

The interaction of Mars and Venus with the solar wind; IMF penetration into the ionospheres

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Since Mars and Venus do not have global intrinsic fields, the solar wind directly interacts with the ionospheres. PVO (Pioneer Venus Orbiter) observed that the IMF penetrates into the Venus ionosphere and recently MGS (Mars Global Surveyor) observed large-scale field in the Martian ionosphere. The large-scale field in the ionosphere is expected to affect the structure of ionosphere and the amount of escape flux. From PVO observation, it is when dynamic pressure of the solar wind exceeds thermal pressure of the ionosphere that the large-scale field is seen in the ionosphere. During that time the ionopause descends and thickens. We believe that there is some dissipation mechanisms at the ionopause and study it by using numerical models. We are going to report some results.

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