






# RCEMIP Update

- **The big news: RCEMIP overview paper has been published! The key points...**
  - **Temperature, humidity, and clouds in radiative-convective equilibrium vary substantially across models**
  - **In 70% of models, anvil cloud fraction decreases with warming**
  - **Intermodel spread in estimate of cloud feedbacks smaller in models with explicit convection**
  - **Models agree that self-aggregation dries the atmosphere and reduces high cloudiness**
  - **There is no consistency in how self-aggregation depends on warming**

**JAMES** | Journal of Advances in Modeling Earth Systems

Research Article | Open Access |   

**Clouds and Convective Self-Aggregation in a Multi-Model Ensemble of Radiative-Convective Equilibrium Simulations**

Allison A. Wing , Catherine L. Stauffer, Tobias Becker, Kevin A. Reed, Min-Seop Ahn, Nathan P. Arnold, Sandrine Bony, Mark Branson, George H. Bryan, Jean-Pierre Chaboureau, Stephan R. de Roode, Kulkarni Gayatri, Cathy Hohenegger, I-Kuan Hu, Fredrik Jansson, Todd R. Jones, Marat Khairoutdinov, Daehyun Kim, Zane K. Martin, Shuhei Matsugishi, Brian Medeiros, Hiroaki Miura, Yumin Moon, Sebastian K. Müller, Tomoki Ohno, Max Popp, Thara Prabhakaran, David Randall, Rosimar Rios-Berrios, Nicolas Rochetin, Romain Roehrig, David M. Romps, James H. Ruppert Jr., Masaki Satoh, Levi G. Silvers, Martin S. Singh, Bjorn Stevens, Lorenzo Tomassini, Chiel C. van Heerwaarden, Shuguang Wang, Ming Zhao ... See fewer authors 

First published: 20 July 2020 | <https://doi.org/10.1029/2020MS002138>

## *The Protocol*

- **30 models: LES, CRM, GCRM, GCM, SCM**
- **Two sets of domains: Small & Large**
- **Three simulations with uniform SST: 295K, 300K, 305K**
- **Uniform insolation**
- **No rotation**
- **Full physics**

# RCEMIP Update

## Progress Since Last CFMIP

- Overview paper published in JAMES
  - 41 scientists, more than 30 models from 29 institutions in 8 countries
- Special collection across AGU journals launched: [Using Radiative-Convective Equilibrium to Understand Convective Organization, Clouds, and Tropical Climate](#)
  - ALL papers using RCE encouraged, not limited to RCEMIP!
  - 5 papers so far, more in review
- Data publicly available at <http://hdl.handle.net/21.14101/d4beee8e-6996-453e-bbd1-ff53b6874c0e> (Thanks DKRZ!)
  - All are encouraged to make use of this unique dataset to do interesting science
- Thinking about second phase – Simple physics? Mock Walker? Rotation?
- Questions? Contact Allison Wing ([awing@fsu.edu](mailto:awing@fsu.edu))
- <http://myweb.fsu.edu/awing/rcemip.html>