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Recent Progress on Modelling Energetic Electron Precipitation to the Atmosphere

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The energetic electrons in the Earth's radiation belts and ring current can precipitate to the atmosphere. Such precipitation of energetic particles from space can generate nitric oxide in the atmosphere, and nitric oxide can destroy ozone very efficiently. Geomagnetic activity that controls the precipitation of magnetospheric particles is now recommended as part of the solar forcing of the climate system for model experiments. The complication of estimating the effect of the precipitating particles usually arises from the fact that measurements are sparse and the global models of the precipitating particle environment are not available. In this presentation, we show our recent progress on modelling energetic electron precipitation to the atmosphere.

Solicited or Contributed

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