

NLF: MWR Article : mention confusion caused by private firm (Accu-4x) statements about Isidore becoming ^{10/29/84} a hurricane.

PRELIMINARY REPORT

TROPICAL STORM ISIDORE

25 SEPTEMBER TO 1 OCTOBER 1984

by

Harold P. Gerrish

Although Isidore never reached hurricane strength and certainly was not a spectacular storm, it did provide forecast challenges and an excellent opportunity to test preparedness procedures throughout most of Florida and along the southeast coast of the United States.

Isidore, like Diana, formed at the western end of a quasi-stationary frontal zone near the Bahamas. On September 24, ship KPIV had 35-knot winds just north of Hispaniola at 1800Z, but according to satellite pictures, the convection was just beginning to organize and a center was not evident. Satellite imagery and Air Force reconnaissance reports clearly documented that a depression had formed on the morning of September 25th. A special tropical disturbance statement was issued at 10:30AM EDT indicating that a depression had formed in the southeastern Bahamas and the first advisory was issued at noon EDT.

Isidore weaved its way through the Bahamas with the center passing near the northern tip of San Salvador Island, across Cat Island, south and west of Nassau, near the northern tip of Andros

Island, and just north of Bimini. Reconnaissance reports indicated that Isidore reached tropical storm strength in the central Bahamas near 1200Z on September 26th. The lowest central pressure of 999 mb was reached when the storm was near the northern tip of Andros Island. Isidore did not strengthen as it crossed the warm Florida current.

| The storm made landfall near Jupiter, Florida, passing near Hobe Sound and Stuart, where it made a significant turn to the west northwest across the central Florida peninsula. Hourly surface maps and radar data indicated that the center passed between Frostproof and Lake Wales, between Lakeland and Winter Haven, near Dade City, just west of Ocala, east of Gainesville, near Cecil Field, around the western portions of Jacksonville and off the coast near Fernandina Beach, Florida. The system continued on a northeasterly course about 80 miles offshore from the Carolina coasts, passed close to NOAA Data Buoy #41001 (34.9°N latitude, 72.9°W longitude), and was absorbed in a frontal zone 750 miles east northeast of Cape Hatteras, North Carolina on October 1st, see figures 1, 2, 3 and table 1. REMOVED

The 1984 season seems to be characterized by systems developing in relatively cool baroclinic environments. Isidore was one of these systems. Although there were some wobbles in the path, the track was essentially parabolic. A large area of high pressure over the eastern United States restricted its northward movement until September 28th. As the high pressure area moved eastward, the storm trailed behind on a northeasterly course. The storm

never did achieve a good outflow pattern and periodic intrusions of cool air along the northern portion of its course probably restricted the potential for strengthening.

It was remarkable that the central pressure varied only between 1001 and 1002 mb while the storm was over the Florida peninsula and weakening was not evident until the system was emerging off the northeast coast of Florida. While Isidore was over land, reconnaissance reports continued to document 1500-ft. flight level winds on the order of 50 kts (58 m.p.h.) along both coasts of Florida.

The highest gusts observed at the surface were 73 m.p.h. at Camachee Cove in the St. Augustine area. Gusts of 60 m.p.h. were observed at Patrick AFB and 65 m.p.h. at 200 ft. above Tampa Bay on the Skyway Bridge. Sustained winds of 46 m.p.h. were observed at Camachee Cove, and 43 m.p.h. at Mayport, east of Jacksonville, see table 2.

Highest storm rainfalls ranged from 5 to 7 inches in north Florida. Much of that was associated with a strong convective band north and east of the storm center. There was one unconfirmed tornado in the Savannah area.

Isidore crossed seven citrus counties. One of the major concerns which is still being evaluated is the possible spread of citrus canker by the wind and rain. The canker bacteria oozes out of lesions in citrus leaves where it can be swept away with the slightest amount of rain.

