Science and Technology Seminar

The Enhanced Multisensor Precipitation Estimator and Nowcaster – Improving WFO Flash Flood Services

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The Multisensor Precipitation Estimator (MPE) was delivered to the Weather Forecast Offices (WFOs) and River Forecast Centers (RFCs) several years ago within AWIPS to provide improved methods for estimating rainfall from WSR-88D radar, rain gauges, and GOES satellite for input into hydrologic forecast models. Although MPE satisfies current requirements for river forecasting at the RFCs, it falls short in providing rainfall products of sufficient temporal and spatial resolution at the WFOs for flash flood monitoring and warning in small stream basins.

A new enhanced version of MPE, called EMPE, has been developed as part of the Advanced Hydrologic Prediction Services program. The EMPE will satisfy these more stringent requirements and provide increased flexibility for both WFOs and RFCs. In addition, a new Multisensor Precipitation Nowcaster (MPN) algorithm has been developed from the legacy Flash Flood Potential algorithm and integrated with EMPE to provide new regional, gridded, short-term rainfall forecasts for increased warning lead time. These two prototype systems have been running continuously since 2004 in an off-line test and demonstration mode at the Hydrology Laboratory and have recently been given high priority for integration within AWIPS to improve flash flood-related GPRA performance measures. The EMPE and MPN algorithms will be described and new capabilities that are enabled by these enhancements will be presented.

Wednesday, April 05, 2006
2:00 - 3:00 P.M.
SSMC#2, Room 2358

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