

Kazakhstan's center for diagnostics of near-Earth space and forecast of space weather

Key parameters monitoring for space weather by Kazakhstan's multi-level system measurements with a database update and diagnostics of a state of the near-Earth space is carried out. Results of space environment monitoring are accessible via the Internet on the web-site of the Institute of Ionosphere (<http://www.ionos.kz/?q=en/node/21>) in real time. Kazakhstan's multi-level system measurements includes an experimental setup for records of cosmic ray intensity using a neutron monitor (AATB high mountain cosmic ray station), a magnetic observatory "Alma-Ata", a solar radio telescope for measurements of the solar radio flux at frequencies of 1.078 GHz (27.8 cm) and 2.8 GHz (10.7 cm) with 1-second time resolution, and a Callisto radio spectrometer (type eC37). Kazakhstan Space Weather Prediction Center works daily (<http://ionos.kz/?q=en/node/21>). We issue the short-term and long-term forecasts of magnetic activities (Ap-indexes) and solar activity (F10.7) for 55 days, the forecast of probability of a large proton enhancement for 28 days and the forecast of fluence of magnetospheric electrons with energy > 2 MeV at geostationary orbit for 28 days and provide this information to all interested organizations in Kazakhstan. An off-optimum situation with the Kazakhstan geostationary satellite KazSat-2 was analyzed.

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