



Monash Weather and Climate seminar series

Next seminar: Friday 14th August

African Easterly Wave dynamics

Gareth Berry (School of Mathematical Sciences, Monash)

African Easterly Waves (AEWs) are the dominant synoptic-scale weather phenomena that occur over tropical North Africa during the boreal summer. AEWs propagate westwards through the West African monsoon system and significantly modulate precipitation in sub-Saharan Africa. After leaving the African continent, these systems are also the primary synoptic precursors of tropical cyclones in the Atlantic Ocean basin and have been observed to propagate as far west as the central Pacific Ocean.

The textbook view of AEWs is that their dynamics are governed by barotropic and baroclinic growth on the mid-tropospheric African Easterly Jet, which is a persistent feature of the West African monsoon system. Using a combination of observations, numerical analyses and numerical modeling, the research presented here will put forward a new paradigm of AEW generation and dynamic growth. Supported by further research, this new conceptual model of AEW dynamics suggests that scale interaction between the synoptic AEW and deep convection is an integral element of the observed AEW lifecycles.

Seminars held in Room 345, Building 28, Fridays 1-2pm

All Welcome!

For more information, contact Laura Davies or Jo Brown
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