



VO Tools - VAMDC

M. Doronin (Portal), N. Moreau (VO-Tools), VAMDC Support, LERMA2, VO-PDC

Linking the VAMDC Portal to
Virtual Observatory Tools

A key element of the VAMDC infrastructure is the web portal (portal.vamdc.eu), that provides an unified way to query the VAMDC registered atomic and molecular databases. A request is built through a graphical user interface and sent to all the databases. They return data in a common XML format called XSAMS.



The portal provides tools called "Processors" that can convert a XSAMS file into another format. The Processors called « Molecular Spectroscopy XSAMS to HTML » and « Atomicxsams2HTML » display for respectively molecular and atomic spectroscopic data » an HTML page where columns and lines can be selected. The selected data can be exported into 2 formats: a CSV table where column are separated by « , » and a VOTable which is a Virtual Observatory (VO) standard used to exchange data among VO Tools.



The VOTable can be sent to any VO Tool launched on the users' desktop using the « send via SAMP » functionality of the processor. SAMP is another VO Standard (<http://www.ivoa.net/documents/SAMP/>) that allows several



applications to exchange data directly, without the need to save and load a file locally.

In the example below, the file is sent to an application called TOPCAT (<http://www.star.bris.ac.uk/~mbt/topcat/>) which is dedicated to the visualisation of tabular data. All functionalities of TOPCAT can be used on the selected VAMDC data.

Figure: Molecular data displayed by the processor and sent to TOPCAT VO Tool.

The screenshot shows the TOPCAT VO Tool interface. The main window displays a table with columns: Select ID, Owner, Processed, Program, X, Y, Lower magnitude, Lower total distance mag, Lower radius distance mag, Lower QM, Upper magnitude, Upper total distance mag, Upper radius distance mag, and Upper QM. The table contains several rows of data. A 'Table Properties' dialog box is open in the foreground, showing details for 'Table 1', including its location, name, sort order, and activation action.

Select ID	Owner	Processed	Program	X	Y	Lower magnitude	Lower total distance mag	Lower radius distance mag	Lower QM	Upper magnitude	Upper total distance mag	Upper radius distance mag	Upper QM
6	C-15-D-18	13471458	13471458	0	0	0	0	0	0	0	0	0	0
7	C-15-D-18	13471458	13471458	0	0	0	0	0	0	0	0	0	0
8	C-15-D-18	13471458	13471458	0	0	0	0	0	0	0	0	0	0
9	C-15-D-18	13471458	13471458	0	0	0	0	0	0	0	0	0	0
10	C-15-D-18	13471458	13471458	0	0	0	0	0	0	0	0	0	0
11	C-15-D-18	13471458	13471458	0	0	0	0	0	0	0	0	0	0
12	C-15-D-18	13471458	13471458	0	0	0	0	0	0	0	0	0	0
13	C-15-D-18	13471458	13471458	0	0	0	0	0	0	0	0	0	0
14	C-15-D-18	13471458	13471458	0	0	0	0	0	0	0	0	0	0
15	C-15-D-18	13471458	13471458	0	0	0	0	0	0	0	0	0	0
16	C-15-D-18	13471458	13471458	0	0	0	0	0	0	0	0	0	0
17	C-15-D-18	13471458	13471458	0	0	0	0	0	0	0	0	0	0
18	C-15-D-18	13471458	13471458	0	0	0	0	0	0	0	0	0	0
19	C-15-D-18	13471458	13471458	0	0	0	0	0	0	0	0	0	0
20	C-15-D-18	13471458	13471458	0	0	0	0	0	0	0	0	0	0

Support to access VAMDC Databases

You can implement all the protocols that VAMDC has designed: <http://www.vamdc.eu/standards>.

You might want to save time and to use our libraries in Java or other languages: <http://www.vamdc.eu/software>.

You may need some tutorials: see <http://tutorial.vamdc.org>.

You may need some help: send a mail to support@vamdc.eu.

You may want to exchange: <http://forum.vamdc.org>

