

## Lab 8 - Pulsating Stars and Other Variables

In addition to eclipsing binaries and transiting exoplanets, other stars and objects sometimes vary in brightness, over time. These variations can occur due to fluctuations in star size, interactions with companion stars, or an object's rotation.

<http://www.aavso.org/variables-what-are-they-and-why-observe-them>

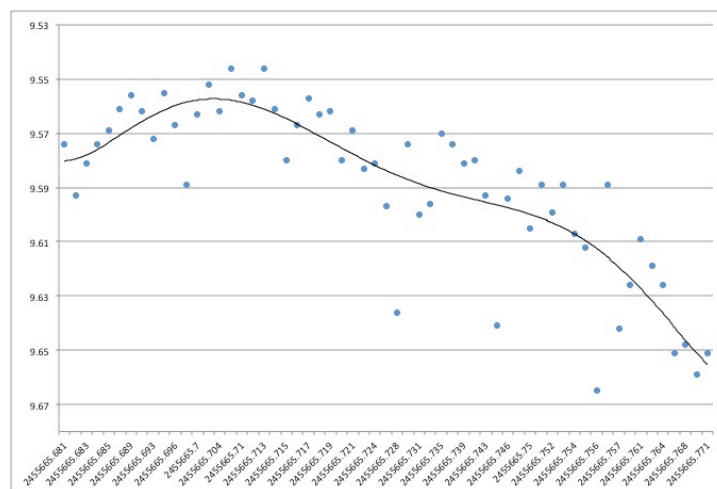
Pulsating Variables such as BL Cam <http://www.aavso.org/lcotw/bl-camelopardalis> expand and contract over specific periods. Cataclysmic Variables like CG Cyg are close binaries usually containing a white dwarf star in the act of accreting matter from a larger, companion star. [http://en.wikipedia.org/wiki/Cataclysmic\\_variable\\_star](http://en.wikipedia.org/wiki/Cataclysmic_variable_star)

Asteroids can also vary in brightness due to their irregular shape, and rotation as they move through the solar system. Light curves [http://en.wikipedia.org/wiki/Light\\_curve](http://en.wikipedia.org/wiki/Light_curve) of asteroids can help reveal their rotation rate.

During this semester, identify and gather data on at least two types of pulsating variable stars, and asteroids, as possible. Specific targets will be provided.

In addition to TheSky 6, the IAU Minor Planet Center contains information and lists of asteroids. <http://www.minorplanetcenter.net/iau/lists/LightcurveDat.html>

Refer to the **Horizons Web-Interface** ephemeris in Lab 5, p.11, for generating asteroid ephemerides.



Asteroid light curve