

**RESULTS OF XUV FULL SUN IMAGING SPECTROSCOPY FOR
ERRUPTIVE AND TRANSIENT EVENTS BY THE SPIRIT
SPECTROHELIOGRAPH ON THE CORONAS-F MISSION**

I.Zhitnik(1), S.Kuzin(1), O.Bugaenko(2), A.Ignat'ev(1), V.Krutov(1), D.Lisin(3),
A.Mitrofanov(1), S.Oparin(1), A.Pertsov(1), V.Slemzin(1), A.Urnov(1)
(1)P.N.Lebedev Physics Institute of RAS, Moscow, (2) Sternberg
Astronomical Institute of Moscow University, Moscow, (3)Institute of
Terrestrial Magnetism, the Ionosphere and Radio-Wave Propagation of RAS,
Troitsk, Moscow region (zhitnik@sci.lebedev.ru; kuzin@sci.lebedev.ru)

An overview is given of new observational results obtained in the framework of the SPIRIT experiment by means of multi-channel spectroheliograph (RES) on board the CORONAS-F satellite. Preliminary analysis of the data was made on the basis of more than ten thousands of monochromatic images in X-ray channel (MgXII 8.42 Å line) along with that in EUV channels (well-resolved lines in the ranges of 177--207 and 285--335 Å) recorded with high spatial and temporal resolution for the period of six months since the launch 31 July 2001. Images in MgXII channel revealed eruptive as well as transient events: dynamic well-shaped on- and off-limb plasma structures in vicinity of active regions, firstly observed in monochromatic line emission. These structures are characterised by the temperature of about 10 MK and life-times from minutes through days. Typical MgXII images for the flare revealing bright sources at footpoints as well as the top of the loop and for a typical long-lived off-limb transient event of "spider"-like form at a distance of about 0.3 solar radius are given. DEM and density diagnostics of hot plasma regions for some flare and transient events provided by XUV spectroheliograms are used to discuss observational constraints for coronal heating models.