

The National FAA Safety Team Presents:

Topic of the Month
August

Use of Weather
Information

Presented to: WAFC and Friends

By: Stephen Bateman, CFI

Date: August 9th, 2021

Produced by: ***AFS 850***
National FAA Safety Team



Federal Aviation
Administration

Welcome

- **Steve Bateman, CFI, AOPA Director of Flying Clubs**
 - Treasurer, maintenance and safety officer – Westminster Aerobats Flying Club
 - FAASTeam lead representative, Baltimore FSDO
- **Sponsor Acknowledgment – WAFC, AOPA, FAASTeam, Baltimore FSDO**
- **Please - MUTE your microphone.**
- **WINGS Credit: Yes...but give me a day or two...**
- **In-and-out...no time for questions, but send email:**
 - **steve.bateman@aopa.org**



Important!

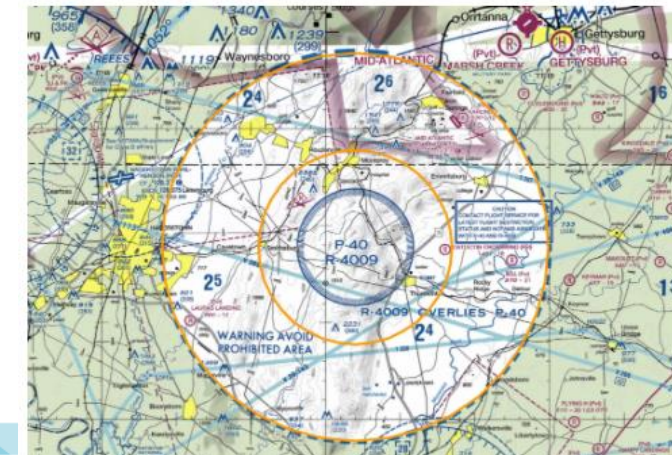
- **Wilmington Delaware TFRs**
- **Extended P-40 TFRs**
- **Will be popping up like daisies...**
- **Check NOTAMs**
- **Subscribe to NOTAM notifications**
- **Call flight service when in flight**



VIP TFR OVER WILIMINGTON, DE BEGINNING TODAY SATURDAY, MARCH 6, 2021



VIP TFR OVER HAGERSTOWN/THURMONT, MD BEGINNING FRIDAY, APRIL 2, 2021
(((CHANGE IN DEPARTURE TIME)))



Overview

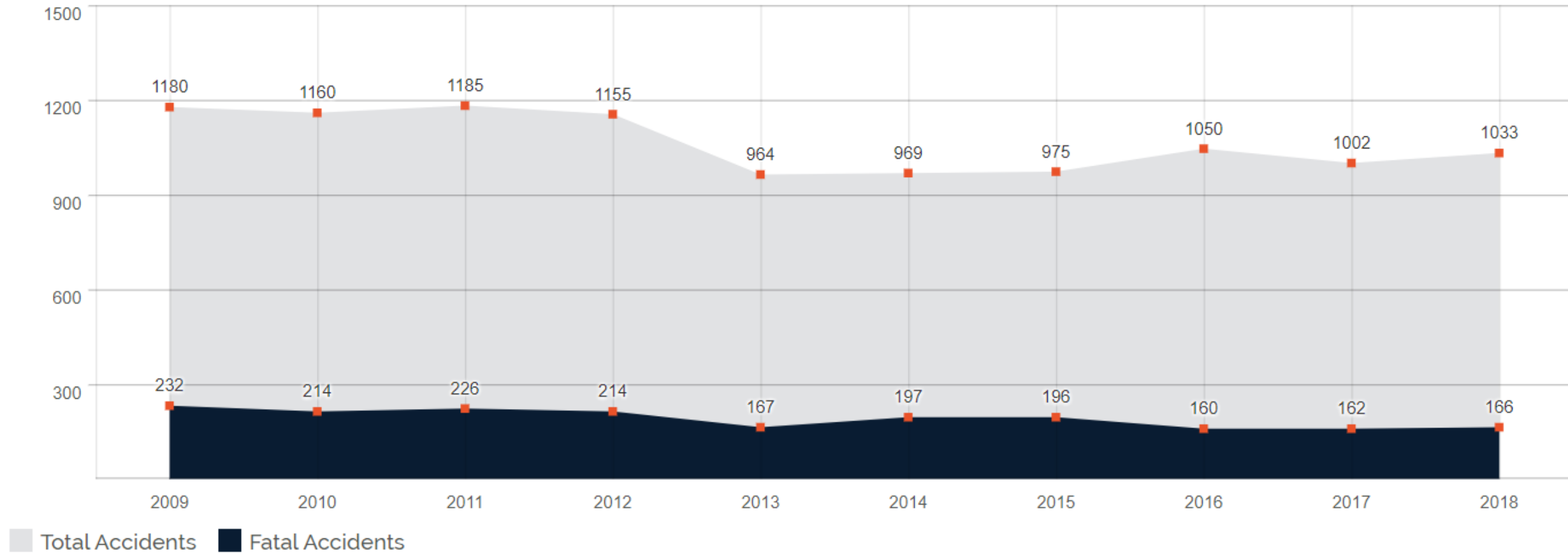
- **Weather tools:**
 - Pre-Flight
 - In-Flight



Bet it all on red...Or...Let's play a game of chicken...

Figure 1.2: General Aviation Accident Trends 2009-2018

2018 Non-commercial fixed-wing

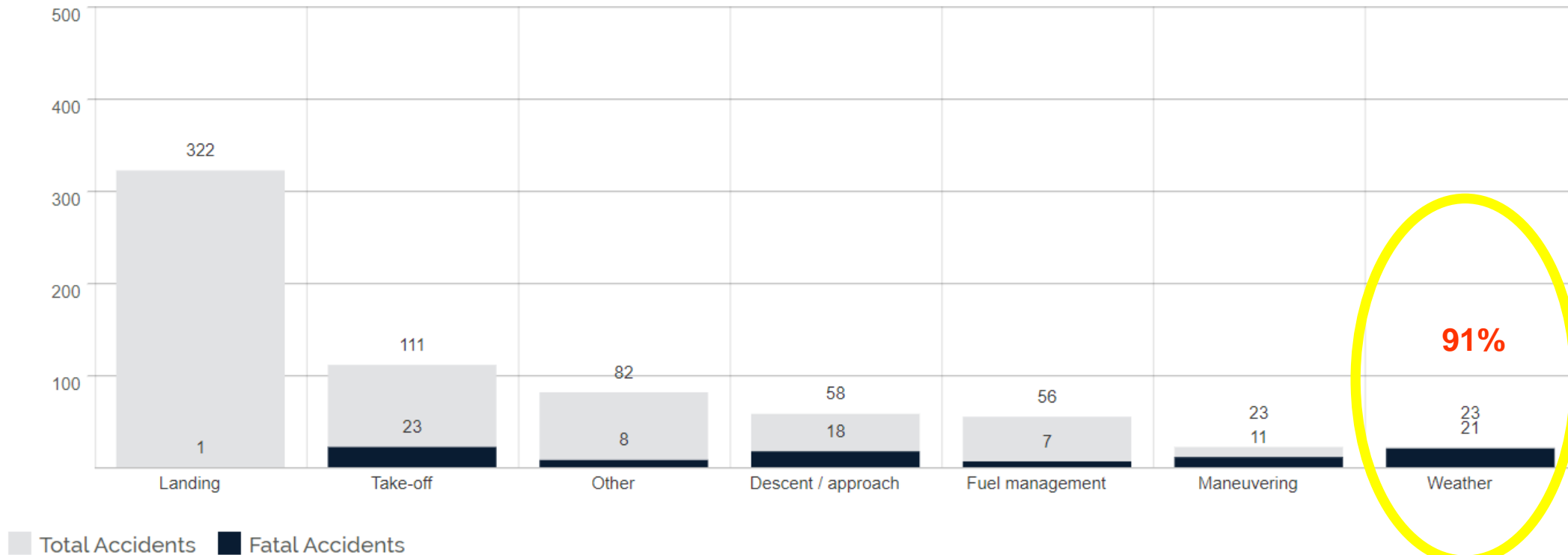


Types of Accident

Choose your accidents wisely

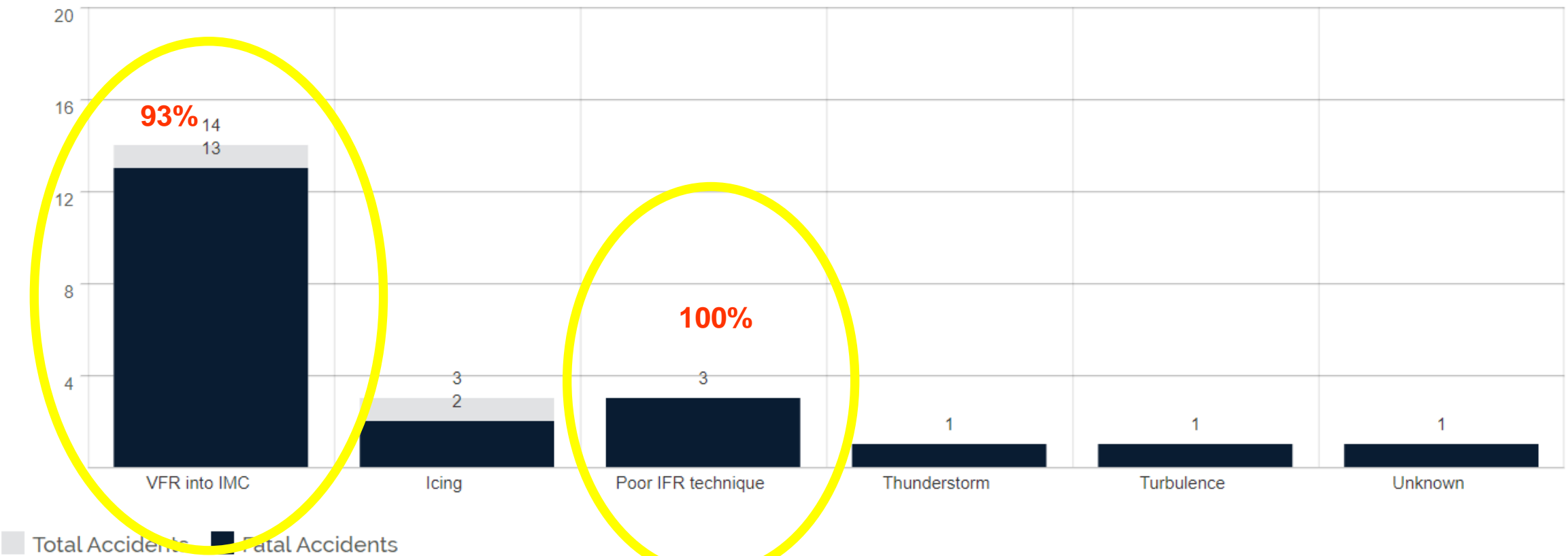
Figure 1.11: Types of pilot-related accidents

2018 Non-commercial fixed-wing



Weather Related Accidents

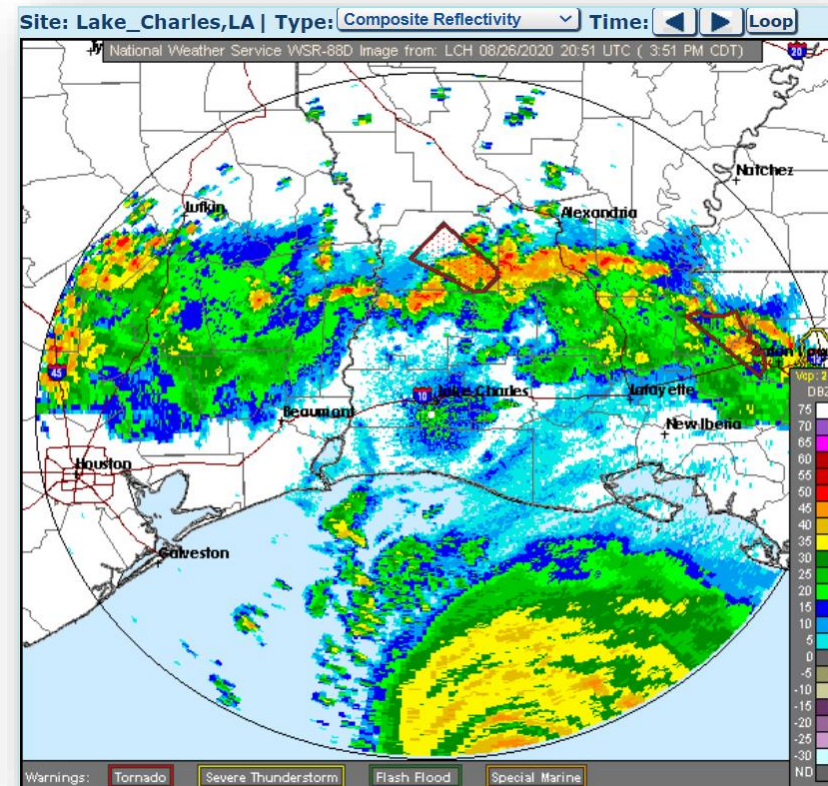
Figure 1.7.2: Types of weather accidents
2018 Non-commercial fixed-wing



