

Preliminary results on active region loop morphology and heating obtained by the HINODE/EUV Imaging Spectrometer.

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The EUV Imaging Spectrometer (EIS) on board the HINODE (formerly Solar-B) satellite observes in the 170-210 and 250-290Å wavelength ranges. It detects emission lines formed at temperatures from $\log T = 4.7 - 7.3\text{K}$. Spectra can be obtained using 1-2 arcsec slits, and images can be obtained using 40 and 266 arcsec wide slots. In addition, the EIS fine mirror can be tilted to produce raster slit and slot images. In this talk we introduce some of the initial results obtained by EIS, focusing on observations relevant to the understanding of active region loop heating. Current modeling of loop heating is based on a number of simplifying assumptions that can be tested observationally by EIS, for example, expanding loop cross-sections, densities, heating time-scales. Here we discuss the initial results obtained from re-visiting these assumptions.