

Variations in Solar EUV Flux as Measured by SOHO/ CELIAS/ SEM

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Abstract: Solar EUV irradiance has been measured by the SOHO/CELIAS/SEM experiment since January 1996, providing data from solar minimum to maximum conditions. These measurements cover two spectral ranges: the broader 0.1-50 nm (zero order channel, often called as XUV) and in the 26 -34 nm (first order channel, often called as EUV). To study the relation between the XUV and EUV irradiances, a ratio (Ratio = XUV/EUV) has been derived. It is shown that this ratio rises slowly over the solar cycle. The most interesting events in the derived ratio are the sharp spikes which are associated with the increased sunspot areas derived from the SOHO/MDI images and the rapid increases in GOES soft X-ray data. Result and their interpretation are presented in this paper.