

## Active Region Spectrum from EVE Lunar Transit

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The EUV Variability Experiment (EVE) aboard the Solar Dynamics Observatory (SDO) observed several lunar transits during the first year of science operations. EVE measures the disk-integrated intensity of solar extreme ultraviolet radiation. While the spectra taken during transits generally are not used for science because EVE is not measuring the full solar disk, this project used these observations to obtain the spectrum from a small segment of the Sun. We used spectra from 6.5 nm to 38 nm taken with the Multiple EUV Grating Spectrometers (MEGS) on EVE. MEGS has a spectral resolution of 0.1nm and a time cadence of ten seconds. EVE has a high time cadence but because it takes full disc measurements, it has no spatial resolution. Using a difference spectrum from outside and during a transit produces the spectrum from the area of the Sun covered by the Moon. This project focused on a transit that occurred on 6 November 2010, where an active region was covered. We produced a spectrum for that active region at the EVE spectral resolution. Using the CHIANTI Atomic Database, a differential emission measure (DEM) was calculated from this active region and compared to the DEM of a representative active region in CHIANTI.