SPACE DEBRIS SYMPOSIUM (A6)
Space Surveillance and Space Situational Awareness (5)

Author: Mr. zhang yaolei
China Academy of Launch Vehicle Technology (CALT), China, spacesim@126.com

Mr. Lu Ying
China, leagley@gmail.com
Mrs. Zhang Jianying
China, zhangjianying79@163.com
Prof. Xie Zebing
China Academy of Launch Vehicle Technology (CALT), China, sunxie8888@sina.com

EVALUATION SYSTEM OF SPACE SITUATION BASED ON SPACE OBSERVATION

Abstract

As the space activities becomes more and more, the number of space targets such as satellites and space debris grows rapidly, which increasingly influences the success probability of space activities. Consequently, it is necessary to develop an Evaluation System of Space Situation (ESSS) based on space observation data, which can provide services to rockets launch and supports to the research on new technology. This paper introduces the existent software and models of evaluation system, and space targets. On basis of the existent approach, 4 kinds of research are introduced, such as the research of special network, target database, automatic awareness and evaluation system, and automatic awareness and evaluation system. Special network gets large amount of space observation data from another place for target database. Target database not only includes the observation data of satellites and space debris, but also predicts the trajectory of each space target accurately. Automatic awareness and evaluation system draws graphics of the typical results, evaluates success probability of the flight. Master control interface and system of user service provides friendly interface and scores of function blocks used for designing an application system, managing the results, and so on.