

gGui: The gPhoton Glue User Interface for Analyzing GALEX Data from the MAST Archive

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gGui is Powered By:



1. What is gGui?

gGui is an open-source data-analysis software package written to visualize astronomical lightcurves, images, and cubes from gPhoton, a collection of GALEX calibrated photon events (Million et al. 2016).

Main features:

- View any combination of lightcurves, images, and cubes
- Visualize all bands of data simultaneously
- Enables users to flip through large target lists
- Target-specific notes that stay with the target catalog

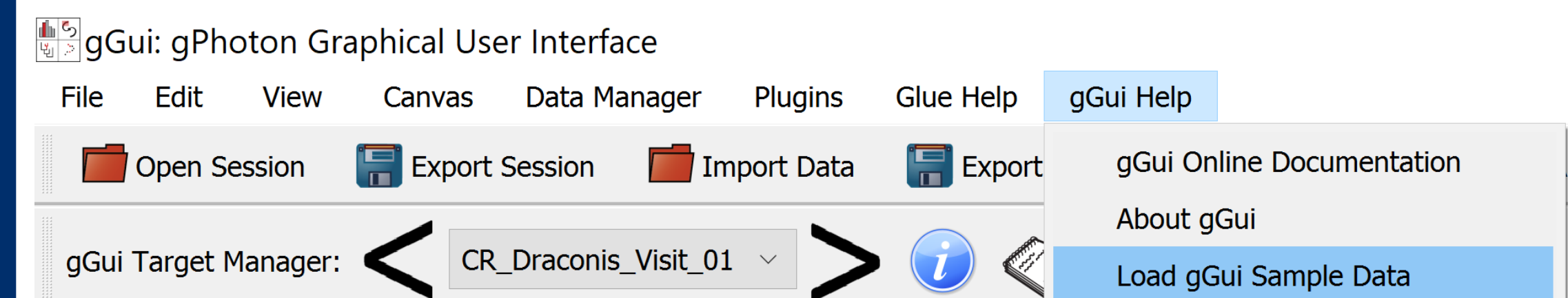
2. How to get gGui

To try gGui, install Python 3.6 or greater, then use pip!

```
pip install ggui
```



New users can enter a tutorial mode built into gGui:

