

# Titan Use case

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# Titan profiles database

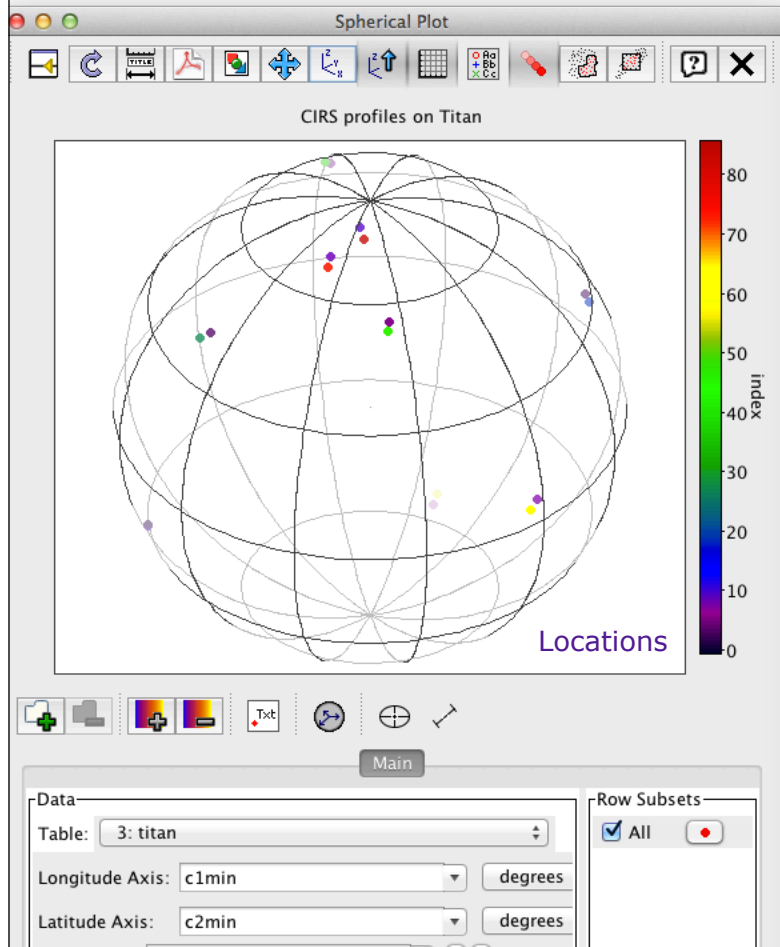
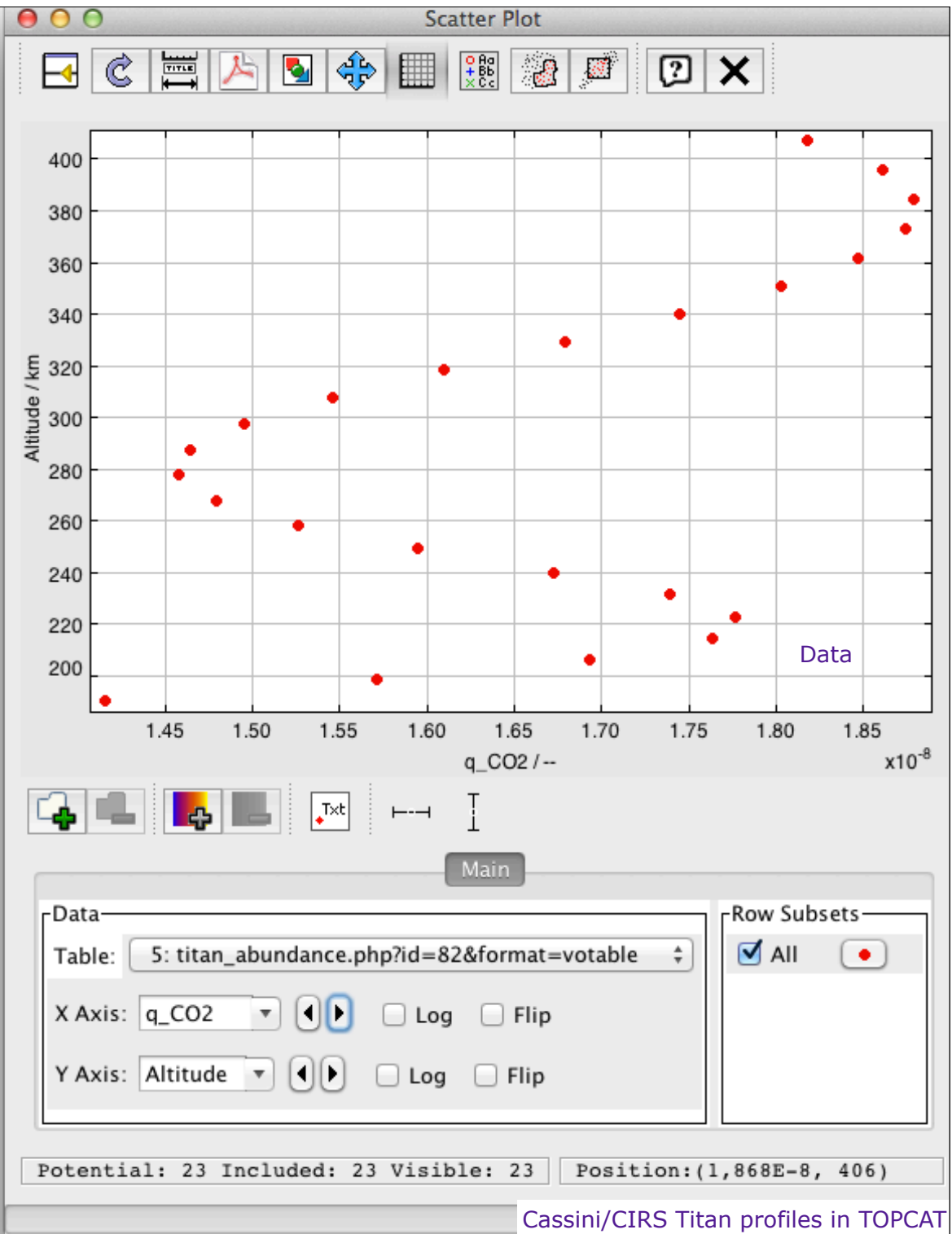
## Typical example of VO data service

