

SPACE DEBRIS SYMPOSIUM (A6)  
Modeling and Risk Analysis (2)

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ON USING BOARD MEASUREMENTS FOR IMPROVEMENT OF SPACE DEBRIS MODELS

**Abstract**

There are two ways to build a space debris model. The first one is a space debris source simulation: careful investigations of space events, ground simulations of explosions and impacts, reliable tracing the Sun's activity and the atmosphere's behavior, and solution of the evolution problem. This way is generally accepted because it allows having the most comprehensive view on the problem. Note, nevertheless there are a lot of sources of uncertainties and errors at all stages. The other way is to build a space debris model measuring directly the space environment in-situ, using aboard measurements. Such way was used by GOSNIAS in 80's when they develop a model of collisional environment in LEO using experiments made aboard space stations Salyut series. This technology has its advantages providing the most reliable information on a temporary local space debris populations. In the paper there is discussed how to combine these two approaches and to implement the data of aboard measurements to improve a space debris model