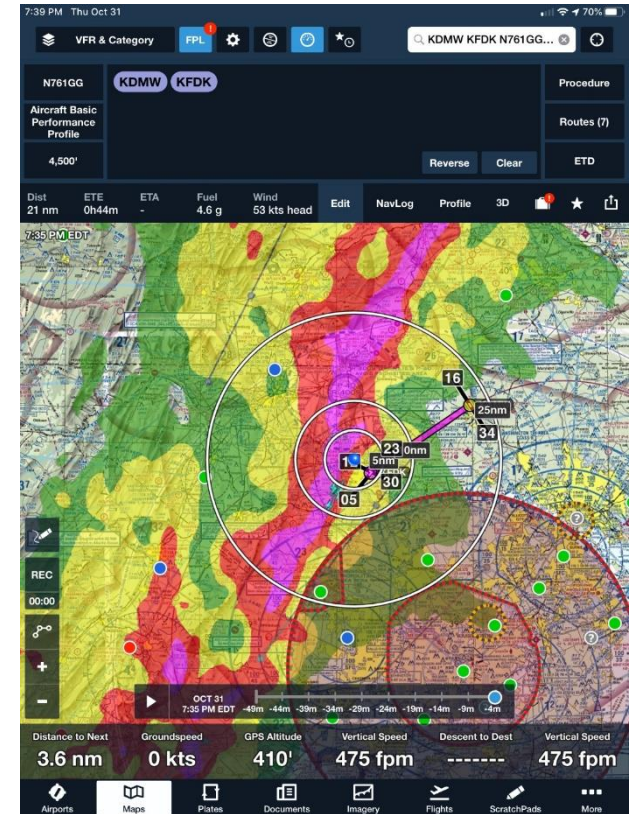
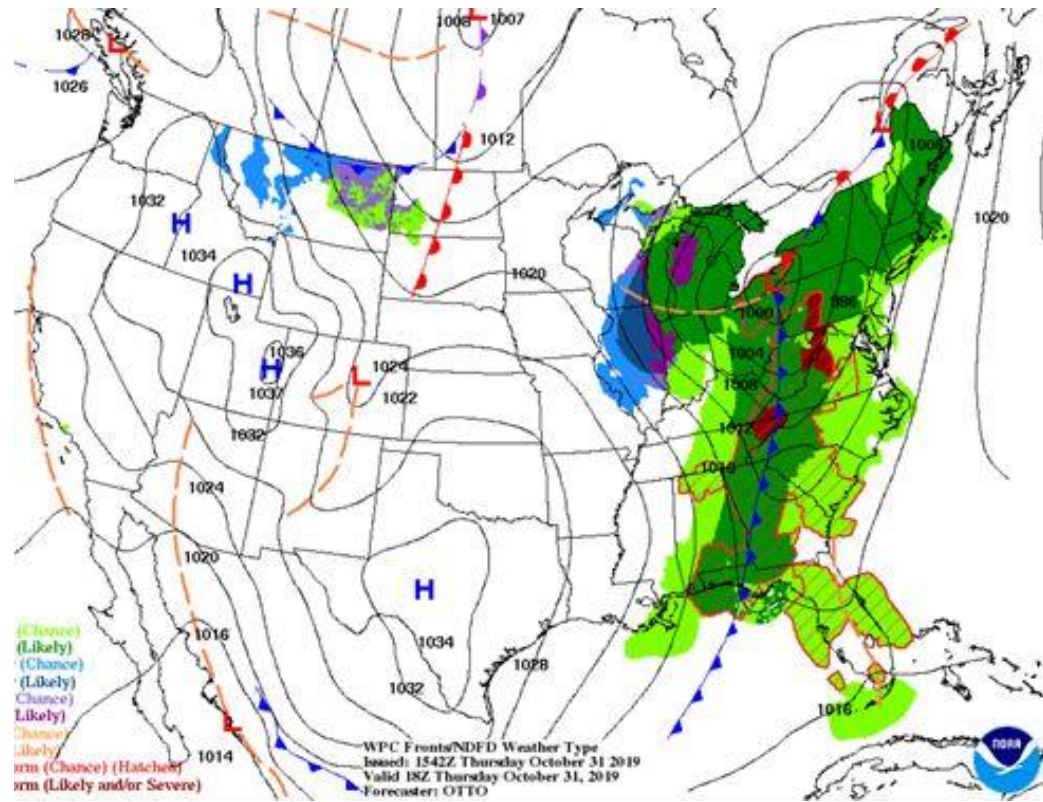
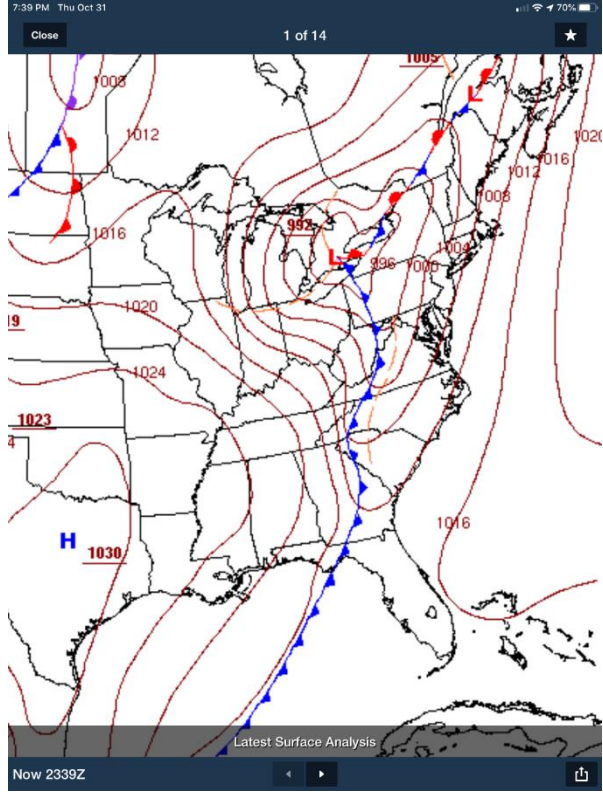
VEY

Not all weather sources report the same data.

The decision-making process requires you to make **operational decisions** based on ALL information available for your flight.



Different views...Give more Info... Fast Moving Cold Front...October 2019

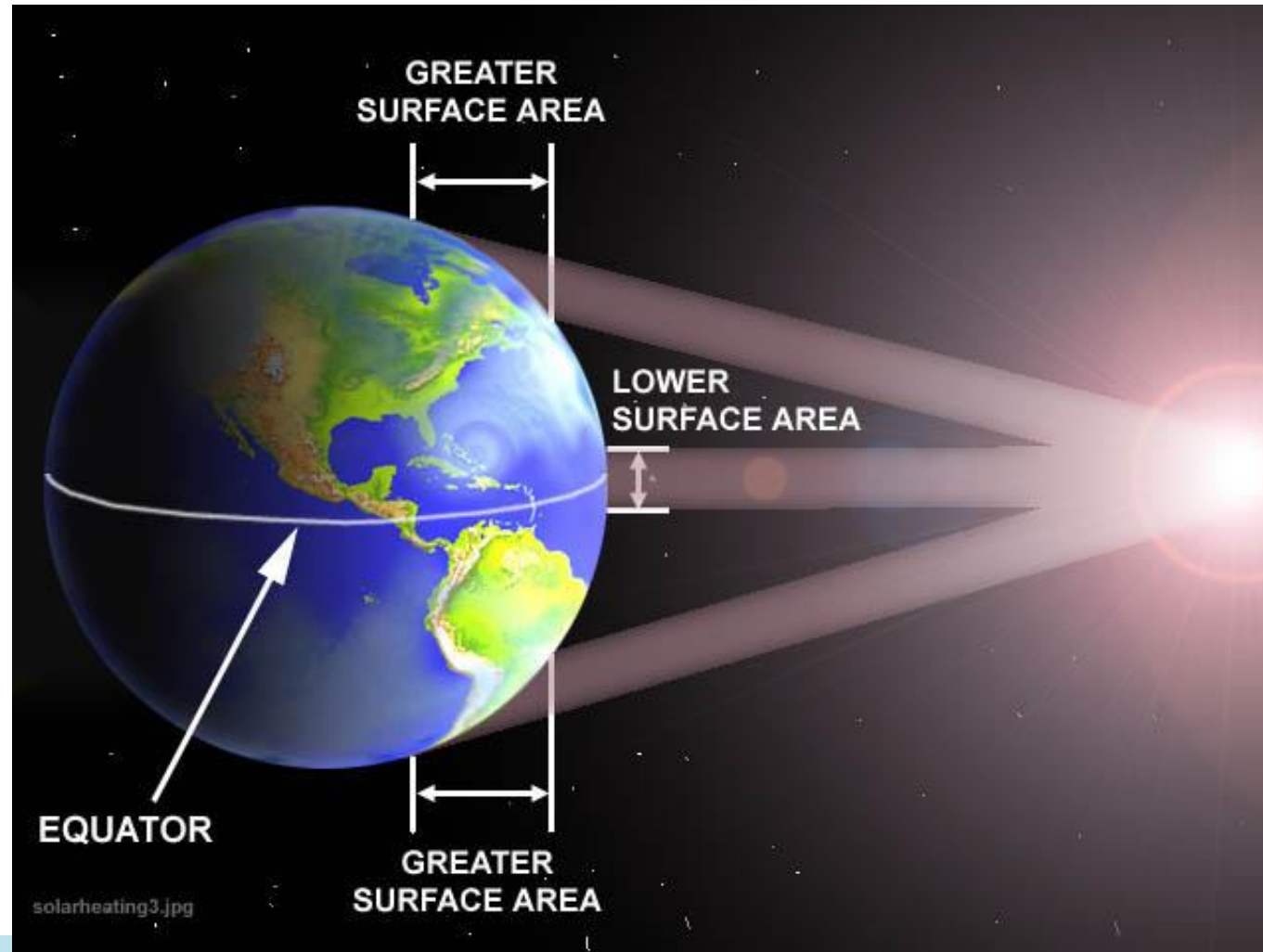


Study and Evaluate

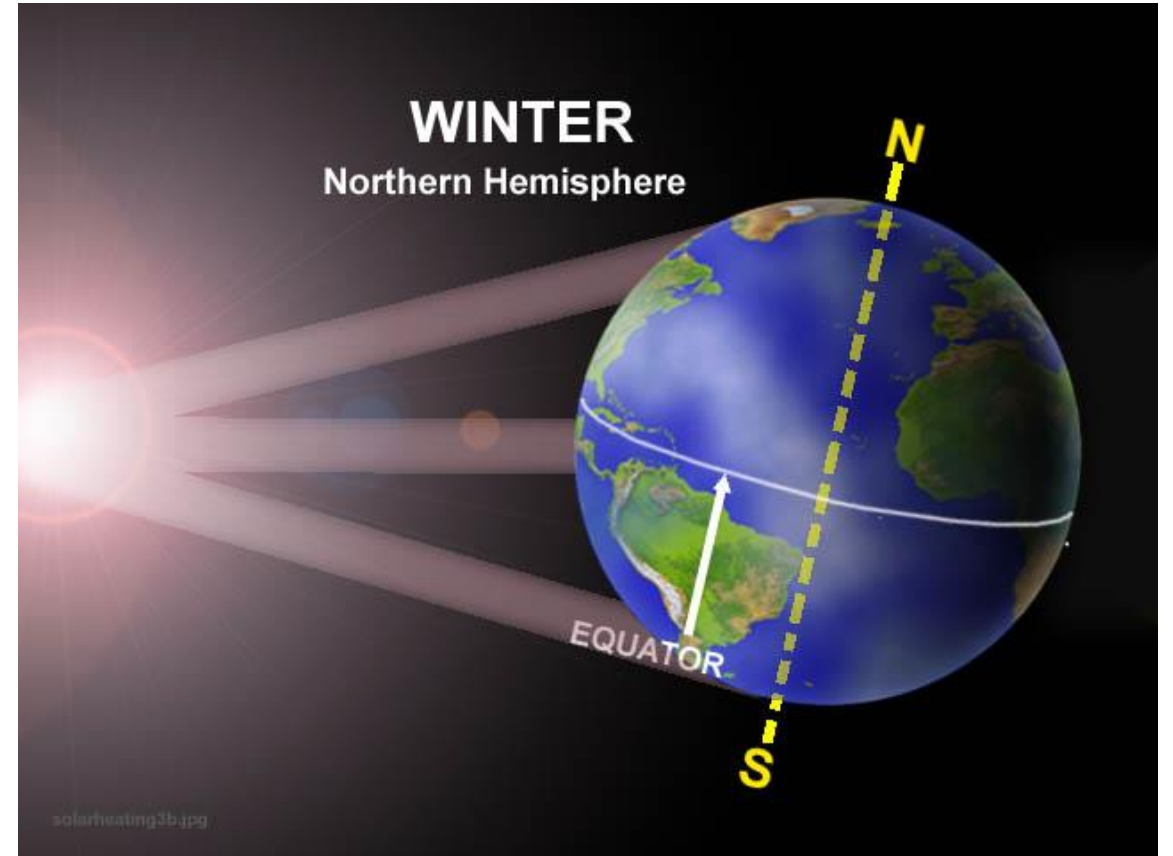
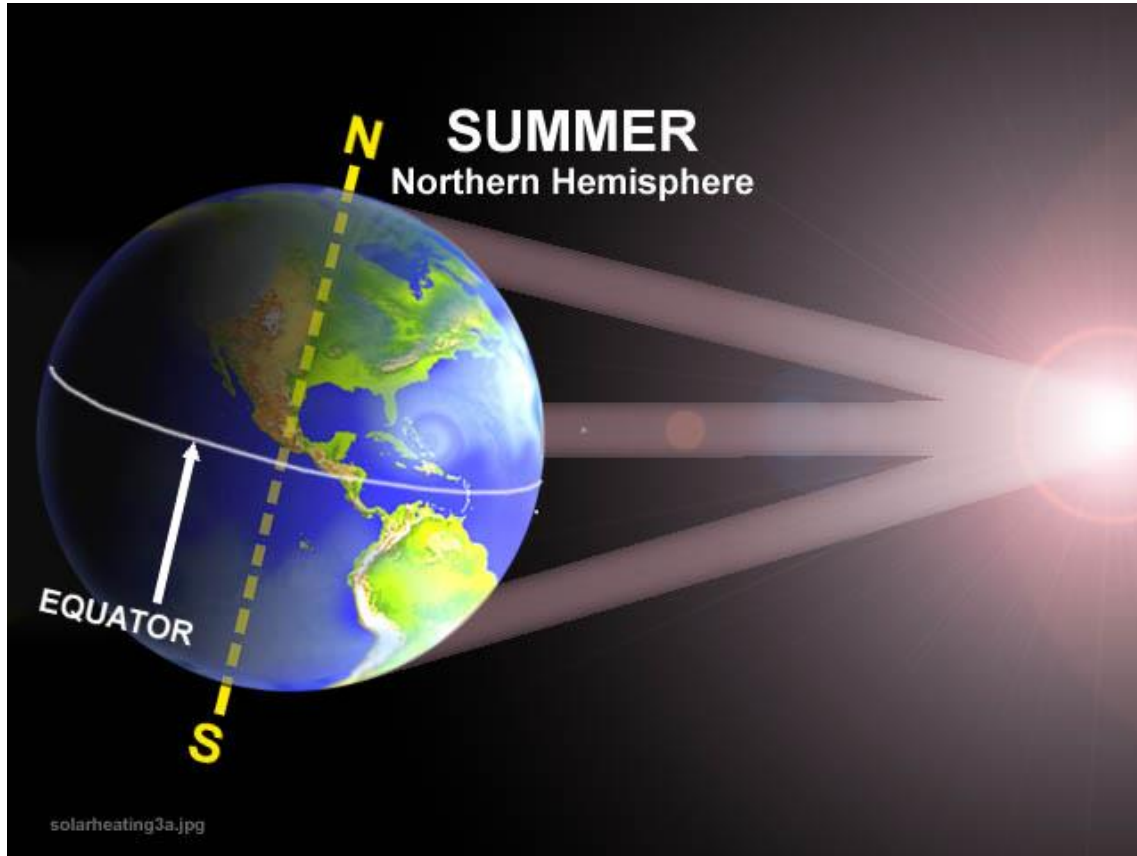
- **In the beginning you were tested on theory and the use of weather products**
 - Homework...Review:
 - Aviation Weather, FAA AC 00-6B
 - Aviation Weather Services, FAA AC 00-45H
- **Now you need to use your experiences and skill to process and apply that data specific to your flight**



