Mission Summary
Georges
980919h Aircraft N42RF

Scientific Crew

Lead Project Scientist:	Sim Aberson
Dropwindsonde Scientists:	Sim Aberson, John Gamache
Radar Scientist:	John Gamache
Workstation Scientist:	Paul Leighton
CSCAT/VSDR Scientists:	Peter Black, Ivan Popstefanija
AXBT Scientist:	Peter Black

Mission Briefing:

Hurricane Georges rapidly intensifying just east of the Leward Islands, moving westward at about 18 kt (Fig. 1). The subtropical ridge extends east to west across the entire basin between 20N and 25N, suggesting a continuing westerly motion for the storm. The upper-level cold low located near Hispaniola could allow for a more west-northwestward turn. A vorticity maximum near Bermuda is not expected to influence the track or Georges. Due to the rapid motion, George was expected to impact the U. S. Virgin Islands and Puerto Rico at around 24 h, so the G-IV was tasked to fly a mission, and the two P3 aircraft participated in a three-plane synoptic flow experiment. during its scheduled ferry flight to St. Croix.

Ensemble perturbations (Fig. 2) suggest that the main areas of uncertainty in this forecast coincide with Georges itself, with the subtropical ridge axis to the north of Georges, and with the cold low near Hispaniola. The G-IV also sampled the vorticity maximum near Bermuda (Fig 3.).

Mission synopsis:

Due to the slowed motion of Georges, the pattern for N43RF was far too long, so the pre-flight planning included modifying the flight pattern to ensure that targets were reached and that a figure 4 was completed in the center of the hurricane to anchor the analyses. This allowed for a third penetration into the eye of Georges, in which it was decided that the plane would circle to get visual footage of the eyewall structure.

The flight path of N42RF was modified slightly to fill in gaps left by modification to the other P-3's flight path. As a result, there was sufficient time for N43RF also to make three pentrations.

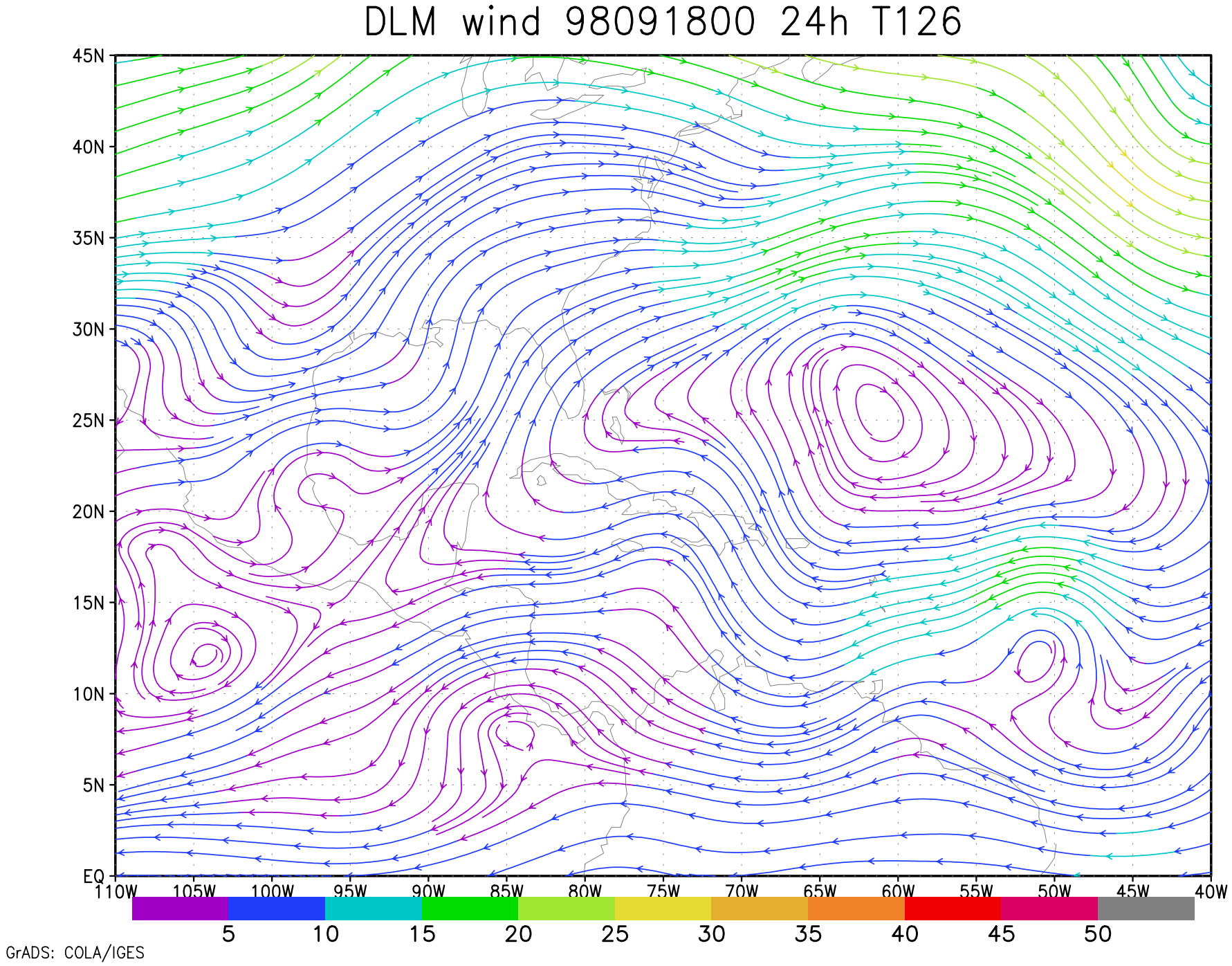
The early part of the flight was uneventful except for some very strong convection noted off the coast of Brazil both visually and on radar. This is the furthest east the P3s have flown for hurricane work.

