
Station-Keeping Maneuver Simulation for the communication Ocean and Meteorological Satellite

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Automated east/west and north/south station-keeping maneuvers were simulated for the geostationary COMS(Communication, Ocean and Meteorological Satellite) satellite that will be launched around year 2008. The satellite has to be maintained within $\pm 0.05^\circ$ at the nominal longitude of 128.2°E . The general perturbation method was used to keep the position of the geostationary satellite. Weekly based east/west and biweekly based north/south station-keeping maneuvers were investigated. The sun-pointing perigee control method and two-burn strategy were used for the east/west station-keeping maneuver. Switching the right ascension of the ascending node to descending node was adopted for the north/south station-keeping maneuver. One year station-keeping maneuver was demonstrated and various station-keeping orbital parameters were analyzed.