

THE SOLAR MORETON WAVE OF 6 DECEMBER 2006: EVIDENCE FOR A CME DRIVER

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We analyze ground- and space-based observations of the eruptive flare and associated Moreton wave on 6 December 2006. The wave spanned $\sim 270^\circ$ in azimuth and traveled $\sim 1.2 R_\odot$ from the S06E63 site of the eruptive 3B/X6 flare toward the southwest in ~ 15 minutes where it disrupted a large quiescent filament. An accompanying coronal wave was observed in a single He I ($\lambda 10830$) image. Various lines of evidence suggest that the Moreton wave was initially driven by a coronal mass ejection. These include: (1) onset of the wave during the rapid rise phases of the $H\alpha$ and 1-8 Å time profiles; (2) comparison of a potential field model of the active region coronal magnetic field (augmented by $H\alpha$ images of flare ribbons and bright points and TRACE images of loops at 195 Å) with subtracted off-band (red-blue) images of the wave; and (3) the observation of a darkening region in $H\alpha$ at the inferred source of the wave.

Solar Moreton wave, coronal mass ejection

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