



NOAA GIV N49RF
Hurricane Dean
August 16, 2007



Flight ID: N070816

Sensor or system

INE (for wind derivation)
Attack Angle
Slip Angle
Accelerometer
Temperature Probe
Dew Point Probe
Altitude (for vertical wind derivation)
Static Pressure
Dynamic Pressure
True Air Speed
Constants File
Project Directory

Number or Name

VEW_PITR,VNS_PITR
AKRD1
SSRD1
ACINS_PITR
AT3
DPRC
PALT
PS2M
QC2M
TAS2
49cal071
/proj/706

Local Met Data:	<u>Takeoff</u> (1722Z)	<u>Landing</u> (0038Z)
Aircraft Static Pressure	1012.4 mb	1013.6 mb
Tower Pressure (corrected)	1013.1 mb	1013.1 mb

Notes:

Missing Data: 202401Z – 203131Z
202304Z – 202308Z

Data missing because of crashes to the MADS data system.

Spikes occur in all selected inertial data at the end of both data gaps.

Just before taxi and up until takeoff HGM232 radar altitude spiked up to 20,000m for 30mins.

During takeoff HGM232 had several downward spikes from 175124Z – 181232Z

Immediately upon landing the HGM232 gives a constant value of 20,000m.

At beginning of the flight AKRD2 had more data spikes than AKRD1.

Both inertial track variables (TKAT) stayed at a constant 274° for the whole flight.

29 dropsondes launched: 28 good, 1 bad

All 28 good drops successfully sent to NCEP and ingested into the 17/00Z model run.

Flight Director:

LTJG Jackie Almeida

Phone #:

(813) 828-3310 ext. 3075

U.S. Dept. of Commerce / NMAO / NOAA / Aircraft Operations Center

Flt ID: N070816	From: TISX	To: TISX
Flt No: 07 - 071	Blk In: 0045 Z	Time On: 0038 Z
ETD: 1730 Z	Blk Out: 1713 Z	Time Off: 1722 Z
ETE: +	Blk Time: 7hrs 32 + (7.5) Hrs	Flt Time: 7hrs 16min (7.2) Hrs
Sponsoring Org: NOAA - NHC	Program: HURRICANE SURVEILLANCE	Purpose: INVEST

AOC Flight Crew

Aircraft Commander: HAGAN	Data System: ROGERS
Co-Pilot: LONGENECKER GLOVER	AVAPS: RASCO
Navigator: /	System Eng: /
Flight Eng: /	A A: DEFEO
Flight Director: ALMEIDA DAMIANO	A A: PARRISH
Avionics: /	Crew Chief: /

Participating Scientists / Visitors

Name (Last, First)	Activity on Aircraft	Affiliation

Remarks (Storm Name, Mission ID, Recco Times, Fix Times)

Storm Name: **DEAN**

Mission ID: **/**

Penetration number and time

Recco Times

Fix # Fix Time

**MADS crash
@ 201852Z
up around
2036Z
MADS crash
2101 Z**

**drop 12 was 40nm
from plan position
due to data crash**

U.S. Dept. of Commerce / NMAO / NOAA / Aircraft Operations Center

Flight ID: NO70816 Time Off: 1722 Z Time On: Z

	A/C - Takeoff	Wx Station - Takeoff	A/C - Land	Wx Station - Land
Pressure	<u>1012.4</u> mb	<u>1013.1</u> mb	<u>1013.6</u> mb	<u>1013.1</u> mb

ATIS	Time	Observation
Takeoff	<u>1653Z</u>	<u>10017622kt 30.00 32/33 105M CLR</u>
Land	<u>0053Z</u>	<u>06013kt 30.00 28/24 105M SCT030</u>

	Number	Data Disposition / Date / Quality
Flight Level Tapes	<u>3</u>	
Radar Tapes		
Cloud Physics Tapes / CDs		
Video Tapes		
Dropsondes	<u>29</u>	Good: <u>28</u> Bad: <u>1</u>
XBT		
XCP		
XCTD		

Remarks:

N49RF AOC GPS Dropwindsonde Log

Flight ID N070816 Aspen Operator Barry Damiano / Jack Parrish Page 1 of 2
Mission ID 0204A Storm DEAN