The Cause of Weather is...Uneven Heating of the Earth's Surface

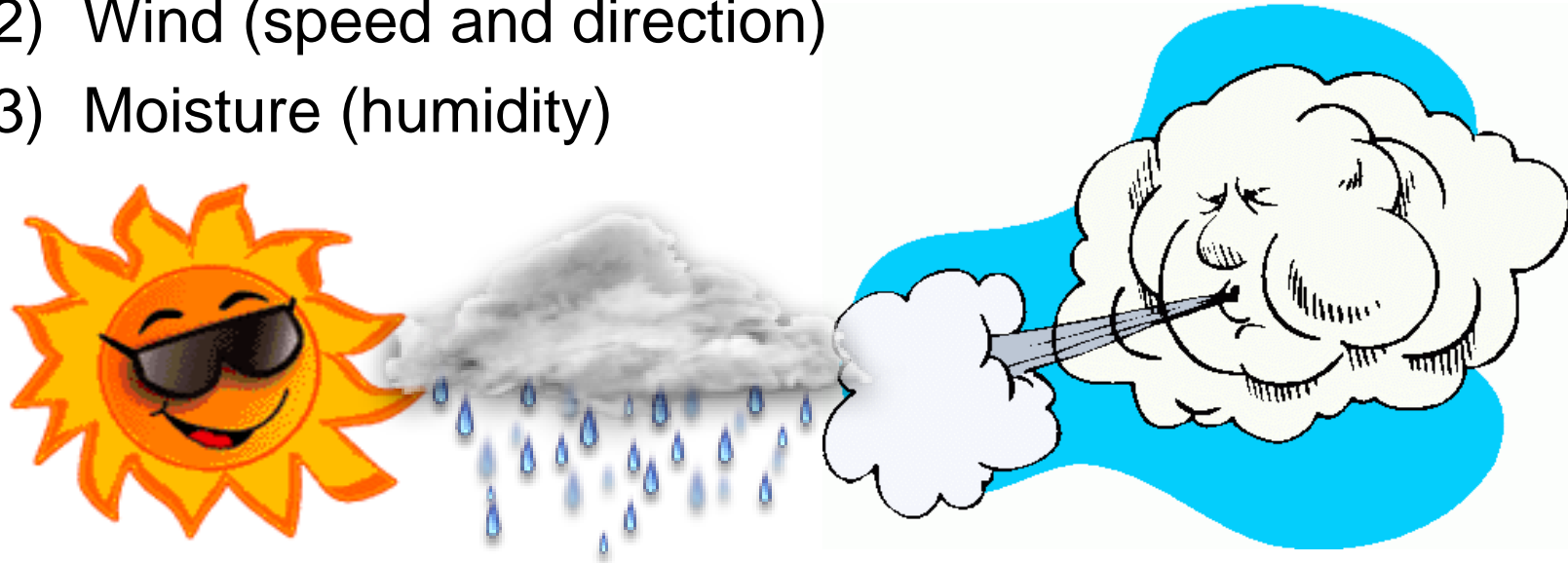


Add in the Tilt to get Seasonable Temperature Differences



Three Basic Elements of Weather are...

- 1) Temperature (warm or cold)
- 2) Wind (speed and direction)
- 3) Moisture (humidity)



Temperature, wind, and moisture combine to varying degrees to create conditions that affect pilots.

Making sense of the data

How will the weather affect this flight?

- **Turbulence**
- **Visibility and terrain**
 - Viz, cloud clearance, separation
 - Flight rules
- **Aircraft performance (Density altitude)**
- **...and it all changes like, well, the weather...**



Best Practices When Planning

- **Use more than one weather data source**
- **Plan to be late**
- **Plan alternatives**
- **Plan for the worst possible scenario**
- **Train for weather related contingencies**
- **Check weather often while en-route...**



A Good In-Flight Starts With...A Good Pre-Flight

- So, what is *your* first pre-flight (weather) action?



Let's Ask Siri...

- Hey Siri...
- Do we go flying...or not?



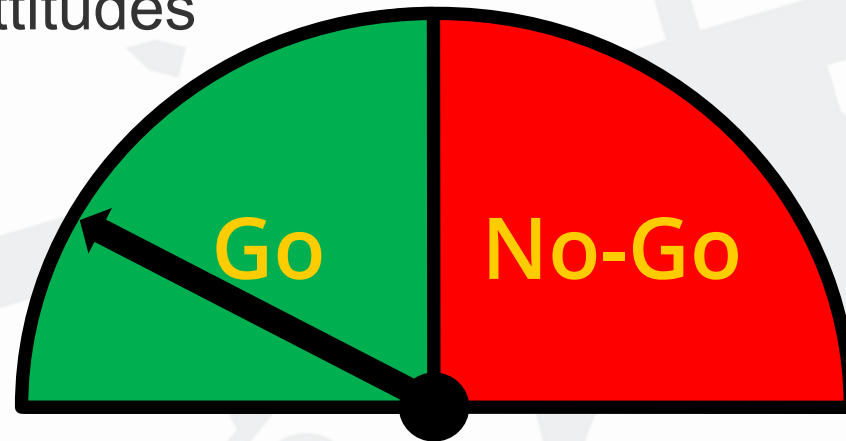
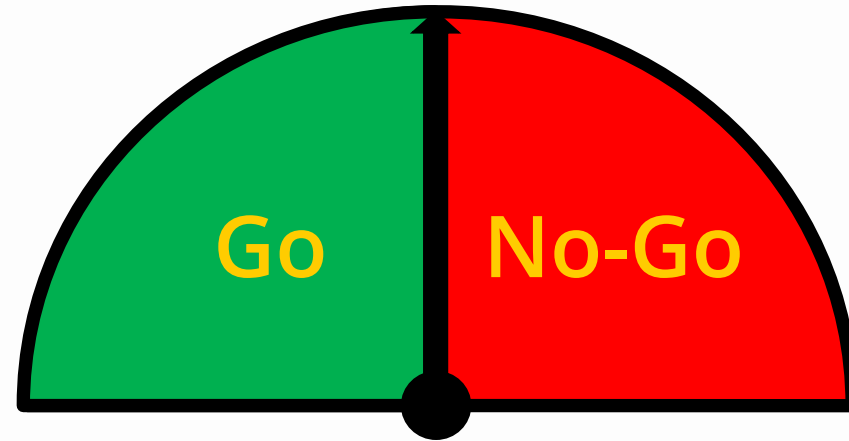
Pre-Flight Tools

- Pre-flight – Official:
 - Flight Service - 1-800-WXBRIEF
- Big picture – graphical tools
 - Aviation Digital Data Service – ADDS
 - Graphical Area Forecast (replaces the old Area Forecast)
- Call a briefer
 - 1800wxbrief.com
 - Driving off a cliff, not recommended
 - So, VFR not recommended...?
- No-Go/Go?



What's On Your Go-ometer?

- 50:50 decision?
- No - naturally biased towards go
- Influenced by your “type” and hazardous attitudes



Flight Service Online Portal

- Access at www.1800wxbrief.com
- “Official” weather!
- One stop shop:
- Can it be any easier...?
 - Weather products
 - Flight plan your route
 - Click to get a briefing – magic!
 - Then call a briefer for more details, questions, etc.
 - File and verifications of acceptance

Welcome FRED I STAHL Fri Sep 16 13:27:15 EDT | 17:27:15 Z


Optimize your experience ACAS EasyActivate™ EasyClose™ Close Reminders ATC Notices SE-SAR Provide information for improved service

[Learn & Register](#) My Aircraft

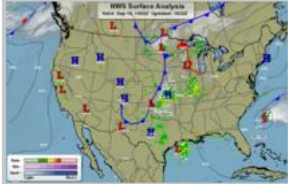
Activate, Close, Amend, Cancel, and View Alerts for your Flight Plans here Last updated at 17:26Z

No current flight plans


Weather and Airport Conditions [Edit Favorites](#)




U.S. WEATHER DEPICTION



U.S. SURFACE ANALYSIS



12 HR SURFACE PROG



24 HR SURFACE PROG

Click Weather Graphic to enlarge

Plain Text [What's this?](#)

KFDK KMRB KIAD *Aircraft ID:

Airport	Condition	METARs	Density Altitude
KFDK	VFR	KFDK 161647Z 12005KT 10SM BKN042 BKN055 24/15 A3031	1213 ft
KMRB	VFR	KMRB 161653Z 13006KT 10SM OVC037 22/14 A3027 RMK AO2 SLP247 T02220139	1334 ft
KIAD	VFR	KIAD 161652Z 10007KT 10SM FEW024 BKN040 BKN055 23/13 A3028 RMK AO2 SLP250 T02330128	1115 ft
Airport	TAFs		
KFDK	No data available for airport		
KMRB	TAF	KMRB 161721Z 1618/1718 14005KT P6SM BKN040 FM170400 00000KT P6SM BKN045 FM170700 00000KT 6SM BR BKN015 FM171500 17005KT P6SM BKN025	
KIAD	TAF	KIAD 161721Z 1618/1724 13006KT P6SM BKN050 FM170500 VRB03KT P6SM SCT020 BKN035 FM171500 18005KT P6SM BKN035 FM171800 18006KT P6SM BKN045	
Airport	NOTAMS		
KFDK	FDK 16/02008 KFDK AIRSPACE SEE FDC 1/1155 ZDC FLIGHT RESTRICTIONS TFR 1602091925-1701312359EST		
KMRB	MRB 16/08021 KMRB OBST TOWER LGT (ASR 1236173) 392531.30N0775706.40W (2.ONM NE MRB) 704.1FT (234.9FT AGL) OUT OF SERVICE 1608210426-1609200426		



ADDS

Aviation Digital Data Service



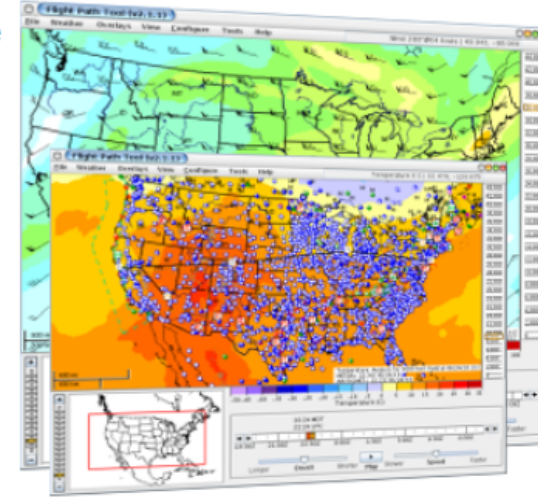
Local Forecast



Aviation Digital Data Service

The **Aviation Digital Data Service (ADDS)** makes available to the aviation community text, digital and graphical forecasts, analyses, and observations of aviation-related weather variables. ADDS was developed as a joint effort of NCAR Research Applications Program (**RAP**), Global Systems Division (**GSD**) of NOAA's Earth System Research Laboratory (**ESRL**), and the National Centers for Environmental Prediction (**NCEP**) Aviation Weather Center (**AWC**).

ADDS is currently maintained at AWC and is funded through the FAA Aviation Weather Research Program (**AWRP**).



Turbulence

Icing

Convection

Prog Charts

Ceil&Vis

PIREPs

Satellite

Wind/Temp

METARs

TAFs

SIGMETs

Radar

Page loaded: 16:33 UTC | 08:33 AM Pacific | 09:33 AM Mountain | 10:33 AM Central | 11:33 AM Eastern

ADVISORIES

- SIGMET
- G-AIRMET
- Center Weather

FORECASTS

- Convection
- Turbulence

FORECASTS

- Icing
- Winds/Temps
- Prog Charts
- TAFs
- Aviation Forecasts
- WAFS Forecasts
- Area Forecasts
- Avn Forecast Disc (AFD)

OBSERVATIONS

- Aircraft Repts
- METARs
- Radar
- Satellite

USER TOOLS

- Flightpath Tool
- HEMS Tool
- Text Data Server
- Flight Folder
- Decision Support
- PIREP Submit
- Standard Briefing
- Aviation Testbed
- Aviation Links

