

I. TYPHOON KATHY (151000Z-180600Z AUGUST 1961)

THE FIRST KNOWN OBSERVATION OF KATHY WAS MADE BY A USAF WEATHER OFFICER, ANDERSEN AFB, WHO WAS FLYING AS NAVIGATOR ON A C-54 ENROUTE TO JAPAN FROM GUAM. HE SENT THE FOLLOWING REPORT TO JTWC: "SPECIAL WX REPORT X 2340N 14240E VERY LARGE TSTMS X 50 NM IN DIAMETER SFC WIND EST 40 KTS L/V TURBULENCE." THE REPORT ARRIVED AT 150320Z; THE SITUATION WAS EXAMINED AND THE INFORMATION WAS INTERPRETED TO BE WEATHER CONDITIONS ASSOCIATED WITH TROPICAL DEPRESSION 20, THEN CENTERED NEAR 18.5N 139.5E. THE SIGNIFICANCE OF THE REPORT WAS REALIZED WHEN IWO JIMA REPORTED STRONG WINDS AND A PRESSURE OF 998.6 MB AT 150600Z. THIS REPORT WAS VERY LATE IN ARRIVING, ALLOWING KATHY TO PASS IWO JIMA BEFORE JTWC BECAME AWARE OF THE CONDITIONS THERE. KATHY WAS ACTUALLY TRAVELING AROUND TROPICAL DEPRESSION 20.

THE MINIMUM PRESSURE REPORTED AT IWO JIMA WAS 997.0 MB AT 150730Z, WITH MAXIMUM SUSTAINED WINDS OF 42 KTS AND MAXIMUM RECORDED GUSTS OF 61 KTS, HOWEVER THE GUSTS EXCEEDED THIS VALUE AT A LATER TIME BUT POWER FAILURE PRECLUDED RECORDING THE VALUE.

THE FIRST WARNING WAS ISSUED ON KATHY AT 151000Z AS A STORM. THE CIRCULATION CONTINUED TO INTENSIFY UNTIL WINDS OF TYPHOON STRENGTH WERE AROUND IT AFTER 151800Z. AS IT APPROACHED KYUSHU, THE LAND EFFECT DISRUPTED THE ASSOCIATED WIND FIELD AFTER 170600Z. THE SURFACE WIND SPEEDS THEN DECREASED IN INTENSITY FROM 80 KTS TO 60 KTS AND WERE ONLY 25 KTS NEAR THE CENTER AS KATHY PASSED OVER THE KYUSHU COAST LINE SHORTLY AFTER 171800Z. THE LAST WARNING WAS ISSUED AT 180600Z WHILE KATHY WAS OVER THE ISLAND OF KYUSHU.

KATHY REMAINED VERY SMALL IN SIZE THROUGHOUT ITS LIFE. THE LAST CLOSED ISOBAR PROBABLY DID NOT EXCEED 450 MI IN DIAMETER AT ANY TIME NOR DID THE RADIUS OF 30 KT WINDS EXTEND BEYOND A 150 MI RADIUS. THE SMALL SIZE CREATED ANALYSIS DIFFICULTIES, EVEN AS IT APPROACHED LAND.

