

SOLAR EVENTS AND THEIR INFLUENCE ON THE INTERPLANETARY
MEDIUM

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~~This talk reviews some of the aspects of a workshop on "Solar Events and their Influence on the Interplanetary Medium" held in September 1986. The goal of the meeting was to foster interactions among colleagues, leading to an improved understanding of the unified relationship between solar events and interplanetary disturbances. The international scientists attending selected one of three working groups: 1) flares, eruptives, and other near-sun activity, 2) coronal mass ejections, or 3) interplanetary events. Instead of formal presentations, each group openly discussed topics distributed in advance by the group leaders. Also, pairs of groups met together on a prearranged schedule to ask questions and discuss common problems. For some topics there was group consensus, but other topics were contentious. For example, the flare/eruptives group members agreed that pre-event energy is stored in stressed/sheared magnetic fields, but could not unanimously concur that flares and other eruptive events (e.g. eruptive solar prominences) are aspects of the same physical phenomenon. In the coronal mass ejection group, general agreement was reached on the presence of prominences in CMEs, and that CMEs have a significant three-dimensional structure. Some topics identified for further research were the aftermath of CMEs (streamer deflections, transient coronal holes, possible disconnections), identification of the leading edge of CMEs, and studies of the range and prevalence of CME mass sizes and energies. The interplanetary events group identified a number of questions, but very few answers. General topics requiring more work included a comprehensive understanding of magnetic structures observed in interplanetary space near Earth, how they relate to properties close to the sun, and the particular solar sources of interplanetary disturbances. It was recognized that already available interplanetary data should be analyzed on a priority basis. A second session of this Workshop is planned for March, 1988.~~