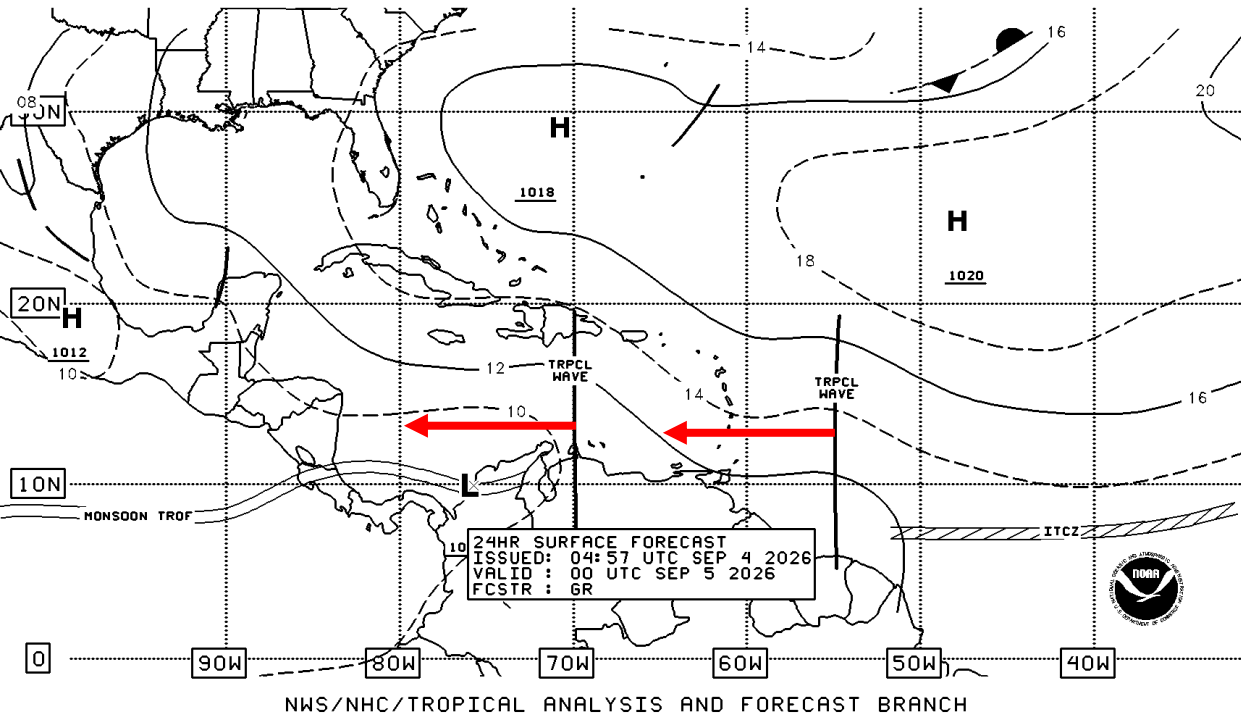


SABRE Forecast Discussion

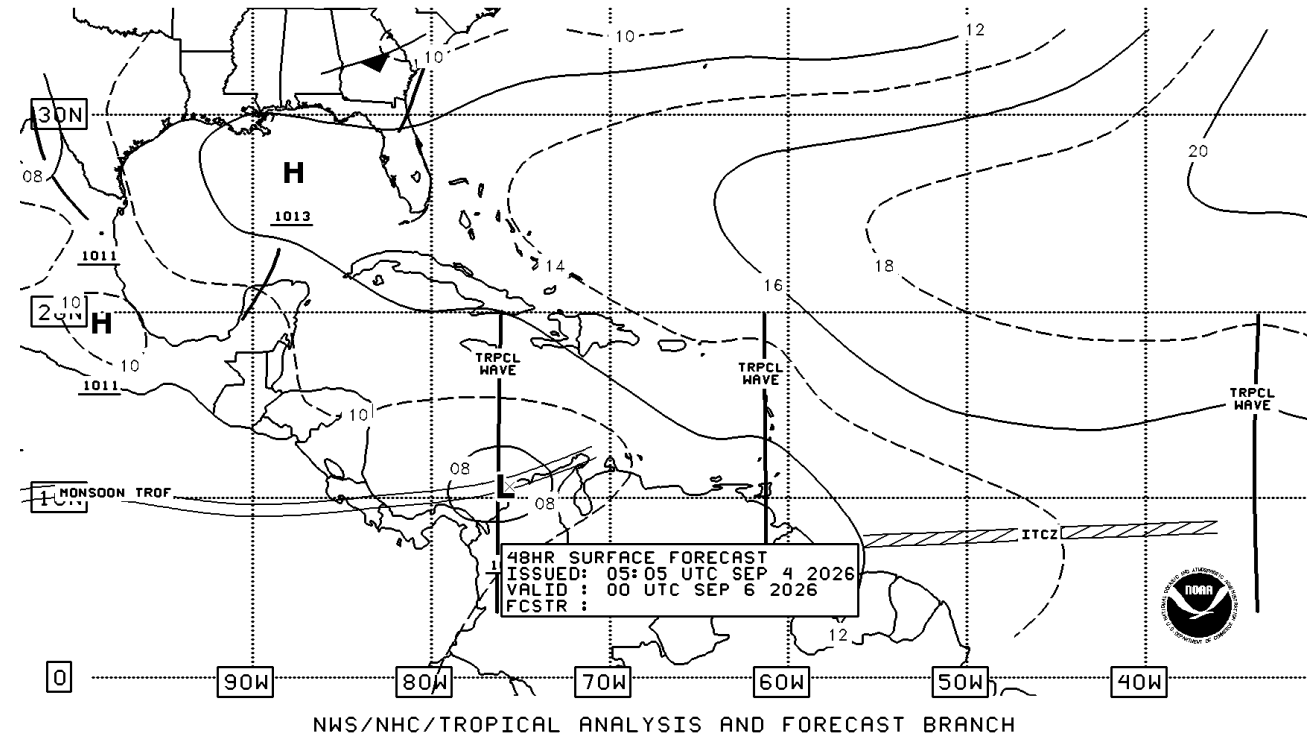
09/04/2026

Surface Chart

09/04 00z (7pm local time)



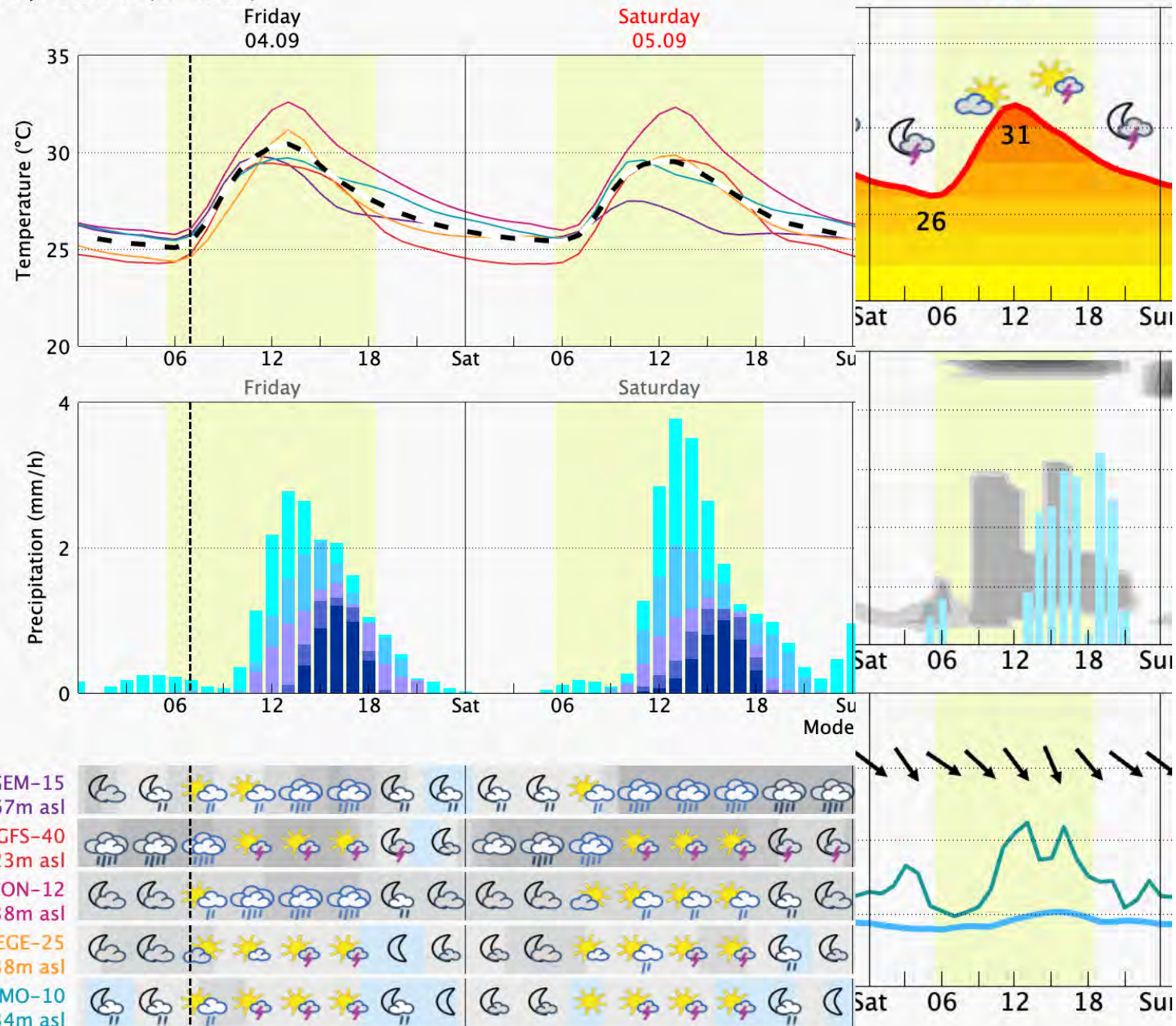
09/05 00z (7pm local time)



- Tropical wave moves through Panama around 7 pm tomorrow.
- The monsoon trough is located over Costa Rica and just north of Panama.
- Tropical wave, Monsoon trough, and low pressure system converge today-tomorrow.
- Scattered moderate to isolated strong convection is occurring from 02N to 12N and east of 115W.
- Panama Met says: LOW PRESSURE SYSTEMS, BOTH FOR THE PACIFIC AND IN THE CARIBBEAN SEA; THEREFORE, CONDITIONS TYPICAL OF THE RAINY SEASON ARE EXPECTED

Panama City

8.99°N, 79.52°W (17 m asl)



Flight day:

- Saturday has the potential for more precipitation than we have seen the past few days
- UKMO and GFS both suggest thunderstorms and precipitation starting as early as 12 pm.
- Model agreement for peak precipitation is at 4pm.
- Winds of 4.3 knots out of the northwest during 9:30 takeoff time. 5.4 knots out of the northwest, with gusts of ~9.5 knots during 3pm landing.

