ENERGY-SPECTRUM DISTRIBUTION OF THE X-RADIATION UNDER 8 Å AND ITS RELATION WITH THE SOLAR RADIO EMISSION ON 2800 MHz*

E. M. APOSTOLOV

Geophysical Institute of the Bulgarian Academy of Sciences
Sofia, Bulgaria

Abstract: Data of the X-ray flux in the 0.5—3 and 1—8 Å ranges are used for obtaining the energy-spectrum distribution of the X-radiation under 8 Å, assuming the power law distribution $I(\lambda) = k . \lambda^n$. The numerical value of the power n is taken as an indicator of the curve's approximation of the spectrum, of about the radiation hardness. The value of n under quiet and flare conditions are compared with the corresponding values of the solar radio emission on 2800 MHz. It vas found that under quiet conditions an obvious dependence between n and $F_{2800 \text{ MHz}}$ does not exist, while in the maximum of the solar flares there is a strict dependence, expressed by means of the non-linear law $n = n_0 + p/\ln F_{2800 \text{ MHz}}{}^m$.