

Solar wind parameters near Mars and Venus obtained by Mars Express and Venus Express missions. Comparison with simulations and MAVEN data.

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Abstract

We present ion moments data set obtained from the IMA mass-spectrometer that is a part of ASPERA plasma package. ASPERA experiments have been mounted onboard of ESA Mars Express and Venus express missions. Mars Express is still active and we have an excellent solar wind and planetary ions data set from 2007 up to now. Venus Express mission has been completed in 2014 and the ions moment data set covers 2006 - 2014 time interval. For space weather purposes we have selected a special data set corresponding to undisturbed solar wind observed in the vicinity of Mars and Venus. The resulting data are available in AMDA database (<http://amda.cdpp.eu/>) online. The present work shows the comparison of our data with the solar wind simulations, and with available MAVEN (NASA) data. We discuss also the pitfalls that user can meet during the data analysis.