

Spectroscopy of filament activations and eruptions – properties of the ejected material

Peter Young, NRL

Two examples of filament eruptions observed by the Hinode/EIS instrument will be presented corresponding to flares on 16-Feb-2011 and 29-Mar-2014. For the former, hot high velocity (800 km/s) plasma is observed immediately behind the EUV wave. Density diagnostics suggest the material is dense (10^{11} cm^{-3}). For the 29-Mar-2014 flare, the filament channel is observed to fill with coronal plasma at a high density (10^{12} cm^{-3}) prior to eruption; the erupted plasma rises at speeds of up to 600 km/s.