

Probability Matched Mean

Quick Reference Guide

The **Probability Matched Mean (PMM)**, most often used for QPF, is applied with the goal of correcting for the low bias of peak values in the ensemble mean. It refits the ensemble mean values with those of the full distribution across all members. Therefore, it maintains the spatial distribution of the ensemble mean, and retains the peak values of individual members.

A **Local Probability Matched Mean (LPMM)** limits the domain to a smaller area using a radius of influence. This will reduce the chances of QPF values from one coherent precipitation area being assigned to a different area.

Example: 24-hr QPF

- a) Ensemble Mean
- b) Ensemble Max
- c) PMM
- d) LPMM

The local maxima in southeast Oklahoma, southwest Missouri, and south Texas are better preserved in the PMM (c) than in the raw mean (a). The LPMM (d) adds further spatial detail, including an additional maximum in southeast Missouri.