ABOUT

- AWC
- Help
- FAQ
- Contact



ADDS Full Monty



AVIATION WEATHER CENTER

NOAA NATIONAL WEATHER SERVICE

Local Forecast

Go

HOME ADVISORIES FORECASTS OBSERVATIONS TOOLS NEWS SEARCH ABOUT USER

Aviation Weather Overview

METARs

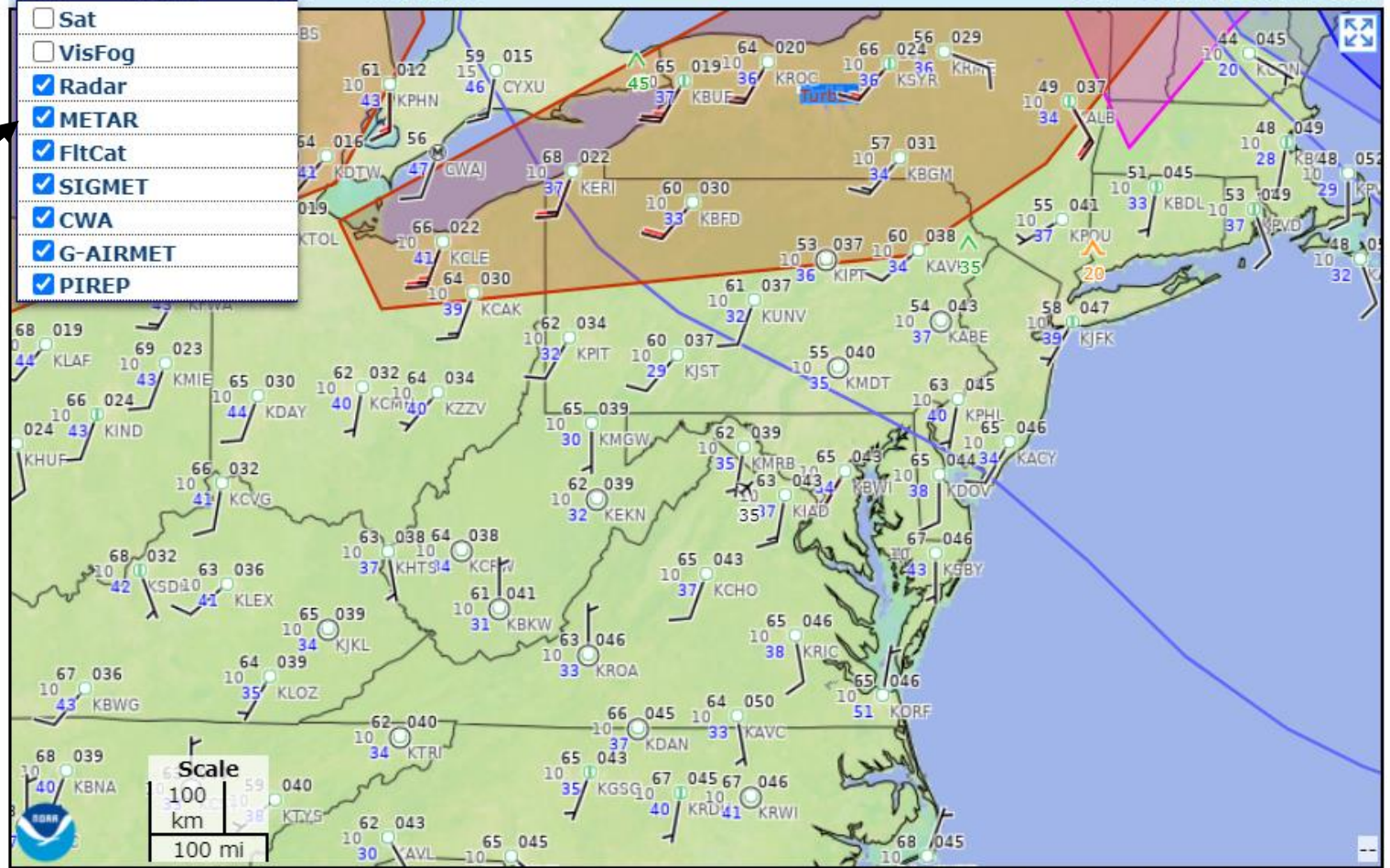
TAFs

AIR/PIREPs

SIGMETs

G-AIRMETs

Data Overlay View Configure 1737 UTC Wed 4 Nov 2020



Disclaimer: International SIGMET locations approximated. Please refer to SIGMET text for full details

- Go Home
- Turn-on layers for the big picture
- Look what you get

Graphical Aviation Forecast



AVIATION WEATHER CENTER

NOAA NATIONAL WEATHER SERVICE

Local Forecast

Go

HOME ADVISORIES FORECASTS OBSERVATIONS TOOLS NEWS SEARCH ABOUT USER

Graphical Forecasts for Aviation

Flight Path Tool

GFA Home

TAF CIG/VIS Clouds PCPN/WX TS Winds Turb Ice

GFA Tool

UTC Wed 4 Nov 2020

Forecast Obs/Warn Map Options

18Z 19Z 20Z 21Z 22Z 23Z 00Z 01Z

HEMS Tool

Text Data Server

Flight Folder

Decision Support

PIREP Submit

Standard Briefing

Aviation Testbed

Aviation Links

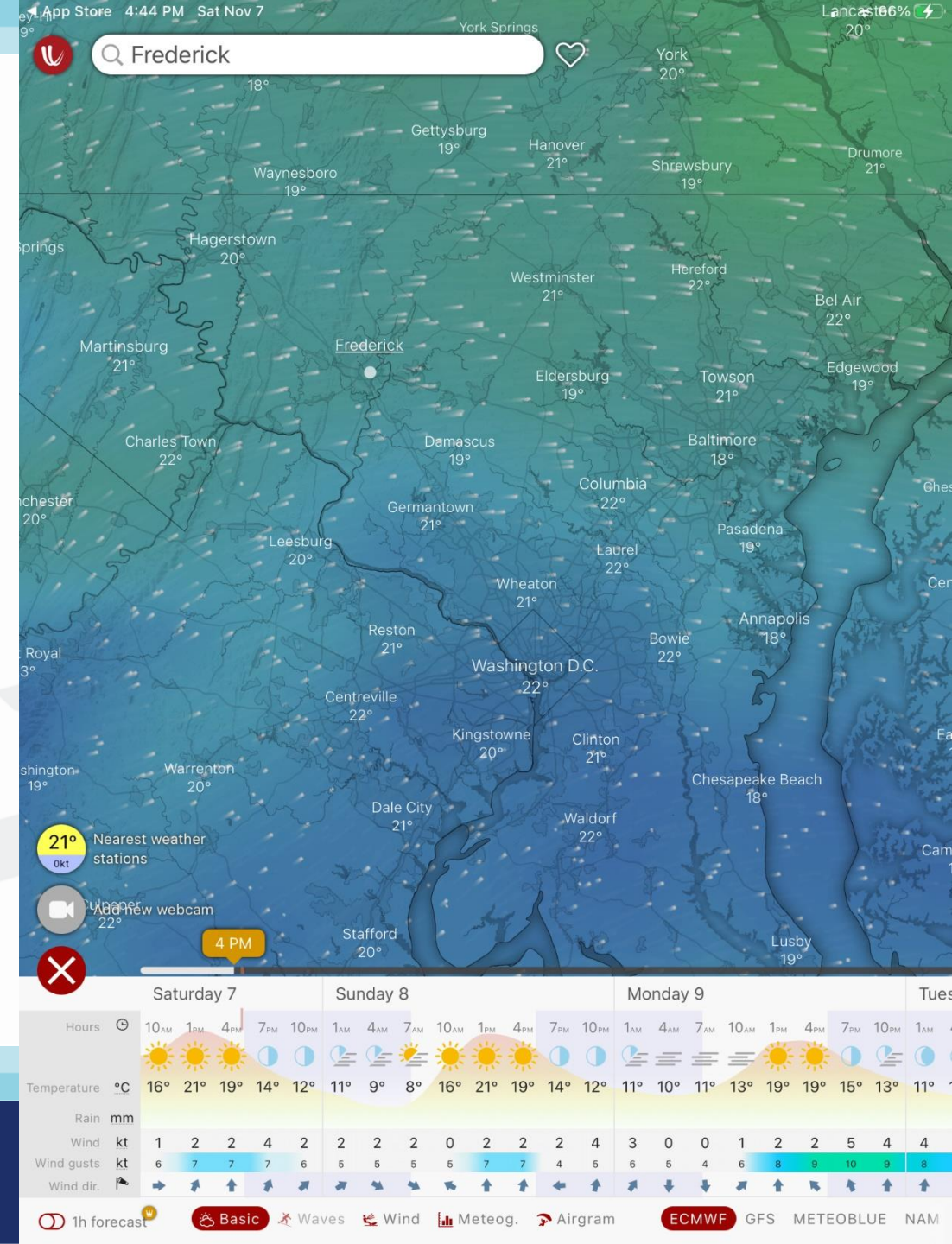
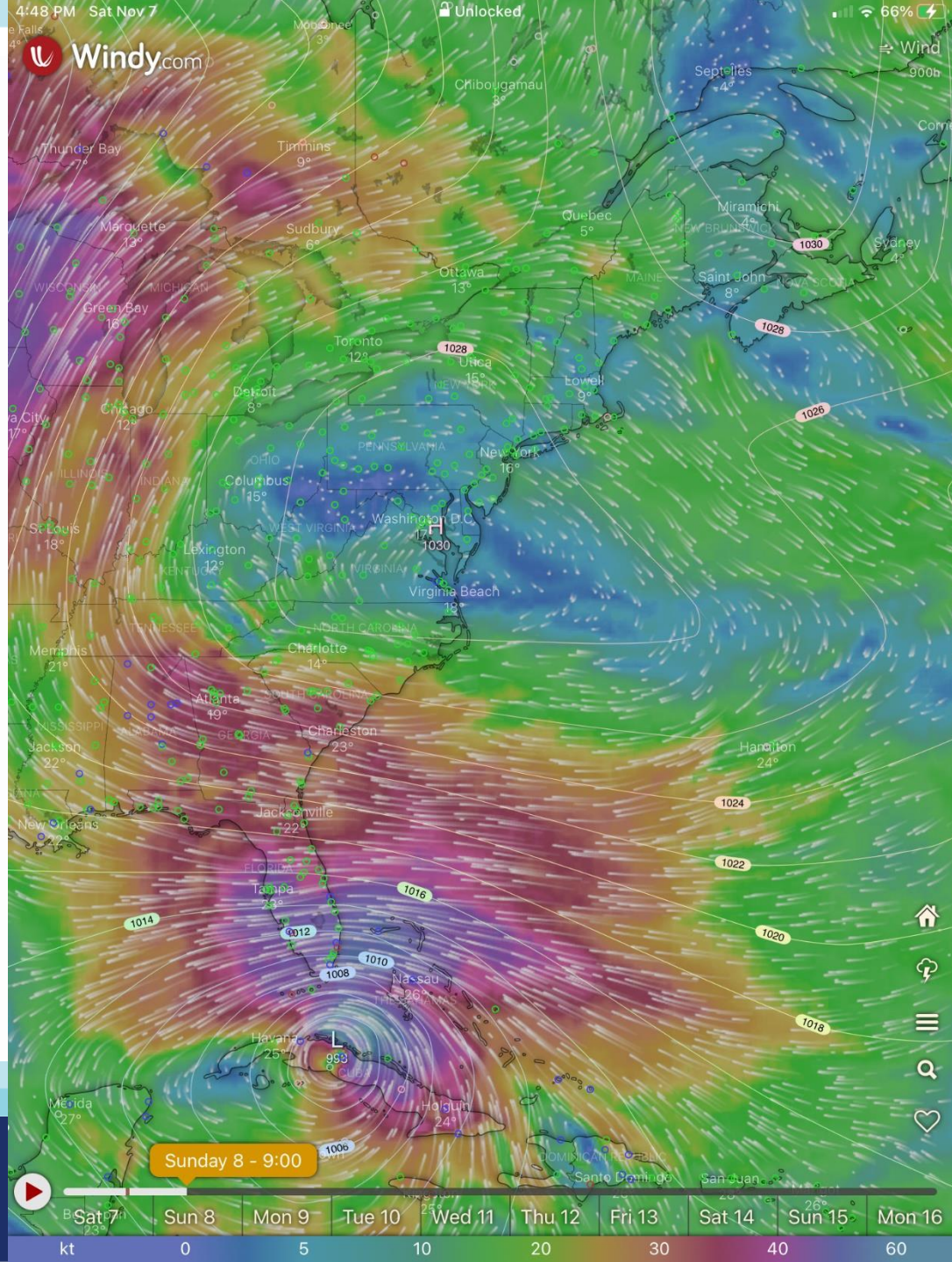


Scale 500 km 500 mi

Vis-0.5	Wx	17	Ceil	KRFD	Id	Windbarb	Fit Cat: LIFR IFR MVFR VFR	Weather Symbols	Wind	☉ Calm	↘ 15kt	↘ 60kt	↘ 25G30kt					
SIGMETs	Convective	Conv	Thunder-storm	TS	Trop Cyclone	TC	Blowing Dust/Sand	IFR	Volcanic Ash	VA	Turb	Turb	Icing	Ice				
Warnings	Tornado	TO	Severe Thunder-storm	TS	Winter Storm	WS	Blizzard	BZ	Ice Storm	IS	Lake Effect Snow	LS	Storm	ST	Gale	GA	High Wind	HW

• <https://www.aviationweather.gov/gfa>

Windy



Pivotal

4:24 PM Sat Nov 7

pivotalweather.com

Live election result... Flight Service Flight Service Models: GFS — Pivo...

Get more of what you want. Xfinity Internet \$39.99

pivotal weather

HOME / MODELS / FORECASTS / OBSERVATIONS / SATELLITE / CONTACT / SUBSCRIPTIONS / LOG IN

Forecast Hour

Run: Sat 2020-11-07 12z
000 006 012 018 024 030 036
048 054 060 066 072 078 084
096 102 108 114 120 126 132
144 150 156 162 168 174 180
192 198 204 210 216 222 228
240 252 264 276 288 300 312
336 348 360 372 384

Valid: Sat 2020-11-07 18z

Parameter

- Upper-Air: Height, Wind, Temperature
- Surface and Precipitation
 - Surface
 - 2 m AGL Relative Humidity
 - 2 m AGL Temperature
 - 2 m AGL Temperature, Wind Barbs
 - 2 m AGL Wind Chill/Heat Index
 - 2 m AGL Dew Point
 - 2 m AGL Dew Point, Wind Barbs
 - 2 m AGL Theta-e, Wind Barbs
 - MSLP, 10 m AGL Wind
 - Precipitation Type
 - Precipitation Type, Rate
 - Quantitative Precipitation
 - 6-hr Accumulated QPF
 - 12-hr Accumulated QPF
 - 24-hr Accumulated QPF
 - 48-hr Accumulated QPF
 - 120-hr Accumulated QPF
 - Total Accumulated QPF
 - Integrated Moisture and Satellite
 - Cloud Cover
 - Precipitable Water (PWAT)
 - Radar Products
 - Composite Reflectivity
 - Anomalies
 - PWAT Anomaly
 - 2 m AGL Temperature Anomaly
 - Upper-Air: Moisture
 - Upper-Air: Dynamics
 - Severe Weather
 - Winter Weather

