



Center Weather Service Unit CWSU ZFW



SAWS 9



Tom Amis CAPT USN (Ret)

Meteorologist in Charge

National Weather Service

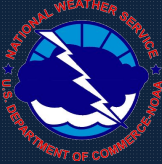
Center Weather Service Unit

Fort Worth Air Route Traffic Control Center

Nov 5/6, 2021



Center Weather Service Unit CWSU ZFW

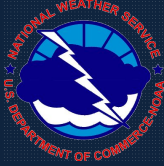


CWSU Operations

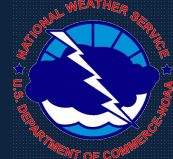
Thinking Like a Meteorologist Planning Like an STMC

DSS Getting the Message of the Day to the Customer

Long Term DSS Days 2-4



CWSU Operations



Traffic Management SPO Telcons

Users: ATCSCC/ARTCCs/TRACONs/Dispatchers/
Airline/CWSU meteorologists

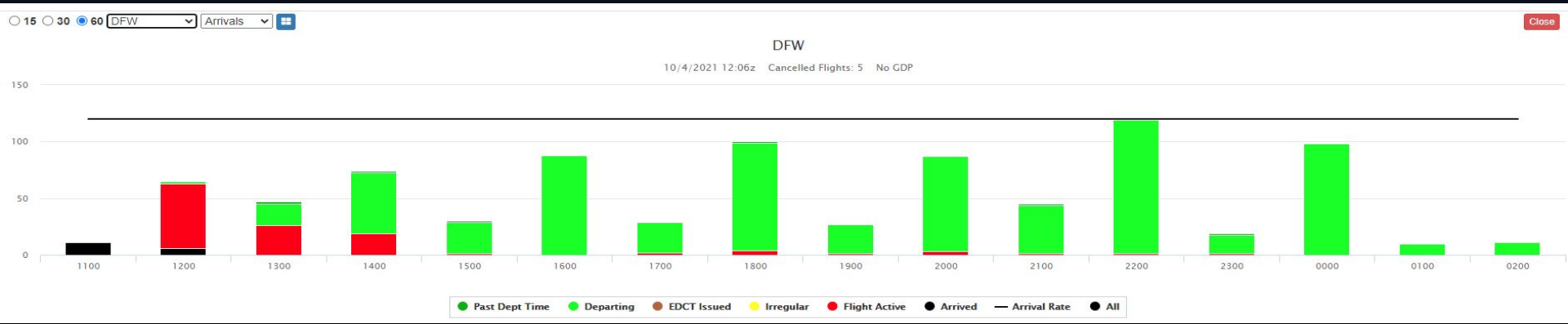
Discuss: Terminal and enroute issues

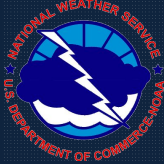
Hours UTC: 10:15
12:15
14:15
16:15
...
02:15

SPOs drive TMI
decision making in
the NAS

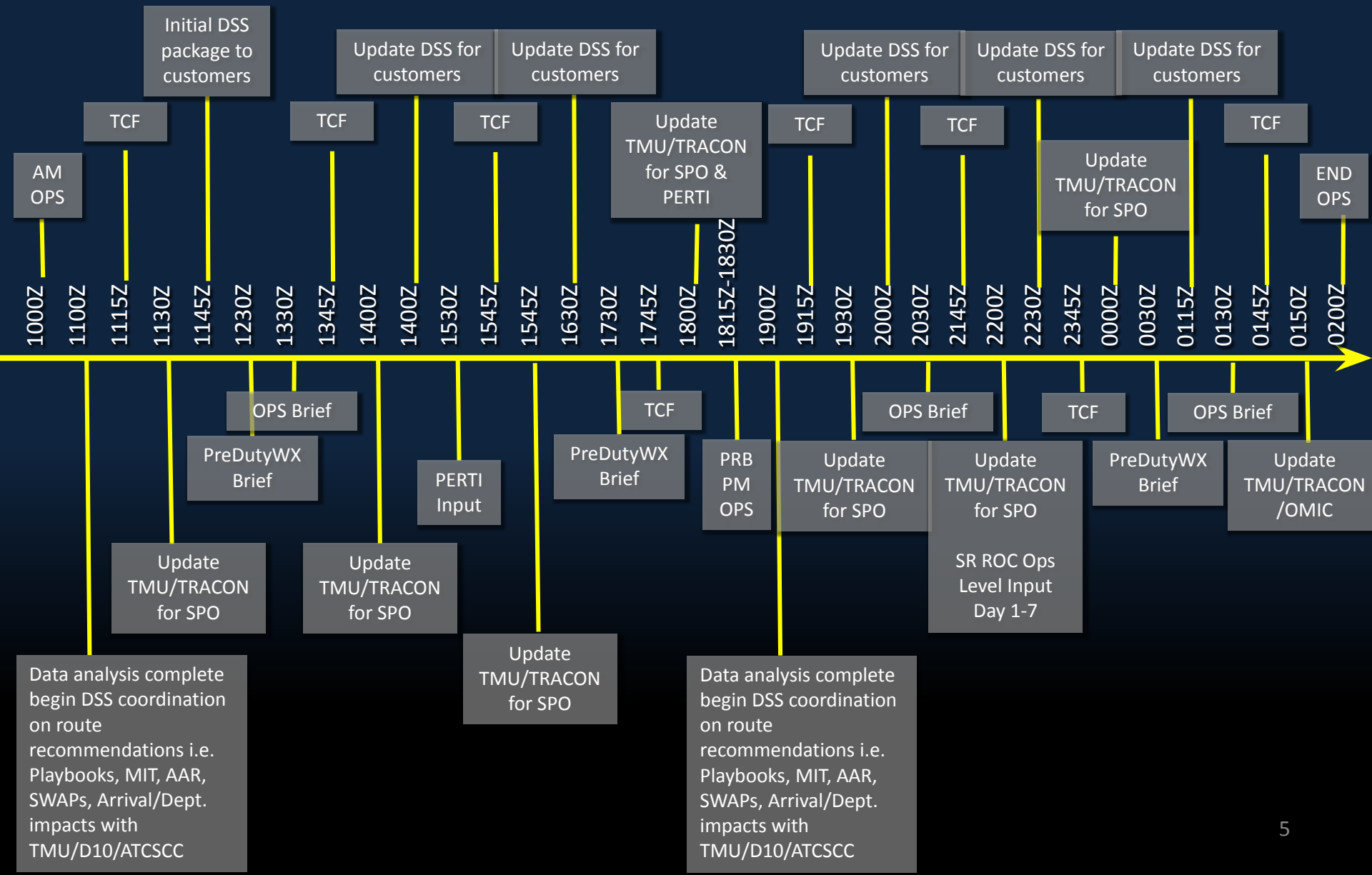
High OPS TEMPO due to convection the
North TX Hotline activated:

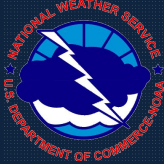
- CWSU frequently asked for input in this scenario
- CWSU becomes a member of the TMU management team co-located with TMU





