

U. TYPHOON PHYLLIS (110000Z-200000Z DECEMBER 1960)

A cyclonic circulation was evident about 100 mi W of Truk on the 090600Z surface chart. This system moved W, and at 110000Z the initial warning was issued on T.D. 25 in the vicinity of 7N 148E. This cyclone moved WNW to W for the first 60 hours that warnings were issued; the depression was upgraded to T.S. PHYLLIS at 120000Z near 10N 142E. The average speed of movement of PHYLLIS for the first 60 hours that warnings were issued was 15 kts. This is a relatively fast speed for a tropical disturbance in low latitudes, but the 300 mb charts from 101200Z to 131200Z indicated a stronger than normal gradient throughout this region, which undoubtedly had an effect on the speed.

The storm passed 40 mi N of Ulithi at 120730Z. The maximum reported surface wind speed at this atoll was 20 kts, and the minimum sea level pressure was 998.3 mb. The sea level pressure at Yap and Koror did not fall below 1,000 mb, which indicated that PHYLLIS was still a small storm. After it passed Ulithi it rapidly intensified, reaching typhoon strength by 130000Z near 12N 136E. At this time the 200 mb chart showed an elongated high just N of PHYLLIS, extending from S of Marcus to the Philippines. This high split into two separate cells, and the typhoon began to move N around the western edge of the anticyclone which was E of PHYLLIS. It then moved into a col area between the two highs; this slowed its speed of movement to 3 kts. The 200 mb high, which was E of PHYLLIS, began to spread its influence over PHYLLIS again. This resulted in PHYLLIS turning to the W and accelerating to 11 kts by 160000Z. After 161200Z PHYLLIS began to turn slowly toward the NW and its speed of movement decreased. From 171200Z to 181800Z the typhoon changed its direction of movement from 300 to 080 degrees as it rapidly recurved. Its speed during recurvature slowed to 4 kts, and the maximum surface wind speed increased to 105 kts by 180600Z.

A cold front was located about 300 mi N of PHYLLIS at 181200Z, and it moved S as the typhoon moved E. This front brought cold air into the typhoon, causing it to rapidly weaken and to become extratropical. At 182330Z a reconnaissance fix indicated maximum sustained surface winds of 110 kts, and at 192325Z a reconnaissance fix indicated winds of only 15 kts and a poorly defined center. The final warning was issued at 200000Z.

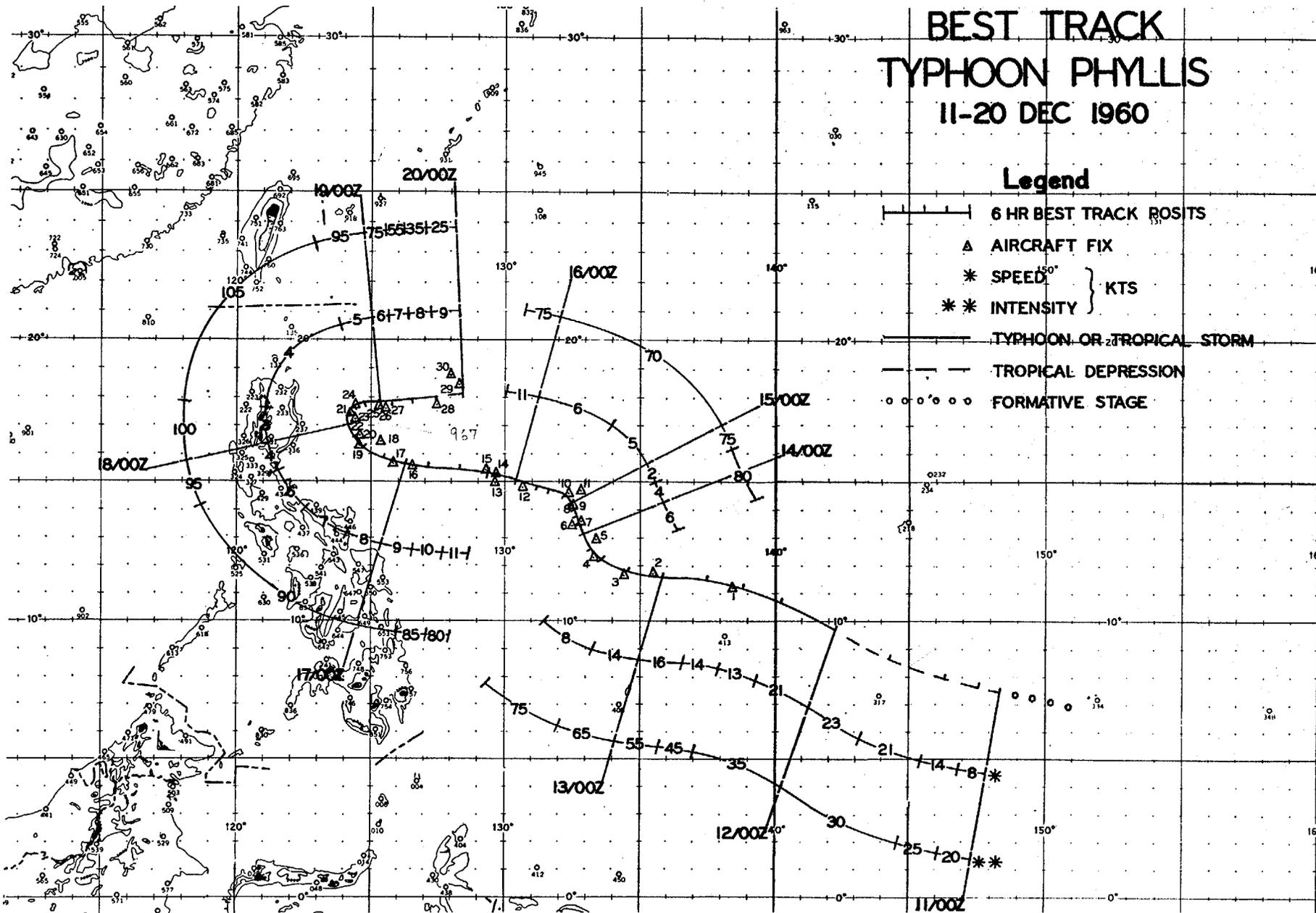
A total of 37 warnings were issued, covering a period of 9 days. PHYLLIS traveled 1850 mi, averaging 9 kts or 207 mi per day. The minimum speed of movement was 2 kts on 14 Dec., and the maximum speed was 23 kts on 11 Dec.

