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RAL SEMINAR SERIES

Speaker: Jenny Sun, Scientist, RAL, HAP

Date: March 11, 2015
Time: 3:30pm
Place: FL 2 – Rm 1022

Title: A Study of Mesoscale Processes Contributing to the Formation of the 11
           September Heavy rainfall during the Colorado flood of 2013

Abstract:

The great Colorado flood that occurred during the second week of September 2013 was
an unprecedented event causing loss of life and significant property damage. While the
rainfall and flooding covered a large area of northern Colorado over a one-week period,
three episodes of heavy rainfall deluged the Front Range of the Rocky Mountains with
the most intense episode centered in Boulder County the night of 11 September. The
large-scale event brought abundant moisture from the Gulf of Mexico which is believed
to be the source of the record amount of rainfall. Locally heavy rainfall, however, was
driven by mesoscale processes. This study will examine the formation mechanisms of
these processes on the night of 11 September using high-resolution analyses from the
Variational Doppler Radar Analysis System (VDRAS). VDRAS performs fine-scale
analyses by assimilating observations from several WSR-88D radars along the Front
Range region and surface networks using a 4-dimensional data assimilation technique.
Results suggest that, in addition to the large-scale forcing over the Rocky Mountains, the
terrain of the Palmer Divide south of Denver and the Cheyenne Ridge north of Boulder
played an important role in the formation of the mesoscale heavy rainfall system.

This seminar will be Webcast - Webcast link
http://www.fin.ucar.edu/it/mms/fl-live.htm