

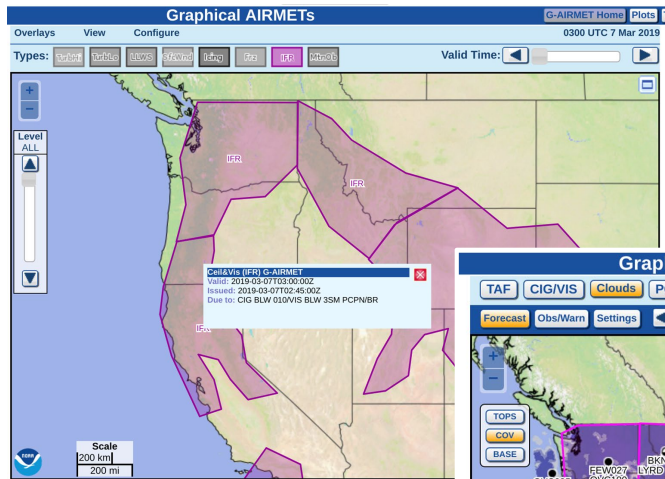


**NATIONAL WEATHER SERVICE**  
Aviation Weather Center

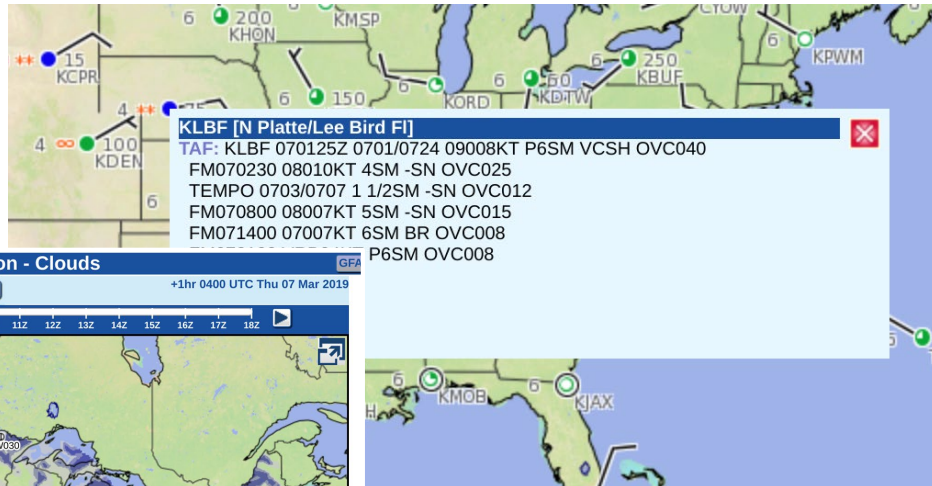
# **Cloud Layers and the Presentation of C&V Information to Users**

