Lunar Exploration (3) Lunar Mission updates (1A)

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## INTERNATIONAL HUMAN MOON LANDER 2020-2025 & ILOA UPDATE 2017

## Abstract

The International Lunar Observatory Association ILOA, based in Hawai'i, long has manifested a "Human Service Mission to the ILO" and contracted technical studies for a Human-Rated Lunar Lander with SpaceDev Inc, formerly of Poway, California, in 2005 and in 2006, and with Golden Spike Company of Boulder, Colorado, 2012-2014.

With the 2018 NASA SLS / Orion Exploration Mission EM-1 Planned For Cislunar capability, there is opportunity to pioneer and catalyze diverse interests, and responsibility to advance Human Multi World existence, through international Human Moon lander enterprise and development.

American / Independents Such As Golden Spike, Astrobotic, Moon Express, Shackleton Energy, Canadensys Aerospace, Team Indus, SpaceIL, as well as SpaceX, Blue Origin, Bigelow Aerospace, among others, may collaborate through public-private bi-national and multi-national partnerships with Canada, China, India, Southeast Asia, Europe, Japan, Russia, USA, and other nations globally, to advance this leading-edge and focal point for Human Moon development reality in 2017.

ILOA for 2017 continues to advance its four lunar missions, to pursue an increasingly effective Galaxy Forum 21 Century Education and Support program, and to establish itself as a pioneer in Observation, Astronomy and Communications from the Moon.

The ILO-1 flagship mission to the Moon South Pole – with payload instrument developer Canadensys Aerospace Corp of Ontario, Canada advancing the 2-year Lunar Electronics Program, and spacecraft developer / lander Moon Express Inc of Florida, USA contracted for Landing Technology Advanced R&D – aims for 2018-2019 launch aboard ISRO Antrix PSLV or RocketLab Electron.

ILO-X precursor aboard the Moon Express first mission set for late 2017 aims to acquire and globally broadcast the first image ever from the Moon of our Milky Way Galaxy, with possible similar impact as the first whole Earth image ever from the Moon taken by Apollo.

ILOA also continues collaboration with the National Astronomical Observatories of China NAOC for Astronomy and Galaxy Research from the Moon using the Lunar Ultraviolet Telescope, now operating into its 4th year aboard the Chang'e-3 lunar lander.

These four missions will enable the international ILOA partners the opportunity to participate in Observation, Astronomy and Communications from the Moon, in Lunar Base buildout, and in the advance of Humanity as a Multi World Species.