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Mitsubishi Electric Helps Upgrade Subaru Telescope Observation System

Succeeds in trial of new observation instrument

TOKYO, July 31, 2013 – [Mitsubishi Electric Corporation](#) (TOKYO: 6503) announced today it has delivered the Prime Focus Unit, a major component for the prime focus camera, the Hyper Suprime-Cam (HSC), that has been newly installed in the Subaru Telescope on the Big Island of Hawaii. The National Astronomical Observatory Japan (NAOJ) of the National Institutes of Natural Sciences received the Prime Focus Unit from Mitsubishi Electric this month.

Also today, NAOJ released a set of breathtaking images of the universe taken with the HSC and Prime Focus Unit fitted provisionally to the Subaru Telescope.

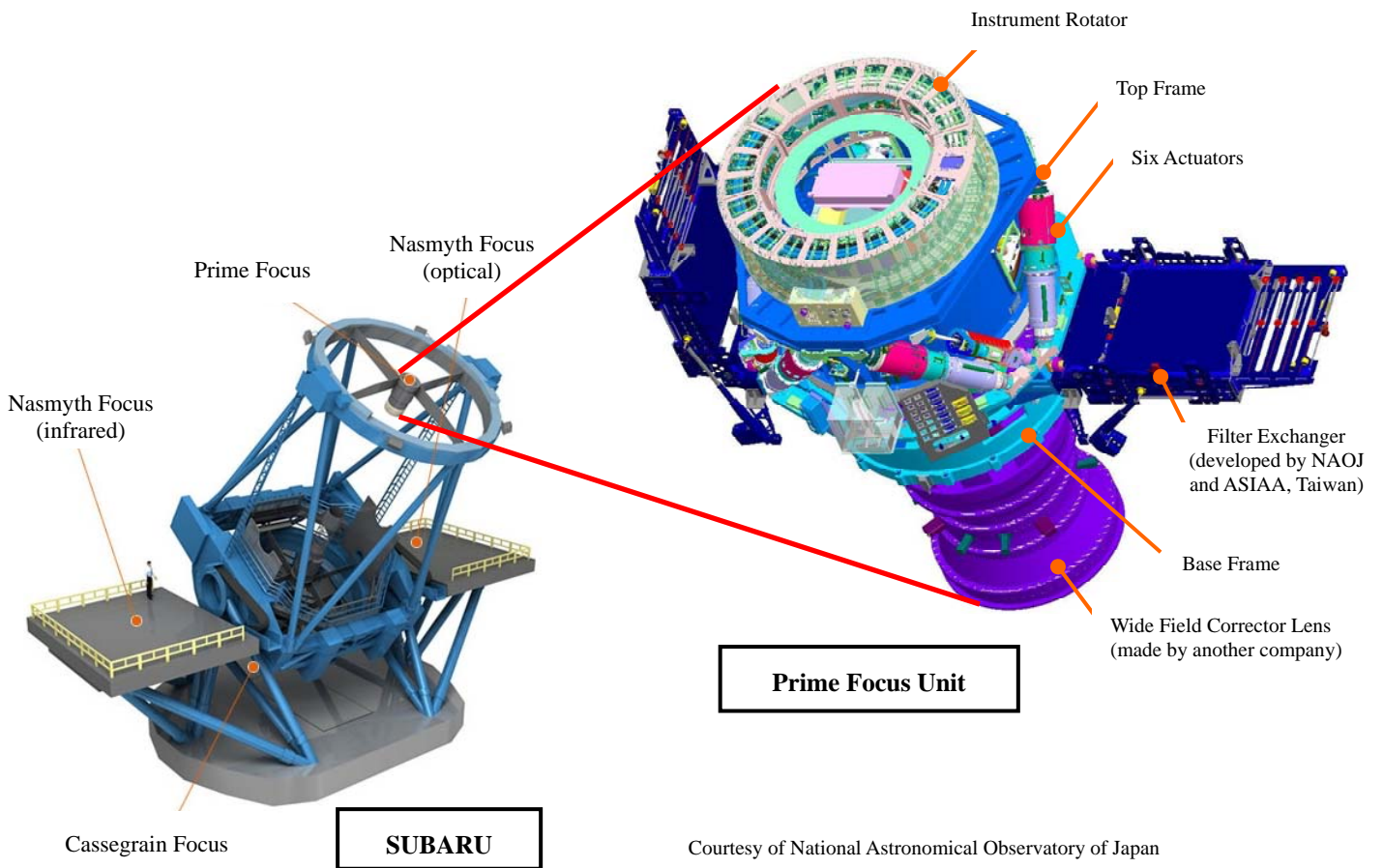
The HSC's unprecedented upgrade with the Prime Focus Unit will enable the Subaru Telescope to observe dark energy and dark matter with world-leading accuracy. Astronomists are actively trying to determine the characteristics of dark matter and dark energy, which comprise 90 percent of the universe and are considered crucial to understanding the origin and evolution of the universe.

The Subaru Telescope, which has an 8.2-meter diameter primary mirror, is noted for its high-quality wide-field observations. The new HSC realizes a field that is about seven times wider than the previous prime focus camera, the Suprime-Cam, but still maintains high-resolution images.

Mitsubishi Electric's Prime Focus Unit helps to accurately maneuver the camera and wide-field corrector lens, which together weigh about 2.2 tons. The unit's six actuators are capable of large load bearing and very high precision, enabling the lens and camera to be accurately positioned relative to the telescope's primary mirror with micro-meter precision and extremely smooth motion to continuously compensate for the effects of gravity deflection. The instrument rotator's drive mechanism rotates the camera on an optical axis with smooth precision to ensure that the camera is always aligned with the diurnal rotation of the sky.



HSC installed in Subaru Telescope



Courtesy of National Astronomical Observatory of Japan

Mitsubishi Electric managed construction of the Subaru Telescope, the world's largest optical-infrared telescope, which is located at the summit of the 4,200-meter Mauna Kea in Hawaii. The company's revolutionary temperature control system with ellipse dome reduces atmospheric blurring. Its 261 actuators maintain the 8.2-meter wide, 20-cm thick mirror in perfect shape. Mitsubishi Electric's advanced technologies help realize the world's highest level of performance in the Subaru Telescope.

Mitsubishi Electric aims to continue contributing to astronomy through the manufacture of large radio telescopes, optic telescopes featuring high-precision control systems, and antenna technologies.

For more information, please visit our homepage www.MitsubishiElectric.com/products/space/telescopes.

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About Mitsubishi Electric Corporation

With over 90 years of experience in providing reliable, high-quality products, Mitsubishi Electric Corporation (TOKYO: 6503) is a recognized world leader in the manufacture, marketing and sales of electrical and electronic equipment used in information processing and communications, space development and satellite communications, consumer electronics, industrial technology, energy, transportation and building equipment. Embracing the spirit of its corporate statement, Changes for the Better, and its environmental statement, Eco Changes, Mitsubishi Electric endeavors to be a global, leading green company, enriching society with technology. The company recorded consolidated group sales of 3,567.1 billion yen (US\$ 37.9 billion*) in the fiscal year ended March 31, 2013. For more information visit <http://www.MitsubishiElectric.com>

*At an exchange rate of 94 yen to the US dollar, the rate given by the Tokyo Foreign Exchange Market on March 31, 2013