

Analysis of Space Radiation Environment and Effects of COMS-1

Sung-Joon Kim¹, Jongho Seon², Yun-Whang Jung², In-bok
Yeom², Daiho Ko¹, and Kyoung-Wook Min¹

¹Dept. of Physics, Korea Advanced Institute of Science and
Technology

²Satrec Initiative Company Limited

We analyzed space radiation environment and effects of Communication, Ocean and Meteorological Satellite-1 (COMS-1) that will be launched in 2008 and have geo-synchronous orbit with 128.2 E longitude. The space radiation environment from trapped particles, solar protons and cosmic ray is simulated respectively by using NASA AP8/AE8 model, JPL model and Naval Research Lab (NRL) CREME under the orbit information. The effects on devices in COMS-1 by this radiation environment are predicted by SHIELDOSE-II code and Weibull functions.