Drop#	Sonde ID#	Time (UTC)	Lat (°N)	Lon (°W)	Sfc Prs mb	WX Cond.	Comments	OB #	SatComm Failure	Send Time (UTC)
1	060356077	180145			1016.3		knpc	1		18362
2	060356077	181344			1017.5		144019	2		18412
3	060356078	182905			1017.8		144947	3		18502
4	060356083	184416			1017.4			4		19102
5	060356083	190051			1015.9		152903	5		19302
6	060356131	191439			1018.1		153748	6		19382
7	060416030	193349			1017.8		158402	7		19502
8	060356188	194409			1018.7		160557	8		20042
9	060356188	195913			1017.0		161724	9		20182
10	060416028	201007			1016.0		163158	10		20332
11	060356149	202220			1015.3		164207	11		2042
12	060356148	203708			1014.6		170303	12		2103
13	060356141	205447			1012.9		171415	13		2115
14	060356144	210456			1013		172334	14		2124
15	060226474	211646			1011.6		173423	15		2135
16	060416029	212801			1011.9		174725	16		2148
17	053620102	213711			1011.4		175747	17		2159
18	055036209	215016			1009.7		181000	18		2211
19	060356142	220132			1008.8		182238	19		2223
20	060356081	221250			1008.7		185006	20		2251
21	05453052	222248			1008.2		185121	21		2252
22	060356082	224353			1010		190148	22		23022
23	054626040	225435			1010.7		191554	23		2316

wrong serial #

revert 18492

INMARSAT

Date station 7/16/02 Drop

N49RF AOC GPS Dropwindsonde Log

Flight ID N070816

Flight Director

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Mission ID 0204A

Storm

DEFINITION

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N49RF AOC GPS Dropwindsonde Log

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Mission ID NOAA9 0204A Storm DEAN

Splash

Drop#	Channel# Serial ID	Time (UTC)	Lat (°N)	Lon (°W)	Sfc Pres mb	WX Cond.	Comments	OB #	SatComm Failures	Sent Time
1	060356077	181343	21°57.8	065°00'	1016.9	7/8 Cu, St				
2	060356077	181343	21°57.8	065°00'	1016.9	7/8 Cu, St				
3	060356077	181343	21°57.8	065°00'	1016.9	7/8 Cu, St				
4	060356083	184417	21°57.8	065°00'	1017.4					
5	060356083	184417	21°57.8	065°00'	1017.4					
6	060356131	191438	21°57.7	058°28.4	1018.1	7/8 Cu, Sc St				
7	060356131	191438	21°57.7	058°28.4	1018.1	7/8 Cu, Sc St				
8	060356168	194408	22°41.3	055°02.4	1018.7					
9	060356168	194408	22°41.3	055°02.4	1018.7					
10	060416028	201006	20°00.5	055°54.8	1016.0	0/8 Cu St				
11	060416028	201006	20°00.5	055°54.8	1016.0	0/8 Cu St	40m from Sonda GPS			
12	060356148	203709	17°46.8	054°31.3	1014.6		40m from Sonda			
13	060356148	203709	17°46.8	054°31.3	1014.6					
14	060356144	210456	16°24.3	055°31.9	1013.0	8/8 St				
15	060356144	210456	16°24.3	055°31.9	1013.0	8/8 St				
16	060416029	212803	14°05.1	054°24.5	1011.9	8/8 St				
17	060416029	212803	14°05.1	054°24.5	1011.9	8/8 St				
18	055036209	215015	11°45.0'	055°33.0'	1009.7	8/8 St				
19	055036209	215015	11°45.0'	055°33.0'	1009.7	8/8 St				
20	060356081	221750	11°13.9	058°02'	1008.7	8/8 St				
21	060356081	221750	11°13.9	058°02'	1008.7	8/8 St				
22	060356082	224353	14°7.2'	060°22.6'	1010.1	dark				
23	060356082	224353	14°7.2'	060°22.6'	1010.1	dark				

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Flight ID N070816

Flight Director

JACKIE ALMEIDA

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Mission ID N0449 0204A Storm DEAN

