

Data Mining Workshop

Friday, October 17, 2008

9:00 am – 12:00 pm

9:00 am	Introduction	Paula Szkody	<i>15 minutes</i>
9:15 am	The AAVSO International Database and the ASAS-3 Database	Aaron Price	<i>45 minutes</i>
10:00 am	An Introductory Overview of the National Virtual Observatory & How It Might Benefit the AAVSO	Richard 'Doc' Kinne	<i>20 minutes</i>
10:20 am	<i>Coffee Break</i>		<i>30 minutes</i>
10:50 am	Data Mining, ADQL, & the National Virtual Observatory's OpenSkyQuery Utility	Richard 'Doc' Kinne	<i>30 minutes</i>
11:20 am	SDSS and GALEX Databases	Paula Szkody	<i>15 minutes</i>
11:35 am	Palomar-Quest and other new surveys	Arne Henden	<i>25 minutes</i>

MMO Session: History and Current Research

Celebrating the 100th Anniversary of the Maria Mitchell Observatory

Friday, October 17, 2008

2:00 pm – 5:00 pm

2:00 pm	Opening Remarks	Toni McKerrow	<i>10 minutes</i>
2:10 pm	The Mitchells Good	Jascin Finger	<i>20 minutes</i>
2:30 pm	Mentored by Stars	Frances Karttunen	<i>20 minutes</i>
2:50 pm	Recollections of the inspirational Dorrit Hoffleit by her first male assistant at MMO	John Briggs	<i>20 minutes</i>
3:10 am	Nantucket: an Astronomical Island	Vladimir Strel'nitski	<i>20 minutes</i>
3:30 pm	<i>Coffee Break</i>		<i>30 minutes</i>

- 4:00 pm **Observations of Exoplanets at the MMO** Jed Williams 20 minutes
- Coauthors:* Gary Walker, & Vladimir Strel'nitski
Abstract: A program of exoplanet transit photometry was started at the MMO in the Spring of 2008. Our approaches to the reduction of systematic errors, crucial for this type of observations, will be discussed and examples of reduced light curves will be demonstrated. This project was supported by the NSF/REU grant AST-0354056 and the Nantucket Maria Mitchell Association.
- 4:20 pm **News on the Optical and Radio Variability of MWC349** Gary Walker 20 minutes
- Coauthors:* Elissa Sperling, & Vladimir Strel'nitski
Abstract: The results of the long-term (11 years) monitoring of MWC349 at optical and radio wavelengths, as well as a recent (summer 2008) experiment of simultaneous optical and radio observations to detect short-term variability, will be summarized. In particular, we will compare the results obtained with the 24-inch CCD telescope of the MMO with those submitted to the AAVSO database by various observers. The revealed amplitudes of MWC349 variations are small – a few tenths of a magnitude for a long-term variations (years) and, typically, less than one tenth for the short-term variations (months to days). This requires a relatively high accuracy photometry, not always achieved in amateur observations. The data obtained so far can be summarized as follows: (1) No obvious periodicity; (2) The amplitude of variations monotonically decreases with the decreasing time scale and towards longer wavelengths; (3) There is correlation of optical (R) and radio (hydrogen recombination line maser) radiation on both a long and short time scales, but the amplitude of the radio variations is greater. Possible interpretation of these results will be discussed. This project was supported by the NSF/REU grant AST-0354056 and the Nantucket Maria Mitchell Association.
- 4:40 pm **Spectral Monitoring of UXORs with Interference Filters** Vladimir Strel'nitski 20 minutes
- Coauthors:* Lauren Weiss & Gary Walker
Abstract: UXORs are a small group of pre-main sequence Herbig AeBe stars exhibiting deep irregular drops of continuum brightness, probably due to small circumstellar dust cloudlets occulting the star. Scarce available data from parallel spectroscopy and photometry indicate a lack of correlation between the variations of emission lines and continuum. This important result confirms the dust obscuration model but it needs corroboration. We at MMO started a program of UXORs monitoring with two interference filters, which is an inexpensive substitute for spectroscopic monitoring. The theoretical background for the separation of the temporal behavior of an emission line and the adjacent continuum by this method, as well as the first results of the application of the method to a candidate UXOR star, V3798 Sgr will be summarized. This project was supported by the NSF/REU grant AST-0354056 and the Nantucket Maria Mitchell Association.