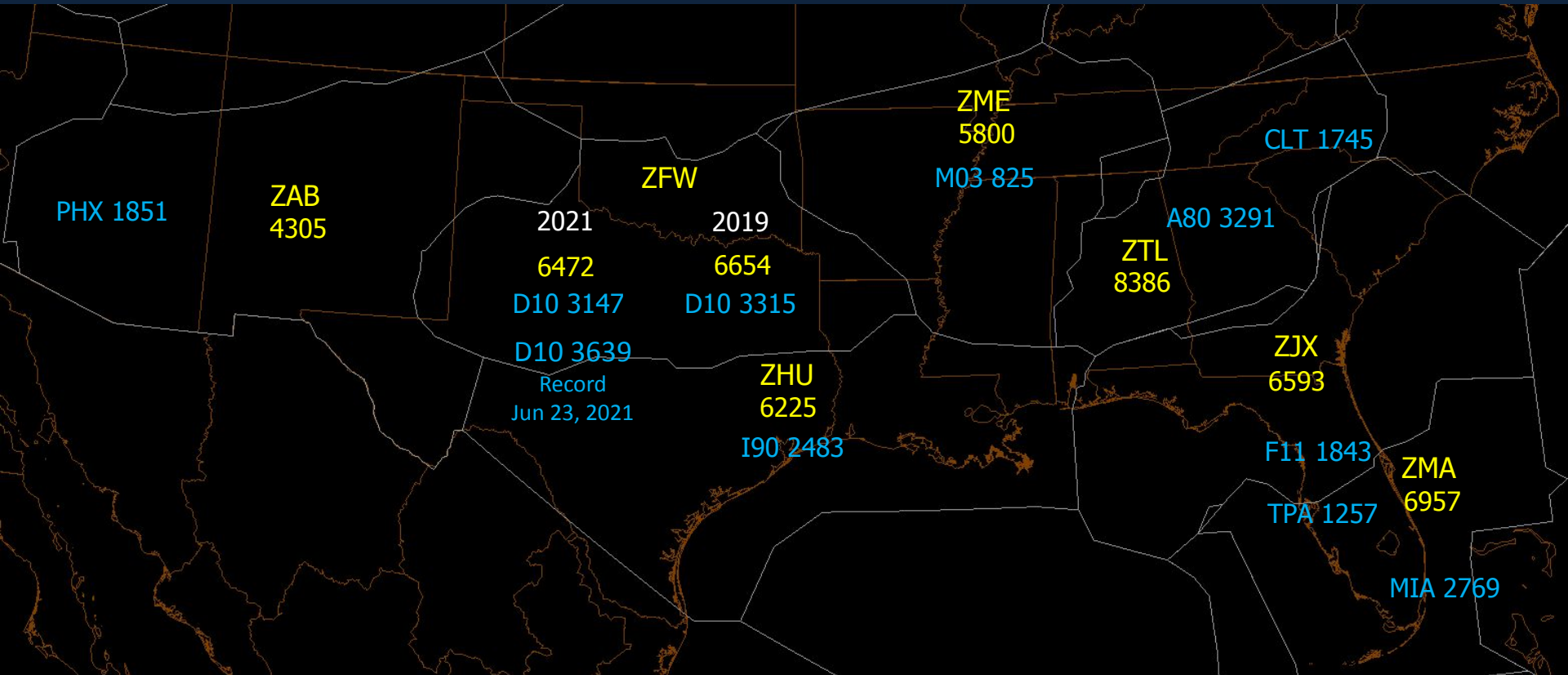
CWSU Operations TEMPO



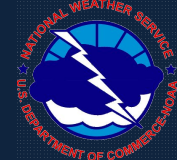


2019 & 2021 Daily Traffic Counts For SR ARTCCs

Average number of daily operations:*



*Source: 2019 7 2021 FAA Air Traffic Activity Data System (ATADS)



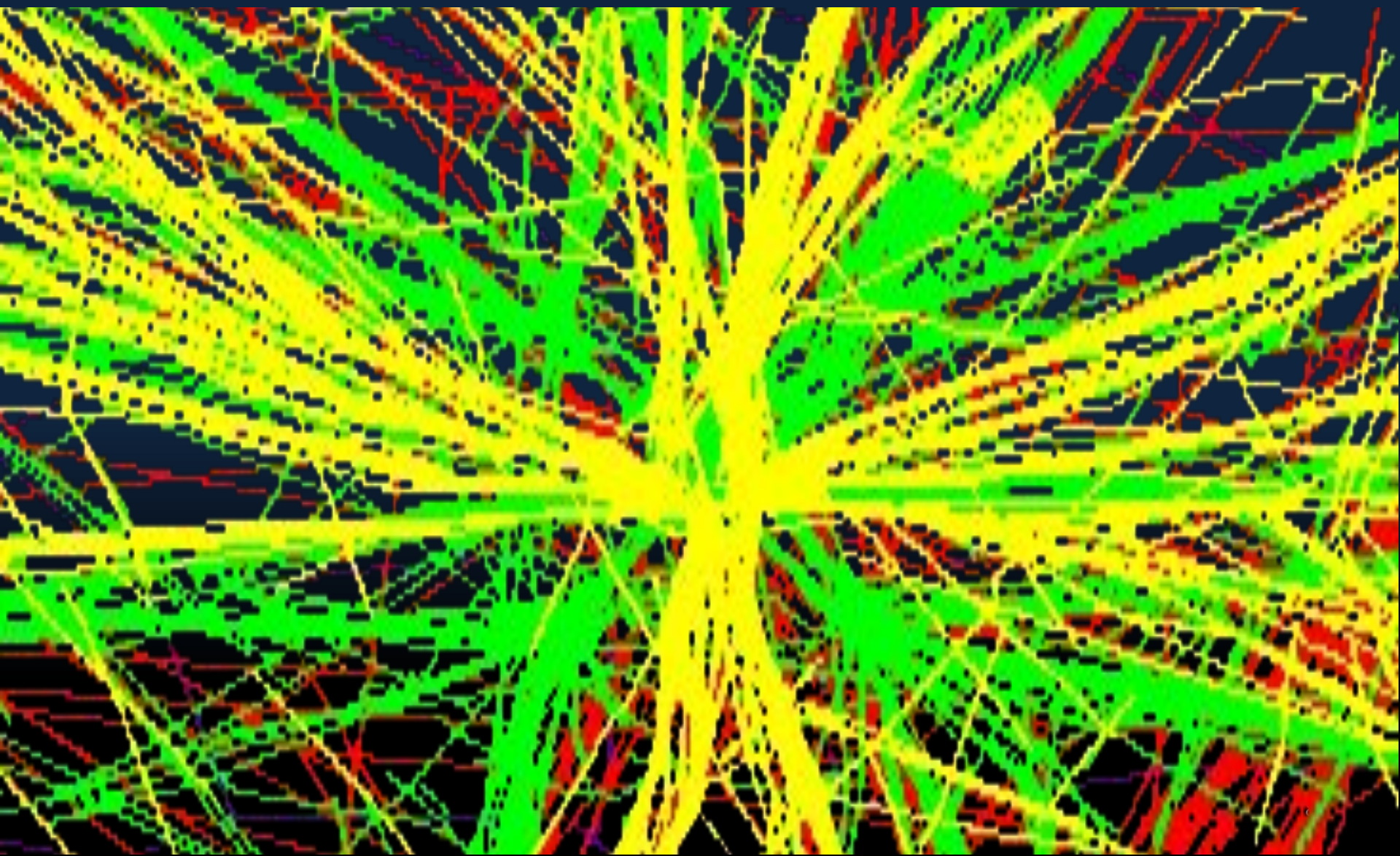
Thinking Like a Meteorologist

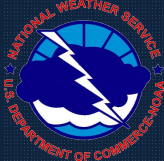
Planning Like a TMU (STMC)

Supervisory Traffic Management Coordinator



Fort Worth ARTCC Typical Flows





UKW

BYP

10NM FAP
S FLOW

20NM

10NM

BASE LEG

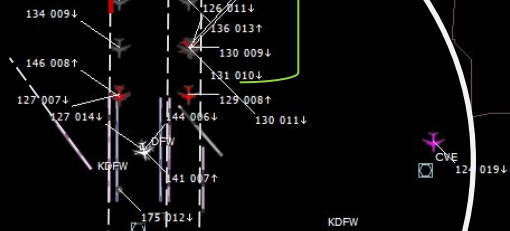
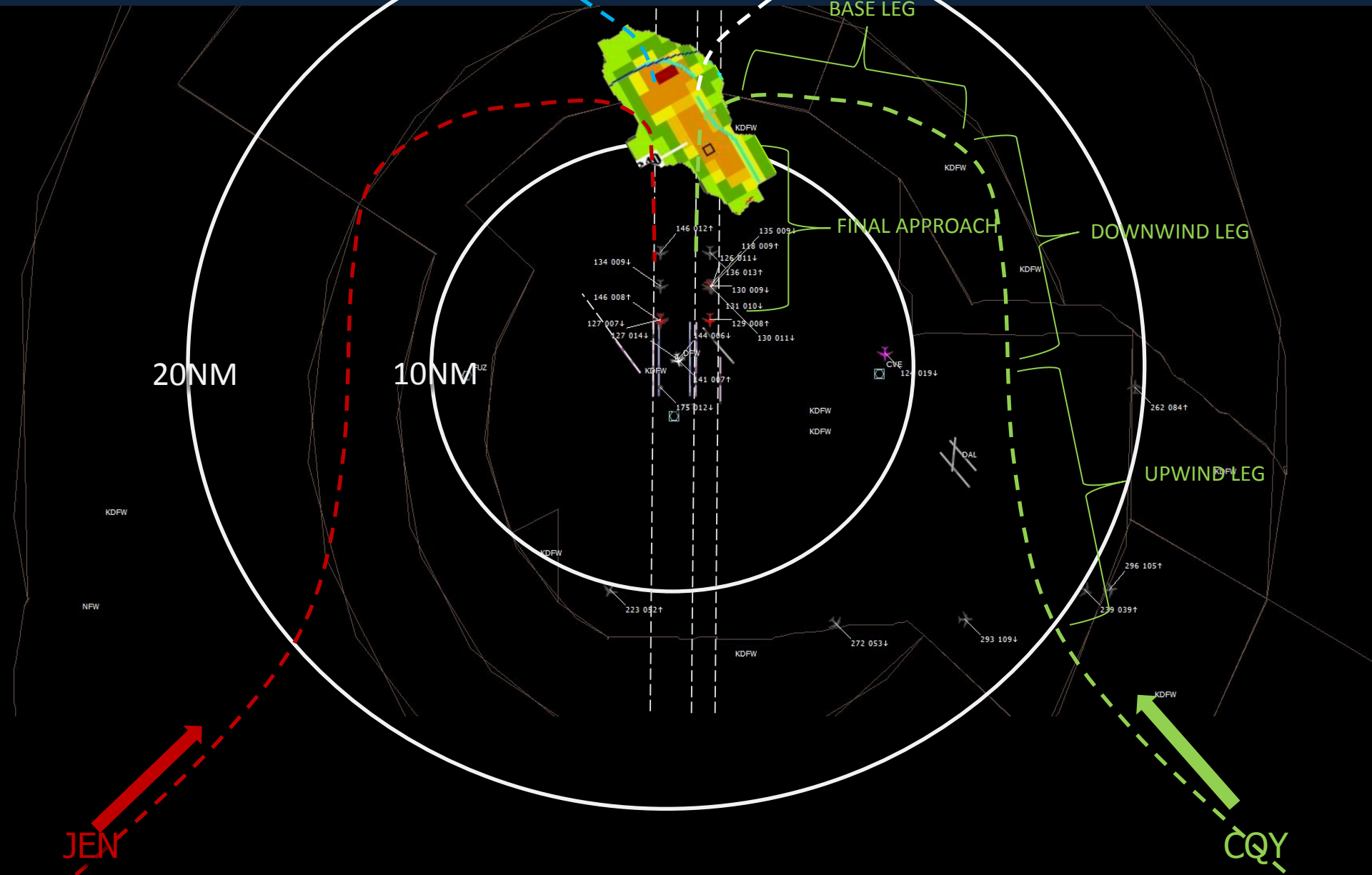
FINAL APPROACH

