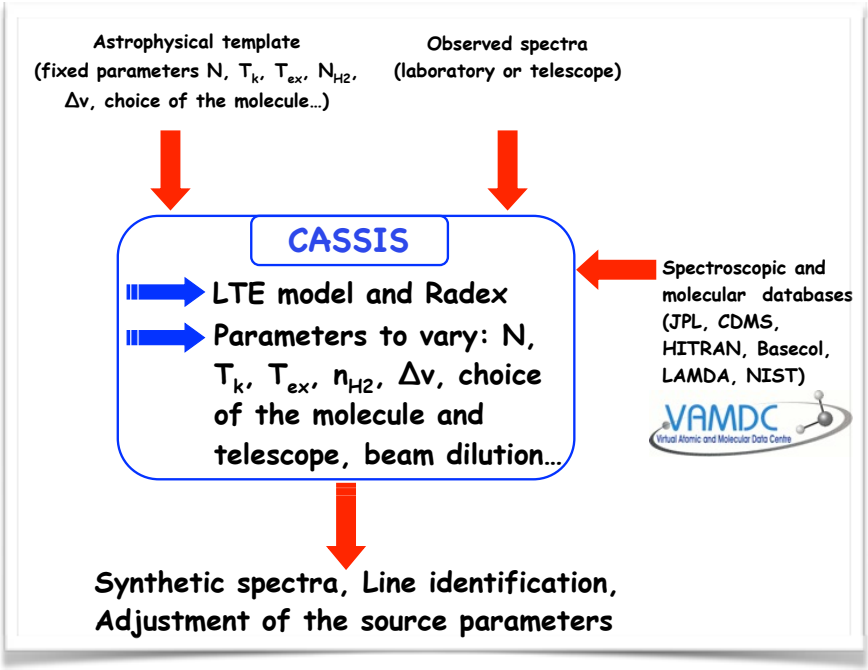

CASSIS and VAMDC

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Accessing VAMDC from a standalone spectra analysis software: CASSIS

The CASSIS (Centre d'Analyse Scientifique de Spectres Instrumentaux et Synthétiques) software has been developed by CESR/IRAP since 2005. All information about it can be found on a dedicated website: http://cassis.irap.omp.eu. The functionalities are represented in the flow chart above.

CASSIS uses the Single Spectral Access (SSA) Protocol to access the IVOA services in order to retrieve any spectra (Hubble, Corot, ISO, Pollux, etc) via our SSA module. Also CASSIS uses the SAMP messaging protocol that enables astronomy software tools to interoperate and communicate.

CASSIS is able to retrieve some useful information for the modeling (LTE or non-LTE) or identification from databases (CDMS, JPL, BASECOL) through the VAMDC TAP protocol based on IVOA format. TAP provides virtual data and allows to plug in the query language VSS2 and the data model VAMDC-XSAMS (the latter being an output format).

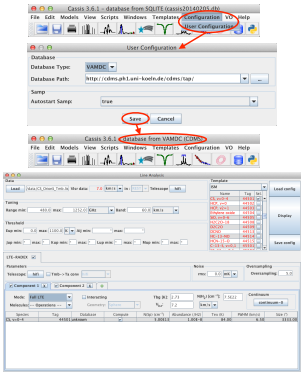

Figure 1: The top panels show how to change the user configuration in order to swap from a local SQLite database to the VAMDC database. The bottom panel is a snapshot of the Line Analysis module with parameters such that CASSIS will search all the CS transitions having an Eup < 1100 K, potentially present in the selected data file and will overlay an LTE model. The result is displayed in Figure

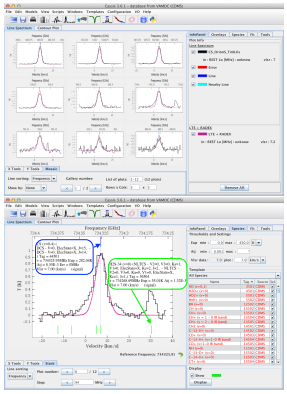

Figure 2: The top panel shows the result corresponding to the Line Analysis window of Figure 1. All the transitions found are displayed as a mosaic and clicking on one of the lines allows the user to zoom on it. The bottom panel shows a zoom of line number 6, on which transitions (with Eup < 450 K and Aij > 10^{-3}) from other species have been overlaid, allowing the identification of an $H_2{}^{34}S$ line next to the CS line.

Support to access VAMDC Databases

You can implement 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