

HESTER

One of the most devastating typhoons to strike Vietnam in over a decade developed from a circulation just west of the Palau Islands. Hester attained tropical-storm strength late on the 19th (Figure 5-53) about 250 miles east of northern Mindanao. The storm swung to the west-northwest crossing the Visayas and intensifying to typhoon force in the Sulu Sea on the 21st. Later that evening, Hester cut across northern Palawan Island and moved into the South China Sea, leaving behind some six persons killed and two missing in the southern Philippines. Winds of 50 kt were felt at Cebu City as the storm center passed 40 n mi south of the station during the evening of the 20th.

As a strong ridge built along the South China mainland, Hester accelerated to 18 kt in forward speed on her west-northwest course or twice the climatological average for typhoons in that region during October. Hester continued to intensify to 90 kt during her day-and-a-half track across the South China Sea (Figure 5-54). Arriving ashore on the Vietnamese coast during the morning of the 23rd, the typhoon's eye passed just south of Hue and diminished in strength. The storm rapidly dissipated over central Laos that evening.

Maximum sustained winds at DaNang were registered at 60 kt with gusts to 85 kt during Hester's passage. Maximum gusts of 70 and 71 kt were reported at Camp Eagle and Hue respectively. The lowest pressure of 971 mb was measured at Chu Lai where maximum winds of 70 kt gusting to 90 kt were estimated.* Heaviest rainfall measured was at Camp Eagle with 5.44 inches.

Extensive damage was suffered at American bases including Camp Eagle and the air and naval facilities at DaNang. Heaviest hit was Chu Lai with 75% of its structures receiving damage. Thirty-eight helicopters were destroyed, four hangers collapsed while eighty-seven other aircraft, mostly helicopters, received damage. Three American lives were lost due to the flying debris (Figures 5-55 and 5-56).

Over 200 n mi of coastal areas were flooded from Quang-tri to DaNang while 90% damage was sustained to houses in Quang Ngai. Severe damage to crops was reported

*Based on data supplied by 1st Weather Group, USAF, Saigon, Vietnam.

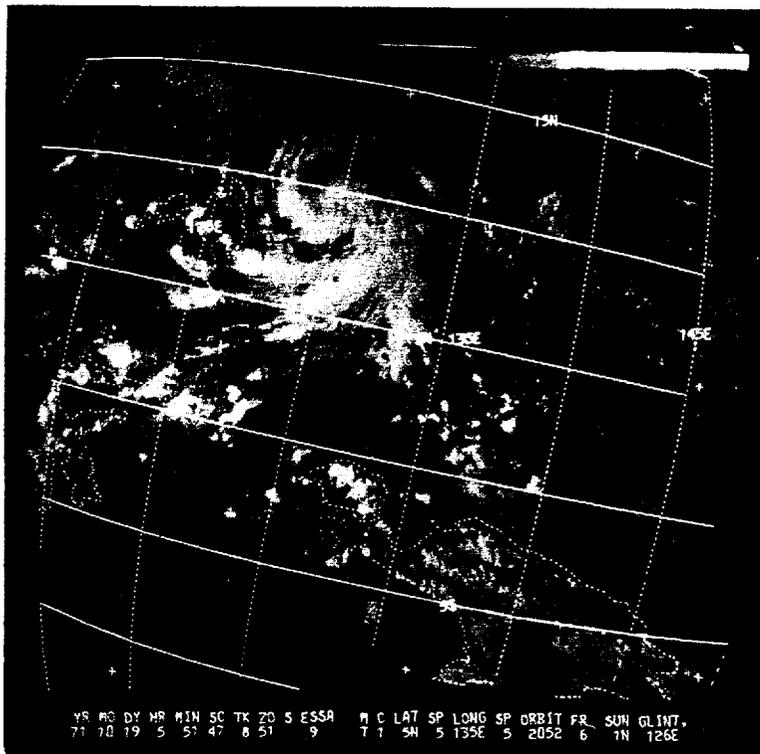


FIGURE 5-53. ESSA-9 PHOTO OF HESTER AS A DEVELOPING TROPICAL STORM EAST OF MINDANAO ON 19 OCTOBER.

