



Interplanetary Scintillation, STEREO Heliospheric Imager and Venus Express ASPERA observations of solar wind structures in May 2007

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We present results from a co-ordinated study of solar wind structure in the inner heliosphere during May 2007, combining results from radio measurements of interplanetary scintillation (IPS), STEREO HI imaging of interplanetary structures and in-situ measurements from the ASPERA instrument on Venus Express.

The ASPERA results revealed periodic disturbances in the solar wind at Venus, which we show correspond to solar wind structures seen in STEREO HI and IPS results. Most of the perturbations seen in ASPERA data correspond to the passage of co-rotating interaction regions over Venus, and we show that these can be identified with CIR signatures seen in IPS and by STEREO. One event is more complex, and we interpret this as the interaction between a coronal mass ejection and the compression region of a co-rotating interaction region.

The combination of STEREO HI, IPS and VEX data has made it possible to investigate solar wind structures with a much higher degree of certainty, demonstrating the potential of such multi-technique programmes.