukt_type	target_name	time_min	time_max	access_url
79N_80E_Ls301_profq_C4H2_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_C4H2.txt
79N_80E_Ls301_profq_CO2_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_CO2.txt
79N_80E_Ls301_profq_C3H8_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_C3H8.txt
79N_80E_Ls301_profq_C2H4_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_C2H4.txt
79N_80E_Ls301_profq_C2H2_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_C2H2.txt
79N_80E_Ls301_profq_C2H6_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_C2H6.txt
79N_80E_Ls301_profq_CH3C2H_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_CH3C2H.txt
79N_80E_Ls301_profq_HCN_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_HCN.txt
79N_80E_Ls301_profq_C6H6_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_C6H6.txt
79N_80E_Ls301_profq_HC3N_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_HC3N.txt

Showing 1 to 10 of 1,430 entries

Previous 1 2 3 4 5 ... 143 Next

Data Selection - Metadata Selection - All Data - All Metadata -

Plotting tools

TOPCAT

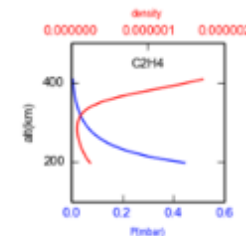
Aladin

SPLAT

CASSIS

Example queries

Saturn in March 2012



A thumbnail is
provided for
each profile

Individual profiles are displayed on each line

All are described with many parameters in column (click "Show all")

You can go back to the search form and add constraints to limit your search (e.g., by local time, season, or time range)



Results in service titan

Show 10 entries

Column visibility Show all Hide all

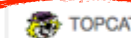
granule_uid	dataprodect_type	target_name	time_min	time_max	access_url
79N_80E_Ls301_profq_C4H2_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_C4H2.txt
79N_80E_Ls301_profq_CO2_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_CO2.txt
79N_80E_Ls301_profq_C3H8_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_C3H8.txt
79N_80E_Ls301_profq_C2H4_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_C2H4.txt
79N_80E_Ls301_profq_C2H2_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_C2H2.txt
79N_80E_Ls301_profq_C2H6_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_C2H6.txt
79N_80E_Ls301_profq_CH3C2H_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_CH3C2H.txt
79N_80E_Ls301_profq_HCN_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_HCN.txt
79N_80E_Ls301_profq_C6H6_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_C6H6.txt
79N_80E_Ls301_profq_HC3N_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_HC3N.txt

Showing 1 to 10 of 1,430 entries

Previous 1 2 3 4 5 ... 143 Next

Data Selection - Metadata Selection - All Data - All Metadata -

Plotting tools



Aladin

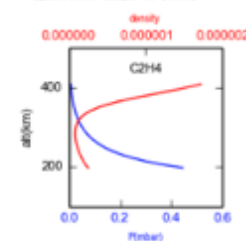


CASSIS

click here to launch TOPCAT from the web (longer)

Example queries

Saturn in March 2012

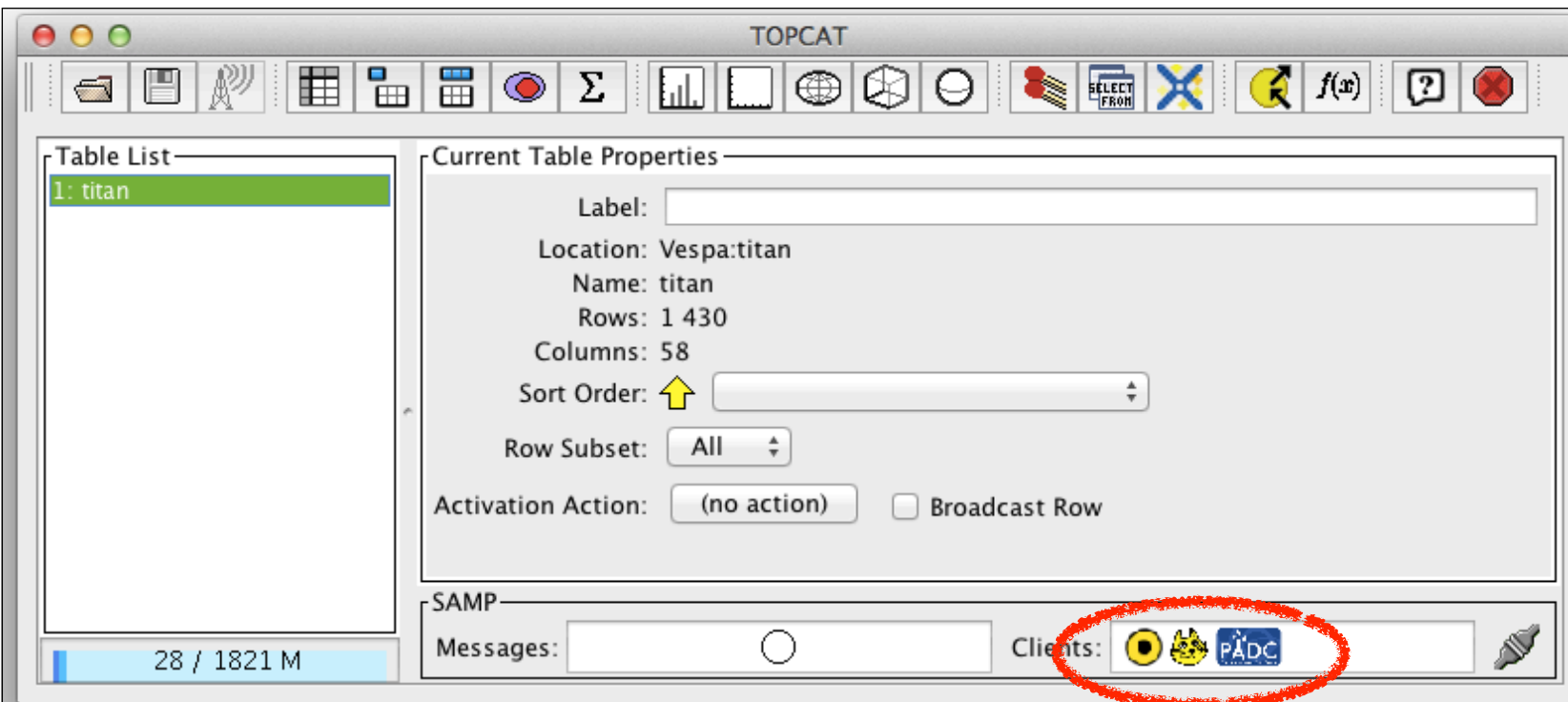


Parameters can be visualized in TOPCAT



Launching TOPCAT from your desktop is quicker
(but not necessarily up to date - demo version = 4.3)

