[구SO-07]Statistical Study of Coronal Mass Ejections Observed by Mk4 Coronameter

봉수찬[1], 김연한[1], 조경석[1], 백지혜[1], 황보정은[2], 문용재[3]
[1]한국천문연구원, [2]충북대학교, [3]경희대학교

Most of Coronal Mass Ejection (CME) studies so far have been done using LASCO C2/C3 onboard SOHO spacecraft. However, the observation range of LASCO C2/C3 is limited above 2 R☉. We report the statistical kinematic properties of CMEs observed by Mk4 coronameter of Mauna Loa Solar Observatory, which covers the range between 1.08 and 2.8 R☉. We analyze the statistical properties of position angle, speed, and acceleration of relatively well observed CMEs between 1999 and 2005, and compare the result with that of LASCO C2/C3.

[구SO-08] COMPARING DIRECTIONAL PARAMETERS OF VERY FAST HALO CMEs

Rho, Su-Hyun and Chang, Heon-Young
Dept. of Astronomy and Atmospheric Sciences, Kyungpook National University

We examine geoeffective directional parameters of coronal mass ejections(CMEs). We select 30 front-side halo CMEs from SOHO LASCO CMEs whose speed is larger than 1000km/s and longitude is less than 30□. These are thought to be the most plausible candidate of geoeffective CMEs. We examine the relation between CMEs directional parameters(Earthward direction, eccentricity, Δdistance and central angle parameter) and the minimum value of the Dst index. We have found that the Earthward direction parameter has a good correlation with the Dst index, the eccentricity parameter has a much better correlation with the Dst index. The Δdistance and central angle parameter has a poor correlation with the Dst index. It's, however, well correlated with the Dst index in very strong geomagnetic storms. Most of CMEs causing very strong storms(Dst $\leq$ -200nT) are found to have large Earthward direction parameter(D $\geq$ 0.6), small eccentricity, Δdistance and central angle parameters(E $\leq$ 0.4, ΔX and sinΘ $\leq$ 0.2). These directional parameters are very important parameters that control the geoeffectiveness of very fast front-side halo CMEs.