
Kuiper Belt Object Occultation Survey : Current Status

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The Taiwanese-American Occultation Survey (TAOS) is a program dedicated to performing a survey of small objects (< 10 km) in the trans-Neptunian Region of the Solar System by detecting the occultations of bright stars by these objects. This survey must deal with the low expected event rate, marginal signal to noise of detections at one telescope, and the possibility of a high false detection rate due to atmospheric fluctuations or other terrestrial phenomena. TAOS responds to these challenges with an array of small (50 cm) telescopes, each equipped with a 2048x2048 pixel CCD camera, which will operate automatically to monitor ~2000 stars simultaneously at 5 Hz. False detections are removed by requiring coincident detection in 3 or more telescopes. We expect this system to be sensitive to objects as small as 3 km in diameter. The system is partially installed at a site in the central highlands of Taiwan. This poster gives a status report on the project and plans for operation later in 2003. This project is supported by NASA (at UPenn), DOE (at LLNL), Academia Sinica (at ASIAA), NSC (at NCU), and KRF (at Yonsei).