<http://www.star.bris.ac.uk/~mbt/topcat/topcat-full.jnlp>



The list of connected tools automatically includes the VESPA search interface



Results in service titan

Show 10 entries

Column visibility Show all Hide all

granule_uid	datapoint_type	target_name	time_min	time_max	access_url
79N_80E_Ls301_profq_C4H2_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_C4H2.txt
79N_80E_Ls301_profq_CO2_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_CO2.txt
79N_80E_Ls301_profq_C3H8_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_C3H8.txt
79N_80E_Ls301_profq_C2H4_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_C2H4.txt
79N_80E_Ls301_profq_C2H2_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_C2H2.txt
79N_80E_Ls301_profq_C2H6_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_C2H6.txt
79N_80E_Ls301_profq_CH3C2H_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_CH3C2H.txt
79N_80E_Ls301_profq_HCN_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_HCN.txt
79N_80E_Ls301_profq_C6H6_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_C6H6.txt
79N_80E_Ls301_profq_HC3N_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_HC3N.txt

Showing 1 to 10 of 1,430 entries

Previous 1 2 3 4 5 ... 143 Next

Data Selection Metadata Selection All Data All Metadata

Plotting tools

TOPCAT

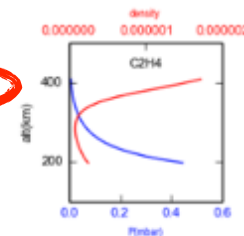
Aladin

SPLAT

CASSIS

Example queries

Saturn in March 2012



Select individual profiles of interest (single click)
then "Metadata selection / Send table"

The image shows two windows from the TOPCAT software. The main window, titled 'TOPCAT', has a toolbar with various icons. One icon, representing a table, is circled in red. Below the toolbar is a 'Table List' panel showing '1: titan' selected. To the right is the 'Current Table Properties' panel, which displays details for the 'titan' table: Label (empty), Location: Vespa:titan, Name: titan, Rows: 1 430, Columns: 58, Sort Order (indicated by an upward arrow), and Row Subset: All. A second window, titled 'TOPCAT(1): Table Browser', is overlaid on the main window. It shows a table with the following columns: phase_..., instrum..., instrument_name, measurement_type, and access_url. The table contains data for rows 86 through 101, all of which are from the 'Cassini' instrument and represent 'Composite Infrared Spectrometer#CIRS' measurements. The row for '93' is highlighted in green. A red arrow points from the circled button in the TOPCAT toolbar to the Table Browser window.

Table List

1: titan

Current Table Properties

Label:

Location: Vespa:titan

Name: titan

Rows: 1 430

Columns: 58

Sort Order:

