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The solar wind is a continuous stream of charged particles and magnetic fields flowing from the Sun throughout the heliosphere, frequently disrupted by transient phenomena such as coronal mass ejections (CMEs), stream interaction regions (SIRs), and flows of solar energetic particles (SEPs). These structures are typically measured in situ and analysed via data from spacecraft near Earth and/or heliophysics-dedicated missions scattered through the inner heliosphere. Nevertheless, an additional source of measurements comes from planetary missions, which usually consist of spacecraft orbiting a planet other than Earth. These orbiters can provide useful information on the propagation and structure of solar wind transients, either via direct measurements (if the spacecraft samples the solar wind during part of its orbit) or via indirect proxies (e.g., the level of compression of a planetary magnetosphere or the generation of aurora).

In this presentation, we show examples of events for which available measurements from planetary missions complemented and enhanced the information that could be retrieved from near-Earth observations only. These studies remark the importance of taking advantage of “less conventional” data sets in order to characterise the structure and evolution of transient phenomena in the solar wind and to obtain a more complete picture of the heliospheric context in which they propagate.
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