

Supporting Information for “Improved Representation of Tropical Cyclones in the NASA GISS-E3 GCM”

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References

- Moon, Y., Kim, D., Camargo, S. J., Wing, A. A., Sobel, A. H., Murakami, H., . . . Zhao, M. (2020a). Azimuthally Averaged Wind and Thermodynamic Structures of Tropical Cyclones in Global Climate Models and Their Sensitivity to Horizontal Resolution. *Journal of Climate*, 33(4), 1575-1595. doi: 10.1175/JCLI-D-19-0172.1

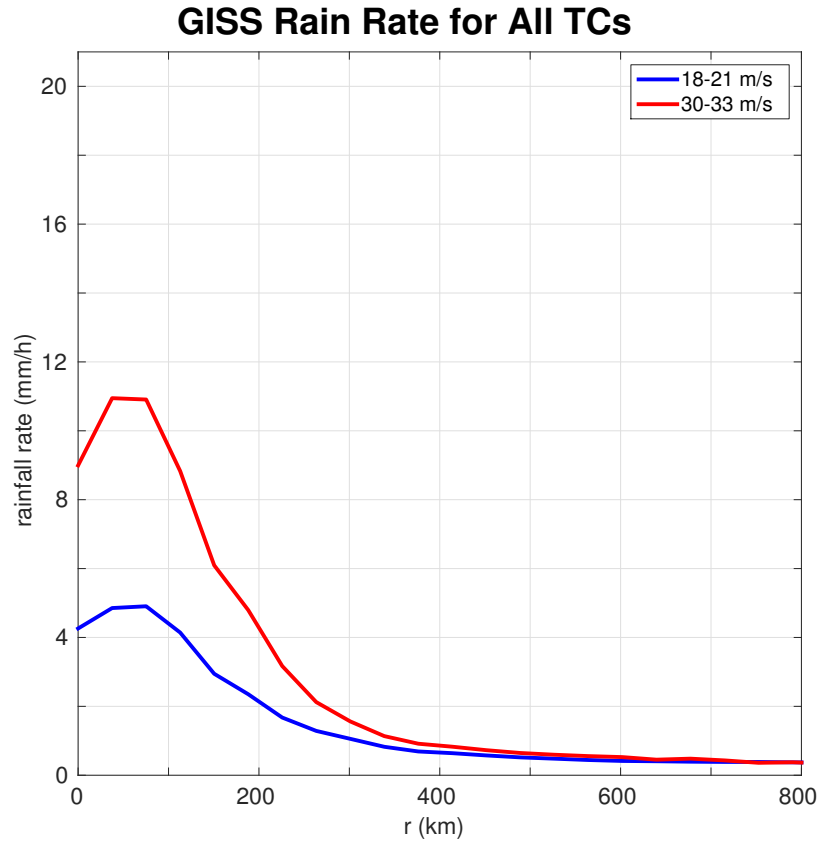


Figure S1. Radial profiles of rain rate for TCs in V1, binned by maximum wind speed. Compare to Figure 6 of Moon et al. (2020a).

Table S1. Definitions of regions used for tropical cyclone statistics (ϕ is latitude)

Region	Hemisphere	Western Boundary	Eastern Boundary
North Indian	Northern	35°E	99°E ($\phi > 8^\circ\text{N}$)
		35°E	$(105 - \frac{3}{4}\phi)^\circ\text{E}$ ($\phi \leq 8^\circ\text{N}$)
Western North Pacific	Northern	99°E ($\phi > 8^\circ\text{N}$)	160°W
		$(105 - \frac{3}{4}\phi)^\circ\text{E}$ ($\phi \leq 8^\circ\text{N}$)	160°W
Eastern North Pacific	Northern	160° W	107°W ($\phi > 24^\circ\text{N}$)
		160° W	$(65 + \frac{7}{4}\phi)^\circ\text{W}$ ($\phi \leq 24^\circ\text{N}$)
North Atlantic	Northern	107°W ($\phi > 24^\circ\text{N}$)	0°
		$(65 + \frac{7}{4}\phi)^\circ\text{W}$ ($\phi \leq 24^\circ\text{N}$)	0°
South Indian	Southern	25°E	105°E
Australian Region	Southern	105°E	165°E
South Pacific	Southern	165°E	70°W
South Atlantic	Southern	70°W	0°

