

- Not done
 - too busy doing other things
 - need better requirements from science team

- STILTS auto-generates its `app-description.xml` file
- Installed on CEA server in Cambridge(?)
- Most STILTS facilities now available using CEA
 - `tcopy`, `tpipe`, `tmatch2`, `votcopy`
 - that list doesn't include all – add more?
- Examples of use in hackathon?

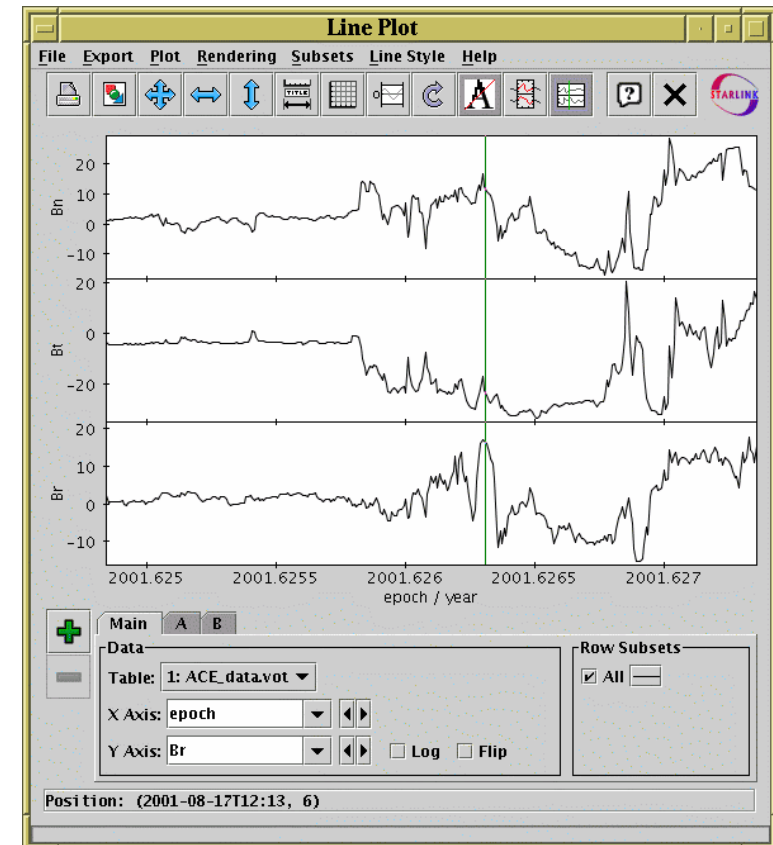
- New data formats supported:
 - IPAC input handler
 - TST input and output handlers
- Text-based formats now detect ISO-8601, sexagesimal
 - Tried and failed to get this into VOTable
- Some improvements in metadata retention
 - Store UCDs in FITS `TUCDnn` header cards
- Column-oriented storage (see DS6)

- New commands:
 - `tcube`: writes N-dimensional histogram as FITS array
 - `multicone`: makes multiple cone searches and joins results
 - `regquery`: makes simple registry queries (for services)
- New processing filters:
 - `stats`, `meta`, `transpose`, `uniq`, `sorthead`, `colmeta`,
`setparam`, `clearparam`, `assert`, `check`
- New output modes:
 - `plastic`, `cgi`, `discard`

DS4

TOPCAT Graphics enhancements

- Solar physics/time series:
 - Stacked line plot
 - Plot ISO-8601 date columns directly
 - Decimal year date conversion functions
- General graphics:
 - per-axis zooming
 - sphere plot zoom
 - asynchronous data reads
 - improved quality of GIF & EPS exports
 - various graphical bugfixes & tweaks



DS4

Other TOPCAT enhancements

- PLASTIC facilities in public release, and enhanced
 - See DS6
- Flux conversion functions
 - Jansky \leftrightarrow AB Magnitude conversions
- URL access to MySpace using custom protocol handlers
 - See DS3
- Add skew and kurtosis calculations to Statistics window
- ICRS coordinate system added
- Various minor tweaks, bugfixes, workarounds