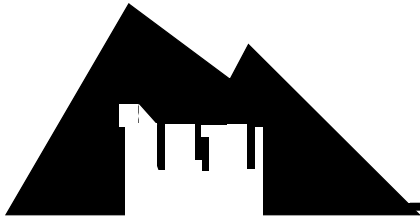


# *The RAL Seminar Series*



**NCAR**

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## **ARMOR: An Ultimate Nowcasting Based on the Correction of Phase and Amplitude Errors in Numerical Models**

by

**GyuWon Lee**

**Advanced Study Program/ Research Applications Laboratory**

*Tuesday, 24 October 2006  
Foothills Lab Building 2 Auditorium, Room 1022  
3:00 p.m.*

Precipitation forecasts have evolved along two directions: 1) radar precipitation nowcasting through the extrapolation of current precipitation maps and 2) numerical precipitation forecasting with better initial conditions from radar and other sensors. The former has extended its coverage to the continental scale. Recent research shows that radar nowcasting outperforms numerical models up to 6 hours. Their poor performance appears to be due to their inherent phase and intensity errors. We demonstrate a method of separating the model phase and intensity errors and show how these errors evolve as a function of time. This provides an improved systematic evaluation of model precipitation forecasting. We demonstrate a nowcasting method that corrects the flow-dependent time-tendency of these errors. This model-based nowcasting technique significantly improves a model precipitation forecasting up to 8 hours.