

Session: [B2C-6] S6 : Observing Facilities and International Collaborations

Date: August 19, 2014 (Tuesday)

Time: 16:00~17:30

Room: Room F (Room 108)

Chair: Byeong-Gon Park (Korea Astronomy and Space Science Institute)

[B2C-6-1]

16:00~16:20

[Invited] The Large Binocular Telescope as the first Extremely Large Telescope

Christian Veillet (Large Binocular Telescope Observatory, USA)

Slowly but surely, the Large Binocular Telescope (LBT) is getting closer to his ultimate goals: (1) Offer to its users a very large telescope capable of very efficient observing, thanks to the simultaneous use of pairs of instruments each fed by one of its two 8-4m mirror, (2) allow the incoherent combination of its two beams on a single instrument, bringing the equivalent diameter of the telescope to a stunning 11.7-m, and (3) act as an Extremely Large Telescope (ELT) with a resolution equivalent to a 23-m aperture by coherently combining the light coming from its two mirrors through interferometric observations. We will describe in this talk the current status of the LBT Observatory, including the exquisite performances of its adaptive optics and a couple of exciting results showing that LBT is on its way to be the first of the ELTs. We will also present its short- and mid-term development plan and the opportunities it will offer as training ground and technology demonstrator for the ELTs currently in development.

[B2C-6-2]

16:20~16:40

[Invited] The University of Tokyo Atacama Observatory (TAO) Project

Mamoru Doi (University of Tokyo, Japan)

The University of Tokyo Atacama Observatory (TAO) is a project to construct a 6.5-meter telescope optimized for infrared observations at the summit of Co. Chajnantor, 5,640 m altitude, in northern Chile. Because of high altitude and dry climate, atmospheric windows from 0.9 to 2.5 micron become almost continuous, and new windows at wavelength longer than 25 micron are open. We have operated the 1-m miniTAO telescope since 2009, and have verified superb quality of the site by astronomical observations. We start constructing the 6.5-m telescope since 2013. Overview and present status of TAO project are shown.

[B2C-6-3]

16:40~17:00

Status of the Long Baseline Array

Philip Edwards (CSIRO Astronomy & Space Science, Australia)

Astronomical observations using the Very Long Baseline Interferometry technique in the southern hemisphere are conducted with the Long Baseline Array. The core elements of the LBA are ATNF's Parkes 64m telescope, Mopra 22m telescope, and the Australia Telescope Compact Array, and the University of Tasmania's Hobart 26m and Ceduna 30m telescopes. On occasions, the Tidbinbilla 70m or 34m telescopes, the Warkworth (New Zealand) 12m telescope, Hartebeesthoek (South Africa) 26m or 15m telescopes, and a single 12m ASKAP dish also participate. The LBA operates in the standard radioastronomy bands between 1.4 and 22 GHz, and, as a three-element array, can operate at 32 GHz. Recent operational constraints on the number of receiver changes at Parkes (a prime focus instrument) have resulted in very few observations at 2.3 or 4.8 GHz in recent years. The LBA operates for 3~4 weeks a year in a 4~5 sessions, with additional out-of-session support for RadioAstron observations and occasional time-critical observations. This talk will further describe the capabilities of the LBA, give examples of recent scientific results from the array, and discuss prospects for the future.

Poster Session

17:00~17:30

Chairs: **Byeong-Gon Park** (Korea Astronomy and Space Science Institute)
Ajit Kembhavi (Inter-University Centre for Astronomy and Astrophysics)