



WEATHER PROGRAM OFFICE

National Oceanic and Atmospheric Research

Who We Are

The **Weather Program Office (WPO)** supports world-class weather and air quality research to save lives, reduce property damage, and enhance the national economy. In pursuit of its vision and mission, WPO works closely with weather enterprise and the National Weather Service (NWS) to develop and transition weather and air quality research from minutes out to seasons, including hurricanes, severe thunderstorms, heavy precipitation, and air pollution.

Subseasonal to Seasonal Program



In 2018, NOAA's Subseasonal to Seasonal (S2S) program transitioned from NOAA's Climate Program Office to NOAA's Weather Program Office to align OAR's research activities with the Weather Research and Forecasting Act of 2017 (The Weather Act). Within WPO, this program will focus on improved understanding of S2S phenomena and their predictability to improve NOAA's operational prediction skill of weather events from two weeks to two years, as well as contributing to improvements in Federal operational prediction in agencies by the National Earth System Prediction Capability program.

Focus

WPO will meet its objectives by engaging with the S2S research community to advance the scientific development of NOAA's earth system models, including data assimilation, ensemble design, reanalysis and reforecasting, multi-model ensemble construction and processing, and statistical tools. Efforts will be derived from and foster the development of NOAA's Unified Forecasting System, interagency data assimilation projects, and ongoing multi-model ensembles, their construction and processing efforts within the North American Multi-Model Ensemble (NMME) or its related subseasonal ensemble effort, which leverage existing NOAA, WMO, and other agency datasets.

The S2S program will address a spectrum of issues on the subseasonal-to-seasonal time frame along the continuum of research readiness. Its near-term focus will advance predictive capability and understanding of precipitation on the subseasonal-to-seasonal scale via improved data assimilation especially coupled data assimilation including new observation types, Earth system model processes for precipitation and high-impact events, ensemble techniques, composition, and post-processing, including multi-model ensembles.

Goals

The S2S program seeks to advance two main goals identified by NOAA and in the Weather Act:

- (1) Improving the skill of S2S forecasts, and
- (2) Enhancing the value of S2S products for stakeholders.

Funding Objectives

S2S objectives focus on baseline understanding of predictability, advancing community-driven, NOAA modeling initiatives, and increasing the utility of multi-model ensembles for end users. By facilitating new S2S capabilities, NOAA seeks to reduce the magnitude and/or duration of disruptive events, support land- and marine-based economic vitality and mitigation efforts, advance month-to-month operational applications, and better position local, regional, and national decision-makers for successful responses to adverse weather events.



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