- Data from CIRS / Cassini, outcome of a publication
- P, T and gaz abundance profiles retrieved from spectral inversion in mid-atm
- Currently 93 profiles published
- Some 100s profiles to be added in 2014 from another publication
- Main parameters are : location, time, local time, season...

See recorded tutorial/demo here:

[http://voparis-europlanet.obspm.fr/utilities/Tuto\\_Titan\\_TopCat.pdf](http://voparis-europlanet.obspm.fr/utilities/Tuto_Titan_TopCat.pdf)

# Titan profiles database



# Europlanet Client



All VO Custom resource

## Query form: All VO

Target name: **titan** Target class: asteroid, comet, dwarf\_planet, exoplanet, interplanetary\_medium, planet

Resource type: granule

Dataset ID: [input]

Time selection: Data range is included in the range between

Time min: [input] Time max: [input]

Dataproduct: **profile**, **volume**, cube

Measurement type: [input]

Spatial name: **body**

Longitude min: [input] Longitude max: [input]

Latitude min: [input] Latitude max: [input]

z min: [input] z max: [input]

## Useful info

### VO applications

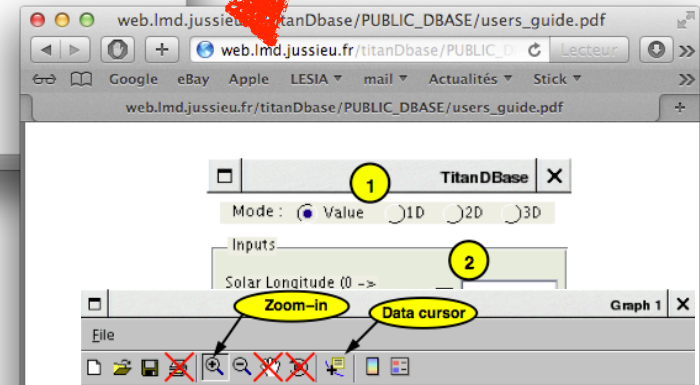
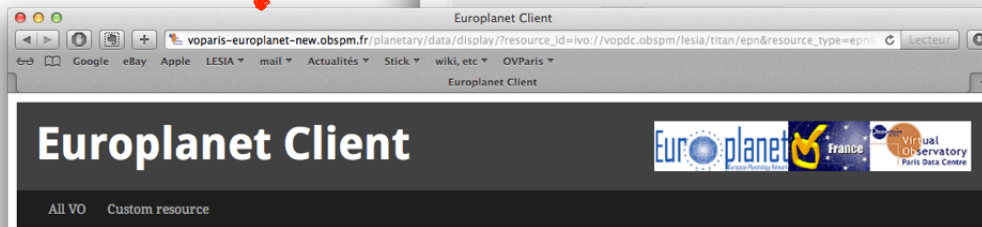
- TOPCAT
- Aladin

### Example queries

- Saturn in March 2012

Science case:  
Titan atm.

*\*Titan GCM\**  
[with VO web interface]



## Query result on schema titan

dataprod_type	target_name	time_min	time_max	access_url
profile	titan	2007-03-25T12:00:00	2007-03-25T12:00:00	titan_abundance.php?id=1&format=votable
profile	titan	2007-03-25T12:00:00	2007-03-25T12:00:00	titan_abundance.php?id=2&format=votable
profile	titan	2007-03-25T12:00:00	2007-03-25T12:00:00	titan_abundance.php?id=3&format=votable
profile	titan	2007-03-25T12:00:00	2007-03-25T12:00:00	titan_abundance.php?id=4&format=votable
profile	titan	2007-03-25T12:00:00	2007-03-25T12:00:00	titan_abundance.php?id=5&format=votable
profile	titan	2007-03-25T12:00:00	2007-03-25T12:00:00	titan_abundance.php?id=6&format=votable
profile	titan	2007-03-25T12:00:00	2007-03-25T12:00:00	titan_abundance.php?id=7&format=votable
profile	titan	2007-03-25T12:00:00	2007-03-25T12:00:00	titan_abundance.php?id=8&format=votable
profile	titan	2007-03-25T12:00:00	2007-03-25T12:00:00	titan_abundance.php?id=9&format=votable
profile	titan	2007-01-29T12:00:00	2007-01-29T12:00:00	titan_abundance.php?id=10&format=votable
profile	titan	2007-01-29T12:00:00	2007-01-29T12:00:00	titan_abundance.php?id=11&format=votable

## Useful info

### VO applications

- TOPCAT
- Aladin

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

then check regional radar maps during the period, etc...

