

Interplanetary magnetic fields which correspond to coronal mass ejections

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Interplanetary counterparts of a halo CME which occurred on April 13, 1999, were observed by NOZOMI and ACE on April 16-18, when the two spacecraft were within 3 degrees in heliocentric longitude and 0.2 AU in heliocentric distance. The interplanetary magnetic fields had filamentary structures with large Bz components, and the Bz component was positive at NOZOMI while negative at ACE. Both magnetic fields were different from a magnetic cloud. It implies that the CME had a number of filamentary structures of magnetic field lines with various directions. An interplanetary magnetic field of this kind can be used for detection of candidates of interplanetary counterparts of CMEs.