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The active Sun and its implication for the heliosphere
no preference

Analysis of the 13 April 2010 prominence eruption using SWAP and EUVI data

Mierla, Marilena^{1,2}

^{1,2}Institute of Geodynamics of the Romanian Academy, Bucharest, Romania;
Royal Observatory of Belgium, Brussels, Belgium

Observations of the early rise phase of solar prominences can provide clues on the mechanisms involved in the destabilisation of the magnetic configuration by comparing their power-law rise with numerical simulations. As described in Schrijver et al. 2008, it is possible to derive the initiation mechanism of an erupting prominence, depending of the value of the exponent m in the power law. We have analysed such an event, observed on 13 April 2010 by SWAP on PROBA2 and EUVI on STEREO. We have applied the 3D-HT technique described in Mierla et al. 2008 in order to derive the true direction of propagation and the true speed of the top of the prominence. Our results ($m = 3.77$) may point towards a torus instability scenario.