

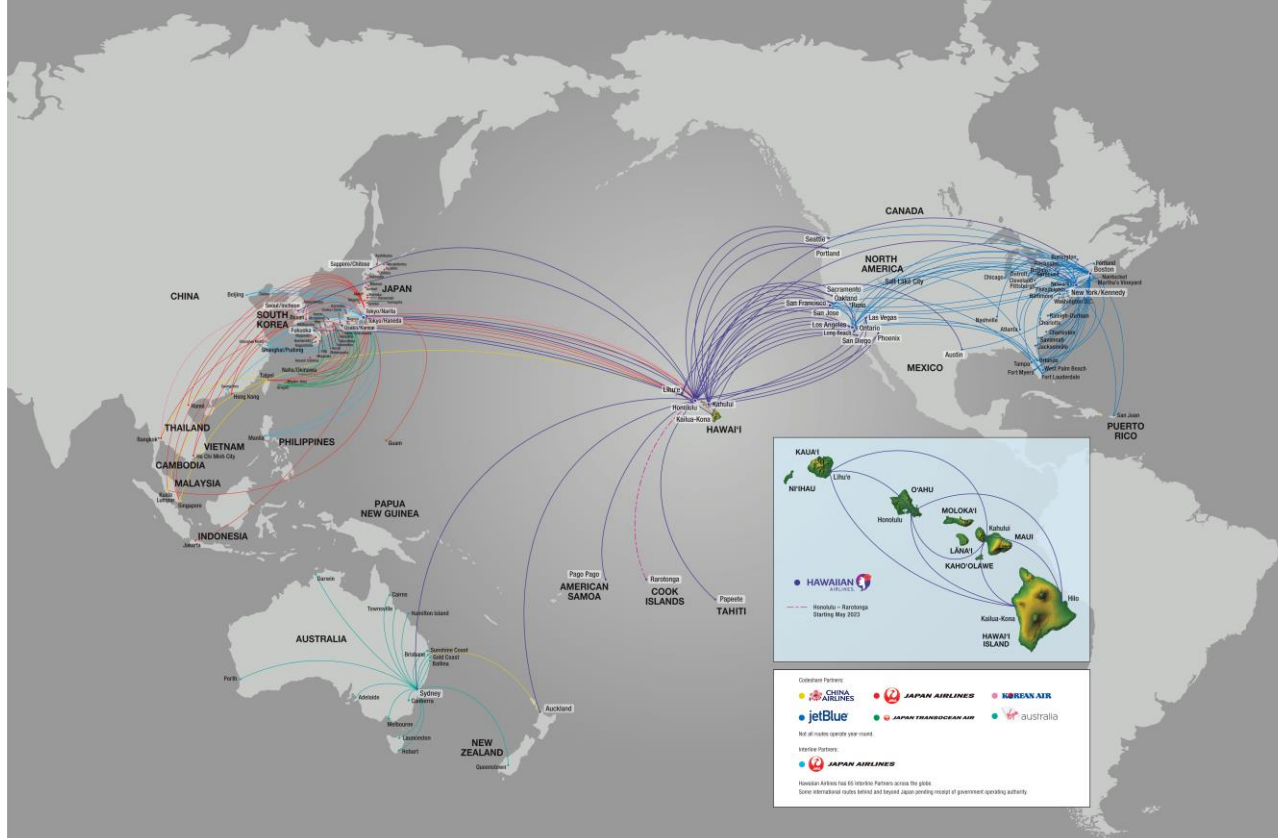


## Trans-Pacific Aviation Weather

Samuel Strobel- A330 First Officer and Instructor Pilot



# Hawaiian Airlines Areas of Operation



- Neighbor-Island
  - Boeing 717
- North America
  - Airbus A321
  - Airbus A330
- Asia and South Pacific
  - Airbus A330



# Dispatch Briefing

Flight Release

**DEPARTURE**

METAR **RJTT** 270900Z 20013KT 9999 FEW030 11/M01 Q1030 NOSIG RMK 1CU030  
A3044  
METAR **RJTT** 270900Z 20013KT 9999 FEW030 11/M01 Q1030 NOSIG  
METAR **RJTT** 270830Z 19012KT 9999 FEW030 11/M02 Q1030 NOSIG

TAF **RJTT** 270505Z 2706/2812 20010KT 9999 FEW030 BECMG 2714/2716  
25008KT BECMG 2800/2803 20018KT

**ARRIVAL**

METAR **PHNL** 270853Z 05010KT 10SM FEW025 FEW035 SCT055 23/18 A3018  
METAR **PHNL** 270853Z 05010KT 10SM FEW025 FEW035 SCT055 23/18 A3018 RMK  
AO2 RAB01E12B36E47 SLP218 P0000 60000 T02280178 51014 \$  
METAR **PHNL** 270853Z 05010KT 10SM FEW025 FEW035 SCT055 23/18 A3018 RMK  
AO2 RAB01E12B36E47 SLP218 P0000 60000 T02280178 51014 ?

TAF **PHNL** 270857Z 2709/2812 05012G19KT P6SM VCSH FEW025 SCT040  
FM272000 08020G30KT P6SM FEW025 SCT050 FM280500 06015G23KT P6SM  
VCSH FEW025 SCT040

**OTHER**

METAR **PHOG** 270854Z 05009KT 10SM -RA FEW036 SCT060 BKN075 20/17 A3018  
METAR **PHOG** 270854Z 05009KT 10SM -RA FEW036 SCT060 BKN075 20/17 A3018  
RMK AO2 RAB41 SLP226 P0000 60000 T02000167 51011 ?  
METAR **PHOG** 270854Z 05009KT 10SM -RA FEW036 SCT060 BKN075 20/17 A3018  
RMK AO2 RAB41 SLP226 P0000 60000 T02000167 51011 \$

TAF **PHOG** 270530Z 2706/2806 06012G18KT P6SM VCSH FEW035 SCT050  
FM271800 06018G26KT P6SM VCSH FEW035 SCT050 FM272200 06026G36KT  
P6SM VCSH FEW035 SCT050 FM280400 06015G23KT P6SM VCSH FEW035 SCT050

**OTHER**

METAR **PMDY** 270856Z AUTO 10012KT 7SM CLR 22/20 A3019 RMK AO2 SLP226  
T02170200 53009 TSNO  
METAR **PMDY** 270756Z AUTO 10013KT 7SM CLR 22/20 A3019 RMK AO2 SLP223  
T02170200 TSNO  
METAR **PMDY** 270656Z AUTO 10011KT 6SM BR CLR 22/20 A3017 RMK AO2  
SLP218 T02170200 TSNO

