




# Top 3 Pilot Requests for Weather Forecasters

## Single-Pilot IFR Pro Tips

Real-World Pro Tips to make IFR Easier and Safer

By Gary "GPS" Reeves  
(The Guy in the Pink shirt)



**#MasteryNotMinimums**  
From the 2019 National CFI of the Year

Foreword by: Thomas P. Turner,  
2015 inductee CFI National Hall of Fame

Edited by: Mike Jesch, Master CFI & Airline Captain

A must-read for any IFR Student, pilot, or instructor looking for #MasteryNotMinimums level of skill and safety. *Single Pilot IFR Pro Tips* is a fun and easy-to-read book with the same training Reeves provides to Private 3-day Mastery clients for \$300 per hour.



**Gary "GPS" Reeves** shares over 8,000 hours of real-world experience. These are new ways of planning, flying, and training that no other instructor provides. Topics include:

- Declaring a Mayday before the emergency
- Telling ATC "No"
- Get off the airways, file almost GPS direct
- Three alternates that belong in every FPL
- Three approaches to almost never use
- PAC flying
- And a lot more!



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# Weather today vs weather 10 years ago

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**MORE**  
is not always  
**better**

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**Change your point of  
view to the end user**

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# Who is in the audience?

- Pilot
- Instrument Rated
- Proficient? (Flies at least 3 times per week in real world xc)



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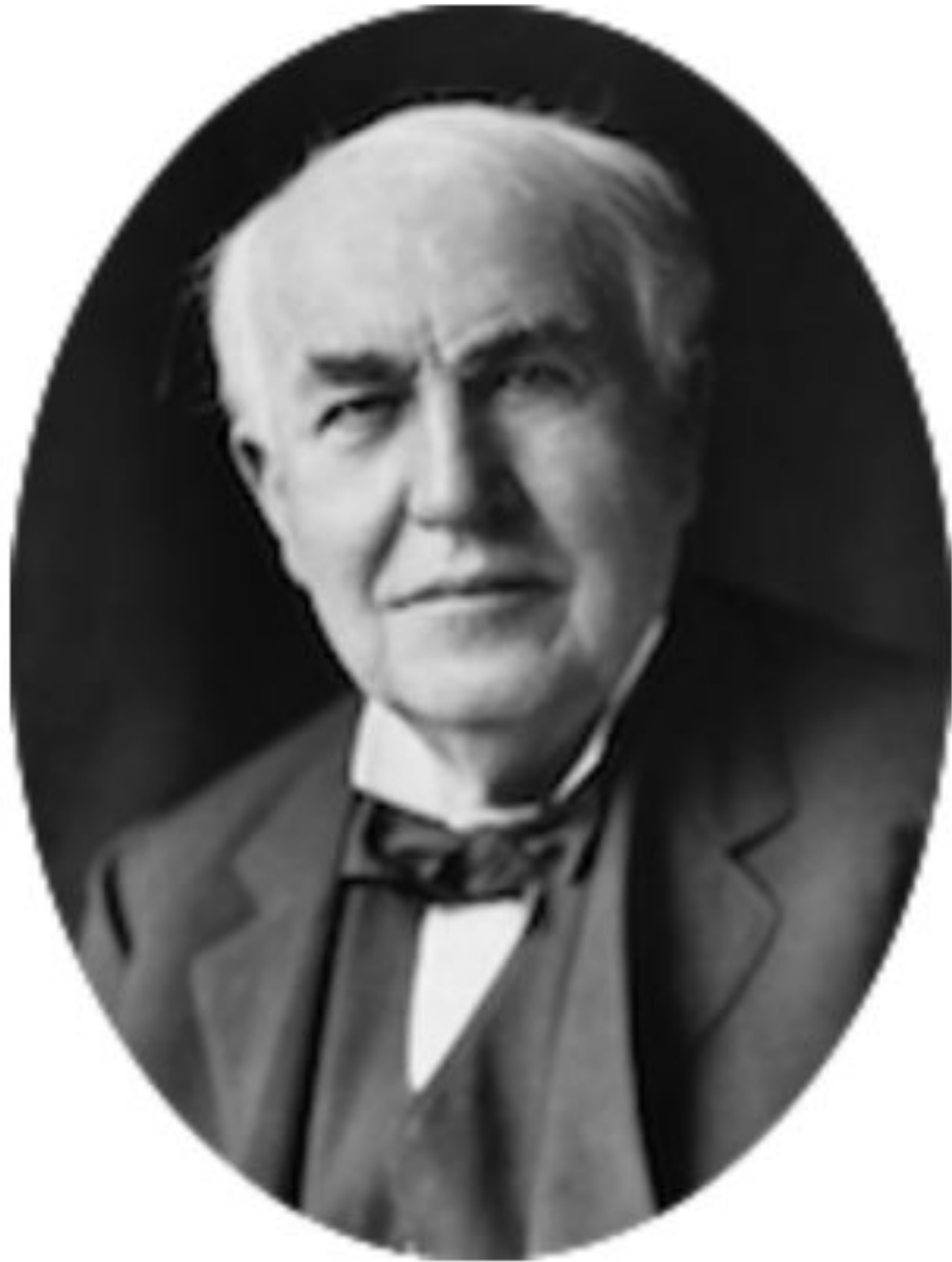
# ≥ 100 Pilot Requests

- Cloud Tops
- Confidence Factor
- Smoke Intensity
- VFR Cloud Layers
- Speak English
- Add Temps to TAF
- Wx forecast by a/c type
- Icing layers
- Add VFR not recommended
- VFR lowest clouds
- Integrate webcams
- Turbulence tops
- Change the term showers
- Reduce the geographical size of Airmets/Sigmets/CWA
- Change terms
- Smoke Intensity



