

Participatory Exploration for Inspiration and Education (12)
Engaging Citizens: Results and Future Concepts (1)

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ISRAELI LUNAR EXPLORATION AS A TOOL TO ENGAGE THE PUBLIC IN SPACE RESEARCH
AND EDUCATION

Abstract

At late 2010 an Israeli team (SpaceIL) has joined the Google Lunar Xprize endeavor with the vision of Israel becoming the third country to land its flag on the moon. The goals of our team include not just landing on the moon and winning the prize but also to energize the Israeli space community, encourage space technology research and promote science education.

The spacecraft is a low weight micro-satellite, using innovative technologies and Israeli know-how to accomplish a lunar landing with a modest budget. The mission will be launched to a high energy earth orbit, as a piggy-back, and then use the on-board propulsion system to perform the required maneuvers to reach and land on the moon. The design utilizes advanced technologies and algorithms to bring to minimum the required systems on-board. Another step to decrease cost, weight and enable shorter development time is to allow for single points of failure in low risk sub-systems. Another feature of the spacecraft is the ability to perform a lunar hop, moving a distance greater than 500 meters on the lunar surface using the propulsion system - enabling an aerial view of the lunar surface and exploring different locations.

The SpaceIL team is composed of over one hundred members, all volunteers, coming from the Israeli aerospace industry, High-tech companies and the public. This vibrant group has engaged the challenge, performing public outreach, raising the funds, creating an education program and a technical team performing the satellite development. The creation of the team has already energized and engaged the local community, working together with varied bodies - from schools and academia to the industry and Israel space agency.