



Characterization of mesoscale convective systems over the eastern Pacific during boreal summer

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The eastern Pacific Ocean is one of the most active tropical disturbances formation regions on earth. This preliminary study is part of a broader project that aims to investigate how mesoscale convective systems (MCS) may be related to these synoptic disturbances with emphasis on local initiation of tropical depressions.

As a first step, the main characteristics of the MCS over the eastern Pacific are documented with the help of the recently developed TOOCAN tracking algorithm (Fiolleau and Roca, 2013) applied to the infrared satellite imagery data from GOES-W and -E for the period JJAS 2012-2014. More specifically, the spatial distribution of the MCS population, the statistics of their spatial extensions and durations, as well as their trajectories and propagation speeds are summarized. In addition the environment of the MCS will be investigated using various Global Precipitation Mission datasets and the Megha-Tropiques/SAPHIR humidity microwave sounder derived products.

Reference: Fiolleau T. and R. Roca, (2013), An Algorithm For The Detection And Tracking Of Tropical Mesoscale Convective Systems Using Infrared Images From Geostationary Satellite, Transactions on Geoscience and Remote Sensing, doi: 10.1109/TGRS.2012.2227762.