

The nightside ionosphere of Venus and Mars

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We compare the nightside ionosphere of Venus with that of Mars and discuss the strategy of the future missions. The measurements of Pioneer Venus orbiter (PVO) gave us much information on the Venus ionosphere. The main sources of the nightside ionosphere of Venus are thought to be the transport of atomic ions from the dayside and the electron precipitation to the nightside atmosphere. The transport from the dayside almost disappears at low solar activity while the electron precipitation exists also at low solar activity. We have little information, however, on the mechanism of some phenomena of the nightside ionosphere of Venus. On the other hand, the observations of the nightside ionosphere of Mars are quite few, because its electron density is too low to be detected.

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