

Creation of the next generation CMIP7 ozone forcing database

Monday 16 September 2024 10:00 (30 minutes)

This presentation will provide an overview of the next generation ozone forcing database in support of the Coupled Model Intercomparison Project phase 7 (CMIP7). Tropospheric and stratospheric ozone changes are key drivers of climate change and need to be accounted for in climate model simulations that aim at understanding past and future climate responses to anthropogenic emissions of long-lived greenhouse gases and precursors. A new three-dimensional ozone dataset covering the time period 1850-2021, plus a set of comprehensive future scenarios out to 2100 will be prepared, consistent with other climate forcings (including solar) and the timeline envisaged by the CMIP Forcings Task Team. The dataset, an update to the CMIP6 ozone forcing by Hegglin et al. (ESGF, 2016), will be purely model based using a couple state-of-the-art chemistry-climate models that include stratosphere-troposphere resolving chemistry. Validation against observations ensures reliability. The process behind this effort will be discussed in detail. The resulting database supports CMIP's goals of improving climate projections and understanding ozone's role in climate change.

Solicited or Contributed

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