

Analysis of Simultaneous Measurements on Foton M2 Satellite and on CSA Aircraft in June 2005

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Space radiation have been monitored using the R3D-B2 radiation risks radiometer-dosimeter on board a recent space flight on the Russian satellite Foton M2 spending 15.6 days in Earth orbit at altitude between 260 and 304 km within the ESA Biopan 5 facility mounted on the outside of the satellite exposed to space conditions. The relatively high inclination of 62.9° allows observations of the inner and outer radiation belts. In same time another very similar instrument flies continuously on CSA A310-300 commercial aircraft mainly on Prague to North America routes. Simultaneously measured radiation environment on the spacecraft and on the aircraft are compared with a preliminary version of a new Atmospheric Ionizing Radiation (AIR) model in development at the National Institute of Health of Italy (Istituto Superiore di Sanita – ISS), in collaboration with the NASA Langley Research Center and the Bartol Research Institute of the University of Delaware.