DOWNWIND LEG

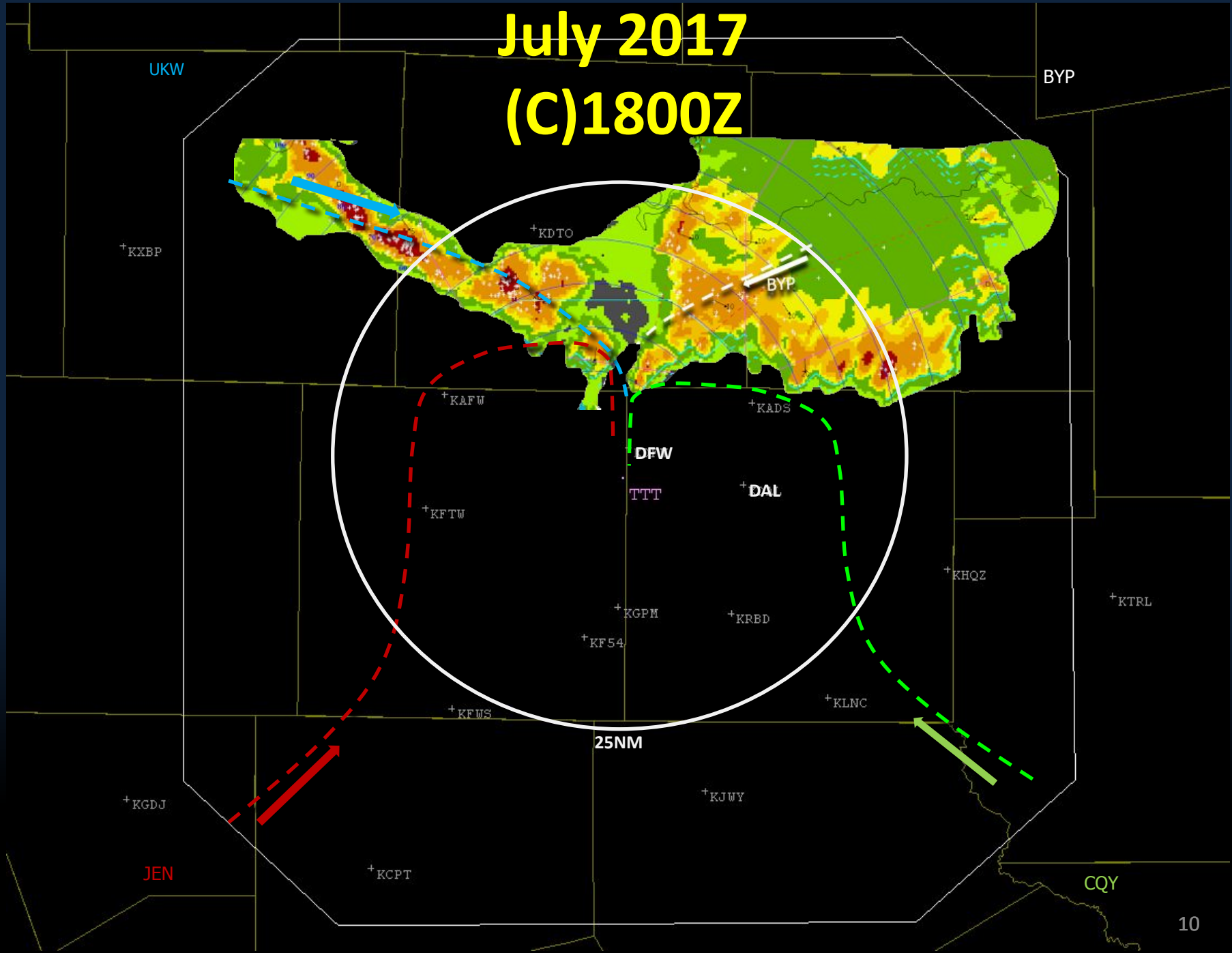
UPWIND LEG

JEN

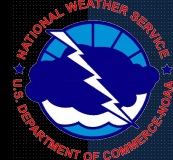
CQY



July 2017 (C)1800Z



Transit Time to DFW North & Central America



If you wait to add VCTS or a TEMPO group until TS are an hour away you have waited too long

- Dispatch and flight maintenance have to load extra holding fuel when TS are expected
- If you are waiting to the last second to add that VCTS remark or TEMPO because you are trying to improve verification then you aren't helping the airline customer or the FAA planners

NAS Operational Web Site Integral to CWSU Operations

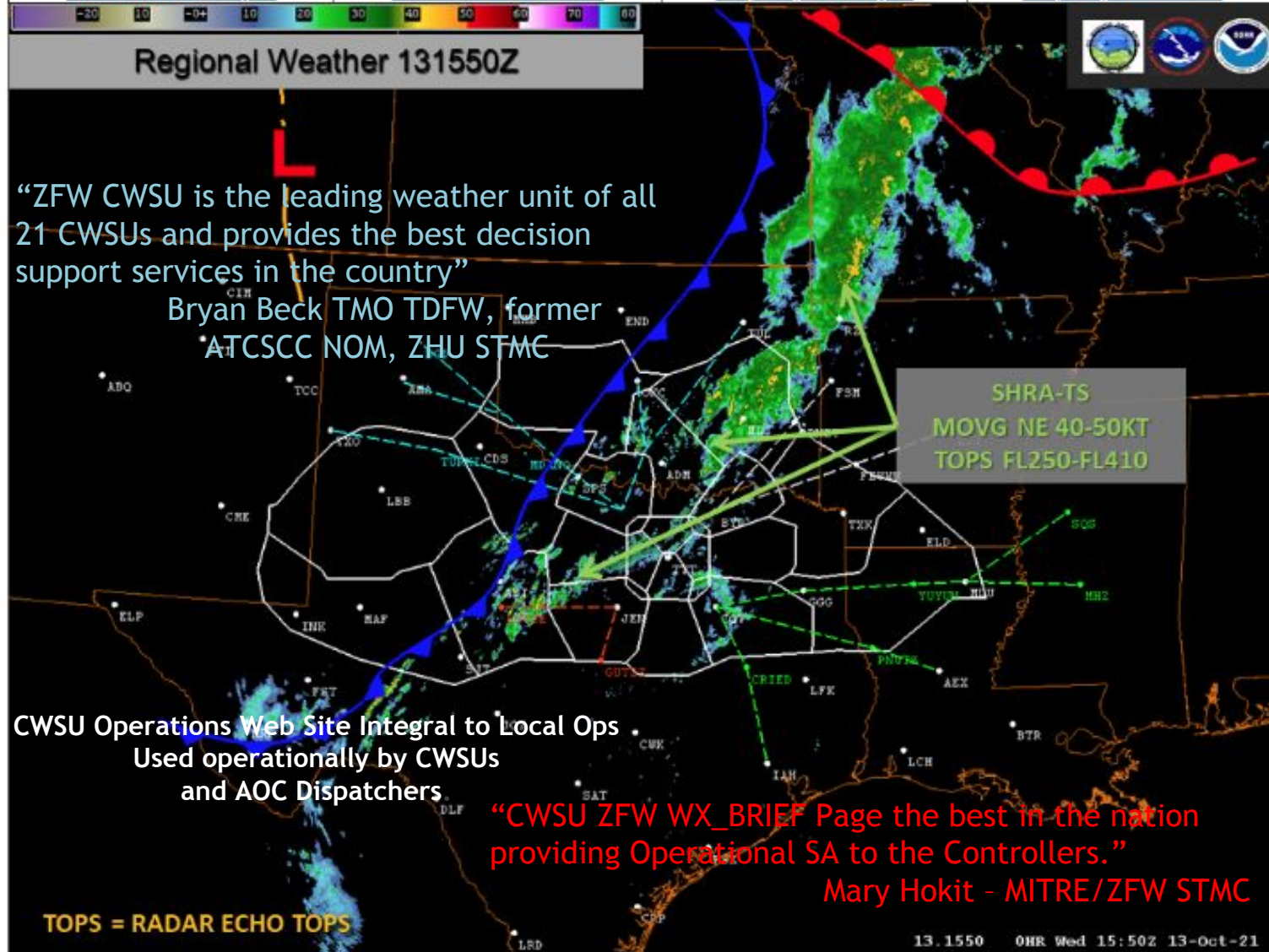


DSS Getting the Message of the Day To Our Customers

| | | |
|-----------------|-----------------------|--------------------|
| TRACON Forecast | D10 TRACON WX Impacts | WFO FWD Discussion |
| AWC CWA | AWC AFDs | WFO FWD |

...SHRA-TS CONTG-DVLPG CNTRL-ERN OK/NCNTRL TX ZFW...

| | | | | | | | | | | | | |
|-----------------------|-----------------|-------------|-----------------------|----------|---------|------------------------|----------|--------------|------------------------|----------|----------|----------|
| Current | Forecast | DFW-Tracon | Arr / Dep | Radar | SAT VIS | SAT IR | TCF 4 HR | TCF 6 HR | TCF 8 HR | SPC Day1 | SPC Day2 | SPC Day3 |
| Jetstream-ZFW | Cornerpost Wind | Compression | Turb High | Turb Low | Icing | Turbulence | Pireps | Icing Pireps | Sigmets--TS | | | |
| VFR-MVFR-IFR Analysis | | | VFR-MVFR-IFR Forecast | | | Pirep Request Analysis | | | Pirep Request Forecast | | | |



“ZFW CWSU is the leading weather unit of all 21 CWSUs and provides the best decision support services in the country”

Bryan Beck TMO TDFW, former ATCSCC NOM, ZHU STMC

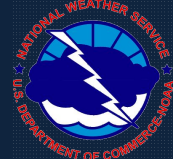
CWSU Operations Web Site Integral to Local Ops
 Used operationally by CWSUs and AOC Dispatchers

“CWSU ZFW WX_BRIEF Page the best in the nation providing Operational SA to the Controllers.”

