

**Abstract:**

The addition of average and ensemble range of pollution-related mortality is good; the same applies to the reduction in ozone-related deaths. Adding the spread and explanation is good. The disclaimer in lines 15 – 18 are also good.

**Introduction:**

Line 28: “release of precursors such as sulfur dioxide” – precursors to what? Admittedly, readers are not likely to be confused by this, but the sentence should be made precise.

Line 77: the additional explanation of shortcomings is a welcome addition.

**Model description:**

Line 93: CESM2(WACCM6) is already defined (and used) as an abbreviation earlier in the text (lines 39-40, albeit without version).

Line 109: Suggest moving “(Wen et al, 2023; Wei and Tahrin, 2024)” to end of sentence in line 110, considering this second part contains the findings of said papers.

Line 131: “with the aim of maintain[ing]”

**Results:**

Prior to “In Fig. 1, ...” I would highly recommend the authors to add a topic sentence, with the main conclusion of this paragraph. This is completely optional, but paragraph 3.1 currently reads like a summation of figures first and foremost, and less like an active interpretation of these findings. A topic sentence with the main findings before diving into the figures would be a welcome addition here.

The results section often mentions ensemble spread but does not clearly identify which results are robust across the ensemble and which are dominated by variability. For example, the hemispheric ozone asymmetry appears as a strong and consistent feature, whereas several PM2.5 patterns do not. Clarifying this distinction will help readers assess confidence in each result.

Related to this, many maps contain extensive stippled regions indicating non-significant differences. In some cases, the text still describes spatial patterns along these regions. It would be helpful to explicitly state when results are not statistically significant rather than implying interpretability from noisy patterns.

Line 216: “ITCZ” is defined, but not used again, so this (ITCZ) can be omitted.

Figure 3.: I suggest being consistent and writing out “percent” all the time, or even use “relative”, instead of switching between “percent” and “%”.