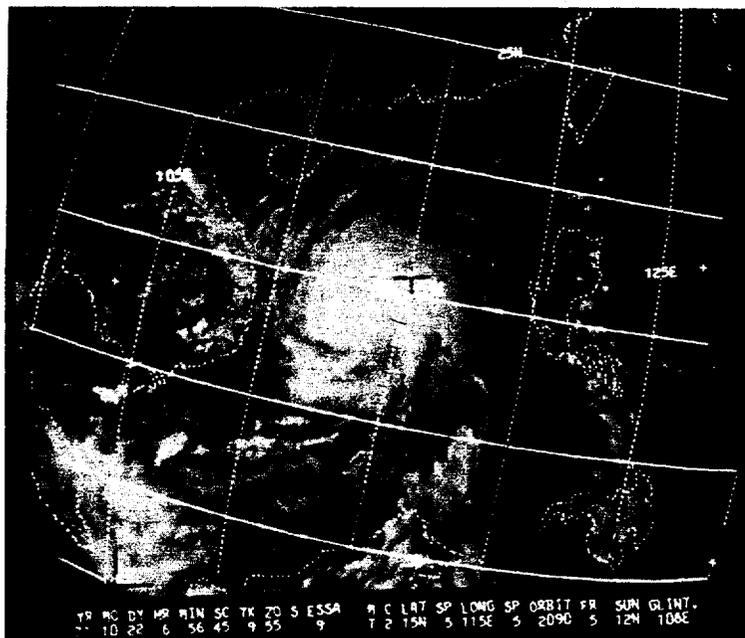


FIGURE 5-54. TYPHOON HESTER IN THE SOUTH CHINA SEA AS VIEWED BY ESSA-9 ON 22 OCTOBER.

and loss of cattle amounted to close to 900 head. Maritime casualties accounted for some 500 fishing boats reported sunk or destroyed and the 1,000-ton UNION PACIFIC run aground north of Chu Lai.

In total, newspaper reports indicate some 85 Vietnamese were killed and over 200,000 rendered homeless due to Hester. The Republic of Vietnam social welfare department regarded the typhoon as the worst to strike the country since 1944.

