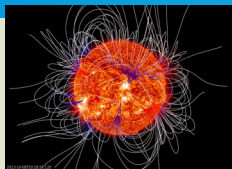


Two consecutive prominence eruptions observed from different viewpoints on October 8, 2013



K. Koleva¹, Y. Nacheva¹, P. Duchlev¹, Dechev, M.²

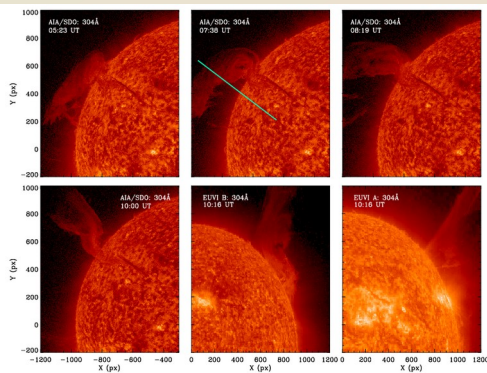
¹Space Research and Technology Institute, Bulgarian Academy of Sciences, Sofia, Bulgaria

² Institute of Astronomy and National Astronomical Observatory, Bulgarian Academy of Sciences, Sofia, Bulgaria

Outline: We examine two successive prominence eruptions that took place on the northeast solar limb on October 8, 2013. The first eruption began at around 07:18 UT, while the second one occurred at 20:58 UT in the same solar region. The events were observed by the Atmospheric Imaging Assembly (AIA) onboard the Solar Dynamics Observatory (SDO) AIA/SDO and Solar Terrestrial Relations Observatory (STEREO) A and B observatories. As a result, we were able to use the high temporal and spatial data from three separate perspectives to examine the eruption kinematics.

First Eruption:

Eruption started at around 07:18 UT on the north eastern solar limb and was linked to a partial halo CME. The upward prominence movement was accompanied by rotation around the main axis and lasted until 08:38 UT, when the top of the prominence left the AIA FOV.



In ST A and B eruption was observed at the north western limb.

Fig. 1

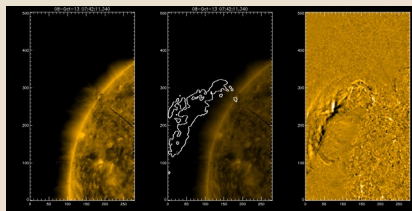


Fig.2 First eruption as viewed by AIA/SDO 171 Å images (<http://eruptivesun.com/>)

Second Eruption:

This eruption began at 19:14 UT and was associated with a partial halo CME. The erupting filament faded completely, which suggests that it was a full type eruption.

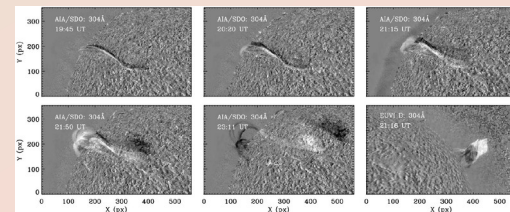


Fig.3 Running difference images, showing the eruption evolution in AIA and STB FOV.

Kinematic:

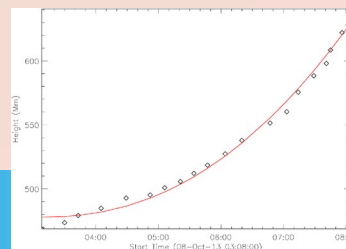
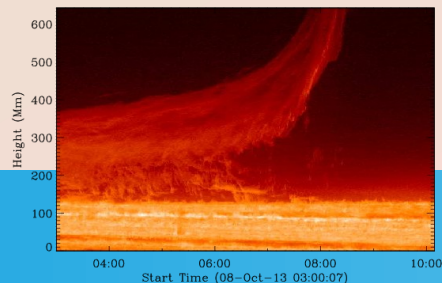


Fig.4 Time–distance plot taken in the AIA/SDO A 304 Å channel, corresponding to the slice shown with green line in Fig.1 *Height-time profile shows, that the prominence reached heights of about 640 Mm in the AIA FOV. The eruption speed was from 5 to 51 km/s.*