



## **Analysis of extreme precipitation events over Brazil using satellite database**

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Extreme rainfall is one of the most severe weather hazards affecting all the globe, especially the tropical region. Some studies use statistical approaches for interpreting extreme events by choosing a constant threshold based on different empirical rainfall distributions. The main goal of this work is to fit different Extreme value distributions (EVDs) like the Generalized Extreme Value (GEV) and Generalized Pareto Distribution (GPD) for extreme rainfall in different time scales to understand their behaviour. The objectives of this study are: (i) analyse the extreme precipitation distribution at 1 degree daily (1DD) using rain gauges data and different well-known satellite-based retrievals like TAPEER (Tropical Amount of Precipitation with an Estimate of ERrors) over Brazil; (ii) characterize the Mesoscale Convective Systems (MCS) life cycle properties like duration and minimum temperature (among others) associated with extreme events using TOOCAN (Tracking Of Organized Convection through a 3 dimensional segmentation) tool.