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Mitsubishi Electric-built ACA Antennas Celebrated at ALMA Observatory Inauguration in Chile

TOKYO, March 14, 2013 – [Mitsubishi Electric Corporation](#) (TOKYO: 6503) announced today that 16 Atacama Compact Array (ACA) antennas delivered by the company under contract with the National Astronomical Observatory of Japan (NAOJ) were feted in an inauguration ceremony at the Operations Support Facility of the Atacama Large Millimeter/submillimeter Array (ALMA) Observatory in Chile on March 13. Chilean President Sebastián Piñera and numerous other guests celebrated the inauguration of the observatory, where the company-built ACA antennas, also known as “IZAYOI,” comprising four 12-meter and 12 seven-meter antennas, will be used in astronomical observations as part of the 66 large radio telescopes being built in Chile’s Atacama Desert.

The antennas, which are located at an altitude of 5,000 meters in the Atacama Desert of the Andes Mountains, incorporate innovative correction technologies and bespoke structural designs to minimize deformation due to heat or wind, and are driven with a direct-drive method using linear motors, resulting in the achievement of 25μm mirror accuracy and 0.6 arc-second pointing accuracy despite the harsh conditions of their operating environment.



”IZAYOI” ACA antenna cluster,
installed at an altitude of 5000 meters

Since the launch of the first-phase observations in September 2011, the ALMA project already has discovered a simple sugar molecule in a planet-forming region, measured the chemical composition of a very distant galaxy and found planet-forming gas streams that feed gas-guzzling giant planets. Going forward, Mitsubishi Electric will continue contributing to the project through training to local engineers and support in equipment maintenance.

About the ALMA project

ALMA is an international astronomical project involving the participation of Japan, the United States, Europe, Chile and other countries. Combining 66 telescopes using an interferometer array, the multiple antennas is equal to a massive radio telescope that would measure 18.5 kilometers in diameter, achieving a resolution equivalent to visualizing a small coin from a distance of 400 kilometers. The three major goals of the ALMA project are to investigate the birth of planets, the birth of galaxies and the evolution of matter in the universe.

Mitsubishi Electric's involvement in large telescopes for NAOJ

Since the 1980s, Mitsubishi Electric has been involved in numerous NAOJ-related projects for large telescopes, including the Nobeyama 45m radio telescope in Japan, the Subaru Telescope in Hawaii and the VLBI Exploration of Radio Astrometry (VERA) telescope in Japan.

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About Mitsubishi Electric

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 3,639.4 billion yen (US\$ 44.4 billion*) in the fiscal year ended March 31, 2012. For more information visit <http://www.MitsubishiElectric.com>

*At an exchange rate of 82 yen to the US dollar, the rate given by the Tokyo Foreign Exchange Market on March 31, 2012