

# Aviation Weather Center

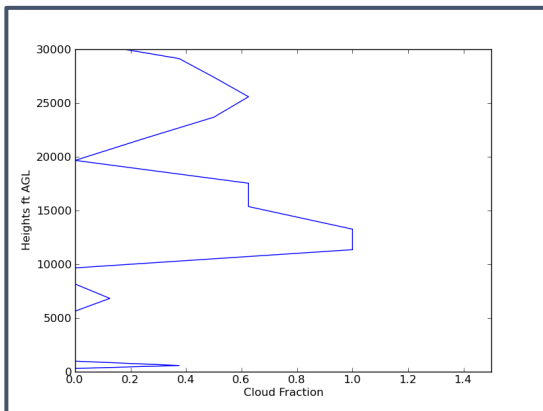
Joshua Scheck

NCEP Production Suite Review 2018

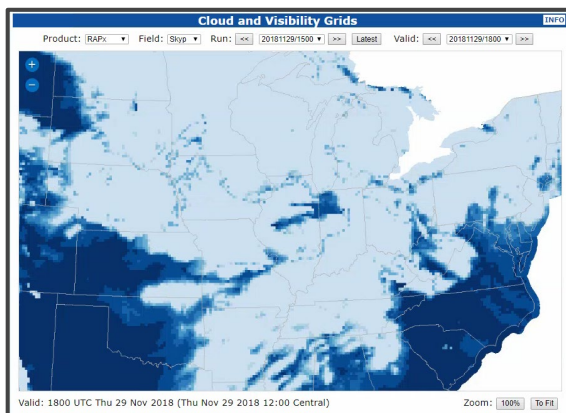
# Benefits of 3-D fractional cloud coverage on native vertical levels

- Allows for derivation of a more accurate, multi-layered representation of cloud cover
- Better supports aviation user need by providing layered information (ie. TAFs, GFA)

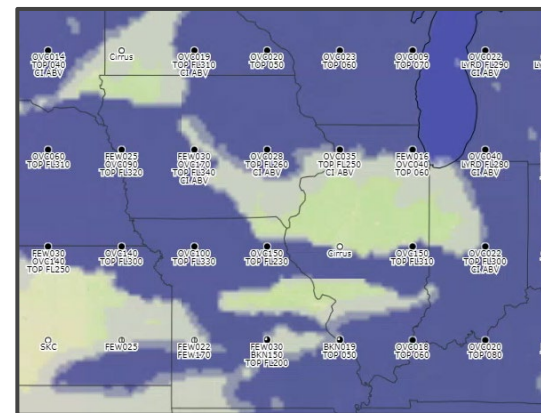
## 3-D Fraction



## First Guess Primary Cover



## Final GFA Clouds



- AWC creates automated cloud layer grids to support NWS Digital Aviation Services (DAS) and TAF creation
- Resultant grids then feed into Graphical Forecasts for Aviation (GFA) cloud product
- Allows for consistent depiction of clouds from regional to national level

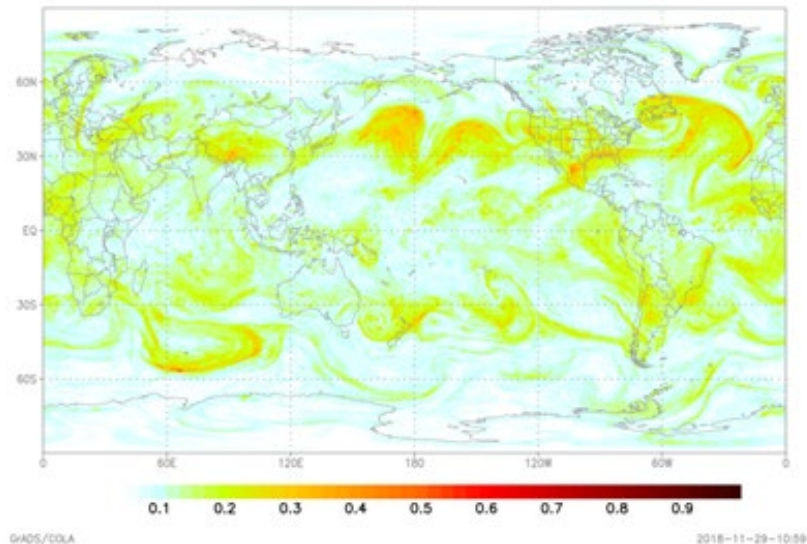
# Turbulence

## Global Turbulence Guidance

- Multi-diagnostic calculation of turbulence in Eddy Dissipation Rate units
- RAP and GFS (FV3); All from Unified Post (UPP) in 2019
- HRRR-based in UPP with FV3 upgrade (2024)

Graphical Turbulence Guidance on 300hPa

Forecast at 2018112900z.f06

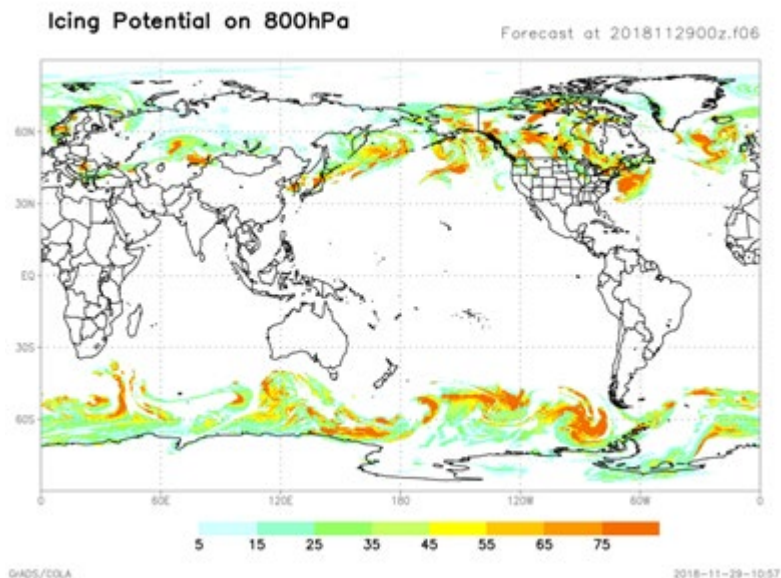


# Icing

## Current/Forecast Icing Product

- Weighted blend of fields to produce Icing Probability/Severity  
Transitioning RAP-based to WCOSS
- EMC maintains UPP version on GFS (FV3)
- Version 2.x in plans for HRRR FV3 in UPP (2024)
- Agnostic solution to apply to RAP/GFS (FV3)

**Needs consistent model microphysical output on native levels across FV3 suite**



# Questions

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