



## **The method of landing sites selection for Russian lunar lander missions**

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Russian space agency is planning to launch two lunar landers in the upcoming years – Luna-Glob (2018) and Luna-Resurs (2021). Instruments installed on board the landers are designed to study volatiles and water ice, lunar exosphere, dust particles and regolith composition. As primary scientific interest is concentrated in the south polar region, the landing sites for both landers will be selected there.

Since rugged terrain, conditions of solar illumination at high altitudes and necessity of direct radio communication with the Earth, it is essential to select an optimal landing site for each lander. We present the method of landing sites selection, which is based on geographical information systems (GIS) technologies to perform analysis, based on the criteria of surface suitability for landing, such as slopes, illumination conditions and Earth visibility. In addition, the estimations of hydrogen concentration in regolith based on LEND/LRO data were used to evaluate landing site candidates on possible water ice presence. The method gave us 6 candidates to land. Four of them are located in the impact craters: Simpelius D, Simpelius E, Boguslawsky C, Boussingault, and the other two are located to the north of Schomberger crater and to the north-west of Boguslawsky C crater and associated with probable basin-related materials. The main parameters of these sites will be presented with possible prioritization based on both technical requirements and scientific interest.