

Chuva International Workshop

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Title: Modeling cloud and rainfall formation near Belem and Santa Maria with OLAM (Ocean Land Atmosphere Model)

Abstract

The OLAM model was used to simulate the cloud and rainfall formation observed in two field experiments at Belem-PA and Santa Maria-RS, respectively. The model was set up with a global domain and a spatial refined grid structure for these two regions (Fig. 01ab). This procedure provided a simultaneous model representation of the large scale dynamics and local circulations. The spatial resolution reached a refinement suitable for using the cloud microphysics parameterization. The liquid and ice hydrometeors formation were evaluated to better understand the clouds evolution. The results show that OLAM was able to simulate the major dynamics and thermodynamics of the physical processes involved on the clouds evolution observed on those two sites.

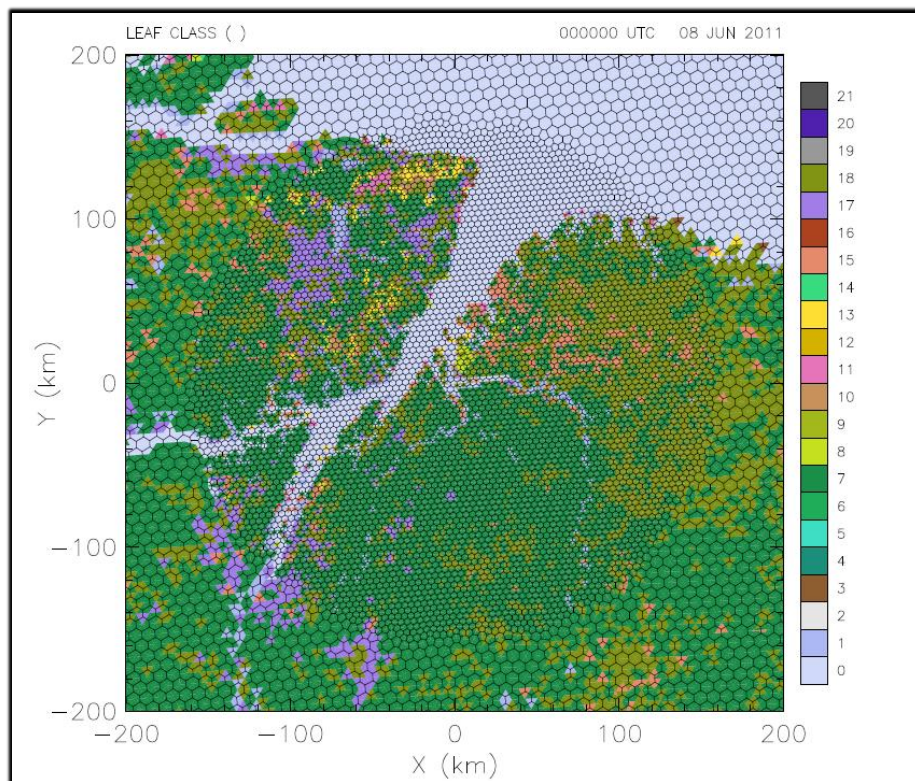


Figure 01a – OLAM model surface boundary condition characteristics and the hexagonal grid structure near Belem-PA.

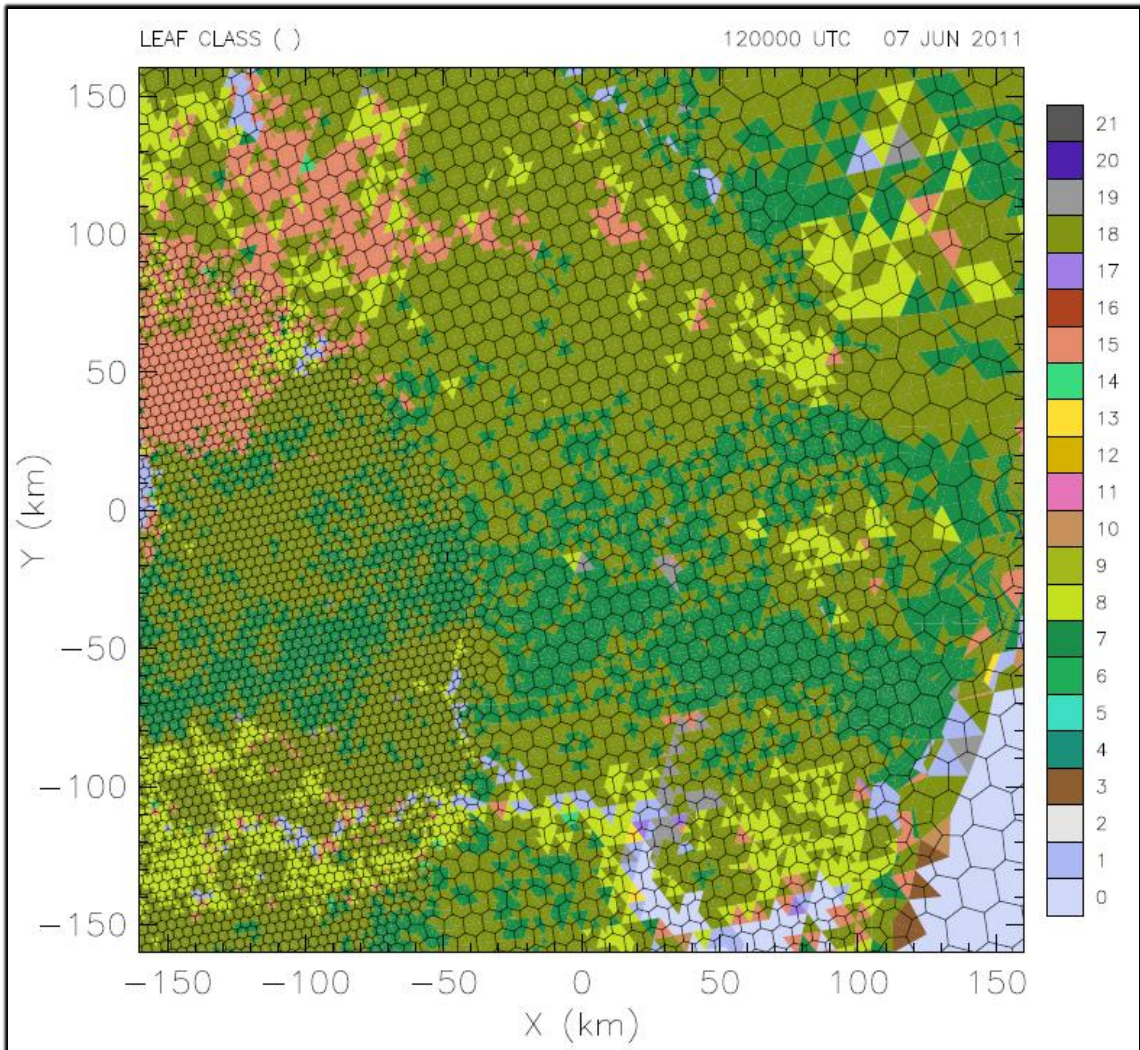


Figure 01b – OLAM surface boundary condition characteristics and the hexagonal grid structure near Santa Maria-RS.