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[International Cooperation][Astronomy] Pan-STARRS Program Begins to Operate; Taiwan Scholars Take Parts [International Cooperation][Astronomy] Pan-STARRS Program Begins to Operate; Taiwan Scholars Take Parts (Chinese Version)

NCU News (2010/06/21) The prototypical telescope of the Pan-STARRS program, namely, PS1, has begun to scan the sky with the largest digital camera in the world. The image data obtained by PS1 aim at not only searching for the potentially threatening asteroid to the Earth, but also at finding clues to unfold the nature of the mystery of the dark matter and dark energy.

The full title of Pan-STARRS program is "Panoramic Survey Telescope & Rapid Response System." The program is special with the excellent location of the Hawaii observatory site, advanced techniques and its unique science goals. The observation system is sponsored by the U.S. Air Force. The accomplishment of the total construction is to form an array consisting of four telescopes. The complete equipment of Pan-STARRS will have a light grasp four times than PS1.

PS1 can succeed and begin to operate owing to the effort of The PS1 Science Consortium, PS1SC. The consortium is formed of the following institutes: Institute of Astronomy, University of Hawaii; Pan-STARRS Project Office; Max Plunck Institute (Max-Planck-Gesellschaft zur Förderung der Wissenschaften e.V., MPG) including its Institute for Astronomy (MPI für Astronomie) and Institute for Astrophysics (MPI für Astrophysik); Johns Hopkins University; Durham University; Queen's University; Harvard-Smithsonian Center for Astrophysics (CfA); Las Cumbres Observatory Global Telescope Network; University of Edinburgh Institute for Astronomy; and National Central University.

The about thirty scholars from Taiwan in Pan-STARRS program are astronomers and information engineering scholars from National Central University, Academia Sinica, National Tsing Hua University, National Taiwan University and National Cheng Kung University. They participate in the program from a great variety of perspectives. Pan-STARRS is a revolutionary observation project, Vice President of University System of Taiwan and the expert in solar system Professor Wing-Huen IP pointed out, and at its beginning the project has drawn great international attention. He said, a revolutionary science discovery must occur in one or two years. The Head of Pan-STARRS in Taiwan and the professor at Institute of Astronomy, National Central University, Wen-Ping CHEN said, with circular scanning, the observation is conducted as if filming the universe, and we can compare the data obtained at different time to identify the changes of the celestial bodies.

Sponsored by National Science Council, the participation in Pan-STARRS helps unite the astronomers and information engineering experts in Taiwan to work on the issues such as the potential dangerous asteroids, variable stars, colliding galaxies, the large-scale stars in explosion, the high-energy radiation of the flashing celestial bodies, etc. The contribution of these cooperations of the domestic research dynamics to the international program will be the establishment of databases and the development of a high-efficient celestial classification algorithm accordingly.

Related Website: http://ps1sc.org http://www.astro.ncu.edu.tw/~wchen/wp\_chen/essay/psinstr.pdf

Reference: <u>National Central University News 2010/06/21</u> (Chinese)

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