Statistical collapse of stratiform and convective drop diameter distributions at the ground

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The probability density function of the drop diameter at the ground is investigated in stratiform and convective rain, at Darwin Australia during the Tropical Warm Pool International Cloud Experiment.

We find that, after a renormalization procedure of the drop diameter (subtracting the mean and dividing by the standard deviation), the empirical probability density functions of both types of rainfall collapse in a single curve, indicating the existence of an invariant probability distribution of the drop diameter at the ground.