Mary Hokit - MITRE/ZFW STMC

CWSU ZFW Web Products

www.weather.gov/zfw/zfw_wxbrief



Surface Forecast: Valid 131150Z-132000Z

Corner Post Wind FCST 150 Valid 131710Z-140000Z

ZFW Turbulence FCST & PIREP Request AOA FL180 131515Z-132100Z

ZFW Turbulence FCST & PIREP Request AOB FL180 131515Z-132100Z

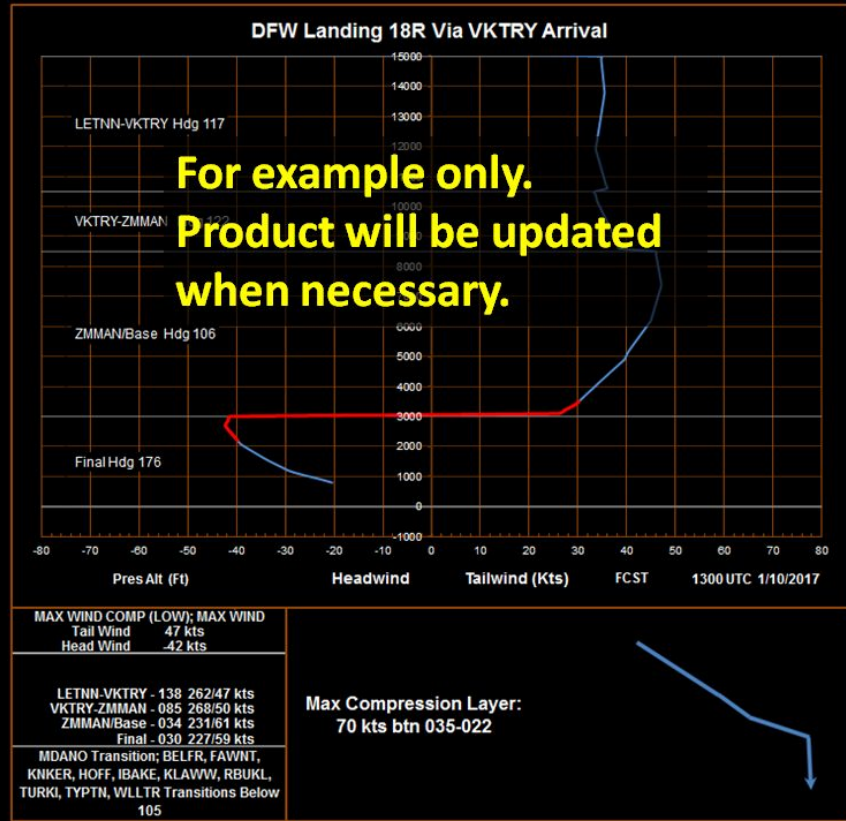
ZFW Icing FCST & PIREP Request 131515Z-132100Z

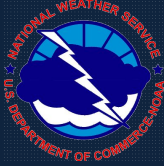
Surface Conditions VFR/MVFR/IFR at 131500Z

Surface Conditions VFR/MVFR/IFR at 132300Z

Ceilings AOB 050 VIS AOB 5SM at 131500Z

Ceilings AOB 050 VIS AOB 5SM at 132300Z





Keeping Up With Operational SA



ZFW CWSU NWSChat Interaction

NWSChat Live

Map Panel

Map Valid: 5:40 PM Tools Opacity

Layers Control

- Base Layer
- Blank
- ESRI Topo
- Satellite
- GOES Water
- GOES West V
- GOES East V
- GOES Visible
- GOES IR
- Precip/RADAR
- NMQ Q2 3 Dc
- NMQ Q2 2 Dc
- NMQ Q2 1 Dc
- NMQ Q2 1 Hc
- NEXRAD Bas
- NMQ Hybrid

Help All Chats awcchat awc_nam zabchat **zfwchat** zhuchat zkcchat zmechat ztlchat fwdchat sr-roc awc_nas_impacts

Clear Room Log Print Log View As HTML Hide NWSBot Mute Sounds A A

Message

(5:22 PM) nws-zfw-doug.reno: also...exp easterly winds by 10-11z w/ spds 6-7kts...

(5:22 PM) nwsfwd-eric.martello: What concerns me is the east-southeast (though light) surface-925mb flow with IFR/LIFR cigs already residing across E TX.

(5:22 PM) nwsfwd-eric.martello: overnight

(5:23 PM) nws-zfw-doug.reno: I think we'll see the vfr/mvfr cutoff line not move too much more acrs ern TX ovngt. as bndry lyr winds bcm more easterly/sely...exp hier dwpts to advect wnwwd pre-dawn/early sun am.

(5:23 PM) nwsfwd-eric.martello: I won't go too overboard, but do think some restrictions to VSBY and lowering cigs to IFR and sooner appears prudent at this time, especially after some rains and the light E winds overnight, not to mention a cool near surface layer.

(5:24 PM) nwsfwd-eric.martello: Ok...

(5:24 PM) nws-zfw-doug.reno: copy that. current vosh arnd 18z probably ok atm.

(5:24 PM) nwsfwd-eric.martello: Sounds good. Got 15 mins to get these out, so I better roll. I'll try to get ya some wrktafs if possible.

(5:24 PM) nws-zfw-doug.reno: OK...thanks.

(5:44 PM) nwsfwd-eric.martello: Well, I stayed as conservative and delayed as possible, but think the overnight through mid morning will see some patchy dense or thick fog and periods of IFR, with possible TEMPO LIFR at Waco around daybreak. I may not have started soon enough at Waco per progs, but will watch and adjust as necessary on the 03z AMDs and 06z issuance. I wouldn't be surprised to see a Dense Fog Advisory for parts of the area issued on the mid shift.

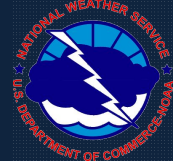
9 people in room

- aviation-david blake
- aviation-SWA-barbara e.bec
- nws-MIC-ZFW-thomas amis
- nws-zfw-doug.reno
- nws-zhu.Andy McNeel
- nws-ZME-nick uebelhor
- nwsbot
- nwsfwd-eric.martello
- nwsfwd-matt.stalley

