

Telescope Network (KMTNet), we expect the detection of many events caused by wide-separation planets and free-floating planets, which is not easy due to the short event duration. Thus, it is important to understand wide-separation planetary lensing events. Several studies on the wide-separation events have been reported, but events caused by wide-separation planetary systems with a moon have not yet been studied. In this paper, we study the properties of events caused by planetary systems where wide-separation planets host a moon. We also study the effect of a finite background source star on the moon feature in the wide planetary-lensing events.

[포 ST-04] A Comparison between Infrared and Visible Light Curves of Short Period Variables

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단주기 변광성들의 적외선 광도곡선이 가시광선 광도 곡선과 어떠한 차이가 있는지 알아보기 위해 주기가 하루 이내로 짧은 다양한 유형의 변광성을 대상으로 보현산 천문대의 1.8m 반사망원경과 적외선검출기(KASINICS)를 이용한 J(1.25 μ m), H(1.64 μ m), K(2.15 μ m) 필터 관측을 수행하였다. 관측 대상은 맥동변광성으로 분류되는 BO Lyn 외 2개 대상, 격변변광성으로 분류되는 RX And 외 3개 대상, 그리고 식변광성으로 분류되는 V1007 Cas 외 1개 대상이다. IRAF를 이용한 전처리 및 구경 측광을 실시하여 각 필터별 적외선 광도곡선을 얻었다. 이를 통해 현재 각 분류 대상별 주기분석과 여러 해 동안 관측한 자료를 이용하여 각 대상들의 장주기에서의 변광 요인 유무도 확인하여 가시광선 광도곡선과의 비교 분석 연구를 수행하고 있다. 격변변광성의 경우 가시광 광도 곡선이 주로 강착원반의 더 뜨거운 내부고리와 대기에 의한 것인 반면 적외선 광도 곡선은 동반성과 차가운 강착원반에 의한 것이라 여겨지며, 맥동변광성과 식변광성의 경우도 가시광선과 적외선이 서로 다른 깊이를 보게 될 것이므로 파장대별 최대 밝기 위치와 광도 윤곽에서의 차이가 기대된다.

[포 ST-05] The IGRINS Spectra of Late-Type Stars

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We present a library of high spectral resolution ($R \sim 40,000$) and high signal-to-noise ratio ($S/N \sim 200$) near-infrared spectra of ~ 50 late-type stars. The spectra of late-type stars were obtained with Immersion GRating INfrared Spectrograph (IGRINS) covering the full H and K band. The stars are mainly from MK standard stars which have well-defined spectral types and luminosity classes and cover wide ranges of effective temperatures and surface gravities. The spectra are corrected for telluric absorption lines and absolutely flux calibrated using the Two Micron All Sky Survey (2MASS) photometry. In this work, we present the preliminary results of spectroscopic diagnostics for stellar physical parameters. Our ultimate goal is to provide a library of near-infrared spectra of standard stars, which covers all spectral types and luminosity classes, with a high spectral resolution and high signal-to-noise ratio.

[포 ST-06] Blue Straggler Stars and Open Clusters

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Blue Straggler Stars (BSSs), kind of unusual main sequence stars, are the brighter and bluer stars than the main sequence turn off (MSTs) stars in coeval clusters. Since the first detection in globular clusters (GCs), BSSs have been shown to reveal an anti-correlation between the luminosity of their host star cluster and the number of BSSs in the cluster. Further, conclusions based on this result can be expanded to the open clusters. BSSs seem to play an important role in GCs according to the relation between the dynamical time scale of GCs and the number of BSSs along the cluster radius. This relation, however, remains to be verified in open clusters. In this study, we divide open clusters by the existence of BSSs into two groups. Then we compare parameters between these groups to specify the role of BSSs in open clusters.

[포 ST-07] Source frequency phase referencing observations of H₂O and SiO masers toward the semi-regular variable star R Crateris