



Estimation of the solar wind induced magnetic field in the Martian Ionosphere

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The indications are that the low frequency radar MARSIS on board the Mars Express orbiter, can measure the magnitude of the magnetic field at the spacecraft location. Owing to the relative short scale of the crustal magnetic field the larger scale sun induced field can in principle be estimated. Assuming the sun induced field to be nearly constant over (a relatively) short distance over which the crustal field varies considerably, a sun induced field can be derived which fits all the measurements.