

**NOAA / AOML / Hurricane Research Division
2021 Hurricane Field Program
Advancing the Prediction of Hurricanes Experiment (APHEX)**

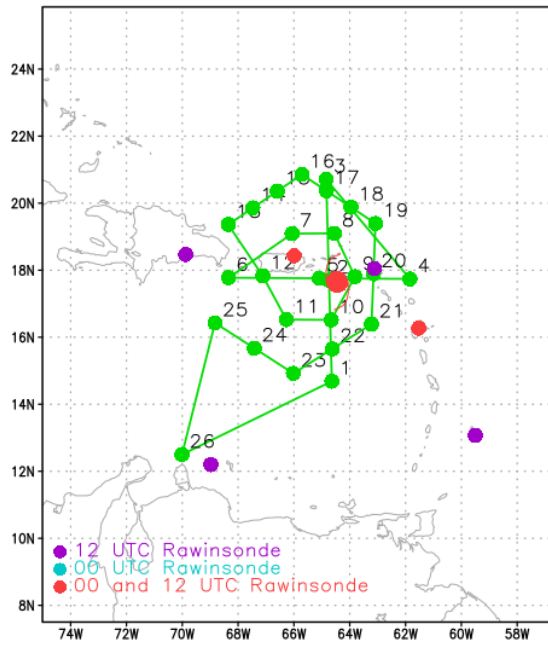
FLIGHT LOG -- 20210815N1

MISSION PLAN			
FLIGHT ID	20210815N1	STORM	AL07 / GRACE
MISSION ID	WB07A	TAIL NUMBER	NOAA49
TASKING	HRD	PLANNED PATTERN	Double Circumnav + Fig-4
MISSION SUMMARY			
TAKEOFF [UTC]	1505	LANDING [UTC]	2121
TAKEOFF LOCATION	Aruba	LANDING LOCATION	Aruba
FLIGHT TIME	6.3	BLOCK TIME	6.5
TOTAL REAL-TIME RADAR ANALYSES (Transmitted)	5 (5)	TOTAL DROPSONDES (Good/Transmitted)	32 (27/27)
OCEAN EXPENDABLES (Type)	None	sUAS (Type)	None
APHEX EXPERIMENTS / MODULES	Genesis Experiment: PREFORM; ITOFS		
HRD CREW MANIFEST			
LPS ONBOARD	None	LPS GROUND	Hazelton
TDR ONBOARD	None	TDR GROUND	Gamache
ASPEN ONBOARD	Henning	ASPEN GROUND	None
NESDIS SCIENTISTS	None		
GUESTS (Affiliation)	None		
AOC CREW MANIFEST			
PILOTS	Waddington, De Triquet		
NAVIGATOR	N/A		
FLIGHT ENGINEERS	N/A		
FLIGHT DIRECTOR	Kalen/Henning		
DATA TECHNICIAN	Miller		
AVAPS	Patel		