Chatroom Bookmarks

Chatrooms

Send



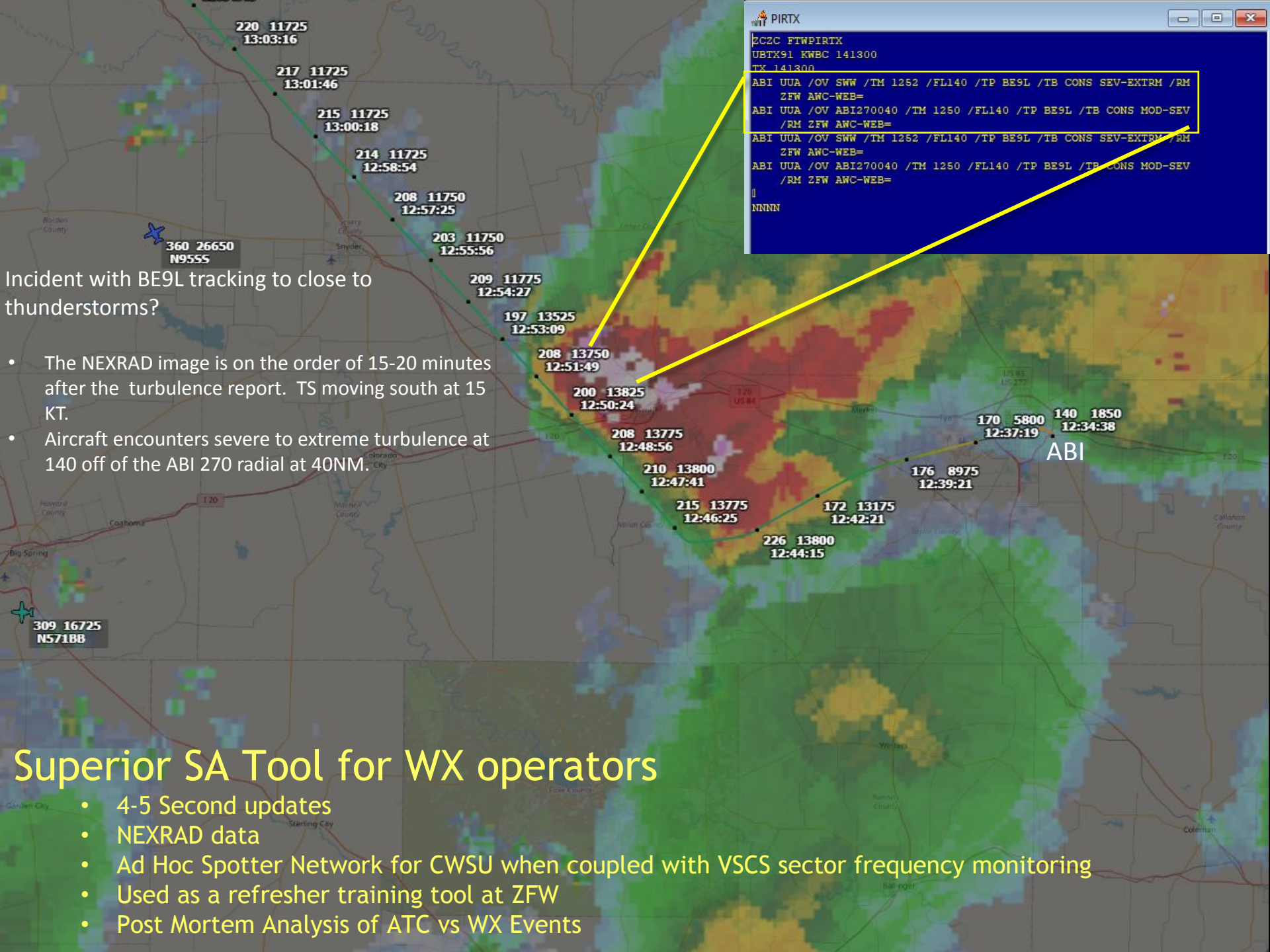
CWSU-WFO-ATCSCC-Airline Coordination

ZFW FCST DISCUSSION: STG SWLY FLO IN LWR LVLS AHD OF STG CDFNT MOVG INTO ZFW FRI. CURRENTLY A SFC TROF EXTNDS FM LO IN WRN KS-SW TX. STG SWLY FLO IN LWR LVLS ADVECTING MVFR CIGS ACRS THE CNTRL AND ERN PTNS OF ZFW. EXPC MVFR CONDS TO IMPROVE FM WRN EDGE OVR ERN OK-N CNTRL TX BCMG MSTLY VFR 21-00Z. EXPC MVFR/IFR TO DVLP AGAIN OVERNIGHT MSTLY E OF FSM-DFW-SJT LN WITH IFR CONDS MSTLY NE TX-AR/LA.

CDFNT FIRST MOVG INTO WRN OK ARND 03Z AND BY 12Z EXTENDING ALG A LIT-DFW-SJT LN. LO LVL MSTR WL BE LIMITED WITH SWLLY FLOW BUT COULD SEE MVFR CONDS DVLP AGAIN IN THE MOIST AND WRM AIRMASS. SOME OVRNG BHD CDFNT WITH MSTLY VFR CONDS ACRS OK AND NW TX AND CONDS IMPRG AFT 15-18Z BHD CDFNT OVR ERN OK/N CNTRL TX. MVFR CONDS CONTG SE PTNS ZFW AFT 18Z.

PCPN WISE AIRMASS FAIRLY STBL. HOWEVER HI RESOLUTION MODELS DVLP SCT SHRA NE-SW ACRS OK AND BY 12Z FRI BLD BACK INTO NW TX VC SPS-LBB