**Austin Cross & Rob Hepper**

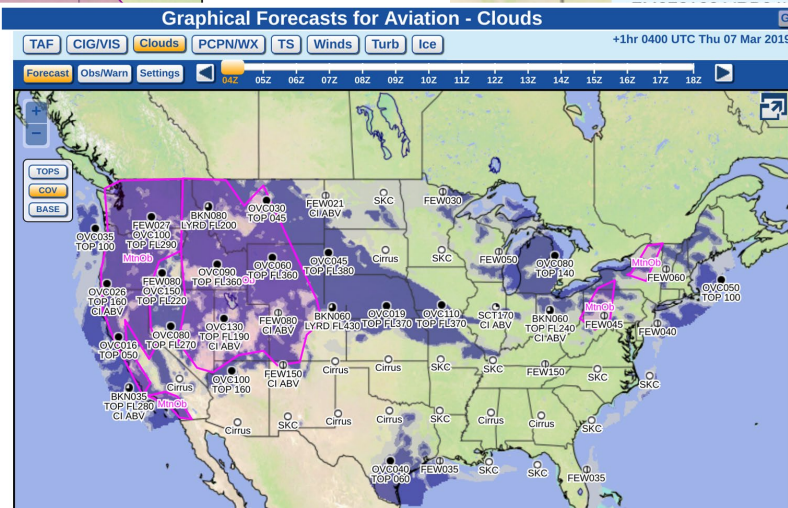
# Primary NWS Cloud & Vis Products



IFR G-AIRMET  
*polygons from AWC*



TAFs  
*text point forecasts from WFOs*



GFA  
*grids and graphics from AWC*

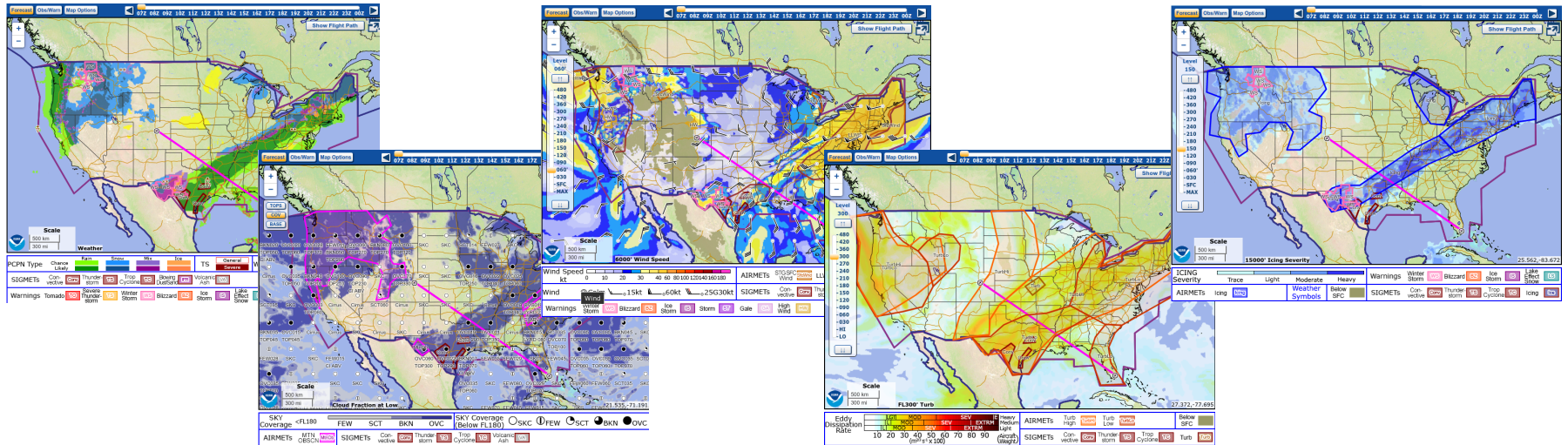


# Off-airport Operations



# Graphical Forecasts for Aviation (GFA)

AviationWeather.gov/gfa



Web capability & graphical forecasts primarily for en-route



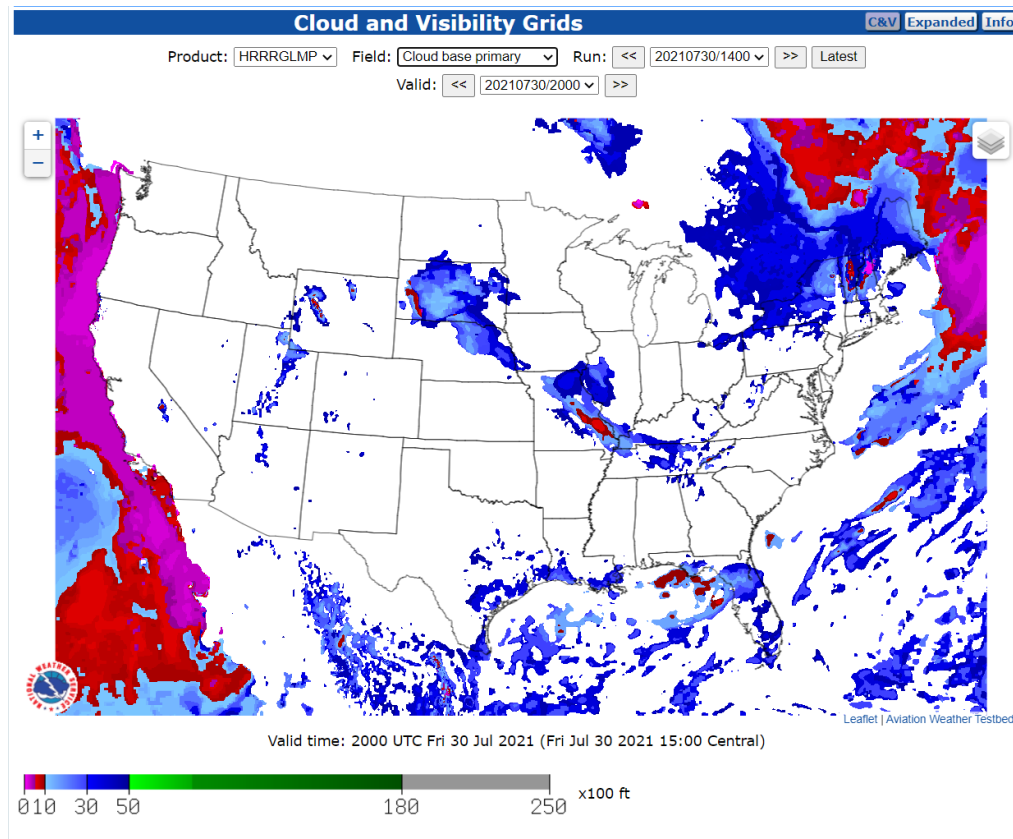
NATIONAL WEATHER SERVICE

# Low Cloud Bases for Terminal Concerns

Focus on greatest impacts to terminals

Most airport area concerns below ~5,000 ft

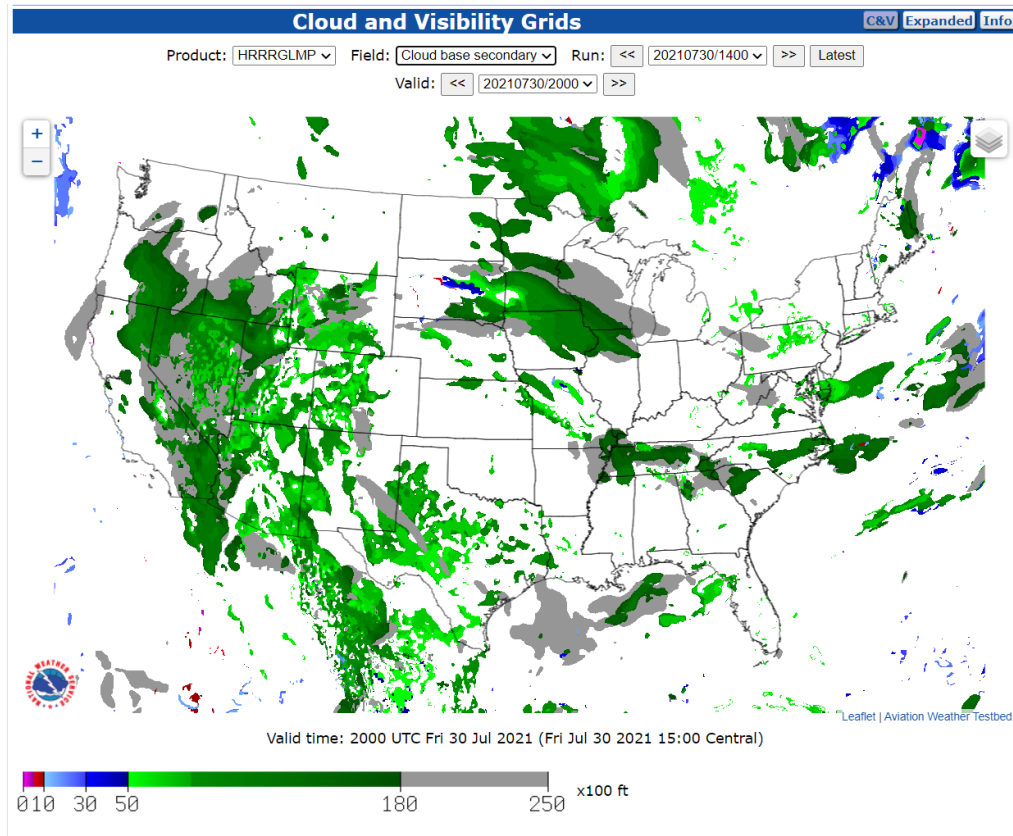
Synthesize gridded LAMP statistical guidance with RAP cloud layer information



