

Analisis kondisi antariksa di orbit LAPAN A2 menjelang puncak aktivitas matahari siklus 24

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20438458&lokasi=lokal>

Abstrak

LAPAN A2 satellite will be placed at 650 km altitude and inclination of $8i^{\circ}$ at the beginning of year 2012 based on the initial scenario. This satellite has structure with the size and weight are 60 cm x 60 cm x 80 cm and 65 kg consecutively. Space environment analysis on this satellite using space weather pattern method showed that geomagnetic activity levels, represented by Kp and Dst indices, had range of 2 to 4 and -40 to -9 nT consecutively. It means that the effect of geomagnetic activity will not significantly impact the satellite system. Simulation using SPENVIS also showed small impact of proton and electron on satellite structure. Analyzing on atmospheric drag showed that this satellite has stable orbit. The only possibility of LAPAN A2 satellite experiences charging come from charged particles trapped in South Atlantic Anomaly (SAA) that contain high flux of particles.