Row Subset: All

TOPCAT(1): Table Browser

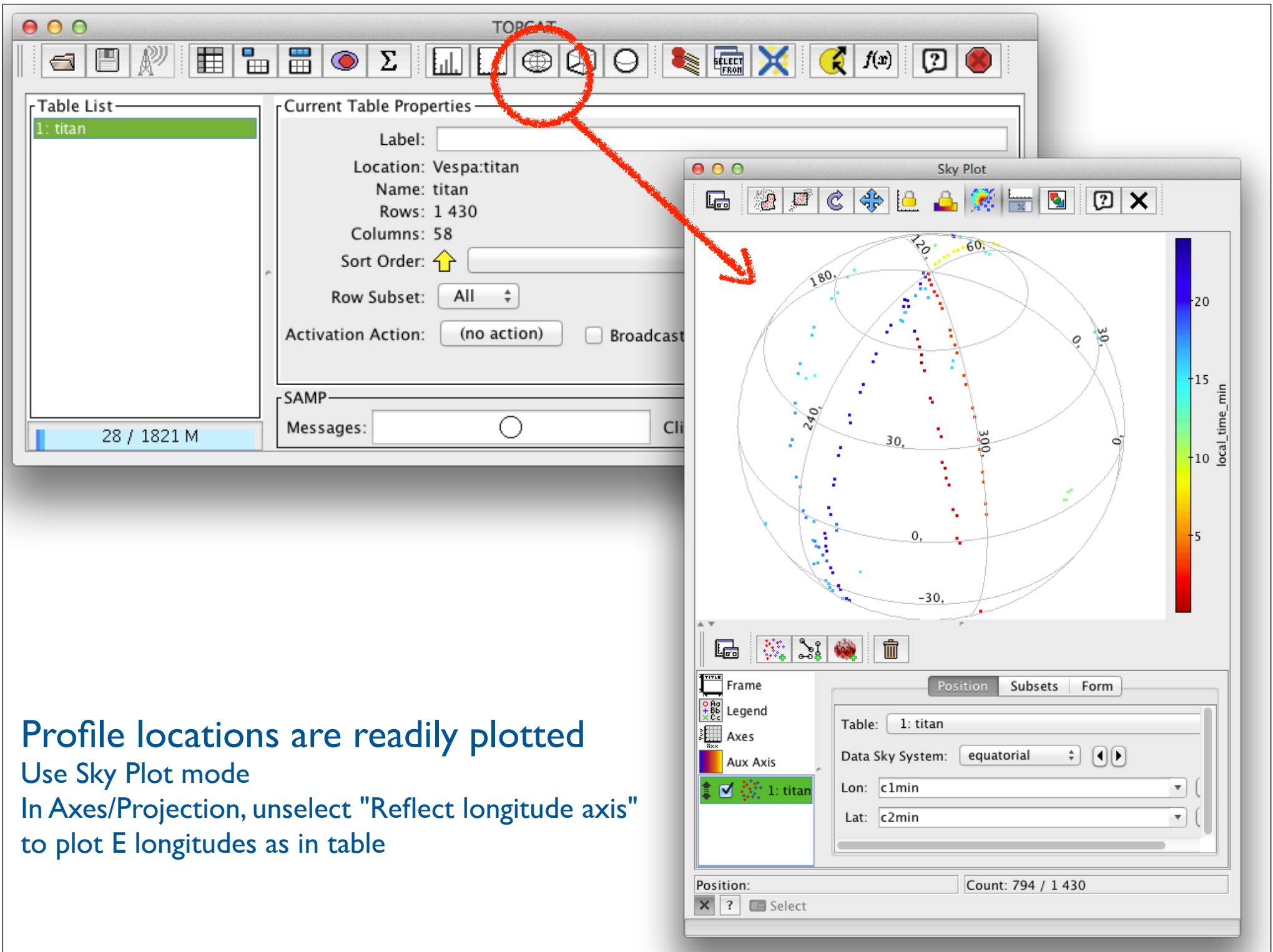
Table Browser for 1: titan

	phase_...	instrum...	instrument_name	measurement_type	access_url
86		Cassini	Composite Infrared Spectrometer#CIRS	phys.pressure#phys.temperature#phys.abund	http://voparis-srv-paris.obspm.fr/ti
87		Cassini	Composite Infrared Spectrometer#CIRS	phys.pressure#phys.temperature#phys.abund	http://voparis-srv-paris.obspm.fr/ti
88		Cassini	Composite Infrared Spectrometer#CIRS	phys.pressure#phys.temperature#phys.abund	http://voparis-srv-paris.obspm.fr/ti
89		Cassini	Composite Infrared Spectrometer#CIRS	phys.pressure#phys.temperature#phys.abund	http://voparis-srv-paris.obspm.fr/ti
90		Cassini	Composite Infrared Spectrometer#CIRS	phys.pressure#phys.temperature#phys.abund	http://voparis-srv-paris.obspm.fr/ti
91		Cassini	Composite Infrared Spectrometer#CIRS	phys.pressure#phys.temperature#phys.abund	http://voparis-srv-paris.obspm.fr/ti
92		Cassini	Composite Infrared Spectrometer#CIRS	phys.pressure#phys.temperature#phys.abund	http://voparis-srv-paris.obspm.fr/ti
93		Cassini	Composite Infrared Spectrometer#CIRS	phys.pressure#phys.temperature#phys.abund	http://voparis-srv-paris.obspm.fr/ti
94		Cassini	Composite Infrared Spectrometer#CIRS	phys.pressure#phys.temperature#phys.abund	http://voparis-srv-paris.obspm.fr/ti
95		Cassini	Composite Infrared Spectrometer#CIRS	phys.pressure#phys.temperature#phys.abund	http://voparis-srv-paris.obspm.fr/ti
96		Cassini	Composite Infrared Spectrometer#CIRS	phys.pressure#phys.temperature#phys.abund	http://voparis-srv-paris.obspm.fr/ti
97		Cassini	Composite Infrared Spectrometer#CIRS	phys.pressure#phys.temperature#phys.abund	http://voparis-srv-paris.obspm.fr/ti
98		Cassini	Composite Infrared Spectrometer#CIRS	phys.pressure#phys.temperature#phys.abund	http://voparis-srv-paris.obspm.fr/ti
99		Cassini	Composite Infrared Spectrometer#CIRS	phys.pressure#phys.temperature#phys.abund	http://voparis-srv-paris.obspm.fr/ti
100		Cassini	Composite Infrared Spectrometer#CIRS	phys.pressure#phys.temperature#phys.abund	http://voparis-srv-paris.obspm.fr/ti
101		Cassini	Composite Infrared Spectrometer#CIRS	phys.pressure#phys.temperature#phys.abund	http://voparis-srv-paris.obspm.fr/ti

A VOTable is forwarded to TOPCAT

[you may have to authorize java applets]

Click button to see the table describing the "granules"



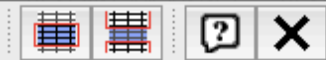


