

Academia Sinica Press Release

Construction Begins on TAOS-2, a Large-Scale Cooperative Astronomical Observation Project between Taiwan and Mexico

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On May 2, the Academia Sinica Institute of Astronomy and Astrophysics (ASIAA) along with the National Autonomous University of Mexico, Institute of Astronomy, and the Smithsonian Astrophysical Observatory held a groundbreaking ceremony to mark the start of construction of the Transneptunian Automated Occultation Survey (TAOS-2) project at the Mexican National Astronomical Observatory in northwest Baja California. The project aims to measure the size distribution of small objects in the region of our Solar System beyond Neptune. Such information is expected to increase understanding of the formation and dynamic evolution of our Solar System. The project marks the first large scientific collaboration between Taiwan and Mexico.

The TAOS-2 project is led by ASIAA, and aims to install three 1.3-meter robotic telescopes with the latest high speed cameras to carry out a census of stellar occultations (events that occur when one object is hidden by another object that passes between it and the observer) by small bodies on the periphery of the solar system. TAOS-2 is the second phase of the TAOS project. The first phase of the project (TAOS), which constructed four 50-cm robotic telescopes at the Lulin observatory in central Taiwan, generated important results regarding the number of small bodies in the outer solar system. With larger telescopes, fast cameras, and a better site in Mexico, TAOS-2, is expected to be 100 times more sensitive than the first phase TAOS project, allowing the delivery of better number densities for different sizes of these small bodies.

The groundbreaking ceremony marked the beginning of the construction work of TAOS-2. The telescopes will be installed this year and in 2014, and the cameras will be developed and delivered in 2015. TAOS-2 is scheduled to start the regular operation in 2016.

Protective measures to preserve dark night skies in the area surrounding the site of the Mexican National Astronomical Observatory at San Pedro Martir, and significant investment in infrastructure mean that the area has excellent astronomical research qualities. TAOS-2 will double the number of telescopes at San Pedro Martir, and provide excellent opportunities for scientific and technological cooperation between

researchers, engineers and students in Taiwan and Mexico. The Mexican National Astronomical Observatory currently has 3 telescopes which were installed between 1971 and 1979 and provides services to astronomers around the world who can make high quality astronomical observations at the site.

The Smithsonian Astrophysical Observatory is part of the Harvard-Smithsonian Center for Astrophysics, and currently has more than 300 researchers. The National Autonomous University of Mexico (Universidad Nacional Autonoma de Mexico, UNAM) is one of the most well known universities in Latin America.

Related Websites:

<http://taos2.asiaa.sinica.edu.tw/>

<http://www.astrosen.unam.mx/indexedaeng.html>

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