J. TYPHOON SARAH (11-18 SEPTEMBER 1959)

Early on 10 September Tropical Storm NORA in the South China Sea, Tropical Depression RUTH midway between Guam and the Philippines, and a suspect area north of Ponape, all lay along the Intertropical Convergence Zone. By 101200Z RUTH had dissipated and reconnaissance into the suspect area was planned for the next day. The reconnaissance aircraft located a center 70 miles east of Guam at 110200Z. Tropical Depression SARAH was named and warning number 1 was issued with center winds of 30 knots. Subsequent fixes by the same aircraft indicated a rather indefinite situation with several small centers. However, from land radar, it was possible to determine that the primary center (SARAH) passed just north of Guam at 111000Z. Guam experienced only light gusty winds and occasional showers. By 112000Z, SARAH, now a fairly well defined circulation, had reached tropical storm intensity; and twelve hours later, at 120800Z, she was a typhoon with center winds of 65 knots.

SARAH followed a rather classical parabolic track, a track which took her directly over the island of Miyako Jima and just a few miles west of Pusan, Korea. SARAH passed over Miyako Jima at approximately 150900Z. Maximum sustained winds of 106 knots were reported there with gusts to 130 knots (which caused the anemometer to blow away). Although SARAH passed 150 miles to the west of Okinawa, Naha reported winds of 73 knots. After SARAH raked the southeastern tip of Korea she began to weaken and accelerate. Further weakening took place over the Sea of Japan. By 180600Z, over Hokkaido, SARAH had become extratropical and the final tropical warning was issued.

SARAH was the third most intense typhoon of the year. Surface winds reached a maximum of 165 knots, and the surface pressure dropped to a minimum of 905 millibars. Climatologically, SARAH recurved slightly farther west than is normal for mid-September. Although this caused Miyako Jima to bear the brunt of the onslaught, SARAH was also the worst typhoon experienced by Korea in 50 years. As previously indicated, SARAH followed a very stable path, and only minor forecasting difficulties were encountered. Thirty warnings were issued covering a period of 8 days.

For damage caused by Typhoon SARAH see Section VI, "Destructive Effects of Typhoons."

RECONNAISSANCE AIRCRAFT FIXES - TYPHOON SARAH

FIX NO.	TIME	LAT.	LONG.	*UNIT METHOD & ACCY	MIN SLP MBS	MAX SFC WND	MIN 700MB HGT	MAX FLT LVL WND	700MB TEMP (°C)	700MB DEWPT (°C)	EYE CHARACTERISTICS
1	110200Z	13.6N	146.2E	54-P-10	1008	35	- -	- -	- -	- -	CNTR OVC HVY RAIN
2	110645Z	13.7N	145.4E	54-P-2	999	20	10140	20	10	09	CNTR DIFFUSE
3	110800Z	13.8N	145.6E	54-P-2	- -	- -	10120	- -	09	09	CNTR DIFFUSE
4	112000Z	13.5N	142.4E	54-P-5	996	30	9900	50	12	09	CNTR DIFFUSE
5	120200Z	13.4N	141.2E	54-P-2	988	60	9760	55	15	10	CIRC DIA 30 MI
6	120800Z	14.0N	140.0E	54-P-5	980	60	9660	65	13	12	CIRC DIA 35 MI
7	121415Z	14.9N	138.3E	54-R-5	- -	- -	- -	55	- -	- -	EYE DIA 35 MI
8	122038Z	16.0N	136.5E	54-P-10	964	75	9090	70	14	11	CIRC DIA 07 MI
9	122330Z	16.3N	135.8E	54-P-5	963	115	9040	85	16	11	CIRC DIA 08 MI
10	130800Z	17.5N	133.7E	54-P-8	959	125	8880	100	16	- -	CIRC DIA UNKN
11	131400Z	18.7N	131.8E	54-R-20	- -	- -	- -	- -	- -	- -	
12	132000Z	19.3N	130.6E	54-R-5	- -	- -	- -	- -	- -	- -	EYE DIA 20 MI
13	132030Z	19.4N	130.4E	54-P-5	943	- -	8530	- -	20	09	CIRC DIA 20 MI
14	132307Z	19.6N	130.0E	12-R-15	- -	- -	- -	- -	- -	- -	CIRC DIA 30 MI
15	140225Z	19.8N	129.3E	54-P-2	- -	- -	8230	100	20	14	OBLONG 35 MI WIDE
16	140800Z	20.6N	128.3E	54-P-3	919	150	7830	120	21	10	CIRC DIA 20 MI
17	141100Z	20.9N	128.0E	12-R-10	- -	- -	- -	- -	- -	- -	CIRC DIA 20 MI
18	141400Z	21.3N	127.4E	54-R-5	- -	- -	- -	- -	- -	- -	CIRC DIA 20 MI
19	142200Z	22.4N	126.6E	54-P-2	905	170	7510	135	26	15	CIRC DIA 15 MI