Tides were less than three feet above normal, but the combination of winds and tides caused severe beach erosion along the middle portion of Florida's east coast. In Indian River County, a \$500,000 beach restoration fill was washed away. Portions of the Ocean Boulevard section of Highway 1A in Palm Beach were washed away. On Hutchinson Island, 15 percent of the loggerhead eggs and 50 percent of the green turtle nests were destroyed. In general, however, the storm damage was light. Overall dollar losses are incomplete, but preliminary estimates are at least three quarters of a million dollars.

There was one storm related death in Florida. A man was electrocuted near Orlando when a live power line fell across the bumper of his pickup truck.

Probabilities (chances of the center of the storm passing within about 65 miles of specific locations) provided for guidance and assistance in planning worked well for this storm. A summary of the values for various locations is listed in table 3.

PRELIMINARY BEST TRACK - TROPICAL STORM ISIDORE
25 SEPTEMBER TO 1 OCTOBER 1984

<u>DATE</u>	<u>TIME (GMT)</u>	<u>POSITION</u>		<u>PRESSURE (MB)</u>	<u>WIND (KT)</u>	<u>STAGE</u>	
		<u>LAT.</u>	<u>LONG.</u>				
9/25	1200	23.4	73.0	1003	30	Trop. Depression	
	1800	23.9	73.9	1003	30	"	"
9/26	0000	24.3	74.9	1002	30	"	"
	0600	24.5	76.0	1002	30	"	"
	1200	24.7	77.0	1001	40	Tropical Storm	
	1800	25.0	77.7	1000	45	"	"
9/27	0000	25.4	78.4	999	45	"	"
	0600	25.8	79.1	1000	50	"	"
	1200	26.4	79.8	1000	50	"	"
	1800	27.3	80.5	1001	45	"	"
9/28	0000	27.8	81.5	1002	45	"	"
	0600	28.5	82.3	1002	45	"	"
	1200	29.5	82.1	1002	45	"	"
	1800	30.1	81.9	1001	45	"	"
9/29	0000	30.7	81.4	1004	45	"	"
	0600	31.3	80.5	1005	45	"	"
	1200	32.2	79.3	1004	45	"	"
	1800	32.8	77.8	1002	45	"	"
9/30	0000	33.6	76.2	1000	50	"	"
	0600	34.3	74.4	1005	40	"	"
	1200	34.8	72.5	1007	40	"	"
	1800	35.3	70.4	1007	40	"	"
10/1	0000	35.8	67.7	1007	30	Trop. Depression	
	0600	36.4	65.0	1008	30	"	"
	1200	36.8	62.1	1012	25	"	"

METEOROLOGICAL AND HYDROLOGICAL

TROPICAL STORM ISIDORE, SEPTEMBER

<u>LOCATION</u>	<u>STATE</u>	<u>STRONGEST WINDS</u>				<u>LOWEST PRESSURE</u>					
		<u>Date</u>	<u>Time(Z)</u>	<u>SUSTAINED</u> <u>mph</u>	<u>GUSTS</u> <u>kts</u>	<u>Date</u>	<u>Time(Z)</u>	<u>in.</u>	<u>mb.</u>		
Miami International AP	FL	26	1750	27	23			27	0850	29.68	1005.1
			27	1840			32	28			
Miami Beach	FL	26	1300	25	22						
			26	1200			38	33			
Homestead AFB	FL	27	2100	16	14			27	0900	29.70	1005.8
			27	1940			29	25			
Flamingo	FL	26	1600	16	14						
			27	2000			30	26			
North Dade County	FL										
Bahia Mar	FL										
Dixie Water Plant	FL										
Hollywood	FL										
Tamiami Airport	FL										
Tavernier	FL										
Duck Key	FL										
Naples	FL										
Clewiston	FL										
W. Palm Beach	FL	27	0937			45	39	27	-	29.62	1003.1
Sanford	FL	28	0800			58	50				
Titusville	FL	27	2145			44	38				
Patrick AFB	FL	28	0702			60	52				
Vero Beach	FL	27	2342			56	49				
Melbourne	FL	27	1900			52	45				
Cape Canaveral	FL	27	2230			54	47				
S. Melbourne Beach	FL	27	1700			55	48				
Daytona Beach WSO	FL	28	1521			48	42	28	-	29.71	1006.1
			28	1524	29	25					
Tampa Airport	FL	28	0952	27	23			28	0552	29.64	1003.7
			28	0816			45	39			
TBW WSO Ruskin	FL							28	0500	29.62	1003.1
Skyway Bridge	FL					65	56				
Cedar Key	FL	28	0930			48	42				
St. Petersburg	FL					40	35				