# Additional Cloud Data for En-Route

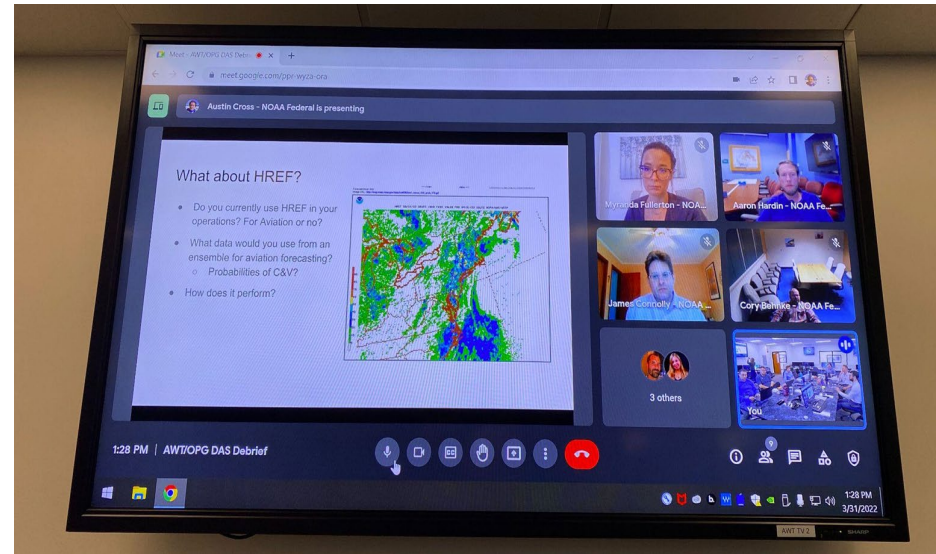
Additional cloud grids to support a full GFA with more layers, tops, cirrus

Available for editing if needed

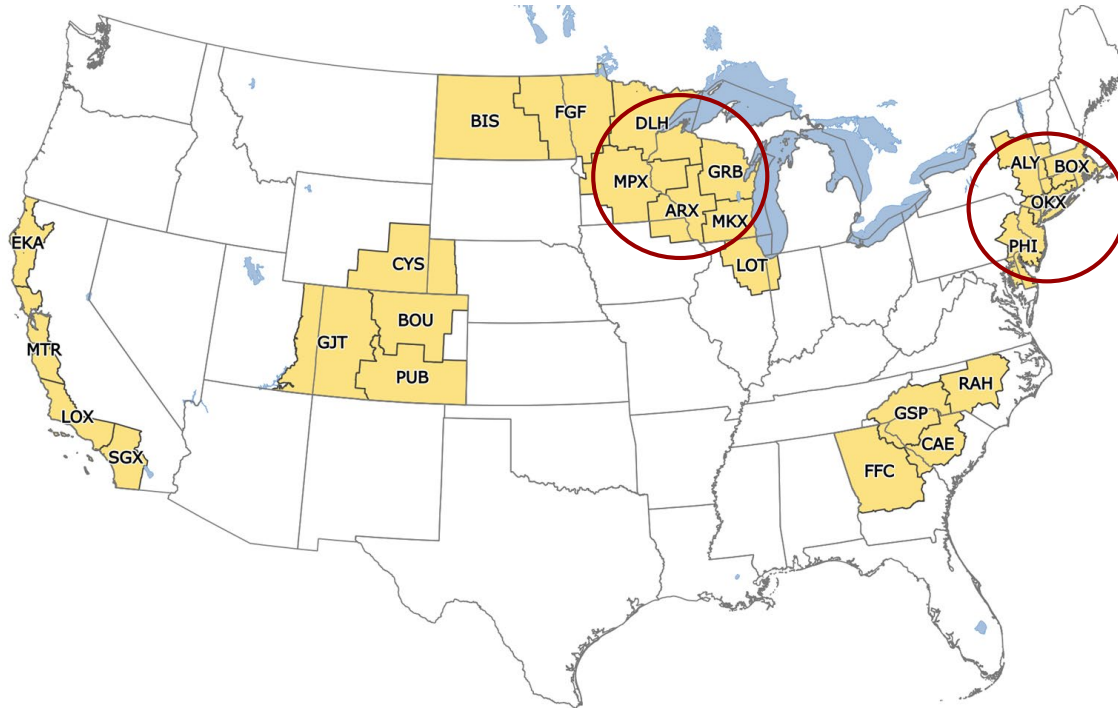


# Virtual Experiment

- 4 remote participants, several regions
- Open video call with participants



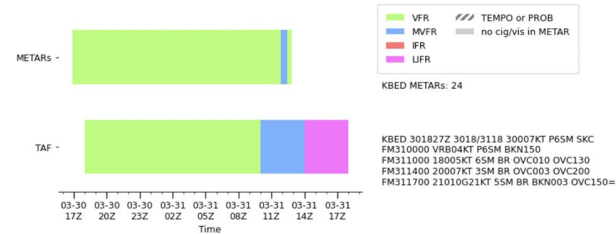
# CWA Clusters





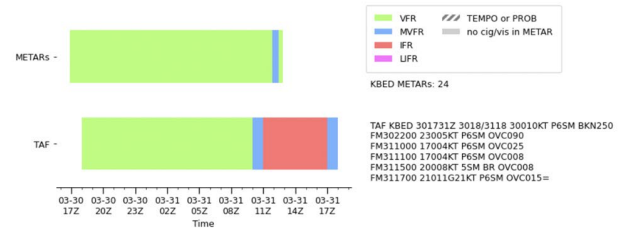
# Reviewed resultant TAFs during and after experiment, including comparing against forecasts created through current methods

KBED TAF issued 2022-3-30 18:27 valid for 3018/3118 & corresponding METARs



AWT

KBED TAF issued 2022-3-30 17:31 valid for 3018/3118 & corresponding METARs



NWS



# Conclusions

- Guidance generally well received
  - Big improvement over a few years ago
  - Changing methodology takes adjustment
- Maintaining consistency a challenge
- TAF production code improvements needed
  - Decreases amount of time post-editing text
- Need to coordinate different workflows and expectations across local forecast offices





