

SPACE EXPLORATION SYMPOSIUM (A3)
Moon Exploration – Part 2 (2B)

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ROSCOSMOS-ESA COOPERATION IN LUNAR EXPLORATION

Abstract

The European Space Agency's approach to exploration includes three destinations: Low Earth Orbit, the Moon and Mars. The role of the Moon in this sequence is as a stepping stone for the development of cooperative robotic and human exploration capabilities, beginning with robotic precursor missions.

Lunar Exploration is a high priority in the Russian space programme, with a sequence of missions planned in the course of the next 10 years. This includes orbiting, landing and sample return missions targeting the unexplored region of the Lunar South and North Poles.

In the context of broader cooperation between ESA and Roscosmos in exploration of the Solar System, a particular interest has been identified to join efforts in the area of lunar exploration. Agencies, industries and institutes from both sides are actively engaged in defining a progressive participation of Europe to the Russian-led missions with a view to a cooperative lunar exploration programme, based on the principle of mutual benefit and complementarity in technology and science. Possible ESA contributions build on recent European developments, particularly in landing technologies (precision navigation, surface hazard detection), science payload instruments and subsurface drilling and sampling technologies.

Such a cooperation will benefit the overall exploration strategy of both Agencies, by enhancing programmatic robustness and mission benefits. It will generate knowledge of the Moon with the eyes of the 21st century and progressively build capabilities that will open new exploration frontiers, beyond the lunar vicinity.