



## **relationships between the satellite anomalies at geostationary and low orbits and space weather parameters**

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The statistical evaluation of a possible space weather impact on space missions has been made with the use of the big database of geostationary and low-orbit satellite anomalies for the period 1971-94, comprising the growth, maximum, and decline phases of the solar activity. The database includes reported anomalies onboard international and former SU satellites. Correlation analysis with the use of the anomaly probability function and the superposed epoch analysis, both indicate the occurrence of space weather impact on satellites missions. At different phases of the solar cycle the main factors of the space radiation impact on satellites turn out to be different. During the period of maximum solar activity, the solar protons are the main factor causing the anomalies of geostationary satellites, whereas in the periods of growth, and especially - decline of the solar activity, the magnetospheric relativistic electrons are the main menace to the satellite systems. There are time intervals with very low fluxes of solar protons and relativistic electrons, when the satellite anomalies are related to the fluxes of energetic ( $\sim 100$  KeV) electrons. The potentially dangerous values of different energetic particles fluxes have been determined. These regularities should be taken into account during the consideration of the measures to mitigate the radiation hazard for the planned satellite missions.