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Global Systems Laboratory Explorer

Welcome to the first edition of GSL Explorer, our new quarterly newsletter! The stories listed here were posted on our website during the past three months and reflect the work of GSL federal, Cooperative Institute for Research in the Atmosphere (CIRA), Cooperative Institute for Research in Environmental Sciences (CIRES), contract staff, and other partners.
Enjoy!

[Visit our Website](#)

Spotlight: New video!



New video showcases GSL research impacts

GSL's visualization team produced a new video that showcases GSL research and the impact it has on society. Check it out!

[GSL Overview Video 2021](#)



Threats-In-Motion

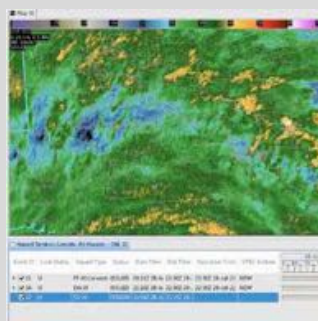
GSL researchers have been working with NWS forecasters on shakedown tests of "Threats-In-Motion" (TIM), a warning dissemination approach that would enable the NOAA National Weather Service to enhance severe thunderstorm and tornado warnings.

[Full story here.](#)

GSL staff awards from Commerce and NOAA!

Congratulations to GSL scientists for a NOAA Distinguished Career Award and several Department of Commerce Bronze Medals!

[Full story here.](#)



Outcomes from the Hazard Services Summer 2021 Functional Assessment Test

GSL researchers hosted their fourth virtual Functional Assessment Test (FAT), evaluating next-generation Hazard Services capabilities. Hazard Services will modernize how the National Weather Service's WFOs and National Centers create forecasts, watches, and warnings.

[Full story here](#)

GSL projects in the HFIP Real-Time Experiment 2021

Each hurricane season brings the opportunity to demonstrate advances that improve weather model accuracy. The Hurricane Forecast Improvement Project (HFIP) Real-time Experiments (HREx). GSL is testing three alternate physical parameterizations in the Unified Forecast System.

[Full story here.](#)





Visualization of a month of smoke forecasts from GSL's FV3-Chem model

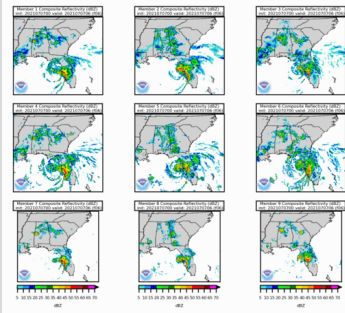
GSL's visualization expert created this video of wildfire smoke forecasts from July 8-August 9, 2021 from GSL's experimental FV3-Chem model. This shows the broad reach of smoke as it is carried by the wind across the world.

[Link to video](#)

GSL receives 2021 National Weather Association Aviation Meteorology Award for HRRR

GSL's Assimilation and Verification Innovation Division is honored by the National Weather Association (NWA) for developing and delivering the first convection-allowing hourly-updated weather model that provides guidance for in-flight icing, convective weather, cloud ceilings, visibility, and other hazards that impact aviation safety and efficiency.

[Full story here.](#)



GSL/CIRES engineers have prototyped the Rapid Refresh Forecast System on the cloud

A team of CIRES Software Engineers at NOAA GSL has prototyped the Rapid Refresh Forecast System on the Cloud. This work was in close collaboration with NOAA Environmental Modeling Center (EMC) on a FY19 Disaster Supplemental project.

[Full story here.](#)



GSL experimental models were evaluated on how well they support flash flood and excessive rainfall forecasts.

GSL experimental models were evaluated by forecasters for their utility in assessing the excessive rainfall and flash flooding threat in the Day 1 timeframe.

[Full story here.](#)