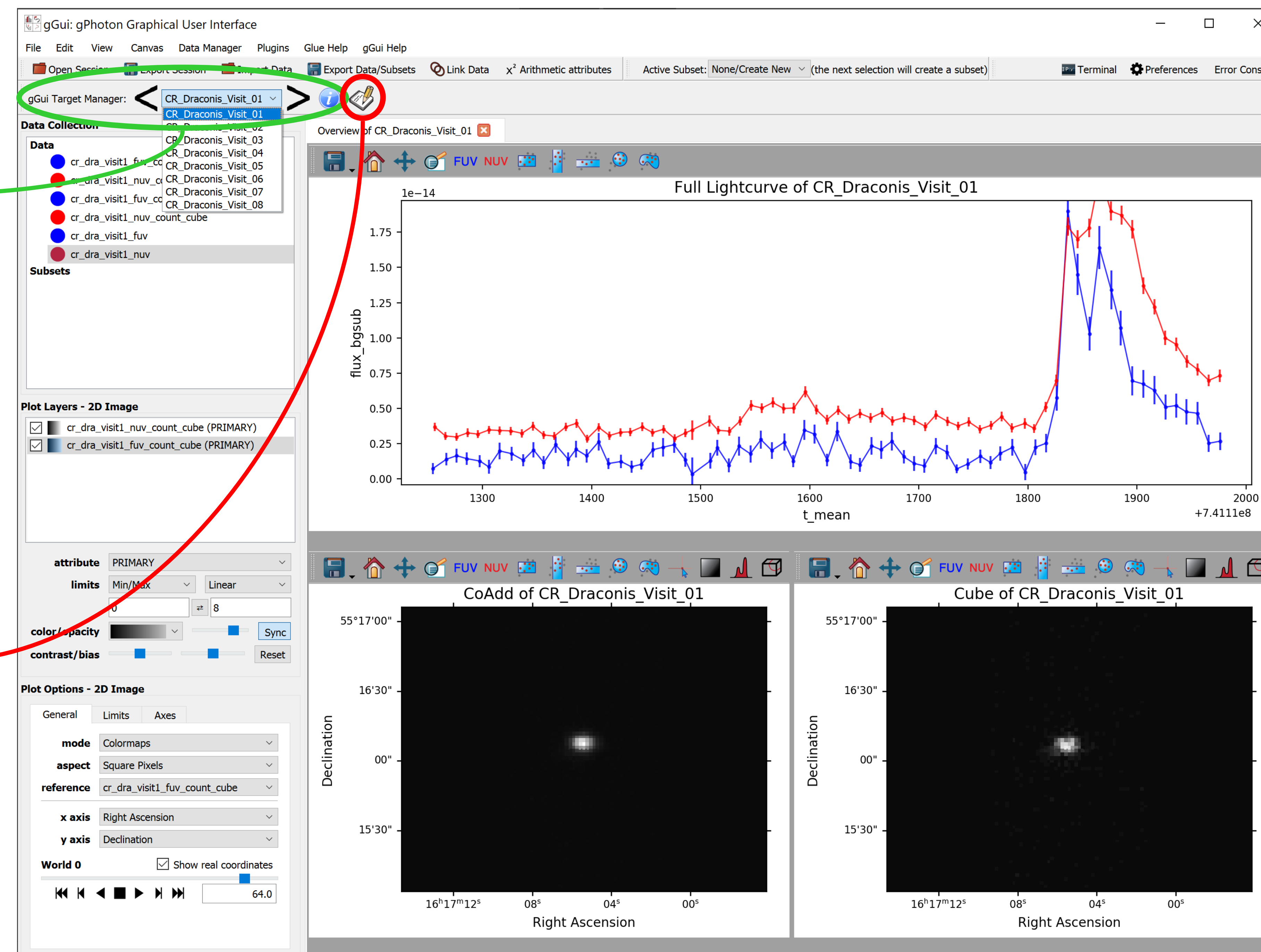


Target Manager

The Manager keeps track of all loaded targets and allows you to switch between them with menu selection or configurable keyboard shortcuts.

Collaborative Notepad

The Notepad features a collaborative space for teams to store comments for each target. These notes are saved to the gGui target catalog, and are restored on future sessions.



3. More Information

Visit ReadTheDocs for our full User Guide:

<https://ggui.readthedocs.io>



See our source code, and submit feedback, on GitHub:

<https://github.com/gphoton-tools/ggui>



See our official releases on PyPI:

<https://pypi.org/project/ggui/>



4. Future Development

- Use Glue to link events between data products
- Search for observations from many missions at MAST
- Ability to download observation products from searches
- Search and overplot sources from many MAST catalogs

