

TOPCAT: Tool for Operations on Catalogues And Tables

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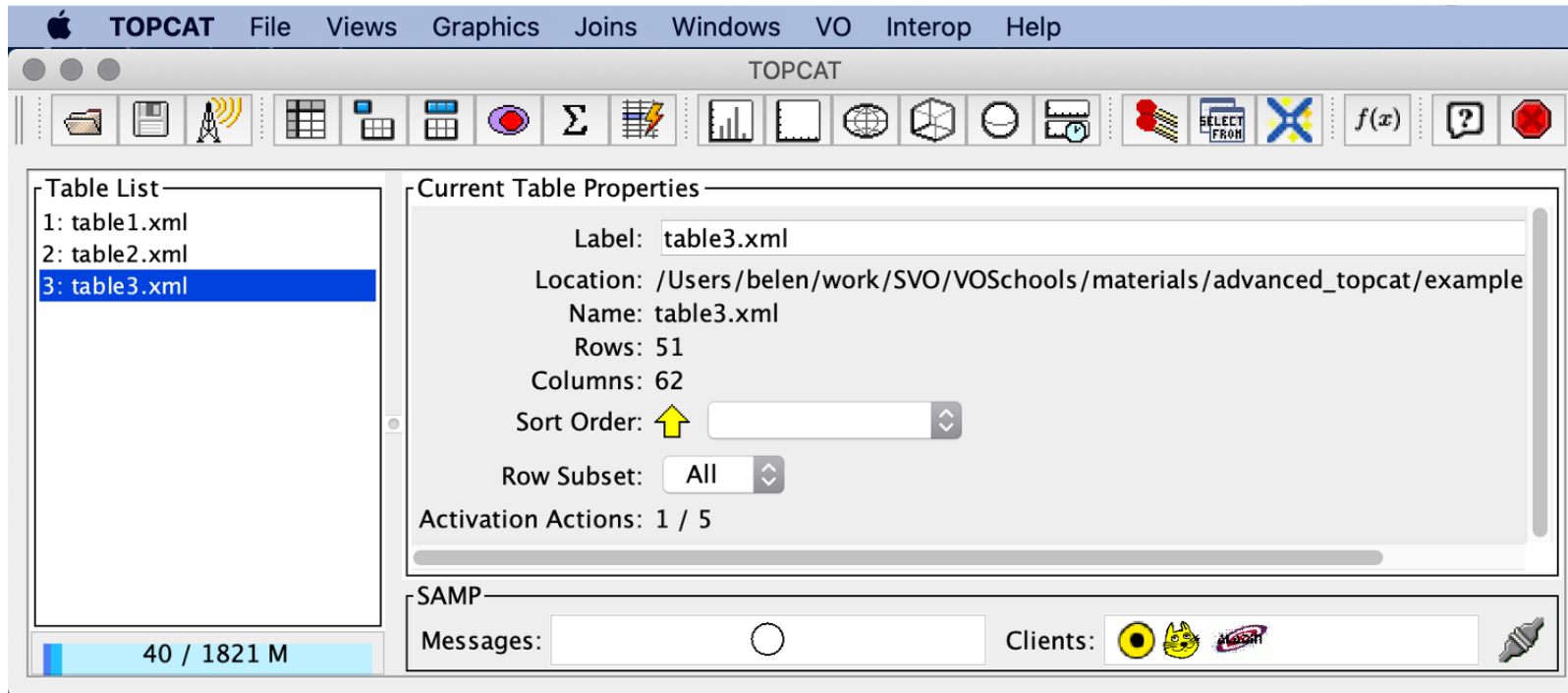


