

ASSIGNMENT #1: APERTURE PHOTOMETRY

Due date: Apr 6, 2016

Based on what you learned in the lab, you are now ready to apply cosmetics to the data (i.e. correct the bias, subtract dark current and flatten the CCD response) and perform aperture photometry on the images you acquired last semester.

- a) Reduce all your high-amplitude variable star observations and get them ready for photometry.
- b) Using `imexamine`, get quick photometric estimates of the variable. Make sure that everything makes sense.
- c) Learn about image aligning in IRAF. The best way to get going is to read Lisa Wells' tutorial (see the literature below). Then align all of your images. This will help tremendously for doing actual aperture photometry.
- d) Using `qphot`, run a robust photometric analysis. Use at least 5 comparison stars.
- e) Document all parameters and procedures you used for the reduction and analysis and typeset them in a formal report.

Useful literature:

- `imexamine` and `qphot` help files;
- Philip Massey: A User's Guide to CCD Reductions with IRAF, Feb 1997;
- Lindsey Davis: A User's Guide to the IRAF Apphot Package, May 1989;
- Lisa Wells: Rectifying and Registering Images Using IRAF, April 1994.