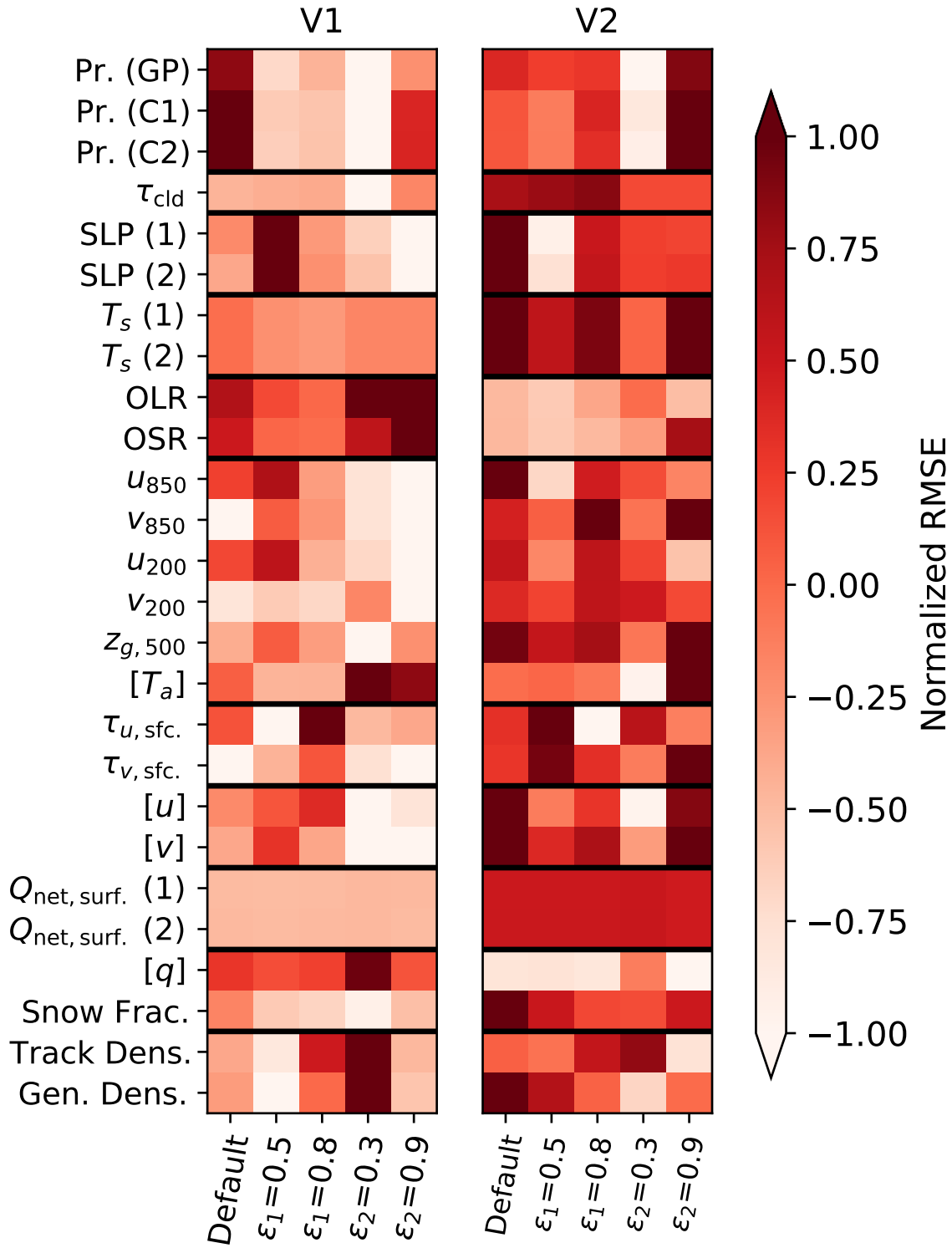


Figure S2. As in Figure 14 but for RMSE weighted by cosine of latitude, normalized by dividing by the inter-quartile range of each 10-element row and subtracting the row median.