Moved to NWSChat on 09/17



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PIRTX
ZCZC FTWPRTX
UBTX91 KWBC 141300
TX 141300
ABI UUA /OV SWW /TM 1252 /FL140 /TP BE9L /TB CONS SEV-EXTRM /RM
ZFW AWC-WEB=
ABI UUA /OV ABI270040 /TM 1250 /FL140 /TP BE9L /TB CONS MOD-SEV
/RM ZFW AWC-WEB=
ABI UUA /OV SWW /TM 1252 /FL140 /TP BE9L /TB CONS SEV-EXTRM /RM
ZFW AWC-WEB=
ABI UUA /OV ABI270040 /TM 1250 /FL140 /TP BE9L /TB CONS MOD-SEV
/RM ZFW AWC-WEB=
NNNN
  
```

Incident with BE9L tracking to close to thunderstorms?

- The NEXRAD image is on the order of 15-20 minutes after the turbulence report. TS moving south at 15 KT.
- Aircraft encounters severe to extreme turbulence at 140 off of the ABI 270 radial at 40NM.

Superior SA Tool for WX operators

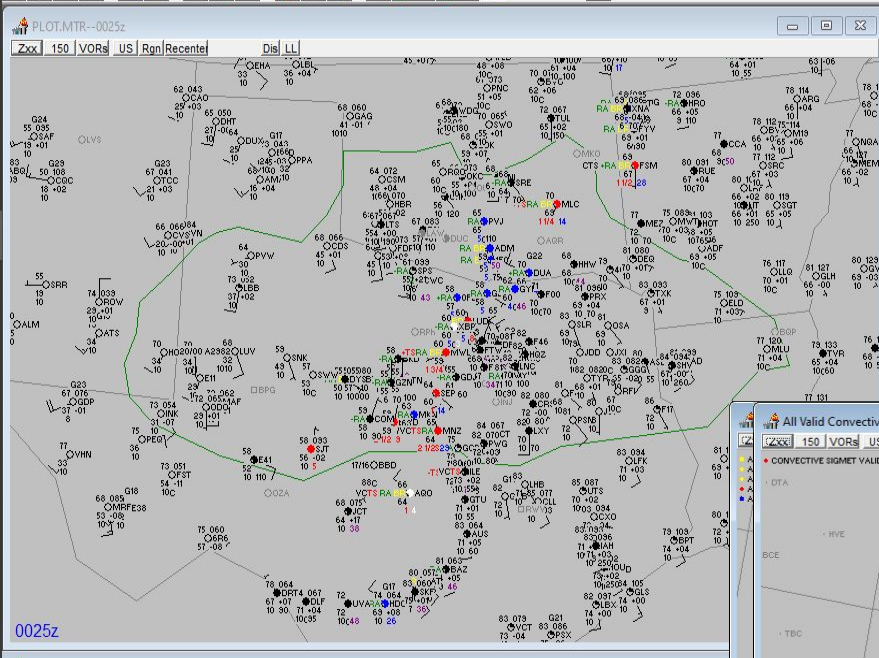
- 4-5 Second updates
- NEXRAD data
- Ad Hoc Spotter Network for CWSU when coupled with VSCS sector frequency monitoring
- Used as a refresher training tool at ZFW
- Post Mortem Analysis of ATC vs WX Events



CWSU ZFW Developed SA Program: Plotter

Plotter 99

File Edit Options Plotter Window Help



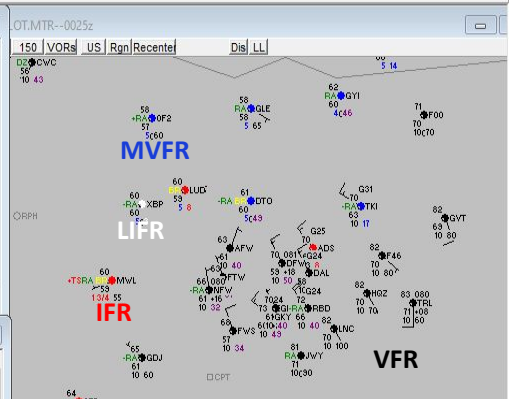
MAVDWF

ZCZC FTNMAVDWF
FOUS24 KDFW 131800
KDFW GFS MOS GUIDANCE 10/13/2021 1800 UTC

| DT / OCT 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 00 | 03 | 06 | 09 | 12 | 15 | 18 | 21 | 00 | 03 | 06 | 09 | 12 | 15 | 18 | 21 |
|-------------|-------|-----|------|------|------|------|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|
| HR | 00 | 03 | 06 | 09 | 12 | 15 | 18 | 21 | 00 | 03 | 06 | 09 | 12 | 15 | 18 | 21 | 00 | 03 | 06 | 09 | 12 | 15 | 18 |
| N/A | | | | | | | | | | | | | | | | | | | | | | | |
| TMP | 76 | 72 | 70 | 69 | 68 | 72 | 79 | 82 | 79 | 75 | 72 | 67 | 64 | 69 | 76 | 77 | 70 | 65 | 59 | 63 | 73 | | |
| DPT | 67 | 66 | 65 | 66 | 66 | 68 | 69 | 68 | 69 | 68 | 65 | 61 | 57 | 56 | 50 | 44 | 43 | 43 | 42 | 40 | | | |
| CLD | OV | OV | OV | OV | OV | BK | BK | FW | CL | FW | CL | CL | CL | CL | CL | CL | CL | CL | CL | | | | |
| WDR | 28 | 34 | 12 | 14 | 17 | 19 | 15 | 16 | 16 | 13 | 20 | 26 | 32 | 33 | 34 | 35 | 35 | 34 | 36 | | | | |
| WSF | 10 | 05 | 07 | 08 | 09 | 10 | 08 | 09 | 08 | 09 | 08 | 13 | 17 | 18 | 16 | 05 | 08 | 06 | 07 | | | | |
| R06 | | | | | | | | | | | | | | | | | | | | | | | |
| R12 | | | | | | | | | | | | | | | | | | | | | | | |
| Q06 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| Q12 | | | | | | | | | | | | | | | | | | | | | | | |