METEOROLOGICAL AND HYDROLOGICAL
TROPICAL STORM ISIDORE, SEPTEMBER

LOCATION	STATE	STRONGEST WINDS						LOWEST PRESSURE			
		Date	Time(Z)	SUSTAINED		GUSTS		Date	Time(Z)	in.	mb.
				mph	kts	mph	kts				
Clearwater Pass	FL					38	33				
Chiefland	FL										
Homosassa	FL										
Temple Terrace	FL										
Brandon	FL										
Crystal River	FL										
Live Oak	FL										
Jacksonville WSO	FL	28	0851	25	22	46	40	28	1000Z	29.62	1003.1
Jacksonville Beach	FL	28	0810	35	30	48	42				
Mayport	FL	28	1500	43*	37-						
		28	0800			55	48				
Camachee Cove	FL	28	0550	46*	40-	73*	63				
St. Augustine	FL	28	0730	35	30	42	36				
Fernandina Beach	FL	28	1009	14	12	33	29				
Savannah WSO	GA	28	2352	20	17			29	0600	29.82	1009.8
		28	2320			30	26				
USCGS Tybee	GA	29	0100	32	28	38	33				
USCGS Saint Simons	GA	28	1800	23	20	35	30				
Charleston WSO	SC	29	0250	21	18			29	0730	29.80	1009.1
		29	0222			32	28				
N. Myrtle Beach	SC	29	1306			25	22				
Myrtle Beach AFB	SC	29	0900			30	26	29	0930	29.87	1011.5
Springmaid Pier	SC	29	1000			31	27				
Folly Beach	SC	29	0300			40	35				
Edisto Beach	SC	29	0100			27	23				
Beaufort Marine Air Sta.	SC	28	2257			33	29	29	0956	29.80	1009.1
Hilton Head Island	SC	29	1200			24	21				
North Island	SC							29	0900	29.82	1009.8
Downtown Charleston	SC										
Myrtle Beach FSS	SC										
Fripp Island	SC										
Ladson	SC										
Summerville	SC										
Wilmington WSO	NC	29	0452	20	17			-	-	29.85	1010.8
		29	1704			32	28				
Cedar Island	NC	29	2100	29	25	35	30				

