

Weather Package for:

DL2763

ATL-AVL

Flight Date: April 2, 2024

Operated on: April 3, 2024

Meteorology Summary: Flight reported injury at 1138z. No EDR or pilot reports in flight history, but we received an ATC PIREP of same aircraft type, similar time and altitude as DL2763. We have assumed this PIREP was reported to ATC by our flight. The PIREP was from 1140z and indicated moderate turbulence on descent between 11,000-8,000FT. The turbulence appears to be caused by windshear in an upper front. There was not a TP out for these altitudes or location. The TP for this upper front was further west and at higher altitudes. This event is considered a miss by Meteorology. Automated turbulence on Widget Weather indicated the risk for light-moderate turbulence.

Location, ACARS and ATC PIREP

Flight Aware Altitude:

1134z 11,075FT

1135z: 9,975FT

1138z: 8,450FT

ACARS:

03APR1138 000000 A80

QU ATLDDDL

.DDLXCXA 031138

A80

FI DL2763/AN N899AT

DT DDL AVL 031138 M22A

- 3401/02 KATL/KAVL .N899AT

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PARAMEDICS MEET US AT

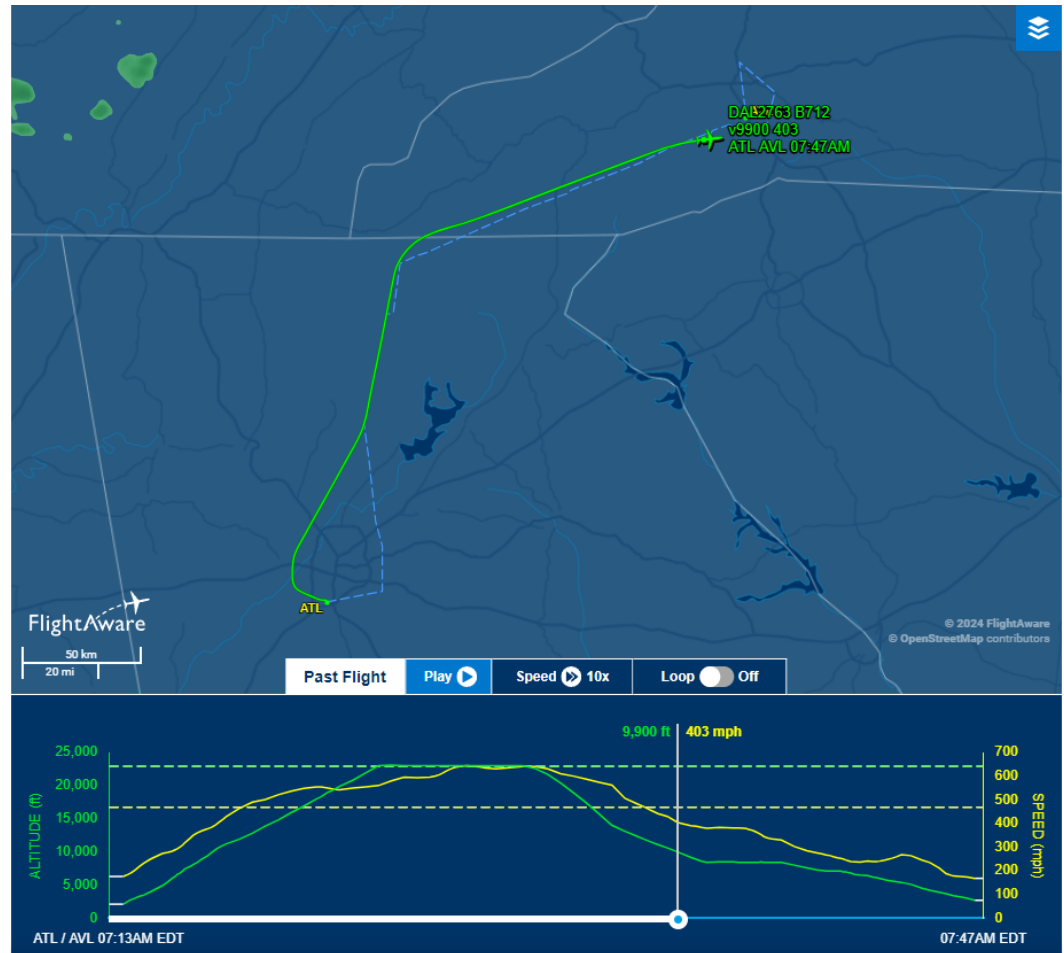
THE GATE

FA MIGHT BE HURT FOLLOW

IN TURBULENCE

ATC PIREP:

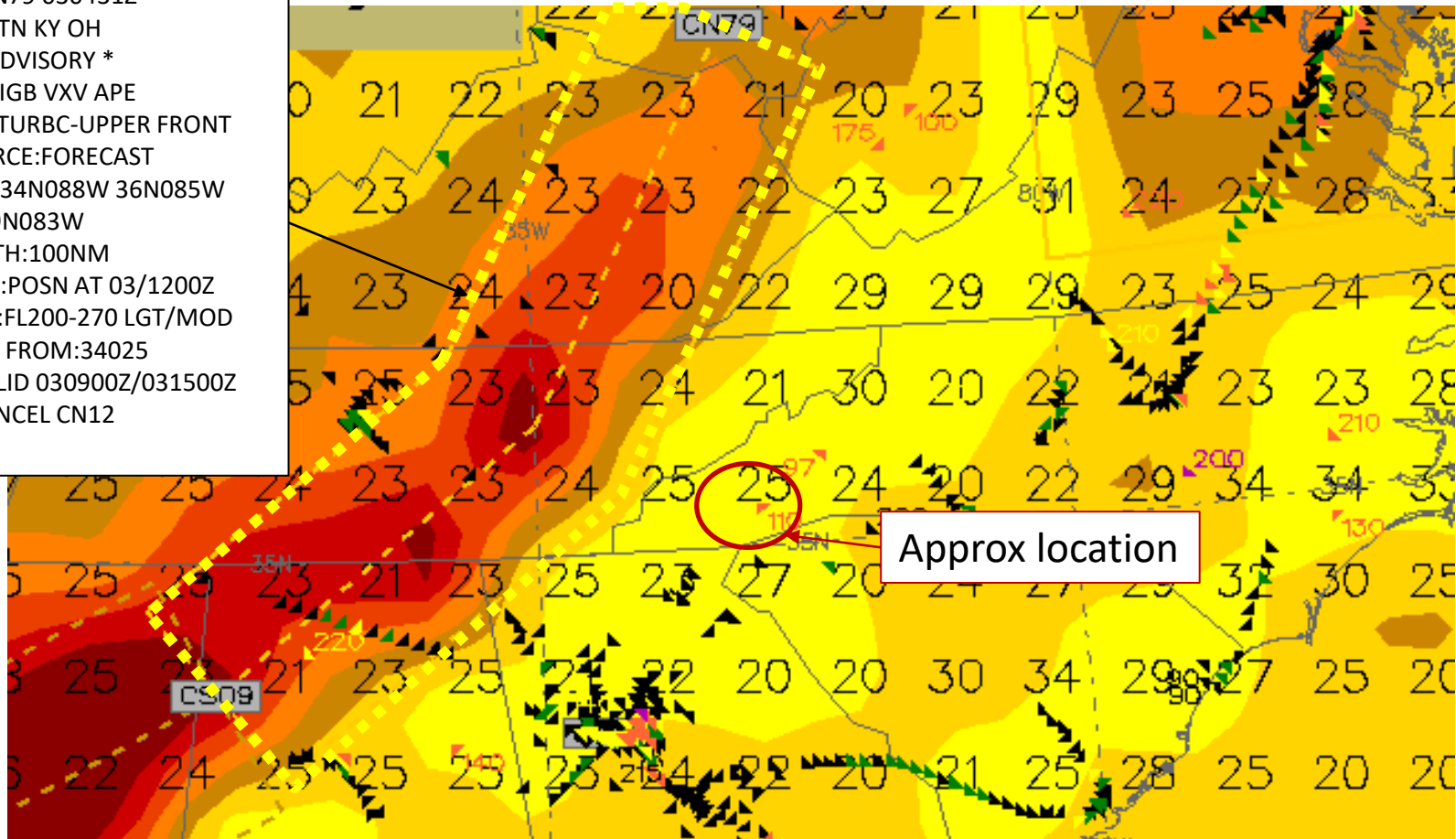
AVL UA /OV AVL250020/TM 1140/FL110/TP B717/SK BKN026/WX 4SM/WV 28006/TB MODERATE/RM
REPORTED MODERATE TURBULENCE ON THE DESCENT BETWEEN 110 AND 080=



