sake of increased discovery rate, rapid follow-up, timely phase coverage, and efficient data analysis. We will give a brief introduction to test runs conducted at CTIO with the first KMTNet telescope in February and March 2015 and experimental data processing. Preliminary scientific results will also be presented.

[구 KMT-07] Deep Wide-Field Imaging of Nearby Galaxies with KMTNet telescopes

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We will obtain deep wide-field images of the 150-200 nearby bright galaxies in the southern hemisphere, in order to explore the origin of faint extended features in the outer regions of target galaxies. Using KMTNet telescopes, we will take very deep images, spending ~ 4.5 hr for the B and R filters for each object. With this dataset, we will look for diffuse, low-surface brightness structures including outer disks, truncated disks, tidal features/stellar streams, and faint companions.

[구 KMT-08] Test Observations for SULF (Southern ULtra-Faint dwarf galaxies) Survey using KMTNet

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We have proposed a deep observing program to survey more than 3,000 sq. degree of southern sky with the KMTNet telescopes to search for ultra-faint dwarf galaxies. Recently, the test observations for our survey were made in B, V, R, I-band. We will report the performance of the KMTNet camera system and our detailed strategy in both of observations and analysis for the three-year survey.

[구 KMT-09] KMTNet Test Observation of Nearby Southern Galaxy Groups

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We present a test observation result of the KMTNet Intensive Nearby Southern Galaxy group Survey (KINGS). The KINGS is designed to study nearby galaxy groups (NGC 55, NGC 253, NGC 5128, and M83 groups), taking the advantage of the wide field coverage of the KMTNet. The main goal of the KINGS is to produce extensive catalogs of dwarf galaxies, ultra compact dwarfs (UCDs), and intraglobular clusters in the galaxy groups. We will also investigate the spatial distribution of intragroup light in each group. We present a progress report of the project based on the test BVI observations of two galaxy groups. We discuss the result from the test observation and possible improvement for future observations.

특별 세션 — Centennial of the General Relativity

[구 GR-01] General Relativity and Light Bending/Gravitational Lensing (일반상대성이론과 빛의 꺾임/중력렌즈)

Myeong-Gu Park (박명구)
KNU (경북대학교)

Light bending by gravity was the key prediction of general relativity. Solar eclipse expedition of 1919 provided the observational support for the theory of general relativity. Diverse gravitational lensing, i.e., light bending, phenomena have been speculated and predicted by general relativity and ultimately discovered many years later. Gravitationally lensed quasars, luminous arcs, weak lensing, and microlensing have provided invaluable information about the distribution of matter, especially of dark matter, and the cosmology. Gravitational lensing is one of the most spectacular manifestation of general relativity and will remain as an extremely useful astrophysical tools in the future.

[구 GR-02] General Relativity and Modern Cosmology (일반상대성이론과 현대우주론)

Jai-chan Hwang (황재찬)
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