

EARTH OBSERVATION SYMPOSIUM (B1)
Earth Observation Sensors and Technology (3)

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A SIMULATION AND ANALYSIS FOR THE INFLUENCE OF DISTURBANCE ON ZY-1 02C
SATELLITE IMAGING

Abstract

With enlargement and flexibility structure of remote sensing satellite, the disturbance problem on image quality becomes more and more significant. When remote sensing satellite imaging on-orbit, there is decrease of camera image quality arose by the rotation of its moving components. The article evaluates and analyzes the effect of imaging disturbance under different working conditions on devices in AOCS for ZY-1 02C (the latest satellite in Ziyuan series) satellite, such as BAPTAs and Momentum Wheels. In the mean while, from aspect of mechanical simulation, the simulation makes the reduction finite element method for the two different CCD cameras disturbance amplitude and frequency. For image quality which influenced by satellite disturbance at different working status, the article also states damping control and vibration implementation. At last, a suggestion for on-board control is produced, and cameras assemble requirement is revealed.