TPs Active at time of event

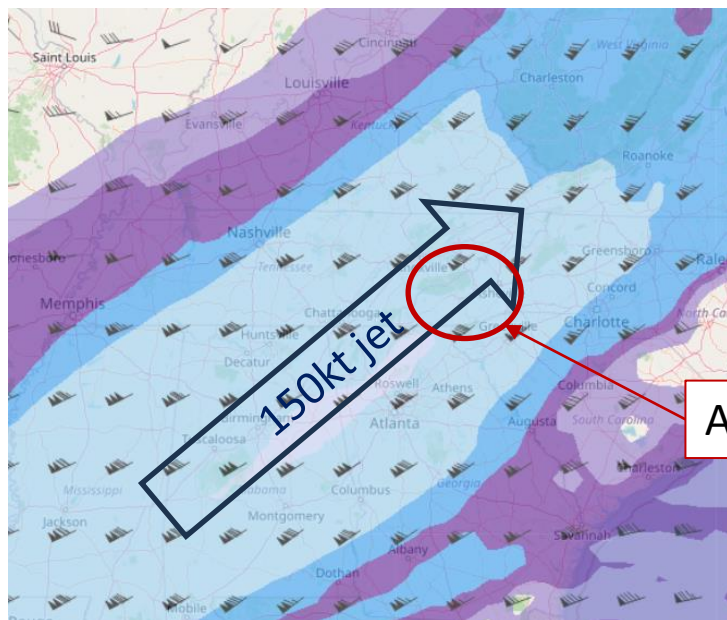
TP for upper front over central TN FL200-270. The slope of upper front was higher in western TN and lower in eastern TN. The color on this map indicates the intensity of wind shear, but only depicts altitudes above FL180. Shear from this upper front extended lower and eastward then the weather map depicts. Meteorology needs to create a more efficient way to identify & analyze shear below FL180.

TP CN79 030431Z
1.AL TN KY OH
2.* ADVISORY *
VOR:IGB VXX APE
HAZ:TURBC-UPPER FRONT
SOURCE:FORECAST
LINE:34N088W 36N085W
39N083W
WIDTH:100NM
TIME:POSN AT 03/1200Z
ALTS:FL200-270 LGT/MOD
MVG FROM:34025
3.VALID 030900Z/031500Z
4.CANCEL CN12

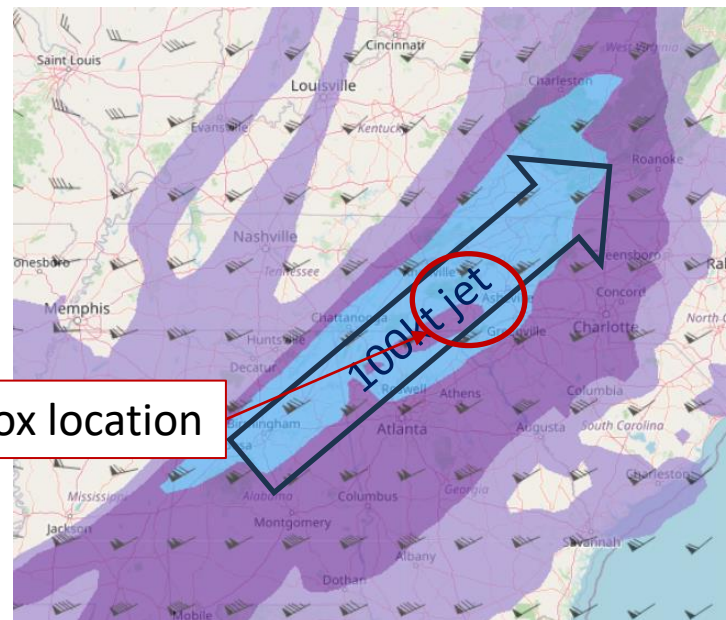


TPs Active at time of event

Broad jet stream with maximum winds over 150kts. Winds greater than 100kts extended below 18,000FT.