VO School



TOPCAT

... does everything you want with tables



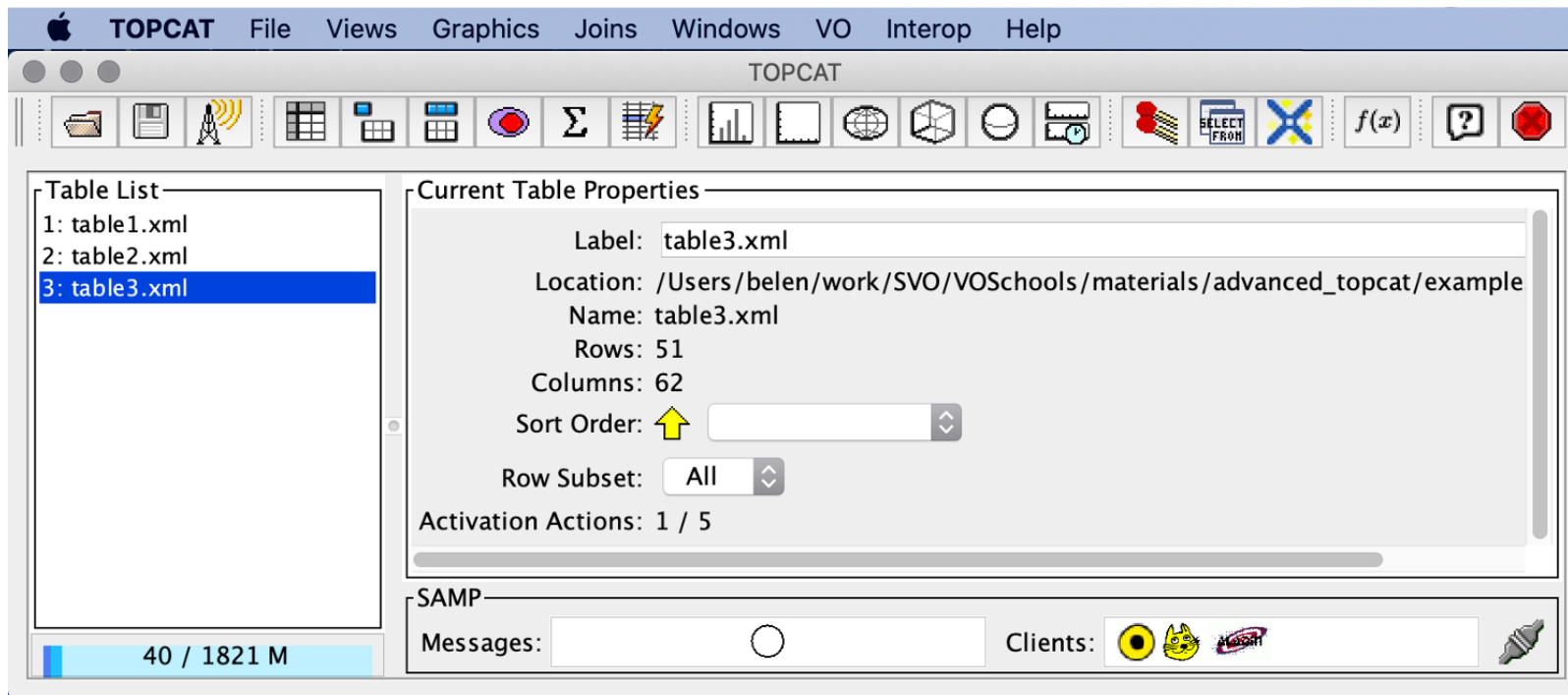
TOPCAT

The screenshot shows the TOPCAT application window with the following annotations:

- Graphical representations**: Points to the 'Graphics' menu item.
- Window control**: Points to the 'Windows' menu item.
- View options**: Points to the 'Views' menu item.
- Joins and matches**: Points to the 'Joins' menu item.
- VO queries**: Points to the 'VO' menu item.
- Interoperability**: Points to the 'Interop' menu item.
- Help menu**: Points to the 'Help' menu item.
- File operations**: Points to the 'File' menu item.
- Exit**: Points to the red stop icon in the toolbar.
- Table list**: Points to the 'Table List' panel on the left, which contains a list of tables: 1: table1.xml, 2: table2.xml, 3: table3.xml (selected).
- Info on selected table**: Points to the 'Current Table Properties' panel, which displays details for 'table3.xml', including its location, name, 51 rows, and 62 columns.
- Sorting and filtering**: Points to the 'Sort Order' dropdown menu in the 'Current Table Properties' panel.
- Memory usage**: Points to the '40 / 1821 M' indicator in the bottom status bar.
- Available VO clients**: Points to the 'Clients' section in the bottom status bar, which shows icons for various VO clients.

TOPCAT

Shall we try it?

