



First stereoscopic coronal loop reconstructions from STEREO SECCHI images

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We present the first reconstruction of the three-dimensional shape of magnetic loops in an active region from two different vantage points based on simultaneously recorded images. The images were taken by the two EUVI telescopes of the SECCHI instrument on board the recently launched STEREO spacecraft when the heliocentric separation of the two space probes was 12 degrees on June 8, 2007. We demonstrate that these data allow us to obtain a reliable three-dimensional reconstruction of sufficiently bright loops. The result is compared with field lines derived from a force-free magnetic field model extrapolated from a photospheric magnetogram recorded nearly simultaneously by SOHO MDI.