| T06 | 48/19 | 8/4 | 1/11 | 3/15 | 6/16 | 4/3 | 0/3 | 0/3 | 2/5 | 0/0 | 0/2 | | | | | | | | | | | | |
| T12 | | | | | 9/12 | 6/19 | 4/7 | 2/7 | 2/7 | 0/3 | | | | | | | | | | | | | |
| PO2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 1 | 1 | 0 | 0 | 2 | 2 | 1 | 0 | | | | |

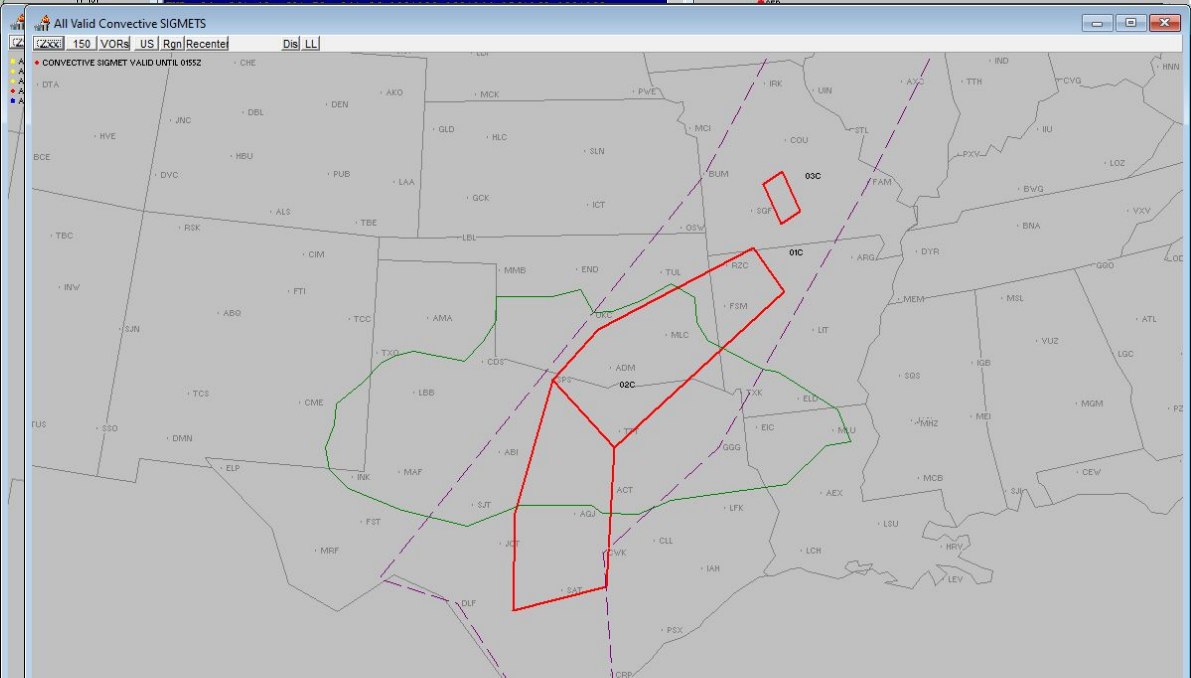
MEXDWF

ZCZC FTNMXDWF
FEUS24 KDFW 131200
KDFW GFS MOS GUIDANCE 10/13/2021 1200 UTC



0025z

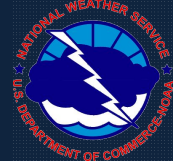
| 00Z KDFW | 323532 | 70/69 | 33014KT | 10SM | SCT032 | SCT042 | BKN050 | BKN150 | OVC200 | 21/15 | A2975 | RMK | A02 | LTC | DSNT |
|----------|--------|-------|------------|---------|--------|--------|--------|--------|--------|-------|-------------|--------|--------------|------------|----------|
| 01Z KDFW | 323332 | 71/64 | 31017G24KT | 10SM | SCT008 | BKN013 | OVC070 | 22/18 | A2980 | RMK | A02 | LTC | DSNT | NW | 1021701 |
| 02Z KDFW | 323122 | 73/69 | 30016G21KT | 10SM | SCT006 | BKN046 | BKN070 | BKN150 | OVC170 | 23/21 | A2979 | RMK | A02 | LTC | D |
| 23Z KDFW | 322532 | 73/70 | 36004KT | 10SM | SCT060 | BKN090 | BKN140 | OVC160 | 23/21 | A2975 | RMK | A02 | RAE2155 | SLP063 | |
| 22Z KDFW | 321532 | 74/69 | 01006KT | 10SM | -RA | FEW008 | BKN038 | OVC070 | 23/21 | A2973 | RMK | A02 | RAE14828 | SLP058 | P0 |
| KDFW | 321242 | 73/69 | 01006KT | 10SM | FEW008 | BKN039 | OVC090 | 23/21 | A2974 | RMK | A02 | RAE21 | P0000 | T02280206 | |
| 21Z KDFW | 320532 | 73/68 | 36008KT | 10SM | -RA | FEW010 | BKN036 | OVC042 | 23/20 | A2974 | RMK | A02 | RAE1822852 | SLP062 | |
| 20Z KDFW | 319532 | 77/68 | 31012G24KT | 280V350 | 10SM | FEW020 | BKN033 | OVC050 | 25/20 | A2974 | RMK | A02 | RAE2155 | SLP063 | WSHF |
| KDFW | 319412 | 78/68 | 34011G17KT | 10SM | FEW020 | BKN033 | OVC050 | 26/20 | A2974 | RMK | A02 | LTC | DSNT | NW | WSHF 3 |
| 19Z KDFW | 318832 | 87/71 | 20018G27KT | 10SM | BKN030 | BKN055 | BKN250 | 31/22 | A2975 | RMK | A02 | PK | WND | 19027/1850 | L |
| 18Z KDFW | 317532 | 85/72 | 18014KT | 10SM | FEW024 | SCT050 | BKN180 | BKN250 | 29/22 | A2978 | RMK | A02 | PK | WND | 20026/17 |
| KDFW | 317282 | 85/72 | 20018KT | 10SM | SCT024 | BKN050 | BKN180 | BKN250 | 29/22 | A2979 | RMK | A02 | PK | WND | 20026/17 |
| 17Z KDFW | 316532 | 83/72 | 18015G24KT | 10SM | SCT022 | BKN026 | BKN046 | OVC200 | 28/22 | A2980 | RMK | A02 | RAE1559B2683 | | |
