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## **From the Sun to the solar wind: coordinating observations and modeling**

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**Abstract.** Solar wind particles are accelerated and heated as they propagate from the solar corona to the earth. Using data from XRT and EIS on HINODE, ACE, and SOHO satellites, we follow the plasma characteristics such as density, flow speed, and composition from the solar corona to 1AU. XRT and EIS data are used to characterize the initial conditions of these solar wind particles. ACE is used to characterize the plasma at 1AU. Using the LFM-helio MHD code coupled with the EPREM energetic particle code, the propagation of a CME from 0.1AU to the earth is modeled and the energetic particles flux is calculated. This type of modeling will enable us to test microphysics that is important to detail the propagation of CMEs and energetic particle events from the Sun to the Earth.