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N49RF AVAPS DropSonde Log

Hurricane 07

Alameda

Mission: 070810N

Flight #: 2

Status: Sys 1 ✓ Sys 2 ✓ Launcher S/N: 02

Drop #	Sonde Serial Number	Chn. #	Time (Zulu)	Press. offset	Winds time	Operator Initials	Comments /Status/ Failure Reason	\$	GOOD ☒
1	060226138	1	1801	Q	23	CR			✓
2	060356077	2	1813	Q	5				✓
3	060356076	1	1829	Q	4				✓
4	060356083	2	1844	Q	6				✓
5	060226488	1	1900	Q	37				✓
6	060356131	2	1914	Q	13				✓
7	060416030	1	1934	Q	6				✓
8	060356088	2	1944	Q	25				✓
9	060226342	1	1959	-0.5	9				✓
10	060416028	2	2010	Q	7				✓
11	060356149	3	2021	Q	5				✓
12	060356141								
13	060356148	1	2037	Q	4				✓
14	060356141	2	2054	Q	5				✓
15	060356144	1	2104	Q	37				✓
16	060226479	3	2116	Q	10				✓
17	060416029	1	2128	Q	10				✓
18	053626142	2	2139	Q	5				✓
19	055036209	1	2150	Q	17				✓
20	060356142	3	2201	Q	7				✓
21	060356081	2	2212	Q	5				✓
22	054556052	1	2222	Q	5				✓
23	060356082	2	2243	Q	5				✓
24	054626040	1	2254	Q	48				✓
25	055036236	3	2307	Q	12				✓
26	060356076	1	2316	Q	6				✓
27	060356080	2	2327	Q	43				✓
28	061229070	1	2347	Q	20		FASTFALL		
29	054046042	2	2350	Q	8		27 3/0		✓
30	060356147	1	0009	Q	17				
31									
32									
33									

