HIGH-RESOLUTION X-RAY SPECTRA AROUND S XV AND SI XIII TRIPLETS AS OBSERVED BY DIOGENESS FLAT CRYSTAL SPECTROMETER

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We present for the first time fully reduced spectra obtained using Polish flat scanning Bragg spectrometer Diogeness placed aboard CORONAS-F Russian solar observatory. The instrument operated during a period of high solar activity in 2001. In particular the spectra obtained in the vicinity of He-like ions of Si XII and S XV will be demonstrated. Besides the strong triplet lines of resonance, intercombination and forbidden transition, multiple dielectronic satellite lines are observed, some of them identified for the first time in astrophysical spectra. We will discuss their relative and absolute intensities that are dependent on abundances of parent elements and ions. Different patterns of spectra of Si and S ions will be shown and discussed in terms of changing plasma differential emission measure during the large X5.3 class flare on 25 August 2001. Observed changes will provide insight into the overall flare energetics in the soft and harder X-ray ranged (including earlier studied Diogeness Ca XIX spectra) and taking into account auxiliary soft and EUV imaging as observed by Yohkoh.