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Identification and removal of spacecraft generated magnetic fields from Venus Express magnetic field data

S. Pope (1), T. Zhang (2), M. Balikhin (1), M. Delva (2), L. Hvizdo (3), K. Kudela (3), H. Alleyne (1)

(1) Space Systems Group, Department of Automatic Control and Systems Engineering, University of Sheffield, UK, (2) Space Research Institute, Austrian Academy of Sciences, 8042 Graz, Austria, (3) Institute of Experimental Physics, Slovak Academy of Sciences, Kosice, Slovakia (s.a.pope@sheffield.ac.uk)

It is a challenging problem to make accurate in situ measurements of the local magnetic field vector from a non-magnetically clean spacecraft with a short boom. It is shown how the use of two point measurements can be used to identify spacecraft generated events in Venus Express magnetometer data. The types of spacecraft magnetic disturbances identified so far in VEXMAG data will be presented. The application of two point measurements together with techniques including fuzzy logic, pattern recognition and nonlinear identification to the correction of spacecraft contributions in the measured field vector will be presented.