

S. TYPHOON NINA (230000Z-271800Z OCTOBER 1960)

In the wake of Typhoon MAMIE there was a collection of debris in the form of small vortices between the Philippine Islands and Guam. Before 200000Z these vortices appeared to form and dissipate frequently; however, at this time a low appeared and ultimately became Typhoon NINA.

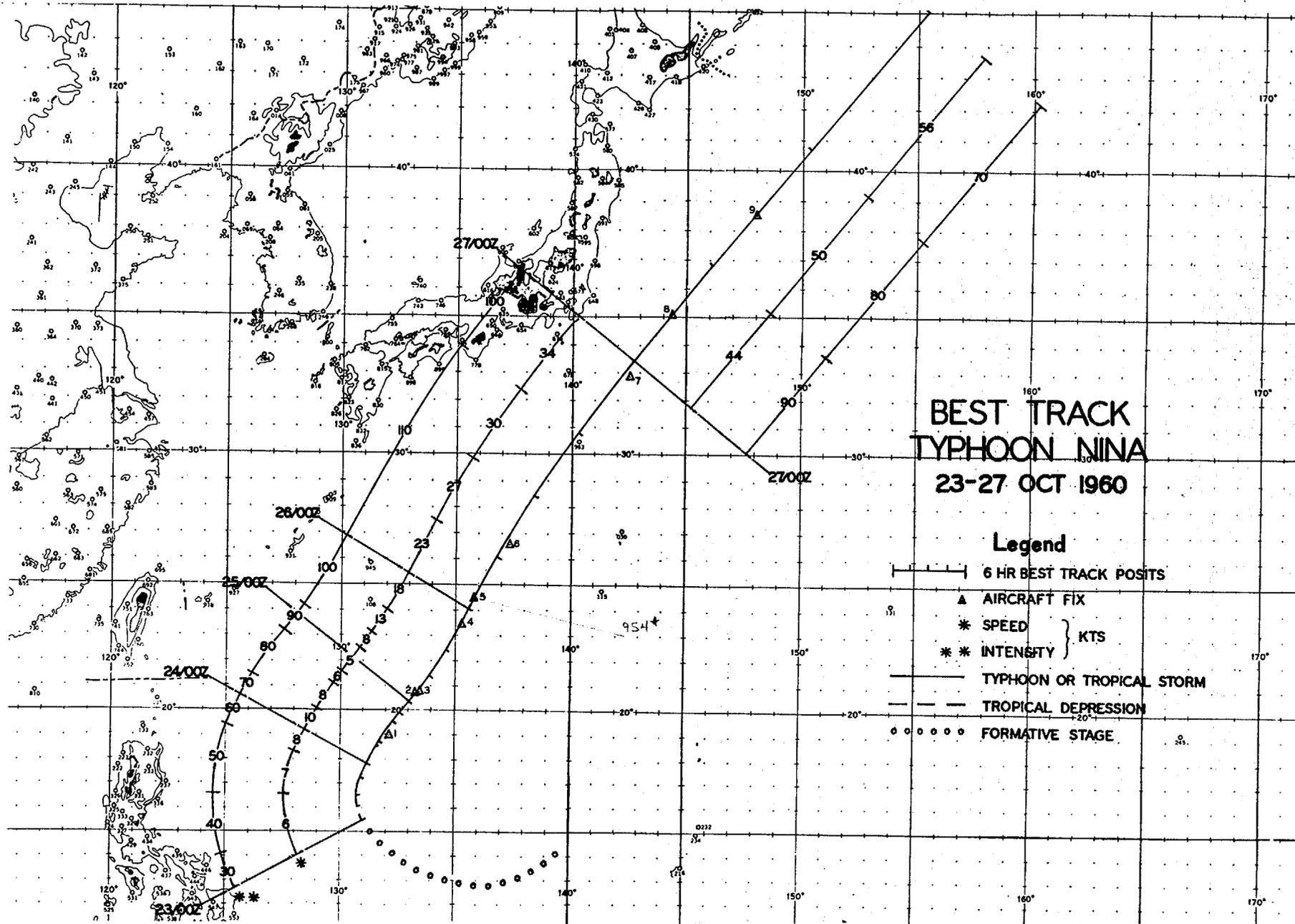
The first warning on T.D. 23 was issued at 230000Z after the depression had moved slowly to the W and NW for several days. The low had just entered into recurvature and was about 600 mi E of Clark AB, Philippines at the time of the first warning. Recurvature was completed 24 hours later; at that time NINA reached typhoon intensity. After 240000Z NINA traveled in an almost straight line, along a track of about 030 degrees. The surface winds near the eye of NINA continued to steadily increase in speed at the rate of 5 to 10 kts each 6 hours, until a maximum of 110 kts was reached at 260000Z when the typhoon was 320 mi W of Minami Iwo Jima, an island just S of Iwo Jima. NINA passed to the W and within 20 mi of Tori Shima between 261700Z and 261800Z, moving at 30 kts. The surface winds reached 40 kts and the pressure dropped to 954 mb or less at that station. The Tori Shima weather station is well protected against high winds from a southerly direction; hence no higher winds were reported. The typhoon passed 200 mi SE of Tokyo at 270000Z and continued parallel to the Japanese Archipelago until 271800Z when the last warning was issued. NINA was moving at 56 kts and had 70 kt surface winds at this time.

