



In-situ magnetic field observations of co-rotating interaction regions and coronal mass ejections at Venus

G. Guymer (1), I. Whittaker (1), M. Grande (1), S. Barabash (2), and T.L. Zhang (3)

(1) Aberystwyth University, Institute of Mathematics and Physics, Aberystwyth, United Kingdom (geg07@aber.ac.uk), (2) Swedish Institute of Space Physics, Box 812, SE-981 28 Kiruna, Sweden, (3) Space Research Institute, Austrian Academy of Sciences, Schmiedstrasse 6, 8042, Graz, Austria

Previous work by Whittaker et. al. combined remote sensing observations from Interplanetary Scintillation observations (IPS) with in-situ ion data collected by the Ion Mass Analyser (IMA) onboard Venus Express to study solar wind interactions with Venus. In-situ magnetic field observations from the Venus Express magnetometer will now be applied as a complimentary tool in identifying different cases of these interactions. Three case studies are undertaken; a co-rotating interaction region (CIR) arriving on \sim 30th April 2007, a coronal mass ejection (CME), arriving on \sim 25th and 26th May 2007 and mass loading of the solar wind coinciding with Venus moving into the tail disconnection event of comet 2P/Encke on \sim 22nd April 2007. We are interested both in making in situ measurements of heliospheric structures previously remote sensed by IPS, and also in understanding the response of the Venus magnetosphere to their passage.

Ref:

I.C. Whittaker, G.D. Dorrian, A. Breen, M. Grande. In-Situ observations of a co-rotating interaction region at Venus identified by IPS and STEREO (submitted to Solar Physics topical issue: Remote sensing of the heliosphere 2009)