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

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RUSSIAN PROGRAM OF LUNAR INVESTIGATIONS AND EXPLORATION

Abstract

Russia has longterm program for Lunar investigation and exploration. First stage of this program- robotic expeditions- starts in summer 2023 by the launch of Luna-25 mission. Mission numbering follows the last Soviet Luna-24 sample –return expedition. Luna-25 lander will explore the environment of the southern polar region and provide data on Lunar exosphere and regolith properties. The main task is to obtain "in situ" measurements of water permafrost inclusions in to the regolith upper surface layer. Next in this row – Luna-26 orbiter - will concentrate on studies of solar wind – Moon interactions and high – resolution mapping of the Lunar surface. Next step will be made by Luna-27 lander, which will perform detailed studies of the Lunar dusty plasma and interaction of solar-wind particles with Lunar exosphere and surface. Lunar-27 cryogenic drilling device will study properties of Lunar soil and possible volatiles under the surface. Mission Luna-28 is designed now to bring samples of regolith (keeping its volatiles intact) back to the Earth's laboratories. Second stage- manned expeditions for Lunar exploration is planned now for the beginning of the next decade and will be related both with various practical issues and astrophysical and astroparticle measurements from the Lunar surface.