

Aurora of outer planets and ion outflow from the polar ionosphere

Shigeto Watanabe[1]

[1] Earth and Planetary Sci., Hokkaido Univ.

Recent observations by spacecrafts and telescope showed that the outer planets have aurora in the polar regions. It suggests that the planets have intrinsic magnetic field, atmosphere, ionosphere and magnetosphere and the magnetosphere interacts strongly with the solar wind. The energy associated with the aurora heats the planetary atmosphere and ionosphere. The heated ionospheric plasma may be able to escape from the planetary atmosphere to the magnetosphere or the interplanetary space.