*46 mph = 21 m/s
73 mph = 33 m/s*

CHANCES OF ISIDORE PASSING WITHIN 65 MILES OF THE LISTED LOCATIONS BY S
72-HOUR TOTAL PROBABILITIES

							A D V I S O R Y D A T E / T I M E				
		26/6A	26/Noon	26/6P	26/Mid	27/6A	27/Noon	27/6P	27/10:30P	27/Mid	28
Marathon	FL	15	35	34	30	14					
Miami	FL	19	51	43	63	73					
W. Palm Bch.	FL	19	37	30	41	90	N	N			
Ft. Pierce	FL	16	24	20	23	59	O	O			
Cocoa Bch.	FL	13	17	16	18	36	N	N			
Daytona Bch.	FL	10	14	13	14	23	E	E	36	14	6
Jacksonville	FL	7	11	10	10	17			18	11	6
Savannah	GA	5	8	7	7	12			12	12	3
Charleston	SC	4	6	6	5	11	I	I	10	10	2
Myrtle Bch.	SC	3	5	4	4	9	S	S	9	9	2
Wilmington	NC	3	4	4	3	8	S	S	8	9	1
Morehead City	NC	3	3	3	3	7	U	U	7	8	1
Cape Hatteras	NC		2	2	2	6	E	E	6	7	1
Norfolk	VA					4	D	D	7	7	1
Ocean City	MD								5	6	
Atlantic City	NJ								4	5	
New York City	NY								3	4	
Montauk Point	NY								3	3	
Providence	RI								2		
Nantucket	MA								2		
Hyannis	MA								2		
Boston	MA								2		
Portland	ME										
Bar Harbor	ME										
Eastport	ME										
Key West	FL	13	28	28	23	11			2		
Marco Island	FL	14	36	30	32	40			11		
Ft. Myers	FL	13	31	25	28	47			32	4	
Venice	FL	11	24	19	22	38			65	31	
Tampa	FL	10	18	16	17	34			94	95	
Cedar Key	FL	8	14	12	13	22			46	78	72
St. Marks	FL	5	11	9	9	14			29	36	18
Apalachicola	FL	4	11	9	9	14			32	49	7
Panama City	FL	3	10	8	8	12			27	41	5
Pensacola	FL		7	6	6	8			20	29	3
Mobile	AL		6	4	4	6			17	21	2
Gulfport	MS		5	4	4	5			16	17	
Buras	LA		6	5	4	5			14	14	
New Orleans	LA		5	3	3	4			13	12	

TABLE 4

WARNINGS FOR ISIDORE 1984

<u>LOCATION</u>	<u>TYPE</u>	<u>EFFECTIVE</u>	<u>DISCONTINUED</u>
Cape Canaveral, FL to Key West, FL, including the Dry Tortugas	Gale Warnings	9/26/1400Z	
Key Largo, FL, to Key West, FL, including the Dry Tortugas	Gale Warnings		9/27/1300Z
Jupiter Inlet, FL, to Fernandina Beach, FL	Gale Warnings	9/27/1900Z	
Jupiter Inlet, FL, to Key Largo, FL	Gale Warnings		9/27/1900Z
Everglades City, FL, to Apalachicola, FL	Gale Warnings	9/28/0230Z	
Venice, FL, to Everglades City, FL	Gale Warnings		9/28/0700Z
Fernandina Beach, FL, to Savannah, GA	Gale Warnings	9/28/0700Z	9/29/1300Z
Jupiter Inlet, FL, to Cape Canaveral, FL	Gale Warnings		9/28/1600Z
Venice, FL, to Apalachicola, FL	Gale Warnings		9/28/1900Z
Savannah, GA, to Little River Inlet, SC	Gale Warnings	9/28/2200Z	
Cape Canaveral, FL, to Fernandina Beach, FL	Gale Warnings		9/29/0700Z
Little River Inlet, SC to Oregon Inlet, NC	Gale Warnings	9/29/1000Z	
Savannah, GA, to Little River Inlet, SC	Gale Warnings		9/29/1900Z
Oregon Inlet, NC to Chincoteague, VA	Gale Warnings	9/30/0400Z	
Little River Inlet, SC, to Cape Lookout, NC	Gale Warnings		9/30/0400Z
Cape Lookout, NC, to Chincoteague, VA	Gale Warnings		9/30/1600Z

FIG 1.