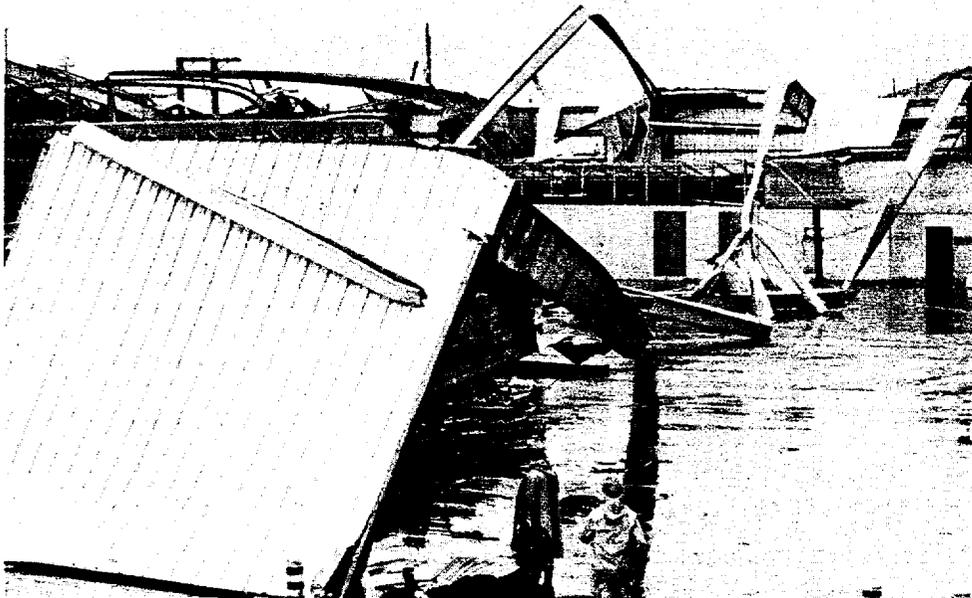


FIGURE 5-55. (TOP AND BOTTOM) DAMAGE SUSTAINED BY HANGERS AT THE CHU LAI INSTALLATION, VIETNAM--COURTESY CORPS OF ENGINEERS U.S.A.



FIGURE 5-56. (TOP) DAMAGE SUSTAINED TO BARRACKS AT THE CHU LAI ARMY INSTALLATION, VIETNAM--COURTESY CORPS OF ENGINEERS U.S.A. (BOTTOM) SMALL CRAFT WASHED AGROUND NEAR CHU LAI ARMY INSTALLATION--COURTESY CORPS OF ENGINEERS U.S.A.

TYPHOON HESTER
 FIVE FIXES FOR CYCLONE NO. 36
 18 OCT - 23 OCT 71

FIX NO.	TIME	POSIT	UNIT-METHOD	FLT LVL	FLI LVL	DBS SFC	DBS MIN	MIN 700MB	FLT LVL	EYE FORM	ORIENT	EYE DIA	THKN WALL	REMARKS	POSIT OF RADAR
1	140340Z	4.5N 137.7E	34-P-----	700MB	20	----	----	----	--/--	----	----	--	----	700 MB WIND CNTR	
2	140457Z	4.5N 137.5E	SATELIT--	STR A										FIRST BLTN	
3	140551Z	4.5N 136.5E	SATELIT--	STR C										STRONGER	
4	142135Z	4.3N 127.0E	34-P-----			40	----	----	--/--	----	----	--	----	WIND CNTR	
5	200045Z	4.3N 126.5E	34-P- 1-14	700MB	35	40	990	2990	12/10	CIRC		30		POORLY DEFINED	
6	200000Z	4.0N 126.0E	34-P- 1-14	700MB	60	40	987	2967	12/10	CIRC		45		POORLY DEFINED	
7	200050Z	4.5N 125.5E	SATELIT--	STR C										LITTLE CHANGE	
8	201500Z	4.0N 121.2E	34-P- 5-10	700MB	----	----	990	3075	10/08	----	----	--		V POORLY DEFINED	
9	202335Z	4.7N 121.2E	34-P-----			----	----	----	--/--	----	----	--			
10	210110Z	4.0N 121.0E	34-P- 1- 5	700MB	45	75	987	2981	15/13	ELIP	NE-SW	30X20		CLSD WC-700 CNTR	
11	210400Z	4.9N 121.5E	34-P- 2- 5	700MB	60	80	983	2954	17/11	ELIP	NE-SW	30X20		15NM N	
12	210557Z	10.0N 120.0E	SATELIT--	STR A	DIA	3	CAT 2.5							CLSD WC-700 CNTR	