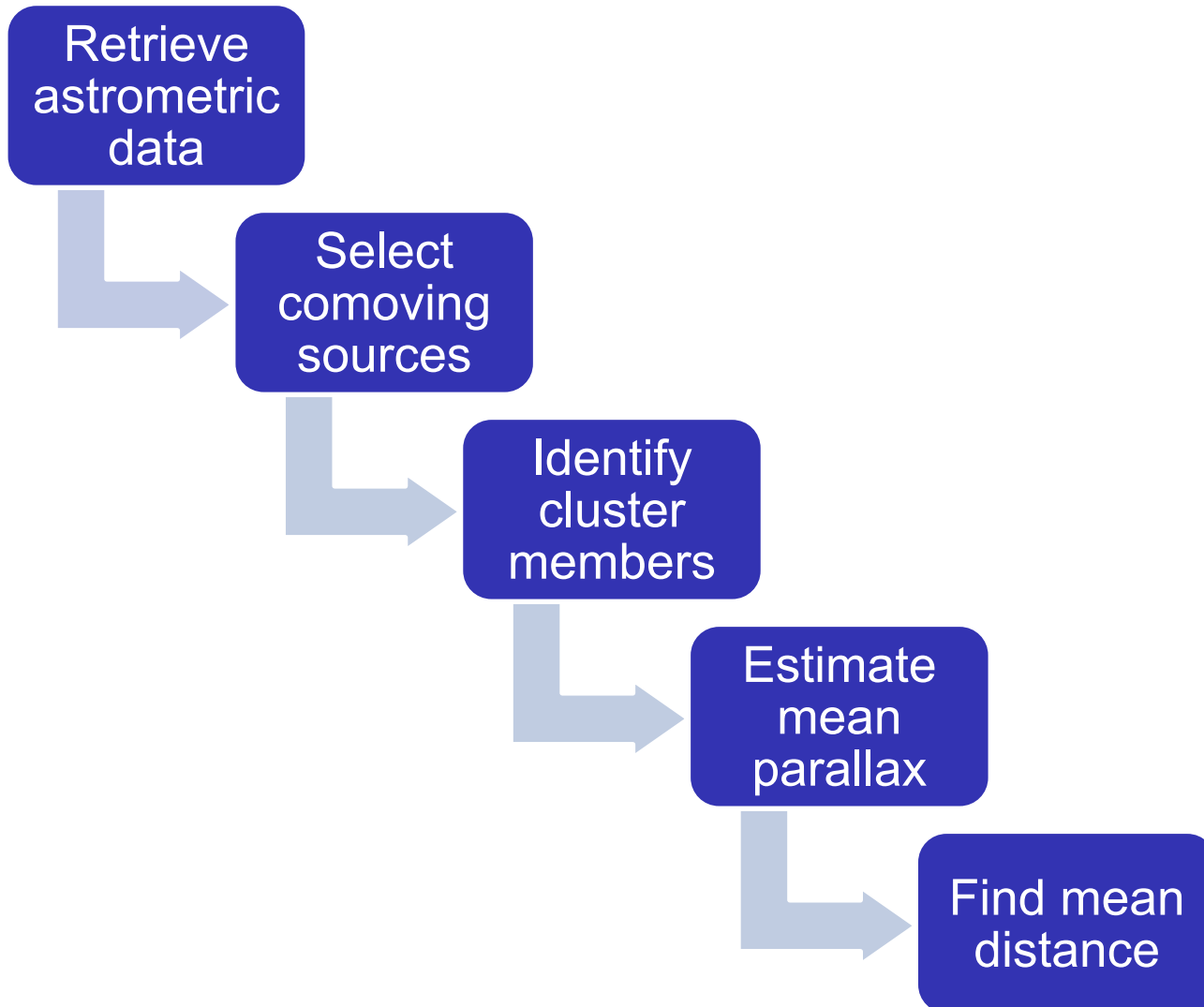


THE DISTANCE TO THE PLEIADES




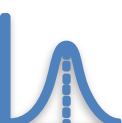


Same age, chemistry, and kinematics.

THE DISTANCE TO THE PLEIADES



Step by step overview

Block	Task	Steps	Output	Done?
1 	Data discovery	3 to 7	3089 entries	✓
2 	Co-moving sources	8 to 13	'comoving' subset	✓
3 	Cluster members	14 to 22	Histogram with likely cluster members	✓
4 	Parallax and distance	23 to 38	Estimate of distance and its error	✓

CHALLENGES

- ★ **Repeat the search for brown dwarfs in 2MASS and SDSS using TOPCAT**

Can you replicate the results obtained using Aladin?

- ★ **Customize the 3D visualization**

Can you tune the cube to have real dimensions (e.g. three dimensions in pc)?

- ★ **Repeat the tutorial for M44 and build the H-R diagram**

Can you see some evolutionary features comparing the two clusters?

Further information

- TOPCAT (last version; currently 4.9): <https://www.star.bris.ac.uk/~mbt/topcat/>
- TOPCAT/STILTS advanced tutorial: <http://andromeda.star.bris.ac.uk/topcat/tutorial-asterics1/>
- TOPCAT virtual lesson (in Spanish): <https://youtu.be/IJ3qeliOOGY>
- Some other use cases: <http://dc.g-vo.org/VOTT>