# BEST TRACK TYPHOON PHYLLIS 11-20 DEC 1960

## Legend

- 6 HR BEST TRACK POSITS
- △ AIRCRAFT FIX
- \* SPEED } KTS
- \*\* INTENSITY }
- TYPHOON OR TROPICAL STORM
- - - TROPICAL DEPRESSION
- ○ ○ ○ ○ FORMATIVE STAGE

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RECONNAISSANCE AIRCRAFT FIXES - TYPHOON PHYLLIS

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	121517Z	11.1N	138.4E	USAF-R--	--	--	--	--	--	-----
2	130030Z	11.8N	135.5E	56-P-03	995	65	9980 <sup>995</sup>	40	15/09	ELLIP N-S 10MI E-W 25MI
3	130630Z	11.7N	134.4E	56-P-03	982	75	9680 <sup>984</sup>	55	15/10	CIRC DIA 20 MI OPEN N
4	131455Z	12.2N	133.2E	VW1-R-08	--	--	--	--	--	CIRC DIA 40 MI
5	132300Z	13.0N	133.3E	56-P-05	977	60	9550 <sup>980</sup>	55	14/--	DIFFUSE
6	140300Z	13.3N	132.9E	56-P-05	984	60	9520 <sup>977</sup>	70	13/--	DIFFUSE, DIA 40 MI
7	140730Z	13.5N	132.9E	56-P-10	980	70	9510 <sup>979</sup>	70	16/15	CIRC DIA 40 MI OPEN N & NE
8	141500Z	14.1N	132.5E	VW1-R-20	--	--	--	--	--	OPEN DIA 25 MI
9	150030Z	14.0N	132.6E	56-P-05	979	50	9820 <sup>989</sup>	50	20/16	DIFFUSE, WALL CLDS E & S
10	150315Z	14.6N	132.3E	56-P-15	990	60	9850 <sup>990</sup>	50	19/16	POORLY DEFINED & DIFFUSE
11	150700Z	14.7N	132.9E	56-P-05	982	65	9750 <sup>987</sup>	60	16/12	POORLY DEFINED & DIFFUSE
12	152315Z	14.8N	130.7E	56-P-05	984	55	9740 <sup>987</sup>	60	16/13	CIRC POORLY DEFINED
13	160308Z	15.9N	129.7E	VW1-R-15	--	--	--	--	--	CIRC DIA 33 MI
14	160330Z	15.1N	129.7E	56-P-07	973	55	9650 <sup>983</sup>	60	17/16	CIRC DIA 50 MI OPEN S & W
15	160700Z	15.3N	129.2E	56-P-05	964	70	9530 <sup>979</sup>	65	16/15	CIRC DIA 40 MI WALL CLDS S&W
16	162145Z	15.5N	126.5E	56-P-04	985	--	9350 <sup>973</sup>	75	15/--	-----
17	170230Z	15.7N	125.9E	56-P-02	971	60	9400 <sup>974</sup>	75	15/--	CIRC DIA 20 MI
18	171015Z	16.3N	125.2E	56-P-05	--	--	9360 <sup>973</sup>	60	14/11	CIRC DIA 15 MI
19	171126Z	16.2N	124.7E	VW1-R-10	--	--	--	--	--	-----
20	171457Z	16.6N	124.6E	VW1-R-10	--	--	--	--	--	CIRC DIA 20 MI