Model: GFS Zoom: Continental US Animation: Single Image

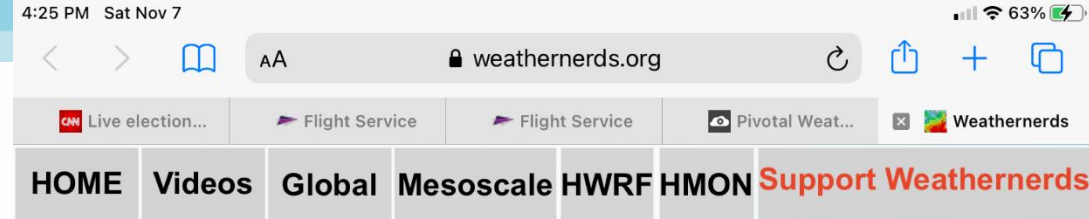
Precipitation Type, Rate (in hr⁻¹), 1000-500 mb Thickness (dam)
F006 Valid: Sat 2020-11-07 18z Init: Sat 2020-11-07 12z GFS

www.pivotalweather.com

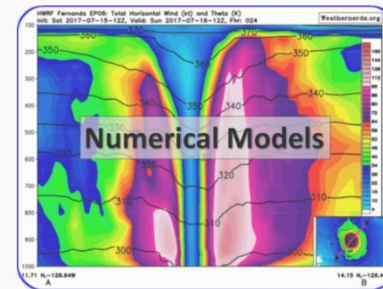
© 2015-2020 pivotalweather.com, All Rights Reserved Contact · Privacy · Terms of Use AN ELITE CAFEMEDIA PUBLISHER

Aviation
Aviation

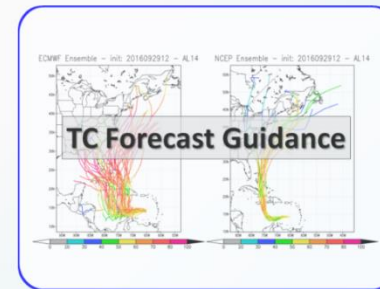
Weathernerds



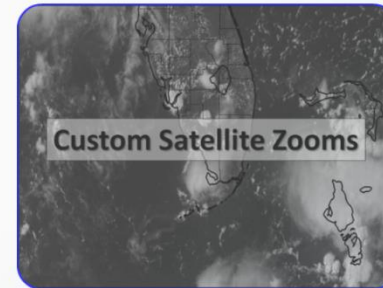
Welcome to Weathernerds



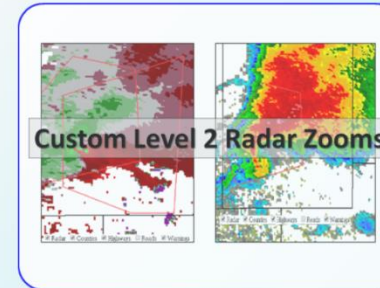
Numerical Models



TC Forecast Guidance



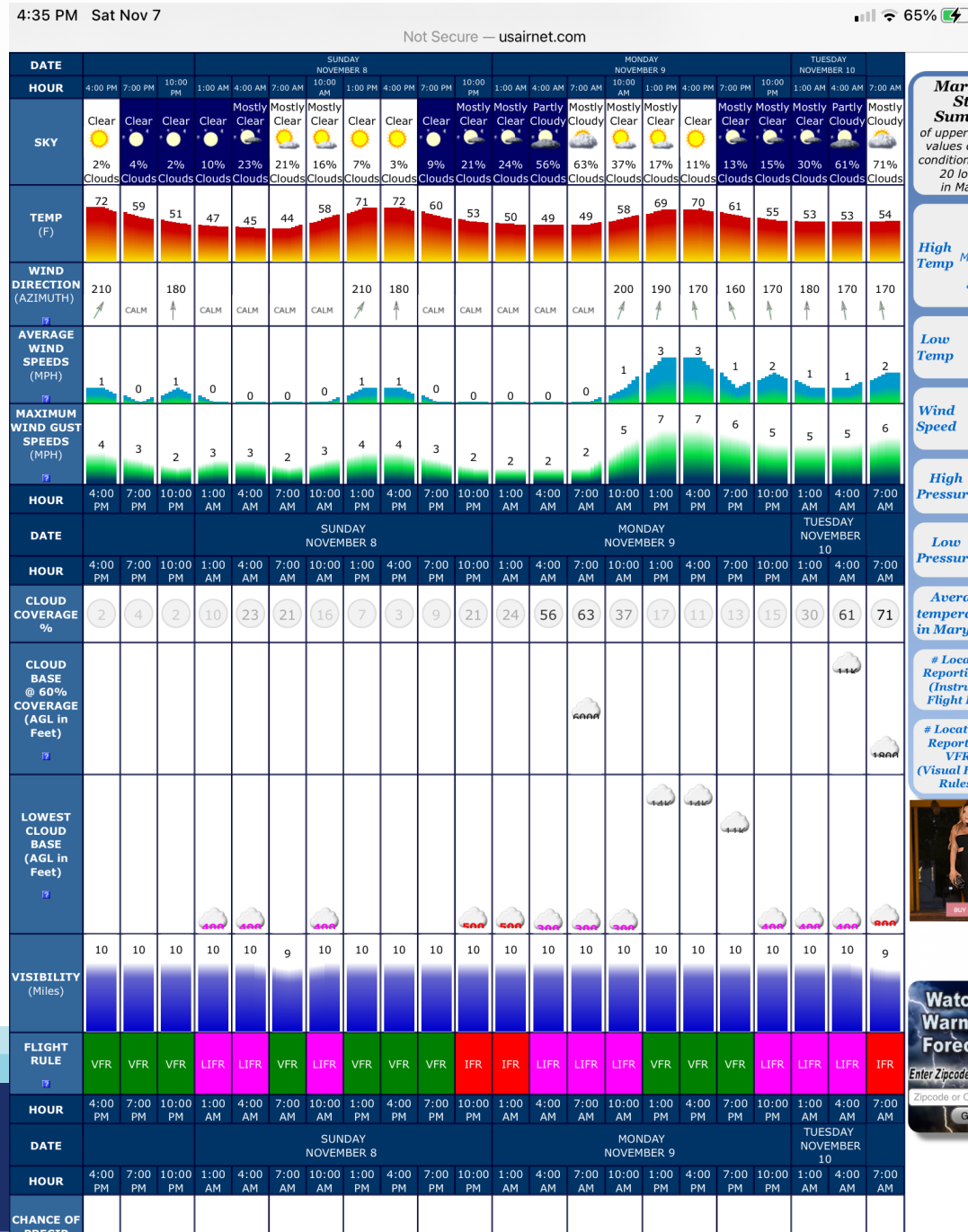
Custom Satellite Zooms



Custom Level 2 Radar Zooms

Weathernerds provides weather data in a flexible, practical interface. This site is designed to give creativity and control to the forecaster so that imagery is weather feature-based rather than relying on predefined geographic maps. Weather models available on the site include the ECMWF, GEM, GFS, HRRR, ICON, NAM, HWRF, HMON, and RAP. The interface allows users to create point soundings, cross sections, multiple field overlays, etc. Satellite data from GOES 16, GOES 17, and Himawari also are provided in an interface that allows users to zoom in anywhere. During hurricane season, the TC Forecast Guidance section provides ensemble forecasts from the GFS and ECMWF. This guidance is useful for analyzing the range of possibilities for TC track and intensity in the long-range portion of the forecast. Finally, WSR-88D Level 2 base radar reflectivity and velocity are provided in a zoomable interface.

Usairnet (Meteogram)



Maryland Summer
of upper air values of conditions 20 loca in Mary

High Temp Mur an

Low Temp Us Ac

Wind Speed

High Pressure

Low Pressure

Average temperat in Maryle

Locati Reporting (Instrum Flight Ru

Locatio Reportin VFR (Visual Fli Rules)

Watch Warnin Foreca

Enter Zipcode or

Zipcode or City

GO



For Another Time...

- **MOS and LAMP**
- **Skew T - Log P charts**



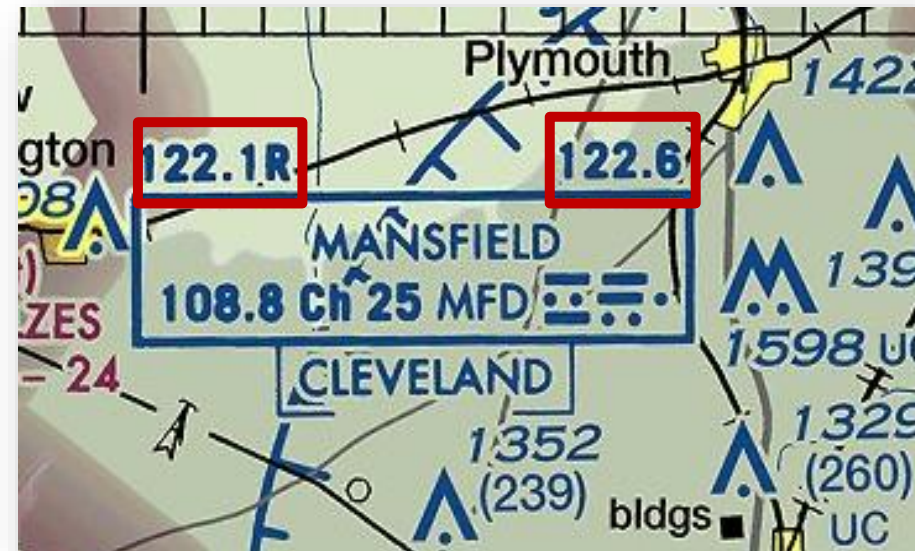
Still Want to Go?

In-Flight Tools



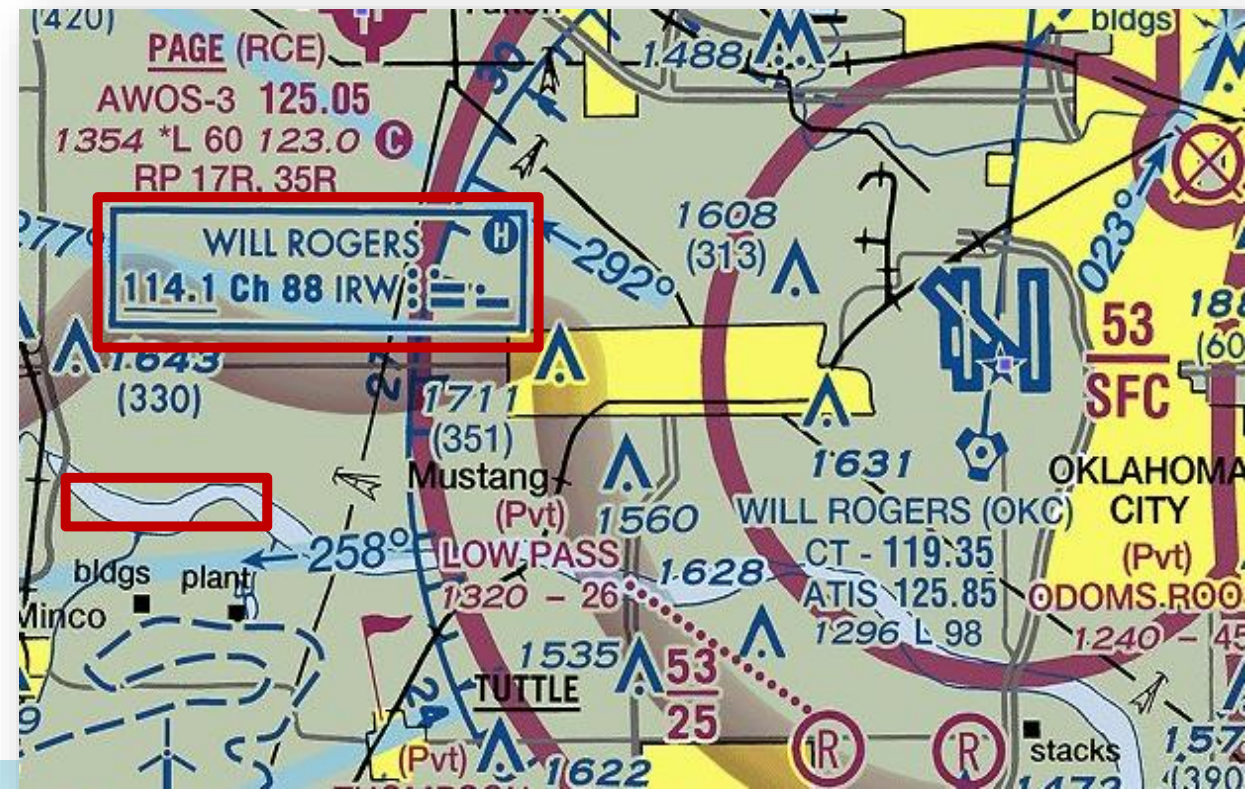
In-flight Weather Sources

- Ask Flight Service (FSS) for en-route weather
- Frequencies depicted on VOR data block
 - Everywhere... 122.2
 - FSS transmits & receives on 122.2 (VHF) and 255.4 (UHF)
 - FSS transmits and receives on 122.6 or receives on 122.1 & transmits on 108.8 (VOR)



In-flight Weather Sources

- ~~Hazardous in-flight Weather Advisory Service (HIWAS)~~
- **Automated Terminal Information Service (ATIS)**
 - Could be an hour old



In-flight Weather Sources

- Automated Surface Observing System (ASOS)
- Automated Weather Observing System (AWOS)



Airborne Weather Radar

- Real Time
- May not show all precipitation
- Good for tactical avoidance
- New users should seek instruction



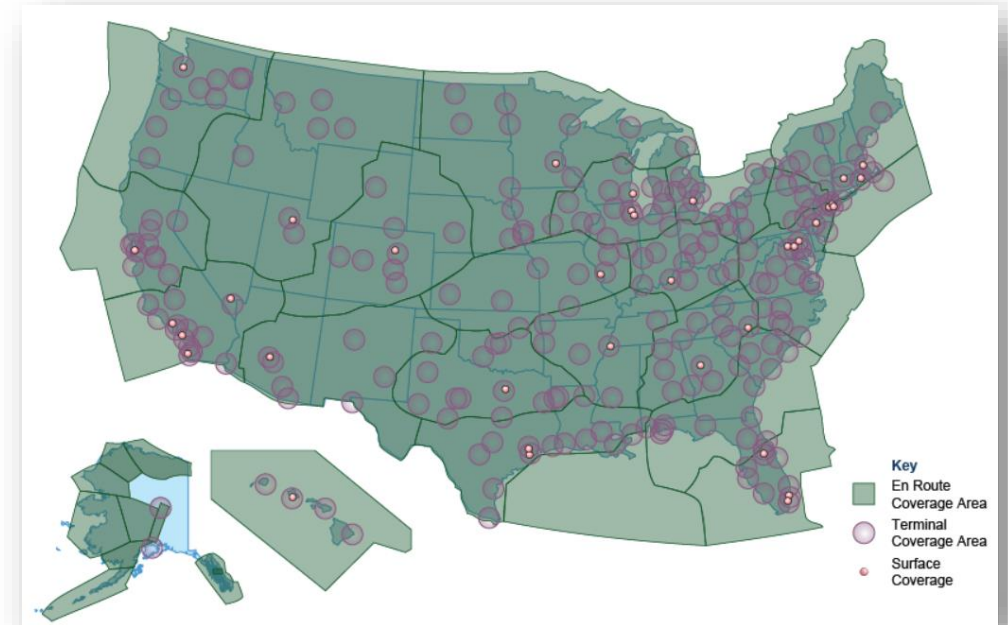
Strike Finder & Storm Scope

- Real Time
- Doesn't show precipitation
- Good for tactical avoidance
- Instruction recommended for new users



ADS-B – IN Applications

- **Traffic Information Services - Broadcast (TIS-B) (1090 and UAT)**
- **Flight Information Services - Broadcast (FIS-B) (UAT only)**
- **If equipping, get dual-band!**
- **At least dual-band IN such as Stratus**



FIS-B Products (Can be ~15-mins old)

AIRMETs

Convective SIGMETs

SIGMETs

METARS

SPECIs

National NEXRAD

Regional NEXRAD

D-NOTAMs

FDC-NOTAMs

PIREPS

Special Use Airspace (SUA) Status

TAFs

Amended TAFs

Winds & Temperature Aloft

Lightning

Turbulence

Icing

Cloud Tops

Graphical AIRMETs

Center Weather Advisories

TIS-B Service Status



Portable ADS-B Receivers



XM Weather – Subscription Service

- **Near Real Time**
 - 2.5 Minute update
 - But look for time stamp
- **Good for strategic planning**
- **Why pay for XM over free ADS-B?**
 - You Tube: ADS-B or SiriusXM?
What's right for you?



