

## Daily changes of ion density vertical profiles derived from a photochemical model of the dayside Venus ionosphere

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The atmosphere of Venus has been explored by a number of spacecraft. From these observations, it is now widely recognized that Venus has no significant intrinsic magnetic fields, and that the solar wind interacts more directly with the upper atmosphere of Venus than the case of Earth. The dynamics and chemical structure of ionosphere depend on solar activity. The effect of long-term solar activity changes on the Venus ionosphere has been investigated by a number of researchers. However, the effect of short-term solar activity changes has been scarcely investigated in the past, although it is recognized that solar EUV and X-rays change daily. In this study, to investigate daily variations of the Venus ionosphere, a 1-D model for estimating ion density vertical profiles in photochemical equilibrium has been developed. The model can describe short-term interactions of the ionosphere with daily variations of solar EUV and X-rays.