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RECONNAISSANCE AIRCRAFT FIXES - TYPHOON PHYLLIS (CONT'D)

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
21	172230Z	17.4N	124.2E	56-P-08	972	- -	9330 <sup>972</sup>	70	14/11	CIRC DIA 50 MI
22	180330Z	17.2N	124.3E	56-P-05	962	65	9230 <sup>969</sup>	85	20/--	CIRC DIA 50 MI
23	180900Z	17.6N	124.2E	56-P-02	967	110	9110 <sup>965</sup>	90	19/--	CIRC DIA 25 MI
24	181430Z	17.7N	124.3E	VW1-R-02	- -	- -	- - -	- -	- - -	CIRC DIA 20 MI
25	182330Z	17.8N	125.3E	56-P-05	979	110	9780 <sup>987</sup>	- -	21/14	WALL CLDS NW
26	190500Z	17.7N	125.5E	56-P-02	987	65	9880 <sup>991</sup>	- -	19/09	OPEN S SEMICIRCLE
27	190800Z	17.7N	125.7E	56-P-03	994	75	10000 <sup>996</sup>	- -	18/10	ELLIP CTR TO W 12 MI CTR TO N 20 MI
28	191607Z	17.8N	127.4E	VW1-R-10	- -	- -	- - -	- -	- - -	NOT WELL DEFINED
29	192325Z	18.3N	129.2E	56-----	1011	15	- - -	- -	- - -	- - - - -
30	200345Z	18.9N	128.0E	56-----	- -	C	- - -	- -	- - -	NO CLOSED CIRCULATION

TYPHOON PHYLLIS 11-20 DECEMBER 1960  
POSITION AND FORECAST VERIFICATION DATA

DTG	STORM POSITION		24 HR. ERROR	48 HR. ERROR
	LAT.	LONG.	DEG. DISTANCE	DEG. DISTANCE
110000Z	07.4N	148.3E	- - - -	- - - -
110600Z	07.6N	147.6E	- - - -	- - - -
111200Z	08.0N	146.2E	- - - -	- - - -
111800Z	08.7N	144.2E	- - - -	- - - -
120000Z	09.7N	142.1E	- - - -	- - - -
120600Z	10.7N	140.1E	- - - -	- - - -
121200Z	11.1N	138.9E	- - - -	- - - -
121800Z	11.4N	137.5E	- - - -	- - - -
130000Z	11.6N	135.9E	- - - -	- - - -
130600Z	11.9N	134.5E	116-302	- - - -
131200Z	12.2N	133.7E	294-140	- - - -
131800Z	12.6N	133.2E	292-109	- - - -
140000Z	13.1N	133.0E	289-150	- - - -
140600Z	13.5N	132.9E	287-206	140-205
141200Z	13.8N	132.8E	282-200	322-222
141800Z	14.0N	132.7E	269-159	287-276
150000Z	14.2N	132.6E	293-67	308-304
150600Z	14.6N	132.2E	015-125	317-294
151200Z	14.8N	131.6E	035-102	324-281
151800Z	14.9N	131.1E	037-175	310-179
160000Z	15.0N	130.4E	087-112	013-171
160600Z	15.2N	129.3E	068-165	047-454
161200Z	15.3N	128.2E	070-333	053-480
161800Z	15.4N	127.1E	070-405	057-561
170000Z	15.7N	126.2E	110-117	073-381
170600Z	15.9N	125.4E	161-44	067-464
171200Z	16.2N	124.8E	180-52	066-698
171800Z	16.6N	124.3E	208-64	065-759
180000Z	17.0N	124.1E	226-174	145-148
180600Z	17.3N	124.1E	238-273	225-182
181200Z	17.7N	124.4E	332-80	234-237
181800Z	17.8N	124.8E	336-127	237-264
190000Z	17.8N	125.3E	338-161	241-445
190600Z	17.9N	125.9E	285-127	243-510
191200Z	18.0N	126.6E	309-147	334-219
191800Z	18.1N	127.5E	301-183	347-276

TYPHOON PHYLLIS 11-20 DECEMBER 1960  
POSITION AND FORECAST VERIFICATION DATA (CONT'D)

DTG	STORM POSITION		24 HR. ERROR	48 HR. ERROR
	LAT.	LONG.	DEG. DISTANCE	DEG. DISTANCE
200000Z	18.1N	128.4E	334-92	345-305

AVERAGE 24 HOUR ERROR 157 MI  
AVERAGE 48 HOUR ERROR 346 MI

# 24 HR FORECAST POSITS TYPHOON PHYLLIS

11-20 DEC 1960

## Legend

- 24 HR FORECAST POSITS
- 6 HR BEST TRACK POSITS

