



Charging of Lunar Simulants Under Particle Bombardments

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The Moon crosses a number of different environments when orbiting the Earth. Charging of the lunar surface varies then for each of them. Also, day-night changes are under completely different conditions because the dayside is bombarded by the solar wind, whereas the plasma conditions in the wake near the lunar surface are still not understood. Therefore, the Moon is heavily bombarded by energetic ions and electrons. In the present paper, we focus on emissions from the lunar dust simulants, JSC-1 and MLS-1, occurring after energetic particle impacts. The study is carried out on grains levitating within the quadrupole trap and influenced with ion and electron guns. Measured characteristics are compared with similar characteristics of glass microspheres as well as with Monte-Carlo simulations.