13	211000Z	10.0N 119.5E	34-P- 1- 9	500MB	60	----	984	2946	14/9	CIRC		30	5	30NM N	
														STRONGER	
														WC OPEN NF-700MB	
														CNTR 3NM W-500MB	
14	211545Z	11.4N 117.1E	34-P- 2- 8	700MB	40	----	----	2983	15/13	CIRC		25	10	CNTR 15NM W	
15	220056Z	13.5N 112.5E	SATELIT--	STR A	DIA	3	CAT 2.5							CLSD WC	
16	220710Z	13.0N 113.0E	34-P- 3- 5	700MB	67	85	----	2962	16/10	CIRC		50	--	STRONGER	
														POORLY DEFINED	
														700 CNTR 8NM WNW	
17	220944Z	13.0N 112.4E	34-P- 4- 5	700MB	61	85	----	2953	15/09	ELIP	N-S	20X12		WC OPEN SW-SFC	
														CNTR 7NM F	
18	221730Z	14.0N 111.7E	34-P- 5- 5	700MB	81	----	----	2950	15/10	CIRC		20	7	V WEAK CLSD WC	
19	221950Z	14.1N 110.8E	34-P- 2- 8	700MB	95	----	972	2919	19/14	CIRC		25	10	WC OPEN F	
20	221900Z	14.3N 110.2E	34-P- 2- 8	700MB	80	----	987	2913	20/14	CIRC		25	10	WC OPEN SF	
21	221915Z	14.3N 110.2E	LNU RDH--											STN VVVS	
22	222045Z	14.4N 109.9E	LNU RDH--											STN VVVS	
23	222130Z	14.6N 109.7E	34-P- 3- 7	700MB	70	----	986	2910	20/14	CIRC		25	10	WC OPEN S-SE	
24	222245Z	14.0N 109.7E	LNU RDH--											STN VVVS	
25	222345Z	14.0N 109.5E	LNU RDH--											STN VVVS	
26	230015Z	14.0N 109.5E	LNU RDH--											STN VVVS	
27	230041Z	14.0N 109.5E	VU-P- 3---			100	973	----	26/21	CIRC		28		WC OPEN S SEMIC	
28	230115Z	14.8N 109.3E	LNU RDH--											STN VVVS	
29	230145Z	14.9N 109.2E	LNU RDH--											STN VVVS	
30	230215Z	15.0N 109.0E	LNU RDH--											STN VVVS	
31	230753Z	16.0N 104.0E	SATELIT--	STR A	DIA	4	CAT 2.0							NO EYE VISIBLE	