# NATIONAL WEATHER SERVICE

## Aviation Weather Center

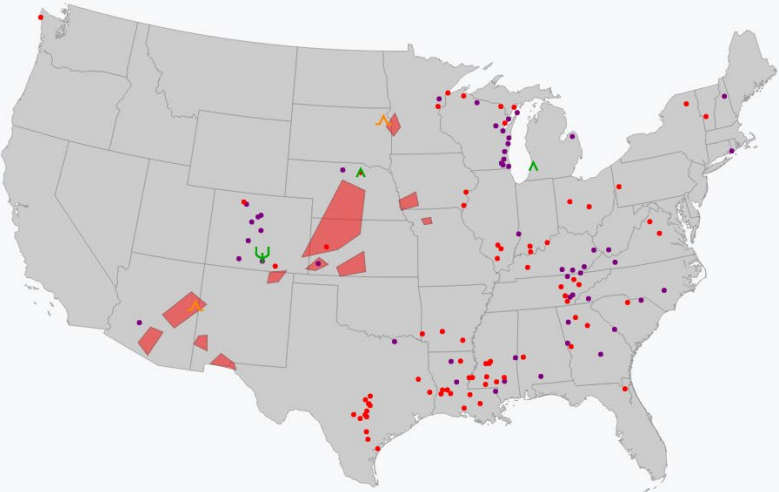
# AviationWeather.gov Update

Aviation Weather Center BETA


Aviation Weather Center Weather Products Tools Connect

I'm a Top News banner  
New look and feel for AviationWeather.gov! Try it on your phone or tablet!

### Current Conditions




Graphical Forecasts for Aviation (GFA)



Interactive maps of aviation forecasts and observations

### Resources for Decision Support Services (DSS)



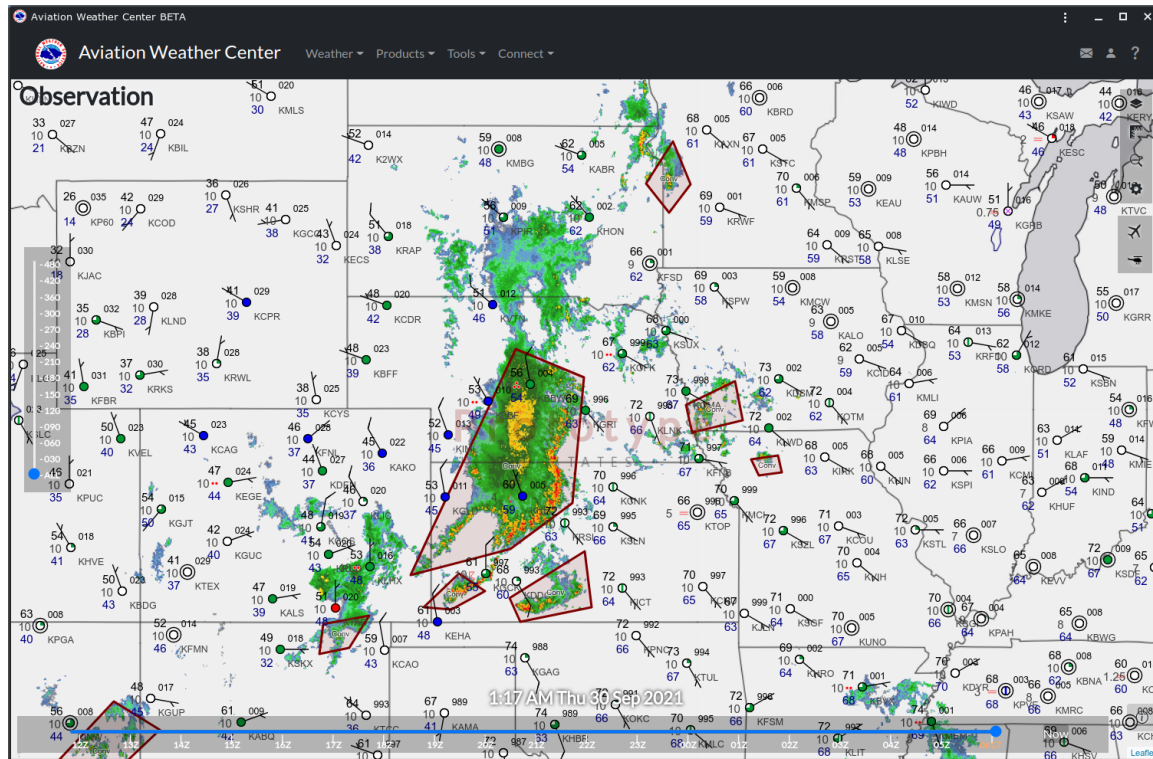
usa.gov

Privacy Policy Freedom of Information Act NWS Glossary Information Quality Disclaimer

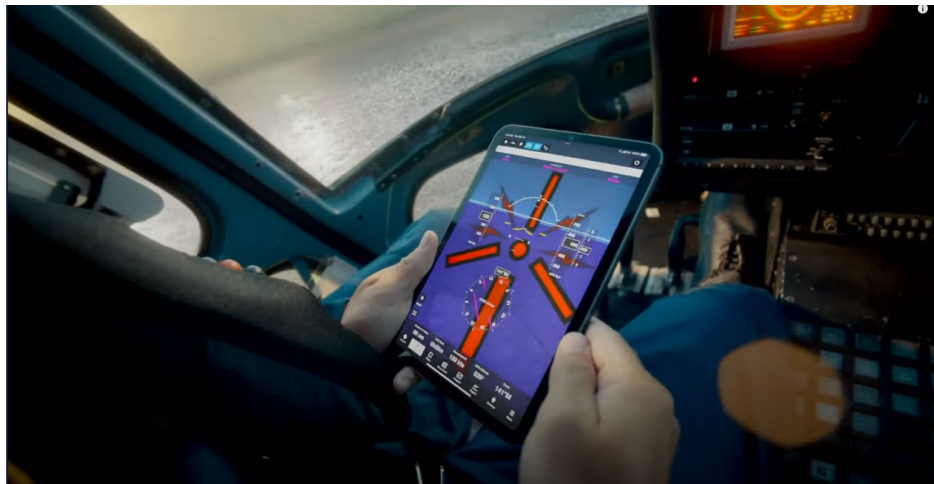


# GFA Low Altitude (GFA-LA)

- All the best features of GFA and HEMS
- New, updated design
- Large, full window maps



