

Complex for spectrometry of hard X-ray and gamma radiation of the Sun and study of polarization of solar flares for the perspective space project SOLARIS.

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The perspective space project SOLARIS involves research on board a spacecraft launched at Lagrange L1 point, which should provide long-term continuous complex observations of the Sun in various ranges of the electromagnetic spectrum. The complex of scientific devices developed by NRNU MEPhI is designed to study active nonstationary processes on the Sun in a wide range of X-ray and gamma radiation (1 keV to 10 MeV), physical mechanisms of acceleration and transport of electrons, protons and nuclei at various phases of solar flare development, plasma in the region of the flare by the methods of spectral-temporal and polarimetric measurements (in the range 30-150 keV) of radiation fluxes. In this paper, the scientific tasks, operating principles and basic characteristics of NRNU MEPhI devices for the SOLARIS space project are described.

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