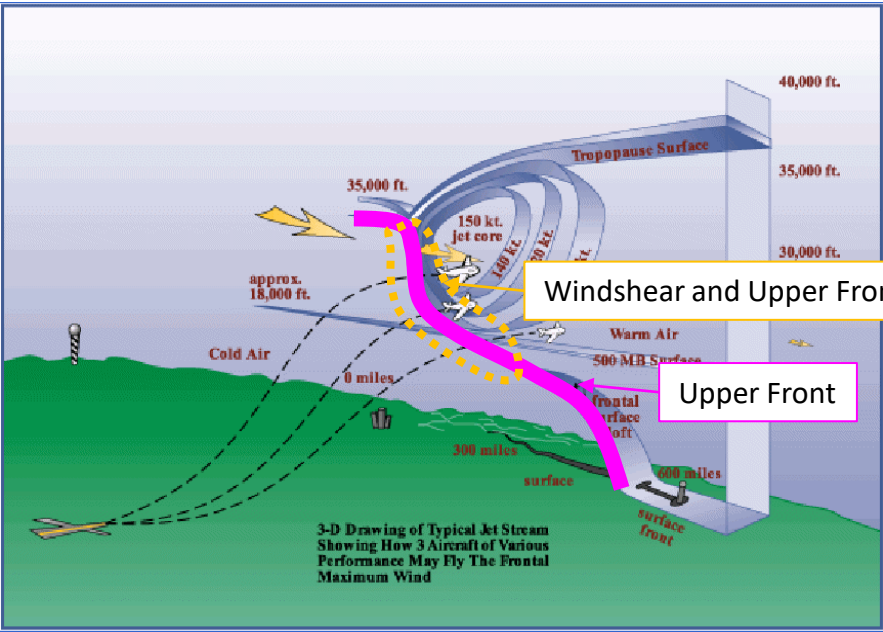


FL300



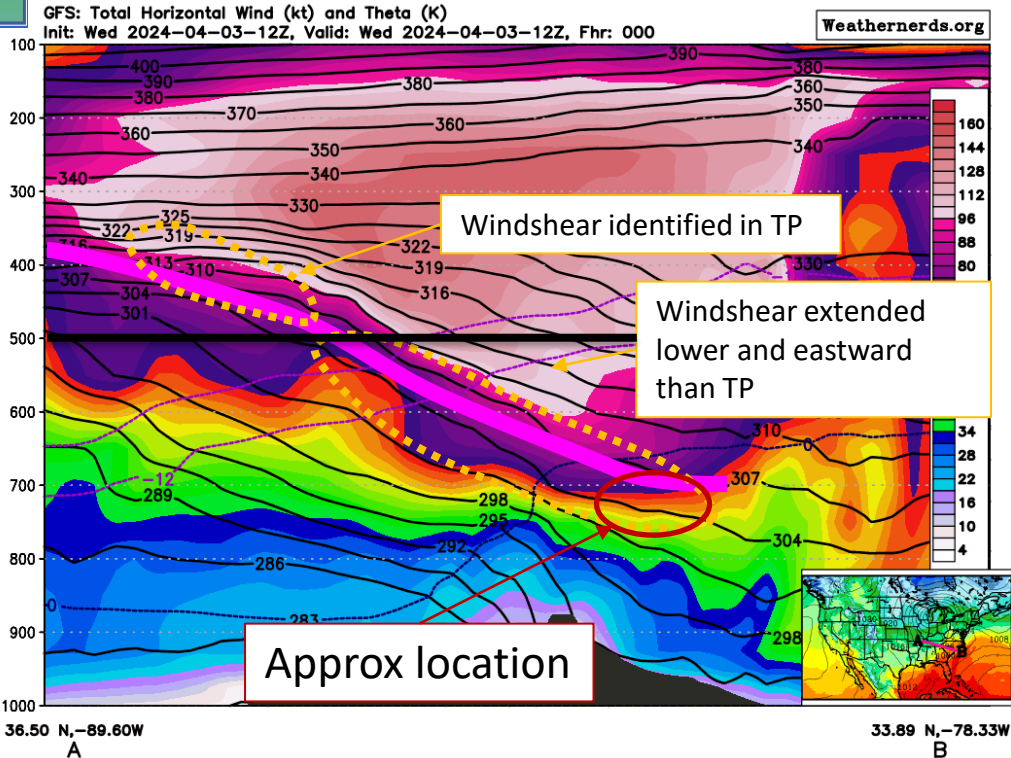
FL180

Cross section view of Jet Stream and Upper Front



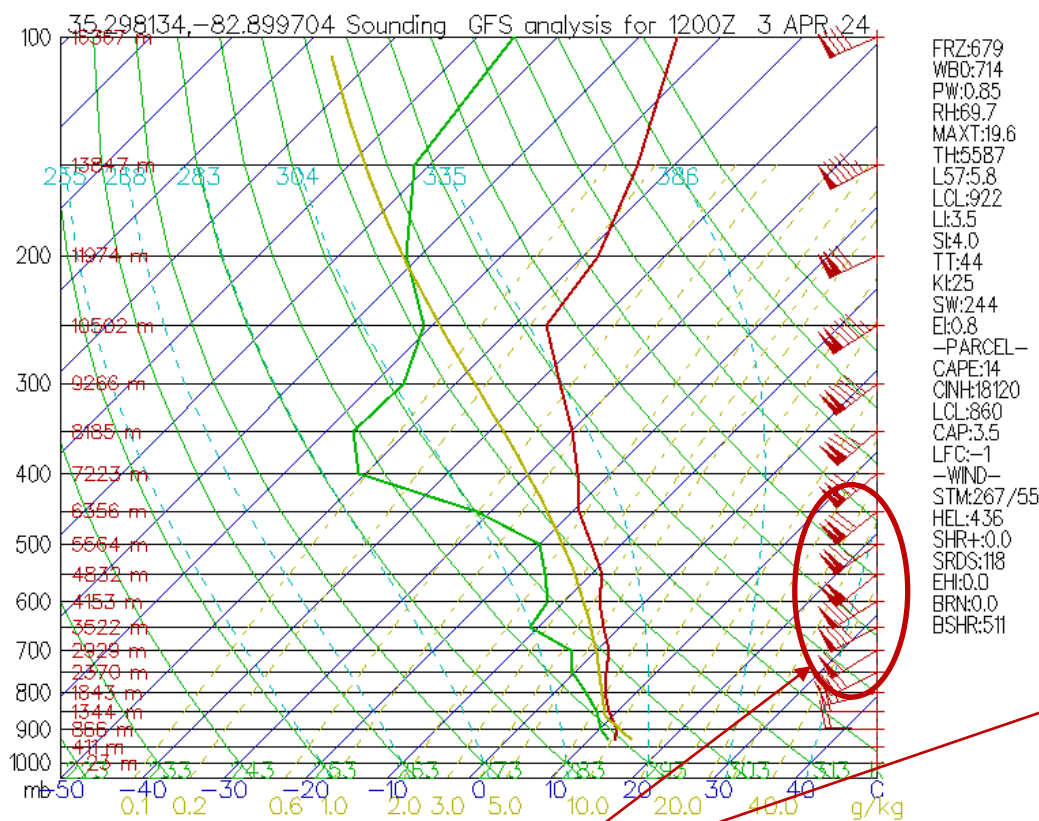
Theoretical Cross Section

Level Graphical Shear Product Starts



Forecast Cross Section
on April 3, 2024 at 1200z

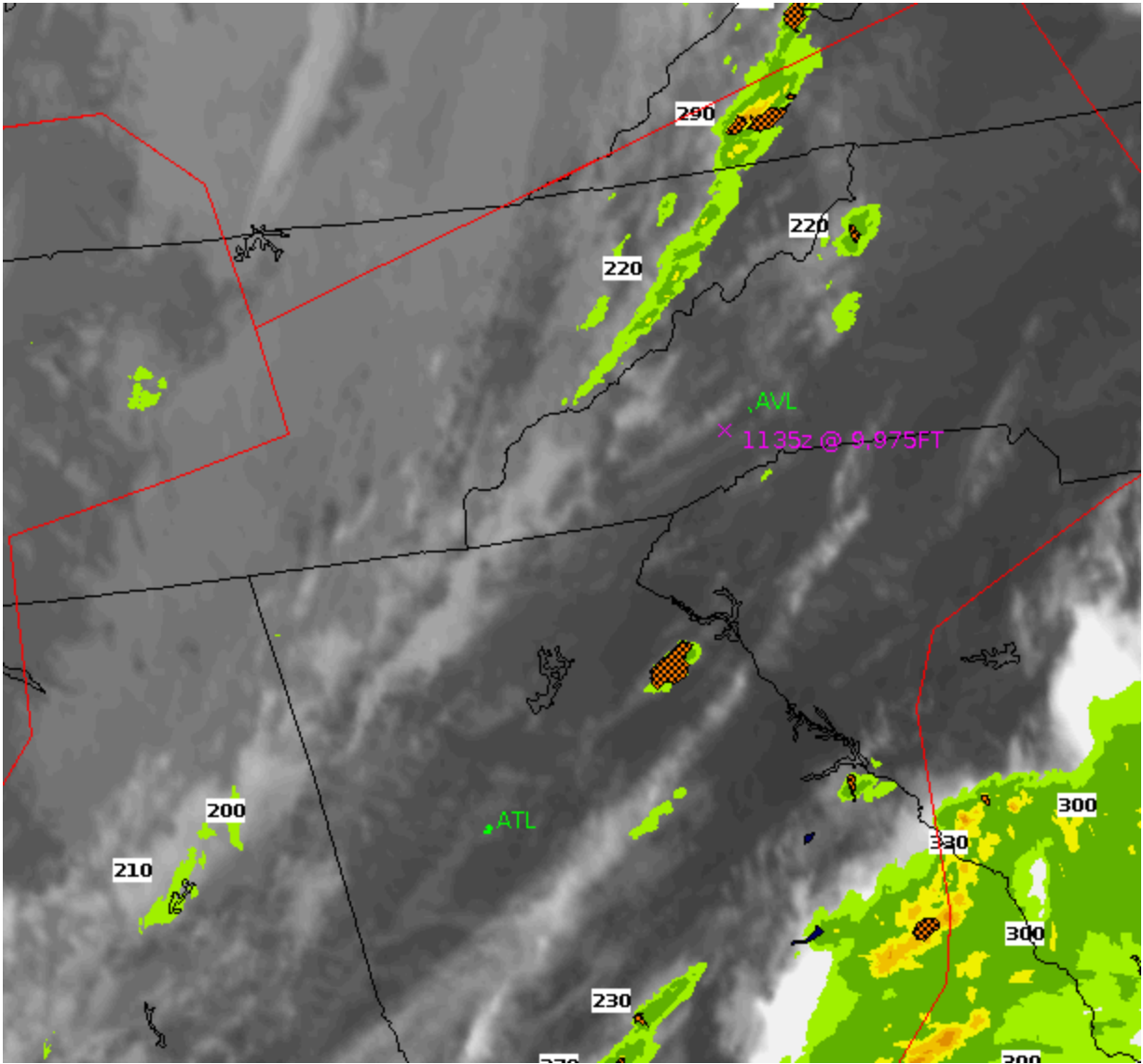
Sounding



Prsr	Height	Wind	Temp	RH	Shear	Lapse
100	53697	246/081	-65.4	5%	-1.90	-1.32
