Phobos Interaction Revisited

WING-HUEN IP

Institutes of Astronomy and Space Science, National Central University, Chung-Li, Taiwan

The Russian Phobos Grunt spacecraft is scheduled to be launched in late 2011 or early 2012. In this ambitious sample return mission, it will provide the first opportunity to retrieve surface material on the surface of the Martian satellite, Phobos, for detailed laboratory study on Earth. It will also carry a small daughter spacecraft, Yinghuo-1, from the Chinese space agency for the study of the Martian plasma environment and the corresponding solar wind interaction. In this talk, we will focus on the physical effects associated with the electrostatic charging of Phobos surface and solar wind sputtering and impact taking into consideration new developments since the measurements by the Phobos 2 spacecraft in 1989.