

Effects of the IMF on Interaction Between the Solar Wind and Jovian Magnetosphere

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Jupiter is a conspicuous giant planet in our solar system. It has interesting characters such as the large mass, large angular velocity, large amount of plasma sources from moon Io and large intrinsic magnetic field.

We have studied interaction between the solar wind and the Jovian magnetosphere by using a 3-dimensional global magnetohydrodynamic model. When a northward is imposed, the magnetosphere becomes smaller. The Jovian magnetosphere becomes much smaller for stronger IMF B_z . On the other hand when a southward IMF is imposed, the magnetosphere extends specifically in east-west direction.