

Single-forcing chemistry simulations of historical composition changes

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The atmospheric composition and climate have been under considerable changes over the last 150 years or so. We build here on existing published simulations that describe the composition change between 1850 and 2000 (Lamarque et al., ACP, 2010) by analyzing results from additional simulations. In these, a specific parameter (such as surface emissions, sea-surface temperatures, ozone-depleting substances, ...) is kept at its 1850 level while all other parameters are kept as in the base simulation. The comparison of each of those with the base simulation will highlight their specific role. In particular, we will focus the discussion on the 1850-2000 evolution tropospheric and stratospheric ozone and on methane lifetime.