Geophysical Research Abstracts, Vol. 9, 01267, 2007
SRef-ID: 1607-7962/gra/EGU2007-A-01267

Locations of the plasma boundaries at Venus - Venus Express ASPERA-4 observations

C. Martinecz (1), M. Fraenz (1), J. Woch (1), N. Krupp (1), E. Roussos (1), E. Dubinin (1), U. Motschmann (2), A. Boesswetter (2), S. Simon (2), S. Barabash (3) and the ASPERA team

(1) Max Planck Institute for Solar System Research (MPS), Germany, (2) Institute for Theoretical Physics, TU Braunschweig, Germany, (3) Swedish Institute of Space Physics (IRF), Sweden, (Contact email: martinecz@mps.mpg.de)

For the first time since 1992 when the Pioneer Venus Orbiter (PVO) ceased to operate there is again a plasma instrument in orbit around Venus - the ASPERA-4 experiment on board Venus Express. We here report on measurements made by the ion sensors during the first 5 months of operation. We determine the position of the Venus bow-shock and ion composition boundary in solar minimum conditions. In contrast to previous works based on PVO data we use 3-parameter fits as developed for the Mars bow shock to achieve a more realistic shape of the boundary. We investigate the dependence of the boundary on solar wind ram pressure (using ASPERA4 solar wind data) and solar EUV flux (using a proxy from Earth).