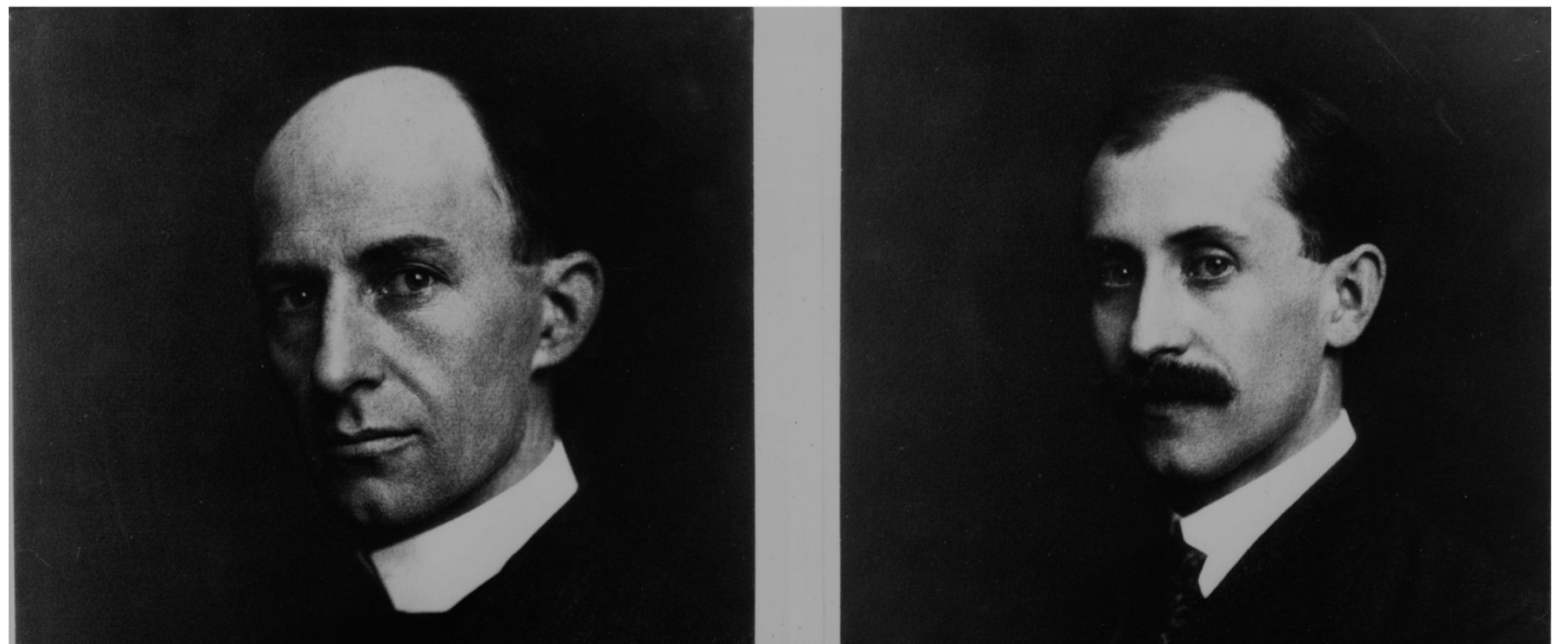
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# Impossible things



It is apparent to me that the possibilities of the aeroplane, which two or three years ago were thought to hold the solution to the [flying machine] problem, have been exhausted, and that we must turn elsewhere.

— *Thomas Edison, November 1895*



“Edison can go suck a  
lemon...”

–*Orville & Wilbur, 1903*

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**I** **T'S**  
**M** **P** **O** **S** **S** **I** **B** **L** **E**

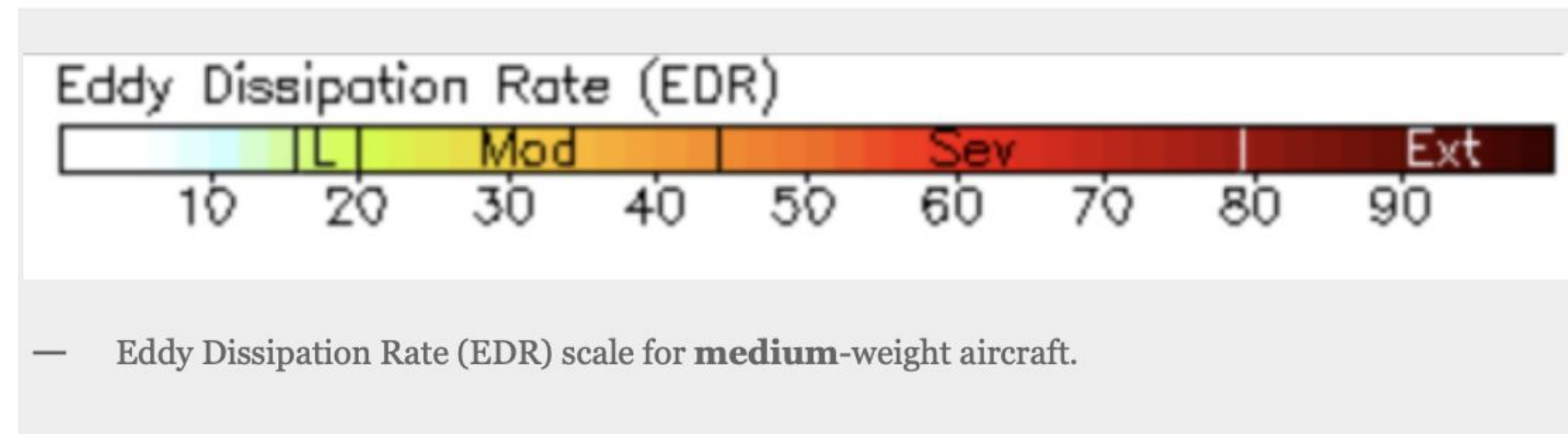
# Four Levels of Turbulence

Light = Bouncy

Moderate = Displacement

Severe = Momentary LOC

Extreme = Total LOC + Damage

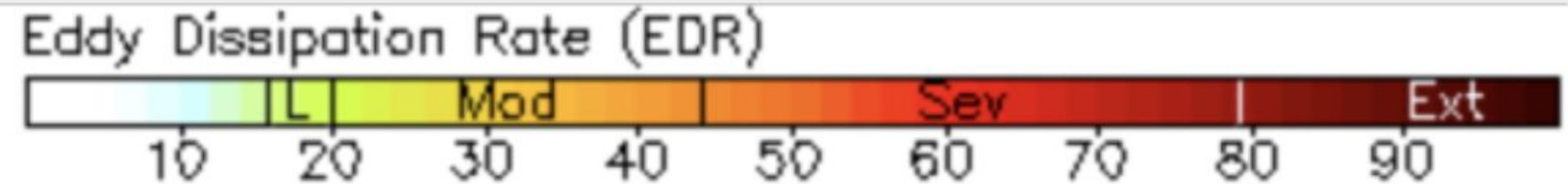


# 3 Types of Aircraft

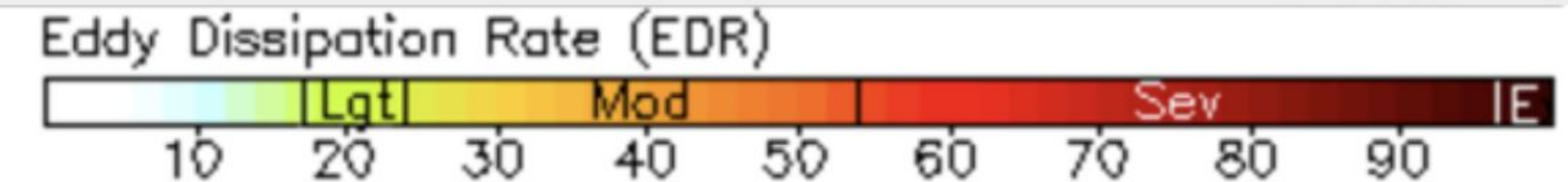
Light  
Medium  
Heavy



— Eddy Dissipation Rate (EDR) scale for **light**-weight aircraft.