Table Browser for 1: titan

	phase_...	instrum...	instrument_name	measurement_type	access_url
86		Cassini	Composite Infrared Spectrometer#CIRS	phys.pressure#phys.temperature#phys.abund	http://voparis-srv-paris.obspm.fr/titan/to_vot_tit...
87		Cassini	Composite Infrared Spectrometer#CIRS	phys.pressure#phys.temperature#phys.abund	http://voparis-srv-paris.obspm.fr/titan/to_vot_tit...
88		Cassini	Composite Infrared Spectrometer#CIRS	phys.pressure#phys.temperature#phys.abund	http://voparis-srv-paris.obspm.fr/titan/to_vot_tit...
89		Cassini	Composite Infrared Spectrometer#CIRS	phys.pressure#phys.temperature#phys.abund	http://voparis-srv-paris.obspm.fr/titan/to_vot_tit...
90		Cassini	Composite Infrared Spectrometer#CIRS	phys.pressure#phys.temperature#phys.abund	http://voparis-srv-paris.obspm.fr/titan/to_vot_tit...
91		Cassini	Composite Infrared Spectrometer#CIRS	phys.pressure#phys.temperature#phys.abund	http://voparis-srv-paris.obspm.fr/titan/to_vot_tit...
92		Cassini	Composite Infrared Spectrometer#CIRS	phys.pressure#phys.temperature#phys.abund	http://voparis-srv-paris.obspm.fr/titan/to_vot_tit...
93		Cassini	Composite Infrared Spectrometer#CIRS	phys.pressure#phys.temperature#phys.abund	http://voparis-srv-paris.obspm.fr/titan/to_vot_tit...
94		Cassini	Composite Infrared Spectrometer#CIRS	phys.pressure#phys.temperature#phys.abund	http://voparis-srv-paris.obspm.fr/titan/to_vot_tit...
95		Cassini	Composite Infrared Spectrometer#CIRS	phys.pressure#phys.temperature#phys.abund	http://voparis-srv-paris.obspm.fr/titan/to_vot_tit...
96		Cassini	Composite Infrared Spectrometer#CIRS	phys.pressure#phys.temperature#phys.abund	http://voparis-srv-paris.obspm.fr/titan/to_vot_tit...
97		Cassini	Composite Infrared Spectrometer#CIRS	phys.pressure#phys.temperature#phys.abund	http://voparis-srv-paris.obspm.fr/titan/to_vot_tit...
98		Cassini	Composite Infrared Spectrometer#CIRS	phys.pressure#phys.temperature#phys.abund	http://voparis-srv-paris.obspm.fr/titan/to_vot_tit...
99		Cassini	Composite Infrared Spectrometer#CIRS	phys.pressure#phys.temperature#phys.abund	http://voparis-srv-paris.obspm.fr/titan/to_vot_tit...
100		Cassini	Composite Infrared Spectrometer#CIRS	phys.pressure#phys.temperature#phys.abund	http://voparis-srv-paris.obspm.fr/titan/to_vot_tit...
101		Cassini	Composite Infrared Spectrometer#CIRS	phys.pressure#phys.temperature#phys.abund	http://voparis-srv-paris.obspm.fr/titan/to_vot_tit...

