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Author: Dr. Yifeng Chen

China Aerospace Science and Technology Corporation (CASC), China, chenyf04@lzu.cn

Dr. Shengsheng Yang

Lanzhou Institute of Physics, China, yangss510@hotmail.com

STUDY OF SPACECRAFT SURFACE CHARGING AND SECONDARY ELECTRON EMISSION OF  
INSULATORS

**Abstract**

Spacecraft charging induced by electron in space have brought serious threaten to the safety and reliability of spacecraft, and the secondary electron emission of insulators is important to study of spacecraft charging. The paper explores the surface potential as a function of secondary electron emission of the insulators, with incident electron bombardment of energy range from 0.5 keV to 30 keV and different fluence. The surface potential is measured by the Surface Charging Facility (SCF-900) of Lanzhou Institute of Physics. The results indicate that the surface potential depends on the secondary electron emission of insulators strongly. Furthermore, the surface potential is observed to be larger at higher projectile energy and higher fluence.