

## 気象再解析データ中の気温・オゾンに現れる太陽プロトンイベントの影響

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## Responses of temperature and ozone to solar proton events in the latest reanalysis data

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Solar proton events (SPEs) have some impacts on the middle atmosphere through NO<sub>x</sub>/HO<sub>x</sub> formation, its subsequent ozone destruction, and Joule heating. Several observational and simulation studies have reported their impact on temperature and circulation in the middle atmosphere. However, their impact has never been captured in the meteorological reanalysis data. The latest meteorological reanalyses have been developed to assimilate satellite radiance and ozone observations in the upper stratosphere and lower mesosphere, so that they have a potential to reproduce atmospheric impacts of SPEs in those regions. This study examines whether the SPEs' impacts on the middle atmosphere can be captured in the latest reanalysis data or not.