The data themselves are contained in another VOTable referenced in the granule table
 — however, it is currently impossible to send a VOTable from TOPCAT to TOPCAT



Results in service titan

Show 10 entries

Column visibility Show all Hide all

granule_uid	dataprodukt_type	target_name	time_min	time_max	access_url
79N_80E_Ls301_profq_C4H2_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_C4H2.txt
79N_80E_Ls301_profq_CO2_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_CO2.txt
79N_80E_Ls301_profq_C3H8_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_C3H8.txt
79N_80E_Ls301_profq_C2H4_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_C2H4.txt
79N_80E_Ls301_profq_C2H2_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_C2H2.txt
79N_80E_Ls301_profq_C2H6_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_C2H6.txt
79N_80E_Ls301_profq_CH3C2H_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_CH3C2H.txt
79N_80E_Ls301_profq_HCN_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_HCN.txt
79N_80E_Ls301_profq_C6H6_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_C6H6.txt
79N_80E_Ls301_profq_HC3N_q_votable	profile	Titan	2005-02-14T12:00:00.000	2005-02-14T12:00:00.000	79N_80E_Ls301_profq_HC3N.txt

Showing 1 to 10 of 1,430 entries

Previous 1 2 3 4 5 ... 143 Next

Data Selection - Metadata Selection - All Data - All Metadata -

Plotting tools

TOPCAT

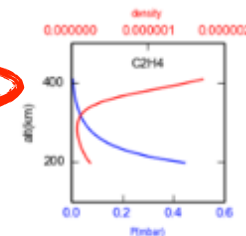
Aladin

SPLAT

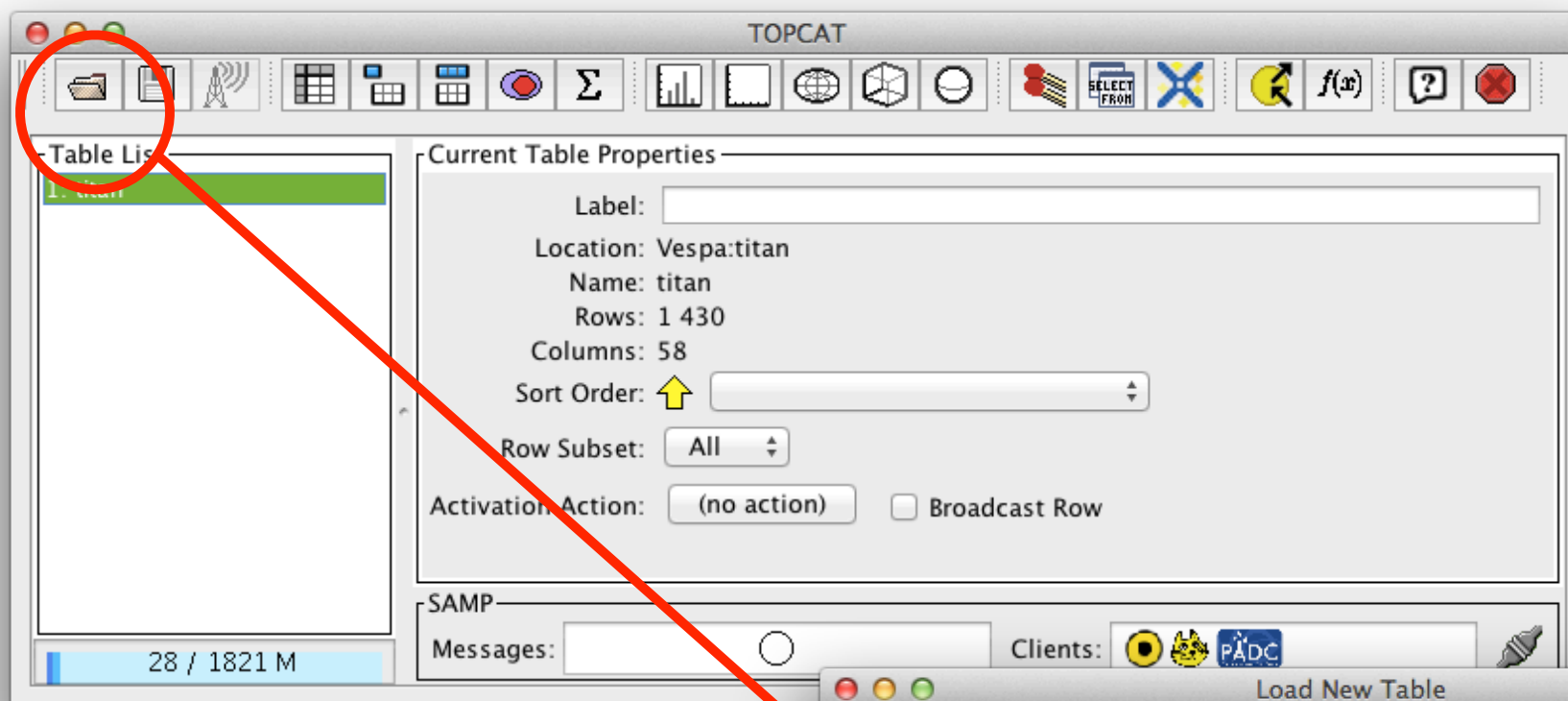
CASSIS

Example queries

Saturn in March 2012

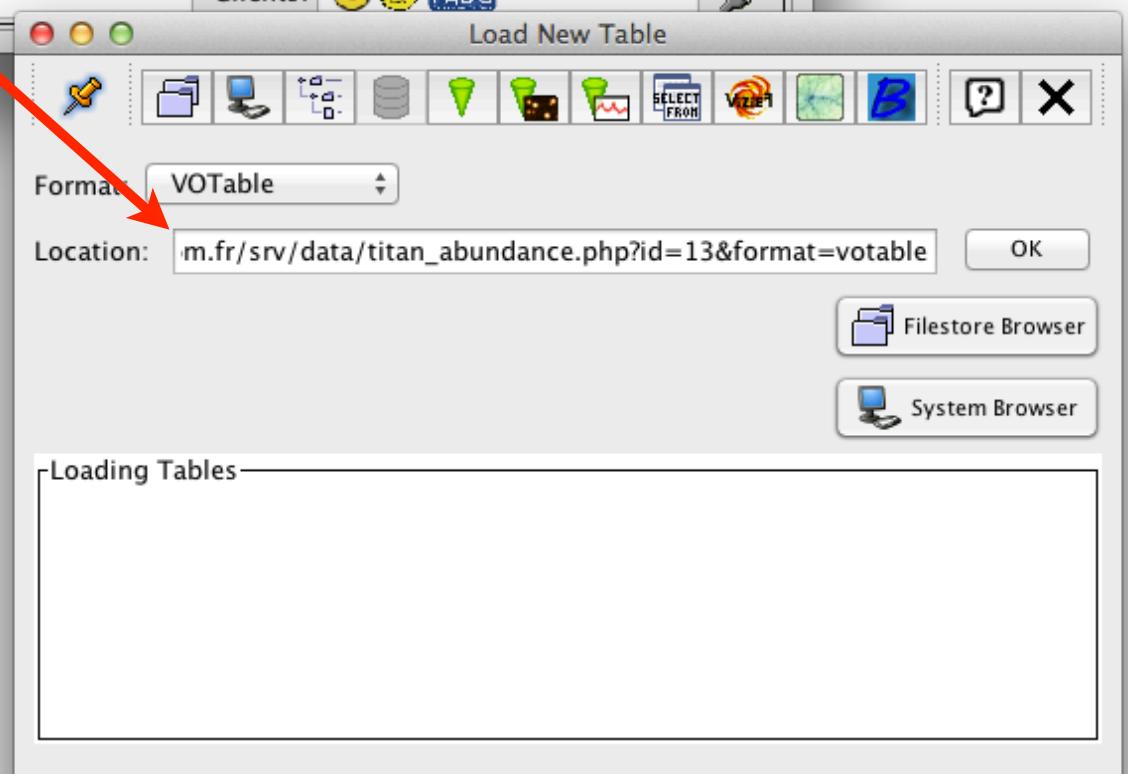


Back in VESPA result page,
click "Data selection / Send as table"



[Alternatively, you can open a data VOTable from TOPCAT]

[Copy VESPA field "access_url" & paste it in Open dialog/Location field]



TOPCAT

Table List

- 1: titan
- 2: 40S_111E_Ls10_2010_06_...
- 3: 54S_280E_Ls320_profq_HC...
- 4: 66N_306E_Ls359_profq_CO2...

Current Table Properties

Label: 66N_306E_Ls359_profq_CO2.txt

Location: http://voparis-srv-paris.obspm.fr/titan/to_vot_titan.py?fileurl=http://vo...

Name: 66N_306E_Ls359_profq_CO2.txt

Rows: 27

Columns: 6

Sort Order:

