

README: 0D Statistics

Comma-separated value (CSV) files of domain-average statistics for the small and large simulations (A1 and A2, respectively) and, for models who performed both simulations, the difference between the two (A3, taken as large - small). Domain and time averages (neglecting the first 75 days of simulation, except for RCE_small_les for which an average over Days 25-50 is used) are provided for each model.

The files for the simulations at 300 K match Tables A1-A3 in Wing et al., 2020.

Variable	Name	Units
F_{NET}	Atmospheric energy imbalance (magnitude of difference between energy imbalance at surface and top of atmosphere)	W m ⁻²
R_{TOA}	Net radiation at top of atmosphere (ASR – OLR, where positive values indicate net radiation into the atmosphere)	W m ⁻²
Q_{OCN}	Implied ocean heat update at the surface (R _{SFC} – LHF – SHF, where positive values indicate a flux into the ocean)	W m ⁻²
R_{NET}	Column net radiative flux convergence (R _{TOA} – R _{SFC} , where negative values indicate net atmospheric radiative cooling)	W m ⁻²
OLR	Outgoing longwave radiation	W m ⁻²
ASR	Top of atmosphere absorbed solar radiation	W m ⁻²
LHF	Surface latent heat flux	W m ⁻²
SHF	Surface sensible heat flux	W m ⁻²
PW	Precipitable water	mm
Precip.	Surface precipitation rate	mm day ⁻¹
LWP	Liquid water path (cloud liquid water)	mm
IWP	Ice water path (cloud ice)	mm
Lapse Rate	Tropospheric lapse rate	K km ⁻¹

Standard deviation, interquartile range, and mean across all models are also included. A column indicating “P” for parameterized convection and “E” for explicit convection is also included.

Note that due to an output error, LWP for CM1 includes cloud liquid water + rain + snow + graupel and LWP for UCLA-CRM includes cloud liquid water + graupel.

References

Wing, A. A., Stauffer, C. L., Becker, T., Reed, K. A., Ahn, M.-S., Arnold, N. P., et al. (2020). Clouds and convective self-aggregation in a multimodel ensemble of radiative-convective equilibrium simulations. *Journal of Advances in Modeling Earth Systems*, 12, e2020MS002138. <https://doi.org/10.1029/2020MS002138>.