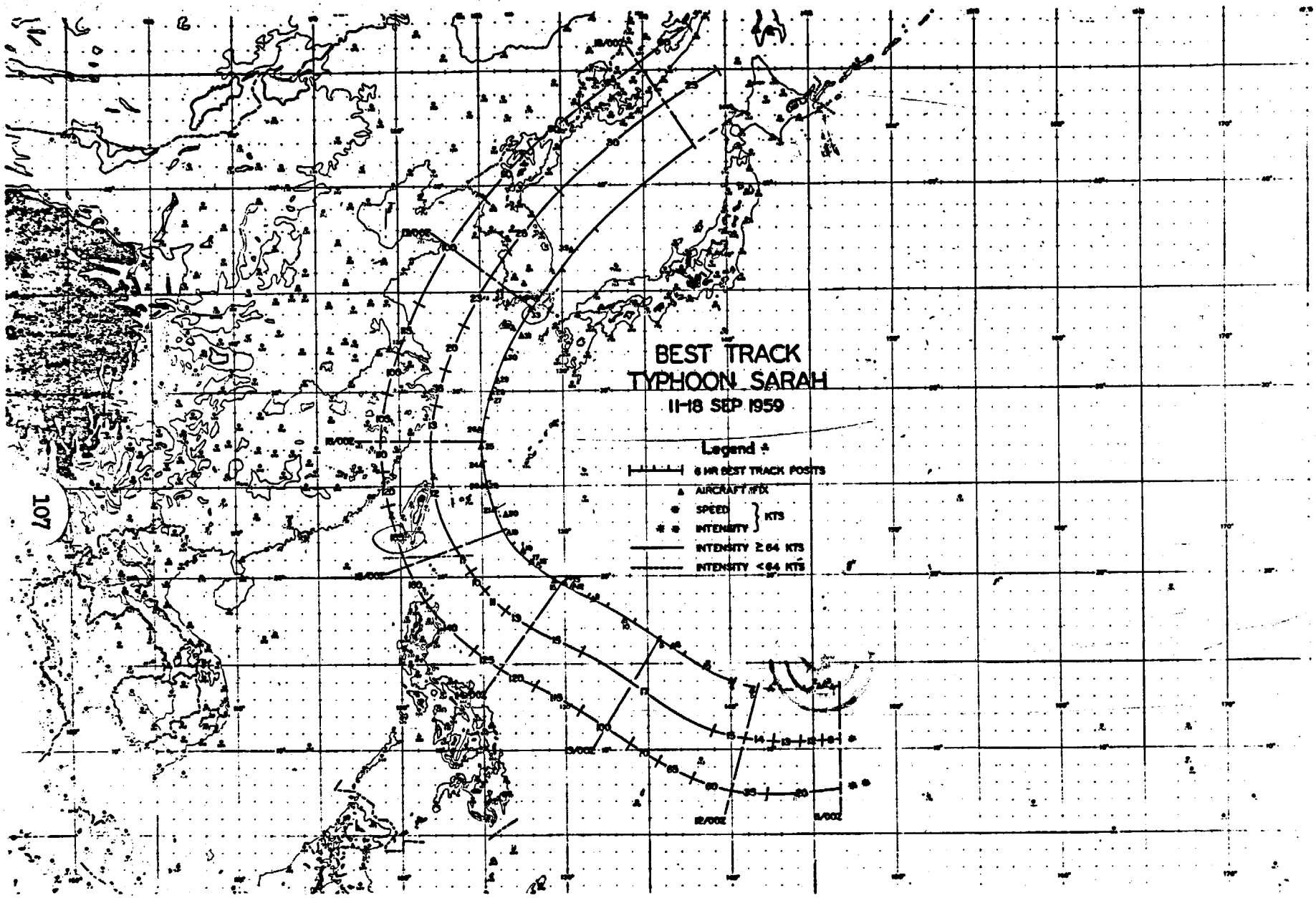
RECONNAISSANCE AIRCRAFT FIXES - TYPHOON SARAH (CONT'D)