Row Subset: All

Activation

SAMP

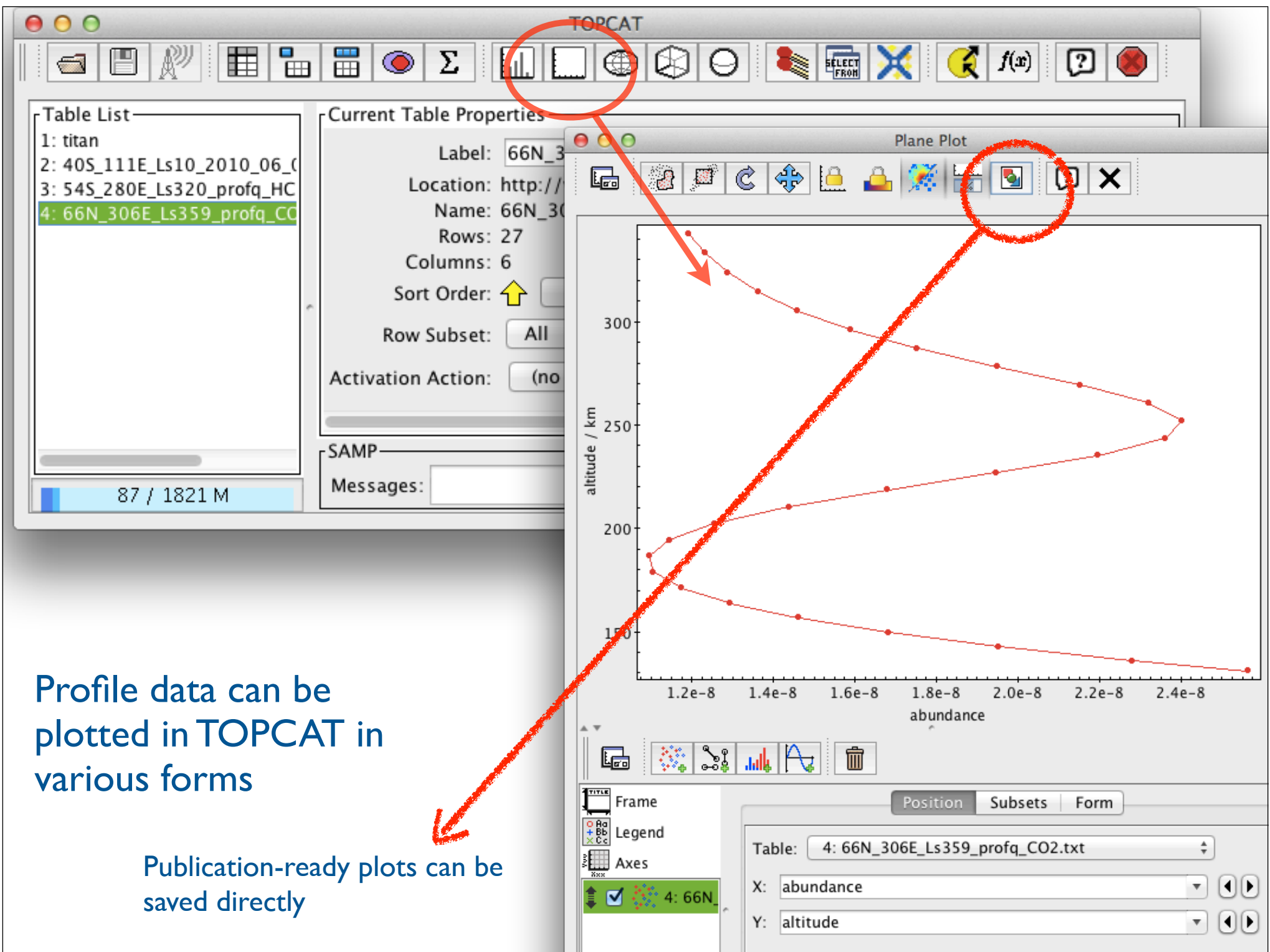
Messages: 87 / 1821 M

TOPCAT(2): Table Browser

Table Browser for 2: titan_abundance.php?id=8&format=votable

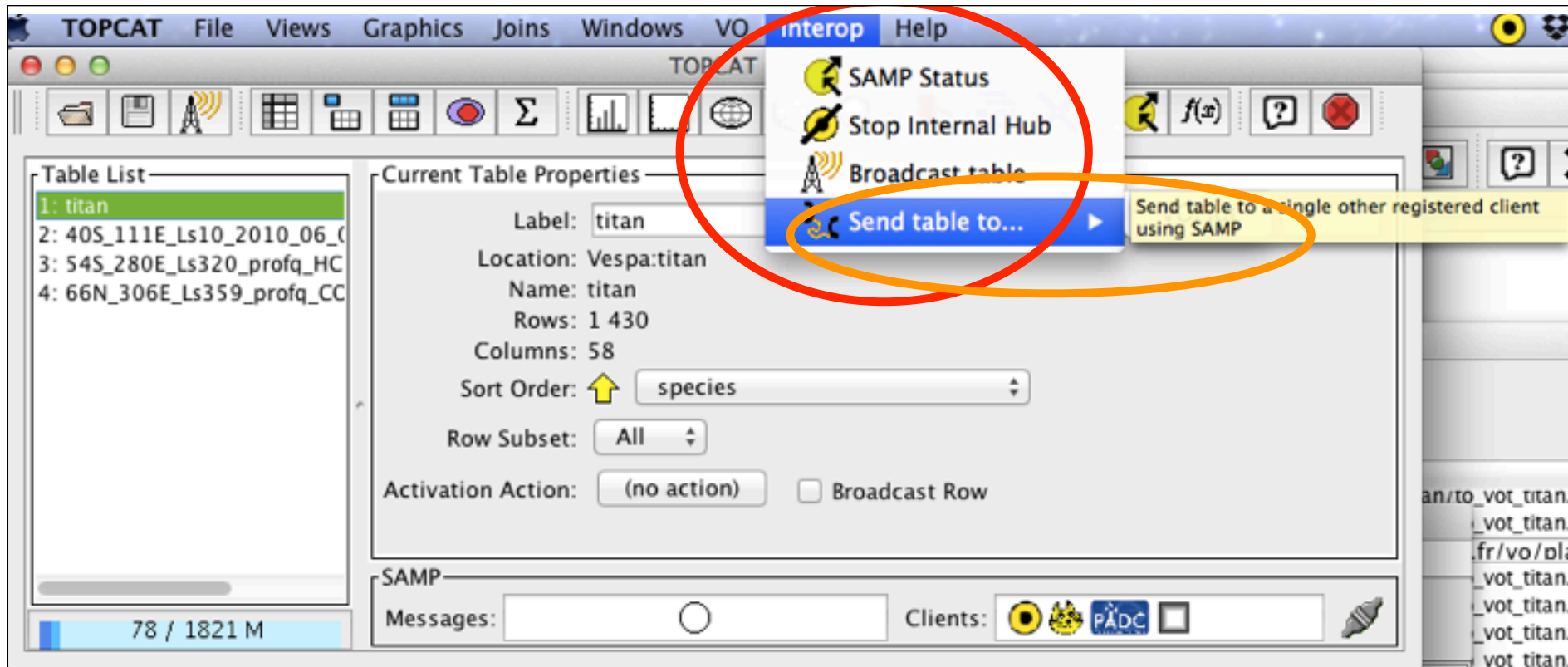
	Altitude	P	T	q_HC3N	q_min	q_max
1	222,62	0,4586	178,29	7,424000E-10	4,616930E-10	1,023110E-9
2	214,92	0,5417	177,12	6,280000E-10	3,784290E-10	8,775710E-10
3	207,33	0,6397	175,35	5,172000E-10	2,979530E-10	7,364470E-10
4	199,86	0,7556	173,48	4,153000E-10	2,261550E-10	6,044450E-10
5	192,51	0,8923	171,61	3,258000E-10	1,661420E-10	4,854580E-10
6	185,27	1,054	169,79	2,505000E-10	1,184770E-10	3,825230E-10
7	178,14	1,245	168,07	1,895000E-10	8,259970E-11	2,964000E-10
8	171,13	1,47	166,32	1,416000E-10	5,638990E-11	2,268100E-10
9	164,23	1,736	164,3	1,050000E-10	3,799340E-11	1,720070E-10
10	157,45	2,051	162,12	7,764000E-11	2,537590E-11	1,299040E-10
11	150,79	2,422	160,11	5,758000E-11	1,687960E-11	9,828040E-11
12	144,59	2,835	158,	4,371000E-11	1,150320E-11	7,591680E-11

