MOSCOVIENSE BASIN: POTENTIAL LANDING SITE FOR FUTURE LUNAR MISSIONS.
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ABSTRACT

We used Lunar Reconnaissance Orbiter Camera [1], Clementine [2,3] and Kaguya [4,5] data to produce a geological map of the Moscoviens basin region on the Moon. The Moscoviens basin (445 km diameter) is located on the northern hemisphere of the lunar farside at 27°N, 148°E [2]. The eastern mare unit of Moscoviens, is a good candidate landing site for rover-based sampling missions, giving access to both young mare basalts and basin materials. As depicted in earlier maps, Moscoviens basin is in a heavily cratered undivided pre-Nectarian region on the lunar farside (pNtm) [6]. Our new map divides the Moscoviens basin and mare units providing a greater level of detail for geological and landing site analyses. Other recent studies focused only on the basin floor [7,8], but not on the whole region. The units in the region can be divided into two groups. The first group contains units associated with the rim of Moscoviens and other crater material. The second group contains the younger dark plains materials, interpreted as mare basalts that fill the basin floor. Both units are affected by craters and secondary crater chains of different ages.


Figure Caption: Geological map of the Moscoviense basin in the northern hemisphere of the lunar farside.