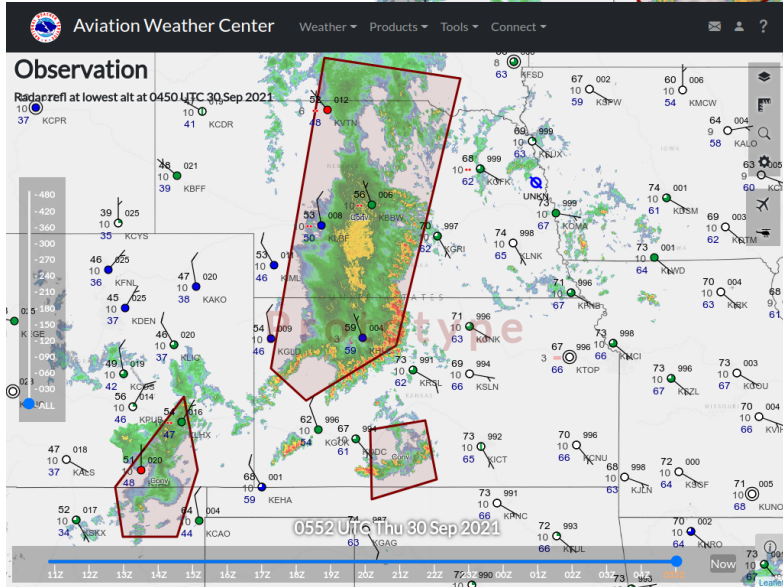
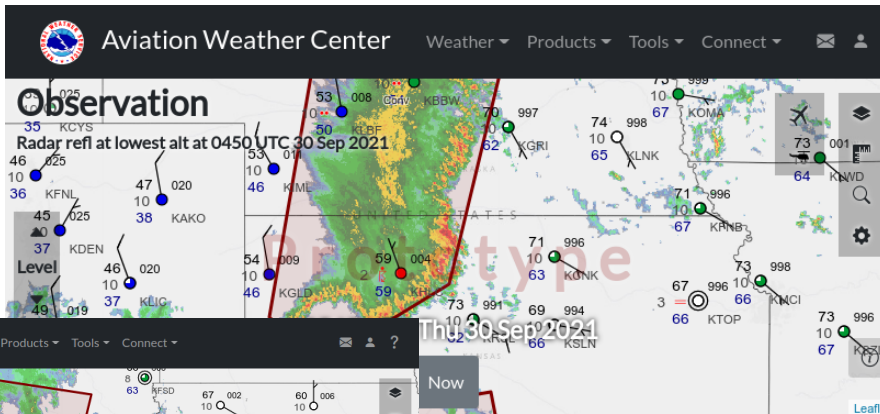
# Mobile Design



iPad Mini in the cockpit at Apple Sept. 2021 event

- Need to support evolving Internet usage
- Mobile accounts for ~50% of all web traffic
- Site used on-the-go: on the tarmac, in the cockpit, in remote locations