TAF **PMDY** 270530Z 2706/2806 11014KT P6SM SCT015 FM271800 12017KT P6SM  
SCT015

# Weather Packet

- Area Forecast(s)
- Current METAR and TAF information
- Winds Aloft/Turbulence Forecast
- SIGMETs and AIRMETs
- D-NOTAMs and FDC NOTAMs
- Hawaiian Airlines Company NOTAMs
- Pertinent TFRs and ATC Delays
- High-Altitude Significant Weather
- 10,000' Winds Aloft (ETOPS)

# 120 Minute ETOPS





# 180 Minute ETOPS



KZAK SIGMET UNIFORM 1 VALID 270615/271015 PHFO-  
 OAKLAND OCEANIC FIR SEV TURB FCST WI N3000 E18000 - N3000 W17230 -  
 N2330 W17600 - N1400 W17515 - N1000 W17830 - N1100 E17600 - N1830  
 E17215 - N3000 E18000. FL270/370. STNR. INTSF.  
 KZAK SIGMET FOXTROT 2 VALID 270915/271315 KKCI-  
 OAKLAND OCEANIC FIR SEV TURB FCST WI N4215 E17230 - N4030 E17645  
 - N3330 E17130 - N3530 E16600 - N4215 E17230. FL280/360. MOV NE  
 20KT. NC.

WAOHI

HNLS WA 271000  
 AIRMET SIERRA UPDATE 3 FOR IFR VALID UNTIL 271600  
 HNLT WA 271000  
 AIRMET TANGO UPDATE 2 FOR TURB VALID UNTIL 271600  
 HNLZ WA 271000  
 AIRMET ZULU UPDATE 2 FOR ICE AND FZLVL VALID UNTIL 271600  
 AIRMET TURB...HI  
 OVER AND IMT S THRU W OF MTN.  
 TEMPO MOD ISOL SEV TURB BLW 090.  
 COND CONT BEYOND 1600Z.  
 .  
 NO SIGNIFICANT ICE EXP.  
 .  
 FZLVL...149 PHLI SLOPING TO 121 PHTO.

WAOHI

HNLS WA 271000  
 AIRMET SIERRA UPDATE 3 FOR IFR VALID UNTIL 271600  
 HNLT WA 271000  
 AIRMET TANGO UPDATE 2 FOR TURB VALID UNTIL 271600  
 HNLZ WA 271000  
 AIRMET ZULU UPDATE 2 FOR ICE AND FZLVL VALID UNTIL 271600  
 AIRMET MTN OBSC...KAUAI OAHU MOLOKAI MAUI BIG ISLAND  
 N THRU E SECTIONS.  
 MTN TEMPO OBSC ABV 025 EXP DUE TO CLD AND SHRA.  
 COND CONT BEYOND 1600Z.  
 .

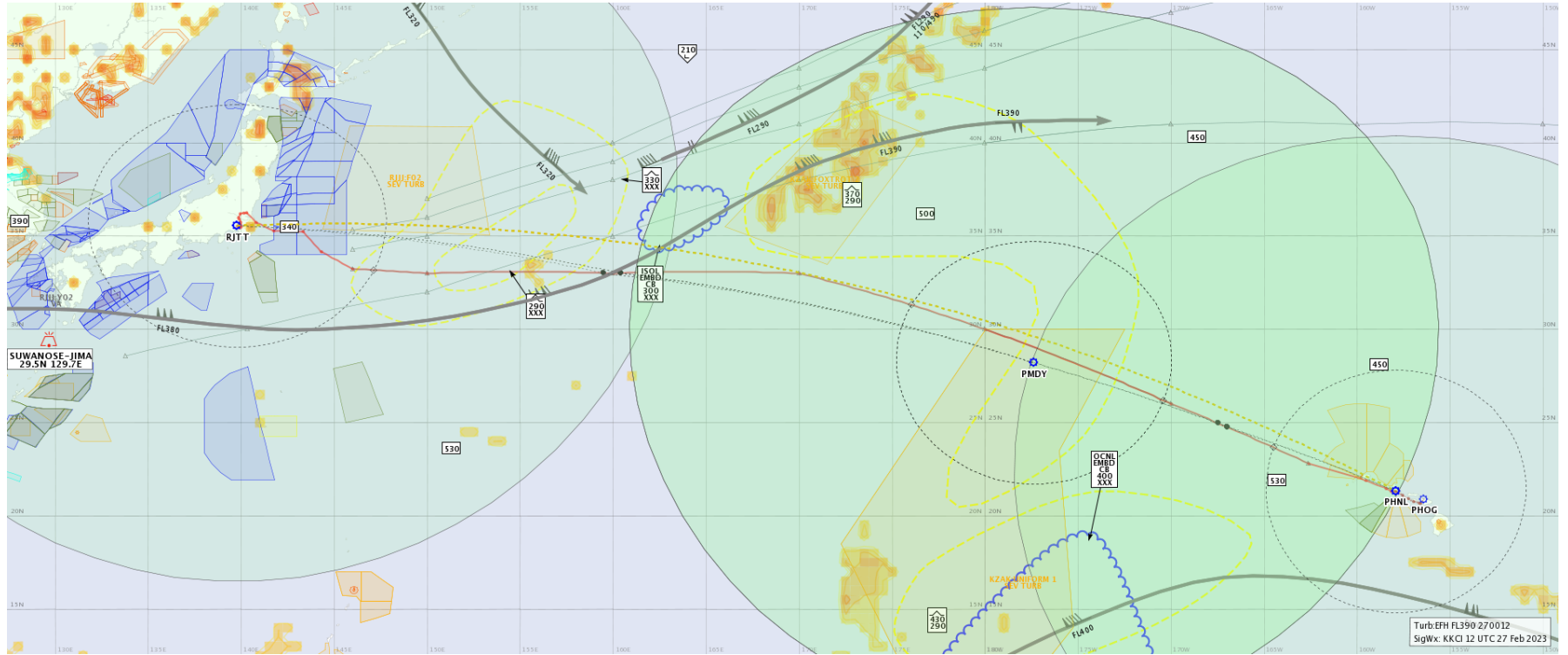
WAOHI

HNLS WA 271000  
 AIRMET SIERRA UPDATE 3 FOR IFR VALID UNTIL 271600  
 HNLT WA 271000  
 AIRMET TANGO UPDATE 2 FOR TURB VALID UNTIL 271600  
 HNLZ WA 271000  
 AIRMET ZULU UPDATE 2 FOR ICE AND FZLVL VALID UNTIL 271600  
 AIRMET STG SFC WIND...MOLOKAI LANAI MAUI BIG ISLAND  
 ENTIRE AREA.  
 STG SFC WND GREATER THAN 30 KT EXP. COND CONT BEYOND 1600Z.  
 .