Peter Black suggested that we make a drop/AXBT combo as we flew over the wake of Georges. SST was found to be 28.1C, so we may have missed the wake, or it was not as strong as expected.

In the storm itself, most of the sondes failed near the surface in high wind situations. One sonde reported winds of 165 kt at 66 m above the surface. Lowest pressure was found to be 939 hPa. Radar composites and VTDs were sent out, as were all sondes by the time we landed. The penetrations were made at night with a new moon, so no visible information was obtained.

For the third pass, CARCAH requested a fix from 10,000 feet due to mechanical failure on the AFRES plane.

Sim Aberson


DLM wind 98091800 24h T126
45N
40N
35N
30N
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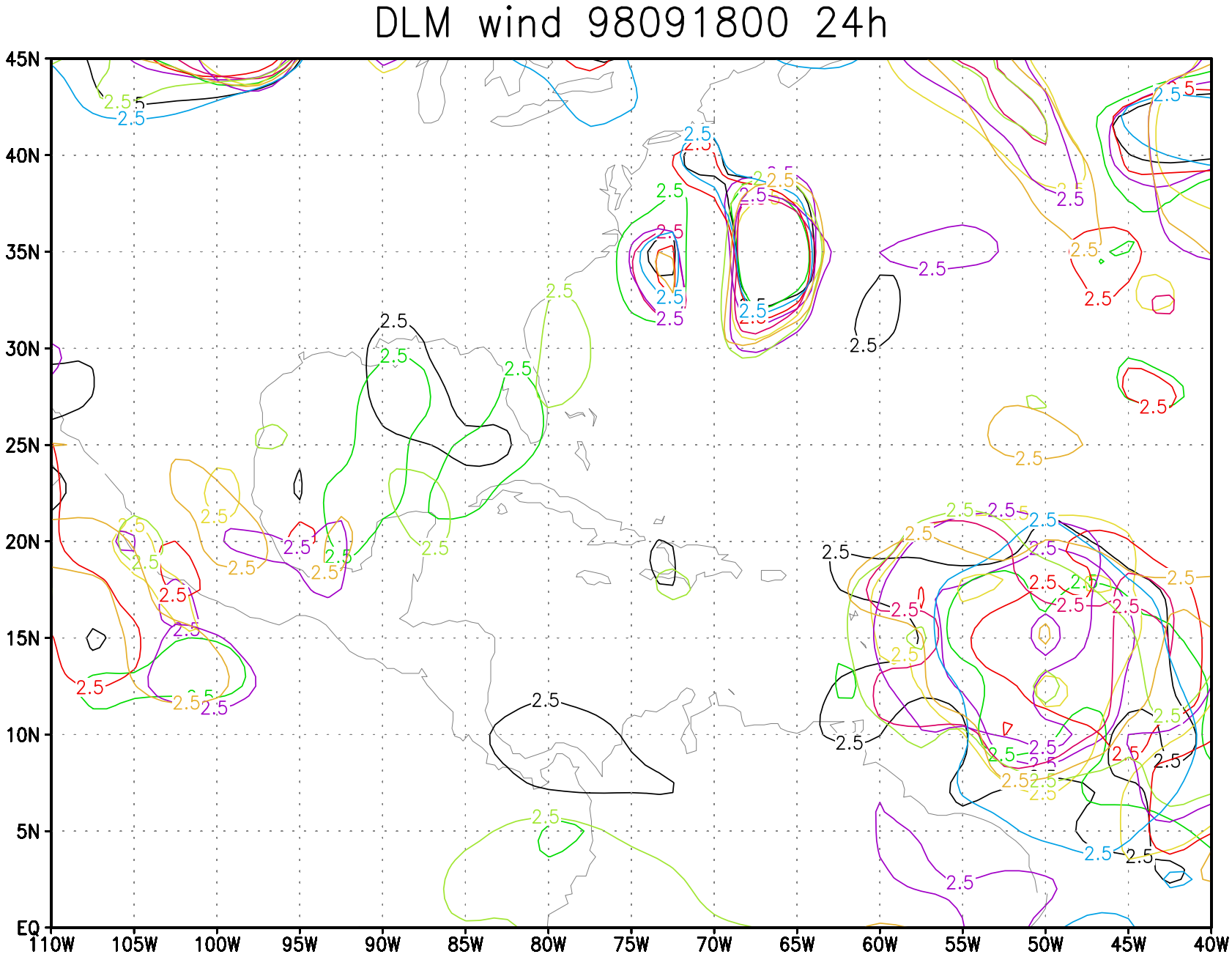
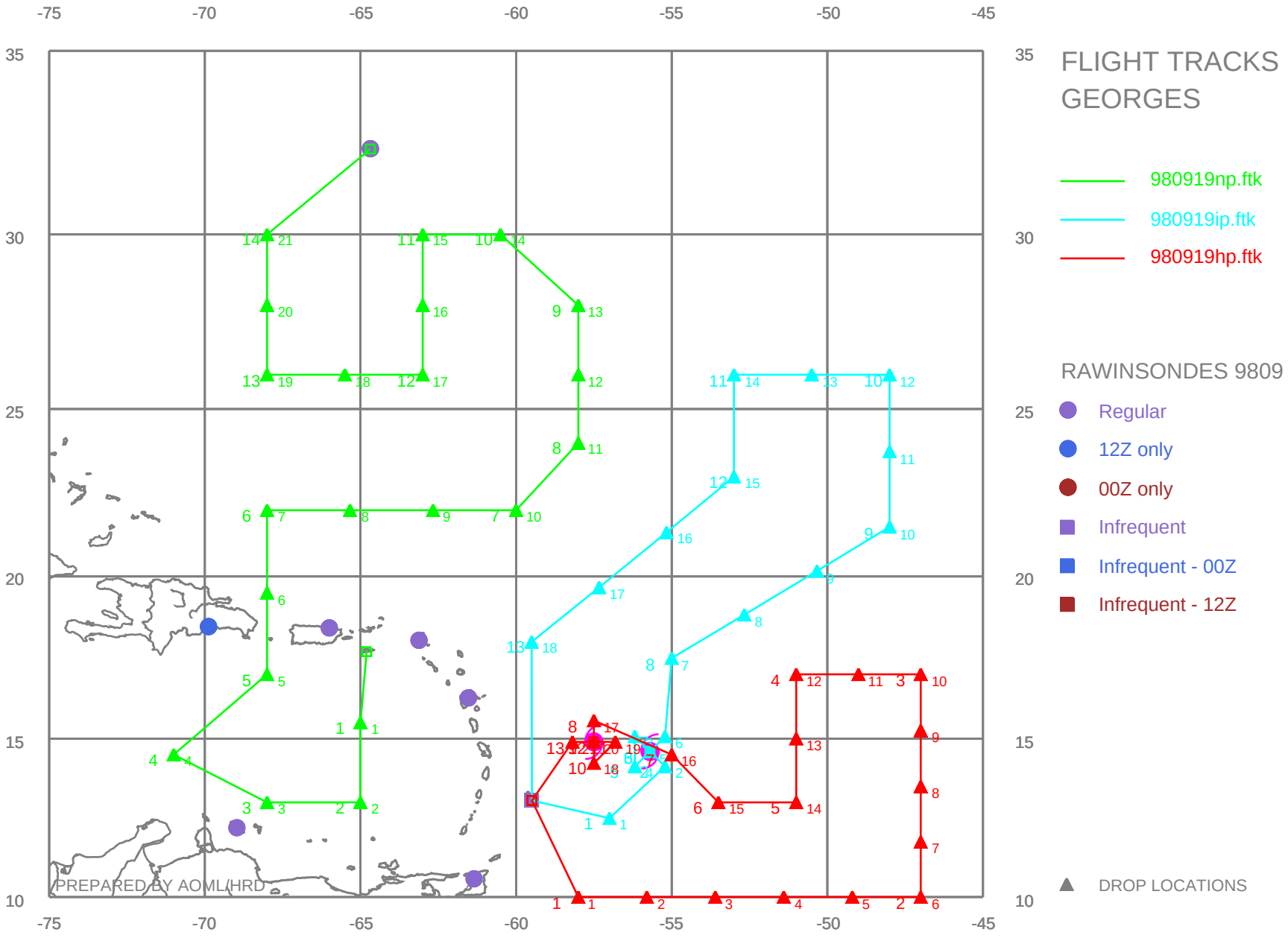
GrADS: COLA/IGES