Upper Level Forecasts for 09/05/2026 and RF09 Flight Plan

SABRE Tropics Flight Plan Options

1. Vertical gradients through the TTL into the LS (under 'background' conditions and in outflow)

2. Near-field continental deep convective outflow

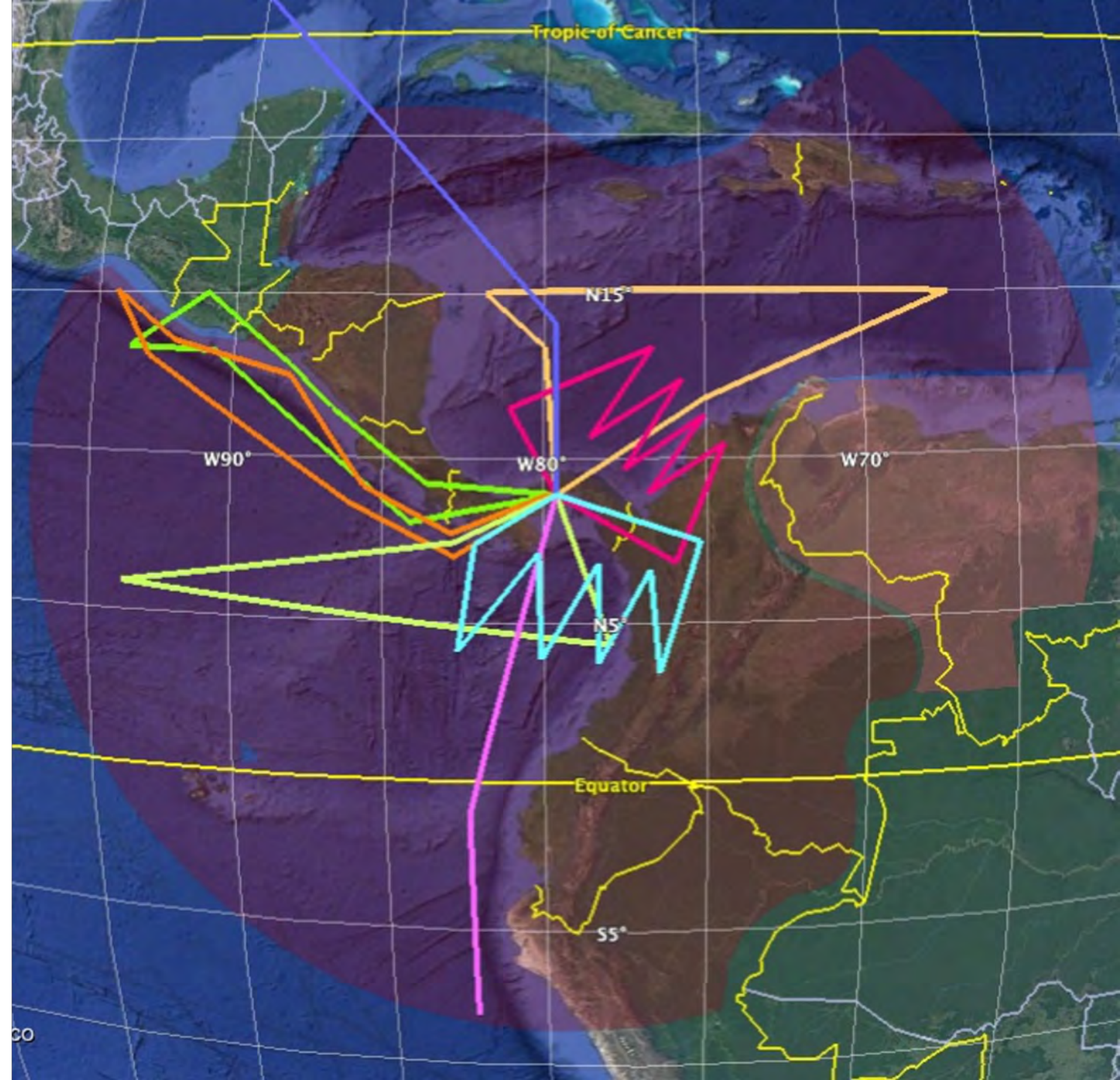
3. Aged outflow from deep continental convection (and/or longitudinal sampling if we can manage)

4. Marine deep ($> \sim 14.5$ km) convective outflow

5. Sampling of long-range transport from ASM/WAM crossing the Atlantic

6. Cross-ITCZ/equator flights for inter-hemispheric tropical comparison/gradients

7. Long longitudinal gradient



RF09 Flight Plan A

Targets

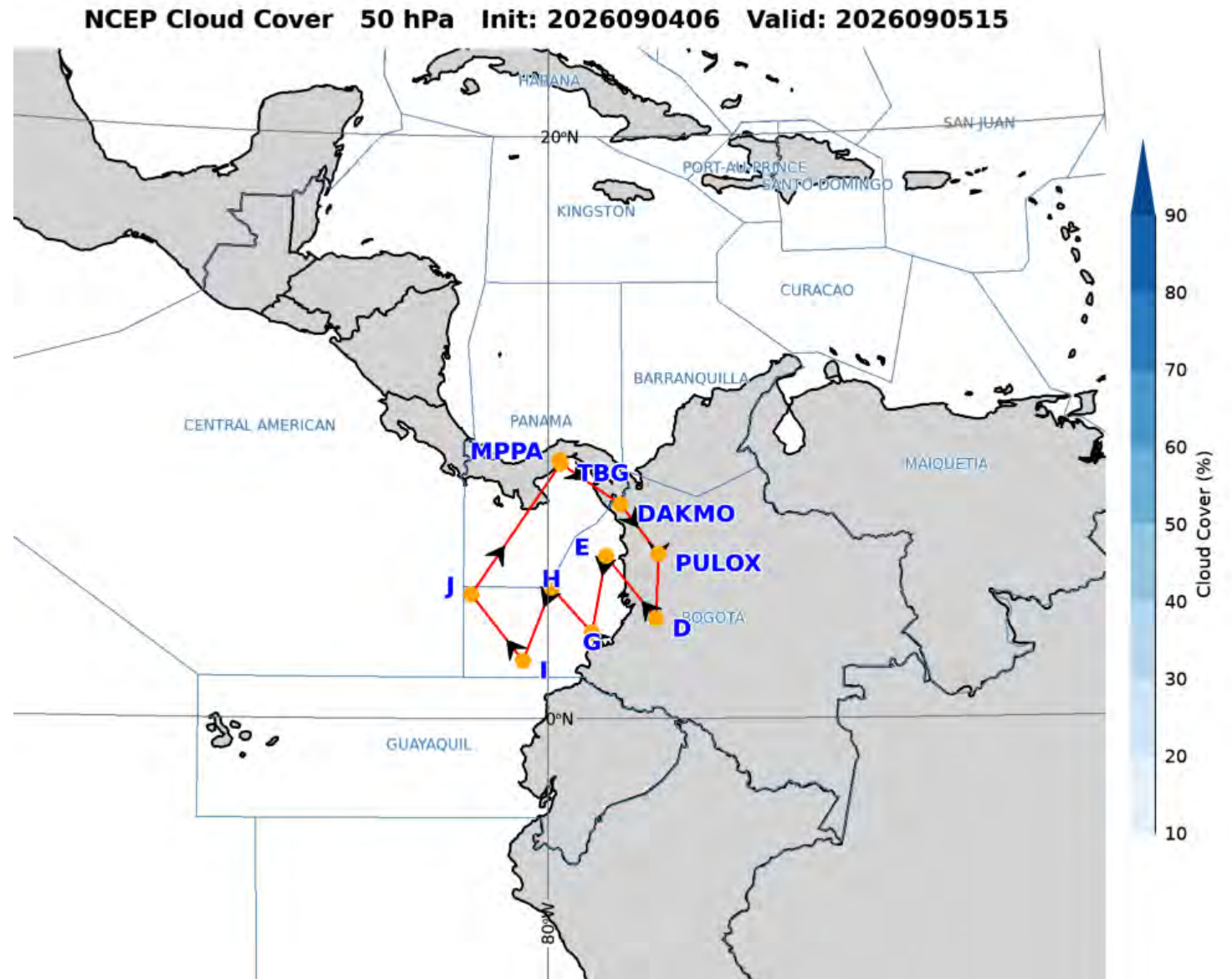
- Near-field continental deep convective outflow
- Aged outflow from deep continental convection

Bonus Target

- Purace and Nevado del Ruiz volcanos currently erupting

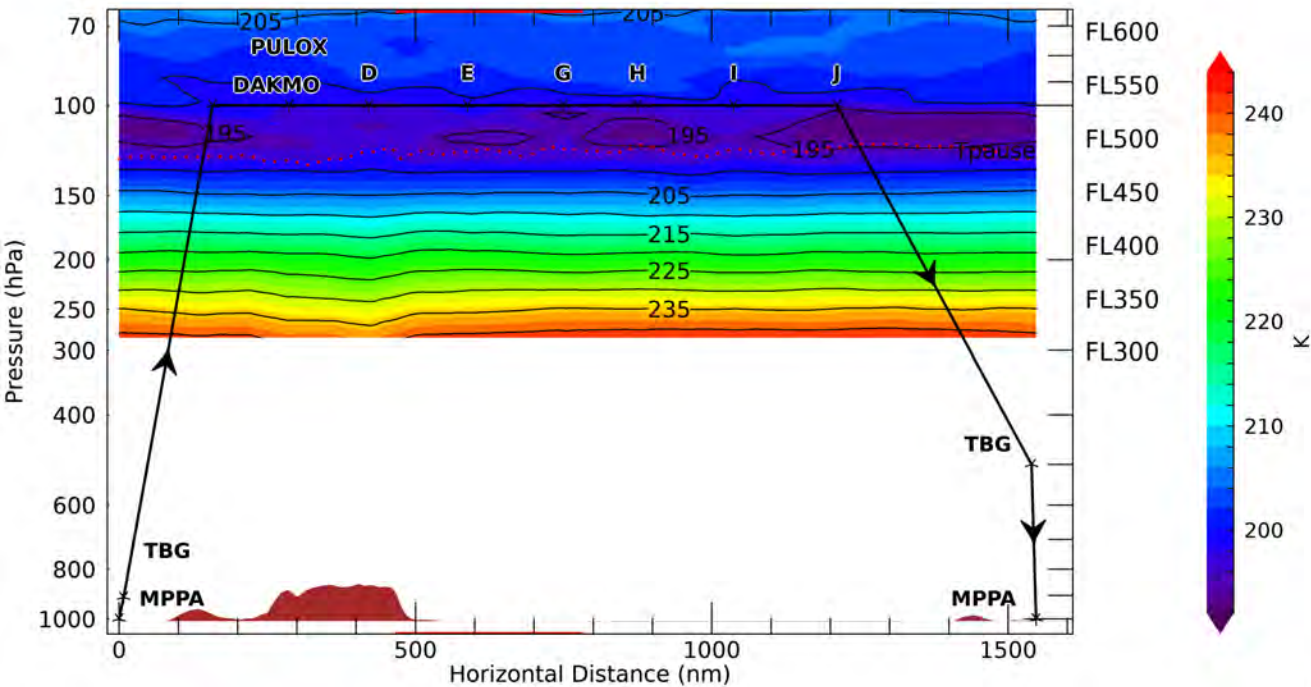
Flight Specs

- Take off: 9:30am
- Landing time: 3:00pm
- Distance: 1800 nautical miles
- Duration: ~5 hour