| 16Z KDFW | 315832 | 80/72 | 15014G21KT | 10SM | -RA | BKN022 | OVC027 | 27/22 | A2982 | RMK | A02 | RAE48 | SLP091 | P0000 | T0 |
| 15Z KDFW | 314532 | 79/72 | 20012G24KT | 10SM | BKN021 | OVC027 | 26/22 | A2982 | RMK | A02 | RAE00B38E47 | PRESRR | SLP095 | | |
| 14Z KDFW | 313532 | 77/72 | 18013KT | 10SM | -RA | BKN020 | OVC028 | 25/22 | A2980 | RMK | A02 | RAE21 | P0000 | T00500 | |
| 13Z KDFW | 312532 | 78/71 | 17017G25KT | 10SM | BKN020 | BKN045 | BKN170 | 26/22 | A2976 | RMK | A02 | PK | WND | 17031/1101 | S |
| 12Z KDFW | 312372 | 78/71 | 17019G28KT | 10SM | BKN020 | BKN045 | BKN180 | 26/22 | A2976 | RMK | A02 | PK | WND | 17031/1101 | B |
| 11Z KDFW | 311532 | 78/71 | 18018G32KT | 10SM | SCT020 | BKN042 | BKN250 | 26/22 | A2976 | RMK | A02 | PK | WND | 17033/1120 | S |
| KDFW | 311402 | 78/71 | 18020G30KT | 10SM | SCT022 | BKN042 | 26/22 | A2977 | RMK | A02 | PK | WND | 17033/1120 | T0256021 | |
| 11Z KDFW | 310532 | 78/71 | 17016G27KT | 10SM | BKN023 | OVC030 | 26/22 | A2976 | RMK | A02 | PK | WND | 18030/1032 | SLP068 | T |
| 10Z KDFW | 309532 | 79/71 | 18017G27KT | 10SM | BKN024 | BKN031 | OVC038 | 26/22 | A2977 | RMK | A02 | PK | WND | 17034/0926 | S |



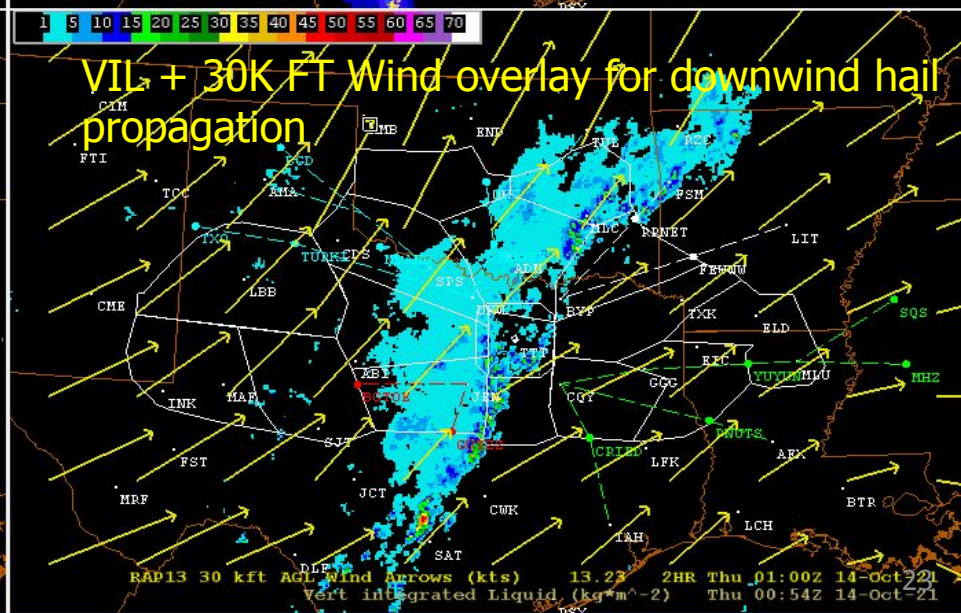
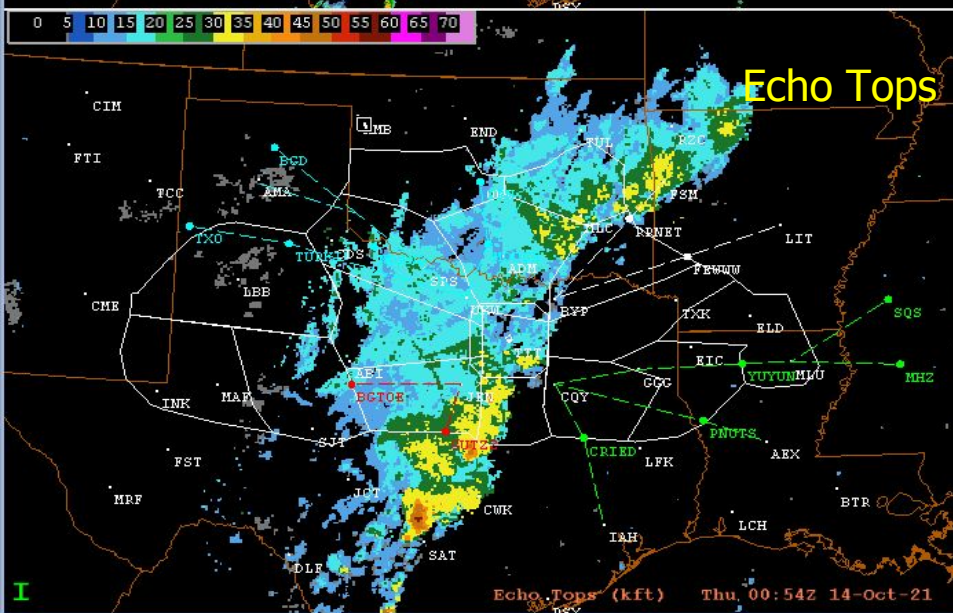
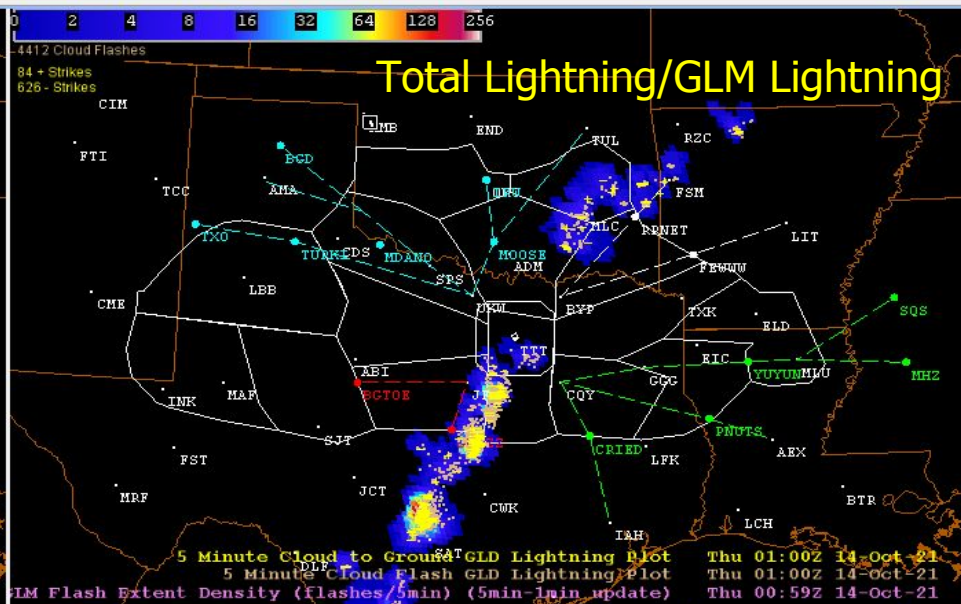
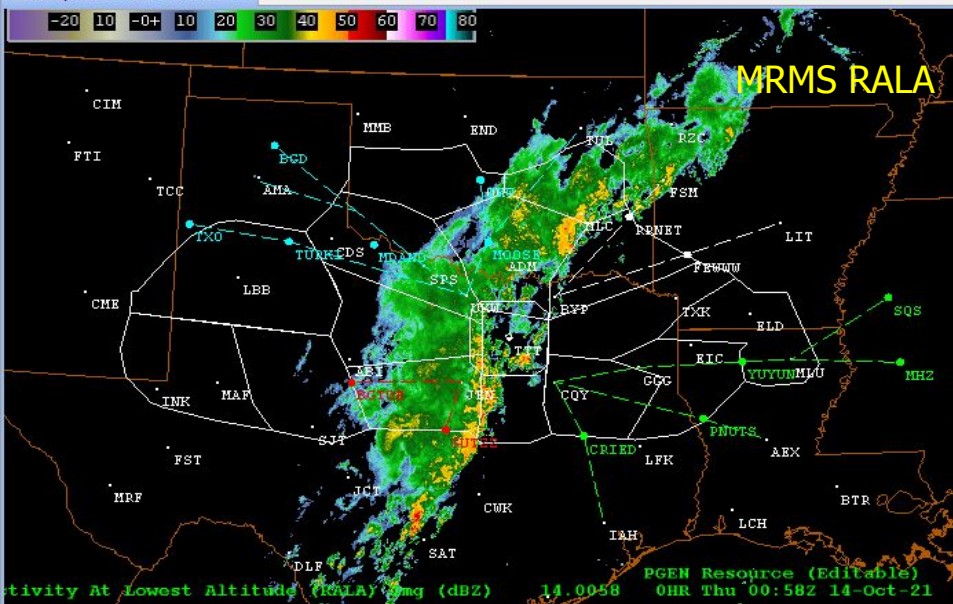
press <Alt Space> to close - or <Ctrl Space> to close all



ZFW Traffic Management Unit AWIPS SA Monitor



_Maps_ZFWHI_VOR_RNAV





CWSU Long Term DSS Days 2-4



Weather Impacts for Friday Apr 23, 1800Z

CWSU National Weather Service Fort Worth (ZFW)



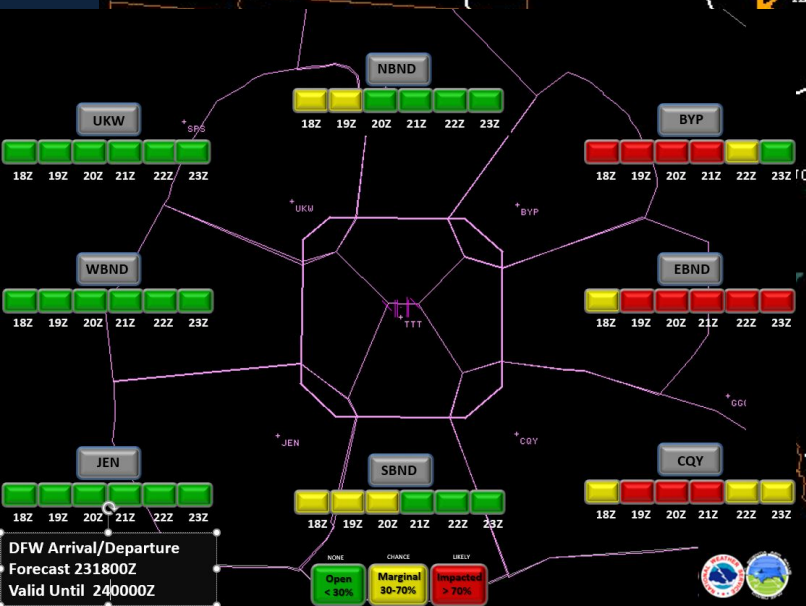
DVLPG EMBD
SHRA/TS
TOPS FL250 - FL350

Impacts ZFW:

- BKN LN TS DVLPG ERN ZFW
- Arrival Impacts BYP/CQY
- Departure Impacts N/E/S
- ICING
- TURB Convective & Jetstream
- Expect significant TMI for ERN ZFW

Impacts D10:

- DVLPG EMBD TS on ERN boundary of D10/ZFW
- South Flow
- IFR



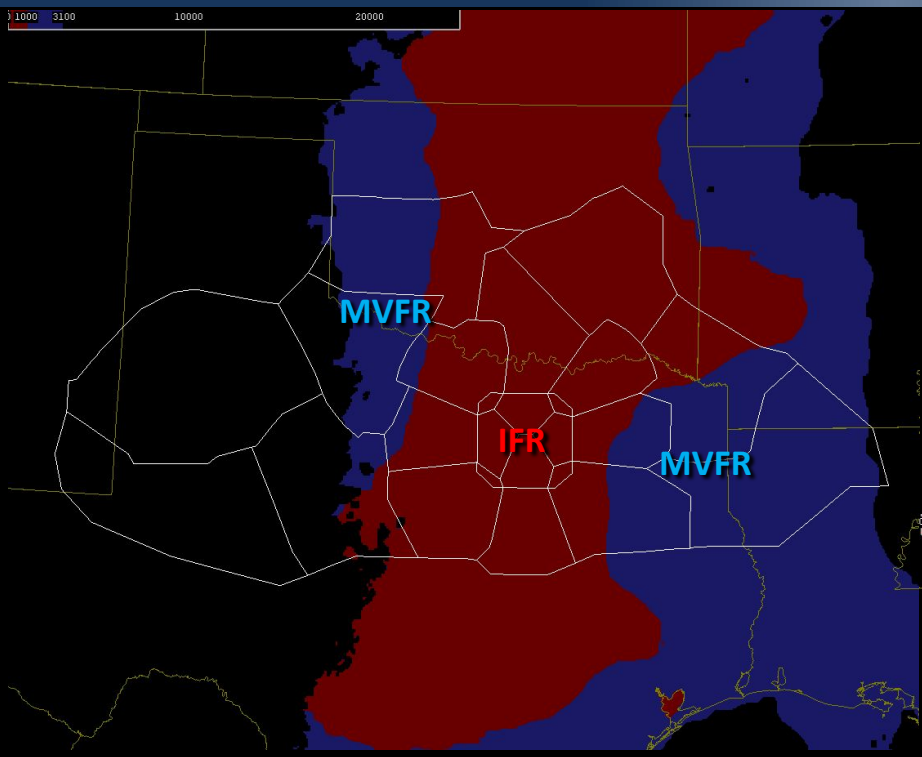
DFW Arrival/Departure
Forecast 231800Z
Valid Until 240000Z



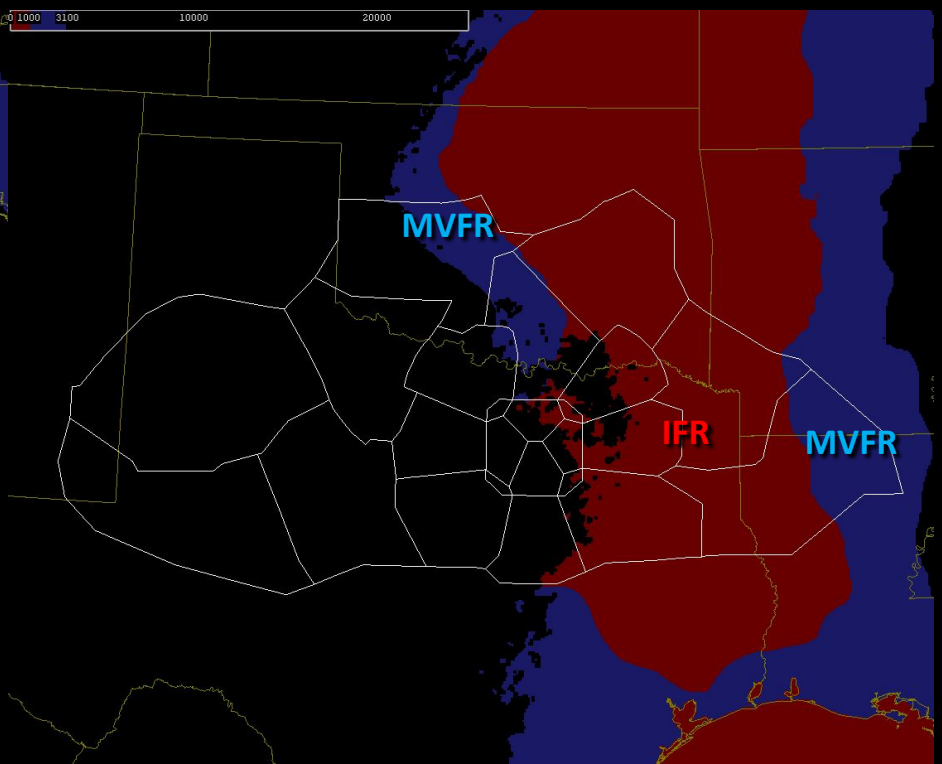


Weather Impacts for MVFR/IFR

CWSU National Weather Service Fort Worth (ZFW)



Friday Apr 23, 1800Z



Saturday Apr 24, 0000Z

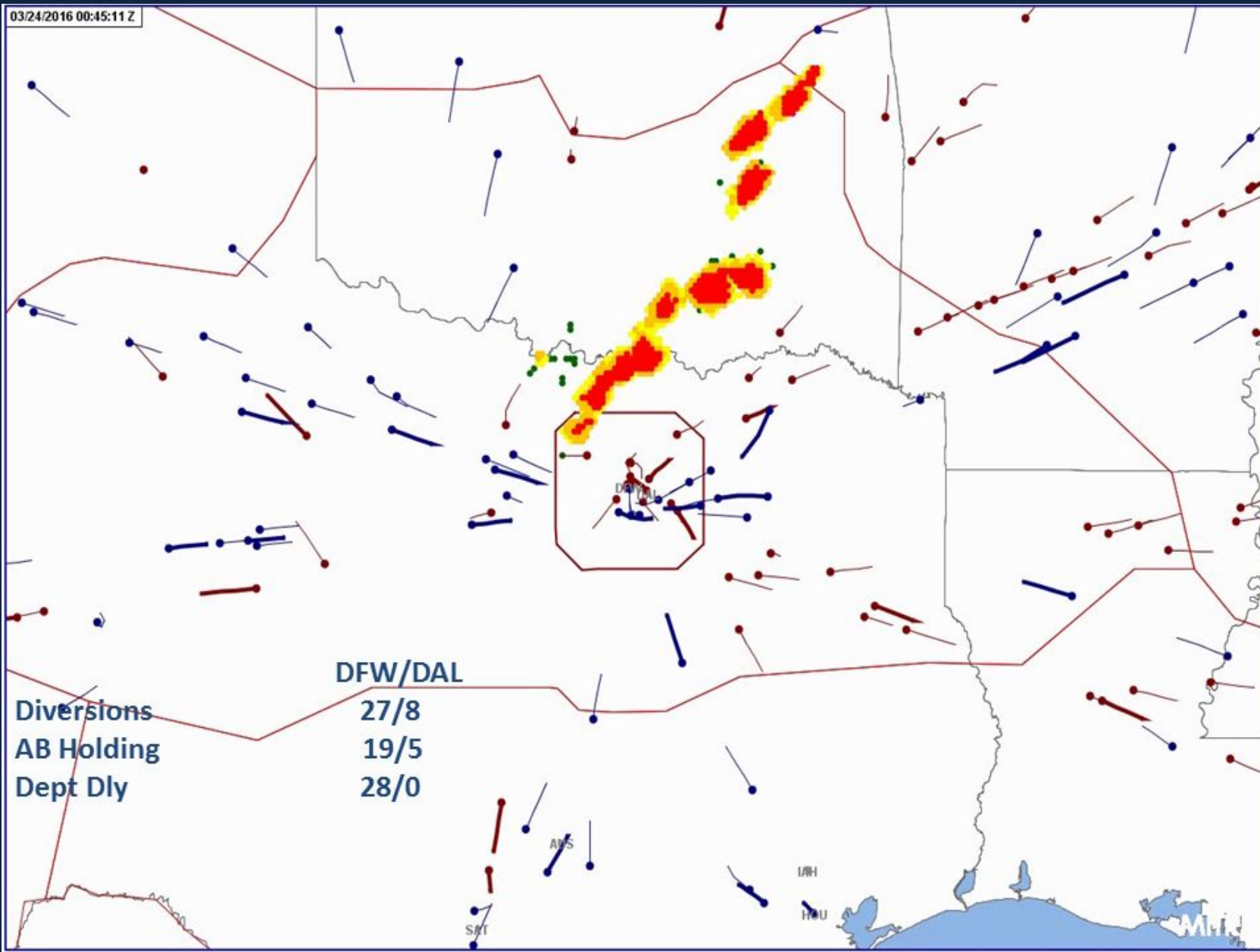
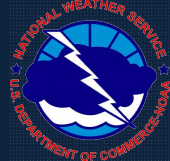
Legend

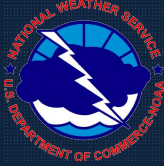
Red = IFR

Blue = MVFR



Low End TS Event Mar 24, 2016





Questions?