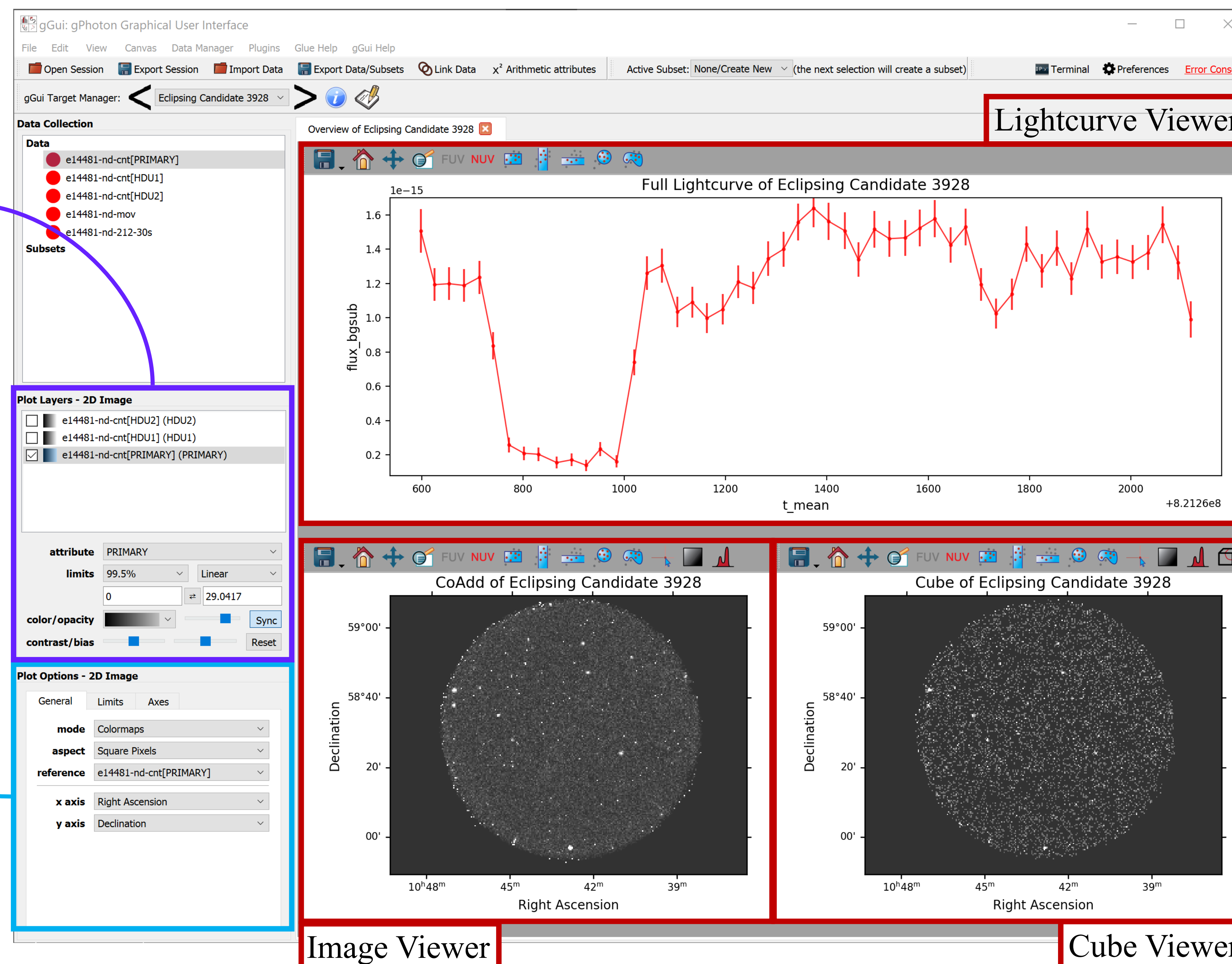
References and Acknowledgements

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 gGui began as an STScI REU project. See <http://stsci.edu/opportunities/space-astronomy-summer-program> for more information.

1. Beaumont et al. (2015), *Hackable User Interfaces In Astronomy with Glue*
2. Robitaille et al (2017) *glueviz v0.13.1: multidimensional data exploration*
3. Million, et al., "gPhoton: The GALEX Photon Data Archive." *The Astrophysical Journal* 833.2 (2016): 292.
4. Million, et al., 2016, *gPhoton, Astrophysics Source Code Library, record ascl:1603.004*

The layer panel lets you change how the FUV/NUV bands are displayed in each display area.

The options panel gives Glue controls for each display area (image timeseries currently shown).



Three main display areas show lightcurves, coadd images, and image timeseries (cubes).

Eclipsing candidate shows the full 1.2 degree field of view of GALEX. Bright points are real sources, not noise.