

Hi Nina,

Thank you for your comments on the paper. The revised manuscript has included all the technical corrections. Our responses (blue) to your comments (*Italic*) are listed below.

*- According to GMD guidelines (<https://www.geoscientific-model-development.net/submission.html>) abbreviations "need to be defined in the abstract and then again at the first instance in the rest of the text." Please remove all redundant abbreviation definitions:*

*A) "SO" is defined twice within the Abstract (Line 16, Line 22) and twice in the Text (Section 3, Section 4).*

Removed "SO" definition in Line 22 and Section 4.

*B) "SWCRE" and "LWCRE" are defined redundantly in Section 3 (after already being defined in the Abstract and Section 2).*

Removed those defined in Section 3.

*C) "E3SM" and "E3SMv2" are defined redundantly in Section 5 (after already being defined in the Abstract and Section 1).*

Removed those in Section 5.

*- According to GMD policy SI units should be used and spaces must be included between number and unit. Therefore please correct "440mb", "680mb" to "440 hPa", "680 hPa" etc.*

Changed "440mb" and "680mb" to "440 hPa" and "680 hPa" in Line 210-211.

*- Use the degree sign consistently throughout the manuscript (e.g. 60° N), which is currently missing at several places (Lines 167, 168, 190, 191, 293, 305 ...).*

Changed all "60N" and "60S" to "60° N" and "60° S".

*- Please add units to Figure labels where missing (e.g., Figure 12: SWCRE ...), whereby units should be written exponentially.*

Added unit to Figure label.

*- Following GMD instructions " the abbreviation "Fig." should be used when it appears in running text and should be followed by a number unless it comes at the beginning of a sentence, e.g.: "The results are depicted in Fig. 5. Figure 9 reveals that...". "*

Changed.

- *Some abbreviations are defined in the Abstract and Text, but then barely used. For example, I can spot over 20 appearances of "stratocumulus" and only 2 appearances of "Sc" after "Sc" has been defined (if you plan to keep "Sc" I would also advise you to introduce "cumulus (Cu)" abbreviation).*

Changed “Sc” to “stratocumulus”.

- *Line 31: "re-turning" should be "re-tuning".*

Changed.

Thanks,  
Yuying