

SPACE EXPLORATION SYMPOSIUM (A3)
Moon Exploration – Part 1 (2A)

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UPDATE ON THE GLXP MISSION PLAN FOR THE BARCELONA MOON TEAM

Abstract

The Barcelona Moon Team is one of the 29 official teams registered at the international competition Google Lunar X-Prize set up in 2007 by Google and the X-Prize Foundation to reach the Moon with private funding and encourage entrepreneurs, technicians and scientists from around the globe to develop technologies that will use the Moon as a base for solar system exploration and a source of energy solutions for the Earth.

The paper will update on the team development plan including a major additional objective for the Barcelona Moon Team: the definition of the lunar rover as a platform to carry on science on the Moon and to use this as an effort to foster social interest in space.

To achieve that the team launched in March 2011 two calls. One for a science experiment, open to the global scientific community, and one for a robotic mini/micro rover within engineering students and young graduates to compete for innovation in mobility on the Moon.

The calls will select in the next months, the most relevant proposals received and will endow them to develop flight models that will become payloads of the team first mission to the Moon.

In addition, the team already selected the development of an experiment to demonstrate in situ the presence of lunar volatiles and/or demonstrate the feasibility of extracting oxygen from the lunar regolith. This will already represent the first ever demonstration of the technological feasibility of in situ (planetary) resource utilization (ISRU) and has great value to the development of future missions to the Moon and beyond.

The paper will focus on the development and current status of the calls for ideas and proposals, the selected experiments, and their impact, not just within the scientific community, but also within the general public in the frame of a project that looks for social support as a major driver.