

[7SE-05] Relationship Between EUV Coronal Jets and Bright Points Observed by SDO/AIA

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We have investigated the relationship between EUV coronal jets and bright points observed by Solar Dynamic Observatory (SDO) / Atmospheric Imaging Assembly (AIA). For this we consider 39 EUV coronal jets from May 2010 to July 2011 in 171 Å identified by Heliophysics Events Knowledgebase (HEK) which provides an automatic identification of coronal jets. We look for coronal jet-bright point pairs as follows. First, we select the size of event area as 360 arcsec * 360 arcsec where the coronal jets are located at the center of the area. Second, we select jet-bright point pairs in case that they are located at the same position or just adjacent. Third, we select jet-bright point pairs that are connected by loops each other. Otherwise, we select jet-bright points pairs as the nearest one. As a result, we present 19 coronal jet-bright point pairs. The mean distance of these pairs is 77.24 arcsec. According to their distance and morphological connection, we classify the following three groups: 1) Adjacent (6 events), 2) Loop connected (5 events), and 3) Not connected in appearance (8 events). The histogram of mutual distance has two peaks; the first peak corresponds to the first group and the other one to the second group. We compare these events with previous observations and theoretical models as well as discuss possible physical connections between jets and bright points.

[7SE-06] Current Status and Improvement of the Fast Imaging Solar Spectrograph of the 1.6m telescope at Big Bear Solar Observatory

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For the study of fine-scale structure and dynamics in the solar chromosphere, the Fast Imaging Solar Spectrograph (FISS) was installed in 1.6m New Solar Telescope at Big Bear Solar Observatory in 2010. The instrument, installed at a vertical table of the Coude lab, is properly working and producing data for science. From the analysis of the data, however, we noticed that a couple of problems exist that deteriorate image quality : lower light level and poorer resolution of the CaII band data. After several tests, we found that the relay optics at the right position is crucial role for the spatial resolution of raster-scan images. By using resolution target, we re-aligned relay optics and other components of the spectrograph. Here we present the result of optical test and new data taken by the FISS.