Air Traffic Control

- **Limited ability and time to forward weather information**
- **You can learn a lot by just listening!**
- **Don't wait until the last minute to make diversion requests**



Yer iPad as an In-Flight Tool

- Situational awareness is a good thing
- Data via ADS-B—Weather and Traffic



EFB

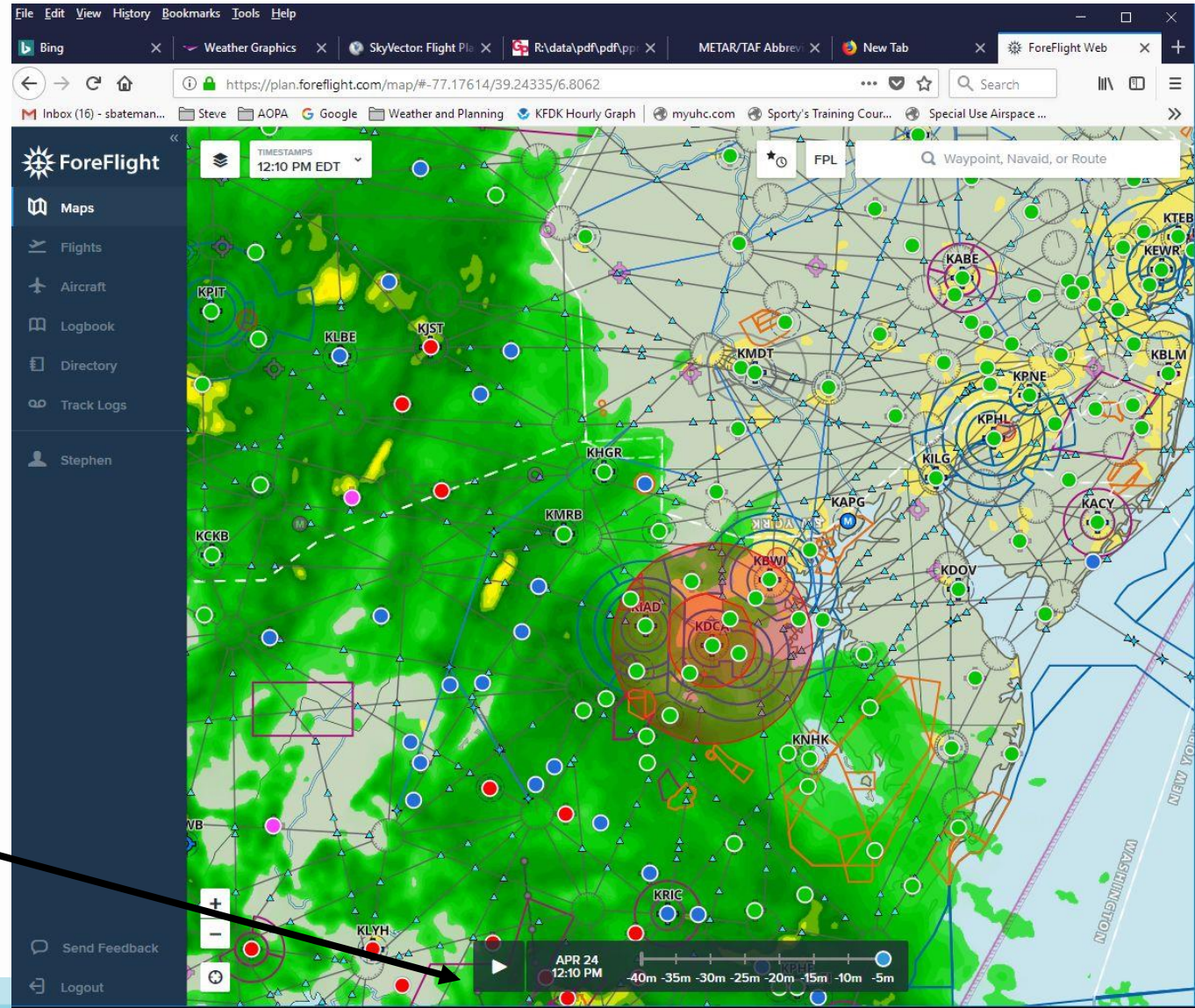
1. Charged and/or plugged-in
2. Connected to a source of FIS-B
 - ABS-B IN
3. You understand the limitations

Let's look at an iPad running Foreflight...



Fancy...

- **Current conditions with radar overlay...**
- **Trends...**



Federal Aviation
Administration

- It looks okay...

11:54 AM Fri Nov 6 60%

U.S. VFR sectional FPL

FROM	TO	HDG	TOTALS	LEG	REMAINING	ETA
KAST	KPDT	72°M	213 nm 9.8 g 2h12m	213 nm 8.8 g 2h12m	-----	-----

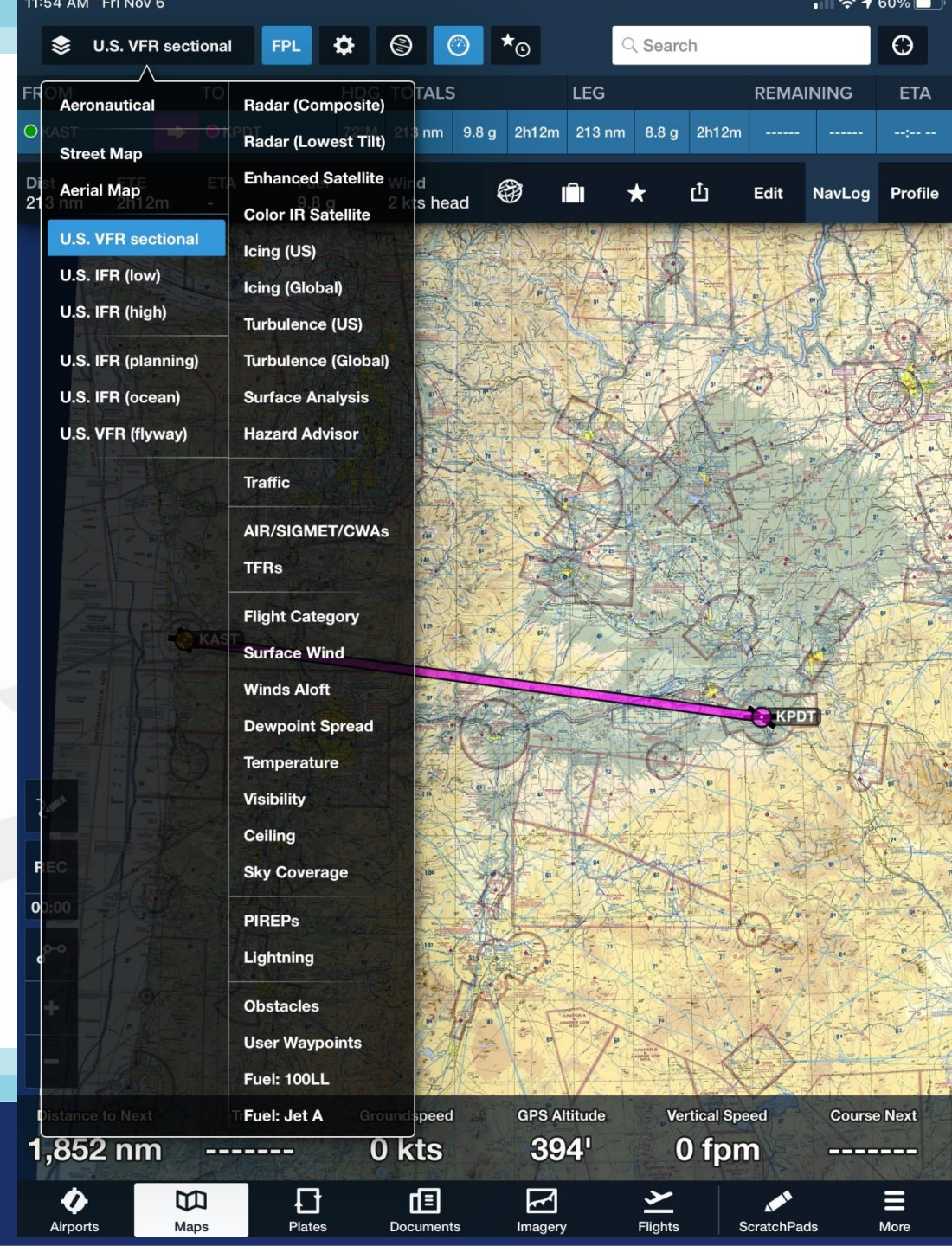
Dist 213 nm ETE 2h12m ETA - Fuel 9.8 g Wind 2 kts head

REC 00:00

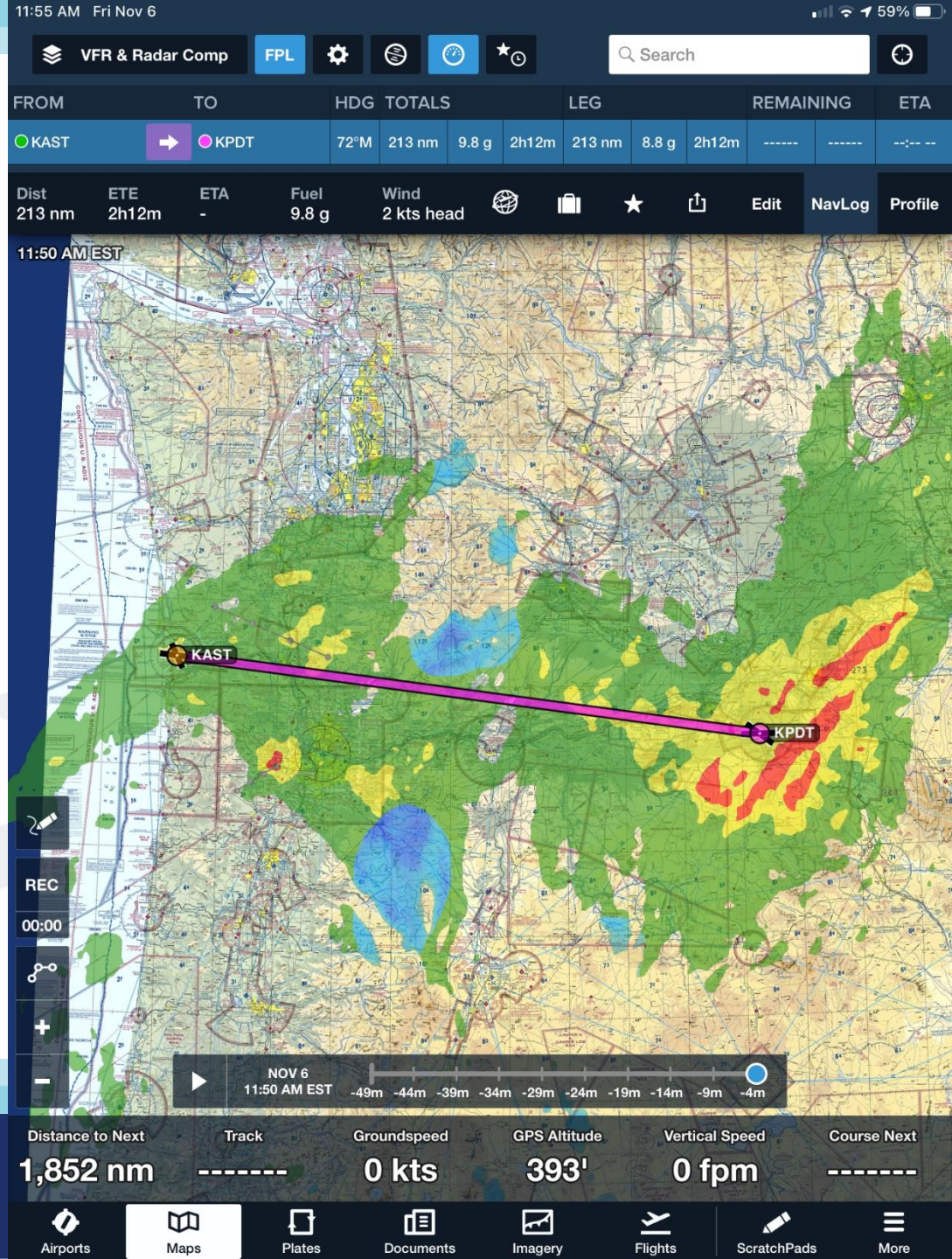
Distance to Next 1,852 nm Track ----- Groundspeed 0 kts GPS Altitude 394' Vertical Speed 0 fpm Course Next -----

Airports Maps Plates Documents Imagery Flights ScratchPads More

- Oh...wait...better turn on RADAR layer



- Well...might be okay by the time we get there...