— Eddy Dissipation Rate (EDR) scale for **medium**-weight aircraft.



— Eddy Dissipation Rate (EDR) scale for **heavy**-weight aircraft.

# 4 Types of Aircraft



Category	Example	Weight
Light		<15,750
Medium		<300,000
Heavy		>300,000



# Four Levels of Icing

Anti-Icing Equipment	
Trace	Pitot Heat
Light	On Low
Moderate	On High
Severe	Not enough Emergency Diversion



# FIKI vs non FIKI

- Flight Into Known Icing
- Known = PIREPS
- Different Capabilities



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# Possible Solutions

- Change Categories - Light <5K, Medium<50K, Heavy<200K, Super?
- Add text - Not recommended for Light GA?
- ?????

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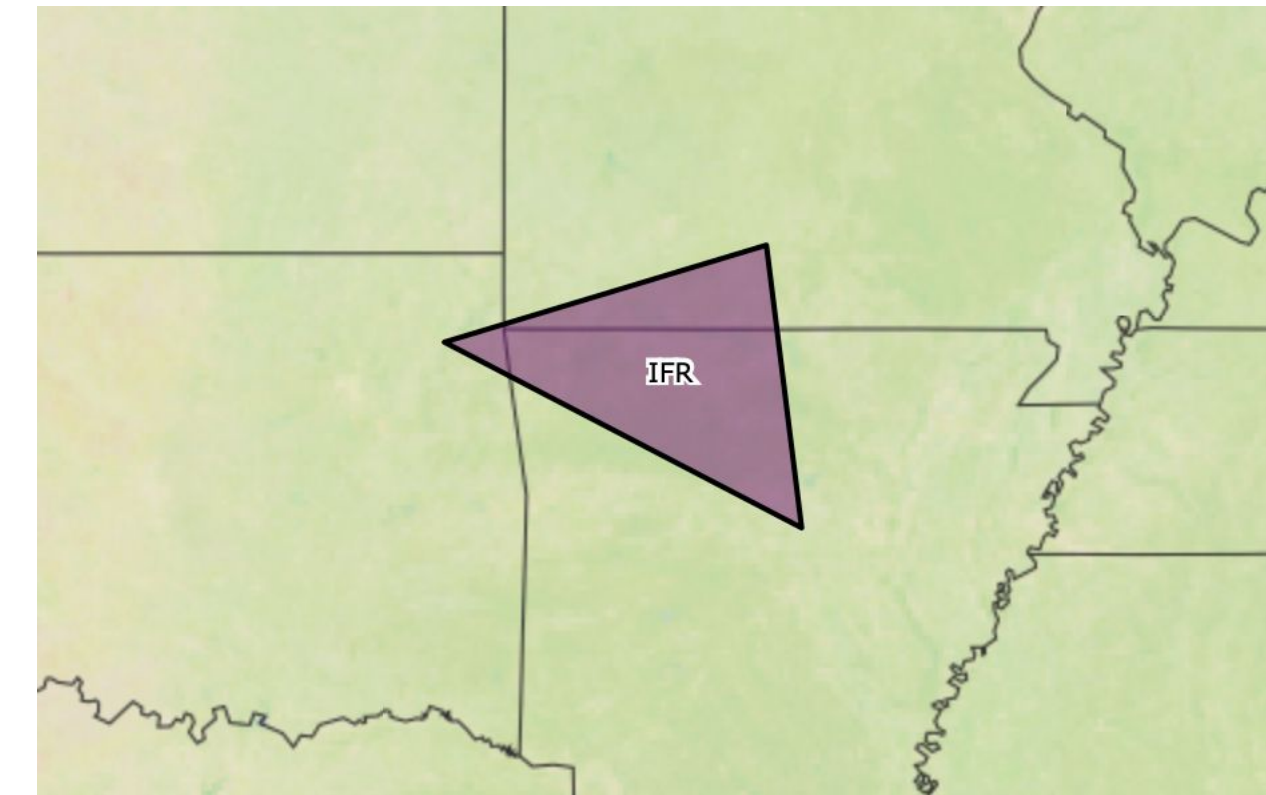
That's great  
but I have  
questions...



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# Can I get some more?



- When will conditions improve?
- What are the cloud tops?
- What is occasional?
- Are the conditions already expired?

