



Connected Solar Events

A. Title

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The Atmospheric Imaging Assembly on the Solar Dynamics Observatory (SDO) provides 24/7 full Sun coverage with a 12 second cadence with images that span the temperature range from 6000 to 20,000,000K with arc second resolution. The Heliospheric and Magnetic Imager on SDO provides doppler data every 30 seconds, line-of-sight magnetograms every 45 seconds, and vector magnetograms every 5 minutes. With this data set and observations from the pair of STEREO satellites it has become apparent that many flares, filament eruptions, and CME's have causal connections. These connections often span a hemisphere. Numerical simulations have indicated at least one mechanism of how the triggering of remote events occurs. Maps of the magnetic topology implied by the surface field often indicates both the regions that are connected and the boundaries of the connected zones. Movies of everts and numerical simulations will be presented as well as topological mappings that indicate the zones of connectivity.