NO PIREP REPORTS FOUND WITHIN TIME SPECIFIED

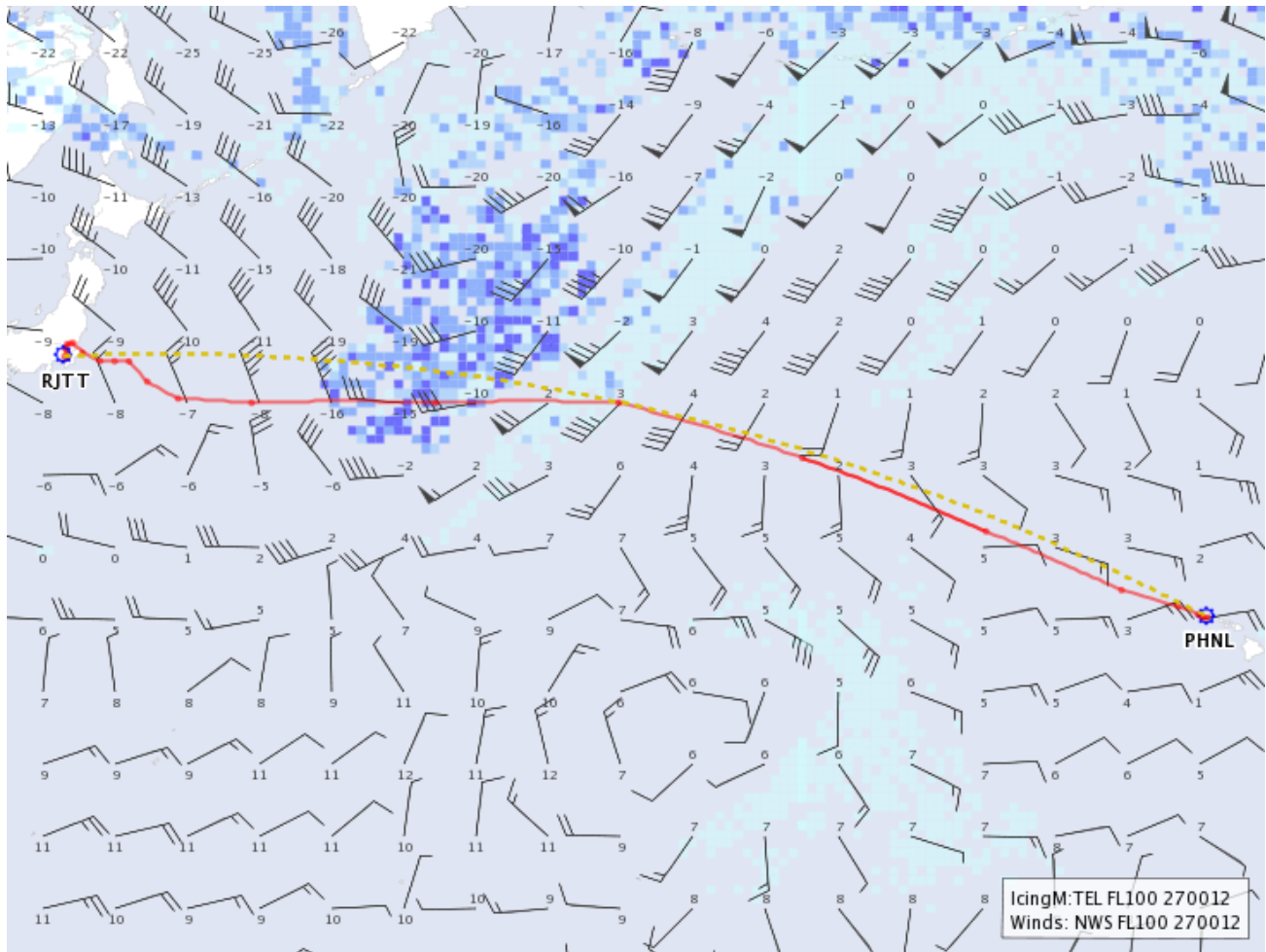
# Weather Information

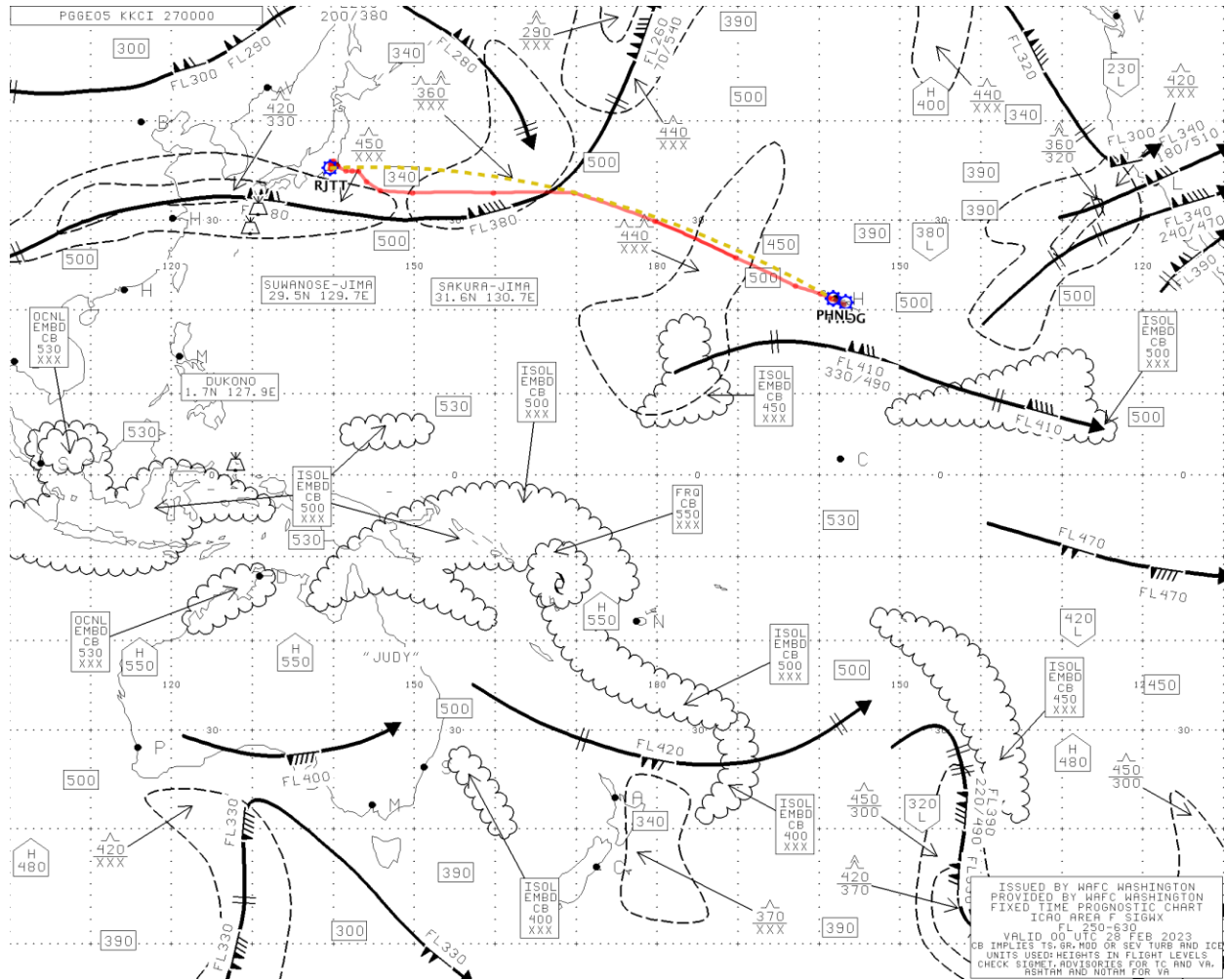
- NAVBLUE
- Jeppesen Jetplan (backup)
- AeroData, Jeppesen, Sabre (performance)



