Station-Keeping Maneuver Simulation for the KOREASAT Spacecraft Using Mission Analysis Software

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East/west and north/south station-keeping maneuvers were simulated for the KOREASAT spacecraft which has to be maintained within 0.05 degrees at the nominal longitude of 116 degrees east. Weekly and biweekly based station-keeping maneuver plannings were used, and weekend maneuvers were avoided. The Sun-pointing perigee control method was used for the east/west station-keeping maneuver which was done with a 7-day cycle time as well as a 14-day cycle time. Slavinskas *et al.* (1988)'s minimum fuel consumption method was applied to the north/south station-keeping maneuver with a 28-day cycle time. All of the station-keeping maneuver plannings and executions were performed using KOREASAT Mission Analysis Software(MAS) on VAX/VMS operating system. Total of 14 weeks station-keeping maneuvers were performed and various station-keeping orbital parameters were obtained.

Slavinskas, D. D., Dabbaghi, H. and Benden, W. J., 1988, *J. of Guidance,* 11, 584.