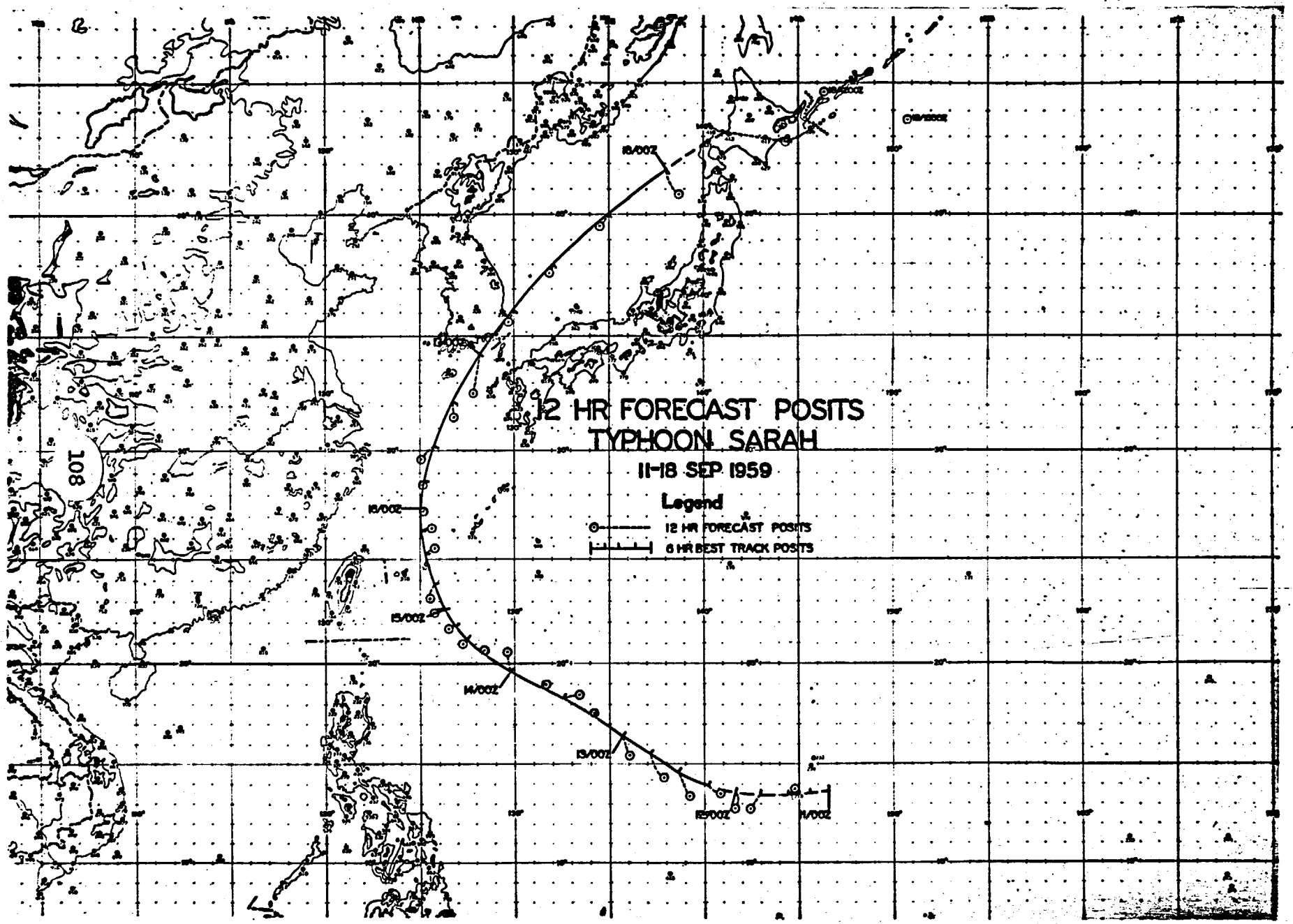
FIX NO.	TIME	LAT.	LONG.	*UNIT METHOD & ACCY	MIN SLP MBS	MAX SFC WND	MIN 700MB HGT	MAX FLT LVL WND	700MB TEMP (°C)	700MB DEWPT (°C)	EYE CHARACTERISTICS
20	150156Z	23.4N	126.3E	56-P-5	905	130	- -	- -	- -	- -	CIRC DIA 15 MI
21	150540Z	23.8N	125.8E	56-R-5	- -	- -	- -	- -	- -	- -	———
22	151110Z	25.0N	125.2E	12-R-10	- -	- -	- -	- -	- -	- -	CIRC DIA 25 MI
23	151230Z	25.0N	125.1E	54-R-3	- -	- -	- -	- -	- -	- -	ELLIP 20X15 MI
24	151853Z	26.1N	125.0E	56-R-10	- -	- -	- -	- -	- -	- -	CIRC DIA 20 MI
25	152309Z	27.1N	125.0E	12-R-2	- -	- -	- -	- -	- -	- -	CIRC DIA 23 MI
26	160342Z	28.0N	124.9E	56-P-5	930	- -	8330	- -	15	15	CIRC DIA 25 MI
27	161030Z	29.7N	125.6E	54-P-5	936	- -	8340	90	19	15	CIRC DIA 20 MI
28	161100Z	30.0N	125.6E	12-R-15	- -	- -	- -	- -	- -	- -	DIA 20 MI
29	161400Z	30.5N	126.0E	54-R-5	- -	- -	8750	95	- -	- -	CIRC DIA 20 MI
30	161700Z	31.6N	126.5E	54-R-20	- -	- -	- -	- -	- -	- -	———
31	162000Z	32.9N	127.6E	54-R-10	- -	- -	- -	- -	- -	- -	CIRC DIA 20 MI
32	162140Z	33.1N	127.0E	54-P-5	944	150	8630	90	19	13	CIRC DIA 25 MI
33	170025Z	34.1N	128.1E	12-R-5	- -	- -	- -	- -	- -	- -	CIRC POORLY DEFINED
34	170200Z	34.6N	128.4E	56-P-3	942	100	- -	- -	- -	- -	CIRC DIA 20 MI
35	170900Z	37.0N	130.6E	54-P-2	- -	150	9190	60	19	13	CIRC DIA 60 MI

