

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

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**Abstract**

ILOA, with four active lunar missions and a robust Galaxy 21st Century Education program, continues to prove itself as a pioneer in space exploration and Astronomy from the Moon. These missions will enable the ILOA teams to observe the Galaxy / stars, local lunar environment, and Earth at multiple wavelengths, for long durations, and from various lunar locations. They will also help to secure Hawaii's leadership in astronomy for the next 100 years.

The Human Service Mission to the ILO on lunar South Pole has been given high priority through collaboration / partnership with Golden Spike Company (GSC) of Colorado, USA. ILOA has advanced this collaboration by becoming the first non-founding equity investor in Golden Spike, and by participating in a global outreach campaign - Galaxy Forum - to gain support for both organizations. The goal of GSC and ILOA is to participate in a human Moon mission within the decade.

ILOA signed an MoU with the National Astronomical Observatories of the Chinese Academy of Sciences in September 2012 allowing ILOA scientists to conduct astronomical observations with the Lunar Ultraviolet Telescope (LUT) aboard the 2013 Chang'e-3 lunar lander. This was followed up with an MoU with CNSA in August 2013. In exchange for use of the LUT, ILOA will provide observation time to NAOC during ILO-X and ILO-1 missions.

ILO-1, the original ILOA mission, will place a multifunctional 2-meter reflective antenna observatory near the South Pole of the Moon. The mission (NET 2016) will conduct radio astronomy, including Galaxy First Light imaging; and commercial communications, including Space Calendar lunar broadcasting, while serving as a beacon for lunar base buildout. ILOA is working with Canadensys Aerospace Corporation in Canada to develop the scientific payload for ILO-1.

ILOA is partnering with the privately funded lunar enterprise Moon Express on a precursor mission known as ILO-X. For this mission, scheduled for 2015, ILOA will operate an already-built 7-cm optical telescope on the team's lunar lander scheduled for 2015.

Galaxy Forum is a successful 21st Century education program held regularly in locations all over the world. Already active in Hawaii, Asia, North and South America, Europe, Africa, the program will be expanded to Antarctica in 2015. The Forums connect Galaxy researchers and local educators to help bring "Galacticity" / Galaxy awareness into every class.