Turb: EFH FL390 270012  
SigWx: KKCI 12 UTC 27 Feb 2023

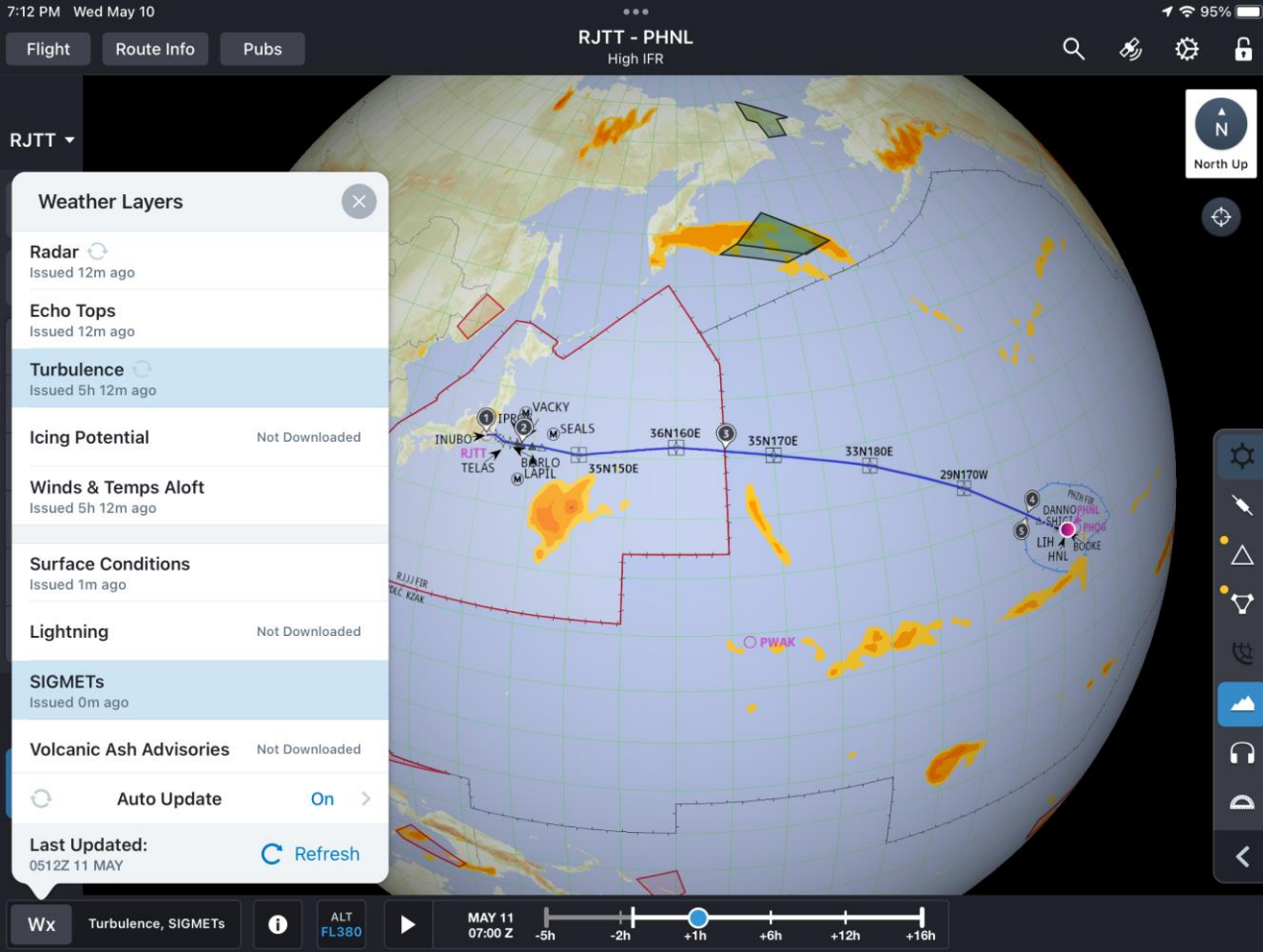






# Enroute Capabilities

Jeppesen FliteDeck Pro X



# Jeppesen FliteDeck Pro X

## Weather Layers

- Radar
- Echo Tops
- Turbulence
  - 11k-43k
- Icing
- Winds Aloft
- Surface Conditions
- Lightning
- SIGMETs
- Volcanic Ash



Figure 1. Screenshot from Jeppesen FliteDeck Pro X. Jeppesen. (n.d.). Jeppesen FliteDeck Pro X Version (4.6.1). Retrieved May 10, 2023.

