



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
OFFICE OF OCEANIC AND ATMOSPHERIC RESEARCH  
National Severe Storms Laboratory  
120 David L. Boren Blvd.  
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## Hazardous Weather Testbed Activities

The NOAA Hazardous Weather Testbed (HWT) at the National Weather Center (NWC) in Norman, Oklahoma, is seeking participants for **two hybrid\* experiments** in Spring 2025. The testbed is a joint project of the National Weather Service Storm Prediction Center, the National Severe Storms Laboratory, and the NWS Norman Forecast Office that provides a conceptual framework and physical space to foster collaboration between research and operations to test and evaluate emerging technologies and science. This year, we will be conducting the 2025 HWT activities **virtually and in-person** for **14 weeks** in total.

There will be four primary projects in the HWT during 2025. The details of the **two** spring experiments are listed beginning on page 3.

Phased Array Radar #1 <i>*in-person</i>	Feb 3–7, Feb 10–14, Feb 24–28
Spring Forecasting Experiment <i>*hybrid</i>	Apr 28–May 2, May 5–9, May 12–16, May 19–23, May 27–30 <b>Application Deadline: Mar 3</b>
Satellite Convective Applications <i>*hybrid</i>	May 5–9 (in-person), May 19–23 (in- person), Jun 2–6 (virtual) <b>Application Deadline: Mar 3</b>
Phased Array Radar #2 <i>*in-person</i>	August – Early September

\*In-person participation will comply with DOC COVID-19 Workplace Safety Plan

All 2025 HWT activities will have virtual contingency plans using online resources such as Google Meet and AWIPS in the Cloud. Each project-specific application form can be found in the project details selection below.

Interest statements should include your motivation for evaluating future warning and/or forecast systems in the HWT and *demonstrate why you would be a good fit for a particular experiment*. NWS participants may include WFO, CWSU, or Region HQ staff, and participants are not required to have had prior HWT experience.

Any questions or concerns about these experiments or the application process should be directed to the HWT Executive Officer, **Tony Lyza (anthony.lyza@noaa.gov)**.

**The deadline for the second round of applications is March 3, 2025.** Candidates will be selected shortly thereafter.

We desire enthusiastic people who are interested in improving NWS warning and/or forecast decision-making technology, products, and services. We would be happy to provide more information about the HWT activities if requested.

Sincerely,  
Tony Lyza  
Hazardous Weather Testbed, National Severe Storms Laboratory

## Spring Forecasting Experiment Project Descriptions & Details

**PIs: Israel Jirak (SPC), Adam Clark (NSSL), and Tom Galarneau (NSSL)**

[Click here to apply!](#)

The deadline for applications is March 3, 2025. Candidates will be selected shortly thereafter.

**WHEN** – April 28–May 2, May 5–9, May 11–16, May 19–23, May 27–30 both in-person\* & virtual

**WHERE** – Hazardous Weather Testbed, National Weather Center, Norman, OK & Online

\*In-person participation will comply with DOC COVID-19 Workplace Safety Plan

**WHAT** – The **Storm Prediction Center (SPC)** and the National Severe Storms Laboratory (NSSL) invite you to participate in experimental forecasting and evaluation activities either in-person or online as part of the annual HWT Spring Forecasting Experiment (SFE):

- Activities are formulated to provide evidence-based information on how best to design **convection-allowing models (CAMs) and ensemble systems** (the operational HREF evolved from these efforts), and to explore innovative ways to extract relevant information from CAMs and create calibrated probabilistic hazard guidance for high-impact weather events using **AI/ML** techniques.
- The SFE efforts support NOAA plans to develop a simplified, Unified Forecast System (UFS). The 3-km grid-spacing **Rapid Refresh Forecast System (RRFS)** will be evaluated against the **HRRR and HREF**, as it is scheduled to replace those systems in NWS operations in 2026.
- The focus of the experiment is directly aligned with NWS **FACETs and Warn-on Forecast (WoF)** programs, including examination of real-time forecasts from a prototype WoF ensemble system and **mesoanalysis** activities.
- To accomplish these goals, the SFE brings together major model development organizations in the US (EMC, GSL, NSSL, GFDL, and NCAR) to work collaboratively in improving community modeling for future implementation into NWS operations.

**WHY** – NWS forecaster participation in the HWT SFE is essential to facilitate meaningful interactions between the development and operational communities that will accelerate research-to-operations transitions. In particular, this provides opportunities for forecasters to provide feedback to ensure that new guidance, products, and visualization approaches meet their needs. This is a unique opportunity to see and influence the future of NWS forecasting tools for high impact weather.

**WHO** – Any **forecaster or SOO** who wants to be on the **cutting-edge of NWS science developments** please consider participating either in-person or virtually in the innovative, exciting SFE activities for one week during the **April 28–May 30** period.

## Satellite Convective Applications Experiment Project Descriptions & Details

[Click here to apply!](#)

The deadline for applications is March 3, 2025. Candidates will be selected shortly thereafter.

**WHEN** – May 5–9 (in-person\*), May 19–23 (in-person\*), June 2–6 (virtual)

**WHERE** – Hazardous Weather Testbed, National Weather Center, Norman, OK & Online

\*In-person participation will comply with DOC COVID-19 Workplace Safety Plan

**WHAT** – Participants will issue experimental short-term forecast discussions, convective warnings, and impact-based decision support services products for a given County Warning Area using new and experimental satellite products and guidance using the AWIPS-II platform during live weather cases. Forecasters will participate in discussions with subject matter experts and compose blog posts during real-time operations regarding their use of the operational and experimental satellite products in the warning decision-making process. Feedback will also be captured through surveys and post-event group discussions. The experimental and operational satellite products most likely to be available include, but are not limited to:

- Experimental RGBs
- GREMLIN Simulated Composite Reflectivity
- ProbSevere LightningCast

**WHY** – This HWT experiment provides an operational demonstration of products and capabilities associated with the recently-launched GOES-R and JPSS series of satellites. This evaluation will gauge the effectiveness of the GOES-R training, test forecaster understanding of GOES-R/JPSS data, understand the usability and effectiveness of the visualizations in AWIPS, and identify best practices for integrating the new data into operations. Feedback received during GOES-R/JPSS product demonstrations will be integrated into training initiatives in coordination with the Warning Decision Training Division, the GOES-R/JPSS programs, and researchers for future product development and visualizations.

**WHO** – All forecasters are welcome to apply for this experiment. Training with IDSS concepts is preferred.