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# Interplanetary Disturbances Affecting Space Weather

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## Abstract

The Sun somehow accelerates the solar wind, an incessant stream of plasma originating in coronal holes and some, as yet unidentified, regions. Occasionally, coronal, and possibly sub-photospheric structures, conspire to energize a spectacular eruption from the Sun which we call a coronal mass ejection (CME). These can leave the Sun at very high speeds and travel through the interplanetary medium, resulting in a large-scale disturbance of the ambient background plasma. These interplanetary CMEs (ICMEs) can drive shocks which in turn accelerate particles, but also have a distinct intrinsic magnetic structure which is capable of disturbing the Earth's magnetic field and causing significant geomagnetic effects. They also affect other planets; in essence, they can and do contribute to space weather throughout the heliosphere.

This talk will present a review of these disturbances and attempt to discuss their global heliospheric effects.

**Keywords:** CMEs in the heliosphere, Magnetic clouds, Impact on the Earth's environment

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