

## **STATUS OF THE RUSSIAN SATELLITE PROJECT “CORONAS-PHOTON” FOR STUDY OF SOLAR FLARE HARD RADIATION**

Yu.D. Kotov (1), V.N. Yurov (1), N.F. Sanko (2), R.S. Salihov (3)

(1) Astrophysics Institute of Moscow State Engineering-Physics Institute,  
(2) Russian Aviation-Space Agency, (3) Electromechanics Institute, Russia  
[kotov@axpk40.mephi.ru](mailto:kotov@axpk40.mephi.ru)/Fax (7-095)-324-0616

PHOTON-PHOTON mission is the third satellite of the Russian CORONAS program on the Solar activity observations. The main goal of the CORONAS-PHOTON mission is the study of the Solar hard electromagnetic radiation in the wide energy range from Extreme UV up to high energy gamma - radiation (~2000MeV). It was adopted as a part of Russian Federal Program of Fundamental Space Researches.

Main objectives of the mission are:

- study of the dynamics of the energy spectra of hard electromagnetic radiation in a wide energy range from 15keV to 2000MeV;
- nuclear gamma-lines spectroscopy of Solar activity regions;
- detection of solar neutrons with energies higher 5MeV;
- measurement of linear polarization and rapid variability of hard X-ray emission during the flares;
- monitoring of the Solar extreme ultra-violet (EUV), soft and hard X-ray emissions;
- detection of the fluxes of electrons, protons and nuclei at the satellite orbit;
- monitoring of Earth upper atmosphere by occultation measurements of EUV and soft X-rays radiated by the quite Sun.

The main characteristic of scientific instruments and shot description of the satellite frame are given in the report.

Orbit: circular, 500km height, inclination 82degrees.