

Astronomy with Digital Cameras – Astronomical Methods II, DU Spring 2009

OBSERVING MODULES

You are expected to complete any three of these modules during the quarter, using resources of TzecMaun observatory internet telescopes, in New Mexico and/or near Perth, AU and/or local resources of the DU Student Astronomy Lab. Software provided.

TOPIC	GOALS	TOOLS	TIMELINE	Notes
1. Asteroids and/or comets	Orbits; Rotation from light curves	Sky software [s/w], Orbitfit s/w	Sets of 3 well spaced observations needed	www.calsky.com links; Orbitfit s/w from www.projectpluto.com
2. Eclipsing binaries	Light curves; periodicity	Aperture photometry s/w	2 weeks	http://www.aavso.org/observing/programs/eclipser/ http://www.as.up.krakow.pl/ephem/
3. Spectroscopy	Line identification	Vspec s/w	2 weeks	http://www.aavso.org/vstar/vsots/0900.shtml
4. Transit search	Planetary transits	Aperture photometry s/w	3 weeks	www.Transitsearch.org for prime list of Candidates
5. Variable stars	Light curves; periodicity	Aperture photometry s/w	3 weeks	RR Lyrae stars ~ days http://www.aavso.org/observing/programs/rrlyrae/ Cepheids ~ weeks http://www.aavso.org/vstar/vsots/0900.shtml
6. Supernova follow-up	Light curves & classification	Aperture photometry s/w	Needs 4 weeks	http://www.supernovae.net bonus points for discovery
7. Data reduction	Re-analysis of archival data	Aperture photometry s/w	2+ weeks	TBA
8. Other	Negotiable			