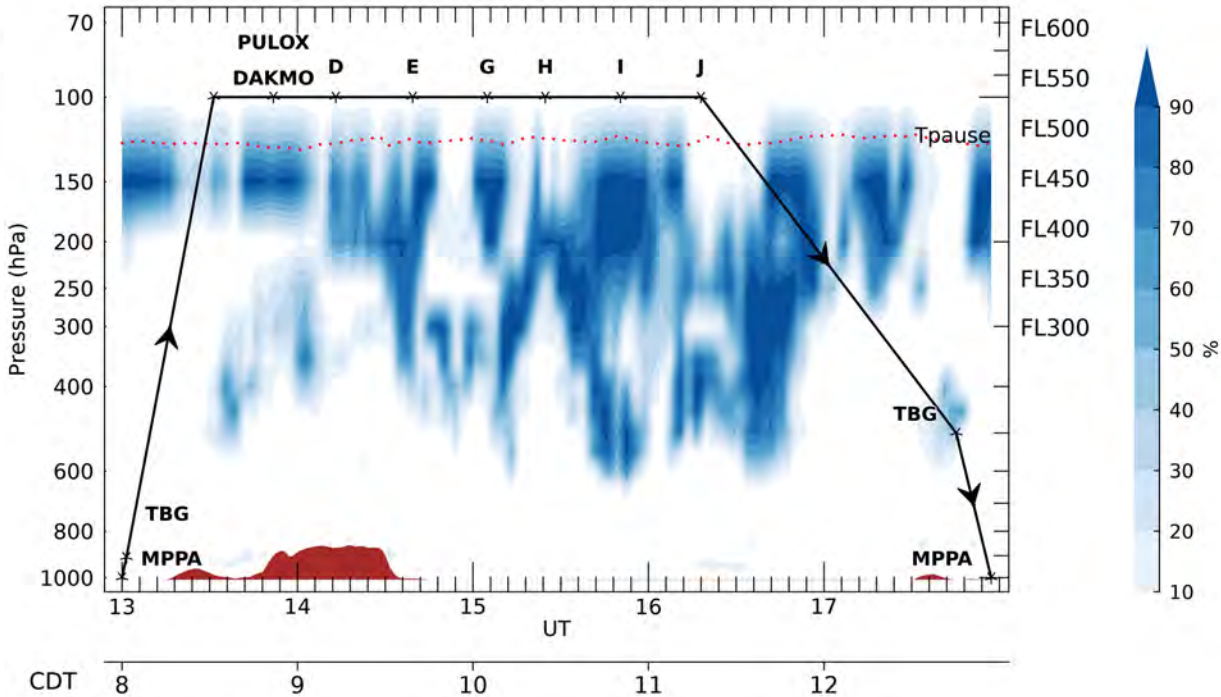


Vertical Profiles

CAMS Temperature Init:2026090312 Valid Time:2026090515



NCEP Cloud Cover Init:2026090406 Valid Day:20260905

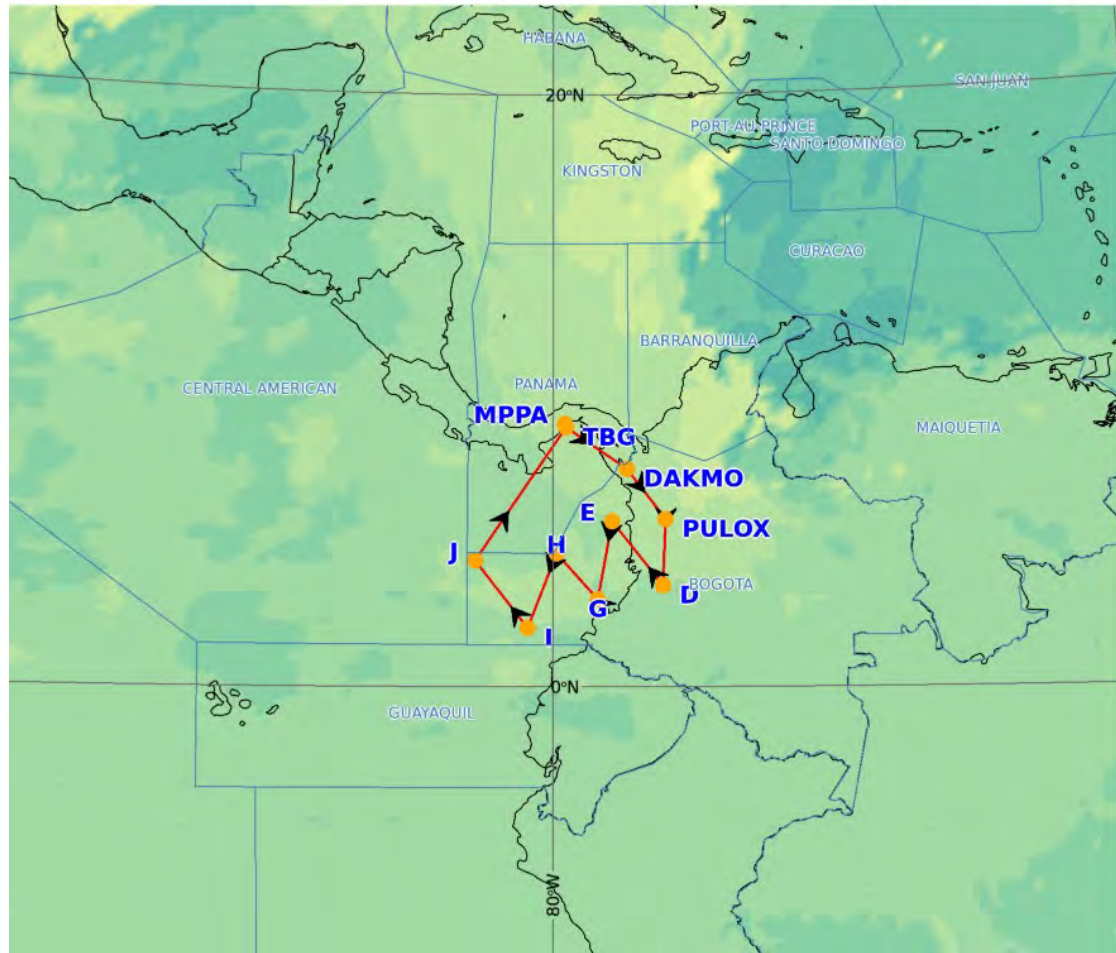


Tropopause 15Z (10a local)

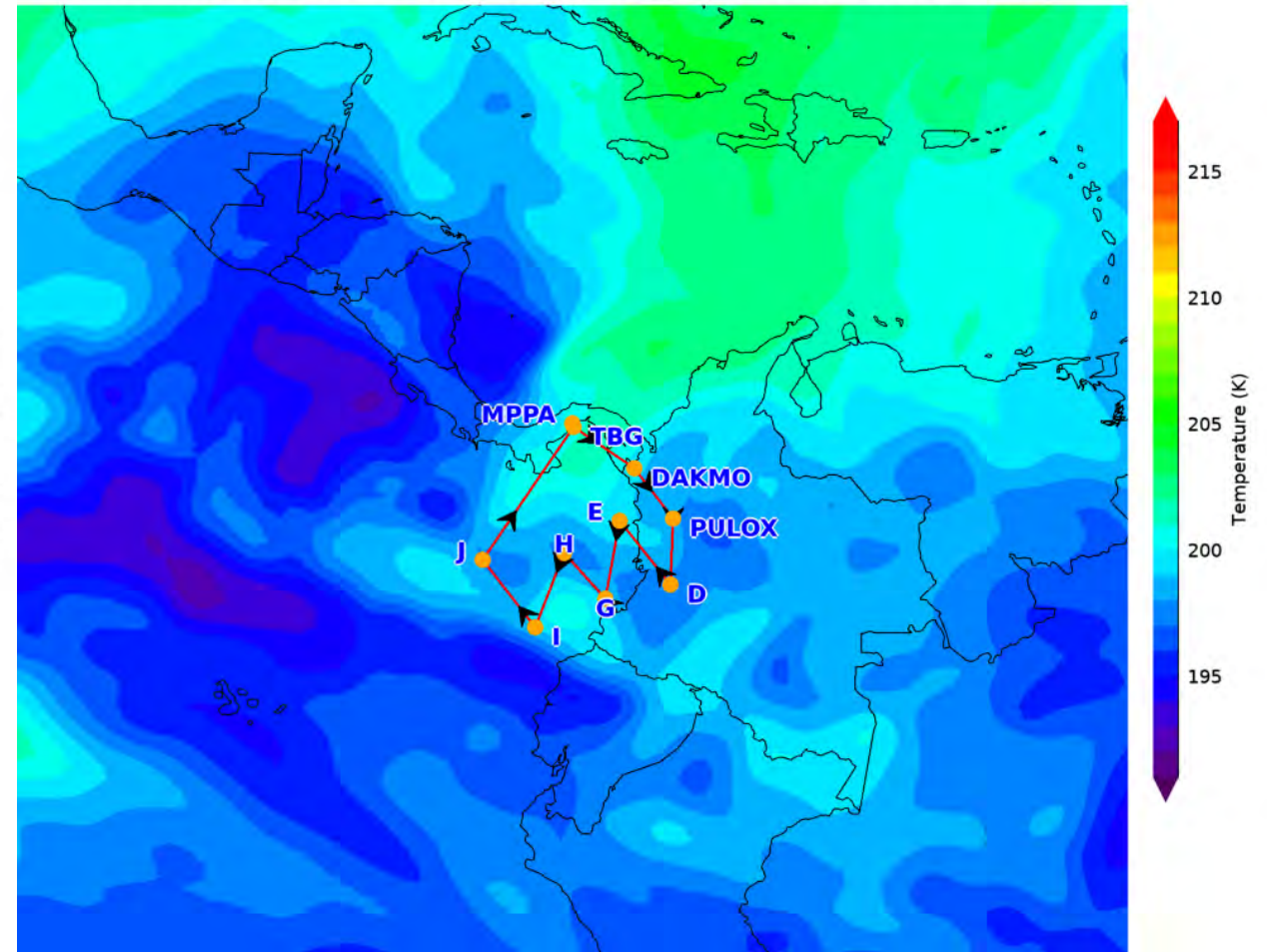
Pressure

Temperature

NCEP Tropopause Height Init: 2026090406 Valid: 2026090515



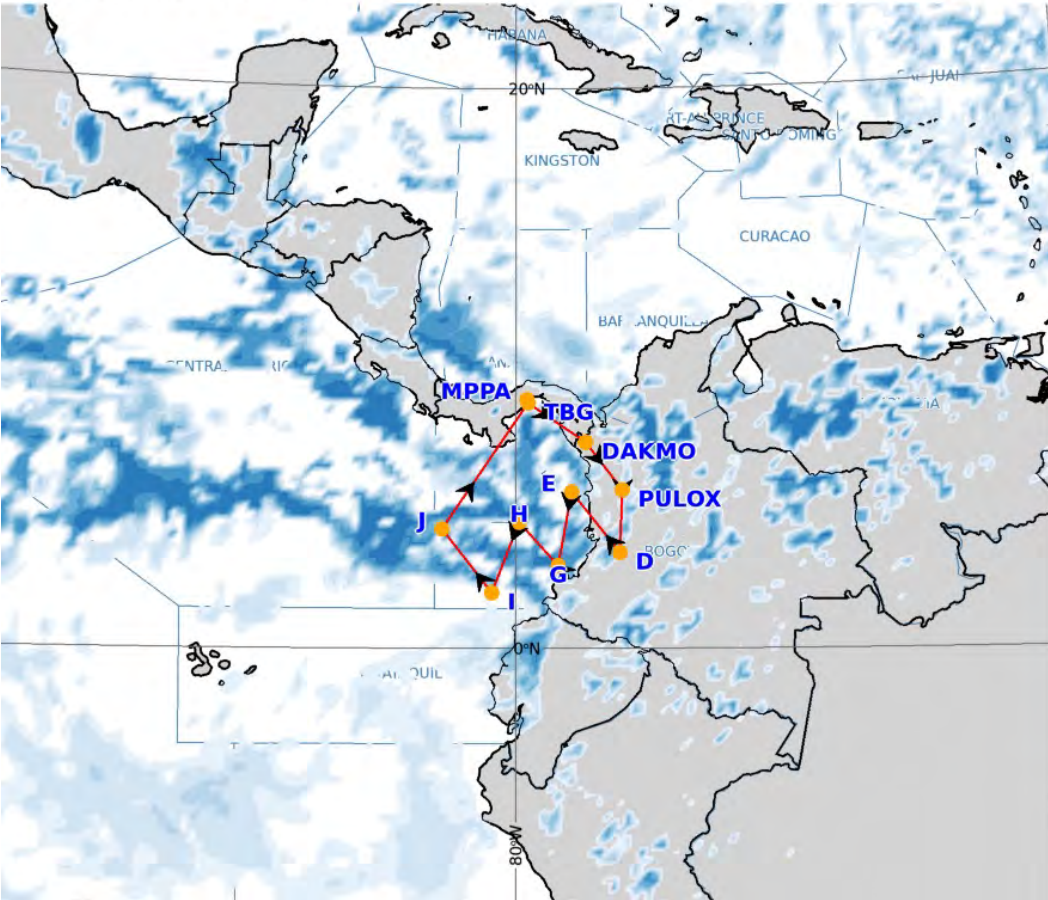
CAMS Temperature 98 hPa Init: 2026090312 Valid: 2026090515



