TYPHOON SUSAN - 181200Z to 281800Z DECEMBER

I. DATA

A. Statistics

1. Calendar days of tropical warning - 10½
2. Calendar days of typhoon intensity - 8
3. Total distance traveled during tropical warning period - 3204 mi.

B. Characteristics as a typhoon

1. Minimum observed SLP - 932mb, 262200Z
2. Minimum observed 700mb height - 2478m, 262200Z
3. Max radius of SFC circulation - 500 mi
4. Max surface winds - 135 kts

II. DEVELOPMENT

A. Initial impetus - Superposition of deep polar trough with subsequent fracture.

B. Initial surface vortex

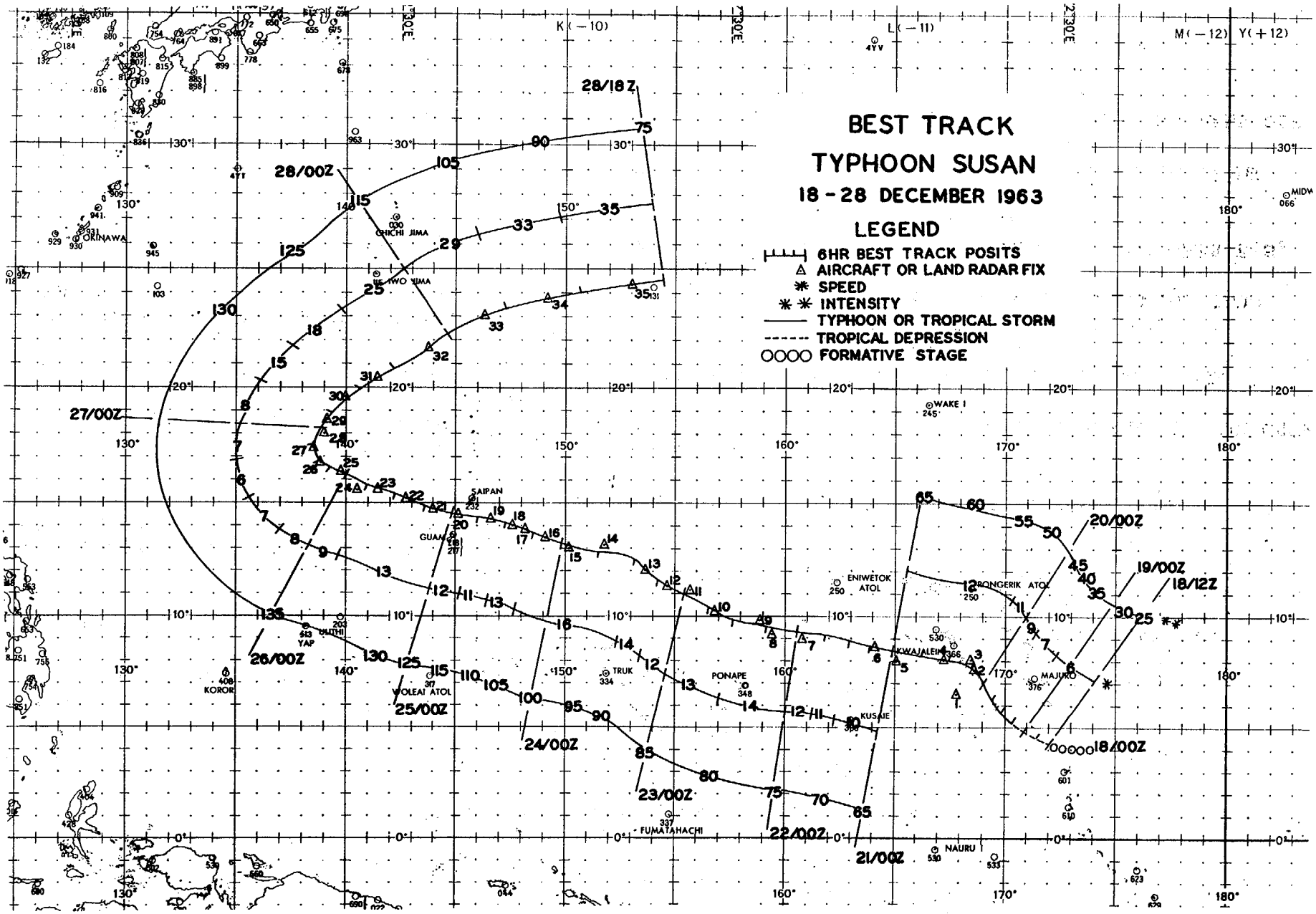
1. Junction vortex at 180000Z
2. Surface pressure less than 1007mb

C. Zenith flow at 200mb

1. Relative position surface vortex - SW quadrant of outdraft.
2. Wind direction over vortex - SE

III. FINAL DISPOSITION

A. Extratropical


BEST TRACK
TYPHOON SUSAN
18 - 28 DECEMBER 1963
LEGEND
6HR BEST TRACK POSITS
AIRCRAFT OR LAND RADAR FIX
SPEED
INTENSITY
TYPHOON OR TROPICAL STORM
TROPICAL DEPRESSION
FORMATIVE STAGE
28/18Z
28/00Z
27/00Z
26/00Z
25/00Z
24/00Z
23/00Z
22/00Z
21/00Z
20/00Z
19/00Z
18/12Z
18/00Z
OKINAWA
CHICHI JIMA
IWO JIMA
SAIPAN
GUAM
YAP
WOLEAI ATOL
KOROR
TRUK
PONAPE
KUSAIE
ENIWETOK ATOL
RONGERIK ATOL
KWAJALEIN
MAJURO
WAKE I
NAURU
FUMATAHACHI
MIDW

