

Multi-spacecraft observations of an X-ray jet and a macrospicule

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Abstract. We present multi-spacecraft observations of an X-ray jet associated with a macrospicule in a polar coronal hole. The X-ray jet was seen on the limb by XRT and showed two-threaded structure. At the same time, a developing macrospicule was observed by STEREO/SECCHI with He II 304 filter. This particular event was successfully captured by EIS and SOHO/SUMER. Doppler velocity measurements show two-threaded upflows in the X-ray jet and oppositely directed flows on the both edges of the macrospicule. Inclination angle of the macrospicule inferred from stereoscopy of STEREO/SECCHI images indicates that the observed Doppler velocities are robustly attributed to the helical motion in the macrospicule. The results suggest that the macrospicule is driven by untwisting magnetic flux while the X-ray jet is composed of out-flowing hot plasma.