

The surface of the Moon in the study of upcoming Russian mission Luna-25

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Today's plans for lunar exploration involve the launch of the Luna-25 mission in July this year. The landing of the descent module is planned in the area of the Boguslavsky crater near the south pole of the Moon (69–70 degrees south latitude). A number of scientific instruments will investigate near-surface regolith: ADRON—mass fraction of frozen water, ARIES and PmL—dynamics of plasma, neutral and dusty exosphere, LASMA—mass spectrum of regolith. Scientific service systems are lunar manipulator and several cameras for panoramic photography, manipulator working field and surroundings.

The PmL lunar dust experiment is aimed at measuring the physical characteristics of dust particles, assessing their dynamics and distribution near the illuminated lunar surface, and simultaneously assessing the environmental conditions of dust plasma and solar wind [1]. This device will be able to study the abundance of microparticles in the clouds of lunar dust during full life the landing module of Luna-Glob mission.

[1] Solar System Research, 2021, Vol. 55, No. 6, pp. 576–587.