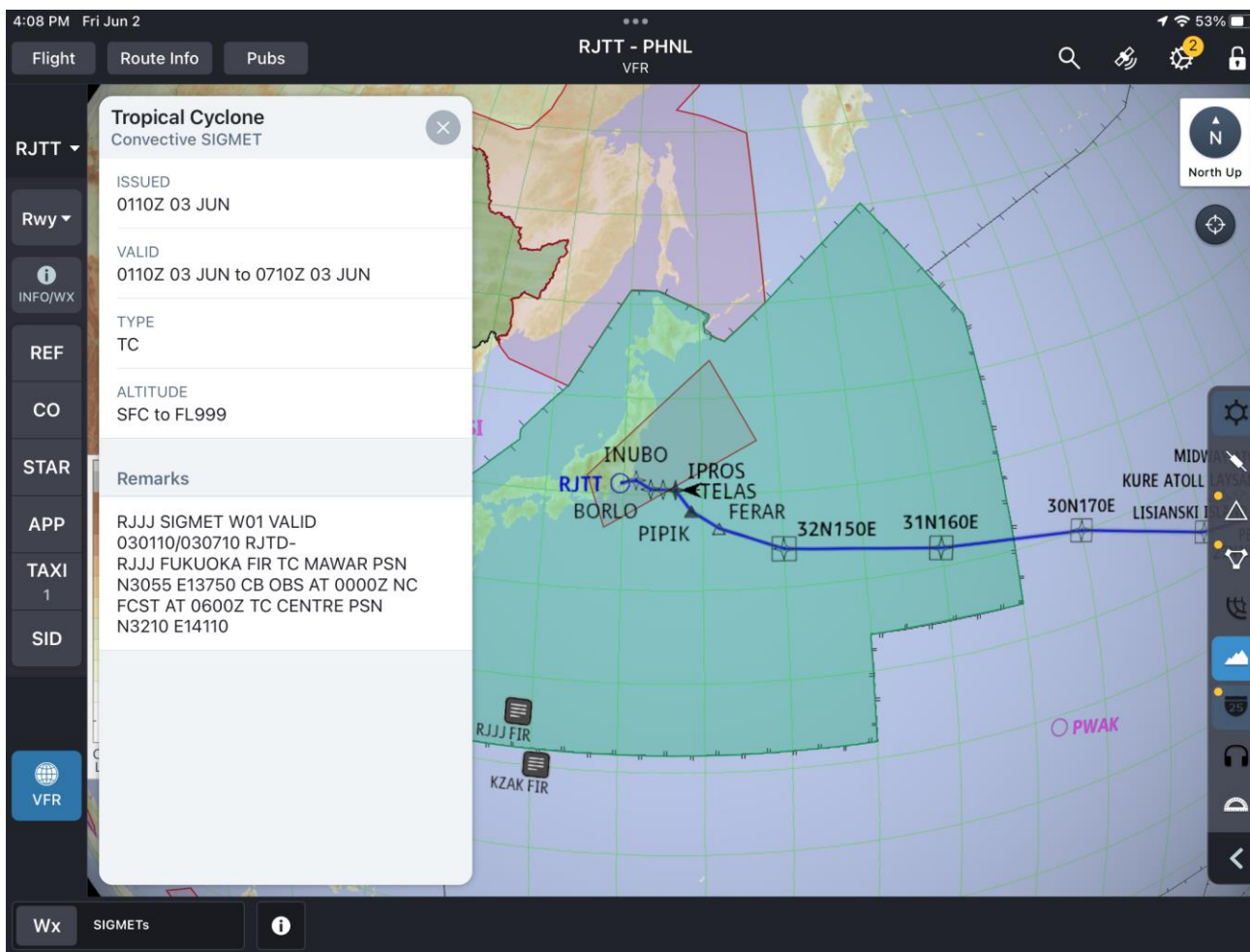


Figure 1. Screenshot from Jeppesen FliteDeck Pro X. Jeppesen. (n.d.). Jeppesen FliteDeck Pro X Version (4.6.1). Retrieved June 2, 2023.