TROPICAL STORM ISIDORE

25 SEPT. TO 1 OCT. 1984

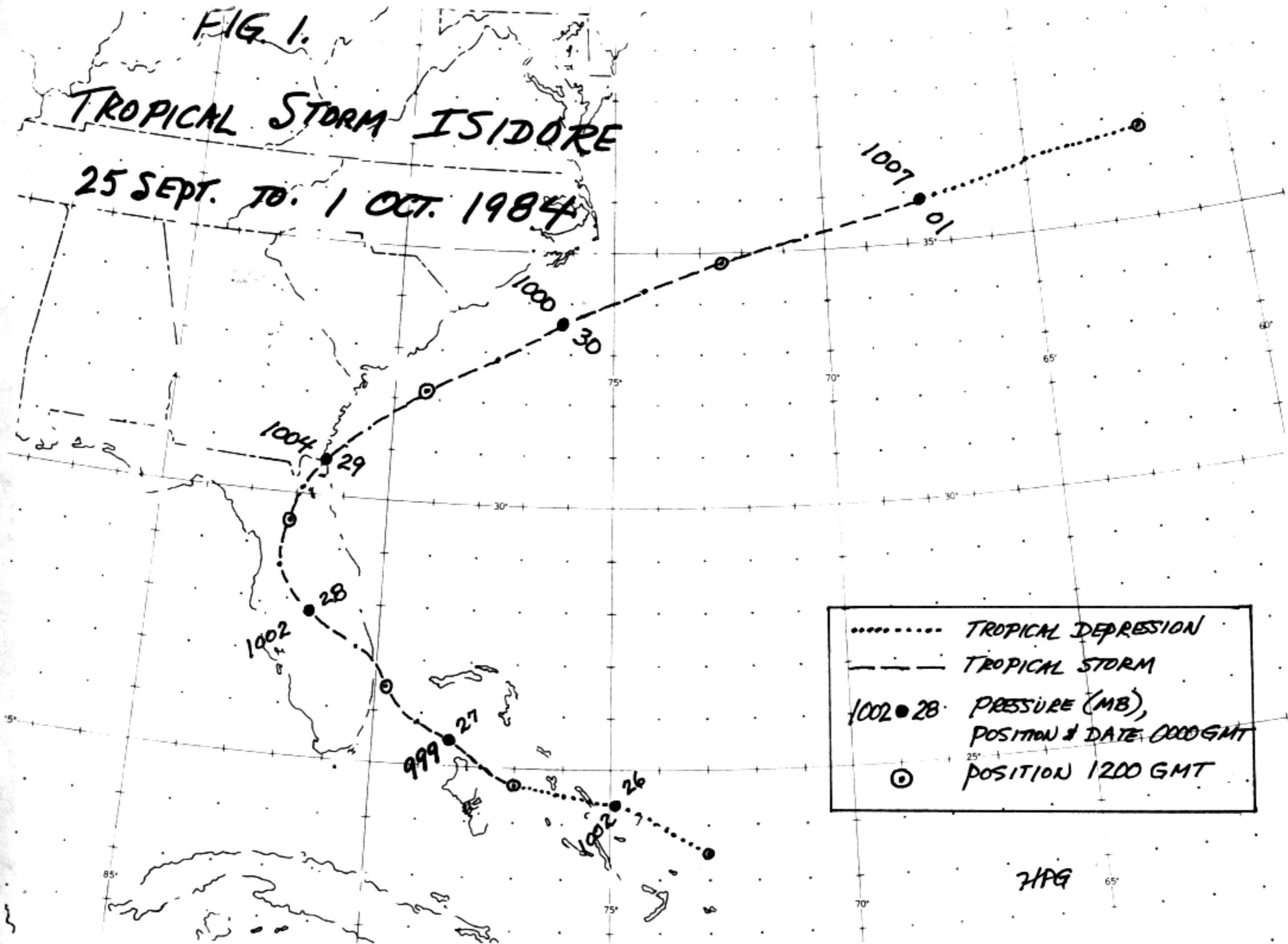


FIG. J. TROPICAL STORM ISIDORE
25 SEPT. TO 1 OCT 1984

- △ NOAA RECON FLT. LVL.
- ▽ NOAA RECON SFC
- ▲ USAF RECON FLT. LVL.
- ▼ USAF RECON SFC.
- GOES 6 SATELLITE
- OTHER REPORTS