- Flight categories from METARs

11:57 AM Fri Nov 6 59%

VFR & Category FPL

FROM	TO	HDG	TOTALS	LEG	REMAINING	ETA
KAST	KPDT	72°M	213 nm 9.8 g 2h12m	213 nm 8.8 g 2h12m	-----	-----

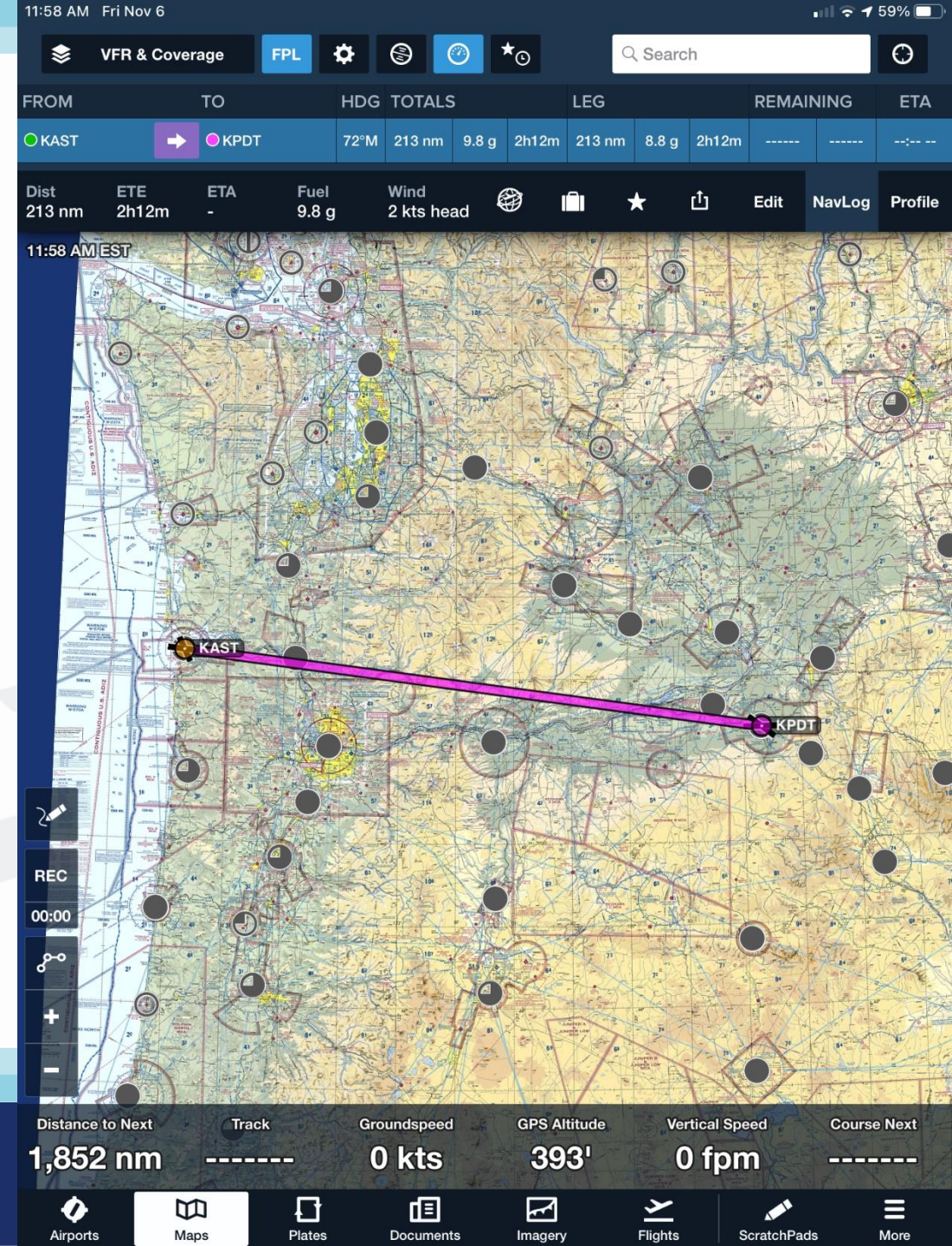
Dist 213 nm ETE 2h12m ETA - Fuel 9.8 g Wind 2 kts head

11:57 AM EST

Distance to Next 1,852 nm Track ----- Groundspeed 0 kts GPS Altitude 394' Vertical Speed 0 fpm Course Next -----

Airports Maps Plates Documents Imagery Flights ScratchPads More

- Sky Coverage



- Ceilings

11:58 AM Fri Nov 6

VFR & Ceiling FPL

FROM TO HDG TOTALS LEG REMAINING ETA

KAST KPDT 72°M 213 nm 9.8 g 2h12m 213 nm 8.8 g 2h12m -----

Dist 213 nm ETE 2h12m ETA - Fuel 9.8 g Wind 2 kts head

11:58 AM EST

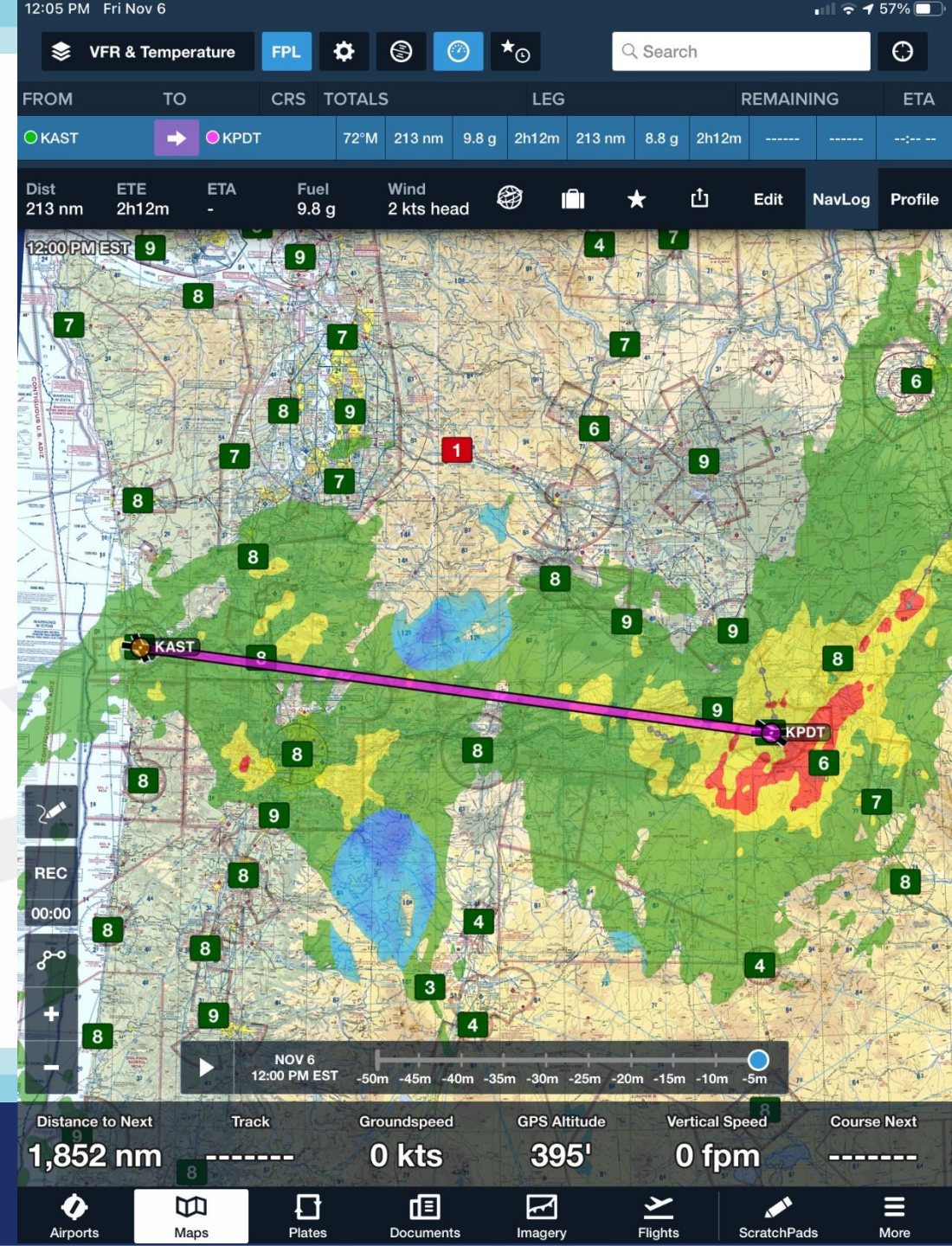
Map showing flight path from KAST to KPDT. The map displays various ceiling markers (e.g., 160, 16, 22, 24, 49, 12, 33, 75, 120, 65, 90, 47, 31, 50, 55, 60, 18, 9, 15, 32, 18, 3, 110, 10, 38, 4) and a pink line representing the flight path. The map also shows terrain, roads, and other geographical features.

REC 00:00

Distance to Next 1,852 nm Track ----- Groundspeed 0 kts GPS Altitude 393' Vertical Speed 0 fpm Course Next -----

Airports Maps Plates Documents Imagery Flights ScratchPads More

- Temps



- T-DP Spread

11:58 AM Fri Nov 6 59%

VFR & Dewpt FPL

FROM	TO	HDG	TOTALS	LEG	REMAINING	ETA
KAST	KPDT	72°M	213 nm 9.8 g 2h12m	213 nm 8.8 g 2h12m	-----	-----

Dist 213 nm ETE 2h12m ETA - Fuel 9.8 g Wind 2 kts head

11:57 AM EST

The map displays a flight path from KAST to KPDT. The T-DP spread is visualized as a series of colored boxes (red and green) with numbers, indicating the spread of terrain data along the route. The path is highlighted in purple.

REC 00:00

Distance to Next	Track	Groundspeed	GPS Altitude	Vertical Speed	Course Next
1,852 nm	-----	0 kts	394'	0 fpm	-----

Airports Maps Plates Documents Imagery Flights ScratchPads More

- PIREPs

11:58 AM Fri Nov 6

VFR & Coverage FPL

FROM	TO	HDG	TOTALS	LEG	REMAINING	ETA
KAST	KPDT	72°M	213 nm 9.8 g 2h12m	213 nm 8.8 g 2h12m	-----	-----

Dist 213 nm ETE 2h12m ETA - Fuel 9.8 g Wind 2 kts head

11:58 AM EST

Distance to Next 1,852 nm Track ----- Groundspeed 0 kts GPS Altitude 393' Vertical Speed 0 fpm Course Next -----

Airports Maps Plates Documents Imagery Flights ScratchPads More

- Departure METAR

12:18 PM Fri Nov 6

VFR & Radar Comp FPL

FROM	TO	HDG	TOTALS	LEG	REMAINING	ETA
KAST	KPDT	72°M	213 nm 9.8 g 2h12m	213 nm 8.8 g 2h12m	-----	-----

Dist 213 nm ETE 2h12m ETA - Fuel 9.8 g Wind

KAST
Astoria Regional

Direct To Remove from Route Fullscreen More >

Astoria Regional
Astoria, Oregon, US
Elevation: 14'
☀️ 7:05 AM 🌧️ 4:53 PM PST

Taxiways FBOs Comments

Info Weather Runway Procedure NOTAM

METAR TAF MOS Winds

● VFR 23m ago

KAST 061655Z AUTO 03012KT 9SM -RA OVC043 08/06 A2984 RMK AO2 SLP105 P0002 T00830061 \$

Time 11:55 AM EST

Wind 030° at 12 kts

Visibility 9 sm

Clouds (AGL) Overcast 4,300'

Weather Light Rain

Temperature 8°C (46°F)

Dewpoint 6°C (43°F)

NOV 6 12:10 PM EST

Distance to Next 1,852 nm Track Groundspeed 0 kts GPS Altitude 397' Vertical Speed 0 fpm Course Next

Airports Maps Plates Documents Imagery Flights ScratchPads More

- Departure TAF
- MOS – TAFs plus processed forecast
- Like a long range TAF...
- Not official but really useful
- More on LAMP, MOS another time...

The screenshot shows a flight planning application interface. At the top, it displays the flight route from KAST to KPDT with various flight parameters: HDG 72°M, TOTALS 213 nm, 9.8 g, 2h12m, LEG 213 nm, 8.8 g, 2h12m. Below this, a detailed TAF for KAST is shown, including a forecast discussion for 7:00 AM EST indicating Marginal VFR and a wind of 090° at 7 kts. The background features a map of the Astoria Regional area with various flight paths and terrain indicators.

Flight Summary:

FROM	TO	HDG	TOTALS	LEG	REMAINING	ETA
KAST	KPDT	72°M	213 nm, 9.8 g, 2h12m	213 nm, 8.8 g, 2h12m	-----	-----

TAF Details:

KAST TAF (5h 40m ago)

061138Z 0612/0712 09007KT P6SM -RA
 BKN010 OVC030
 FM061500 05008KT P6SM -RA SCT010
 BKN030 OVC040
 FM061700 02008KT P6SM -RA
 SCT030 BKN040
 FM061900 33007KT P6SM SCT040
 FM071000 24007KT P6SM SCT008 BKN012

Forecast Discussion: 7:00 AM EST

• Marginal VFR

Wind 090° at 7 kts

Map Data:

Distance to Next: 1,852 nm
 Track: -----
 Groundspeed: 0 kts
 GPS Altitude: 397'
 Vertical Speed: 0 fpm
 Course Next: -----

- Destination TAF and MOS

12:19 PM Fri Nov 6

VFR & Radar Comp FPL

FROM TO HDG TOTALS LEG REMAINING ETA

KAST KPDT 72°M 213 nm 9.8 g 2h12m 213 nm 8.8 g 2h12m -----

Dist ETE ETA Fuel Wind

213 nm 2h12m

12:10 PM EST

KPDT Eastern Oregon Regional At Pendl...