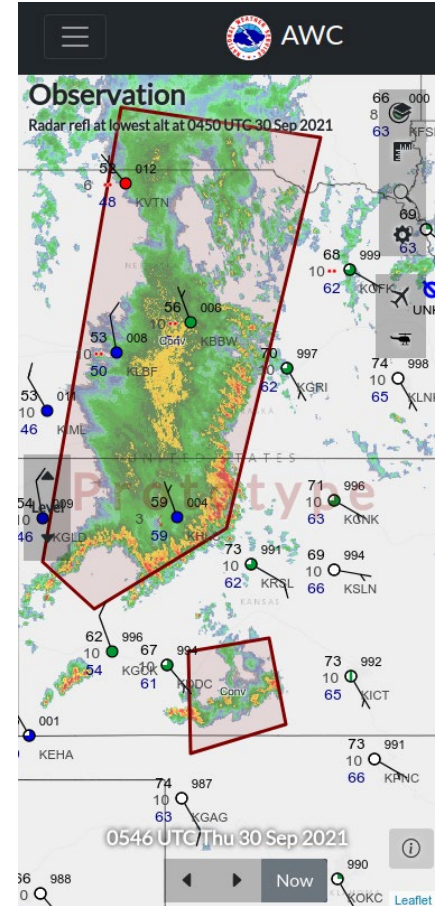
iPhone  
landscape



Thu 30 Sep 2021

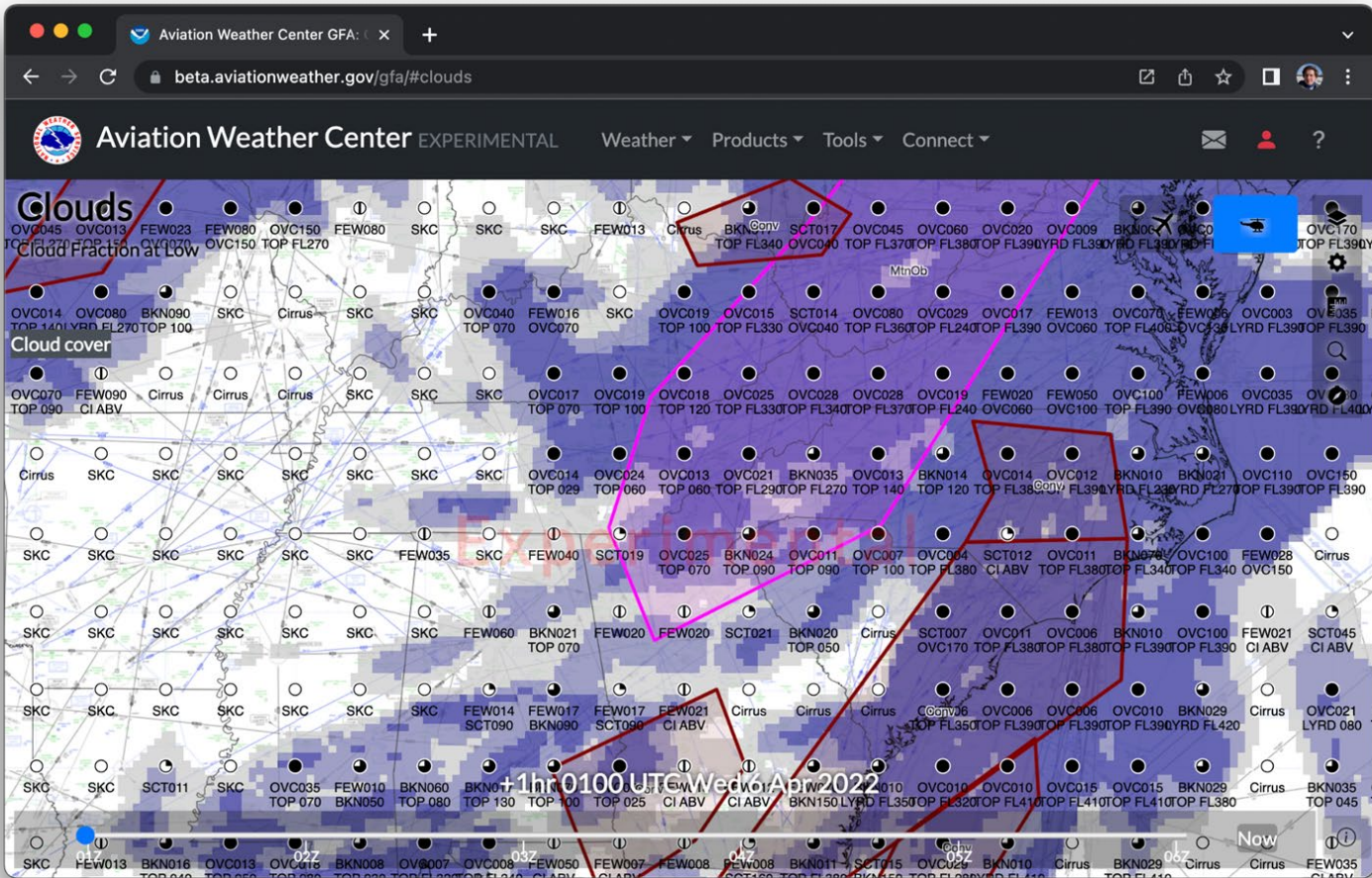
# GFA-LA on mobile platforms

iPad

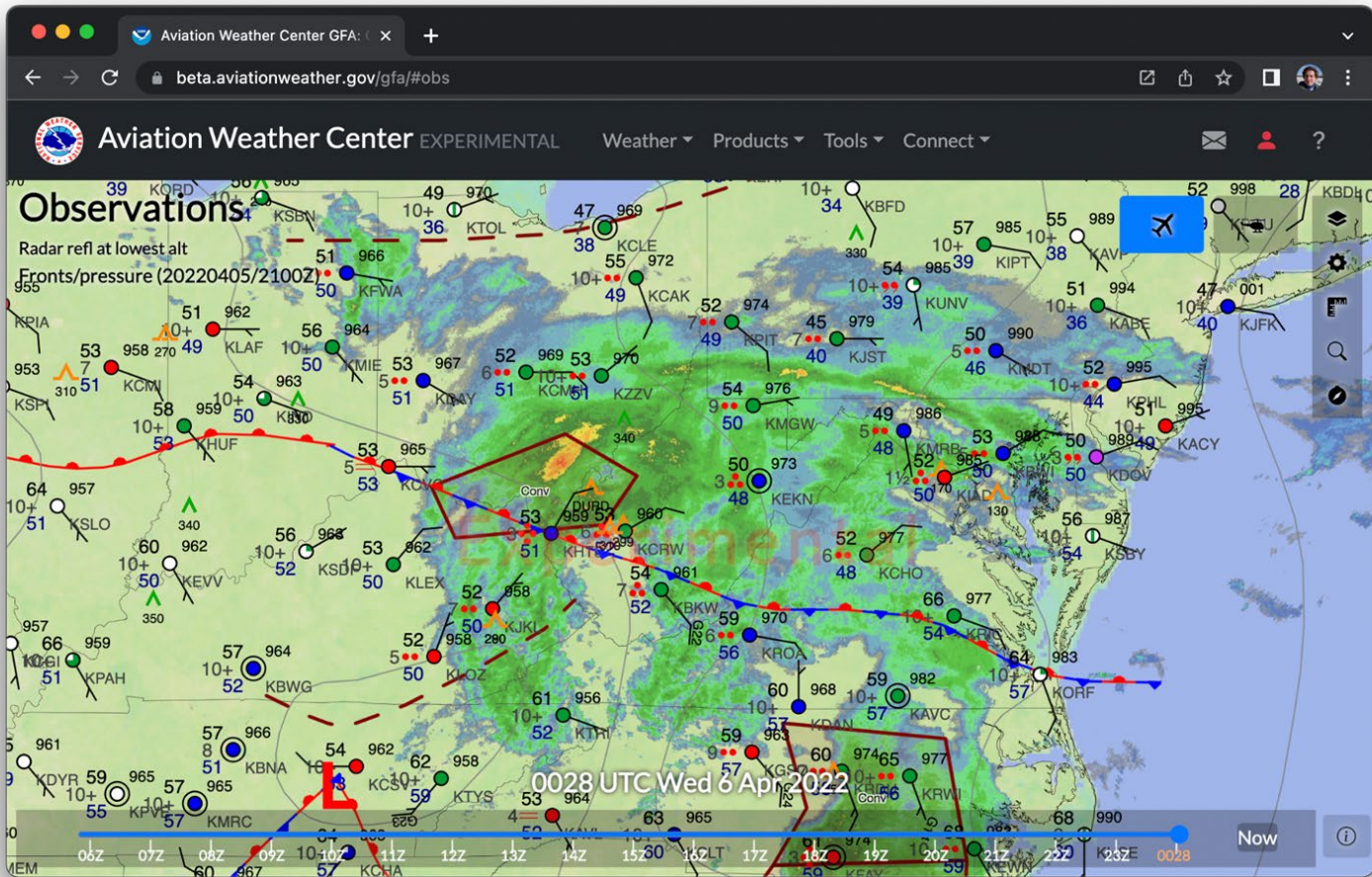


iPhone  
portrait





