Contributed Talk

Splinter Activity

The XUV Sun in Time

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The evolution of the X-ray and extreme ultraviolet radiation (XUV) is important to understand the evolution of planetary atmospheres. The XUV output of solar-like stars varies with time, with a decay seen in all wavelength regimes. We put forward a new way of modeling the flux in the 36-92 nm wavelength regime. Due to interstellar extinction is it not possible to measure fluxes in this regime for stars other than our Sun. We use solar spectral features that are co-added according to filling factors derived from the S-index. This index is obtained from the strength of Ca II H&K lines min two prominent chromospheric lines. These lines are primarly formed in the chromosphere and trace, like H-alpha, plage. This feature can be seen as bright patches in the chromosphere and are correlated with the spots in the photosphere. We find that our integrated fluxes in the EUV are consistent with literature. We are able to study the effect of the variation in the S-index on the XUV spectra for our sample stars. Our approach has the advantage, that is in general possible to get the EUV spectra for any cool star with known S-index.