



Ion cyclotron waves near Venus

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Proton cyclotron waves have been observed in the VEX magnetometer data, when the spacecraft was located upstream of Venus, both outside and inside of the foreshock. These waves are generated by pick-up of protons from the planet's exosphere and show up, as expected, at frequencies just below the proton gyrofrequency. It has been shown by Delva et al. [2007] that these waves mainly occur in the southern hemisphere during intervals of southward convective electric field.

We will investigate all events observed during the first two months of VEX in orbit around Venus. In total 18 events were identified for which we will use the power of the waves to get an estimate of the proton pick-up near Venus. We will also correlate the wave power with other parameters of the solar wind, in order to get information about the interaction of the solar wind with the exosphere and the erosion of the latter.