

## Properties of geoeffective and non-geoeffective CMEs

# Seiji Yashiro[1]; Natchimuthuk Gopalswamy[2]; Sachiko Akiyama[3]

[1] CUA; [2] NASA/GSFC; [3] Physics, Catholic Univ.

We report on the differences in observed properties of geoeffective (GE) and non geoeffective (non-GE) coronal mass ejections (CMEs) originating from disk center (within 30 degree from central meridian). We compiled M- and X-class flares from NOAA's Solar Geophysical Data and examined their CME associations using SOHO/LASCO data. There were 180 disk CMEs between 1996 and 2005. Out of them, 30 disk CMEs produced intense geomagnetic storms, and 67 disk CMEs were not followed by geomagnetic storms ( $Dst \leq -50$  nT) during an interval 1-5 days after the CME onset. We compared the properties of these two populations of CMEs and found that GE CME were faster (Average speed = 1356 km/s) and wider (halo rate = 87%) than non-GE CMEs (652 km/s, 31%). On the other hand, there were 21 disk halos not followed by geomagnetic storms. Five of the non-GE halos were also fast ( $V \geq 1000$  km/s); we discuss why these were not geoeffective.