

SPACE DEBRIS SYMPOSIUM (A6)
Measurements (1)

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ORBIT ESTIMATION FROM A SMALL SET OF MEASUREMENTS

Abstract

Situations in which an orbit must be determined from a small set of available measurements are likely occur during tracking of space debris. In these days, a filter called the unscented Kalman Filter (UKF) is paid attention for its robust way of solving the orbit determination problem from a small set of measurements. We applied this algorithm to the radar and optical measurement data and evaluated the effect. In this paper, we discuss the method of preliminary orbit determination and also the accuracy of the determined orbit.