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PRE-FLIGHT

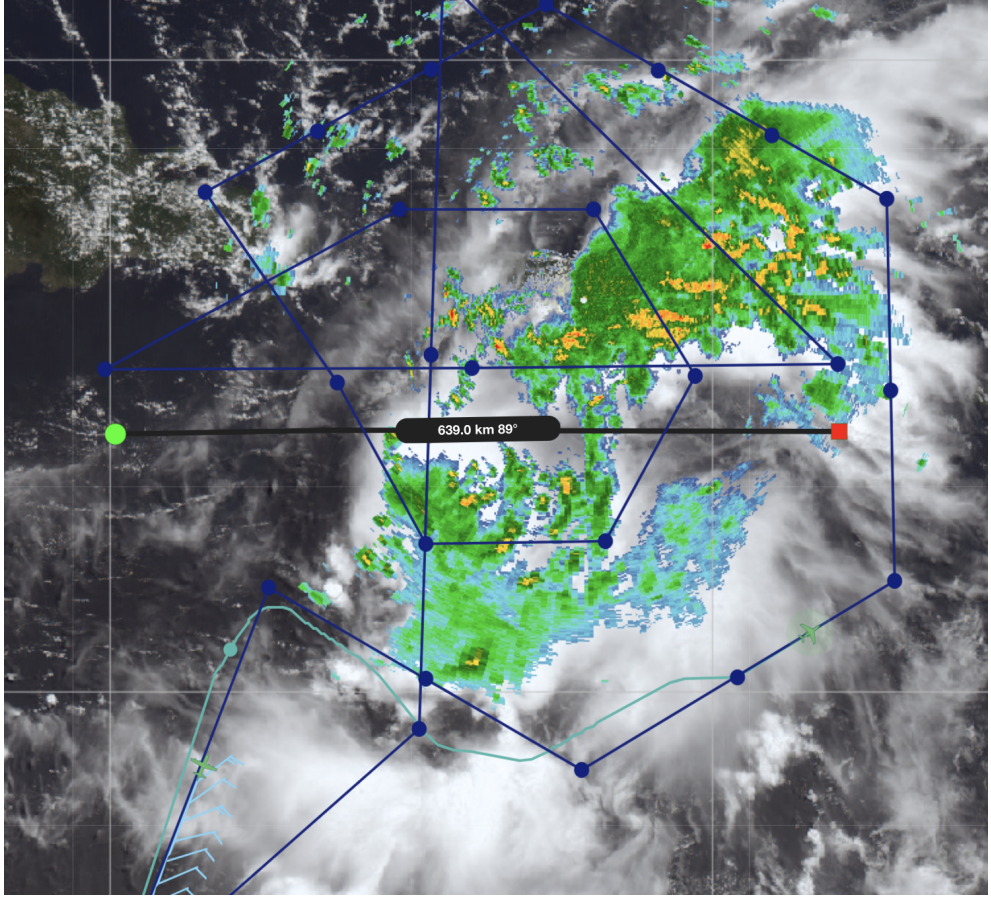
Flight Plan	 <p>This flight is planned as a collaboration between APHEX (the Genesis Experiment: PREFORM) and the ONR TCRI experiment.</p>
Expendable Distribution	20 sondes for the ONR TCRI program 10 HRD sondes
Preflight Weather Briefing	N/A
Instrument Notes	N/A

IN-FLIGHT

Time [UTC]	Event
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1109	Take off from Aruba
1539	Drop 1
1549	Drop 2, adjusted for Venezuelan airspace
1603	Drop 3, adjusted for Venezuelan airspace 
1616	Drop 4 (Backup due to early launch detect)
1626	Drop 5, deviating around some convection before next drop

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1641	Drop 6 (FAST FALL)
1642	Drop 6 (BACKUP)
1654	Drop 7 (Possibly dropped in the Saharan Air Layer)
1701	Drop 8
1710	Drop 9
1718	Drop 10
1735	Discussing moving center passes south because P-3 is finding an apparent center further south

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1727	Drop 11
1734	Drop 12
1742	Drop 13
1759	Drop 14
1810	Avoiding convection on the SE and NE sides of the storm, modifying the inner circumnavigation accordingly
1811	Drop 15
1822	Drop 16
1834	Drop 17
1843	Drop 18
1855	Drop 19
1905	Drop 20 (BACKUP, 1904 No launch detect)

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1914	Drop 21
1928	Drop 22
1950	Drop 23
2001	Drop 24
2015	Drop 25 (BACKUP, Late launch detect) - no heights or SLP
2035	Drop 26
2045	Drop 27

POST-FLIGHT	
Mission Summary	<p>We were able to get an outer circumnavigation and a clean N-S pass across the center. The inner circumnavigation was somewhat altered by convection and airspace considerations. Dropondes and TDR data were transmitted to EMC.</p> <p>32 dropsondes were released, with 27 good ones transmitted; 10 were charged to HRD and 22 to ONR.</p>
Actual Standard Pattern Flown	Outer circumnavigation plus altered inner circumnavigation plus north to south transect of the approximate center.
APHEX Experiments / Modules Flown	Data collected in support of the <i>Genesis Experiment: PREFORM</i> and <i>ITOFS</i> , and was a collaborative mission with the ONR TCRI program.
Plain Language Summary	We navigated around convection in a disorganized storm to collect radar and sonde data to feed into the models.
Instrument Notes	<p>4 failed sondes</p> <p>Computing INE corrections for the TDR</p> <p>TDR Data is OK</p>

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