



Expansion speed of Coronal Mass Ejections

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A large set of limb CMEs has been used to determine the accurate relationship between radial (V_{rad}) and expansion (V_{exp}) speeds of CMEs. It was demonstrated that this relation is exceptionally well described by the function $f(w) = 1/2 (1 + \cot(w))$ representing a full cone model for the CME with a half width, w . We also demonstrated that this relation for the halo CMEs could be very simple $V_{rad} = V_{exp}$.