

TOPCAT Latest

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`$Id: topcat.tex,v 1.6 2014/03/12 11:26:42 mbt Exp $`

Overview

- Recent releases
- Visualisation features
- VO features
- Coming soon

Previous Release

TOPCAT v4.0-1, release 1 July 2013

- New feature:
 - ▷ Support (read-only) for CDF (NASA Common Data Format) files
 - ▷ SAMP MType `table.load.cdf` supported
- Better behaviour:
 - ▷ HTTP Basic Authentication: now pops up User/Password dialogue
 - ▷ Avoid overloading VO services with parallel multi-cone searches
 - terminate abandoned queries properly
 - default maximum value for query parallelism
- Other stuff.
- Now on github ([Starlink/starjava](https://github.com/Starlink/starjava))

Current Release

TOPCAT v4.1, release 7 March 2014

- VO

- ▷ Bugfix: can now talk to VAO/STScI registry!
- ▷ Bugfix (JSAMP 1.3-4): SAMP Hub supports `https` web clients
- ▷ Experimental SAMP Mtype: `table.get.stil`

- Visualisation

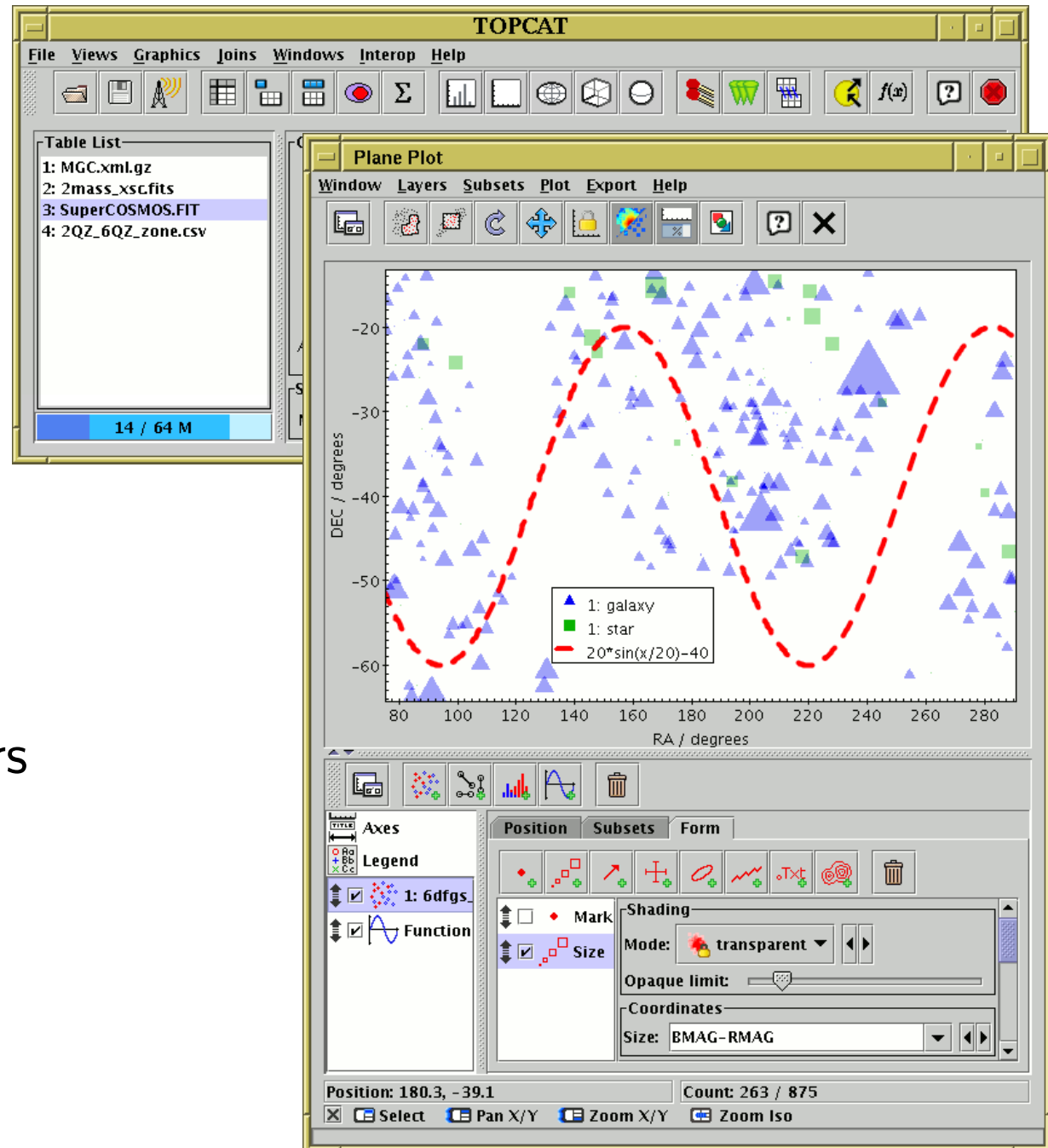
- ▷ First non-experimental release of new plotting windows (introduced at v4.0b March 2013, but experimental and a bit hidden)

