HUYGENS ATMOSPHERIC STRUCTURE INSTRUMENT ENTRY ACCELEROMETER: APPLICATION TO MARS AND VENUS

A.J. Ball, PSSRI, The Open University, Walton Hall, Milton Keynes MK7 6AA, UK. A.J.Ball@open.ac.uk
I. Müller-Wodarg, Space and Atmospheric Physics Group, Imperial College London, Prince Consort Road, London SW7 2BW, UK. i.mueller-wodarg@imperial.ac.uk
S. R. Lewis, PSSRI, The Open University, Walton Hall, Milton Keynes MK7 6AA, UK. S.R.Lewis@open.ac.uk
J. C. Zarnecki, PSSRI, The Open University, Walton Hall, Milton Keynes MK7 6AA, UK. J.C.Zarnecki@open.ac.uk
B. Hathi, PSSRI, The Open University, Walton Hall, Milton Keynes MK7 6AA, UK. B.Hathi@open.ac.uk
M. R. Leese, PSSRI, The Open University, Walton Hall, Milton Keynes MK7 6AA, UK. M.R.Leese@open.ac.uk
M. C. Towner, PSSRI, The Open University, Walton Hall, Milton Keynes MK7 6AA, UK. M.C.Towner@open.ac.uk
F. Ferri, CISAS G. Colombo, University of Padova, Via Venezia 15, 35131 Padova, Italy. francesca.ferri@unipd.it
G. Colombatti, CISAS G. Colombo, University of Padova, Via Venezia 15, 35131 Padova, Italy. giacomo.colombatti@unipd.it
M. Fulchignoni, LESIA, Observatoire de Paris, 5 Place Janssen, 92195 Meudon, France. marcello.fulchignoni@obspm.fr

Abstract

An assessment will be made of the performance achievable if the Huygens entry accelerometer (HASI ACC Servo) were applied to Mars and Venus atmospheric entry. In particular, the cases of ESA's *ExoMars* mission and Venus Entry Probe study are considered. In both cases there is an excellent prospect of improving on previous entry accelerometry data, not least in terms of the maximum altitude at which the atmospheric deceleration is sensed. Some modifications are of course necessary for the Mars and Venus cases, however, with respect to that of Titan.