

Modeling of the Martian atmosphere escape

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Martian atmosphere is thin and dry. However, the evidences of water flows for several billion years ago are still on the surface of Mars. It suggests that the ancient Mars atmosphere was warm and moist. One of the reasons that the Mars atmosphere becomes thin is the outflow of the atmosphere to the space. Because of no intrinsic magnetic field, the solar wind affects strongly the Mars atmosphere/ionosphere. Although the various atmospheric outflow models are considered for the atmospheric escape, the details processes have not been clarified. We constructed a model of atmospheric escape including the effect of collisions, and obtained the distribution of the atmosphere around Mars. In this presentation, we will present the effect of the collision and the amount of atmospheric escape.

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