

SPACE DEBRIS SYMPOSIUM (A6)
Hypervelocity Impacts and Protection (3)

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PRELIMINARY STUDY ON THE TEST OF THE SPACE SMALL DEBRIS IMPACT ON SOLAR
CELLS

Abstract

In the space environment space debris has a large amount of numbers that the aircraft will inevitably impact with small space debris and those impacts will be a threat to the lifetime and reliability of the satellite solar cells. The best way to research after such phenomenon is go into orbit, but it is also the most expensive. A good alternative is to study it in a simulated space environment in ground laboratory. In this paper, we fulfill this aim by using a ground laboratory to create solar cells performance tests with small hypervelocity space debris. We also intend to do some preliminary experiments about charging on the solar cells in plasma environment and make good preparation for later research about this topic.