A Lunar Lander Mission

Science. Exploration. Commerce.

MISSION OVERVIEW – ***Odyssey Moon*** is a small commercial robotic lander mission to the equatorial region of the Moon, in support of science, exploration and commerce. The mission is planned for launch by July 2011 utilizing the MoonOne (M-1) Lunar Lander, developed from an existing common spacecraft bus platform. This "Commercial Mission of Opportunity" still has 15 to 25 kg of additional payload capacity available to the international lunar and business community for commercial, scientific or technology demonstration payloads. We have minimized individual payload costs through sharing of spacecraft resources and common spacecraft elements. As an official Google Lunar X PRIZE mission, Odyssey Moon is the first of a series of mission opportunities designed to enable low cost, rapid, and frequent access to the Moon for government, academic and commercial customers.

MISSION MANAGEMENT

Commercial Director: Dr. Robert (Bob) Richards
Financial Director: Dr. Ramin Khadem
Science Mission Director: Dr. Alan Stern
Chief Scientist: Dr. Paul Spudis
President, US Operations: Mr. Jay Honeycutt
Prime Contractor: MDA Space Missions
Mission Design: OML/MDA
Spacecraft: OML/MDA/Additional Partners

MISSION OBJECTIVES

- Demonstrate low cost commercial lunar delivery system
- Provide access to lunar surface for science instruments
- Provide a platform for technology demonstration
- Provide reliable products & services for lunar commerce
- Establish a NewSpace paradigm for lunar exploration
- Win the $30M Google Lunar X PRIZE

MISSION BASELINE*

The Odyssey Moon reference mission includes the following baseline elements:

- Equatorial landing site, nominally focused on Rima Bode, Sulpicius Gallus, or other lunar regions containing well established dark mantle deposits
- A single platform fixed lander
- Operation during a single lunar day incorporating operation during potential dust levitation terminator

**Additional parameters driven by customer requirements.*

MoonOne (M-1) LUNAR LANDER CONCEPT
M-1 is a modular commercial lunar lander system capable of delivering ~50kg payload to the lunar surface.

KEY SPACECRAFT DESIGN CHARACTERISTICS*

The MoonOne (M-1) lunar lander design is adapted from an innovative common spacecraft bus and includes:

Spacecraft Mass: 130 kg (including propellant)
Spacecraft Propulsion: Liquid Bipropellant
Total Payload Capacity:

- App. 50kg total subject to final mission design

Total Payload Power (shared/lunar day only):

- 15 Watts continuous, 30 Watts w/50% duty cycle
- Short duration peak power < 2 minutes: 50 Watts

Maximum Individual Payload Volumes:

- Internally mounted payloads: 7"W x 8"H x 5"D
- Externally mounted payloads: 14"W x 10"H x 6"D

**Design Characteristics are not frozen and are subject to change.*

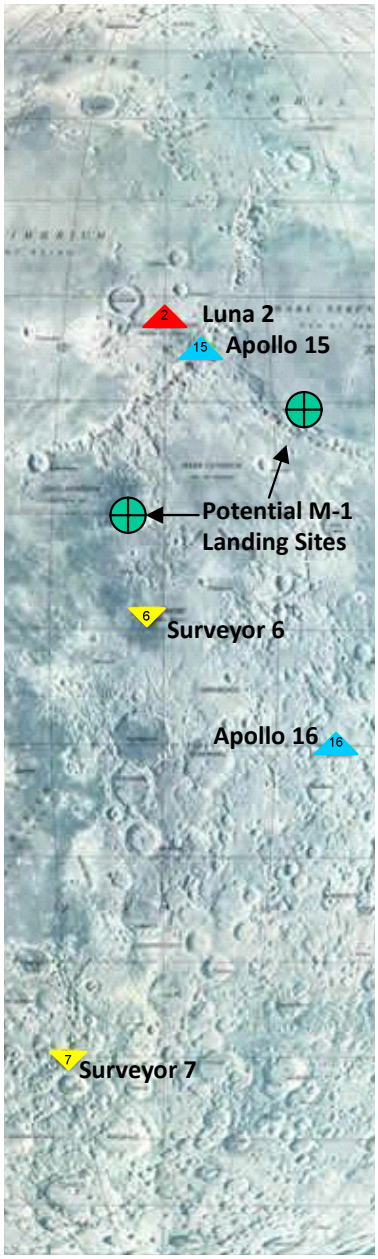
PAYLOAD MANIFEST

- Google Lunar X PRIZE instruments (HD still & video)
- International Lunar Observatory Precursor (ILOA)
- Memorial Payloads (Celestis)
- "Visions of the Moon" archive (The Planetary Society)
- Additional customer instruments TBD (15-25kg total)

"The Google Lunar X PRIZE calls on entrepreneurs, engineers and visionaries from around the world to return us to the lunar surface and explore this environment for the benefit of all humanity." — *Dr. Peter H. Diamandis, Chairman and CEO of the X PRIZE Foundation*

ODYSSEY MOON

DESTINATION: Lunar Nearside Equatorial Region
TARGET ENVIRONMENT: Dark Mantle Deposits / Dust Levitation Terminator
MISSION GOALS: Customer driven



CORPORATE PROFILE

Odyssey Moon is a commercial lunar enterprise dedicated to the long term responsible development of the Moon for the benefit of all humanity.

As the world's first multi-national enterprise dedicated to commercial lunar exploration and development, Odyssey Moon plans to meet near term and long term global market needs for low cost, reliable and frequent lunar access currently unaddressed by large government space programs. By creating alternative commercial lunar delivery products and services that provide rapid mission schedules and standardized systems, our goal is to provide value added commercial lunar missions for our government, academic and commercial customers. World-class technologies will be selected and developed into standardized, scalable turn-key solutions that will supply unprecedented value to diverse international customers seeking reliable and cost effective products and services for lunar activities.

Odyssey Moon has established launch agreements with commercial customers and is recognized by NASA as a potential supplier of Commercial Missions of Opportunity for fundable payload delivery services to the Moon. Odyssey Moon has also entered into discussions with other national space agencies worldwide for the provision of hardware and services on a commercial procurement basis.

Payload proposals are invited from scientists, institutions and commercial enterprises worldwide.

ODYSSEY MOON MISSION LAUNCH

The M-1 spacecraft processing and launch will occur in the United States with the support of an experienced launch partner.

THE PLANETARY SOCIETY

ILOA

celestis®

Payload Inquires:
PFO-M1@odysseymoon.com
Emeline Paat-Dahlstrom
+1 (571) 338-3512
www.odysseymoon.com

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