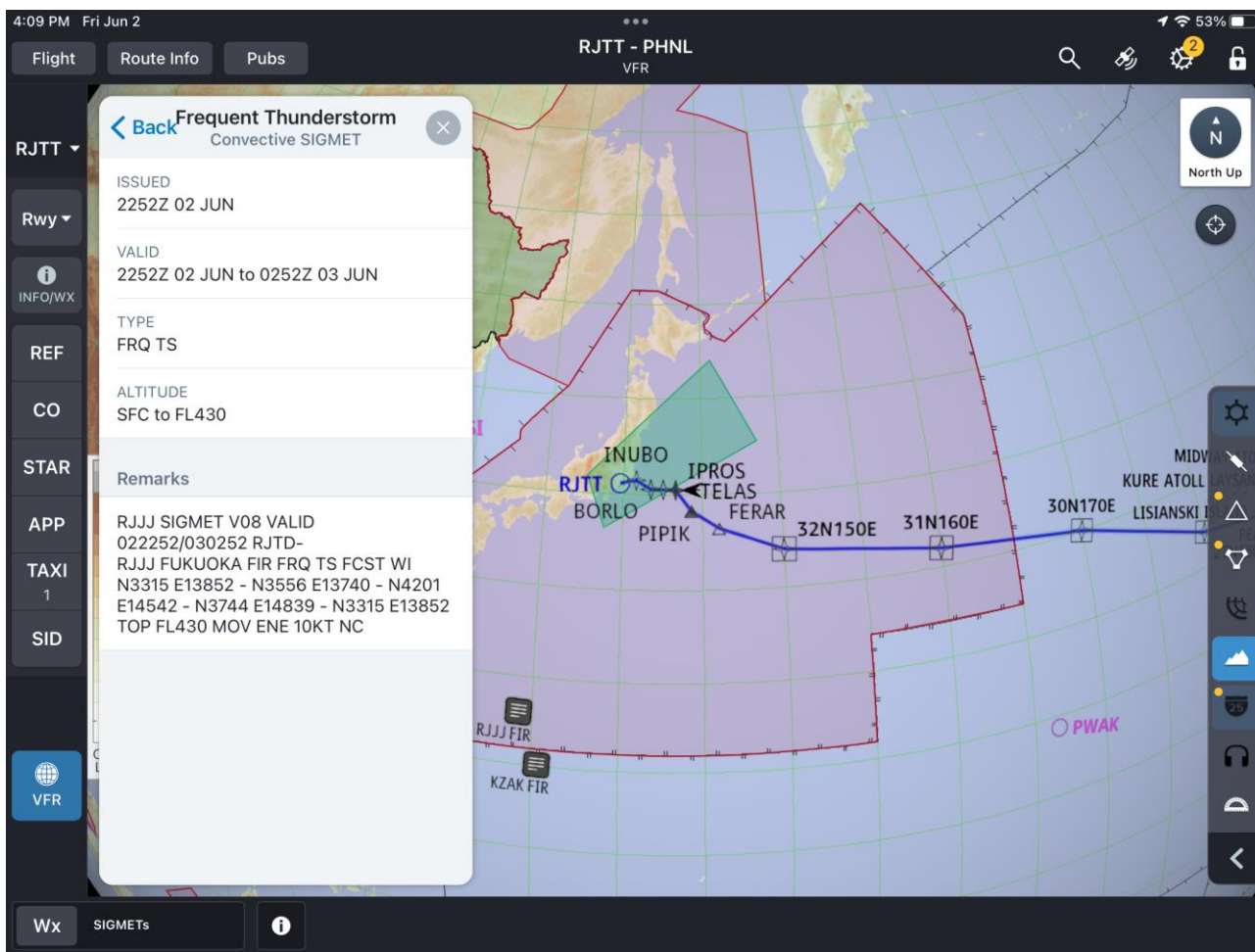


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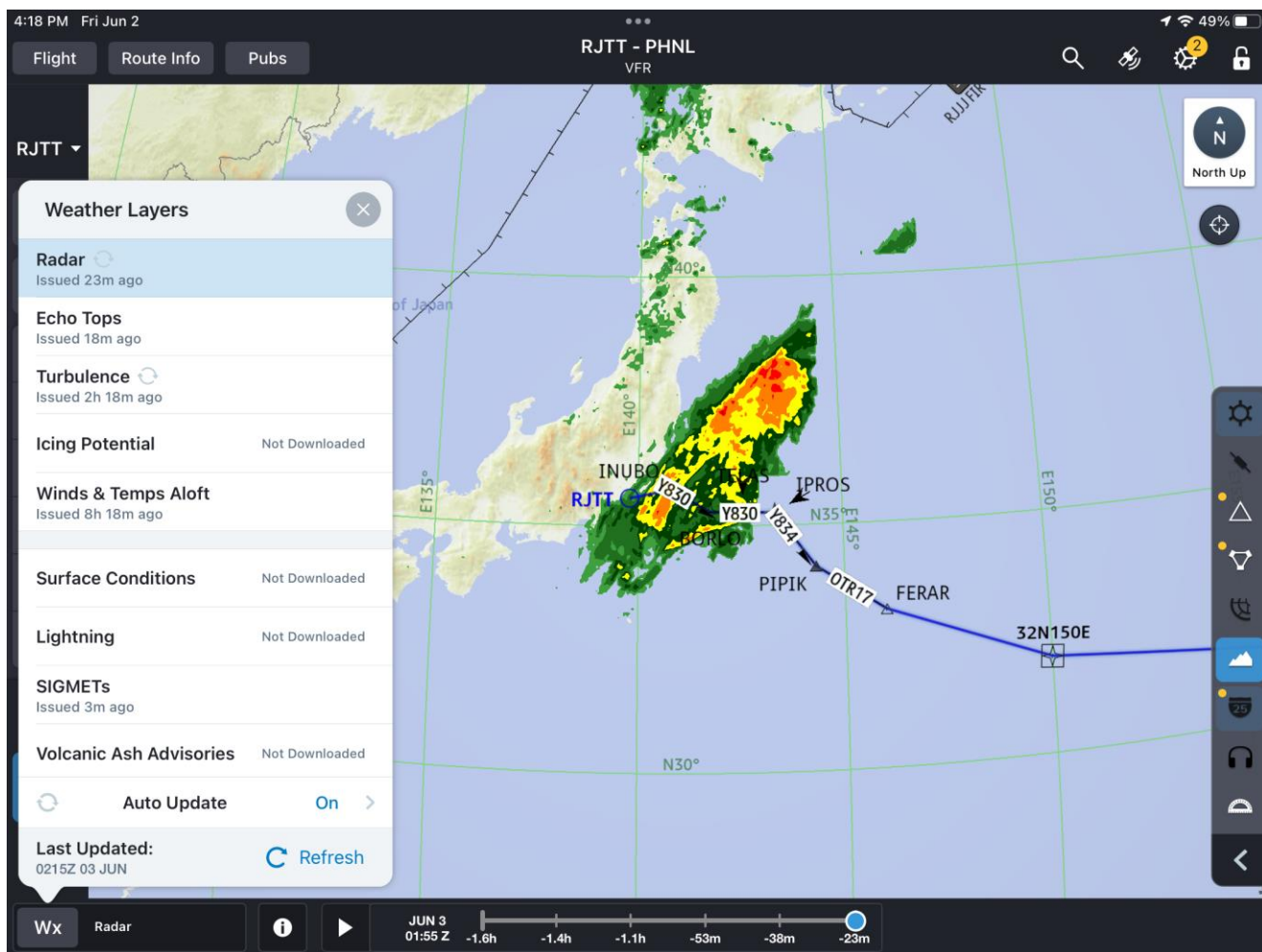


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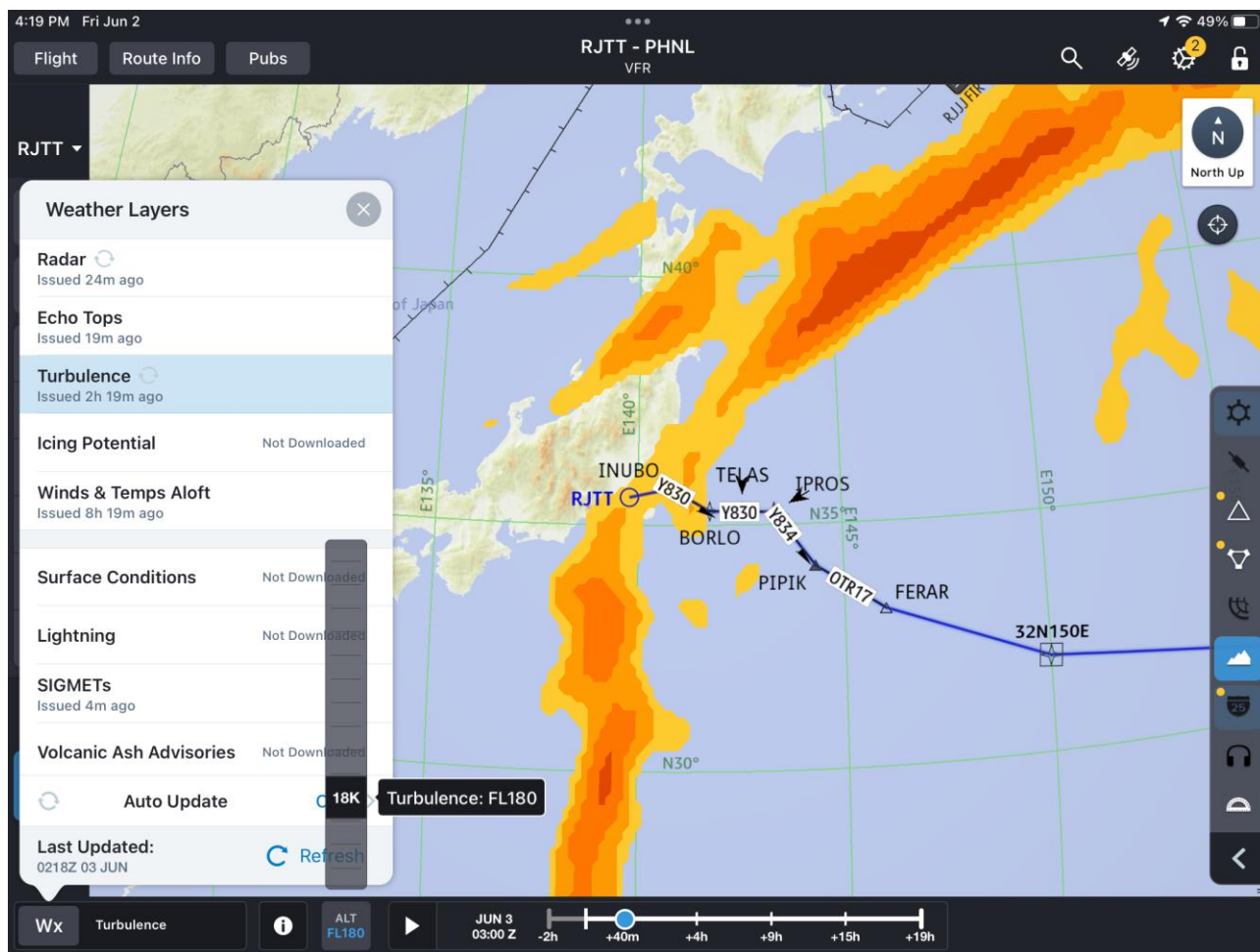


