Examining Cloud Properties and Cloud Feedbacks in DOE's Global Storm Resolving Model (SCREAM)

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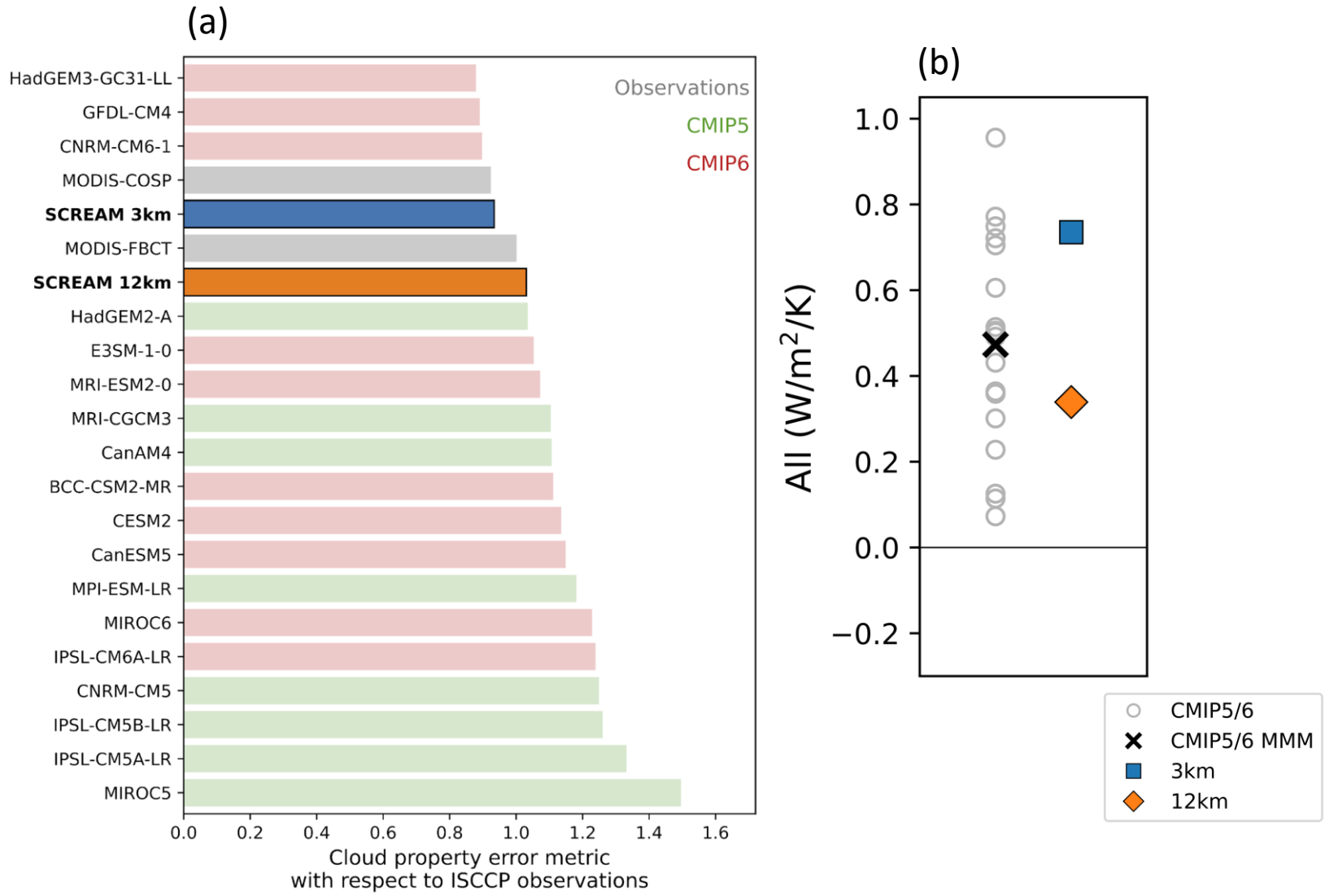
Motivations:

- Cloud feedback may be poorly represented in traditional global climate models due to their coarse resolution
- This study examines how and why the cloud feedbacks in the high-resolution Simple Cloud Resolving E3SM Atmosphere Model (SCREAM) differ from coarse climate models.

Key findings:

a) The present-day mean state of cloud properties is well reproduced in SCREAM, with biases smaller than most CMIP models

b) SCREAM simulates a positive total cloud feedback that lies within the range of CMIP models



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