This new table contains the data themselves

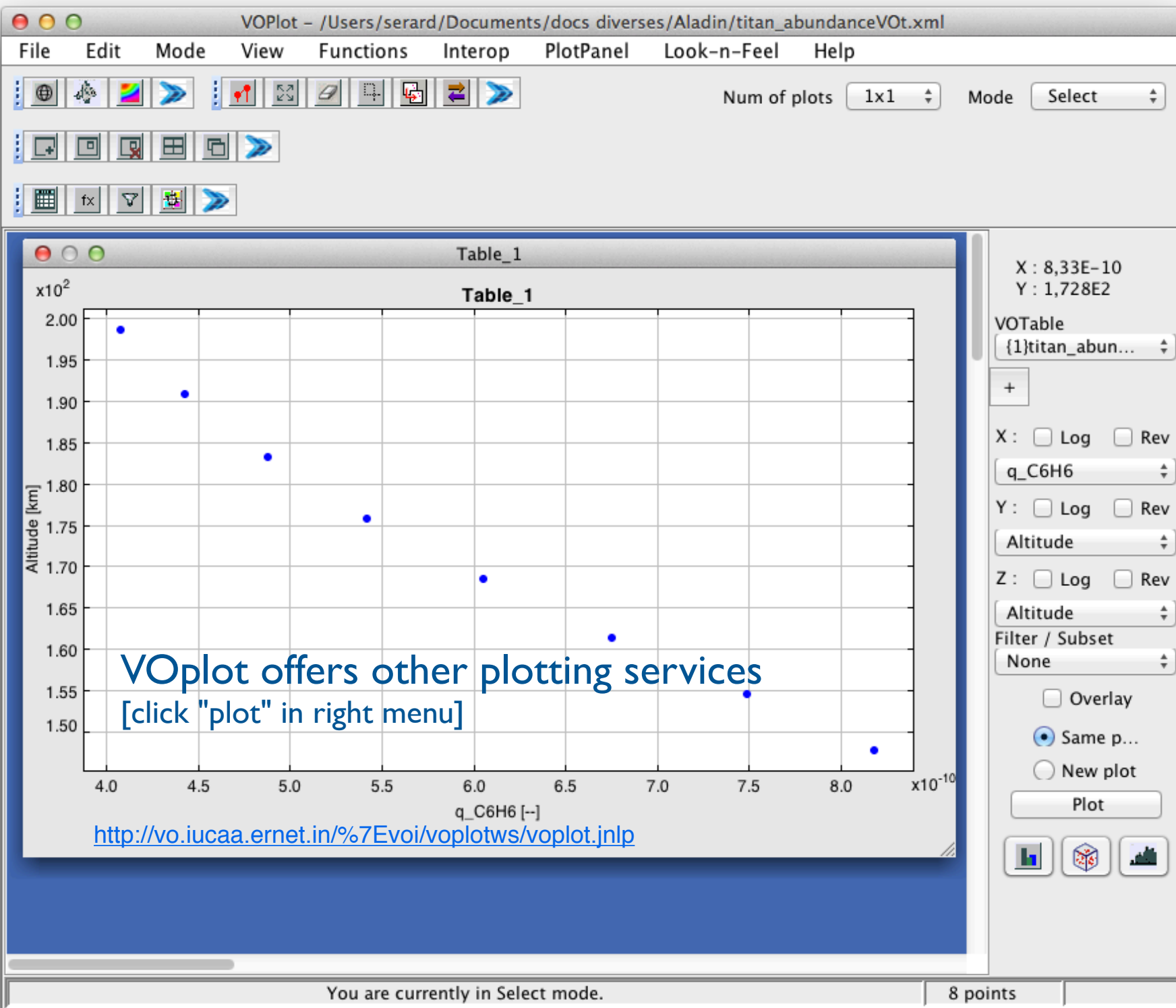


Profile data can be plotted in TOPCAT in various forms

Publication-ready plots can be saved directly



The VOTable can be transmitted
to other VO plotting tools, e. g. VOplot
[alternatively, copy URL on disk then open in VOplot]



