

## Another Look at Erupting Minifilaments at the Base of Solar X-Ray Polar Coronal “Standard” and “Blowout” Jets

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We examine 21 solar polar coronal jets that we identify in soft X-ray images obtained from the Hinode/X-ray telescope (XRT). We identify 11 of these jets as blowout jets and four as standard jets (with six uncertain), based on their X-ray-spire widths being respectively wide or narrow (compared to the jet's base) in the XRT images. From corresponding Extreme Ultraviolet (EUV) images from the Solar Dynamics Observatory's (SDO) Atmospheric Imaging Assembly (AIA), essentially all (at least 20 of 21) of the jets are made by minifilament eruptions, consistent with other recent studies. Here, we examine the detailed nature of the erupting minifilaments (EMFs) in the jet bases. Wide-spire (“blowout”) jets often have ejective EMFs, but sometimes they instead have an EMF that is mostly confined to the jet's base rather than ejected. We also demonstrate that narrow-spire (“standard”) jets can have either a confined EMF, or a partially confined EMF where some of the cool minifilament leaks into the jet's spire. Regarding EMF visibility: we find that in some cases the minifilament is apparent in as few as one of the four EUV channels we examined, being essentially invisible in the other channels; thus it is necessary to examine images from multiple EUV channels before concluding that a jet does not have an EMF at its base. The size of the EMFs, measured projected against the sky and early in their eruption, is  $14'' \pm 7''$ , which is within a factor of two of other measured sizes of coronal-jet EMFs. A full report on these results will be published in the *Astrophysical Journal*. This work was supported by NASA's Heliophysics Guest Investigator's Program, and the NASA/MSFC Hinode Project.

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