Convective Cloud Cover

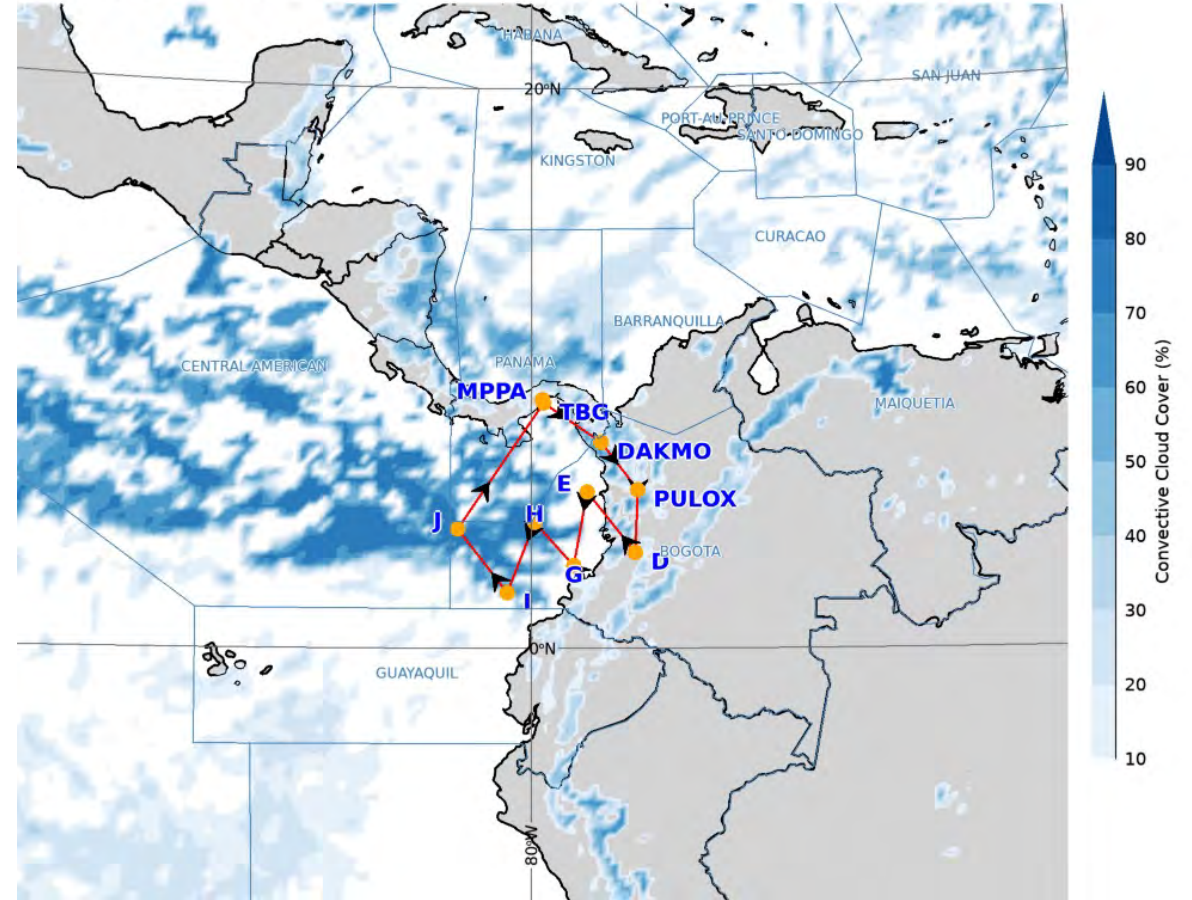
06z (1am local time)

NCEP Convective Cloud Cover Init: 2026090406 Valid: 2026090506



15z (10am local time)

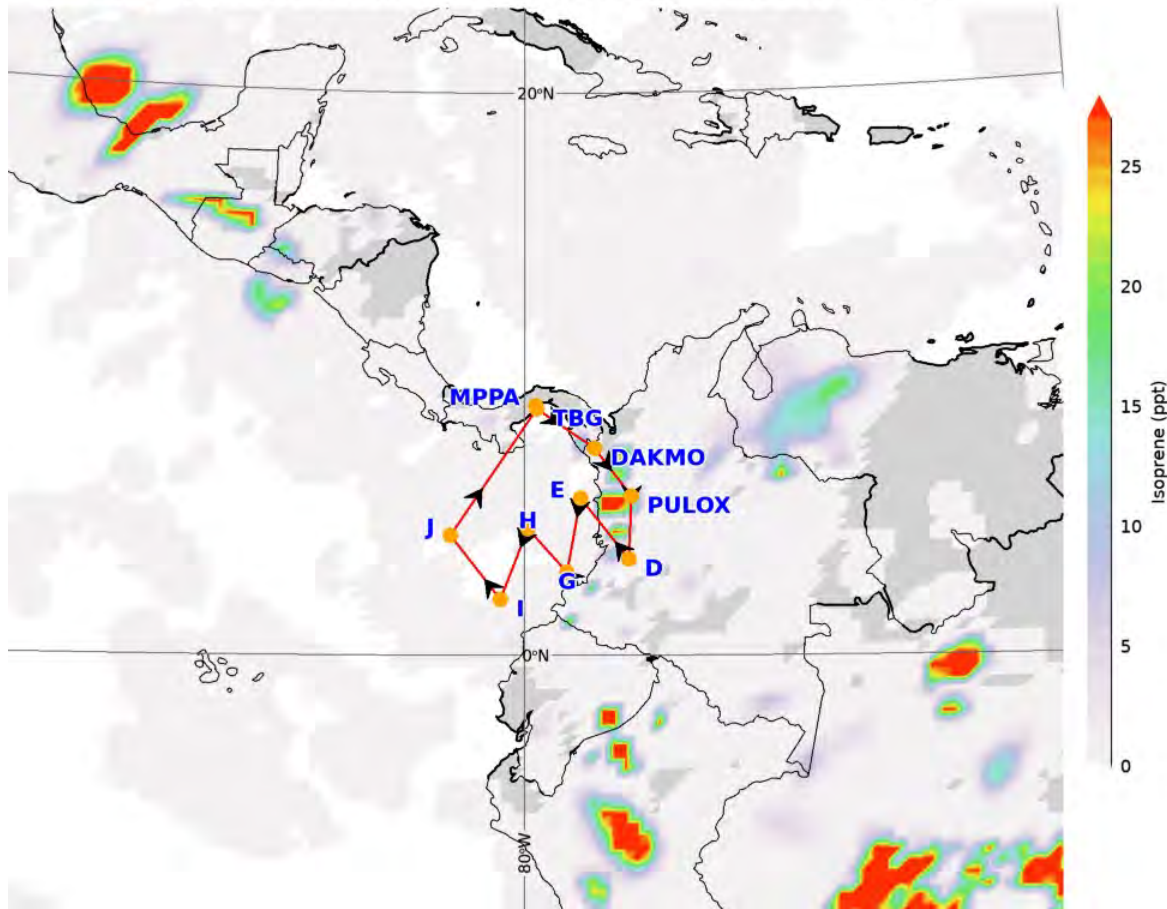
NCEP Convective Cloud Cover Init: 2026090406 Valid: 2026090515



