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Magnetic configuration around Venus under different IMF conditions

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Because Venus has no global intrinsic magnetic field, the solar wind interacts directly with the Venusian ionosphere. The interplanetary magnetic field is draped around the ionosphere to form an induced magnetosphere. Therefore, the draping of the field around Venus should be controlled by the angle between the IMF and the solar wind flow. The previous study was based on the measurements obtained by PVO at solar maximum. Now Venus Express observations provide a new opportunity to investigate the interaction of the solar wind with Venus at solar minimum. In order to investigate the magnetic configuration around Venus under different IMF conditions at solar minimum, a data set consisting of about 4 Venus years (1 Venus year equals about 225 Earth days) of Venus Express magnetic field observations is used in our study. We use a coordinate system determined by solar wind flow and IMF to sort all the magnetic observations. The distribution of magnetic field vectors around Venus is given at different angles between solar wind flow and IMF, and is compared with the previous results at solar maximum.