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GOOGLE LUNAR X PRIZE-BARCELONA MOON TEAM UPDATE

Abstract

The Barcelona Moon Team (BMT) is one of the 23 official teams registered at the international competition Google Lunar X-Prize. The paper will update on the team status and both compulsory and additional objectives.

Since 2010 Barcelona Moon Team gathers world leading Spanish space companies and institutions including Galactic Suite (team leader and responsible for the lunar rover module LRM), GMV (mission analysis, lunar lander GNC system); EADS CASA Espacio (responsible for lunar lander module LLM platform), National Institute for Aerospace Technology INTA (responsible for many LLM and LRM subsystems), Technical University of Catalonia UPC (responsible for many LRM subsystems and science experiment onboard). The team also achieved an important milestone in 2012 with the signature of the LM2C-CTS2 launch service contract with China Great Wall Industry Corporation.

BMT mission is a low cost mission and, thus, design-to-cost approach is used instead. The paper will present the mission architecture and mission approach. The first section/s will be devoted to analyze the mission aspects, including the critical descent and landing phase.

The second section/s will discuss the funding strategy and the long term vision of a commercially viable future lunar transportation company, being BMT the demonstration mission. The baseline mission of the BMT defines landing a total of 40 kilograms of payload on the lunar surface. The consortium offers the additional kilograms besides the LRM at the competitive price of 1,35 million of Euros per kilogram, as an additional revenue to fund its first mission.