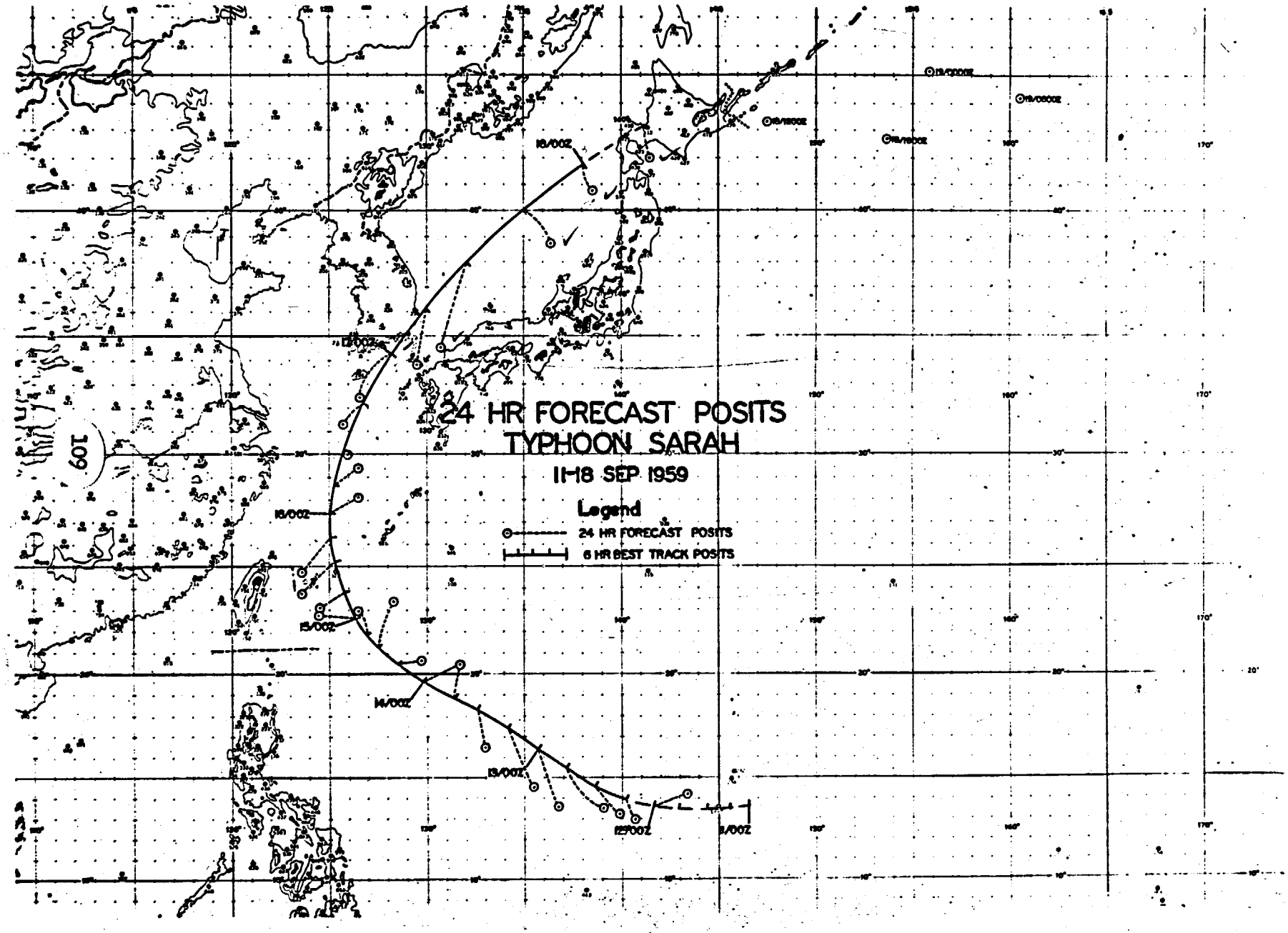
TYPHOON SARAH 11 - 19 SEPT. 1959
POSITION AND FORECAST VERIFICATION DATA

DTG	STORM POSITION LAT.	LONG.	12 HR ERROR DEG.	DISTANCE	24 HR ERROR DEG.	DISTANCE
110000Z	13.8N	146.4E	- - - -		- - - -	
110600Z	13.6N	145.6E	- - - -		- - - -	
111200Z	13.5N	144.3E	- - - -		- - - -	
111800Z	13.4N	143.0E	- - - -		- - - -	
120000Z	13.5N	141.5E	- - - -		- - - -	
120600Z	14.0N	140.1E	123	55	- - - -	
121200Z	14.7N	138.7E	162	85	- - - -	
121800Z	15.5N	137.1E	152	96	137	159
130000Z	16.4N	135.6E	160	70	160	180
130600Z	17.3N	134.1E	352	20	155	175
131200Z	18.2N	132.6E	067	45	165	124
131800Z	18.9N	131.2E	090	27	023	82
140000Z	19.7N	129.8E	270	10	110	112
140600Z	20.5N	128.6E	280	14	073	69
141200Z	21.2N	127.7E	240	30	010	128
141800Z	21.9N	126.9E	255	30	330	74
150000Z	22.8N	126.3E	230	44	268	95
150600Z	23.9N	125.7E	200	52	225	87
151200Z	25.2N	125.2E	040	44	230	114
151800Z	26.2N	125.0E	065	32	220	110
160000Z	27.4N	124.9E	138	23	245	89
160600Z	28.7N	125.1E	195	21	065	73
