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SPACE EXPLORATION SYMPOSIUM (A3)
Moon Exploration – Part 2 (2B)

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Abstract

Space agencies and Astronomy institutions worldwide should be able to participate and observe the Galaxy / Stars, local lunar environment and Earth with various wavelengths, for differing durations, from various lunar locations, and to conduct a wide-range of Moon-to-Earth and Moon-to-Space communications through the four ILOA missions. The missions will also help to secure Hawaii's leadership in Astronomy for the next 100 years.

ILO-1, the flagship ILOA mission, will see a multi-functional 2-meter dish observatory placed near the South Pole of the Moon. The mission (NET 2018) will conduct radio and optical astronomy, including Galaxy First Light Imaging Program; and Commercial Communications, including Space Calendar Lunar Broadcasting, while serving as a beacon for lunar base buildout. ILOA is embarking on a pioneering multi-year lunar electronics contract with Canadensys Aerospace of Canada to develop technology for the ILO-1 scientific payload. Joint venture partner Moon Express Inc. of USA is set to deliver the payload to the lunar surface.

ILOA is also working on a 7-cm optical telescope precursor mission known as ILO-X, partnering with Moon Express to ride on their Google Lunar XPrize lunar lander scheduled for 2017.

ILOA signed an MoU with the National Astronomical Observatories of the Chinese Academy of Sciences (NAOC-CAS) in September 2012 allowing ILOA scientists to conduct Galaxy Observations with the UV telescope aboard the 2013 Chang'e-3 lunar lander. This was followed by an MoU with CNSA in August 2013. In exchange for use of Chang'e-3 LUT, ILOA will provide observation time to NAOC during ILO-X and ILO-1 missions. ILOA has successfully completed observations with the Chang'e-3 LUT, including the first Spiral Galaxy (M101) observed from the lunar surface on New Year's day 2015.

Human Service Mission to the future ILO at Moon South Pole is being advanced through collaboration / partnership with International organizations and private partners such as Golden Spike Company. The goal of ILOA is to participate in a Human Moon mission within the next decade.