Dynamical Weighting of the Week 3-4 Models based on Forecasts of Opportunity

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Overview

This project seeks to improve the Week 3-4 temperature and precipitation outlooks using a new forecast tool based on a dynamically-weighted blend of the subseasonal models according to climatic states at their initialization.
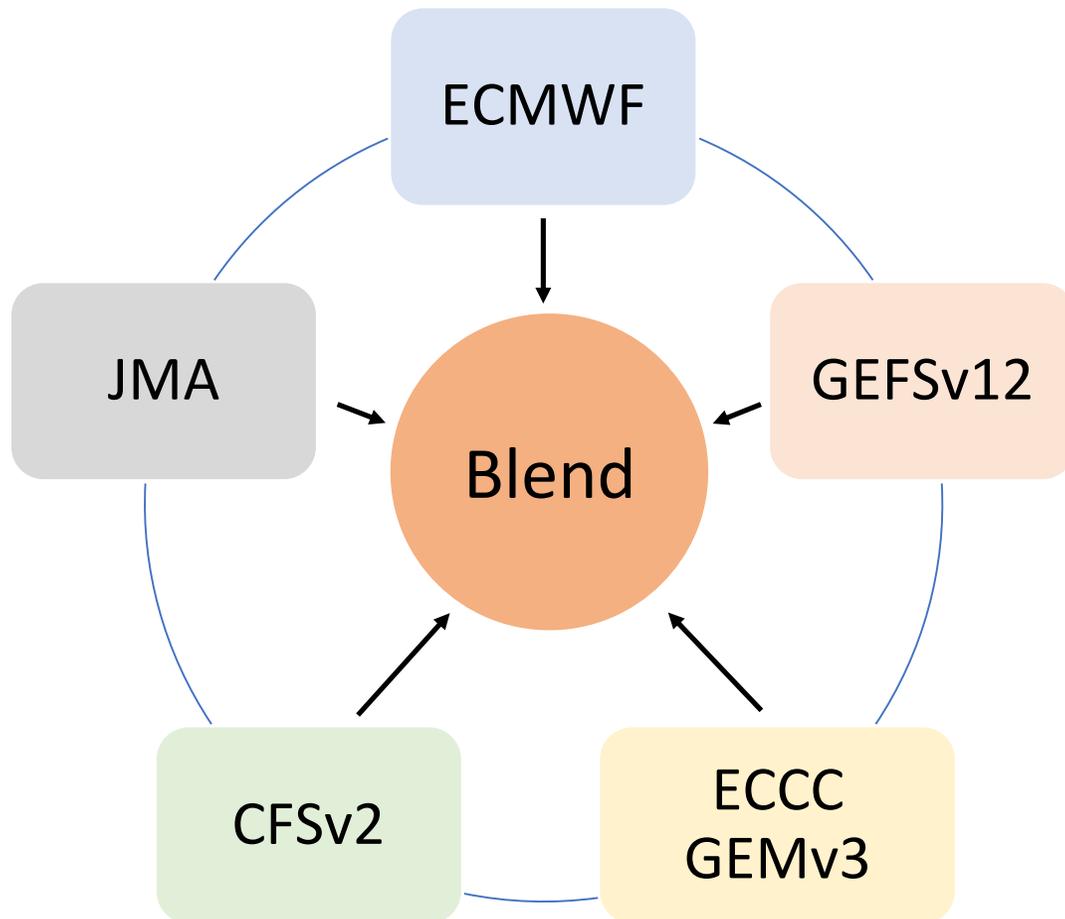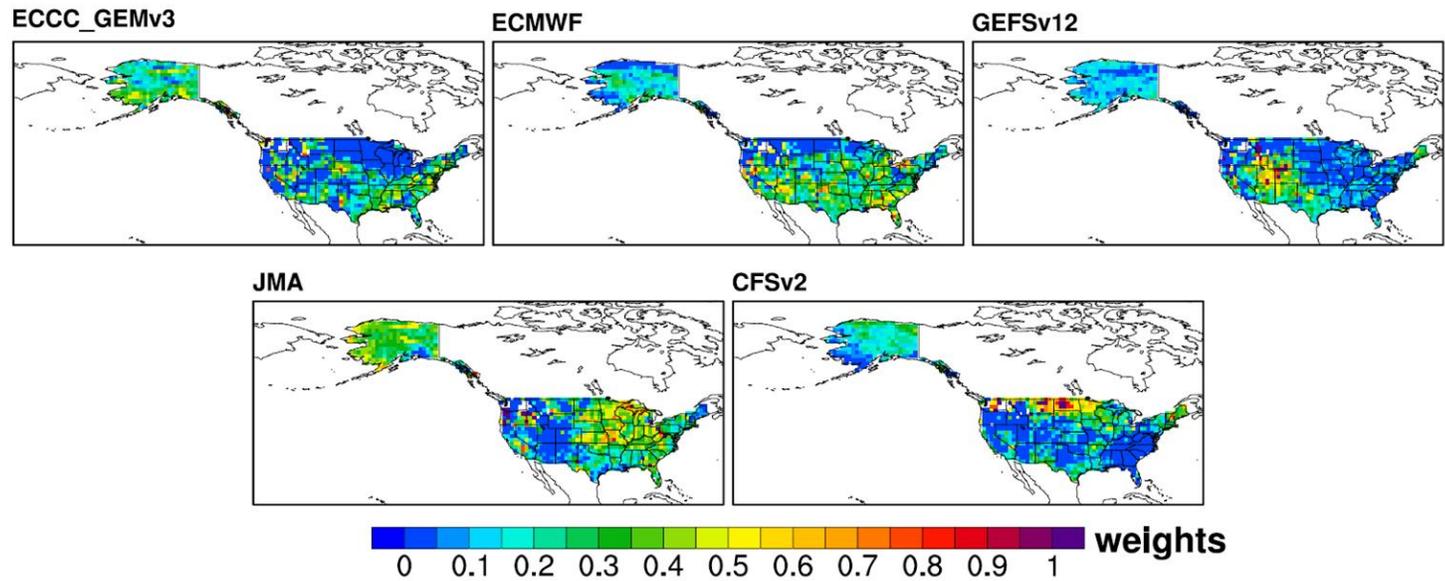

Example of Blends

1. **Equal:** Each model is equally weighted across all grid points

1. **Seasonal**: Models are weighted* as a function of grid point and season.

1. **Seasonal-ENSO**: Models are weighted* as a function of grid point, season, and ENSO.

1. **Seasonal-ENSO-MJO**: Models are weighted* as a function of grid point, season, ENSO, and MJO

* Weights are derived from the models' skill with respect to each other given certain climatic states at initialization during their hindcast periods.

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Week 3-4 Temperature Weights (October 1, 2021)
Seasonal-ENSO-MJO Scheme (ASO; Neutral ENSO; Active MJO 3-4-5)

Example of Seasonal-ENSO-MJO weights that were applied to the models in real-time on October 1, 2021.

To see how well the blends performed with respect to each other and the individual models, please visit my poster room or feel free to reach out via e-mail: Cory.Baggett@noaa.gov or Emerson.LaJoie@noaa.gov