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TYPHOON HESTFR
1200Z 19 OCT TO 1800Z 23 OCT

	BEST TRACK			WARNING			24 HOUR FORECAST				48 HOUR FORECAST				72 HOUR FORECAST			
	POSIT	WIND		POSIT	WIND		POSIT	WIND	ERRORS DST WIND	POSIT	WIND	ERRORS DST WIND	POSIT	WIND	ERRORS DST WIND	POSIT	WIND	ERRORS DST WIND
191200Z	9.6N 129.8E	35		9.3N 129.7E	30	19 -5	9.3N 126.5E	55	160 10	---	---	-- -- --	---	---	-- -- --	---	---	-- -- --
191800Z	9.5N 128.5E	40		9.3N 128.9E	30	26 -10	9.3N 125.7E	50	195 0	---	---	-- -- --	---	---	-- -- --	---	---	-- -- --
200000Z	9.5N 127.0E	50		9.3N 126.9E	40	13 -10	9.3N 122.9E	45	103 -15	9.3N 119.2E	60	316 -15	9.7N 116.1E	70	512 -20			
200600Z	9.5N 125.4E	50		9.5N 125.7E	40	18 -10	9.3N 121.6E	55	114 -15	9.4N 117.6E	65	343 -15	---	---	-- -- --	---	---	-- -- --
201200Z	9.6N 123.8E	45		9.4N 124.7E	45	54 0	9.3N 120.7E	55	179 -15	9.7N 116.7E	65	386 -20	10.6N 113.2E	75	479 -25			
201800Z	9.6N 122.4E	50		9.9N 122.5E	40	19 -10	10.7N 116.9E	65	64 -10	11.9N 111.8E	75	165 -15	---	---	-- -- --	---	---	-- -- --
210000Z	9.7N 121.2E	60		9.8N 121.0E	70	13 10	10.3N 116.2E	90	152 15	11.2N 111.8E	95	273 5	---	---	-- -- --	---	---	-- -- --
210600Z	10.2N 119.9E	70		9.9N 120.1E	80	21 10	10.7N 115.4E	95	197 15	11.9N 111.0E	95	274 20	---	---	-- -- --	---	---	-- -- --
211200Z	11.0N 118.2E	70		10.9N 118.6E	85	24 15	11.7N 114.0E	95	188 10	13.7N 110.1E	85	220 35	---	---	-- -- --	---	---	-- -- --
211800Z	11.7N 116.5E	75		11.7N 116.5E	90	0 15	13.7N 109.8E	85	50 -5	15.4N 103.9E	25	145 -10	---	---	-- -- --	---	---	-- -- --
220000Z	12.5N 114.9E	75		12.2N 115.0E	90	19 15	14.1N 109.7E	85	61 -5	---	---	-- -- --	---	---	-- -- --	---	---	-- -- --
220600Z	13.2N 113.2E	80		13.2N 113.3E	85	6 5	15.2N 107.7E	40	37 -35	---	---	-- -- --	---	---	-- -- --	---	---	-- -- --
221200Z	13.8N 111.6E	85		13.8N 111.9E	80	17 -5	15.5N 106.5E	30	54 -20	---	---	-- -- --	---	---	-- -- --	---	---	-- -- --
221800Z	14.3N 110.4E	90		14.3N 110.3E	80	6 -10	---	---	-- -- --	---	---	-- -- --	---	---	-- -- --	---	---	-- -- --
230000Z	15.0N 109.2E	90		14.7N 109.2E	80	18 -10	---	---	-- -- --	---	---	-- -- --	---	---	-- -- --	---	---	-- -- --
230600Z	15.6N 108.2E	75		15.5N 108.2E	75	6 0	---	---	-- -- --	---	---	-- -- --	---	---	-- -- --	---	---	-- -- --
231200Z	16.1N 107.2E	50		16.1N 107.3E	60	6 10	---	---	-- -- --	---	---	-- -- --	---	---	-- -- --	---	---	-- -- --
231800Z	16.4N 106.2E	35		16.6N 106.5E	40	21 5	---	---	-- -- --	---	---	-- -- --	---	---	-- -- --	---	---	-- -- --