**CWSU:** ZME [Memphis]

**Hazard:** IFR - OCNL

**Begins:** 2021-11-04T12:20:00Z

**Ends:** 2021-11-04T14:20:00Z

FAUS21 KZME 041222

ZME1 CWA 041220

ZME CWA 101 VALID UNTIL 041420

FROM 45ESE SGF-30N LIT-35ENE TUL-45ESE SGF

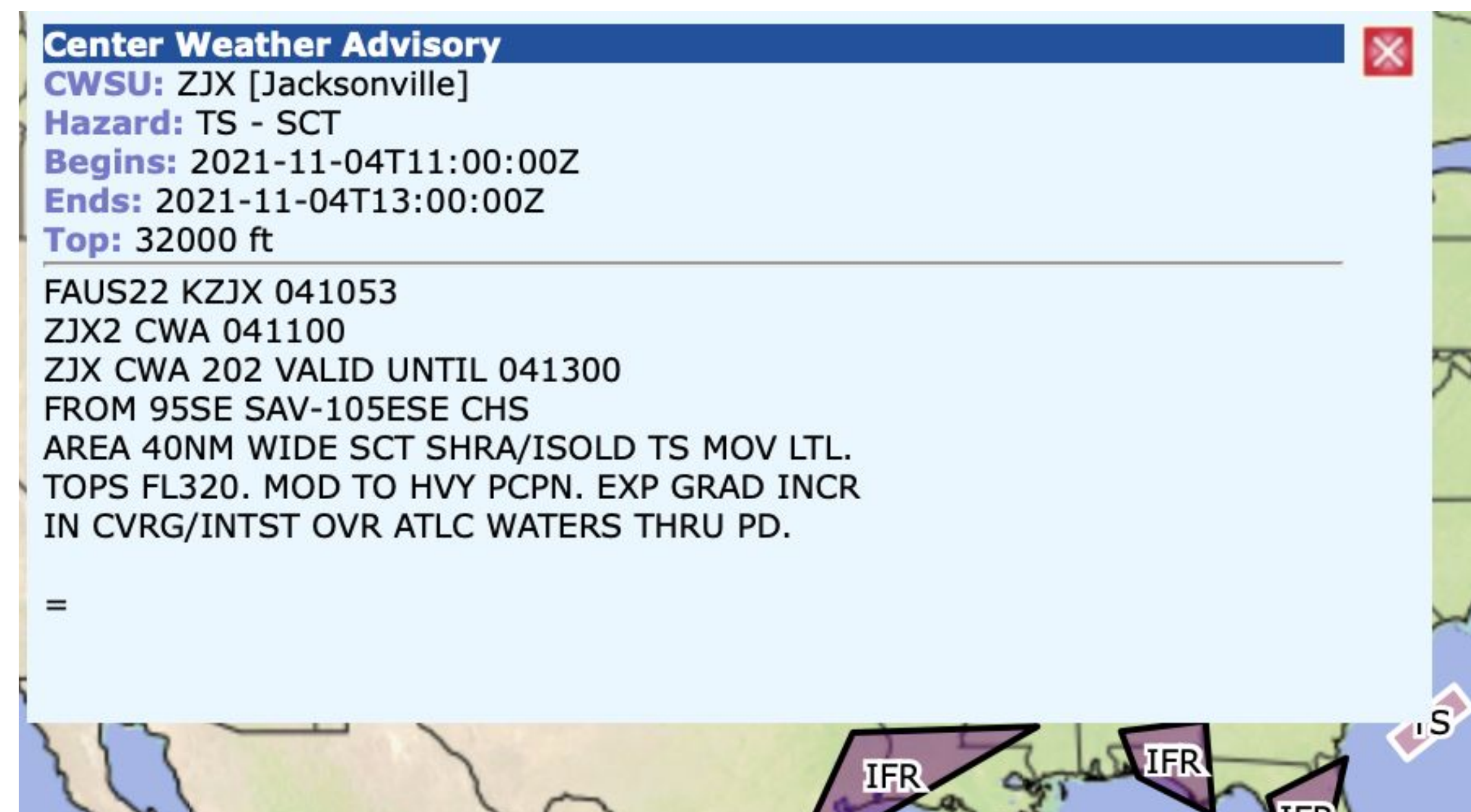
AREA OCNL LIFR CONDS IN BR/FG. CIG AOB 002. VIS

1-3SM OCNL BLO 1SM.

CONDS EXPD IMPRV. AR MO OK

# Can I get some more?

- Scattered?
- Isolated?
- What is gradual increase?
- Does ATC check for Heavy?



**Center Weather Advisory**  
**CWSU:** ZJX [Jacksonville]  
**Hazard:** TS - SCT  
**Begins:** 2021-11-04T11:00:00Z  
**Ends:** 2021-11-04T13:00:00Z  
**Top:** 32000 ft

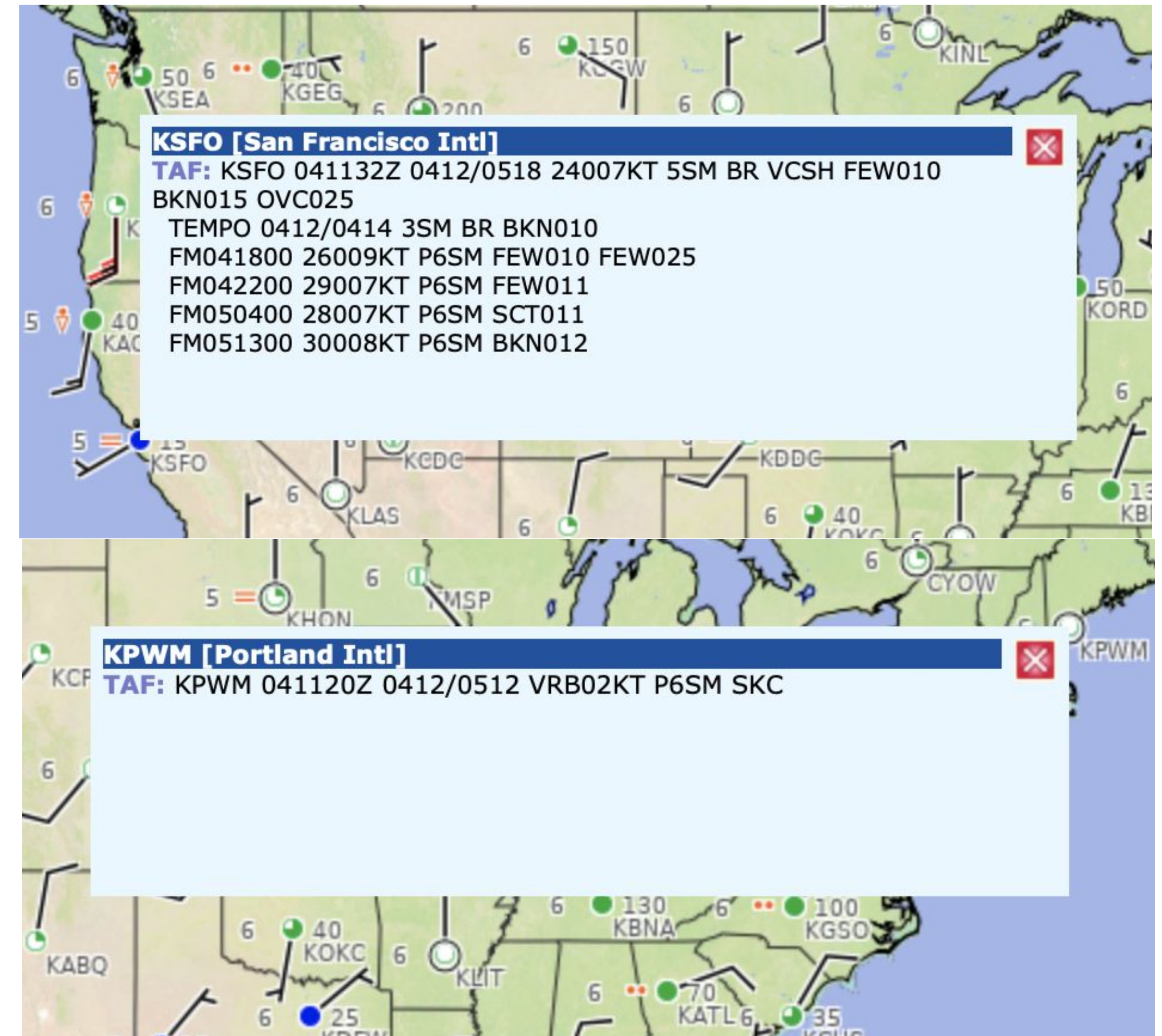
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FAUS22 KZJX 041053  
ZJX2 CWA 041100  
ZJX CWA 202 VALID UNTIL 041300  
FROM 95SE SAV-105ESE CHS  
AREA 40NM WIDE SCT SHRA/ISOLD TS MOV LTL.  
TOPS FL320. MOD TO HVY PCPN. EXP GRAD INCR  
IN CVRG/INTST OVR ATLC WATERS THRU PD.