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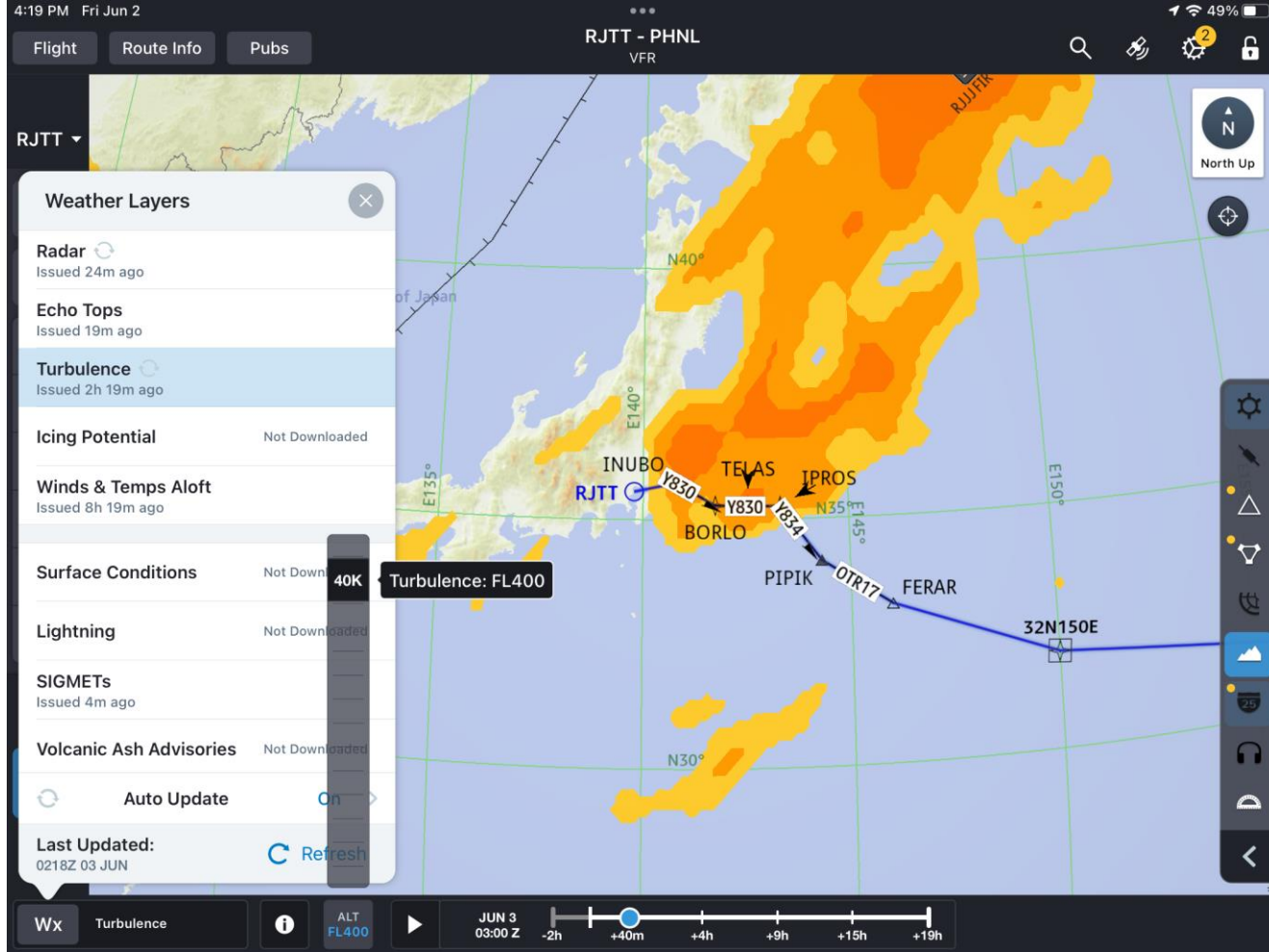
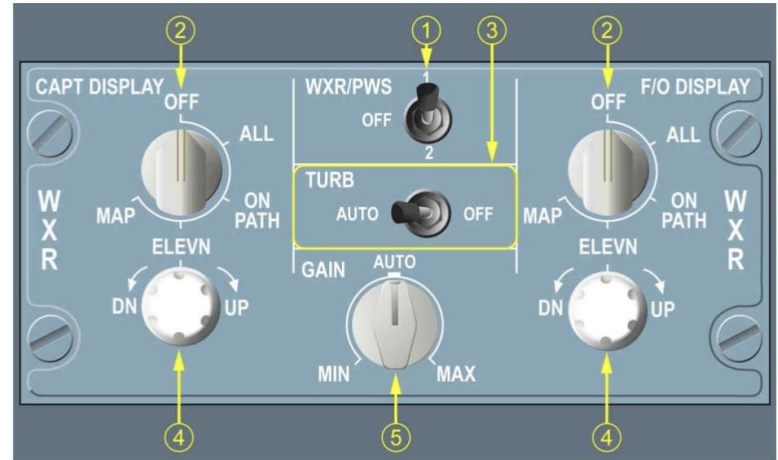


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# Enroute Capabilities

Weather Radar

# Honeywell IntuVue™ RDR-4000



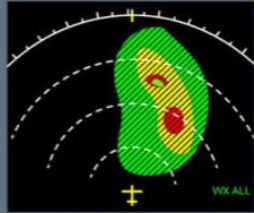
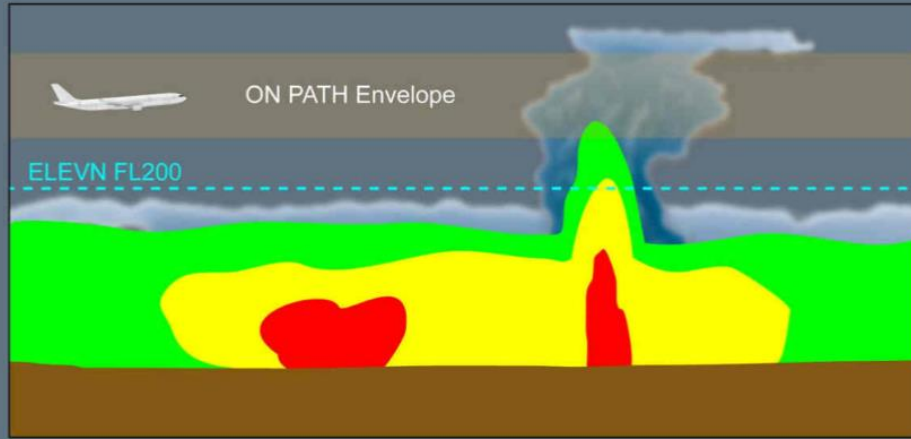
Displays weather radar out to **320nm**, turbulence out to **40nm**, and windshear out to **5nm**

# Honeywell IntuVue™ RDR-4000

All- On Path and Off Path  
Weather (SFC-60,000ft.)