- UI changed/improved
- Navigation improved
- New plot types:
 - histogram, time series
- Bugfixes
- Many miscellaneous tweaks and improvements



New Plots: UI

- New plot windows from main toolbar
- (old ones still in **Graphics** menu)
- Build plot by adding layers to a stack



New Plots: Navigation

- 2d navigation:

- Left-button drag: pan (*also in 4.0*)
- Right-button drag: 2d stretch zoom

- 3d navigation:

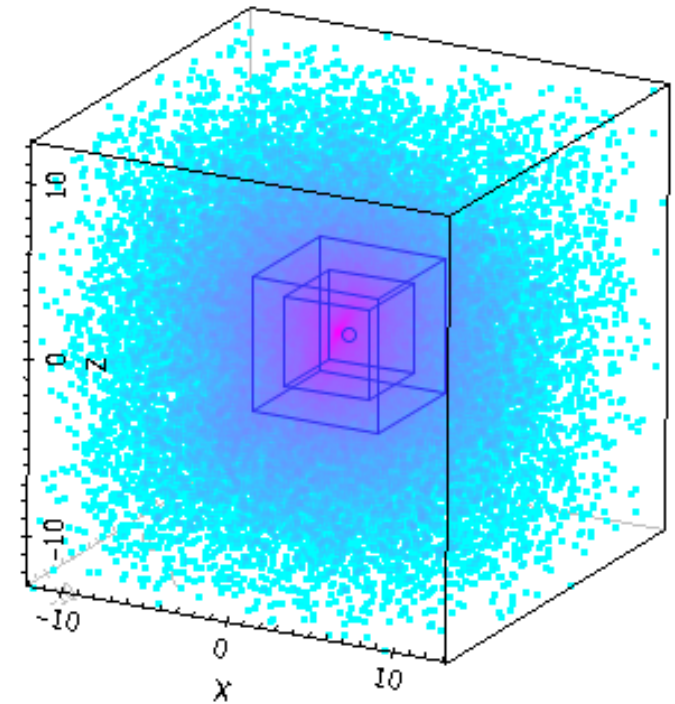
- Left-button drag: rotate (*also in 4.0*)
- Right-button click: re-center (*also in 4.0*)
- Right-button drag: 2d stretch zoom in facing directions
- Middle-button drag: 2d pan in facing directions

- Large/slow plots:

- Progress bar for plot drawing during navigation (optional)
- Sketch sub-sample intermediate positions during navigation (optional)

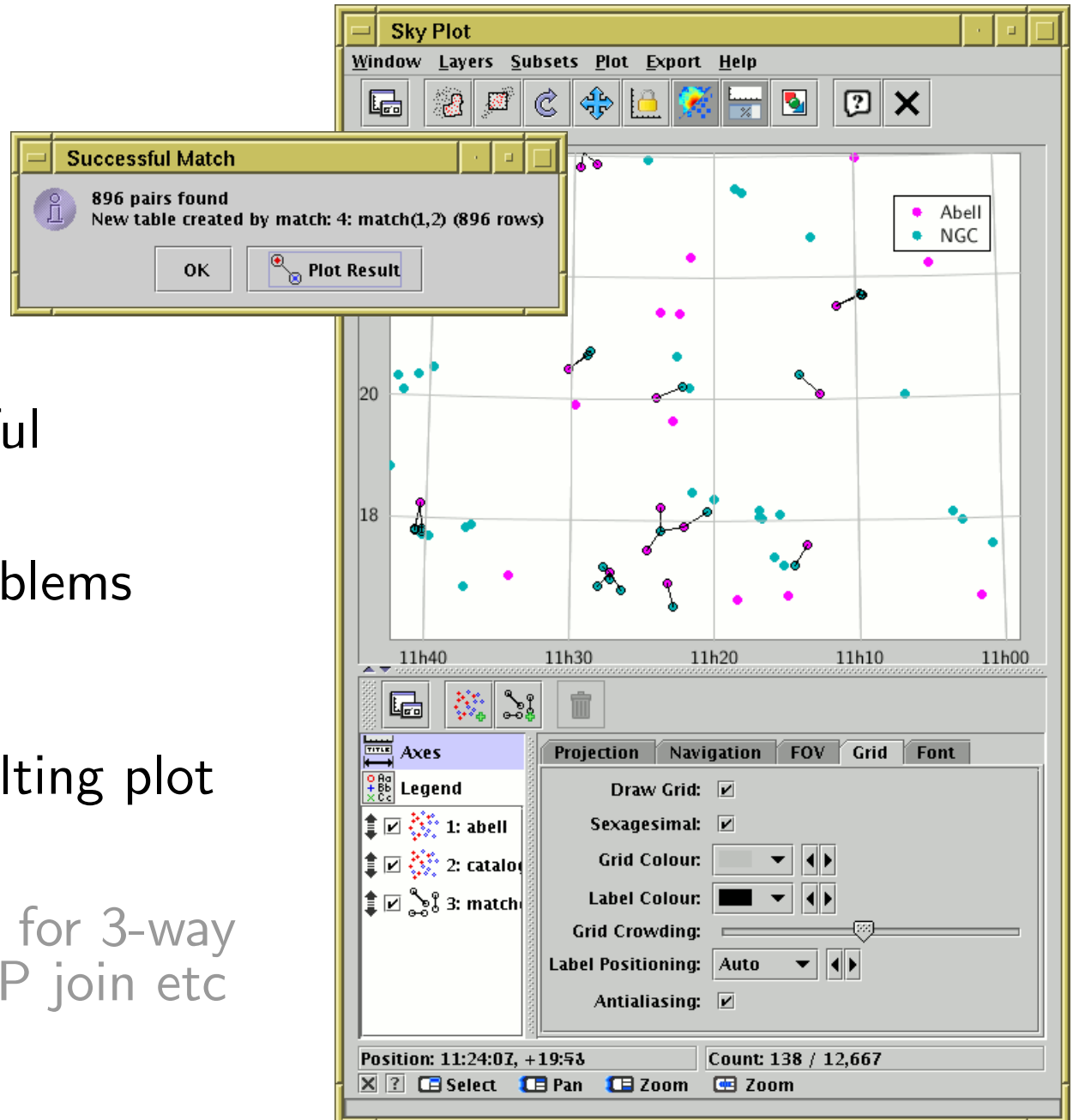
- General:

