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New Insrument with GPS for Analysis of the Space Radiation at Aircrafts

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Under a co-operation between Solar-Terrestrial Influences Laboratory- Bulgarian Academy of Sciences and University of New South Wales, Australia was developed a new space radiation monitoring instrument (Liulin-4SA) for use by pilots during commercial aircraft flights. The instrument consists of 256 channels space radiation spectrometer, GPS receiver, alpha-numeric LCD display and accumulator and allows up to 15 hours continuous monitoring with saving on 1 MB flash memory of the spectra, fluxes, doses and UT latitude, longitude and altitude of the aircraft. Some examples of measured radiation doses on flights between Sydney, Australia and other cities are analyzed and compared with FH 41B instrument and CARI-6 model.