NOAA WEATHER PROGRAM OFFICE

Innovative Science Powering a Weather-Ready Nation

The Weather Program Office (WPO) funds research to improve weather forecasts, save lives, and reduce property damage. We work throughout the Weather Enterprise to foster research that can be transitioned into operations, knowledge, and other applications so the public can better be prepared for extreme weather.

Division Spotlight
Earth System Research and Modeling

The Earth System Research and Modeling Division funds research to accelerate Earth system model development within the Unified Forecast System (UFS) community modeling framework as a seamless weather-to-climate forecast system.

WPO's Subseasonal to Seasonal (S2S) Program addresses NOAA's priority area of improving the skill and value of predicting conditions at the timescales of two weeks to two years.

This division is also focused on transitioning enhanced air quality and fire weather forecast capabilities to the National Weather Service through funding research by NOAA laboratories, academic partners, and commercial industry.

WPO Divisions

Management and Administration

Observations and Research Support

Earth System Research and Modeling

Science, Technology, and Society

The Division also serves as the lead for **Goal 3** of WPO's Strategic Plan:

Contribute to the UFS through a community-based, Earth system modeling approach.
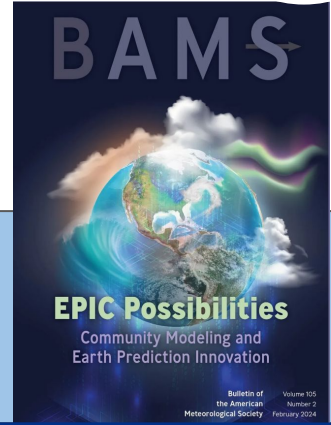
We Fund Research to Improve Your Weather Forecasts

Earth System Research and Modeling Programs

Earth Prediction Innovation Center (EPIC)
Catalyzes Weather Enterprise community access to the developmental UFS code to foster innovation and facilitates the inclusion of those innovations into NOAA's operational codes.
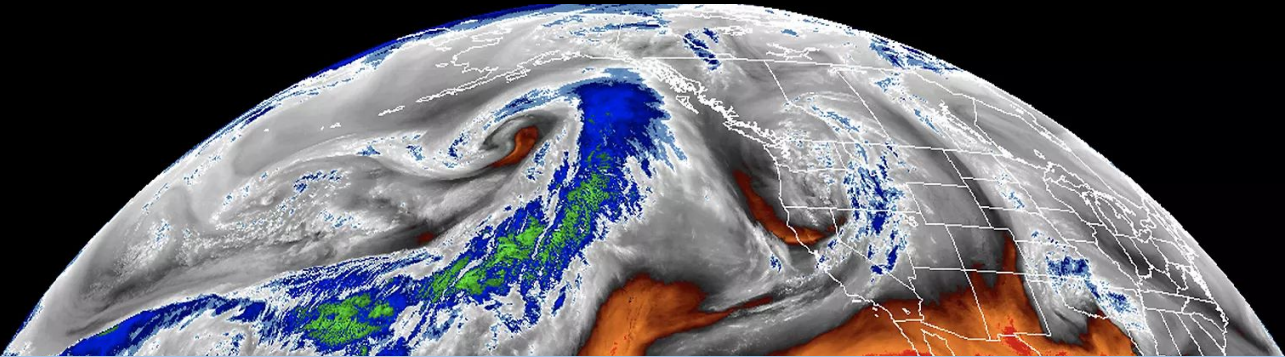

BAMS

EPIC Possibilities
Community Modeling and
Earth Prediction Innovation

Bulletin of
the American
Meteorological Society
Volume 105
Number 2
February 2024

EPIC Investment Areas:
- Community Engagement
- Scientific Innovation
- Software Infrastructure
- Management and Planning
- Cloud-based HPC
- Software and Performance Engineering
- User-Support Services

Subseasonal to Seasonal Program (S2S)
Funds research that focuses on global model improvements for extended range forecasts, especially for precipitation prediction, and extended range forecasts of extreme heat or cold.
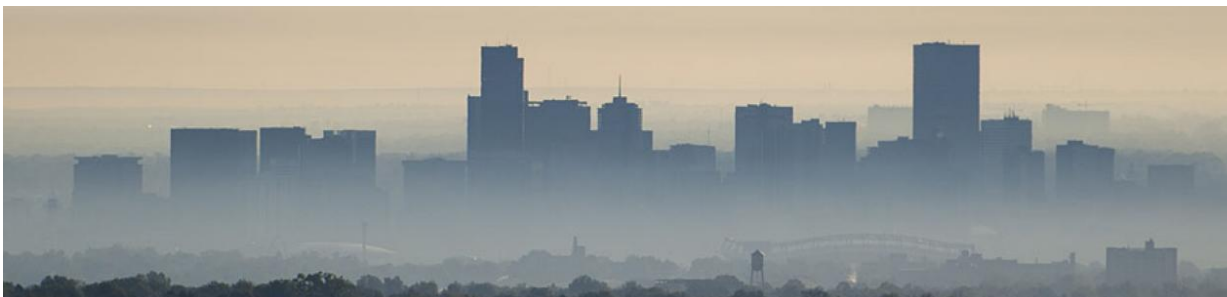

S2S Investment Areas:
- Precipitation
- Western Hydrology
- Support for ICAMS
- Model Development and Data Assimilation
- High Resolution Ocean Modeling

Synoptic Program
Supports research on the scale of days to a week, including fire weather, air quality, and atmospheric rivers. Recently funded projects have focused on air quality research and forecasting techniques that are relatively mature (i.e. generally falling in or near the "demonstration" level of technical maturity) and not in the early stages of development or proof-of-concept.

Synoptic Investment Areas:
- Fire Weather
- Air Quality

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