

Search for the data of space debris initial distribution

Zhang Ping-ping (1), Pang Bao-jun (2)

(1,2) Harbin Institute of Technology Space Debris Hypervelocity Impact Research Center, Harbin, China (zhdoublingping@126.com, pangbj@hit.edu.cn)

Abstract: Space debris environment model is one of the kernels of the research on space debris. Space debris environment model is based on the data of space debris, that is, if we have the data of space debris orbit parameter, we can determine the state of space debris distribution, and then the spacecraft risk assessment can be executed. Because numbers of small size space debris cannot be detected or observed, we have not small size space debris data. The short of small size space debris data leads to the engineering model inaccurate; model needs to be updated while in the status of seriously short of data, the model can not be updated in time. In allusion to the problem of scarcity of data, on the basis of modern computer arithmetic, this paper is trying to search new data with old data, and the results of the model is close to other engineering models.

Key words: space debris; data