

Metric [unit]	Definition	Objectives	Reference
Amount peak [mm/day]	Rain rate where the maximum rain amount occurs	Characterize typical daily precipitation amount	Pendergrass and Deser (2017); Ahn et al. (2023a)
Amount P10 [fraction]	Fraction of rain amount in lower 10 percentile of OBS amount	Measure the rain amount from light rainfall	Ahn et al. (2023a)
Amount P90 [fraction]	Fraction of rain amount in upper 90 percentile of OBS amount	Measure the rain amount from heavy rainfall	Ahn et al. (2023a)
Frequency peak [mm/day]	Rain rate where the maximum nonzero rain frequency occurs	Characterize typical daily precipitation frequency	Pendergrass and Deser (2017); Ahn et al. (2023a)
Frequency P10 [fraction]	Fraction of rain frequency in lower 10 percentile of OBS amount	Measure the frequency of light rainfall	Ahn et al. (2023a)
Frequency P90 [fraction]	Fraction of rain frequency in upper 90 percentile of OBS amount	Measure the frequency of heavy rainfall	Ahn et al. (2023a)
Unevenness [days]	Number of the wettest days for that constitute half of annual precipitation	Measure uneven characteristic of daily precipitation	Pendergrass and Knutti (2018); Ahn et al. (2023a)
FracPRdays [fraction]	Number of precipitating days (≥ 1 mm/day) divided by total days a year	Measure fraction of precipitating days a year	Ahn et al. (2023a)
SDII [mm/day]	Annual total precipitation divided by the number of precipitating days (≥ 1 mm/day)	Measure daily precipitation intensity	Zhang et al. (2011); Ahn et al. (2023a)
Perkins score [unitless between 0-1]	Sum of minimum values between two PDFs across all bins	Measure similarity between two PDFs	Perkins et al. (2007); Ahn et al. (2023a)
Bimodality [unitless between 0-1]	Ratio of smaller ridge peak minus trough peak to larger ridge peak	Measure the degree of bimodality in a PDF	Ahn et al. (2023b, in prep)

Updated from Table 3 of Ahn et al. (2023a)

Ahn, Min-Seop, Paul A. Ullrich, Peter J. Gleckler, Jiwoo Lee, Ana C. Ordonez, and Angeline G. Pendergrass, 2023a: Evaluating Precipitation Distributions at Regional Scales: A Benchmarking Framework and Application to CMIP 5 and 6 Models, *Geoscientific Model Development*, under revision, <https://doi.org/10.5194/egusphere-2022-1106>.

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Pendergrass, A. G., and C. Deser, 2017: Climatological Characteristics of Typical Daily Precipitation. *Journal of Climate*, 30, 5985–6003, <https://doi.org/10.1175/JCLI-D-16-0684.1>.

Pendergrass, A. G., and R. Knutti, 2018: The Uneven Nature of Daily Precipitation and Its Change. *Geophysical Research Letters*, 45, 11,980-11,988, <https://doi.org/10.1029/2018GL080298>.

Zhang, X., L. Alexander, G. C. Hegerl, P. Jones, A. K. Tank, T. C. Peterson, B. Trewin, and F. W. Zwiers, 2011: Indices for monitoring changes in extremes based on daily temperature and precipitation data. *Wiley Interdisciplinary Reviews: Climate Change*, 2, 851–870, <https://doi.org/10.1002/wcc.147>.