150	45429	243/096	-54.5	2%	-5.98	-0.12
188	40666	241/124	-53.9	Trop	6.36	-4.12
200	39281	245/122	-48.2	5%	-6.19	-0.48
250	34455	238/147	-45.9	16%	-3.55	-2.15
264	33290	236/148	-43.4	Max	5.00	-2.15
300	30400	232/139	-37.2	11%	3.67	-2.09
350	26853	229/128	-29.8	6%	2.88	-1.80
400	23694	231/120	-24.1	6%	1.01	-1.69
450	20853	230/118	-19.3	33%	3.47	-2.16
500	18254	234/114	-13.7	59%	5.63	-2.08
550	15853	232/101	-8.7	57%	6.65	-1.35
600	13625	239/092	-5.7	61%	5.51	-1.74
650	11555	241/081	-2.1	50%	10.45	-1.85
700	9609	238/061	1.5	71%	12.22	-1.25
750	7775	243/039	3.8	75%	7.68	-1.33
800	6046	256/028	6.1	85%	5.59	-1.77
850	4409	270/021	9.0	90%	3.25	-1.98
900	2844	273/016	12.1	88%	10.70	-1.07
931	1909	274/006	13.1	96%		

- Very little directional change
- Wind speed increased with height (from 39kts to 81kts). This results in 10-12kts/1000FT of speed shear and aligns with the reported moderate turbulence.