161200Z	30.2N	125.8E	225	53	240	19
161800Z	32.1N	126.8E	175	32	220	69
170000Z	34.2N	128.1E	190	92	215	138
170600Z	36.2N	129.8E	- - - -		- - - -	
171200Z	38.0N	132.0E	- - - -		- - - -	
171800Z	40.1N	134.8E	- - - -		- - - -	
180000Z	41.9N	138.0E	- - - -		- - - -	
180600Z	43.1N	141.1E	- - - -		- - - -	
181200Z	44.8N	143.6E	- - - -		- - - -	
181800Z	46.8N	145.5E	- - - -		- - - -	
190000Z	48.8N	146.8E	- - - -		- - - -	
190600Z	50.4N	147.3E	- - - -		- - - -	

AVERAGE 12 HOUR ERROR 43.8 NM
AVERAGE 24 HOUR ERROR 105.9 NM


BEST TRACK
TYPHOON SARAH
11-18 SEP 1959
Legend :
6 HR BEST TRACK POSITS
AIRCRAFT FIX
SPEED
INTENSITY
KTS
INTENSITY ≥ 64 KTS
INTENSITY < 64 KTS


12 HR FORECAST POSITS
TYPHOON SARAH
11-18 SEP 1959
Legend
12 HR FORECAST POSITS
6 HR BEST TRACK POSTS
18/00Z
17/00Z
16/00Z
15/00Z
14/00Z
13/00Z
12/00Z
11/00Z
108


24 HR FORECAST POSITS
TYPHOON SARAH
11-18 SEP 1959
Legend
24 HR FORECAST POSITS
6 HR BEST TRACK POSITS
18/00Z
17/00Z
16/00Z
15/00Z
14/00Z
13/00Z
12/00Z
11/00Z
109