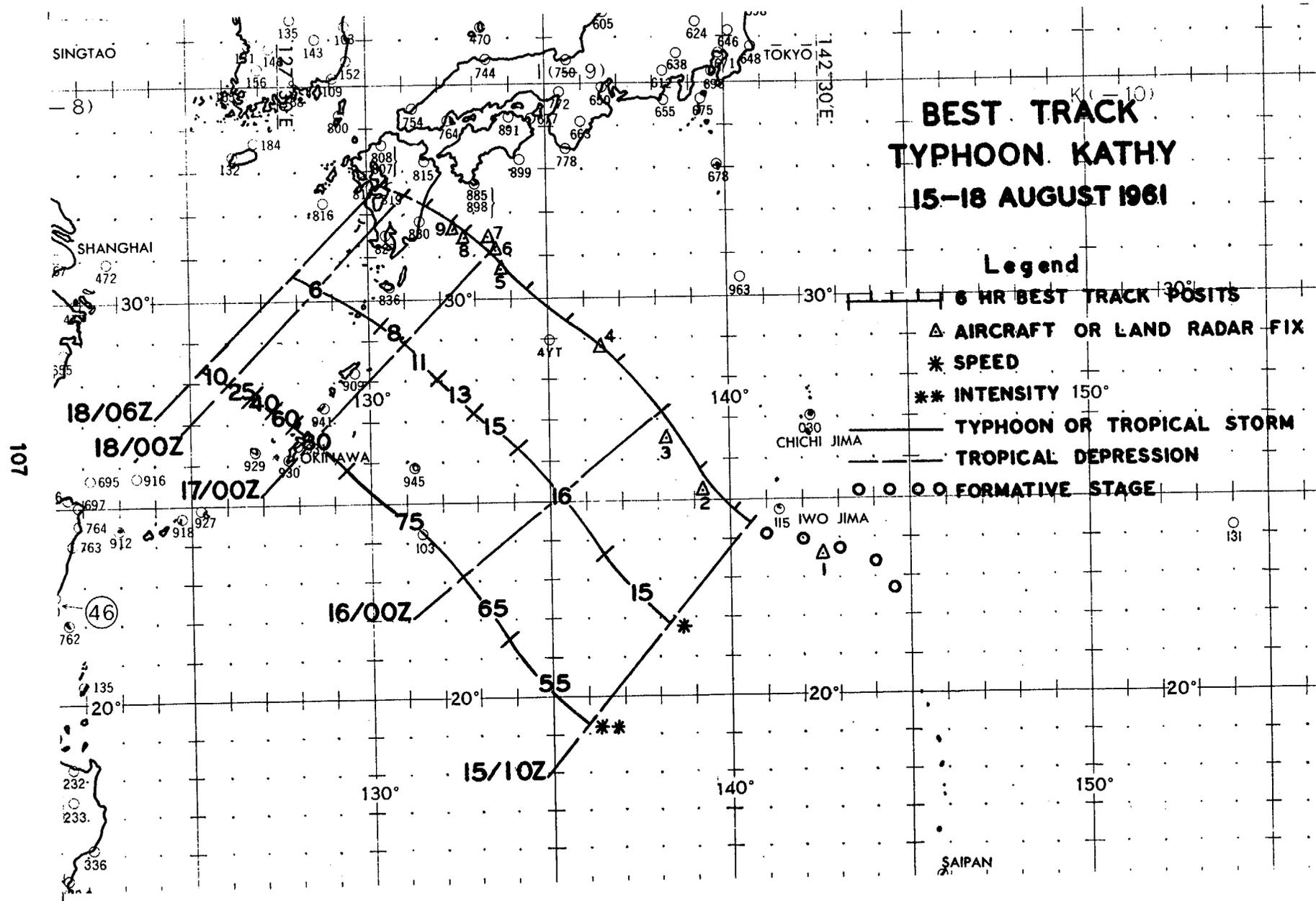
THE TRACK OF KATHY APPROXIMATELY PARALLELED THE 700 MB FLOW, AND WAS ALSO TO THE S THEN SW OF A 500 MB ANTI-CYCLONE THAT MOVED WESTWARD SLIGHTLY DURING THE LIFE CYCLE OF THE TYPHOON. THE 500 MB AND 200 MB RIDGE LINES WERE BETWEEN 33N AND 35N AT THIS TIME. THE WIND FLOW AT THE 200 MB LEVEL COULD NOT BE USED FOR MORE THAN A GENERAL GUIDE TO THE DIRECTION OF MOVEMENT OF THE TYPHOON. A FORECAST USING THESE WINDS WOULD HAVE PREDICTED THE TYPHOON TO MOVE N. THE SINGLE SPACE MEAN CHART WAS AN EXCELLENT TOOL TO FORECAST THE DIRECTION OF TYPHOON MOVEMENT. THE TRACK OF KATHY WAS SIMILAR TO THAT OF IDA OF ONLY A FEW DAYS BEFORE, GEORGIA OF 1955, ALSO FLOSSIE AND HELENE OF 1950 IN BOTH POSITION AND DIRECTION OF MOVEMENT. THIS TYPE OF TRACK IS NOT UNUSUAL BUT IS RELATIVELY RARE.