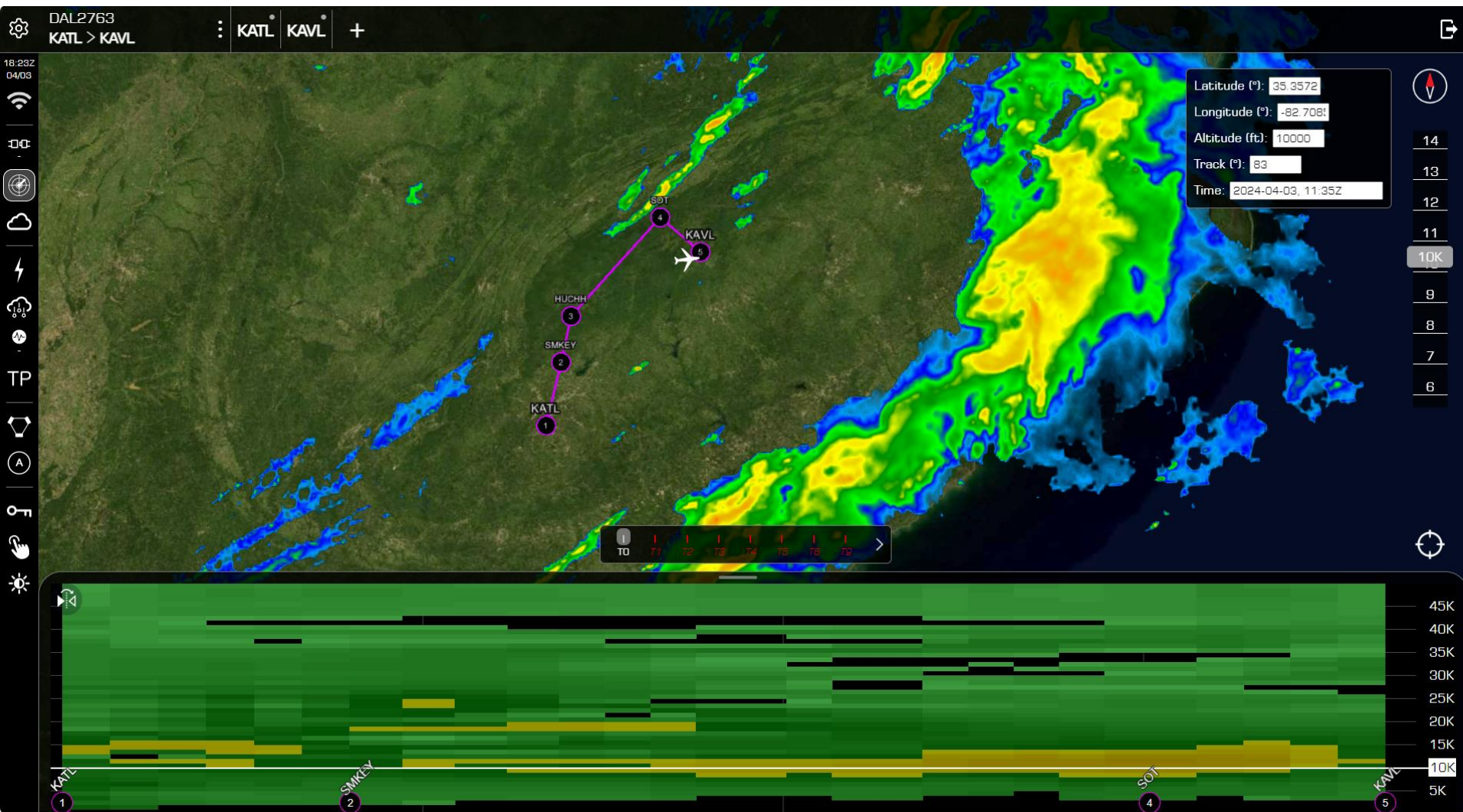
IR Satellite and Radar at 1135Z



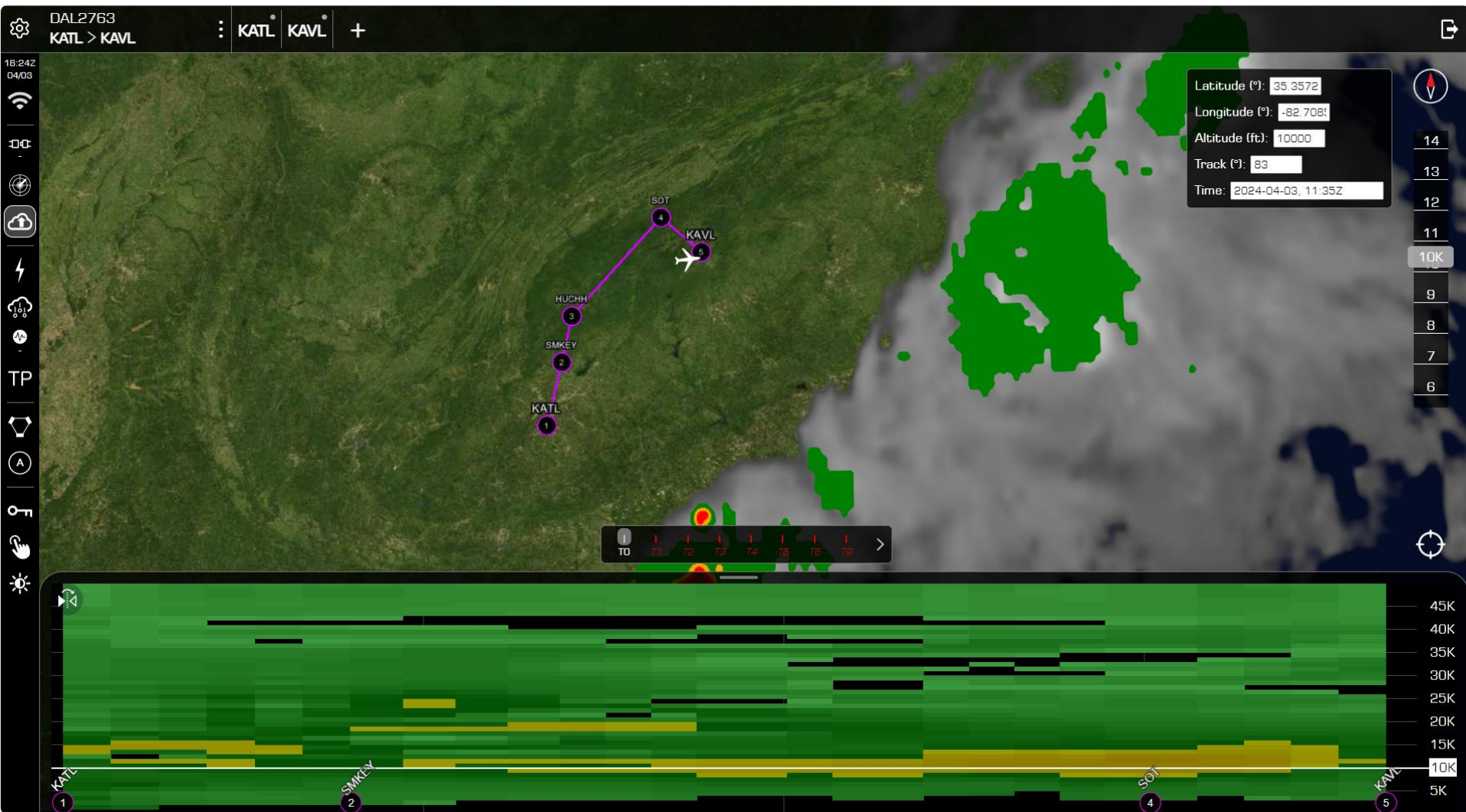
Widget Wx – Graphical Turbulence Guidance



Widget Wx – Radar Reflectivity



Widget Wx – Clouds & Convective Diagnostics



Past 3-hrs of EDR and PIREPs

Cessna reported moderate turbulence at 9,700ft just northeast of AVL at 1140z.

DL2704 reported light-moderate at 8,800FT along the NC/TN border at 0936z.

