

Many thanks for your comments. Please see our replies in blue below.

1. Your response to the question about the definition of how to define polar amplification, "there is also diversity in the literature about whether polar amplification is defined by polar warming versus the global average, or versus the tropical average etc; as a 'ratio of trends' or a 'trend of a ratios'; which variable to use (surface temperature or something else); whether it is appropriate to calculate 'regional amplification' based on a limited longitude range, etc. We do attempt to resolve these issues in this paper, which is intended to document the protocol for multi-model experiments. "

I am a bit confused, but assume you meant to write "do not" rather than "do" in the last sentence above...? If I understand that correctly, my response is that in a paper devoted to the comparison of polar amplification between models it is necessary to define what you are talking about. Therefore, please can you add a paragraph which discusses the different definitions, with references to the literature.

Apologies, we did mean to write "do not", as you assumed. We have added some discussion in Section 5 to define polar amplification.

2. Boundary conditions for model experiment description papers in GMD must be available before acceptance of the manuscript. If you are not able to get them on to input4mips in a reasonable timeframe, please upload them to an alternative public repository and provide a DOI for the upload in the revised version of the manuscript. (Ideally, a model experiment paper includes evidence of model output which demonstrate that the experiments work as expected. Thus the boundary conditions should actually have been finished - fully tested and ready to go - prior to submission of the manuscript!)

We have made forcing data available at [10.5281/zenodo.1633416](https://zenodo.org/record/1633416) and noted this in Section 9 of the manuscript.