Direct To Remove from Route Fullscreen More >

Eastern Oregon Regional At... Pendleton, Oregon, US Elevation: 1,497' 6:44 AM 4:34 PM PST

Taxiways FBOs Comments

Info Weather Runway Procedure NOTAM

METAR TAF MOS Winds

KPDT TAF 53m ago

061626Z 0616/0712 36012KT 6SM -RA SCT003 SCT015 OVC040
TEMPO 0616/0618 5SM -RA BR BKN003
FM061800 12006KT 6SM -RA OVC020
FM070200 23007KT P6SM BKN025 OVC040

Forecast Discussion

11:00 AM EST (CURRENT)

VFR

Wind 360° at 12 kts

Visibility 6 sm

NOV 6 12:10 PM EST -54m -49m -44m -39m -34m -29m -24m -19m -14m -9m

Distance to Next 1,852 nm Track Groundspeed 0 kts GPS Altitude 397' Vertical Speed 0 fpm Course Next

Airports Maps Plates Documents Imagery Flights ScratchPads More

- Destination forecast discussion

The screenshot displays a flight planning application interface. At the top, there are navigation icons and a search bar. Below that, a flight plan summary is shown with columns for FROM, TO, HDG, TOTALS, LEG, REMAINING, and ETA. The current flight is from KAST to KPDT, with a heading of 72°M, a distance of 213 nm, and a time of 2h12m. A forecast discussion window is open over the KPDT destination, showing a 5h 16m ago update. The discussion text is as follows:

KPDT Forecast Discussion
AFD PDT 5h 16m ago
AVIATION

12Z TAFS... IFR TO VFR CONDITIONS WILL PREVAIL THROUGH THE PERIOD AS **STORM** SYSTEM IMPACTS THE REGION OVER THE NEXT 24 HOURS, EXCEPT AT SITE YKM WHERE CONDITIONS WILL REMAIN VFR THROUGH THE TAF PERIOD. BANDS OF LIGHT TO MODERATE RAIN WILL CONTINUE TO IMPACT SITES DLS/PDT/RDM/BDN/ALW THROUGH THE MORNING, WITH RAIN STARTING AT SITE PSC AROUND 15Z. SNOW LEVELS LOWERING THROUGH THE PERIOD WILL BRING POTENTIAL MIXED PRECIPITATION IMPACTS TO SITE RDM AND SNOW IMPACTS TO SITE BDN AROUND 00Z. PRECIPITATION WILL END FROM NORTH TO SOUTH, WITH PRECIPITATION ENDING BETWEEN 00Z TO 02Z AT NORTHERN TAF SITES AND 05Z TO 07Z AT SOUTHERN TAF SITES. SITES WILL CONTINUE TO SEE VFR VISIBILITY CONDITIONS THROUGH THE PERIOD, THOUGH VISIBILITY MAY DROP TO MVFR DUE TO PRECIPITATION IMPACTS AT TIMES. CEILINGS AT MOST SITES WILL FLUCTUATE BETWEEN IFR AND VFR CONDITIONS THIS MORNING, AS LOW AS 700FT ABOVE GROUND LEVEL AT TIMES, BUT WILL BEGIN TO LOWER AS COLDER AIR FILTERS INTO THE REGION LATE MORNING AND EARLY AFTERNOON, WITH BKN-OVERCAST CEILINGS BECOMING 1KFT TO 2.5KFT ABOVE GROUND LEVEL. BEHIND FRONTAL PASSAGE, WINDS WILL BECOME WESTERLY AT 7KTS TO 13KTS, BECOMING LESS THAN 7KTS IN THE EVENING. LAWHORN/82

At the bottom of the screen, there is a status bar with various flight metrics: Distance to Next (1,852 nm), Track (-----), Groundspeed (0 kts), GPS Altitude (398'), Vertical Speed (0 fpm), and Course Next (-----). The bottom navigation bar includes icons for Airports, Maps, Plates, Documents, Imagery, Flights, ScratchPads, and More.

Other Screens/Images – Prog Charts

4:09 PM Sat Nov 7

Regions USA

USA Prog Charts

NATIONAL

Featured

CONUS WEATHER

Prog Charts

6 HR Qty of Precipitation

12 HR Prob of Precipitation

Outlook (SIGWX)

Convective Outlooks

Convective Fcst

Extended Convective Fcst

GRAPHICAL AVIATION FORECASTS

CONUS Cloud

CONUS Surface

Northeast Cloud

Northeast Surface

East Cloud

East Surface

Southeast Cloud

Southeast Surface

North Central Cloud

North Central Surface

Latest Surface Analysis

6 HR (Updated at ~1400Z and 0200Z)

12 HR (Updated at ~1400Z and 0200Z)

18 HR (Updated at ~1630Z and 0430Z)

24 HR (Updated at ~1630Z and 0430Z)

30 HR (Updated at ~1930Z and 0730Z)

36 HR (Updated at ~1930Z and 0730Z)

48 HR (Updated at ~1930Z and 0730Z)

60 HR (Updated at ~2000Z and 0800Z)

DAY 3

DAY 4

DAY 5

Airports Maps Plates Documents Imagery Flights ScratchPads More

Other Screens/Images – Category

4:10 PM Sat Nov 7

Close 1 of 3

Pirep/FltCat www.aviationweather.gov 2036 UTC Sat 07 Nov 2020

Flight Category

Now 2110Z

Airports Maps Plates Documents Imagery Flights ScratchPads More

Other Screens/Images – G-AIRMET

4:11 PM Sat Nov 7

Regions USA

USA
Graphical AIRMETs (G-AIRMETs)

WINDS ALOFT

Surface - 12,000 ft

15,000 ft - FL240

FL300 - FL480

ADVISORIES

Graphical AIRMETs

SIGMETs

ICING

Lowest Freezing Level

Icing Probability Analysis

Icing Severity Analysis

Icing Severity > 25%

Icing Severity > 50%

2 HR Icing Severity Fcst

3 HR Icing Severity Fcst

6 HR Icing Severity Fcst

TURBULENCE

1,000 ft - 13,000 ft (CAT)

15,000 ft - FL290 (CAT)

FL310 - FL450 (CAT)

1,000 ft - 13,000 ft (MTW)

15,000 ft - FL290 (MTW)

Sierra (Initial) Sierra (3 HR) Sierra (6 HR)

Sierra (9 HR) Sierra (12 HR) Freezing Level (Initial)

Freezing Level (3 HR) Freezing Level (6 HR) Freezing Level (9 HR)

Freezing Level (12 HR) Zulu (Initial) Zulu (3 HR)

Airports Maps Plates Documents Imagery Flights ScratchPads More

Other Screens/Images – Precipitation

4:10 PM Sat Nov 7

Regions USA

NATIONAL

Featured

CONUS WEATHER

Prog Charts

6 HR Qty of Precipitation

12 HR Prob of Precipitation

Outlook (SIGWX)

Convective Outlooks

Convective Fcst

Extended Convective Fcst

GRAPHICAL AVIATION FORECASTS

CONUS Cloud

CONUS Surface

Northeast Cloud

Northeast Surface

East Cloud

East Surface

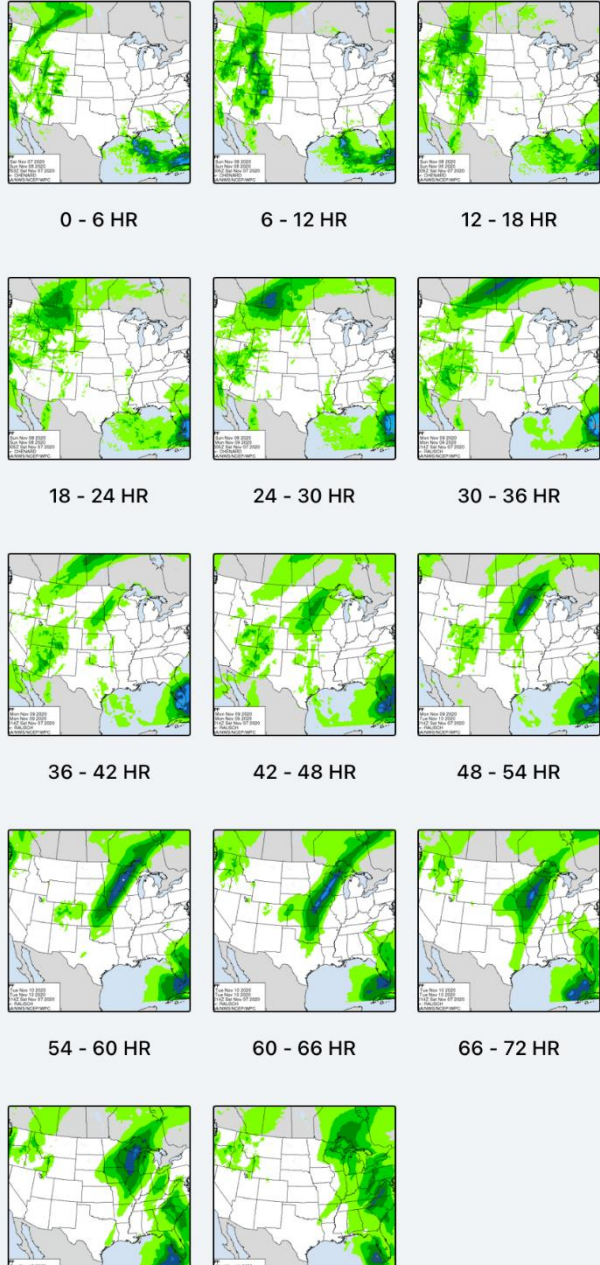
Southeast Cloud

Southeast Surface

North Central Cloud

North Central Surface

USA
6 HR Quantity of Precipitation (QPF)



0 - 6 HR

6 - 12 HR

12 - 18 HR

18 - 24 HR

24 - 30 HR

30 - 36 HR

36 - 42 HR

42 - 48 HR

48 - 54 HR

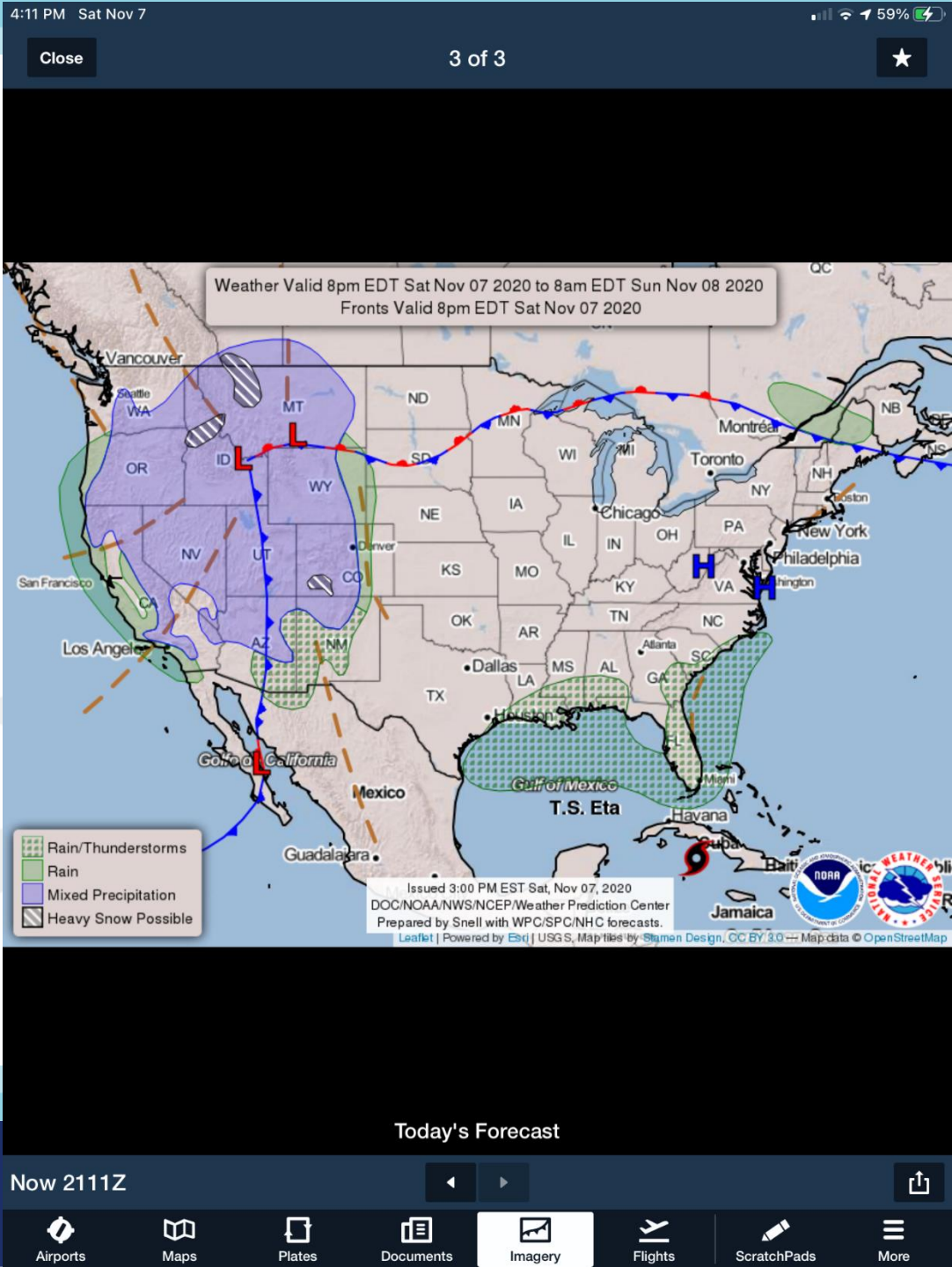
54 - 60 HR

60 - 66 HR

66 - 72 HR

Airports Maps Plots Documents Imagery Flights ScratchPads More

Other Screens/Images – Forecast



Cautions & Tips

- **Don't fixate on the equipment**
 - Cockpit displays don't tell the whole story
 - We still must look outside...we mostly hit things on nice days...
- ***Understand what the displays tell you...***
 - You may not see all the traffic in your area or all the weather ahead
- **Make weather avoidance decisions early**
 - Don't wait till you're close to choose a new route
 - Refine your decisions as more information becomes available
 - Remember to tell ATC



Be Consistent

- **Do the same every time (like with a pre-flight)**
- **Get the big picture first**
- **Then get into progressively more local detail**
- **Then look for trends along the route of flight:**
 - What do the METARS and TAF say?
 - Are they consistent with the forecast or is something changing?



Your Choice, Your Consequences

- **At the end of the day, you, the PIC, must make the No-Go/Go and the Not Continue/Continue decisions**
- **You will live, or not, with the consequences**



Proficiency and Peace of Mind

- Practice may make you perfect and might save your life!
- Fly often with a CFI
- Training is credited
- **WINGS** participation can save you money
 - Insurance discounts
 - Less bent metal!



Next Month's ToM

The National FAA Safety Team Presents

Service Bulletins and the Aircraft Owner

Presented to: WAFC and Friends
By: Stephen Bateman, CFI
Date: September 13th, 2021

Produced by AFS-850
The FAA Safety Team (FAASteam)



Federal Aviation
Administration



Federal Aviation
Administration

Thank you for attending!

**You are vital members of
our GA safety community!**

