

# NRESI RESEARCH COLLOQUIUM SERIES

FRIDAY

Feb. 9, 2007

3:30 - 4:30 pm

LECTURE  
THEATRE

7-158

LIGHT  
REFRESHMENTS  
SERVED AT 3:20 PM

**Dr. Kevin Tory**

*Research Scientist, Model Development Group*



*Melbourne, Australia*



## Tropical Cyclone Formation A Brief Overview

Tropical Cyclone (TC) formation is to this day not well understood. The search for an explanation of the so called “genesis problem” has been pursued for some time without any real breakthroughs. The question that underlies the “genesis problem” is essentially: How can the atmosphere spin-up an intense vortex on scales of hundreds of km until the vortex becomes self-sustaining (ie, the energy required to sustain or amplify the vortex is released by the storm’s own internal dynamics)? Recent work by Dr. Mike Montgomery from the Naval Postgraduate School, Noel Davidson from BMRC and myself, has identified possible mechanisms that explain the TC spin-up process.

I will give a brief, non-technical description of the processes leading up to TC formation, and describe our theory for the amplification of a tropical disturbance into a full blown self-amplifying TC.