

camera at Siding Spring Observatory site has been fine tuned and the protected silver coat of the primary mirror has been replaced with the bare aluminium coat due to the degradation of reflectivity of the primary mirror surface. A plan of KMTNet observation system improvement for 2017 will be introduced in this talk.

[7 KMT-02] OGLE-2015-BLG-1482L: The first isolated Galactic bulge microlens

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The single lens event OGLE-2015-BLG-1482 has been simultaneously observed from two ground-based surveys and from Spitzer. The Spitzer data exhibit finite-source effects due to the passage of the lens close to or directly over the surface of the source star as seen from Spitzer. Thanks to measurements of the microns parallax and the finite-source effect, we find that the lens of OGLE-2015-BLG-1482 is a very low-mass star with the mass $0.10 \pm 0.02 M_{\odot}$ or a brown dwarf with the mass 55 ± 9 MJ, which are respectively located at $DLS = 0.80 \pm 0.19$ kpc and $DLS = 0.54 \pm 0.08$ kpc, and thus it is the first isolated low-mass microlens that has been located in the Galactic bulge. The degeneracy between the two solutions is severe. The fundamental reason for the degeneracy is that the finite-source effect is seen only in a single data point from Spitzer and this single data point gives rise to two ρ solutions.

[7 KMT-03] KMTNet time-series photometry of the doubly eclipsing candidate stars in the LMC

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Multiple stellar systems composed of triple,

double+double or double+triple, etc. are very rare and interesting objects for understanding the star formation and dynamical evolution. However, only six systems have been found to be a doubly eclipsing quadruple, which consists of two eclipsing binaries, and four systems to be a triply eclipsing hierarchical triple. Recently, the 15 doubly eclipsing multiple candidates located in the Large Magellanic Cloud (LMC) have been reported by the OGLE project. In order to examine whether these candidates are real multiple systems with eclipsing features, we performed a high-cadence time-series photometry for the LMC using the KMTNet (Korea Microlensing Telescope Network) 1.6 m telescopes in three site (CTIO, SAAO, and SSO) during 2016-2017. The KMTNet data will help reveal the photometric properties of the multiple-star candidates. In this paper, we present the VI light curves and their preliminary analyses for 12 of the 15 eclipsing systems in the LMC, based on our KMTNet observations and the OGLE-III survey data from 2001-2009.

[7 KMT-04] Introduction to sample light curves of optical transients discovered by the KMTNet Supernova Program

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We introduce sample light curves of optical transients discovered by the KMTNet Supernova Program, focusing on their early discoveries and rapid evolutions decoded in the high-cadence observations of the program. For some sources, we also show their spectra obtained either from rapid Target-of-Opportunity follow-up observations immediately after their discoveries or from regularly-scheduled observations. We expect the program to bring unprecedented insights into what is happening during early phases of various types of optical transients, centered on supernovae.

[7 KMT-05] A KMTNet search for RR Lyrae Stars in the Crater II Ultra-Faint Dwarf Galaxy

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