Short lived tracers

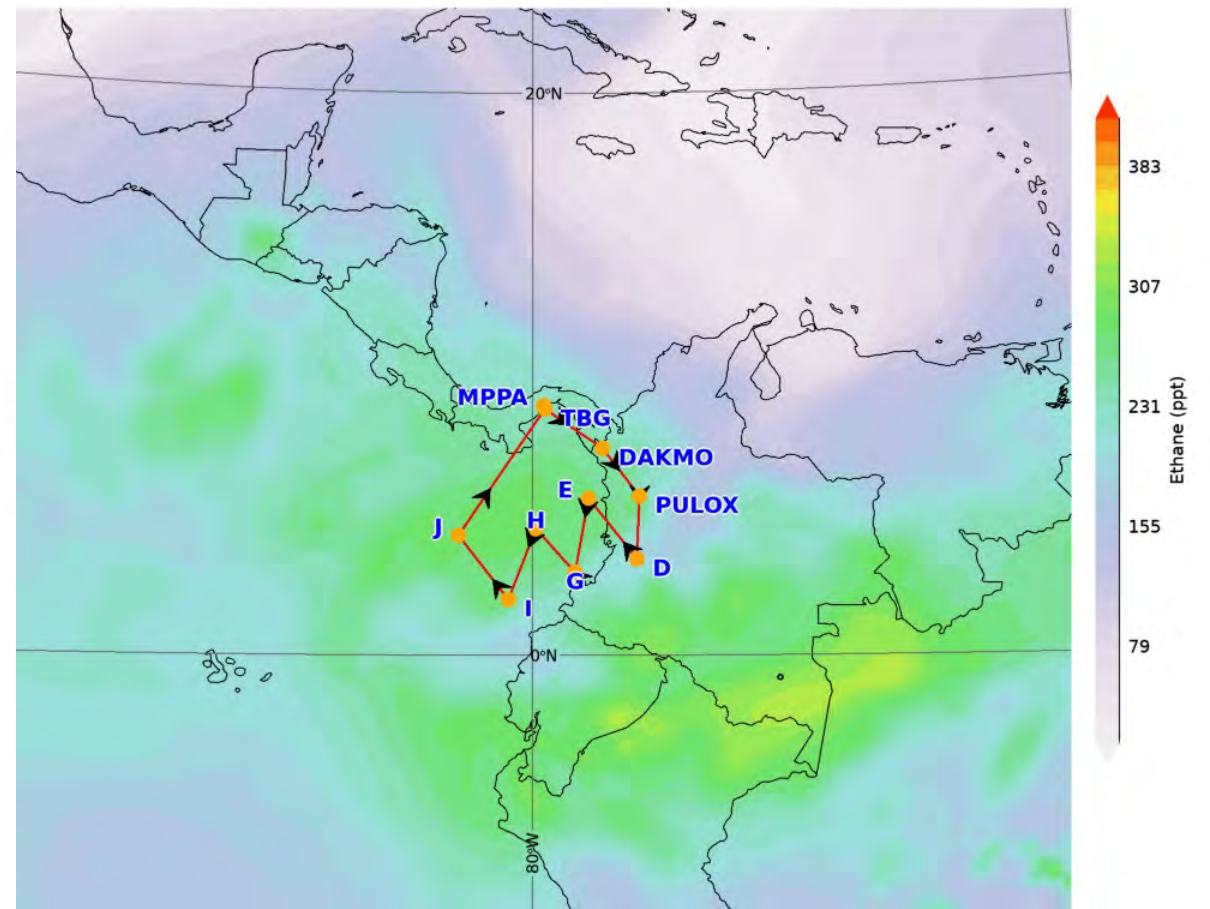
Isoprene

CAMS Isoprene 121 hPa Init: 2026090312 Valid: 2026090515



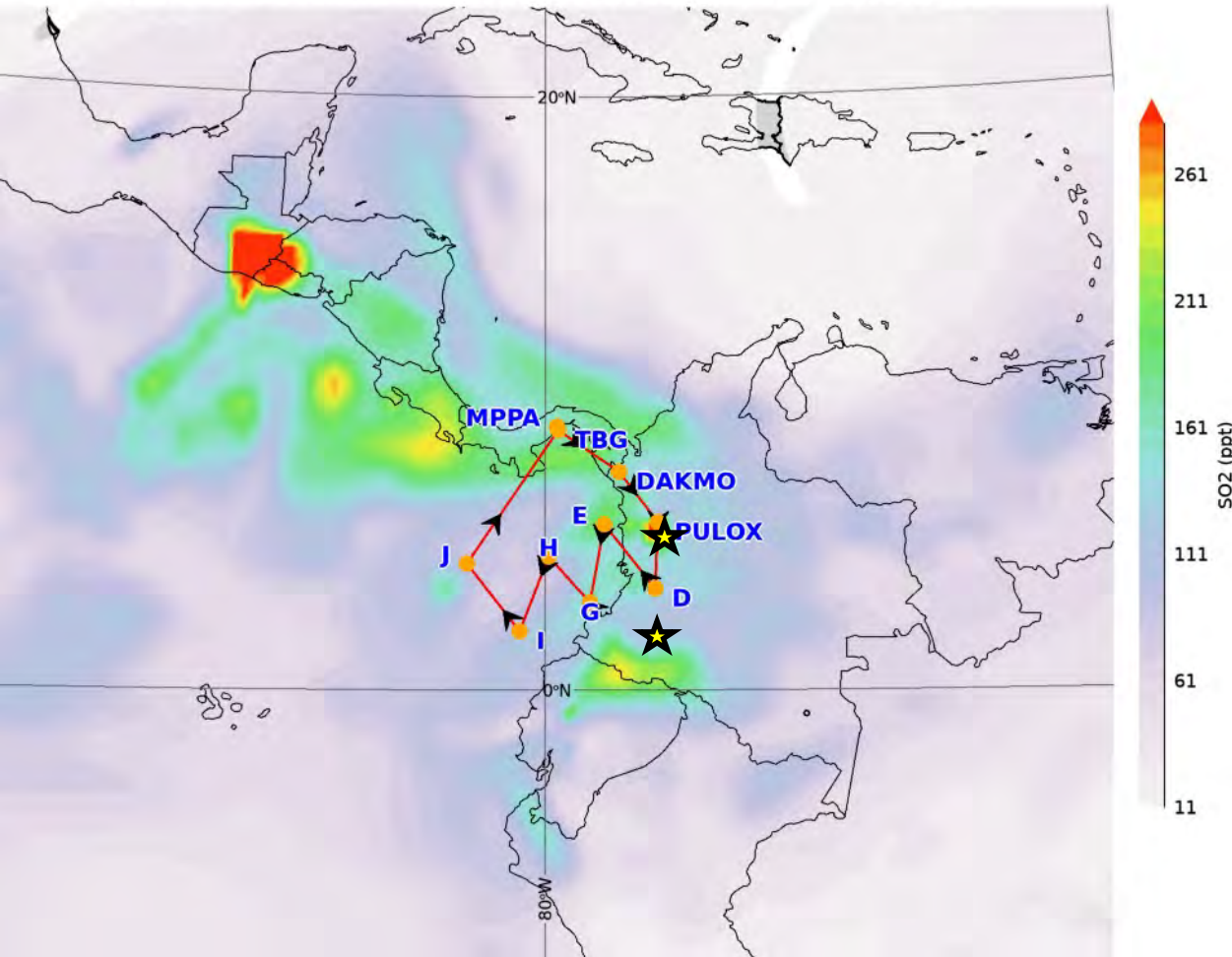
Ethane

CAMS Ethane 121 hPa Init: 2026090312 Valid: 2026090515

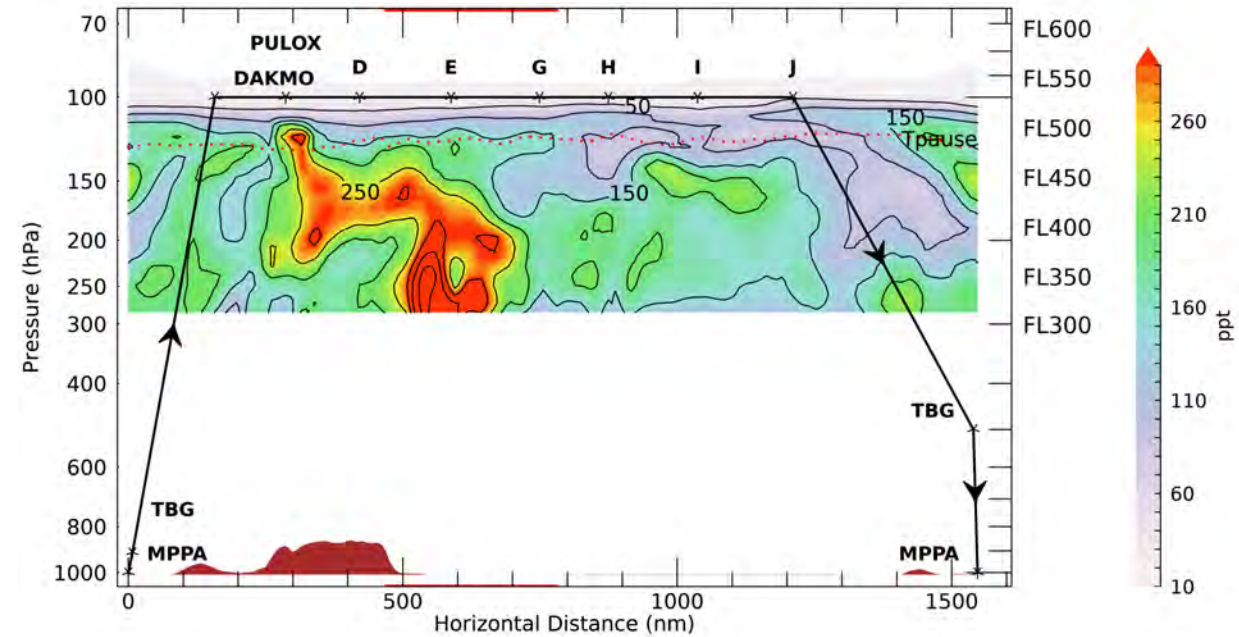


SO2

CAMS SO2 121 hPa Init: 2026090312 Valid: 2026090515



CAMS SO2 Init:2026090312 Valid Time:2026090515



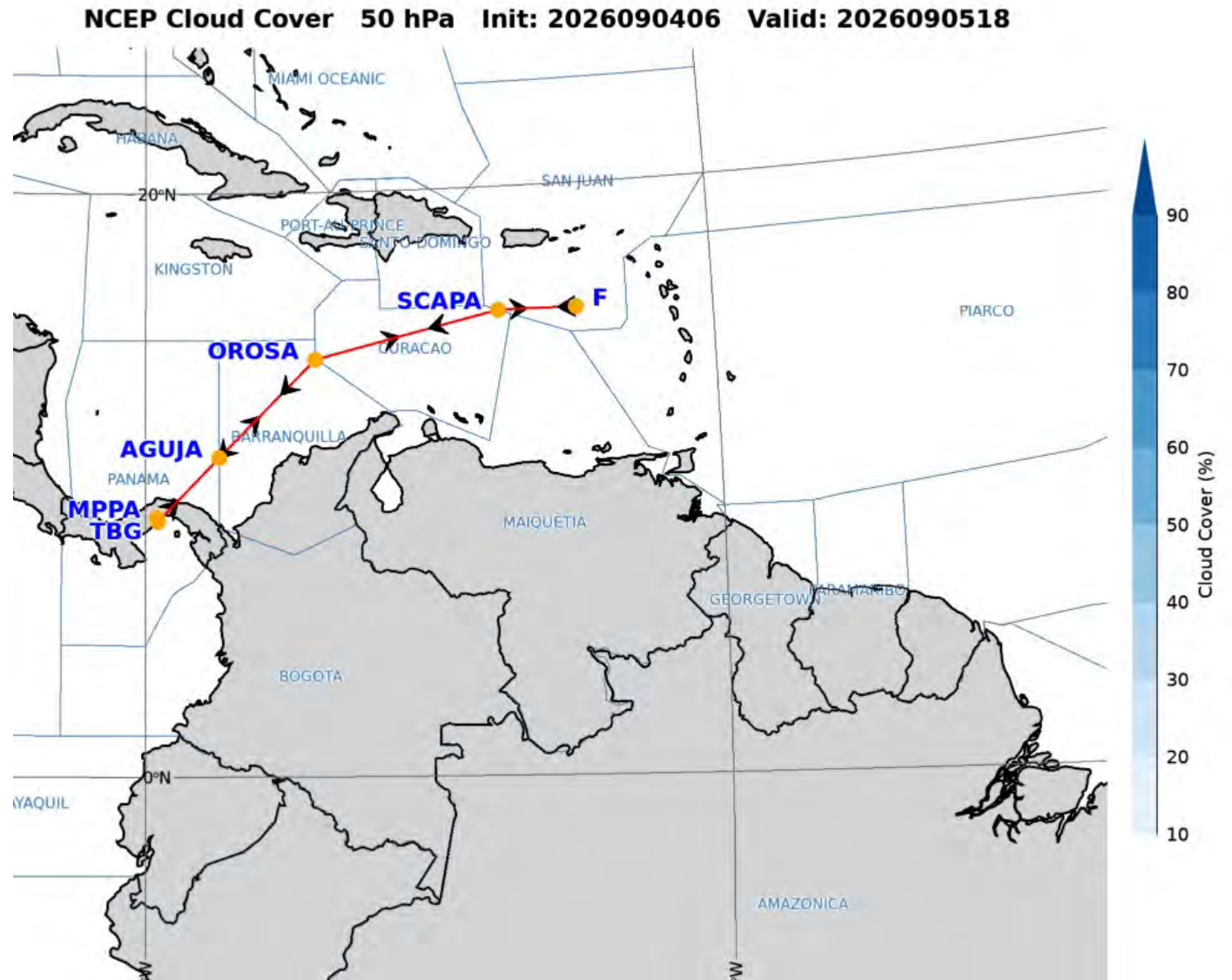
RF09 Flight Plan B

Targets

