[포SE-32] Comparison of Cone Model Parameters for Halo Coronal Mass Ejections

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Halo coronal mass ejections (HCMEs) are major cause of the geomagnetic storms. To minimize the projection effect by coronagraph observations, we consider two CME cone models: an ice-cream cone model and an asymmetric cone model. These models allow us to determine three dimensional parameters of HCMEs such as radial speed, angular width, and the angle between sky plane and cone axis. In this study, we compare these parameters obtained from both models using 50 well-observed HCMEs from 2001 to 2002. Then we obtain the root mean square error (RMS error) between measured projection speeds and estimated ones for the models. As a result, we find that the radial speeds obtained from the models are well correlated with each other (R=0.89), and the correlation coefficient of angular width is 0.68. The correlation coefficient of the angle between sky plane and cone axis is 0.42, which is much smaller than what is expected. The reason may be due to the fact that the source locations of the asymmetric cone model are assumed to be near the center. The average RMS error of the asymmetric cone model (86.2km/s) is slightly smaller than that of the ice-cream cone model (88.6km/s).

[포SE-33] Ca II Transient Brightenings associated with Canceling Magnetic Features

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We analyzed transient Ca II brightening associated with small-scale canceling magnetic features in the quiet Sun near disk center using Ca II H and NaD1 filter images of the SOT/Hinode. We found that in most Ca II brightening related to CMFs the Ca II intensity peaks after magnetic flux cancellation proceeds. Moreover, brightening tend to appear as pairs of bright points of similar size and similar brightness overlying magnetic bipoles. These results imply that magnetic reconnection taking place in the chromosphere or above may be in charge of CMFs.