KATHY MOVED FASTER THAN WAS FORECAST ON THE FIRST FEW WARNINGS. THE TYPHOON CONTINUED ON A NW TRACK AND SLOWED DOWN, BUT THE WARNINGS

ON THE 17TH AND 18TH FORECAST IT TO MOVE MORE NNW AT A FASTER RATE OF MOVEMENT. THE 48 HOUR OUTLOOK WAS ON AN AVERAGE ONLY 164 MI IN ERROR WHILE THE 24 HOUR FORECAST WAS 180 MI IN ERROR. THE MILLER-MOORE 24 HOUR FORECASTS WERE MORE ACCURATE THAN THE WARNING FORECASTS.

KATHY TRAVELED 740 MI DURING THE 2 DAYS AND 20 HOURS THAT WARNINGS WERE ISSUED AT THE RATE OF 261 MI PER DAY, OR AT AN AVERAGE SPEED OF 10.9 KTS. THE TYPHOON MOVED AT A MINIMUM SPEED OF 6 KTS BETWEEN 170600Z AND 180600Z AND AT A MAXIMUM RATE OF SPEED OF 16 KTS BETWEEN 151800Z AND 160600Z. KATHY HAD A MAXIMUM OF 80 KT SURFACE WINDS BETWEEN 161800Z AND 170600Z.

DAMAGE REPORTS WERE NOT RECEIVED BY JTWC, HOWEVER POSSIBLE DAMAGE COULD HAVE OCCURRED TO SHIPPING. THE HIGH WINDS ASSOCIATED WITH KATHY DID CREATE A POWER OUTAGE ON IWO JIMA AS IT PASSED THAT ISLAND, AND OTHER DAMAGE MAY HAVE OCCURRED.



LAND RADAR AND AIRCRAFT FIXES - TYPHOON KATHY

FIX NO.	TIME	LAT.	LONG.	UNIT METHOD & ACCY	MAX SFC WND	MAX 700MB WND	MIN 700MB HGT	MIN SLP MBS	700MB T/T _D (°C)	EYE CHARACTERISTICS
1	150300Z	23.7N	142.7E	USAF-P-U	40	---	----	---	-----	50MI DIA
2	151938Z	25.3N	139.2E	VW1-P-30	---	30	10544	---	13/--	NO WALL CLDS
3	152230Z	26.6N	138.2E	56-P-05	15	14	10190	986	11/10	DIFFUSED NO WALL CLDS
4	160830Z	28.9N	136.4E	56-P-03	80	40	9940	986	18/--	OPEN S WELL DEFINED
5	162130Z	30.8N	133.8E	56-P-04	110	60	9930	980	17/11	CIRC DIA 20MI OPEN S
6	170020Z	31.1N	133.6E	56-P-04	100	60	----	1000	18/--	CIRC 40MI DIA
7	170200Z	31.4N	133.3E	56-P-10	85	55	9890	988	20/14	CIRC 40MI DIA
8	170600Z	31.5N	132.8E	LND/RDR	---	---	----	---	-----	-----
9	170900Z	31.7N	132.3E	LND/RDR	---	---	----	---	-----	-----

TYPHOON KATHY 15-18 AUG 1961
 POSITION AND FORECAST VERIFICATION DATA

DTG	STORM POSITION		24 HR. ERROR		48 HR. ERROR	
	LAT.	LONG.	DEG.	DISTANCE	DEG.	DISTANCE
151000Z	24.6N	140.7E	-----		-----	
151200Z	24.8N	140.2E	-----		-----	
151800Z	25.9N	139.1E	-----		-----	
160000Z	27.2N	138.1E	-----		-----	
160600Z	28.4N	136.9E	-----		-----	
161200Z	29.4N	135.6E		160-175	-----	
161800Z	30.2N	134.3E		160-184	-----	
170000Z	31.1N	133.7E		164-154	-----	
170600Z	31.5N	132.8E		155-78	-----	
171200Z	31.8N	132.2E		013-167		180-263
171800Z	32.2N	131.7E		005-176		180-244
180000Z	32.4N	131.0E		005-232		163-109
180600Z	32.7N	130.3E		010-275		017-40

AVERAGE 24 HOUR ERROR 180 MI
 AVERAGE 48 HOUR ERROR 164 MI

