

Response to Referee#1's comment,

Referee#1's comment:

The authors have done a good job of revising the paper. I take the following slight issue which I suggest should have a minor rewording. Otherwise, I consider the manuscript ready to publish.

The authors have included good additional analysis of ICEFLUX_T, which I think is very helpful.

However, I feel the following sentence does not quite frame ICEFLUX_P correctly.

L533 - "As explained by Romps (2019), the ICEFLUX_P approach is based on a fixed isobar which makes it inappropriate for climate change studies."

ICEFLUX_P is not "inappropriate" for climate change studies. Finney et al (nature climate change, 2018) demonstrated how it could be applied to a future climate. However, the use of an isotherm is probably more transparent and less involved. There's different ways the text could be modified, but a suggestion would be to replace "inappropriate" with "less convenient". Or you could say "the parametrisation would require modification to allow the isobar level to adapt to the changing climate".

Author comment:

We are thankful for your patient inspection of our revised manuscript. We are pleased to see the revised manuscript has met your satisfaction. We agree that the description of ICEFLUX_P scheme here is not accurate and we have revised the word "inappropriate" to "less convenient" at L534 as you suggested.

Sincerely,

On behalf of all co-authors,

Yanfeng He.