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Supplementary material for:

Analogous response of temperate terrestrial exoplanets and Earth's
climate dynamics to greenhouse gas supplement

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Table S1 and Figure S1

Table S1 List of Coupled Model Intercomparison Project phase-6 (CMIP6) models used in the analyses for both historical (1981-2010) and future (SSP5-8.5; 2071-2100) simulations. The table includes the following columns: Institution, model, nominal resolution, member, reference, and DOI.

Institution	Model	Nominal resolution	Member	Reference	DOI
CSIRO-ARCCSS	ACCESS-CM2	250km	r1ilp1fl	Bi et al. (2020)	https://doi.org/10.1071/ES19040
CSIRO	ACCESS-ESM1-5	250km	r1ilp1fl	Ziehn et al. (2020)	https://doi.org/10.1071/ES19035
CMCC	CMCC-CM2-SR5	100km	r1ilp1fl	Cherchi et al. (2019)	https://doi.org/10.1029/2018MS001369
CMCC	CMCC-ESM2	100km	r1ilp1fl	Lovato et al. (2022)	https://doi.org/10.1029/2021MS002814
MIROC	MIROC6	250km	r1ilp1fl	Tatebe et al. (2019)	https://doi.org/10.5194/gmd-12-2727-2019
MPI-M	MPI-ESM1-2-HR	100km	r1ilp1fl	Müller et al. (2018)	https://doi.org/10.1029/2017MS001217
MPI-M	MPI-ESM1-2-LR	250km	r1ilp1fl	Mauritsen et al. (2019)	https://doi.org/10.1029/2018MS001400
MRI	MRI-ESM2-0	100km	r1ilp1fl	Yukimoto et al. (2019)	https://doi.org/10.2151/jmsj.2019-051
NUIST	NESM3	250km	r1ilp1fl	Cao et al. (2018)	https://doi.org/10.5194/gmd-11-2975-2018

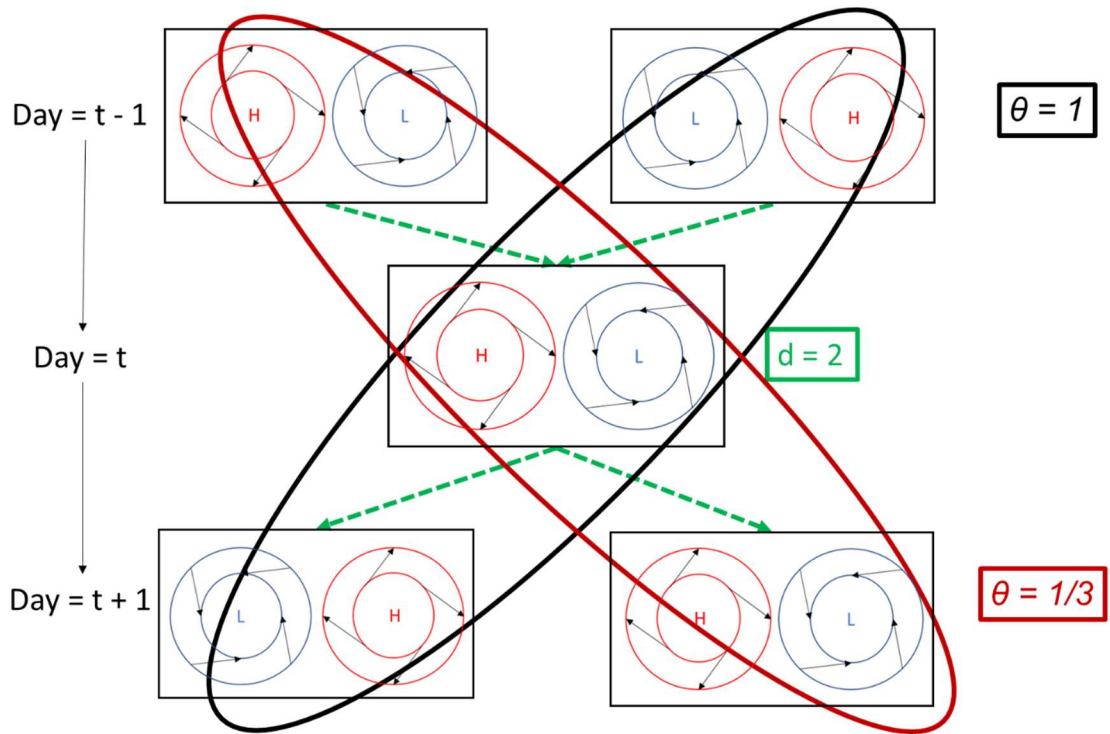


Figure S1 An intuitive schematic of the dynamical systems metrics computed for Day = t on made-up atmospheric states. The red ellipse represents a persistent atmospheric state ($\theta = 1/3$), and the black ellipse represents a non-persistent state ($\theta = 1$). There are two options for the atmospheric state to change from and to; therefore, $d = 2$. The schematic is inspired by a figure from Hochman et al.¹ and Rodrigues et al.².

References

1. Hochman, A., De Luca, P., Komacek, TD. Greater Climate Sensitivity and Variability on TRAPPIST-1e than Earth. *The Astrophysical Journal* **938(2)**, 114 (2022). <https://doi.org/10.3847/1538-4357/ac866f>
2. Rodrigues , D. et al. Dynamical Properties of the North Atlantic Atmospheric Circulation in the Past 150 Years in CMIP5 Models and the 20CRv2c Reanalysis. *Journal of Climate* **31(15)**, 6097-6111 (2018). <https://doi.org/10.1175/JCLI-D-17-0176.1>