leaves periodic tool marks on machined mirror surfaces, leading to undesirable diffraction effect, as well as the deviation of input beam. In order to solve this problem, we propose new SPDT machining conditions to minimize tool marks. We will also show the results from optical measurement and Power Spectral Density (PSD) analysis to evaluate the expectable performance for applications in wide field infrared telescopes.

[포 AT-05] BVRI Filter Standardization of DOAO 1m Telescope

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National Youth Space Center has recently founded the Deokheung Optical Astronomy Observatory (DOAO) 1m Telescope, which accepts community observing applications since 2016. Standardization and calibration of the new observing facility are essential for astronomical research. In this poster, we present standardization processes and preliminary results for photometry of the Johnson-Cousins BVRI filter system. We selected sample data from a night in stable weather condition. After bias, dark, and flat corrections and photometry using ccdred and daophot package of IRAF, we derived standardized band pass parameters including color terms. The corrected photometry results of the BVRI filter system show reduced deviations from the standard magnitudes in the literature. In addition, we calculated atmospheric extinction coefficients and limiting magnitudes of the telescope system. We plan to extend these standardizing processes to flux calibration of narrow band filters, e.g. Hα filter.

[포 AT-06] The Development of The Observing System for Goheung Radio Telescope (고흥전파망원경 관측시스템 개발)

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2013년 청소년 교육목적으로 개발된 고흥전파간섭계시스템을 활용하여 청소년으로 하여금 전파관측을 체험케 하고, 전파천문학 연구 기회를 제공하고자 한다. 안정된 단일경 전파관측과 간섭계모드 전파관측을 위해 현 시스템이 갖추어야 할 기능을 개선하고 있다. 보다 정밀하게 관측대상을 추적하고, 전파 점광원을 관측할 수 있도록 새로운 전파관측시스템을 개발한다. 정밀한 관측대상 추적과 함께 데이터 취득 시간을 확장하여 점광원 관측이 가능하게 되면, 청소년에게 전파관측 및 전파간섭원리와 관측방법을 실험체험 프로그램으로 전해 줄 수 있다.

KMTNet

[포 KMT-01] Progress report of the deep and wide-field imaging survey of nearby galaxies with KMTNet

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In a ΛCDM universe, galaxies are believed to evolve by mergers and accretions. The debris resulting from such processes remains as diffuse, low-surface brightness structures, such as outer disks, stellar halos, and faint companions. These structures will give us fruitful insight into the recent mass assembly history of galaxies, but it is challenging to observe them due to their low surface brightness. In order to explore the structural properties of outskirts of nearby galaxies, we conduct deep wide-field imaging survey with KMTNet. Here we present a progress report of data reduction for the images of NGC 1291, a lenticular barred galaxy with outer rings. To achieve accurate flat fielding, we use dark sky flat and remove the sky gradient of each exposure with a polynomial fit. As a result, we are able to reach 1 sigma depth of μ_R ~ 29.6 mag arcsec^{-2}. We expect to investigate the surface brightness profile of NGC 1291 in 1-D profile, and color-gradient in the outer part of the galaxy using the B- and R-band images.

항 성 및 항 성 계

[포 ST-01] Raman O VI Profile Analysis of