

aboard STEREO. The STEREO mission consists of the twin spacecrafts so-called 'Ahead' and 'Behind' (hereafter SC/A and SC/B) and they provide us with a pair of the images observed by SC/A and B at the same time for the determining and estimating the 3D geometry of the coronal features. We have developed simple a 3D reconstruction method for point-like features like BPs. The basic idea is that the position of a point in the 3D space is specified the intersection of the lines of sights which start from two points on two observed images. In order to analyze the heights of the BPs and their morphologies, we have taken a data set consisting of 171 Å, 195 Å, 284 Å, and 304 Å images on 13 days data arbitrarily selected during a period of more than about a month. From the selected data set, we could detect 386 individual BPs that were visible on all of four passband images. As a result we found that the BPs on 304 Å images have the average height 4.1 ± 1.8 Mm and they are associated with the footpoints of the loops. On the other hand, the BPs on the 171 Å, 195 Å, and 284 Å images are the loop-like structures, and the average heights are 5.0 ± 2.2 , 6.7 ± 2.1 , and 6.2 ± 2.2 Mm, respectively. In addition, we have determined the lengths of the BPs for the 171 Å, 195 Å, and 284 Å BPs and we found that the average heights are half of the average lengths approximately. From the temperature structures, heights and lengths relations, and analyzing relative morphologies observed on SC/A and B images, we suggest that the BPs may be similar to the flare loops.

[SE-15] Two types of active region EUV bright points observed by Hinode/EIS

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We have investigated seven Extreme-Ultraviolet (EUV) bright points in the active region (AR 0926) on 2006 December 2 by the EUV Imaging spectrometer (EIS) onboard Hinode spacecraft. We determined their Doppler velocities and non-thermal velocities from 15 EUV spectral lines ($\log T=4.7-7.2$) by fitting each line profile to a Gaussian function. We present the Doppler velocity map as a function of temperature which corresponds to a different height. As a result, these active region bright points can be classified into two types according to the pattern of doppler shifts. Type 1 bright point shows a systematic increase of Doppler velocity from -56 km/s (blue shift) at $\log T=5.8$ to 12 km/s (red shift) at $\log T=6.7$, while type 2 bright points have Doppler velocities in the range of -20 km/s and 20 km/s. Using MDI magnetograms, we found that only type 1 bright point was associated with the cancelling magnetic feature at

the rate of 2.1×10^{18} Mx /hour. When assuming that these bright points are caused by magnetic reconnection and the Doppler shift indicates reconnection outflow, the pattern of the Doppler shift implies that type 1 bright point should be related to low atmosphere magnetic reconnection. We also determined electron densities from line ratio as well as temperatures from emission measure loci using CHIANTI atomic database. The electron densities of all bright points are comparable to typical values of active regions ($\log Ne=9.9-10.4$). For the temperature analysis, the emission loci plots indicate that these bright points should not be isothermal. We are examining the multi-thermal structures using DEM (Differential Emission Measure) method.

[SE-16] Hinode SOT Observation of Recursive Solar Tornadoes

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We report an observation of recursive Solar tornadoes by Hinode Solar Optical Telescope (SOT). The solar active region AR10930 on the west limb produced a C2.0 flare on 2006 December 17. One day later, Hinode SOT observed the active prominence of AR10930 continuously from 11:21 UT December 18 to 09:58 UT December 19, using the Ca II H broadband filter. The pixel resolution was 0.1 arcsec and the time cadence was 8 s. During the observation, rise and fall motion accompanying rotation, which resembles tornado, appeared recursively. There occurred a total of 14 tornadoes and the lifetime of each tornado was usually less than an hour. A tornado started near the surface, rose up with rapidly untwisting motion, and fell down with slowly untwisting or straight motion. We analyse and discuss their kinematic properties and magnetic field configuration.

[SE-17] The Evolution of Pores Observed by HINODE/SOT

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Pores are small sunspots with strong magnetic flux density. They are important in understanding the mechanism of small-scale flux emergence and its interaction with neighboring plasma on the photosphere. However, it is still unknown how they form and evolve since their observational