

**INSTRUMENTS AND MEASUREMENTS OF THE SOLAR EUV  
IRRADIANCE ONBOARD CORONAS -F AT THE SOLAR ACTIVITY  
MAXIMUM PERIOD**

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There are presented data on solar emission variations in the extreme ultraviolet range (wavelengths < 130 nm), which were obtained on board the CORONASF satellite during the solar activity maximum epoch in 2001. The experiment was aimed at regular recording of solar ultraviolet radiation intensity and its variations, absolute measurement of vacuum UV radiation of the Sun as a star and monitoring of geoeffective radiation.

The measurements were performed with using two instruments: SUFR based on the thermoluminescent technique, (Solar Ultraviolet Radiometer) for recording the solar emission flux at <130 nm. The technique provides absolute measurements. The intensity of the H Lyman  $\alpha$  121.6 nm line emission was also measured on board the CORONAS-F by means of the Vacuum Ultraviolet Solar Spectrophotometer (VUSS-L), which used CuI photo cathode and could be calibrated due to the onboard EUV source.

The characteristics of both instruments are given, as well as calibration methods and the main results. The observation period may be characterized as a high activity level. The Solar flux in the region < 130 nm was  $\sim 11 \text{ erg cm}^{-2} \text{ s}^{-1}$ , the Lyman alpha line intensity was  $(10.5-12) \text{ erg cm}^{-2} \text{ s}^{-1}$ .

Some intensive solar flares were registered during the period of observation.

The estimation of irradiance flux of the Sun as a star during the flares was performed in the X-ray waveband (wavelength <12 nm) as well as for EUV wave range (<130) nm and in Lyman-a line. For example, for a large flare of August 25, 2001 (X-ray class X5.3, optical class 3b) the flux at wavelengths <130 nm was increased by  $\sim 30\%$ , some M-class flares showed increase by 5-7%.