

55th IAA SYMPOSIUM ON SAFETY, QUALITY AND KNOWLEDGE MANAGEMENT IN SPACE  
ACTIVITIES (D5)

Prediction, Testing, Measurement and Effects of space environment on space missions (3)

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DEVELOPMENT OF A PROGRAM IN JAVA PROGRAMMING LANGUAGE TO PREDICT SOLAR  
INTERFERENCE BY SOLAR TRANSITIONS IN GEOSTATIONARY SATELLITE SYSTEMS

**Abstract**

Solar interferences by solar transit “sun outage” are a phenomenon that mainly affects links of geostationary satellites, causing the interruption of the communications service, both transmission and reception by a few minutes. The “sun outage” phenomenon can be predicted using astronomical equations and calculating the position of the satellite and the sun. The objective of this project is to develop a program in java programming language in order to calculate the date and time of solar interference by solar transit in geostationary satellite systems.