- Sampling of long-range transport from ASM/WAM crossing the Atlantic

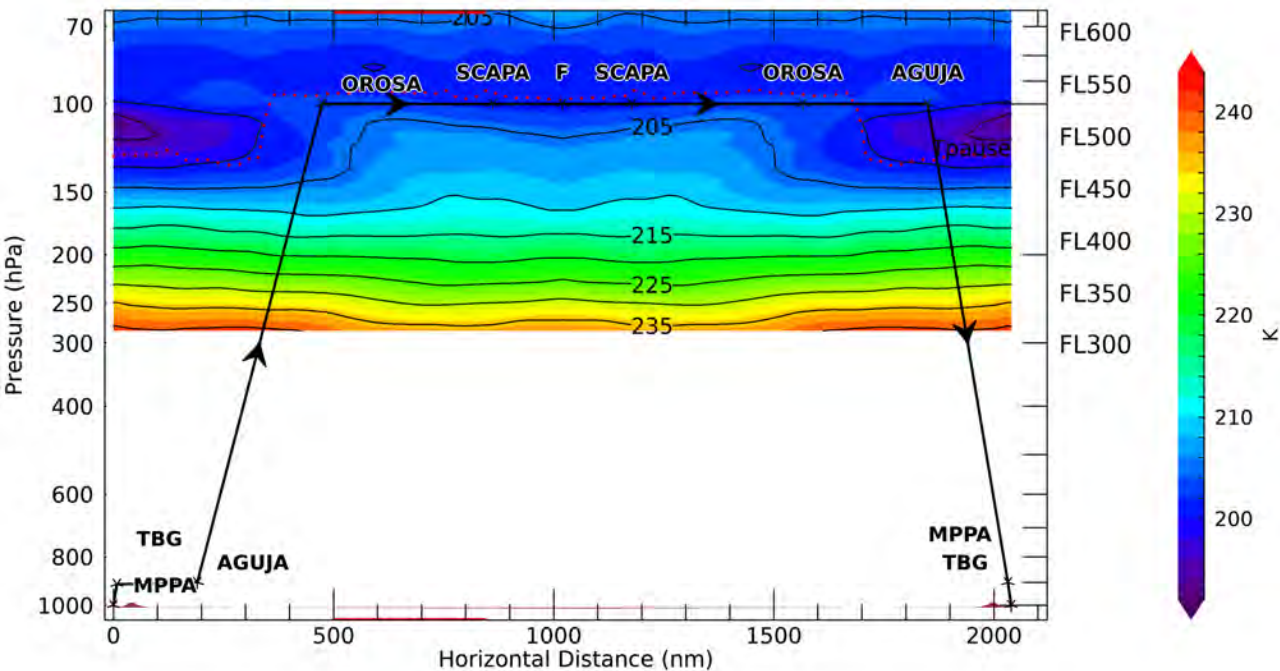
Flight Specs

- Take off: 9:30am
- Landing time: 3:00pm
- Distance: 2039 nautical miles
- Duration: 5.5 - 6 hours

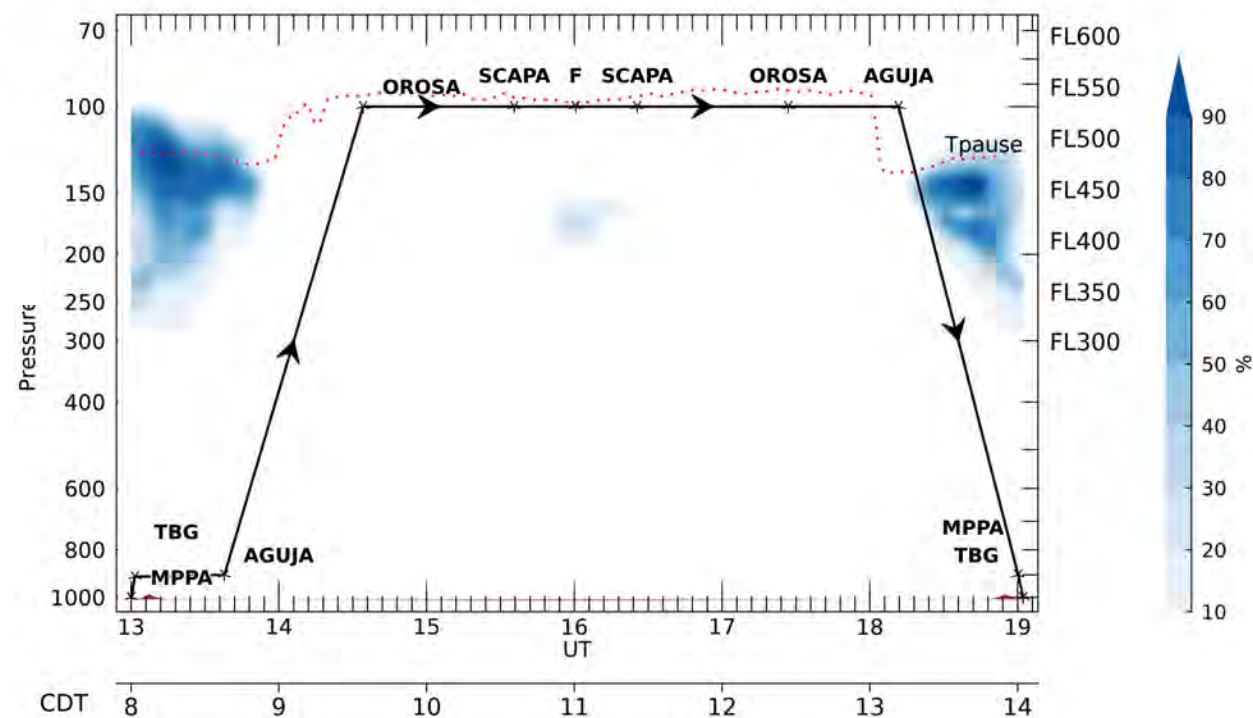


Vertical Profiles

CAMS Temperature Init:2026090312 Valid Time:2026090515



CAMS Cloud Cover Init:2026090312 Valid Day:20260905

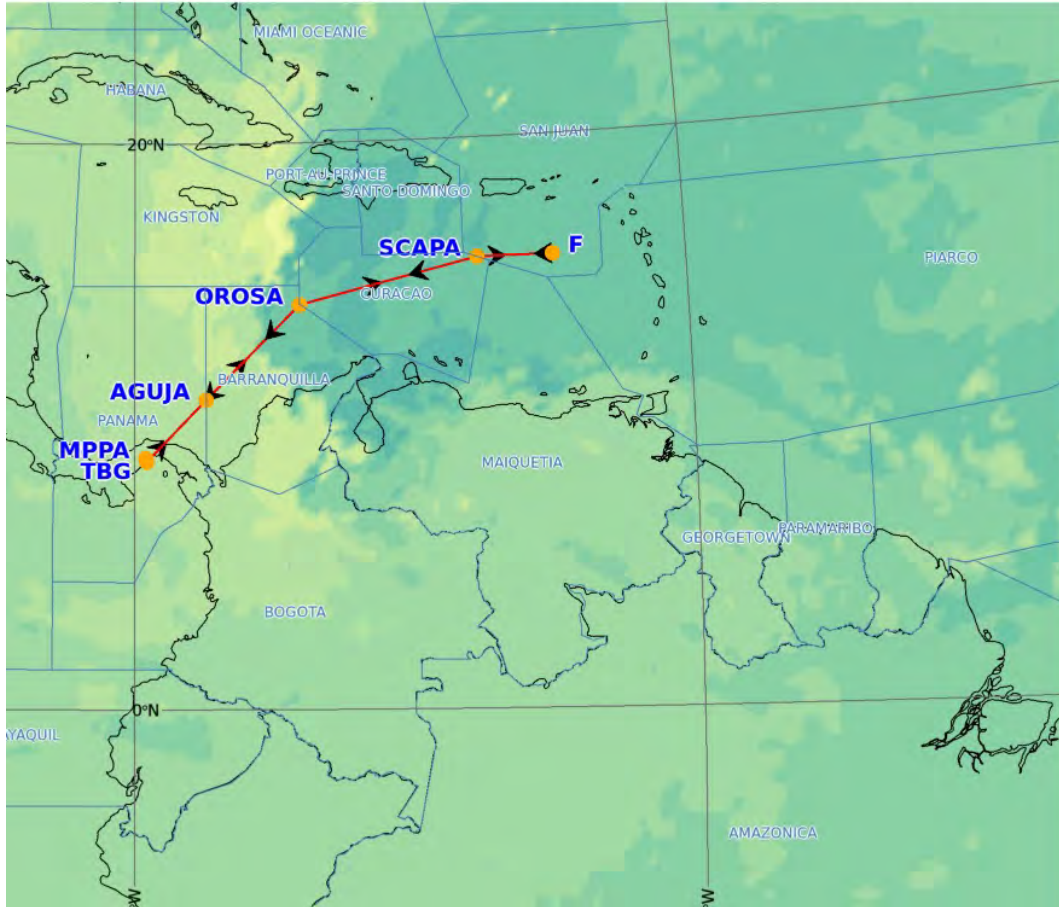


Tropopause 15Z (10a local)