=

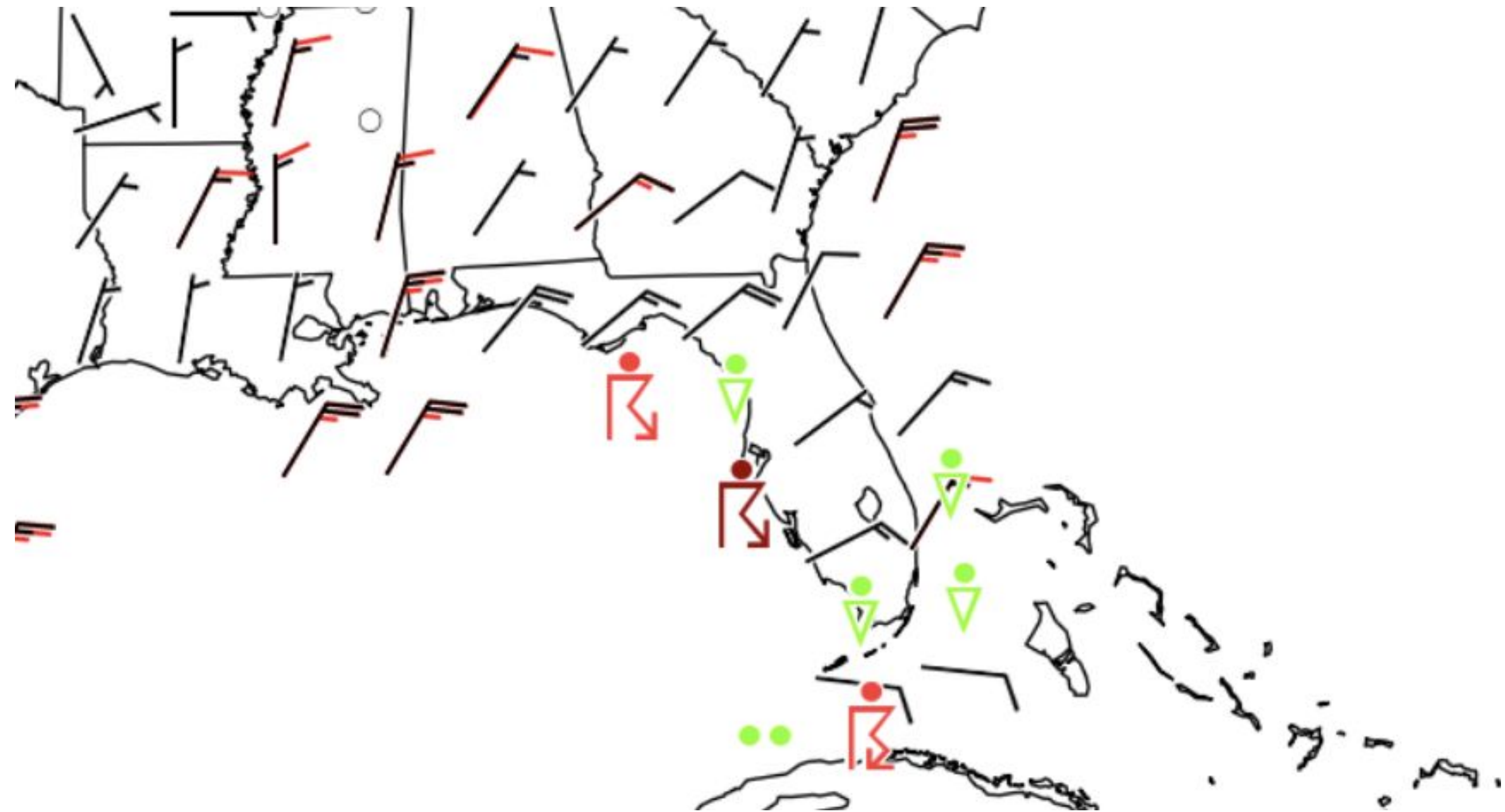
# Can I get some more?

- Temps?
- Time Issued by traffic flow?
- Cloud Tops?
- Confidence?



# Can I get some more?

- Showers means no TS??
- Size of each area?
- Where is my airport?
- Confidence?