\$ Codes A = AOC N = NHC/NWS H = HRD OW = NESDIS

HURRICANE SYNOPTIC SURVEILLANCE MISSION PLAN: Dean

National Hurricane Center: August 16, 2007 9:50:15 AM

Aircraft: N49RF

Proposed takeoff: 16/1730Z

DROP LOCATIONS

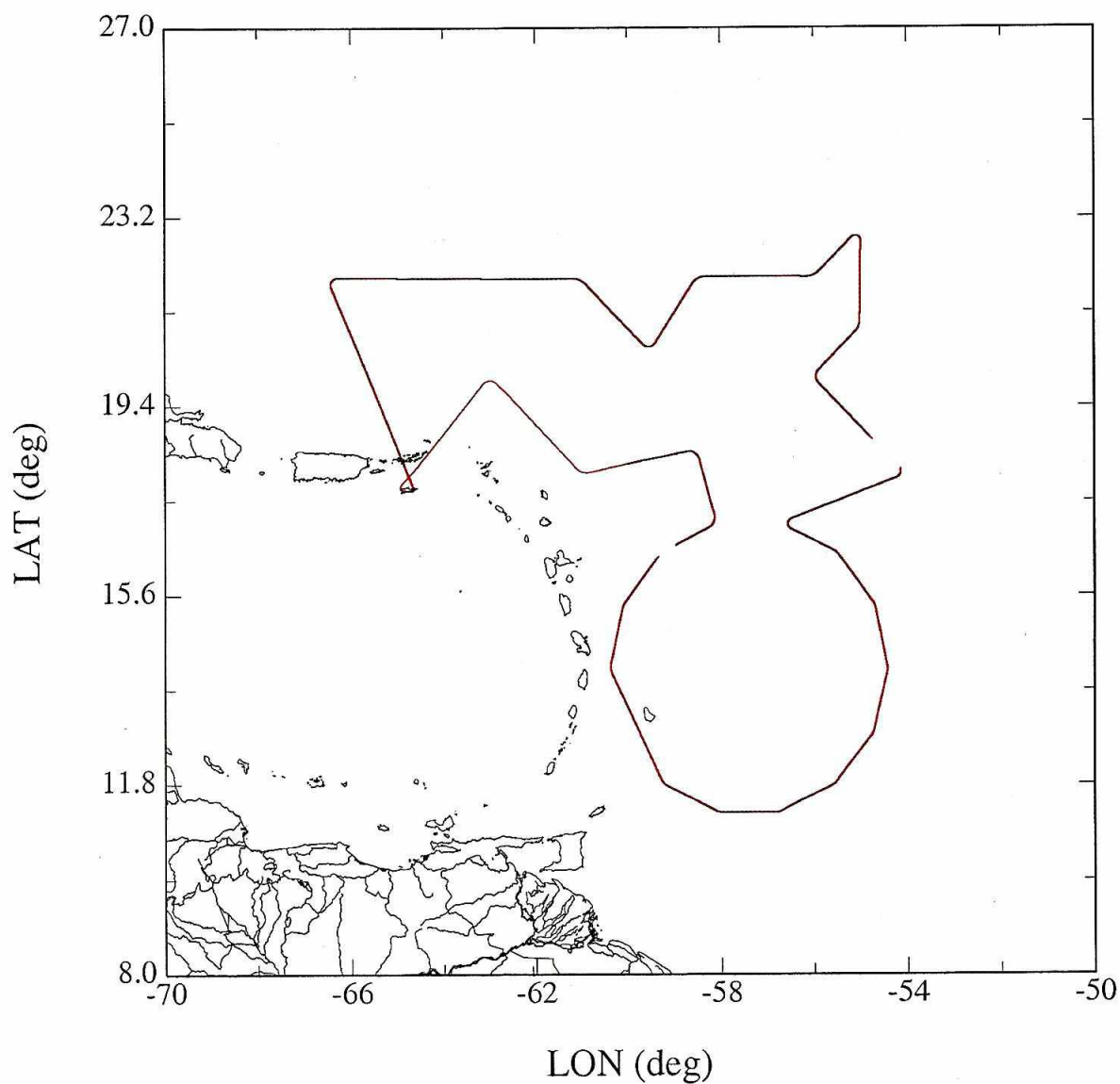
#	LAT (d m)	LON (d m)	TIME (h:mm)
1 x	22 00	-66 30	0:38
2 x	22 00	-65 00	0:49
3 x	22 00	-63 00	1:05
4 x	22 00	-61 00	1:21
5 x	20 30	-59 30	1:38
6 x	22 00	-58 30	1:53
7 x	22 00	-56 00	2:12
8 x	23 00	-55 00	2:24
9 x	21 00	-55 00	2:40
10 ✓	20 00	-56 00	2:51
11 ✓	19 00	-55 00	3:03
12	18 00	-54 00	3:14
13	17 01	-56 44	3:38
14	16 27	-55 32	3:48
15	15 24	-54 42	3:59
16	14 06	-54 24	4:10
17	12 48	-54 42	4:21
18	11 45	-55 32	4:32
19	11 11	-56 44	4:43
20	11 11	-58 04	4:53
21	11 45	-59 16	5:04
22	14 06	-60 24	5:26
23	15 24	-60 06	5:36
24	16 27	-59 16	5:47
25	17 01	-58 04	5:58
26	18 30	-58 30	6:11
27	18 00	-61 00	6:31
28	20 00	-63 00	6:54

