

**Mesoscale convective complexes over Southern Africa**Ross Blamey<sup>†</sup>; Chris Reason<sup>†</sup> University of Cape Town, South AfricaLeading author: [ross.blamey@uct.ac.za](mailto:ross.blamey@uct.ac.za)

Southern Africa, defined here as Africa south of 18°S, experiences considerable spatial and temporal variability in climate and is susceptible to wide range of severe weather phenomena. One such severe weather producing system that may contribute to the intense convective activity over the region is the mesoscale convective complex (MCC). Compared to other MCC regions, rather little research has been done on southern African systems. However, in terms of surface-based weather observation platforms (i.e. rain-gauges, radar, etc), southern Africa could be described as a data sparse region, which generates a problem for monitoring such systems, including their precipitation characteristics. Despite the limited data available in southern Africa, more knowledge about MCCs is required in order to understand the role they play in regional climate variability. Using the maximum spatial correlation technique (MASCOTTE), we develop a detailed climatology of 70 MCCs that occur during the austral summer months over southern Africa for the 1998-2006 period. Most MCCs are clustered along the eastern regions of southern Africa, adjacent to the warm waters of the Mozambique Channel and Agulhas Current. We also find a few infrequent systems developing in Namibia and Botswana. The systems are found to predominantly occur during the months of November - February, with maximum activity occurring in November. Although fewer in number (~9 per season) compared to MCC populations in other regions, the systems do tend to follow the nocturnal lifecycle as documented elsewhere. The next stage involves investigating the precipitation produced by these systems using the Tropical Rainfall Measuring Mission (TRMM) Multi-satellite Precipitation Analysis (TMPA) data.

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