GrADS: COLA/IGES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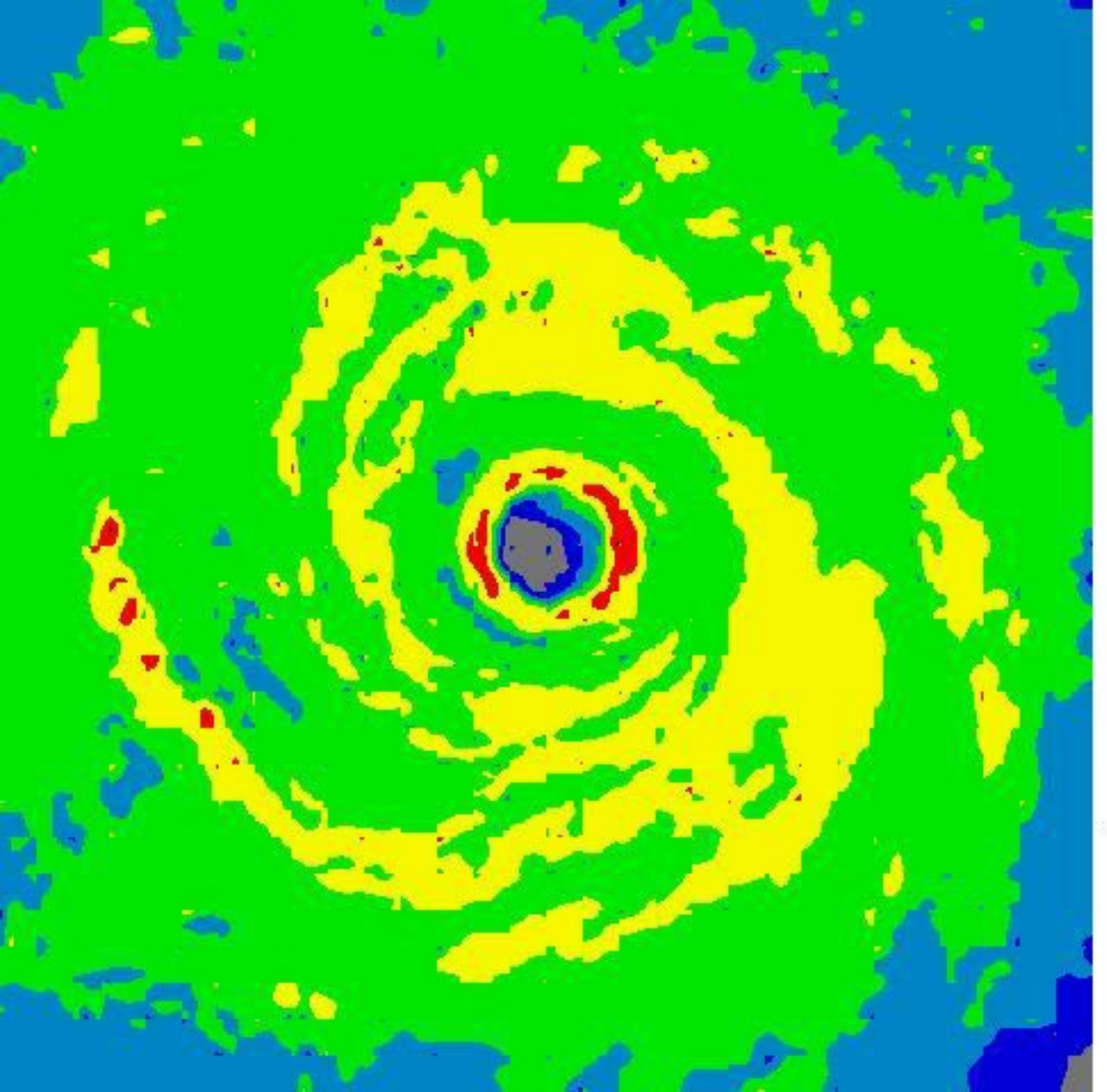
FLIGHT TRACKS
GEORGES
980919np.ftk
980919ip.ftk
980919hp.ftk
RAWINSONDES 9809
Regular
12Z only
00Z only
Infrequent
Infrequent - 00Z
Infrequent - 12Z
DROP LOCATIONS
PREPARED BY AOML/HRD



980919H1

GEORGES#1

242239 Z to
244547 Z

48
41
35
28
21
15 Alt 4532 m

dBZ

Slat 15.80 N
Slon 55.09 W

360 X 360 km

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