



On extremely fast halo CMEs in Oct-Nov 2003 and configuration of global magnetic fields.

Y. Liu

HEPL, Stanford University, Stanford, California, USA (Contact Email:
yliu@quake.stanford.edu, Fax: 1-650-725-2333)

The extremely fast halo CMEs in Oct-Nov 2003 have been analyzed in this paper. Observation suggests that those CMEs were associated with active regions. Configuration of global magnetic fields was inferred by a potential field source surface (PFSS) model, which was applied to the related synoptic maps of magnetic field taken at Wilcox Solar Observatory. It is found that those active regions were related closely with special configuration of large-scale magnetic fields. To be more specific, the active regions appeared in an open field area, or produced a big open field area due to their emerging, or sit at the boundary of two open field areas with like magnetic polarity. We discuss possible explanations for the fast halo CMEs and the special configurations of magnetic fields around them.

SOHO is a project of international cooperation between ESA and NASA