The "warning life" of NINA was 4 days and 18 hours, during which time the typhoon traveled 2200 mi at an average speed of 19 kts or 460 mi per day. The minimum speed was 5 kts on 24 and 25 October, and the maximum speed was 56 kts on 27 October.

The winds aloft at Tori Shima(47963) and Hachijo Jima (47678) are interesting because of the effect of Typhoon NINA on them. Hachijo Jima's 261800Z winds at 25,000 ft strongly suggest a closed circulation; however, the 30,000 ft winds, which were 230 degrees 54 kts at 260600Z, became 220 degrees 17 kts at 261800Z, and then became 250 degrees 68 kts at 270000Z when the influence of NINA no longer existed. The winds at Tori Shima were modified from 251800Z until after the passage of the typhoon there. Prior to that time the 30,000 ft wind was 260 degrees with speeds ranging from 60 to 75 kts; by 260600Z the winds were only 220 degrees 25 kts. The speed increased to 64 kts just before the typhoon passed and the direction changed to 200 degrees. Shortly after passage the winds returned to the prevailing flow (260 degrees 49 kts) at the 300 mb level. The typhoon

in effect decreased the prevailing westerly wind speed at 30,000 ft as it approached that area from the S. NINA appeared to be a closed cyclonic circulation at 20-25,000 ft when in the vicinity of Tori Shima and Hachijo Jima.

The typhoon was not unusual in behavior. Typhoon NINA was the second "fastest" typhoon of the season, averaging 56 kts for the last 6 hours of its "warning life".



RECONNAISSANCE AIRCRAFT FIXES - TYPHOON NINA

FIX NO.	TIME	LAT.	LONG.	UNIT METHOD & ACCY	MIN SLP MBS	MAX SFC WND	MIN 700MB HGT	MAX 700MB WND	700MB TT/Td (°C)	EYE CHARACTERISTICS
1	240815Z	19.0N	132.1E	56-P-05	962	65	9480 <sup>997</sup>	60	17/10	CIRC DIA 05MI NO WALL CLDS
2	250545Z	20.8N	133.4E	56-P-05	954	70	9030	70	15/13	NOT DEFINED WALL CLDS E&N
3	250800Z	20.8N	133.5E	56-P-05	962	90	9010 <sup>961</sup>	105	15/13	CIRC DIA 40 MI
4	252100Z	23.4N	135.1E	56-P-05	957	70	8860 <sup>956</sup>	90	16/11	CIRC DIA 50 MI WALL CLDS SOLID EXCEPT SW
5	260145Z	24.5N	135.7E	56-P-15	958	95	8810 <sup>954</sup>	90	19/10	CIRC DIA 50 MI
6	260750Z	26.6N	137.3E	56-P-05	968	120	8900 <sup>953</sup>	110	17/13	POORLY DEFINED
7	262300Z	32.9N	142.7E	56-P-10	960	100	9050 <sup>962</sup>	60	18/10	CIRC NO WALL CLDS
8	270300Z	35.1N	144.3E	56-P-10	963	75	9040 <sup>962</sup>	85	17/09	CIRC DIA 30 MI OPEN S&SW
9	270800Z	38.4N	148.0E	56-P-10	972	100	9200 <sup>962</sup>	100	13/07	VERY POORLY DEFINED DIA 50-70 MI

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TYPHOON NINA 23-27 OCTOBER 1960  
POSITION AND FORECAST VERIFICATION DATA

DTG	STORM POSITION		24 HR. ERROR	48 HR. ERROR
	LAT.	LONG.	DEG. DISTANCE	DEG. DISTANCE
230000Z	15.4N	131.0E	- - - -	- - - -
230600Z	16.0N	130.8E	- - - -	- - - -
231200Z	16.6N	130.7E	- - - -	- - - -
231800Z	17.2N	130.9E	- - - -	- - - -
240000Z	17.9N	131.2E	- - - -	- - - -
240600Z	18.8N	131.8E	- - - -	- - - -
241200Z	19.5N	132.3E	- - - -	- - - -
241800Z	19.9N	132.6E	- - - -	- - - -
250000Z	20.3N	133.0E	266-257	- - - -
250600Z	20.7N	133.4E	311-74	- - - -
251200Z	21.4N	133.9E	300-81	- - - -
251800Z	22.4N	134.6E	292-82	- - - -
260000Z	24.1N	135.5E	225-80	251-358
260600Z	26.1N	136.7E	196-148	232-77
261200Z	28.4N	138.2E	202-318	210-184
261800Z	30.8N	140.2E	205-458	203-153
270000Z	33.4N	142.9E	196-392	208-463
270600Z	36.8N	146.3E	- - - -	- - - -
271200Z	40.8N	150.2E	- - - -	- - - -
271800Z	45.0N	155.3E	- - - -	- - - -
AVERAGE 24 HOUR ERROR			210 MI	
AVERAGE 48 HOUR ERROR			247 MI	

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