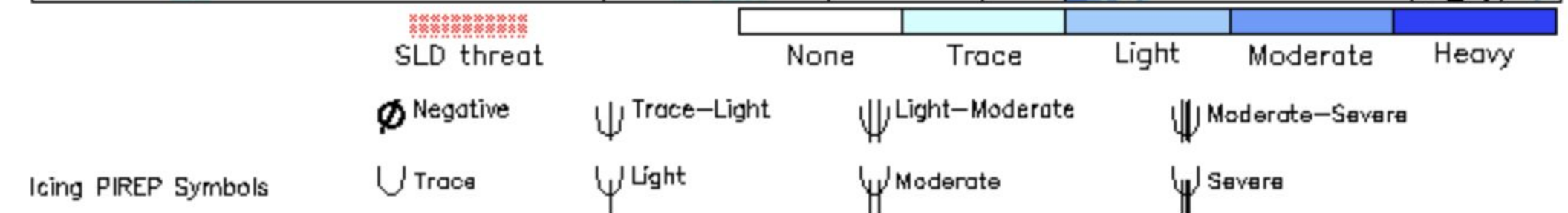
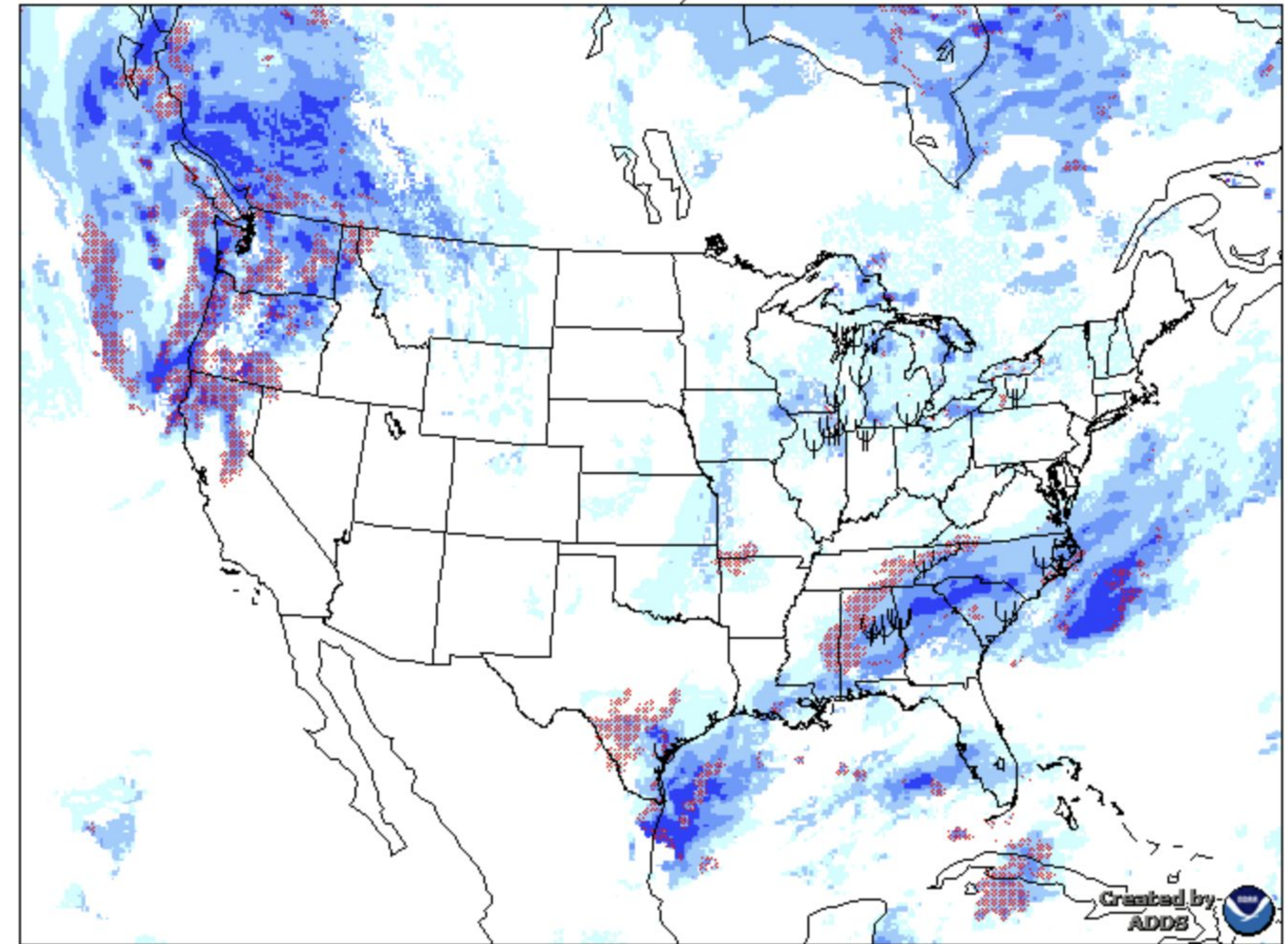


# Can I get some more?

- What is heavy icing??
- Chances of icing in each area?
- Where is my airport?
- Confidence?

Maximum icing severity (1000 ft. MSL to FL300)