1612.4

1950 14° 0' N
56° 17' W

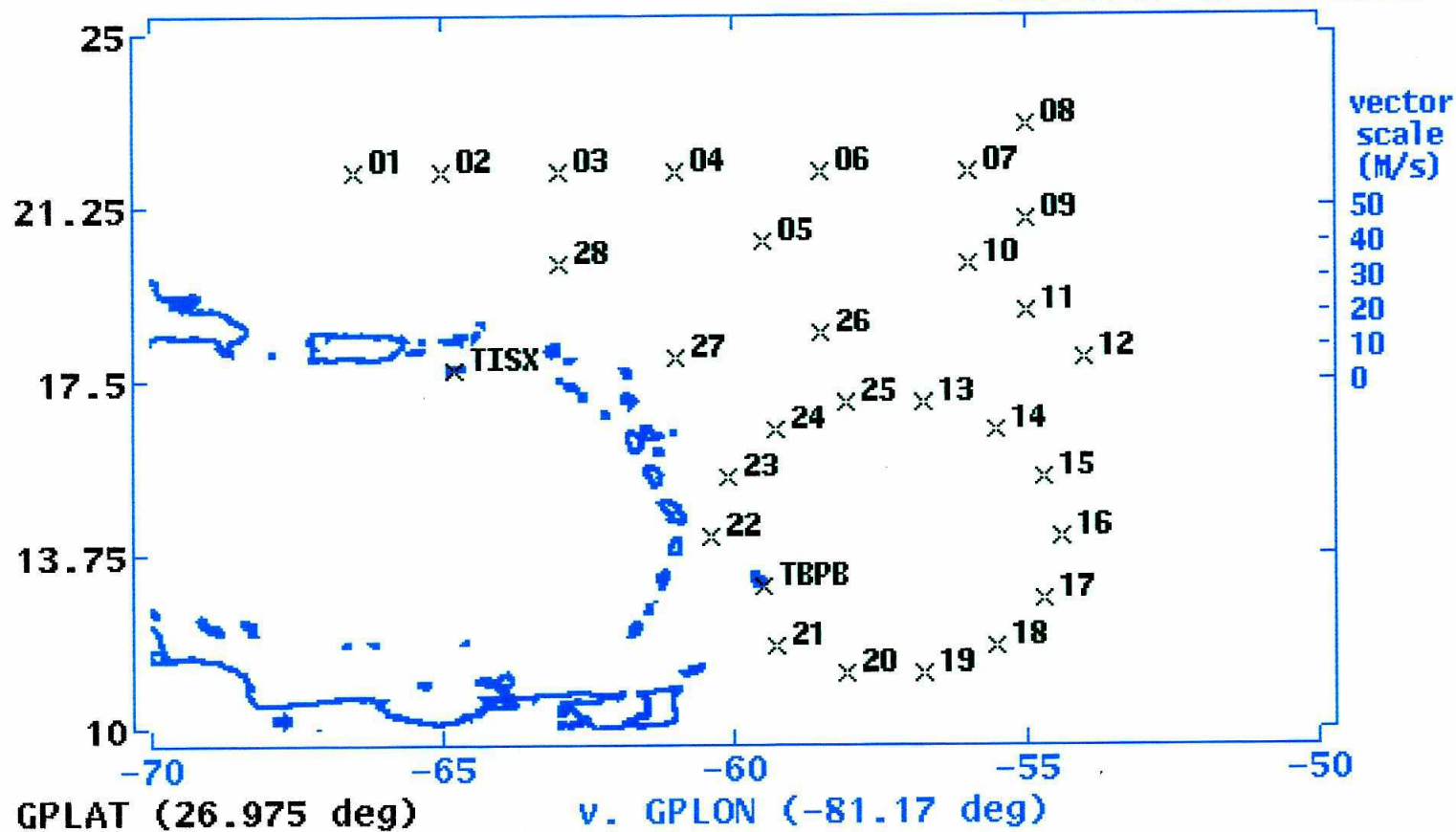
Hurricane_2007, Flight #rf02

08/16/2007, 17:22:00-24:38:00



	mean	sigma	min	max
— LAT (deg), 1 s/sec	18.05	3.43	11.22	22.84
— LON (deg), 1 s/sec	-59.37	3.70	-66.41	-54.13

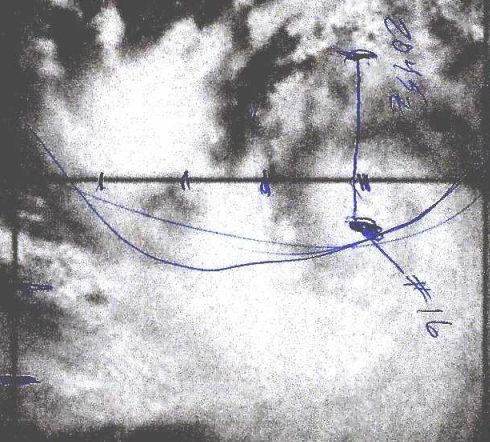
'atlantic-map' (ads@L3) Proi. 706 Flt 0 08/17/07 19:40:06
19:09:43 to 19:40:06



PSL (MB)

