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The impact of rocket-emitted chlorine on stratospheric ozone

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Introduction

The supporting information contains additional figures to provide more detail on the model simulations used in this study.

Figure S1 shows the time-dependent evolution of the major source gases N_2O and CH_4, and the model total inorganic chlorine (Cly) in the WACCM simulations. Figure S2 compares the WACCM control simulation with the column ozone field from the MERRA-2 reanalyses (Gelaro et al., 2017).

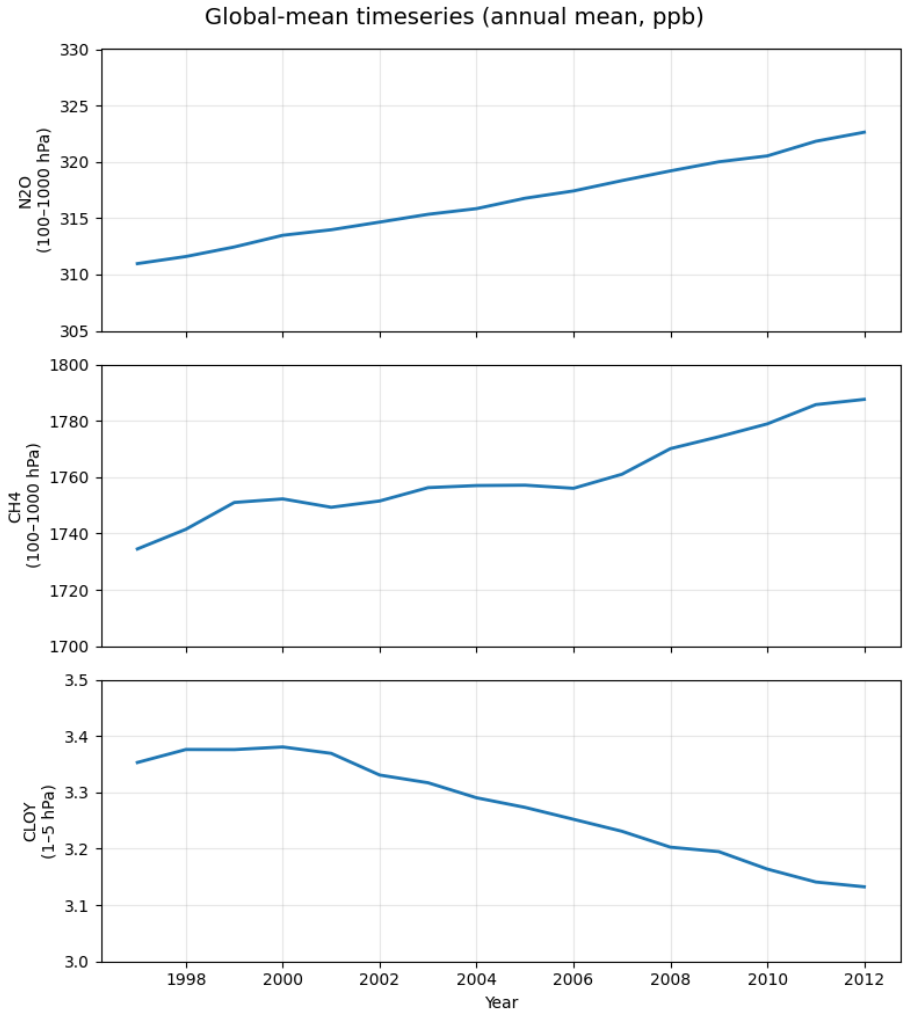

Figure S1. Evolution of major source gases and chlorine loading in the WACCM simulations from 1997-2012. (a, top) Global mean lower atmosphere (1000-100 hPa) N_2O (ppbv). (b) Mean lower atmosphere CH_4 (ppbv). (c, bottom) Mean upper stratosphere (5-1 hPa) total inorganic chlorine (Cly, ppbv).

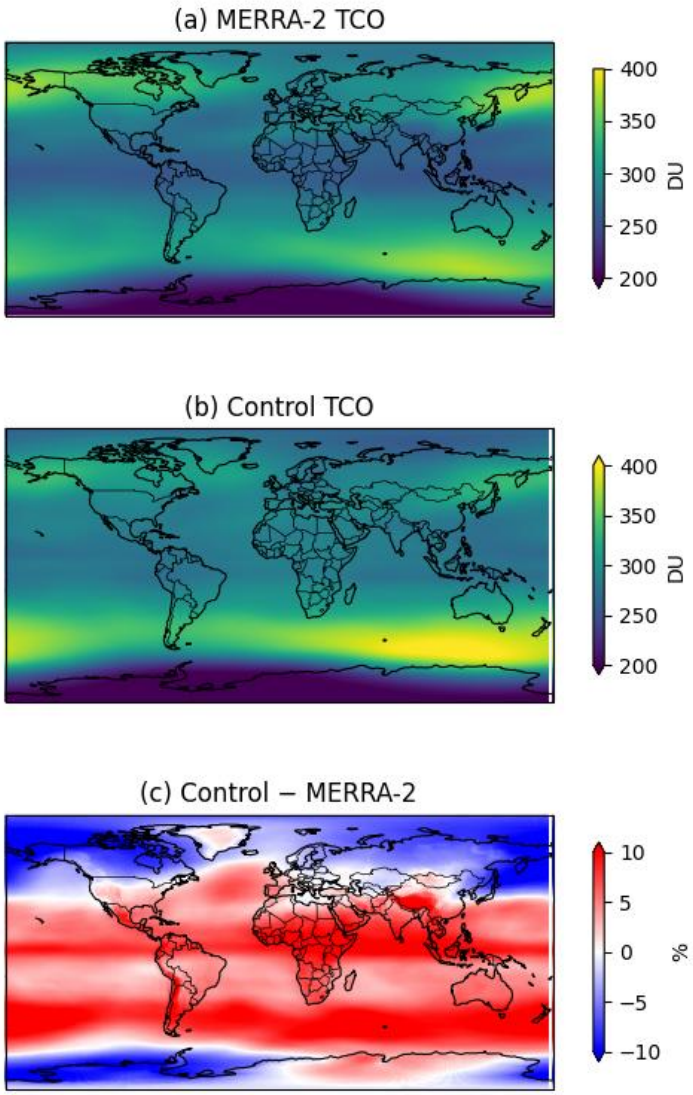

Figure S2. Global total column ozone (DU) averaged for October and November 2011. (a) MERRA-2 reanalyses. (b) WACCM control simulation. (c) Difference in total column ozone (%) between control simulation and MERRA-2 (panels (b) – (c)).

References

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