

## Statistics of solar wind, CMEs and flares during the solar cycle

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A statistical study of the coronal mass ejections (CMEs) is performed during the ascending phase and the maximum of solar cycle 23 (1996-2004), using velocities, accelerations, widths and heliocentric latitude of emergence (position angle); we study their dependence with time, as well as possible interdependences. The data set comes from the observations of CMEs by the SOHO LASCO C2 or C3 coronographs.

An increase of the average CME velocity from minimum towards the maximum of the solar cycle activity is found in the data. The average acceleration remains close to zero all these years. The average width increases after the minimum and remains constant. The average solar wind velocity is not related with the average solar wind velocity.

The distribution of the position of flares (which follows the well-known butterfly diagram) is not related with the distribution of the position of CMEs. The flare distribution converges towards the solar equator as the solar activity increases, while the distribution of CMEs spreads towards the poles, perhaps following the inclination of the magnetic dipole, the solar magnetic equator or the inclination and angular extend of the heliospheric current sheet. A study of the distribution of geoeffective flares is also made.