Moon mission: Dubai joins global entities

MBRSC AND PARTNERS TO DEVELOP KEY INSTRUMENTS ON RASHID ROVER

DUBAI

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Rashid Space Centre (MBRSC) on
Wednesday announced that it has
partnered with local and international entities, institutions and agencies to develop the science programme for the Emirates Lunar Mission.

The partners will support the development of the main instruments on board the Rashid rover, including the Langmuir probe as well assist in data collection, landing site research, calibration strategies and data analysis.

Methodology

Based on the analysis of the scientific and engineering data requirements, MBRSC designed a science package consisting of a set of lightweight but powerful instruments that will be on-board the Rashid rover. These instruments will enable the rover to measure a carefully selected set of environmental conditions on the lunar surface. The demanding sensitivities of the instruments combined with the necessity of optimising between the rover and science instrument requirements resulted in the establishment of an international team of researchers, under the leadership of MBRSC.

Landing site research

MBRSC has partnered with the Centre for Petrographic and Geochemical Research at Universite de Lorraine in Nancy (France) to work on the characterisation of the conditions at the landing sites and analysis of the data from the rover's microscopic imager. This microscopic imager, which was conceptualised by MBRSC, will obtain the highest resolution image from the lunar surface thus far and provide an unprecedented view of the undisturbed topmost layer of the lunar regolith. It is this upper layer which will show the imprint of the formation and evolution of the lunar surface at its smallest scales.

The team has also narrowed down the location where it intends to land, within a circle of 4km. The research into the landing site is essential, as the rover needs to avoid areas with high slopes or potential hazards. Available data of landing sites will also enable the team to find interesting targets that will help better understand the topography, geography and features of the rock and dust.