On Path- On Path Weather

ELEVN- 1,000ft. Slices



ALL (or ALL WX)



ON PATH (or PATH WX)



ELEVN FL200

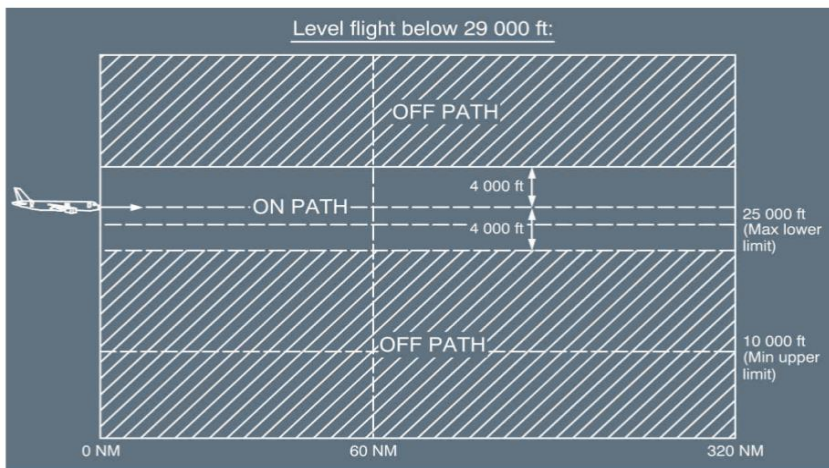
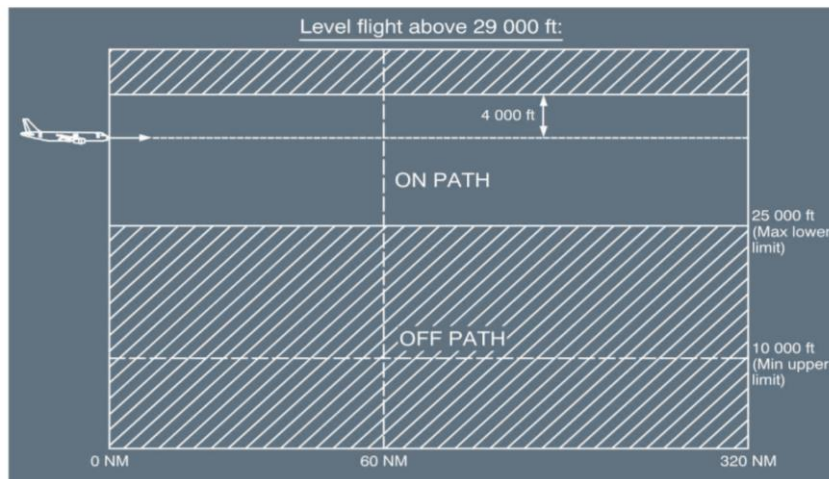




# On Path Function

Aircraft Altitude (feet MSL)	Lower Envelope Boundary (feet MSL)	Upper Envelope Boundary (feet MSL)
> 29,000	25,000	Flight Altitude plus 4,000 (max: 60,000)
6,000 to 29,000	Flight Altitude minus 4,000 (min: Gnd Elev)	
< 6,000		10,000

ON PATH envelope limits





# Enroute Capabilities

ATC/Company  
Communications











	ATC LAT REQ		
	DIR TO	WX DEV UP TO	
1L	[ ]	[ ]	1R ← (1)
2L	SID	OFFSET/START AT	2R
	[ ]	[ ]/[ ]	
3L	HEADING	GROUND TRK	3R
	[ ]°	[ ]°	
	WHEN CAN WE EXPECT		
4L		BACK ON ROUTE →	4R
	ALL FIELDS		
5L	ERASE	ADD TEXT	5R
	ATC MENU	ATC	
6L	<RETURN	REQ DISPL	6R
	15NML		

	ATC LAT REQ		
	DIR TO	WX DEV UP TO	
1L	[ ]	15NML	1R
2L	SID	OFFSET/START AT	2R
	[ ]	[ ]/[ ]	
3L	HEADING	GROUND TRK	3R
	[ ]°	[ ]°	
	WHEN CAN WE EXPECT		
4L		BACK ON ROUTE →	4R
	ALL FIELDS		
5L	ERASE	ADD TEXT >	5R
	ATC MENU	ATC	
6L	<RETURN	REQ DISPL	6R ← (2)







(1)

2225Z FROM NFFF CTL      OPEN

(REPLY TO 2215Z REQ)  
 CLEARED TO DEVIATE  
 UP TO 10NM  
 RIGHT OF ROUTE  
 REPORT BACK ON ROUTE

\*UNABLE      STBY\*  
 WILCO\*

← (1)

(2)

2225Z FROM NFFF CTL      WILCO

(REPLY TO 2215Z REQ)  
 CLEARED TO DEVIATE  
 UP TO 10NM  
 RIGHT OF ROUTE  
 REPORT BACK ON ROUTE

\*CANCEL      SEND\*

← (3)

# Weather Deviation Procedure

1. Obtain clearance via CPDLC
2. Obtain clearance via Voice (HF Radio)
3. If ATC clearance cannot be obtained
  - Deviate from organized track or ATS route system
  - Broadcast intentions on 121.5
  - Watch for conflicting traffic/turn on all lights
  - If deviating <5nm maintain assigned altitude
  - If deviating >5nm
    - North deviation- Descend 300ft.
    - South deviation- Climb 300ft.

# Enroute Reports

PIREPs

# PIREPs

1. Aircraft Location
2. Time of occurrence in UTC
3. Turbulence intensity
  - Light (Occasional, Intermittent, Continuous)
  - Moderate
  - Severe
  - Extreme
4. Whether turbulence occurred in or near clouds
5. Aircraft altitude or flight level
6. Type of aircraft
7. Duration of turbulence















**Mahalo**  
Questions?

