

Round-the-Clock Survey of Small Solar System Bodies in the Southern Sky. H.-K. Moon¹, Y.-J. Choi¹, and M. Ishiguro², ¹Korea Astronomy and Space Science Institute, 776 Daedeokdae-ro, Yuseong-gu, Daejeon, Korea, ²Department of Physics and Astronomy, Seoul National University, 1 Gawanak-ro, Gwanak-gu, Seoul, Korea

In 2009, Korea Astronomy and Space Science Institute officially started an ambitious project to build a network of wide-field survey facilities called KMTNet (Korea Micro-lensing Telescope Network). Its primary scientific goal is to discover earth-mass extra-solar planets in the southern sky. The facilities will be constructed and deployed in Australia, South Africa and Chile, and hence will be used to provide 24-hour uninterrupted monitoring of the night sky in three different time zones. Each telescope consists of 1.3-m prime focus optics and a 20K×20K mosaic CCD camera which covers 2×2 degrees field of view with sampling suitable for accurate photometry in crowded fields toward the Galactic Bulge.

The wide-field capability of the KMTNet telescopes is also ideal for discovery, follow-up and physical characterization of small bodies. It will shed new light on the population as a whole, and on the evolution of the Solar System. We propose several observational programs for KMTNet in the Pan-STARRS era. The site operation of the network is expected to begin in early 2014.