

Terms of Reference

The SCoPEX Advisory Committee is inviting peer reviewers with relevant expertise to support its scientific review of the proposed SCoPEX experiment. The review process is assisted by a Panel of experts in stratospheric science and climate modeling that will be summarizing the reviews and reporting to the Advisory Committee on their scientific implications.

Your central task as a participant in the scientific review process is to review the scientific merits of the proposed experiment, in the spirit of the Intellectual Merit guideline of the National Science Foundation (<https://www.jmu.edu/sponsoredprograms/forms-tools-resources/Intellectual%20Merit.pdf>). Your report should include (but is not limited to) the answers to the following questions:

1. Will the proposed study make an important scientific contribution? If so, what is that expected contribution?
 - a. How likely is it that the experiment will yield new relevant knowledge that has not already been gained from numerical modeling, laboratory studies, or other approaches?
 - b. Can the questions outlined in the proposal be answered in another way? If so, what are the benefits and limitations of this approach versus others?
2. Can the experiment as designed, achieve its objectives by the methodology proposed in the experiment plan?
 - a. Is the methodology described sufficiently?
 - b. Is there a substantial/reasonable chance/probability that the methodology will enable achieving the stated goal: to improve process models that will, in turn, reduce uncertainties in global-scale models, thus reducing uncertainty in predictions of important SRM risks and benefits?
3. Is there anything else relevant to the scientific merit of this experiment plan that raises concern that has not been covered in the previous questions?

Please note that the Advisory Committee is conducting other types of reviews, including a societal review. You are welcome to include any additional thoughts on the proposed experiment.

To ensure the integrity and impartiality of the entire review process, the reviewers should not have any conflict of interests with the proposed experiment or any members of the core research team (Frank Keutsch, David Keith, and/or John Dykema) as described below:

- Any professional benefit from the project proceeding or not proceeding.
- Current or previous employment or association at Harvard University as a professor, adjunct professor, visiting professor, consulting or advisory arrangement in the past 5 years.
- Previous employment or association within Harvard University in the last 5 years.
- Received an award or grant from Harvard University in the past 5 years.
- Past or present association with any members of the research team as a thesis or dissertation advisor/mentee in the last 5 years.
- Collaboration on a project or on a book, article, report, or paper with any members of the research team in the last 5 years
- Co-editing of a journal, compendium, or conference proceedings with any member of the research team listed in the foundational document within the last 5 years.
- Have past or present grant proposals with any members of the research team in the past 5 years.