

- contributing number of time-lagged members

- from GEFS analysis



Total accumulated precipitation from Stage IV analyses across the verification region, east of the Rocky Mountain Range, for May 2023.

Total Precipitation (mm)

Forecast Quality of Time-Lagged, Medium-Range, High-Resolution **Ensembles Over the United States: May 2023** Anastasia Tomanek¹, Craig Schwartz² 1. University Corporation for Atmospheric Research, Boulder, CO | 2. National Center for Atmospheric Research, Boulder, CO

315.1

forecast probability for a certain number of contributing time-lagged members at each threshold. While the black line represents a perfect forecast, deviations from it represent conditional forecast bias.

Time-Lagged Ensembles

- Forecasts initialized at different times with common valid times
- time-period of interest





Brier scores for the 1.0 mm/h precipitation threshold across 31 valid time-lagged forecasts during May 2023. Scores measure probabilistic prediction accuracy for the various ensemble sizes with 0 being ideal.

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 Available number of time-lagged members determined by aligned forecast hours in

Time-lagged ensemble spread over the verification region for May 2023 depicting various amounts of contributing members across 31 valid forecasts based on 1-h accumulated precipitation.

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