

M21a Shrinkage of Coronal X-ray Loops

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We (Wang et al. 1997) present the first set of examples of the shrinkage of large-scale non-flare loops in the solar corona, observed by the *Yohkoh* Soft X-ray Telescope (SXT) in February 1993. A large and isolated active region exhibited an unusual south-north asymmetry in coronal dynamics and heating. The northern part, referred to the main magnetic axis, showed episodic expansion and heating. In contrast, the southern part displayed obvious shrinking and cooling. This asymmetry was correlated with a severe asymmetry in the surface magnetic activity, revealed from Huairou vector magnetograms.

Observations suggest that this shrinkage is not an apparent motion, but a real contraction of coronal loops that brighten as a result of heating at footpoints followed by gradual cooling.

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