

Academia Sinica Press Release

Academia Sinica Institute of Astronomy and Astrophysics and the National Astronomical Observatory of Japan Pledge to Extend Subaru Telescope Collaboration

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Academia Sinica Institute of Astronomy and Astrophysics (ASIAA) and the National Astronomical Observatory of Japan (NAOJ) signed a renewed Memorandum of Understanding (MoU) on 7 February to extend their long-term collaboration on the Subaru Telescope. After the completion of the Hyper SuprimeCam (HSC), the aim of the next part of the project will be to upgrade Subaru's prime focus capability, with NAOJ and ASIAA collaborating on the construction of several optical and infrared astronomical instruments including the Prime Focus Spectrograph (PFS), a multi-fiber spectrograph.

The Subaru Telescope, which went into operation in 1999, is the NAOJ flagship telescope and one of the largest and most advanced optical telescopes in the world. It is located at the summit of Mauna Kea in Hawaii. The HSC is an 870-megapixel high resolution ultra-wide-field CCD camera which enlarges the Subaru Telescope's field of view by seven times. The HSC has been installed on Subaru since 2012. In 2013, for the first time, the HSC enabled the imaging of the complete Andromeda Galaxy in one single high-resolution image. The image exemplified HSC's superb imaging capability, and also represented the completion of the first stage of the pioneering Subaru collaboration. Since that milestone, researchers have turned their focus to using the cutting-edge equipment to capture the faintest signals from the most distant universe. By the collection of huge amounts of data at high-speeds, the HSC can aid researchers investigating hot topics in modern astrophysics such as dark energy, dark matter and the cause of the accelerating expansion of the universe

In the second phase of the Subaru collaboration, ASIAA will participate in the construction of a new instrument called the Prime Focus Spectrograph (PFS) which is a 2400-fiber spectrograph covering a 380-1300 nm range. The Taiwanese team will deliver a metrology camera and contribute to the Prime Focus Instrument (PFI) mechanical structure and integration. The PFS will deliver spectroscopy which will

complement the HSC imaging capability over a wide field of view. The technology will help to refine understanding of cosmological models, galaxy evolution, and galaxy archaeology.

The MoU was signed by the President of Academia Sinica, Dr. Chi-Huey Wong and the President of the NINS, Dr. Katsuhiko Sato. NAOJ Director Dr. Masahiko Hayashi, NAOJ Office of International Relations Chief Officer Dr. Kazuhiro Sekiguchi, Academia Sinica Academician and Director of the Institute of Astronomy and Astrophysics Dr. Paul Ho, Deputy Director of the Institute of Astronomy and Astrophysics Dr. Shiang-Yu Wang, Research Fellow Dr. Keiichi Umetsu and Associate Research Scientist Dr. Youichi Ohyama were among those attending the ceremony.

The NAOJ is one of the five inter-university research institutes that make up the National Institutes of Natural Sciences (NINS) of Japan.

Related Website:

<http://www.asiaa.sinica.edu.tw/project/subaru.php>

<http://oir.asiaa.sinica.edu.tw/subaru/pfs.php>

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