DENSITY SENSITIVE LINES IN THE EUV REGION

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A search for density sensitive line ratios was made in the 1400 Å to 300 Å region of the solar spectra. The emergent intensity of resonance and subordinate lines from ions of the beryllium and boron isoelectronic sequence were calculated for typical solar plasmas. For individual ions, line ratios which are sensitive to electron densities changes between 10^{7} to 10^{13} cm^{-3} were selected. These line ratios were then compared to observations made by the Harvard College Observatory spectrometer aboard SKYLAB. From all the potential candidates only few are adequately observed to estimate electron densities. In particular the Mg VIII lines at 430 and 436 Å are good indicators of the coronal densities. Comparisons of the densities of coronal holes, flares, and active regions are made.

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