http://voparis-srv.obspm.fr/srv/data/titan_abundance.php?id=83&format=votable

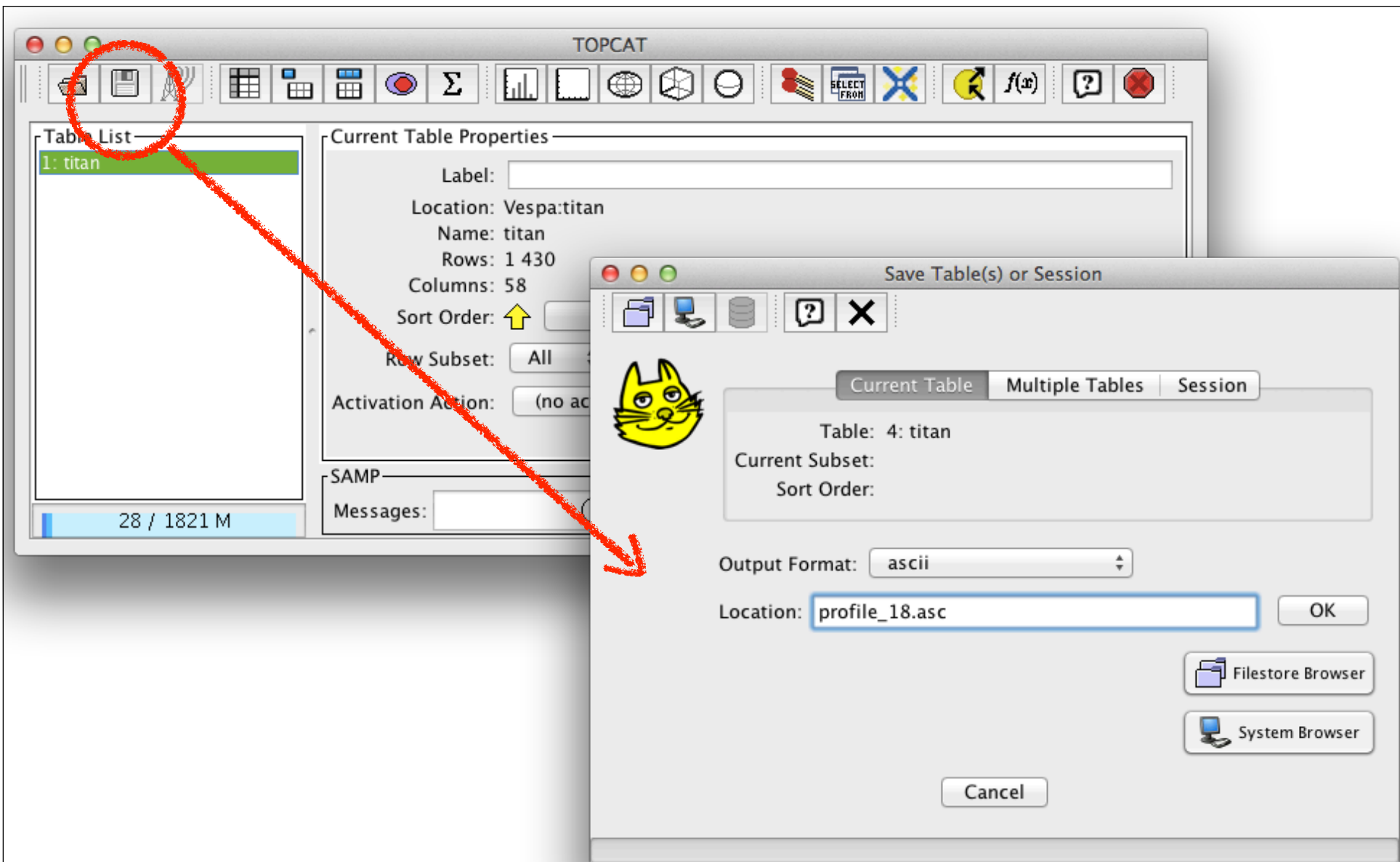
http://voparis-srv.obspm.fr/srv/data/titan_abundance.php?id=83&format=votable

This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
<?xml version="1.2" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.ivoa.net/xml/VOTable/v1.2" version="1.2"
xsi:schemaLocation="http://www.ivoa.net/xml/VOTable/v1.2 http://www.ivoa.net/xml/VOTable/VOTable-1.2.xsd">
  <RESOURCE type="results">
    <DESCRIPTION>Vertical abundance of HC3N in Titan's atmosphere</DESCRIPTION>
    <TABLE>
      <PARAM ID="element" name="Element" ucd="phys.atmol.element" datatype="char" unit="--" value="HC3N"/>
      <PARAM ID="latitude" name="Latitude" ucd="pos.latitude" datatype="double" unit="deg" value="78.5"/>
      <PARAM ID="longitude" name="Longitude" ucd="pos.longitude" datatype="double" unit="deg" value="-80"/>
      <FIELD ID="altitude" name="Altitude" ucd="pos.titan.altitude" datatype="double" unit="km">
        <DESCRIPTION>Altitude</DESCRIPTION>
      </FIELD>
      <FIELD ID="pressure" name="P" ucd="phys.pressure" datatype="double" unit="mbar">
        <DESCRIPTION>Pressure</DESCRIPTION>
      </FIELD>
      <FIELD ID="temperature" name="T" ucd="phys.temperature" datatype="double" unit="K">
        <DESCRIPTION>Temperature</DESCRIPTION>
      </FIELD>
      <FIELD ID="q_HC3N" name="q_HC3N" ucd="phys.abund.HC3N" datatype="double" unit="--">
        <DESCRIPTION>Abundance of HC3N</DESCRIPTION>
      </FIELD>
      <FIELD ID="q_min" name="q_min" ucd="stat.error;phys.abund;stat.min" datatype="double" unit="--">
        <DESCRIPTION>Max error on abundance value</DESCRIPTION>
      </FIELD>
      <FIELD ID="q_max" name="q_max" ucd="stat.error;phys.abund;stat.max" datatype="double" unit="--">
        <DESCRIPTION>Min error on abundance value</DESCRIPTION>
      </FIELD>
      <DATA>
        <TABLEDATA>
          <TR>
            <TD>485.46</TD>
            <TD>0.2135E-02</TD>
            <TD>184.69</TD>
            <TD>0.6334E-06</TD>
            <TD>5.13285e-07</TD>
            <TD>7.53515e-07</TD>
          </TR>
          <TR>
            <TD>474.43</TD>
            <TD>0.2584E-02</TD>
            <TD>187.94</TD>
            <TD>0.5981E-06</TD>
            <TD>4.86148e-07</TD>
            <TD>7.10052e-07</TD>
          </TR>
          <TR>
            <TD>463.28</TD>
            <TD>0.3127E-02</TD>
            <TD>191.27</TD>
            <TD>0.5656E-06</TD>
            <TD>5.13285e-07</TD>
            <TD>7.10052e-07</TD>
          </TR>
        </TABLEDATA>
      </DATA>
    </TABLE>
  </RESOURCE>
</VOTABLE>
```

[paste data VOTable URL
in your browser]

The data VOTable can be
visualized in a browser
[ascii file with xml tags]



The data table can be saved from TOPCAT in simple ascii format, as well as CSV, FITS...
e. g., for easy ingestion in IDL/GDL or other environments