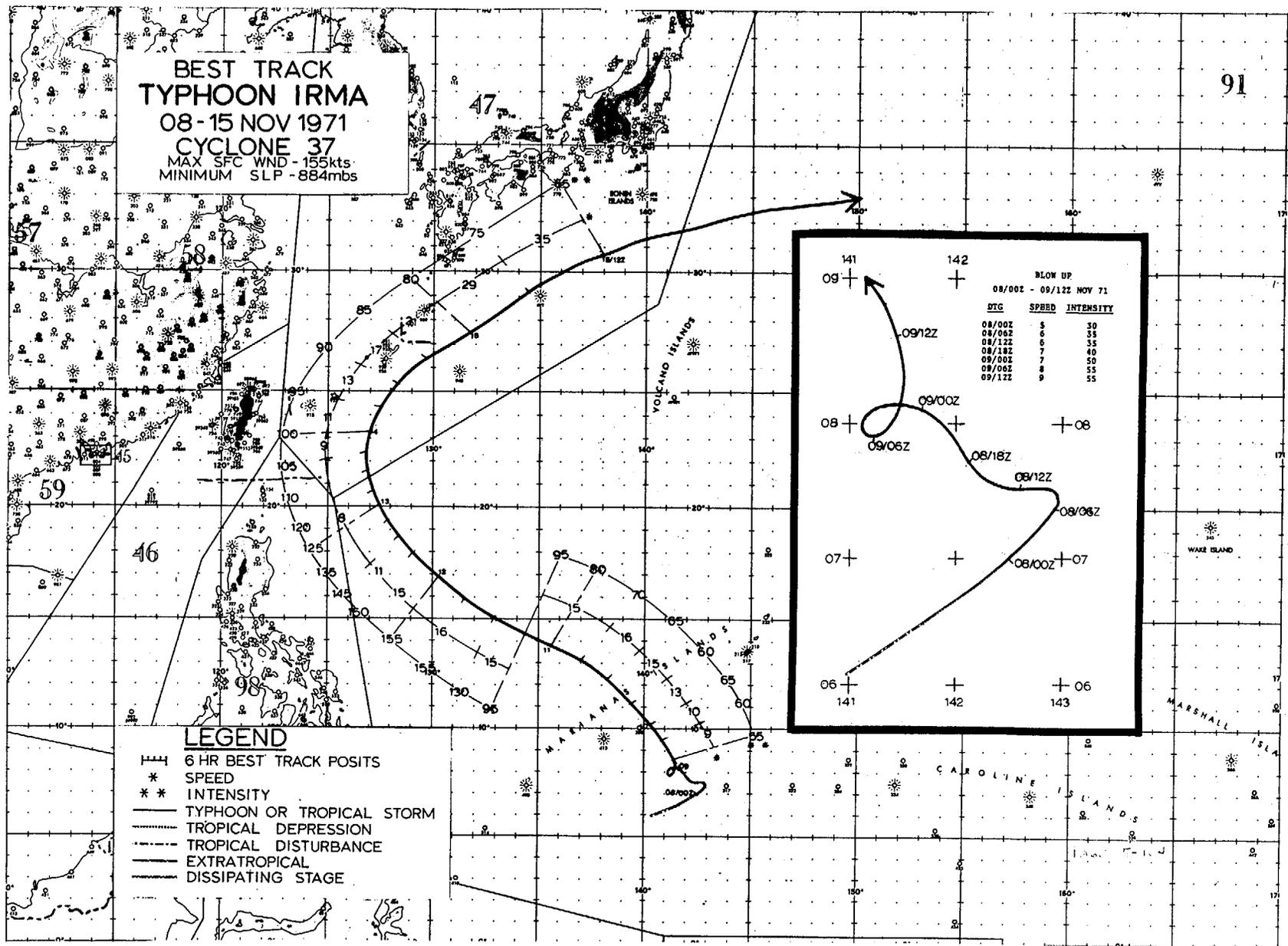
TYPHOONS WHILE WIND OVER 35KTS

	WARNING	24-HR	48-HR	72-HR
AVERAGE FORECAST ERROR	17NM	120NM	265NM	495NM
AVERAGE RIGHT ANGLE ERROR	10NM	41NM	103NM	131NM
AVERAGE MAGNITUDE OF WIND ERROR	9KTS	13KTS	17KTS	23KTS
AVERAGE BIAS OF WIND ERROR	1KTS	-5KTS	-2KTS	3KTS
NUMBER OF FORECASTS	18	13	8	2

ALL FORECASTS

	WARNING	24-HR	48-HR	72-HR
AVERAGE FORECAST ERROR	17NM	120NM	265NM	495NM
AVERAGE RIGHT ANGLE ERROR	10NM	41NM	103NM	131NM
AVERAGE MAGNITUDE OF WIND ERROR	9KTS	13KTS	17KTS	23KTS
AVERAGE BIAS OF WIND ERROR	1KTS	-5KTS	-2KTS	3KTS
NUMBER OF FORECASTS	18	13	8	2

**BEST TRACK
TYPHOON IRMA
08-15 NOV 1971
CYCLONE 37**
MAX SFC WND - 155kts
MINIMUM SLP - 884mbs



LEGEND

- 6 HR BEST TRACK POSITS
- * SPEED
- ** INTENSITY
- TYPHOON OR TROPICAL STORM
- - - TROPICAL DEPRESSION
- · - TROPICAL DISTURBANCE
- EXTRATROPICAL
- · - DISSIPATING STAGE

BLOW UP
08/00Z - 09/12Z NOV 71

UTC	SPBRD	INTENSITY
08/00Z	5	30
08/06Z	6	35
08/12Z	6	35
08/18Z	7	40
08/00Z	7	50
08/06Z	8	55
09/12Z	9	55

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