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## Evidence of self organized criticality in rainfall

H M Wijesekera and D U J Sonnadara

*Department of Physics, University of Colombo*

Rainfall is a product of a number of complex processors having completely different temporal and spatial characteristics. The hypothesis that rainfall might be a case of self organized criticality was tested using rainfall records from the dry zone of Sri Lanka. The time series data of the daily rainfall records for the time period 1900-2000 was used in this work.

It was shown that the wet spells and dry spells distributions exhibit an inverse power law form $f^{-\tau}$ with $\tau$ ranging from 1.01 to 1.95. The intensity of rainfall deviates from the power law behaviour except in extreme events. In general, the daily rainfall data records from the dry zone show the presence of a Self Organized Criticality (SOC) phenomena characterized by scaling extending to a few orders of magnitude. Since the rainfall dynamics in the dry zone seem to be governed by SOC, the long range spatial and temporal correlations can form the basis for the development of statistical prediction models.

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upul@phys.cmb.ac.lk Tel : 0714406251