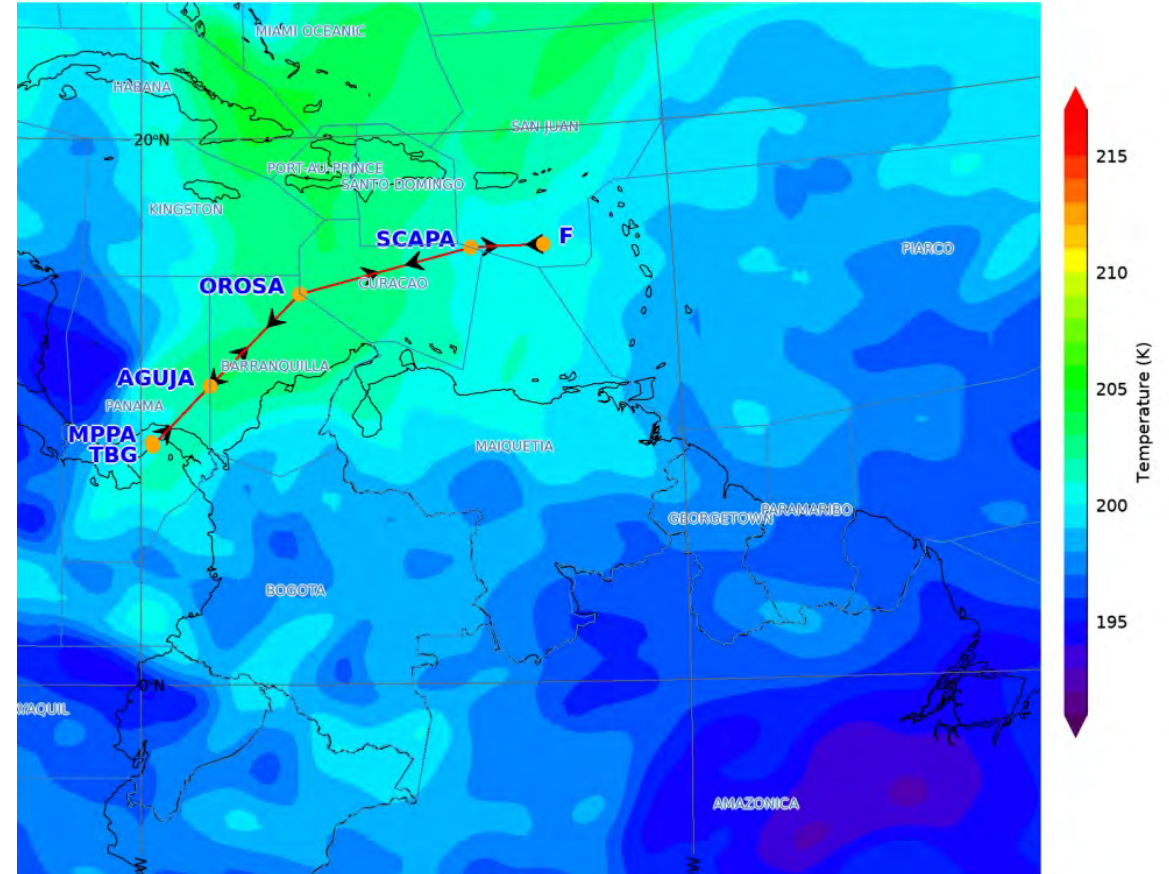
Pressure

Temperature

NCEP Tropopause Height Init: 2026090406 Valid: 2026090515



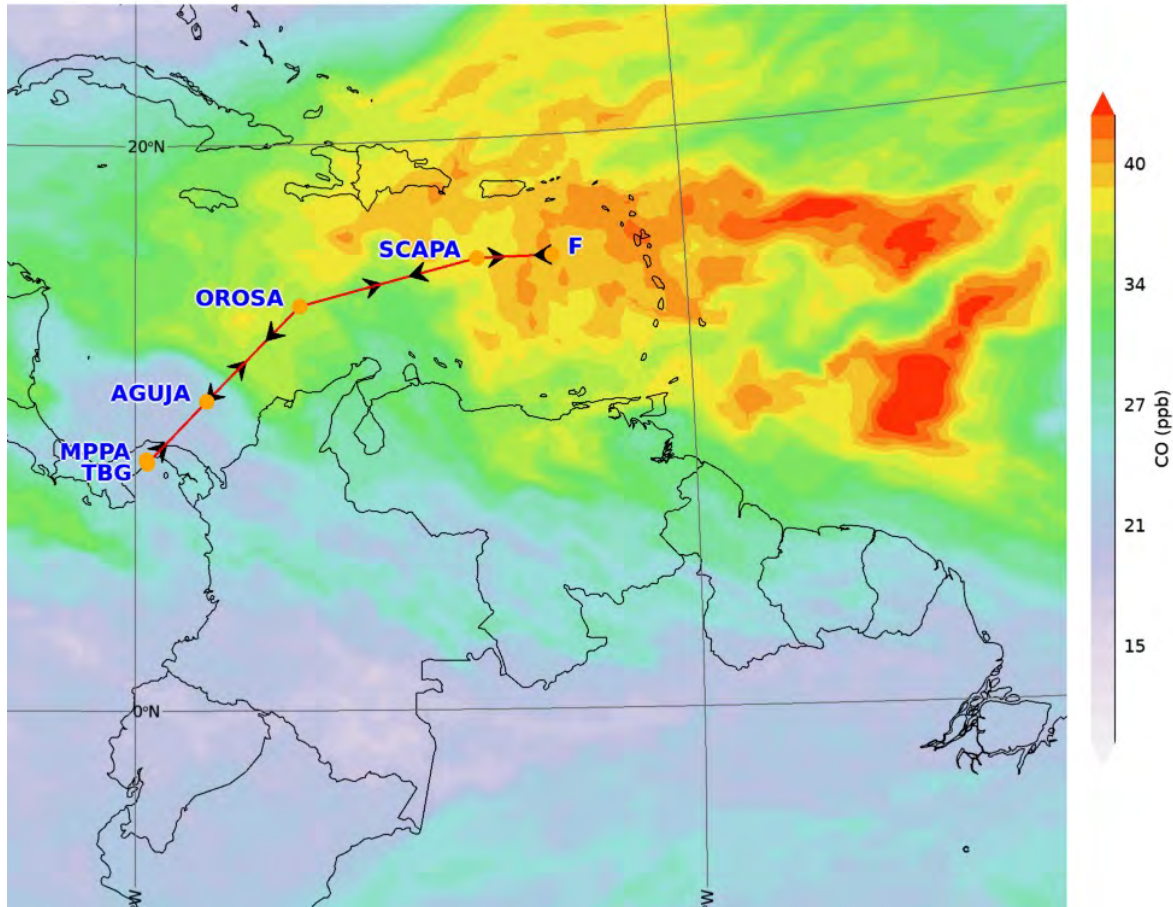
CAMS Temperature 98 hPa Init: 2026090312 Valid: 2026090515