Analysis valid 1300 UTC Thu 04 Nov 2021



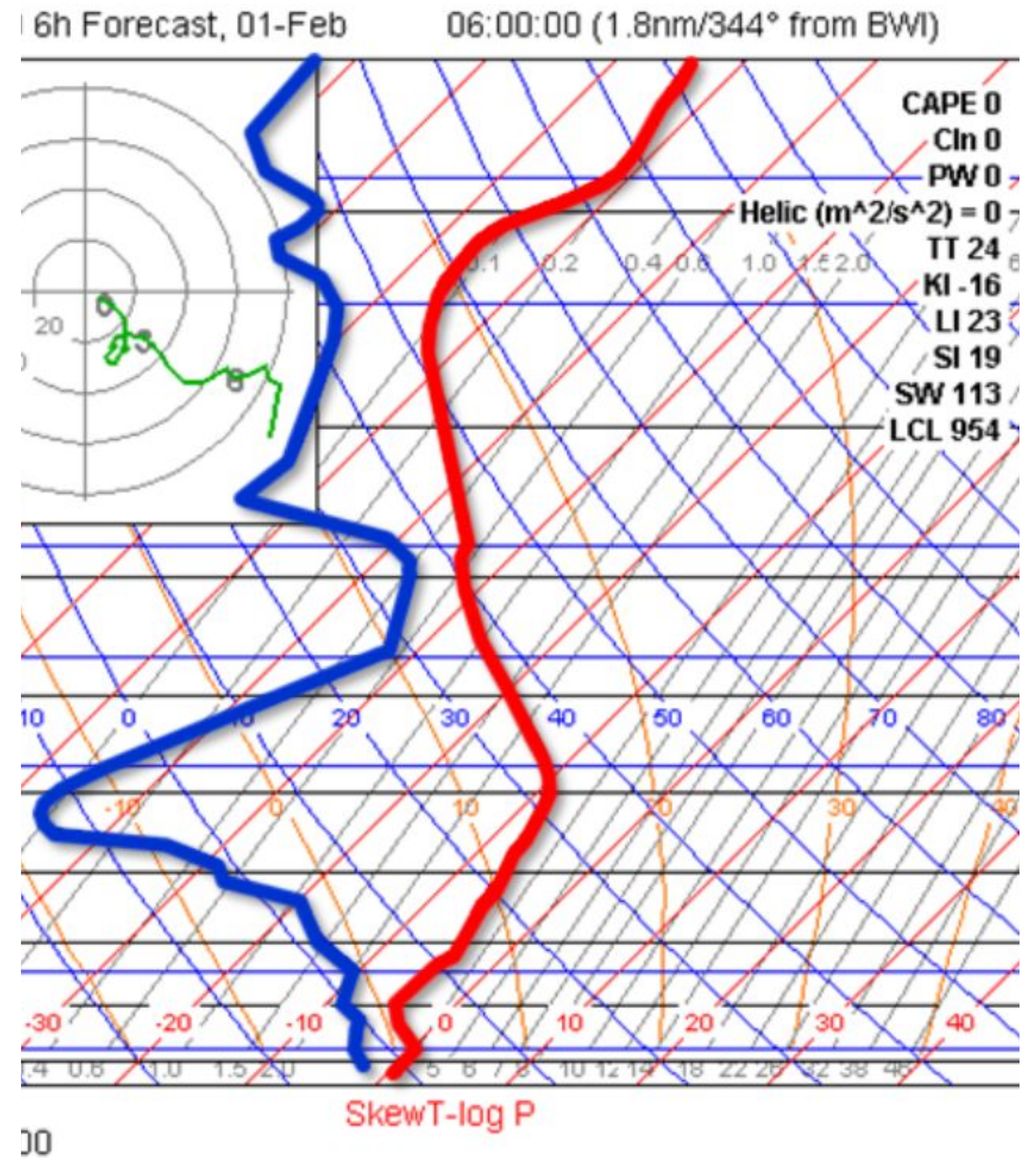


# Possible Solutions

- Add Cloud Tops?
- Add temps?
- Change TAF to every 3 hours?
- Show Class C & gridlines?
- Add confidence?
- ????

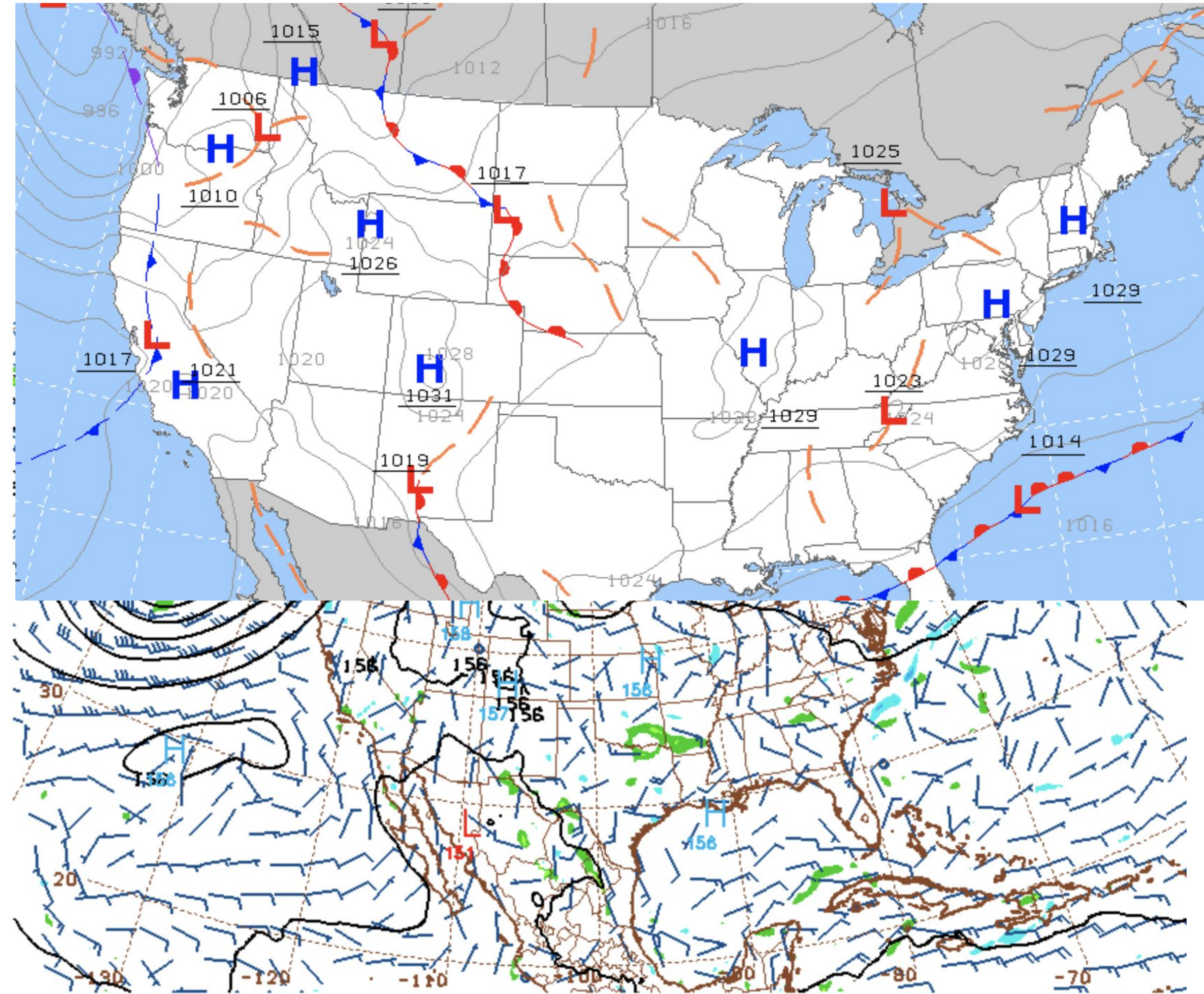
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Can I get that  
in my  
language?



# What's a mb?

- Is low really low?
- How fast does a 40W light bulb work?
- How high is a millibar?



NAM WED 211103/1200V000 850MB HGHT, REL VORTICITY, WIND (KTS)





# Possible Solutions

- All units standard. Pressure in inches of mercury, height in feet?
- Standard for low vs high?
- Add movement speed & direction to fronts?
- Skew-T plain language report by area?
- ????

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# Top 3 Pilot Requests

1. Add Light GA<5000# Weather Products
2. Add confidence and cloud tops
3. Convert to GA Friendly terms

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# 50 Reasons Not To Change



A collection of 50 speech bubbles, each containing a common excuse for not changing. The excuses are:

- I'm not sure my boss would like it.
- It's too ambitious.
- We don't have the equipment.
- It's impossible!
- It's too expensive.
- We'll catch flak for that.
- No one asked me.
- I don't have the authority.
- We didn't budget for it.
- That's someone else's responsibility.
- No es mi problema.
- We can't take the chance.
- It won't fly.
- It will take too long.
- It's hopeless.
- We've always done it this way.
- It's too complicated.
- What's in it for me?
- They won't fund it.
- It's too radical.
- It's too political.
- We don't have consensus yet.
- It's contrary to policy.
- We have too many layers.
- We're doing OK as it is.
- It can't be done.
- It's not my job.
- There's too much red tape.
- We don't have the staff.
- We tried that before.
- It's against tradition.
- It needs more thought.
- Another department tried that.
- It's not our problem.



