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Venus Express magnetic field observation of the solar wind interaction with Venus at solar minimum

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The launch of Venus Express provides a new opportunity to study the solar wind interaction with Venus. Since Venus Express takes its heritage from the magnetometerless Mars Express mission, no magnetic cleanliness program was implemented to minimize the spacecraft field and no boom was provided by project due to the budget constraint. Thus the data processing and cleaning tasks are formidable and unprecendented. An novel approach has been developed by magnetometer team to remove the spacecraft disturbances automatically. Two years after the launch, we have been successfully recovered nearly 100% of the field data with a good accuracy of the quality comparable to magnetic field measurements made onboard magnetically clean spacecraft. Initial results show that the solar wind interaction with Venus at solar minimum is much different than that at solar maximum which was well studied by PVO mission. In this paper, we provide the overview of the new results obtained by the Venus Express magnetic field observation in the course of last two years and discuss some of the ongoing works on the Venus plasma environment.