CO@70hPa

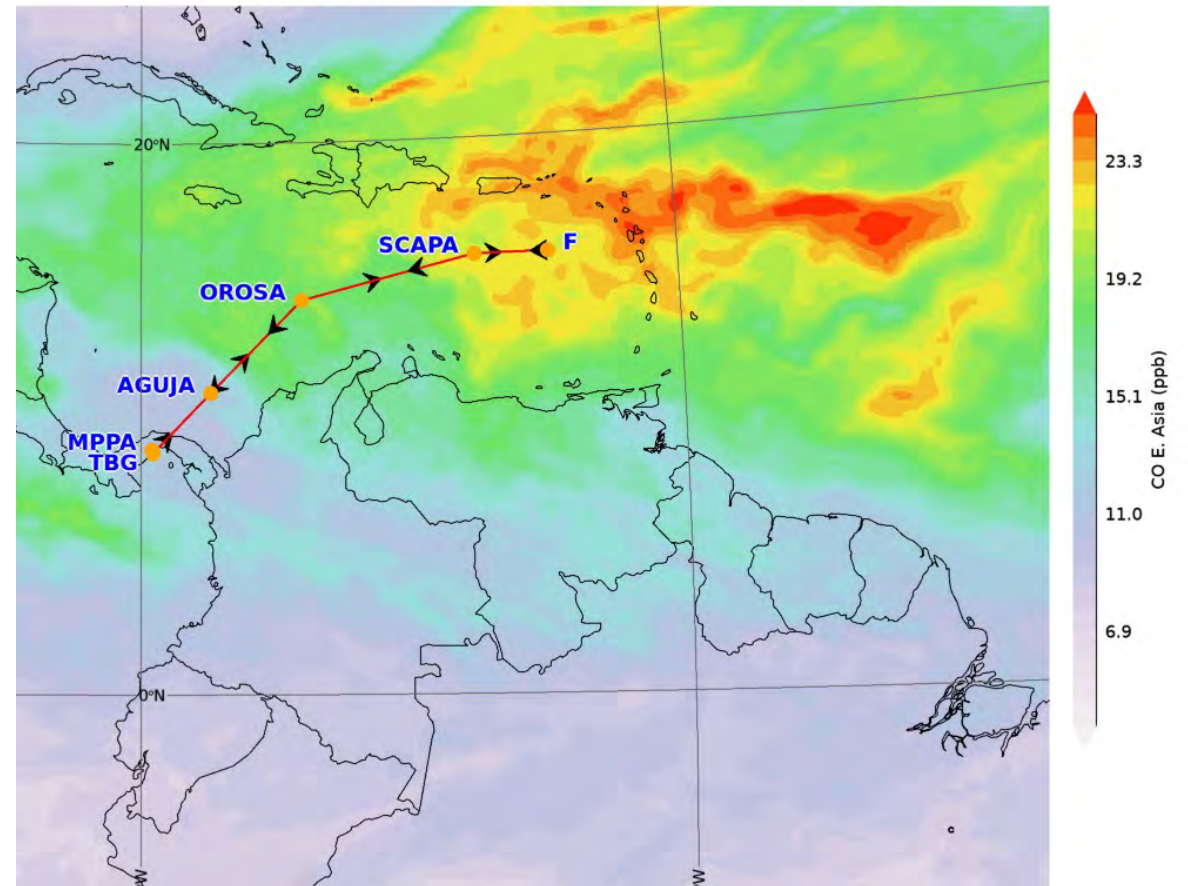
All CO

GEOS CO 70 hPa Init: 2026090312 Valid: 2026090515



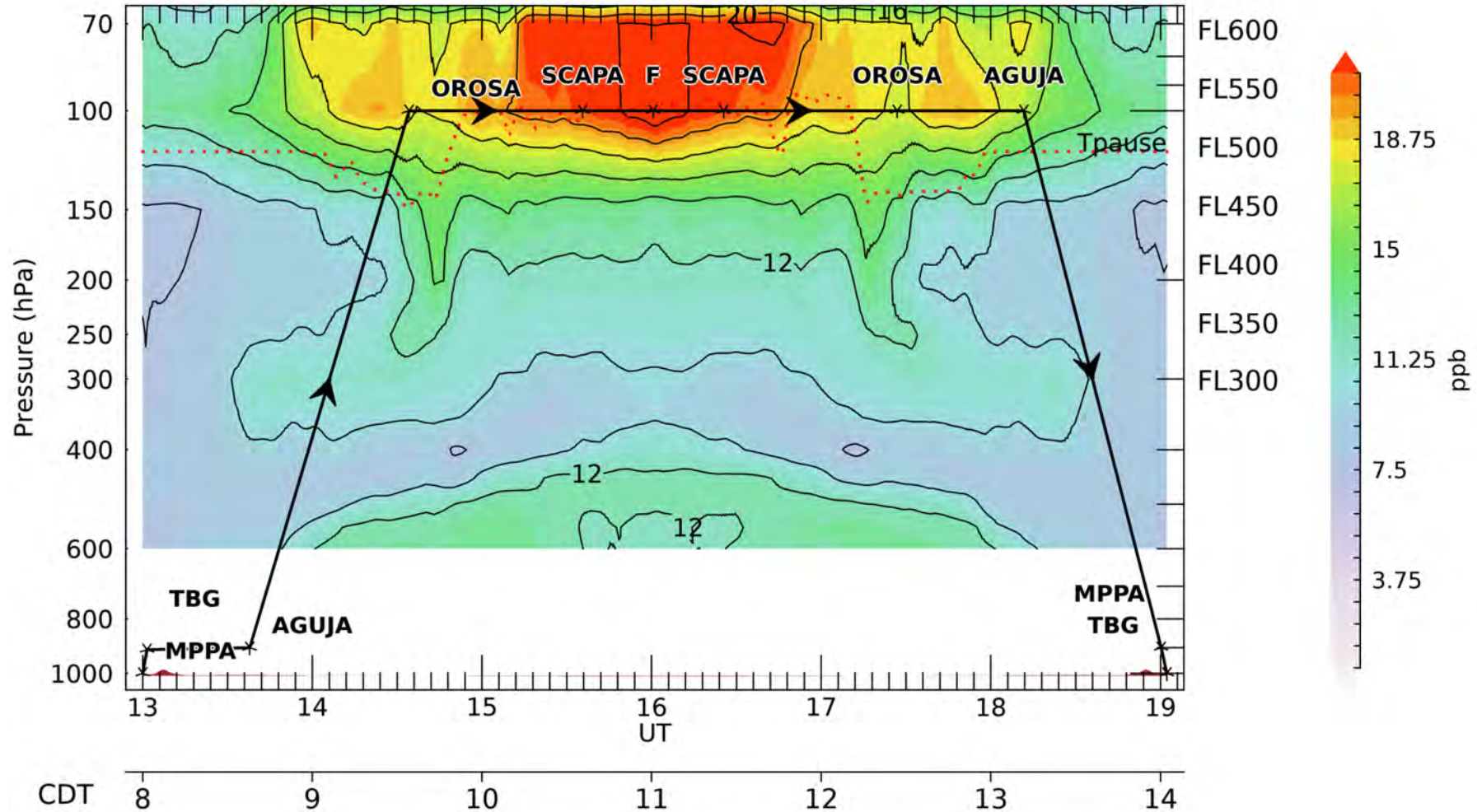
East Asia Tagged CO

GEOS CO E. Asia 70 hPa Init: 2026090312 Valid: 2026090515



CO Curtain

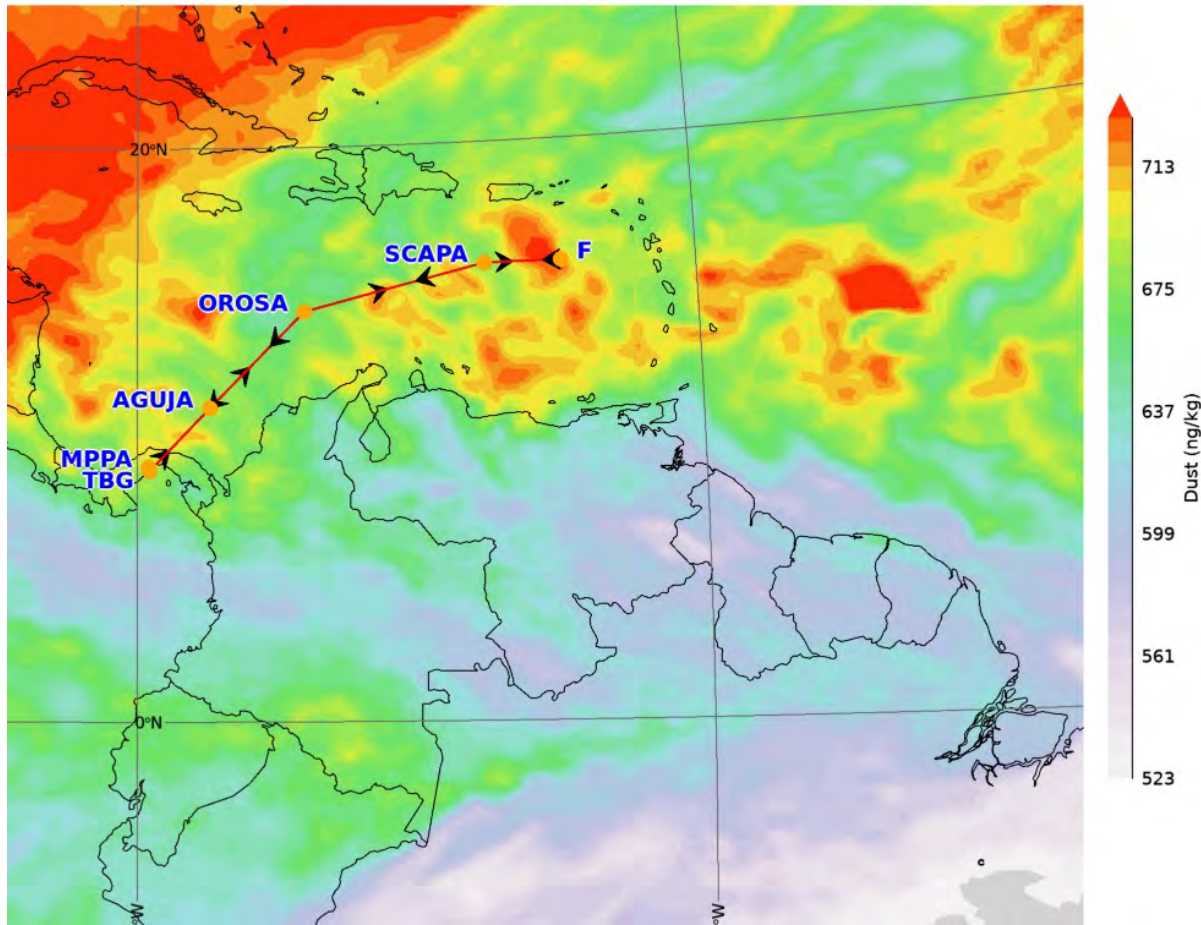
GEOS CO E. Asia Init:2026090312 Valid Day:20260905



Aerosols@70 hPa

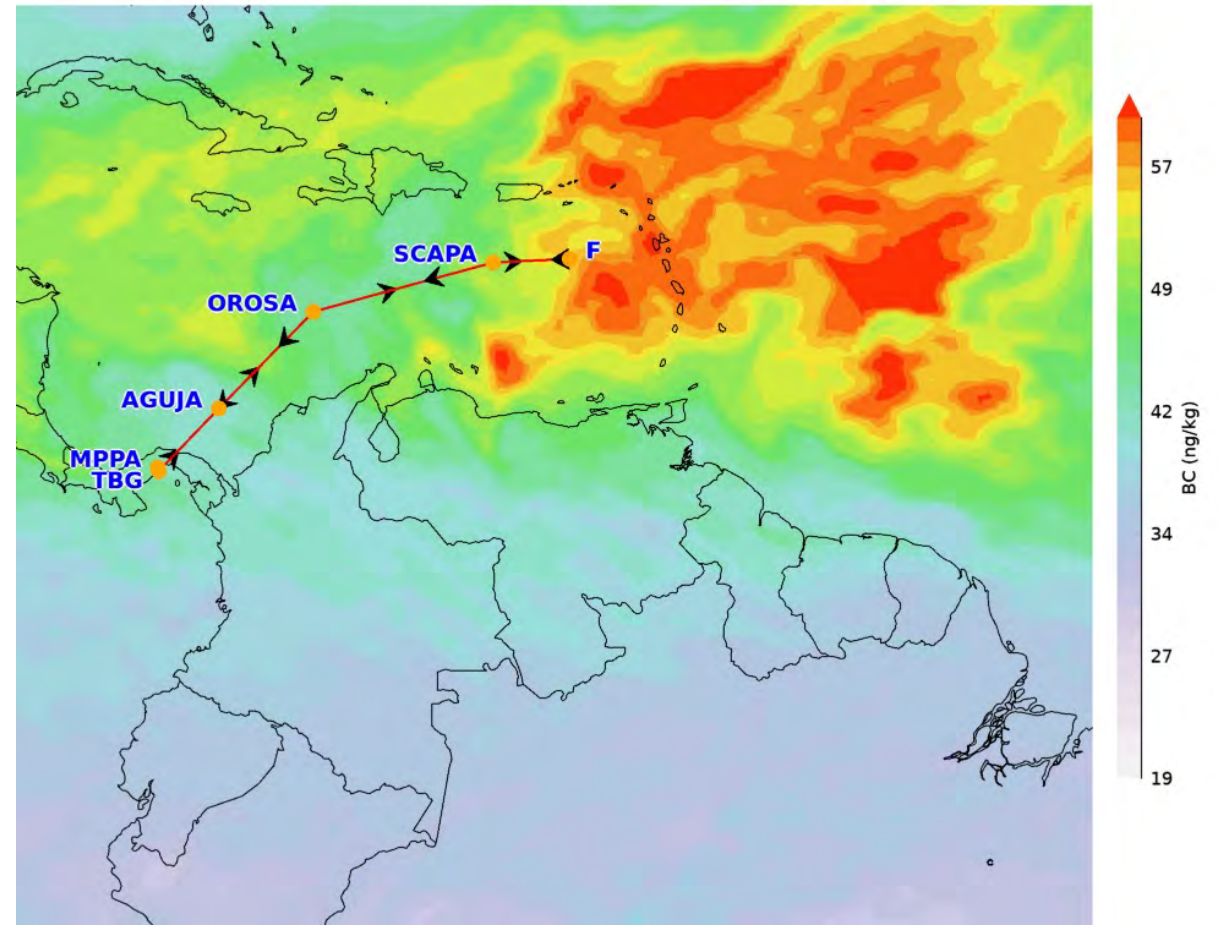
Dust

GEOS Dust 70 hPa Init: 2026090312 Valid: 2026090515



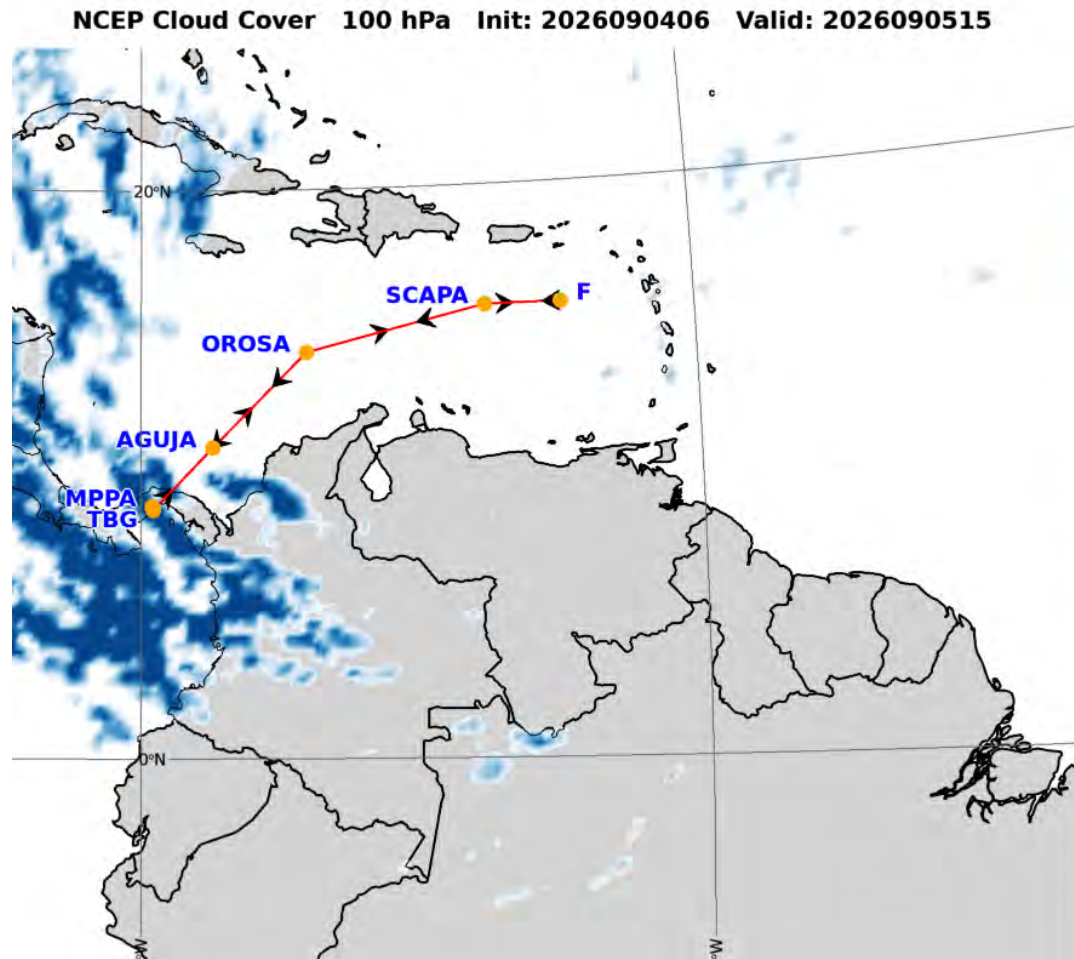
BC

GEOS BC 70 hPa Init: 2026090312 Valid: 2026090515



Cloud Cover

Clouds at 100 hPa (15z)



Convective (18z)

