



High resolution NWP for recent severe weather events in Australia

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The Australian Bureau of Meteorology commenced a project to develop NWP systems at resolutions of approximately 1.5km that are capable of assimilating radar data early in 2010. These systems are targeted at heavy rainfall events, such as those seen in Australia during late 2010 and early 2011. The NWP systems are within the framework of the Australian Community Climate Earth Simulator (ACCESS), which uses the UK Met Office Unified Model and variational assimilation software.

This presentation will provide an overview of the performance of initial configurations of these high resolution systems for case studies involving severe storms and tropical cyclones in northern Australia during December 2010 to February 2011. These events had a major impact on the Australian economy and communities. The focus will be on the value of high resolution 24-36 hour model forecasts, and how this can be improved by high resolution assimilation and the use of radar data to illustrate progress and future plans for mesoscale NWP within the Bureau of Meteorology.