**What can you do to make  
weather forecasting and  
dissemination easier for  
General Aviation that would  
save lives?**

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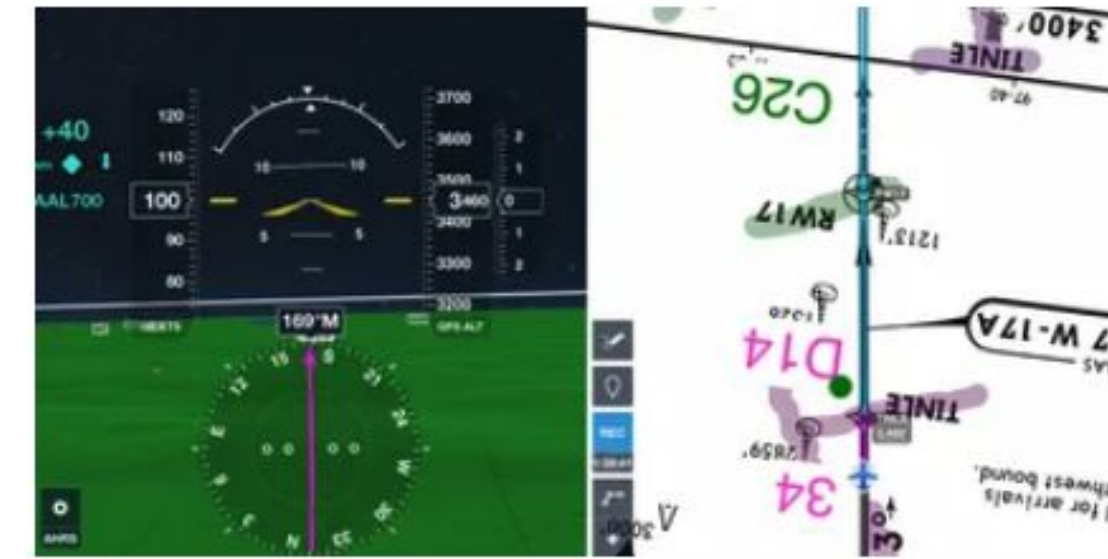
## Mastering Single Pilot IFR



The only reason most good pilots, like you, aren't great at IFR is because you don't get paid to fly IFR everyday. If you want to take your IFR skills to a mastery level. These videos will help you make your IFR flying easier and safer.

[MASTERING SINGLE PILOT IFR](#)

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## About Us



Gary "GPS" (Guy in the Pink Shirt) Reeves:

- 2019 FAA Nat'l CFI of the year
- 8,000+hr Master CFI/CFII/MEI
- Lead rep for the FAA Safety Team
- Avidyne/Genesys Nat'l Partner

[FIND OUT MORE](#)



**The #MasteryNotMinimums safety mindset**

- Adrenaline paralysis & decision fatigue
- Say mayday before the emergency
- Telling ATC no
- I'm a "loser"

**Training for #MasteryNotMinimums**

- The un-safety pilot
- Surviving the simulator
- Trial & error: The worst way to learn
- Use+review+new=mastery

**#MasteryNotMinimumsFlight Planning**

- Get off the airways!
- Filing (almost) GPS direct
- Choosing all 3 alternates
- Marking up charts

**In-Flight #MasteryNotMinimums**

- Autopilots are the answer
- 3 Approaches to (almost) never do
- Slow down and PAC
- 15 More #MasteryNotMinimums Tips

**Appendix / Supplements**

- NTSB accident FTW95FA101
- Additional resources
- Blank PAC sheets
- Mastery Training Information

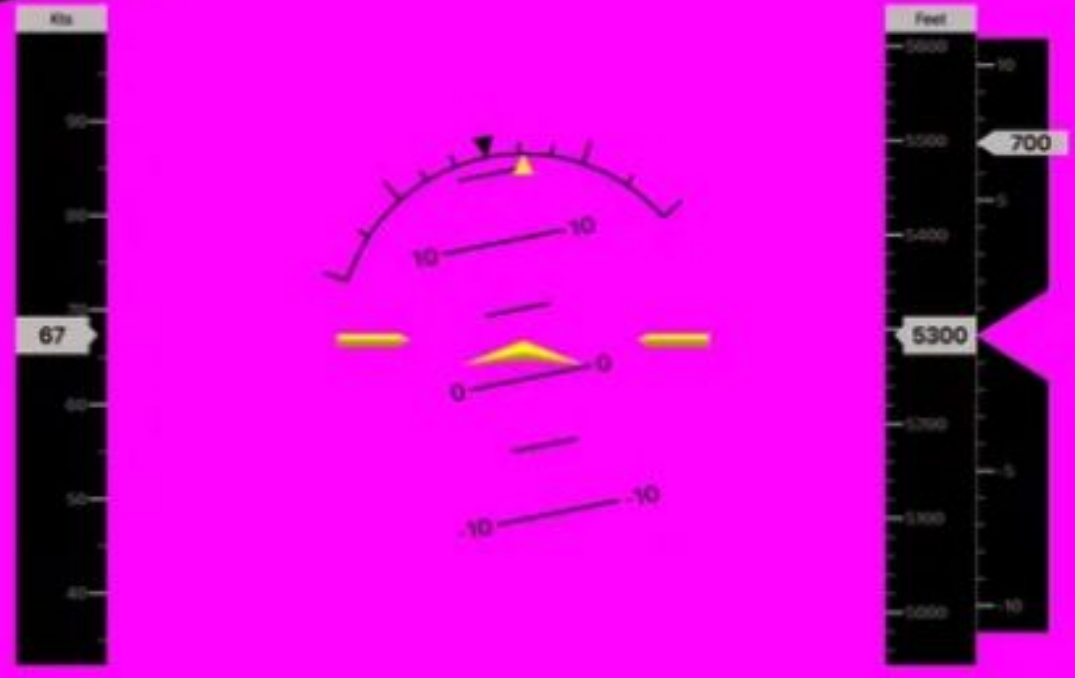
***DON'T FORGET TO ORDER EXTRA COPIES AS GIFTS!***

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