



APRIM 2014

12th Asia-Pacific Regional IAU Meeting
August 18-22, 2014 / DCC, Daejeon, Korea

Session: Plenary Session II

Date: August 19, 2014 (Tuesday)

Time: 09:00~10:30

Room: Grand Ballroom 1

Chair: Sun Kwok (The University of Hong Kong)

[P2-1]

09:00~09:30

Large International Projects

Masa Hayashi (National Astronomical Observatory of Japan, Japan)

I will present an overview of the large international projects in which the National Astronomical Observatory of Japan (NAOJ) is involved, namely: the Subaru Telescope, ALMA (Atacama Large Millimeter/submillimeter Array) and TMT (Thirty Meter Telescope). The Subaru Telescope is not in itself an international project, except that it was constructed with the full support of the University of Hawai'i. However, for the last 14 years of its operations, NAOJ has been actively engaged in various international collaborations for instrument development, which are producing fruitful science returns now. The first one was Fiber Multi-Object Spectrograph (FMOS), a near-infrared spectrograph with 400 fibers, developed in collaboration with the UK and Australia. As we came to understand that the prime focus capability of the Subaru Telescope was unique, NAOJ and Kavli Institute for the Physics and Mathematics of the Universe (IPMU) decided to develop Hyper Suprime-Cam (HSC) in collaboration with Princeton University (PU) and Institute of Astronomy and Astrophysics, Academia Sinica (ASIAA). A large-scale survey with HSC has just begun. NAOJ is expanding international collaboration on Subaru Telescope instrumentation with the Prime Focus Spectrograph (PFS), an optical spectrograph with 2400 fibers, and other instruments such as CHARIS, a high dynamic range imager/spectrograph for exoplanets. We are envisaging (partial) joint operations of the Subaru Telescope with East Asian countries/regions as a possible future operations model and closer collaboration among Mauna Kea international observatories through time exchange programs. ALMA is indeed the largest international project for ground-based astronomy so far realized. The current framework consists of NAOJ, ESO and NRAO working for the Joint ALMA Observatory (JAO) as three executive organizations under three parties representing East Asia, Europe and North America, respectively. ALMA started its Cycle 2 open use operations with more than 40 antennas and baseline lengths up to ~1 km. TMT is the newest large international project of NAOJ in collaboration with the US (California universities and NSF), China, India and Canada. Starting members of these countries established the legal entity TMT International Observatory in May of this year, planning to proceed with the construction at the summit of Mauna Kea. NAOJ plans to undertake the construction of the telescope structure and fabrication of all ~600 pieces for the mirror blanks.

[P2-2]

09:30~10:00

Astronomical Collaborations in East-Asia: Present and Future

Paul Ho (Academia Sinica Institute of Astronomy and Astrophysics, Taiwan)

In the past decade, astronomical research in East Asia has grown rapidly in terms of facilities, manpower, and science production. As a region, in addition to working together, we have also joined many new international projects such as ALMA, GMT, TMT, and SKA. The East Asian Core Observatories Association was established in 2005, with our core institutions of NAOC, NAOJ, KASI, and ASIAA. Now almost 10 years later, EACOA is incorporating the East Asian Observatory. The mission is to raise and share resources in order to construct and operate large scale facilities in support of astronomical research in East Asia. It is our common dream that shared visions, shared resources, and shared manpower, can lift our discipline to the next level.



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[P2-3]

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Proliferation of Astronomy Activities and Collaborations in Southeast Asia

Boonrucksar Soonthornthum (National Astronomical Research Institute of Thailand, Thailand)

Astronomy is a powerful tool in human scientific capacity building, attracting and inspiring the young people to scientific careers, bringing knowledge and wisdom to the community. Astronomy also initiates the acquisition and creation of new technologies and fostering the national and international collaborations in the country. Those mentioned crucial reasons have urged almost every communities including the Southeast Asia to realize how importance to develop astronomical research, education and outreach activities in their countries. During the past decade, astronomy has significantly developed in the Southeast Asian countries. Some new astronomical infrastructures were constructed and the number of human resources in astronomy is increased. The Southeast Asia Astronomy Network (SEAAN) has actively initiated in 2006 to gather astronomers, scientists and engineers in this region to join in promoting and strengthening astronomy in the region. The inter-regional collaboration would be one of the success factors in bringing a sustainable development in astronomy in the Southeast Asia.