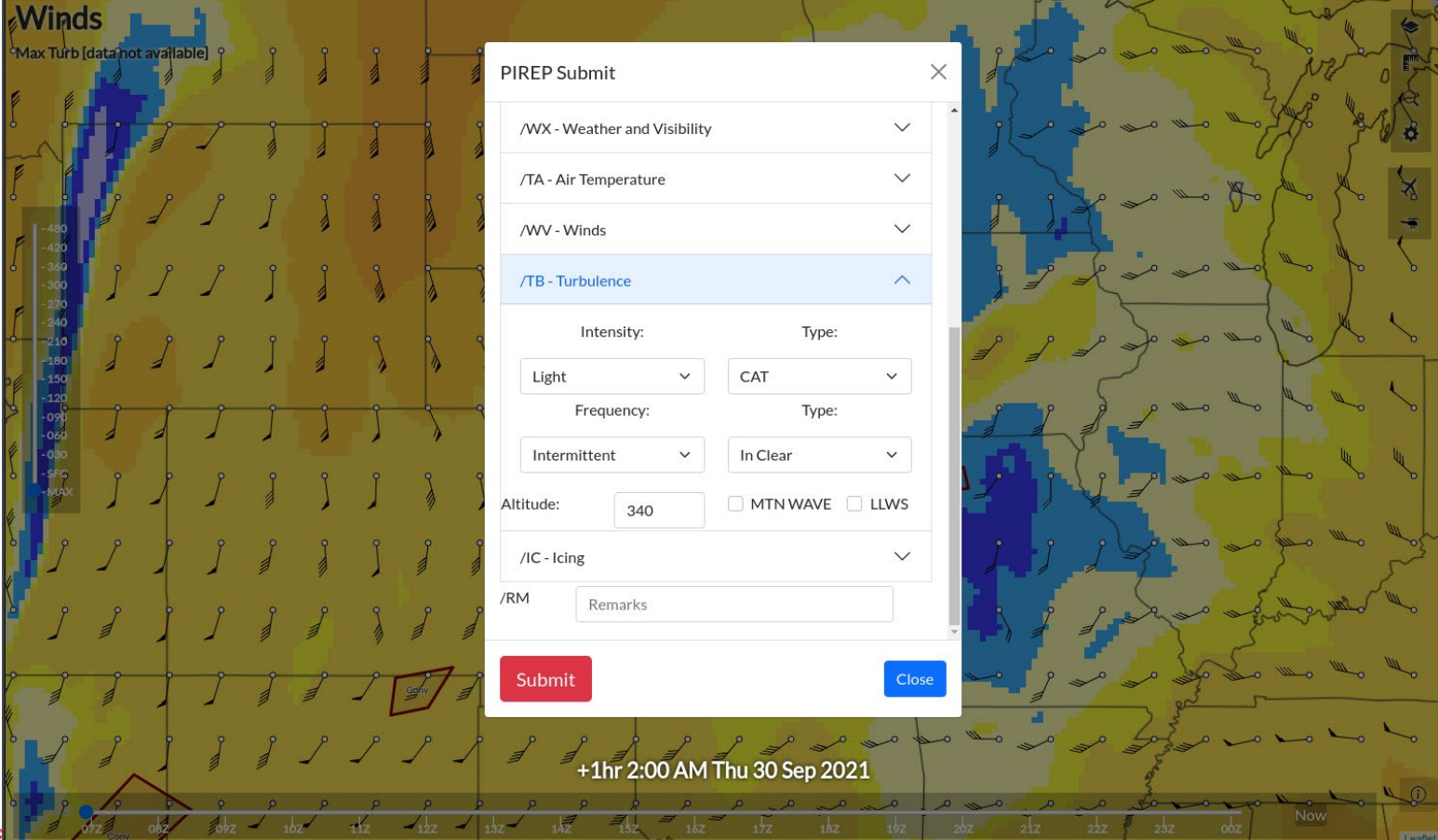






# Winds

Max Turb [data not available]



### PIREP Submit

/WX - Weather and Visibility

/TA - Air Temperature

/WV - Winds

**/TB - Turbulence**

Intensity:  Type:

Frequency:  Type:

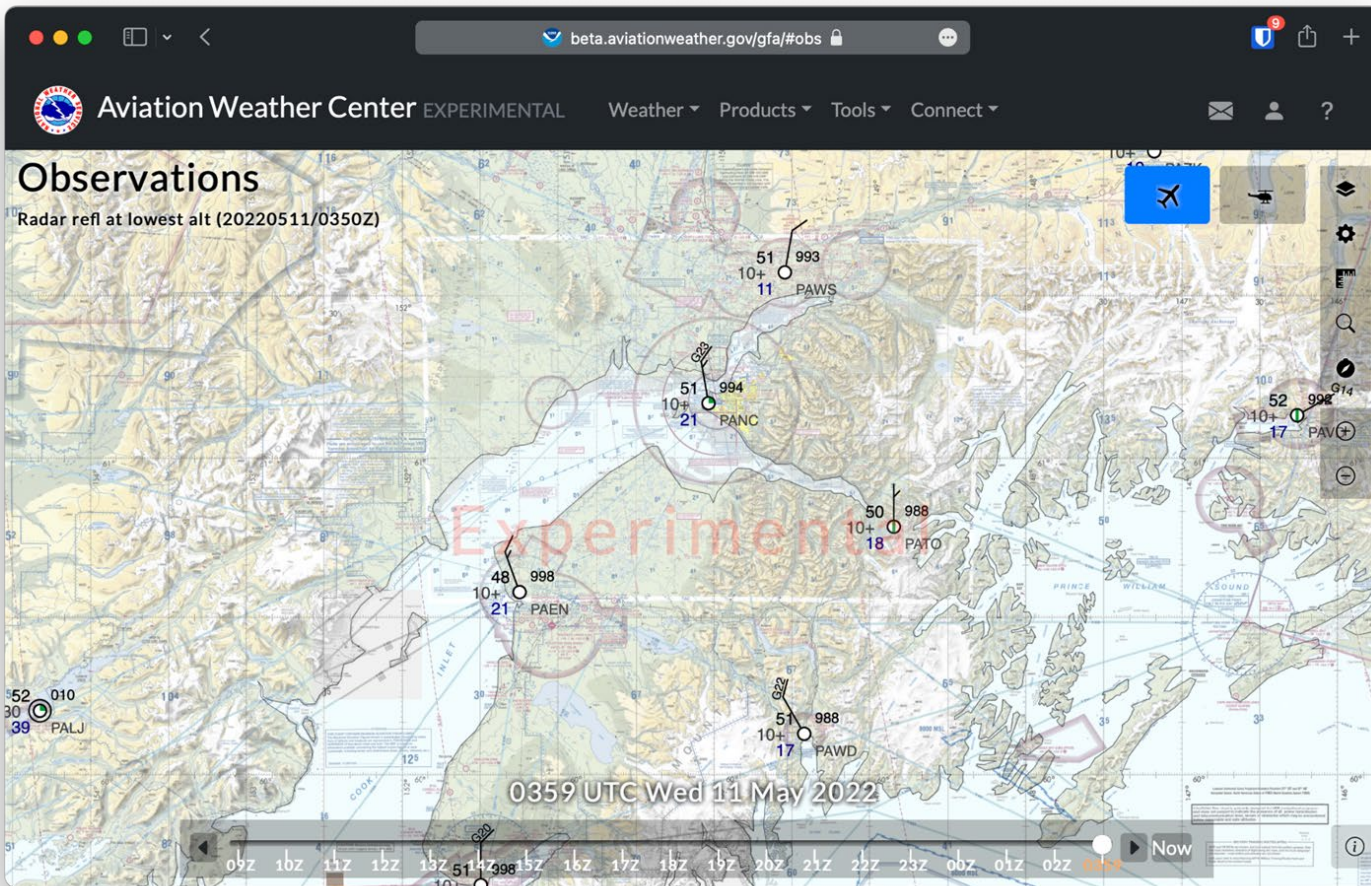
Altitude:   MTN WAVE  LLWS

/IC - Icing

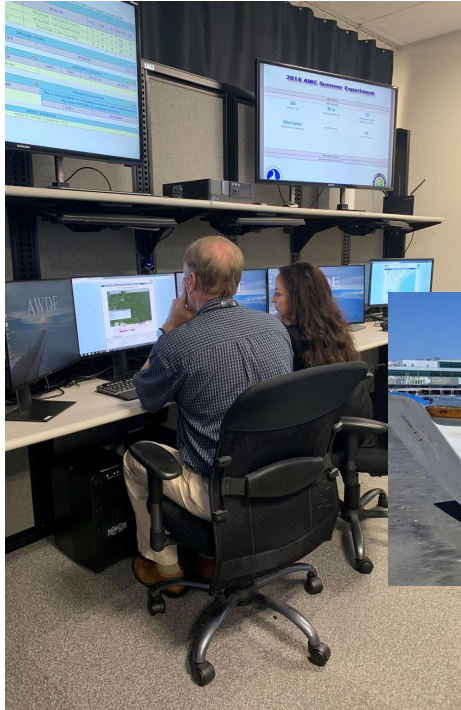
/RM

+1hr 2:00 AM Thu 30 Sep 2021





# Site Evaluation and FAA AWDE



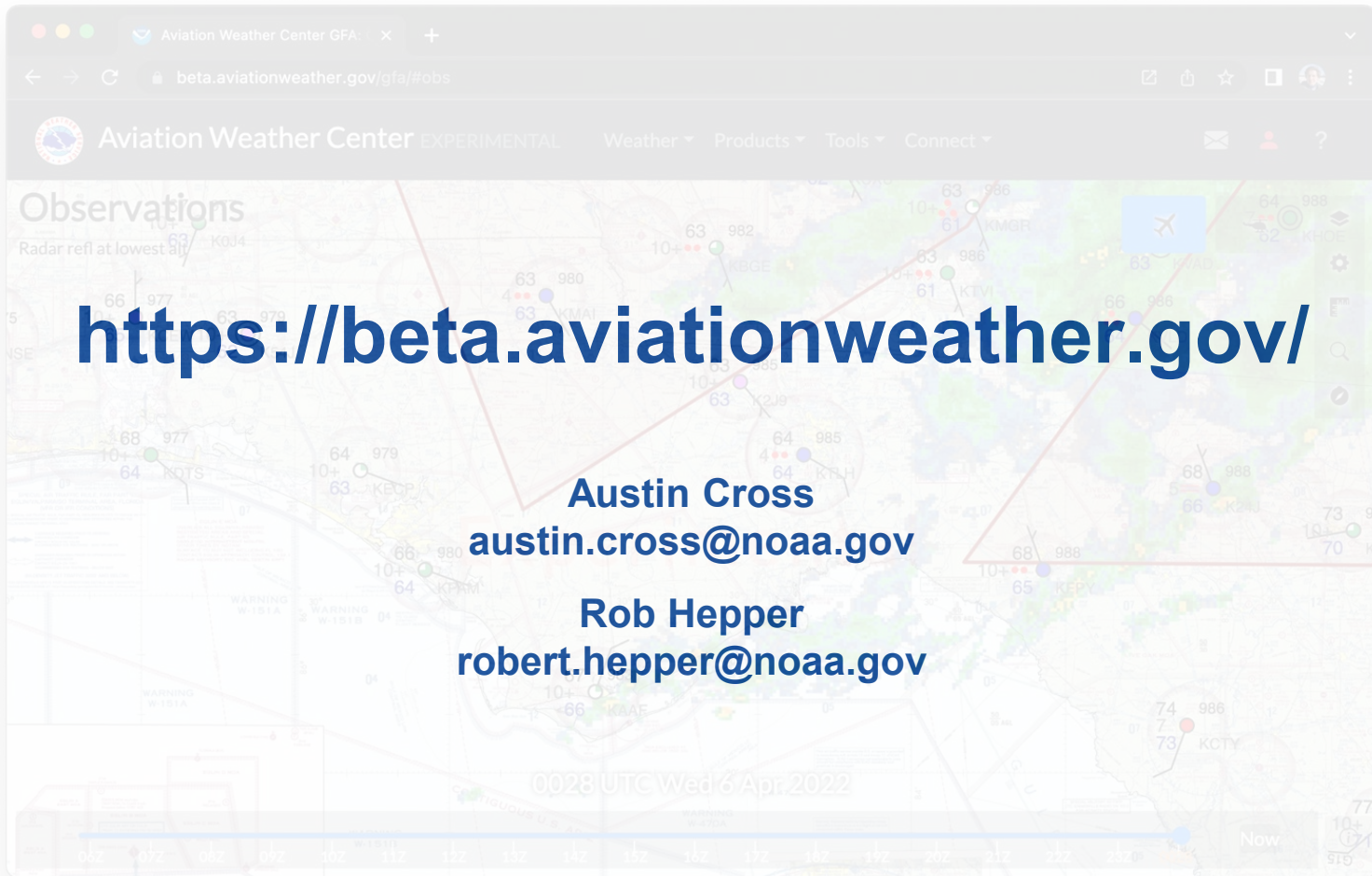
FAA AWDE at the FAA William J. Hughes  
Technical Center in New Jersey that specializes in  
Human Factors

Pilots, dispatchers, univ. professors



Official survey, email, working directly with partners





<https://beta.aviationweather.gov/>

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