



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 a web interface with a table of molecular data. The table has columns for 'Select ID', 'Owner', 'Progenitor', 'A', 'Lower resolution', 'Lower resolution upper/l', 'Lower resolution lower/l', 'Lower QN', 'Upper resolution', 'Upper resolution upper/l', 'Upper resolution lower/l', and 'Upper QN'. The data rows include various identifiers and numerical values. Overlaid on the table is a window titled 'TOPCAT (1) - Table Browser'. This window shows a 'Table Browser for 1: Table_1' with columns for 'Order ID', 'Progenitor', 'A', 'Lower QN', 'Lower ID', 'Upper ID', 'Upper QN', and 'Upper ID'. It also displays a 'Current Table Properties' dialog box with fields for 'Table Name', 'Location', 'Rows', 'Columns', 'Sort Order', 'Row Subset', and 'Activation Action'. The 'Messages' area at the bottom shows '54 / 1775 M'.

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>