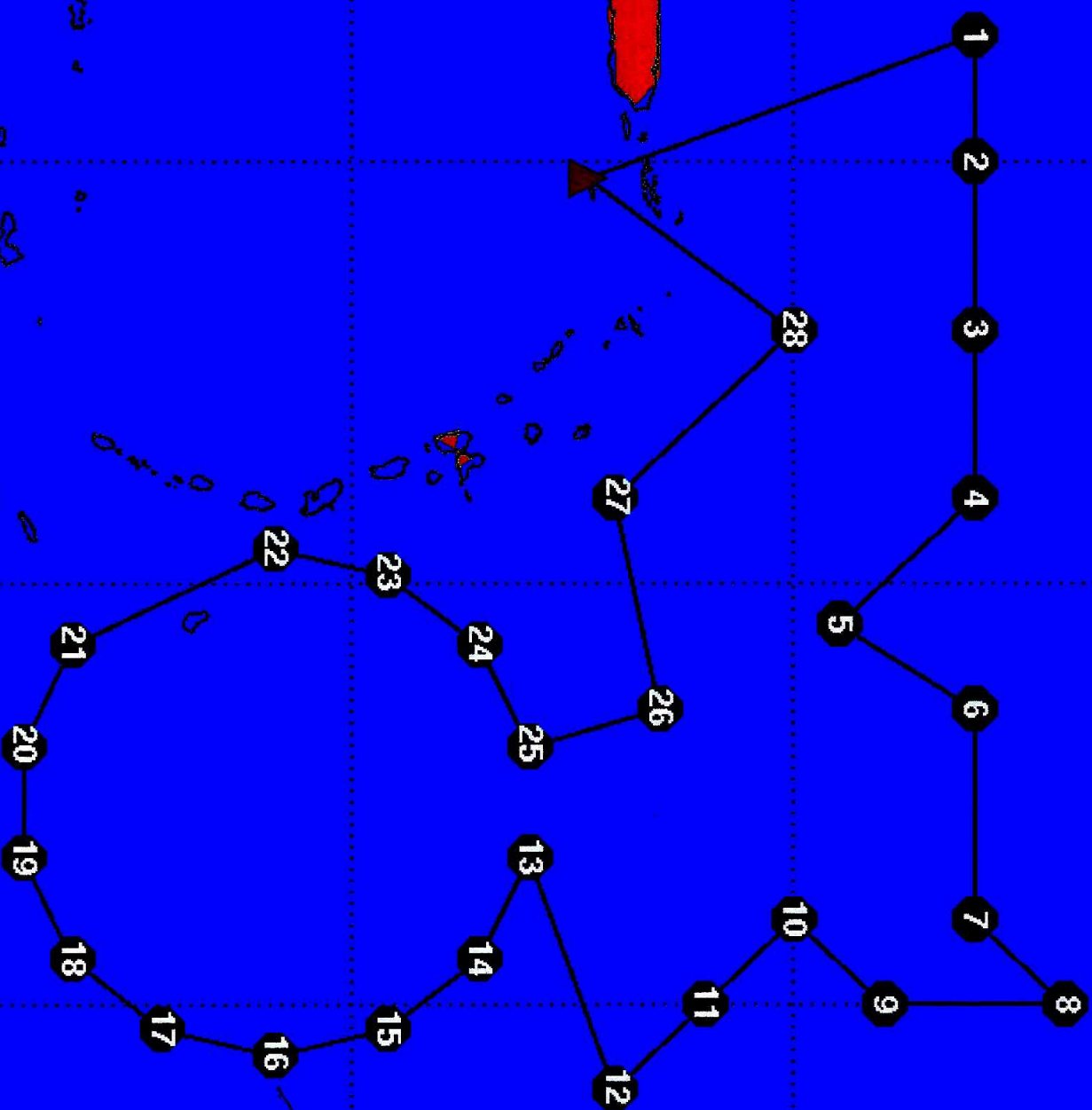
HIND (KT)

00170 5-12 IMG 1 15 AUG 07222 154500 07434 08725 04 00 RMMSD-CLIM-PR



NOAA G-IV Flight Track for Dean (AL042007)

On 2007081700 the storm was centered at 14.1;-57.4



14-06N
54-24W