- Visual feedback for navigation actions
- Mouse help hints
- Configurability (zoom factor etc)



New Plots: Crossmatch Results

- Plot results of successful pair crossmatch
- See links, diagnose problems
- Works on sky, 2d, 3d
- You can configure resulting plot by hand
- Doesn't currently work for 3-way match, multi-cone, TAP join etc



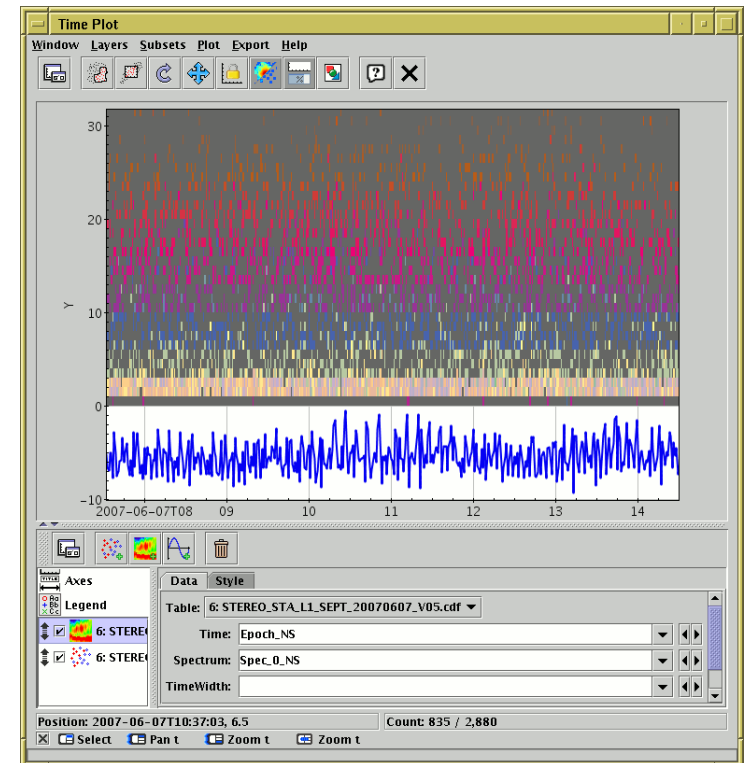
Experimental items

- Time series plot

- X axis labelled as time (ISO-8601, MJD, Decimal year, ...)
- Line plots
- Spectrograms
- not yet stacked plots

- SAMP message `table.get.stil`

- Clients can request one of the tables loaded in topcat
- Supply required format, topcat index; get URL
- Requested by astropy people; cf. `ds9.get cmd=fits`
- Is this useful? Should we introduce a standard MType along these lines?



Coming Up

Next release? Next few months?

- RegTAP
- CDS X-Match client
- Gaia CU9 work

Later

- STILTS plotting already present, but needs documenting
- TOPCAT/STILTS integration for plots
- More visualisation improvements
- Coverage/MOC
- ...

Feedback welcome (hackathon?)

- Requested new plotting features?
- Does navigation work well?