LAND RADAR AND AIRCRAFT FIXES - TYPHOON SUSAN

FIX NO/TIME	LAT.	LONG.	UNIT METHOD & ACCY	MAX SFC WND	MAX 700MB WND	MIN 700MB HGT	RECON MIN SLP MBS	JTWC MIN SLP *MBS	700MB T/Td (°C)	EYE CHARACTERISTICS
1 192155Z	06.5N	167.8E	54-P-00	-	-	-	-	-	- -	FLT LVL 225MB,25 MI DIA
2 200430Z	07.6N	168.7E	VW1-P-10	45	-	-	1001	-	- -	NO CLD CIRC
3 200835Z	08.1N	168.3E	LND/RDR	-	-	-	-	-	- -	---
4 201600Z	08.2N	167.2E	LND/RDR	-	-	-	-	-	- -	---
5 202200Z	08.0N	165.0E	56-P-05	40	40	3085	1004	1004	11/08	NO SHAPE OR WALL CLDS
6 210410Z	08.6N	164.2E	56-P-03	45	40	3045	982	996	16/-	CIRC,CLSD
7 212230Z	09.0N	160.9E	56-P-01	50	52	3060	-	998	14/07	NO VISUAL WALL CLD,NO RDR CNTR
8 220419Z	09.2N	159.4E	56-P-04	45	50	2990	986	993	12/11	CIRC 20 MI DIA,WALL CLDS 8 MI THICK
9 220930Z	09.8N	158.9E	VW1-R-10	-	-	-	-	-	- -	NO WALL CLDS OR EYE
10 221530Z	10.2N	156.9E	VW1-R-10	-	-	-	-	-	- -	RAGGED 35 MI DIA,WALL CLDS NOT DEF
11 222140Z	11.2N	155.6E	56-P-05	55	60	2954	982	987	14/11	15 MI DIA,WALL CLD OPEN E-S, 5 MI THICK
12 230400Z	11.3N	154.6E	56-P-05	65	60	2935	974	983	16/12	18 MI DIA,WALL CLD 8-12 MI THICK,RDR EYE 10 MI
13 230935Z	12.0N	153.7E	VW1-R-10	-	-	-	-	-	- -	DIFFUSE 50 MI DIA,NO WALL CLD
14 231535Z	13.1N	151.8E	VW1-R-05	-	-	-	-	-	- -	CIRC 52 MI DIA
15 232200Z	12.9N	150.2E	56-P-40	75	-	2902	983	983	12/12	CIRC 40 MI DIA

*Computed

LAND RADAR AND AIRCRAFT FIXES - TYPHOON SUSAN (CONT'D)

FIX NO/TIME	LAT.	LONG.	UNIT METHOD & ACCY	MAX SFC WND	MAX 700MB WND	MIN 700MB HGT	RECON MIN SLP MBS	JTWC MIN SLP *MBS	700MB T/Td (°C)	EYE CHARACTERISTICS
16 240300Z	13.6N	149.1E	56-P-05	110	70	2838	970	974	14/12	OVAL N-S,30X20 MI
17 240730Z	13.8N	148.1E	VW1-P-05	120	-	-	968	-	- -	CIRC 22 MI DIA,FLT LVL 600FT
18 241030Z	14.0N	147.5E	VW1-R- -	-	-	-	-	-	- -	---
19 241530Z	14.2N	146.6E	VW1-R-03	-	-	-	-	-	- -	OVAL NW-SE,30X27 MI,WELL DEF
20 242200Z	14.5N	145.2E	56-P-00	120	107	2643	942	948	18/14	ELLIP E-W,17X15 MI, WALL CLD 5 MI THICK
21 250354Z	14.8N	144.0E	56-P-01	120	78	2597	938	946	15/14	OVAL WNW-ESE,25X15 MI
22 250930Z	15.2N	142.8E	VW1-R-05	-	-	-	-	-	- -	CIRC 42 MI DIA,WALL CLDS S-NW 8 MI THICK
23 251530Z	15.6N	141.4E	VW1-R-05	-	-	-	-	-	- -	WALL CLD SW SEMI 10 MI THICK, 2ND WALL CLD CIRC 54 MI DIA, 15-25 MI THICK
24 252200Z	15.6N	140.5E	56-P-44	75	105	2737	970	964	13/12	NO RDR EYE,RAIN-CLDS IN EYE
25 260350Z	16.3N	139.8E	56-P-05	100	120	2563	945	940	21/17	CIRC 30 MI DIA
26 261000Z	16.8N	138.8E	VW1-R-05	-	-	-	-	-	- -	ROUND 37 MI DIA
27 261530Z	17.4N	138.5E	VW1-R-10	-	-	-	-	-	- -	OVAL NNW-SSE,40X30 MI,WALL CLD 7 MI THICK
28 262200Z	18.0N	139.0E	56-P-03	-	100	2478	938	932	18/16	CIRC
29 270400Z	18.5N	139.1E	56-P-05	100	100	2496	934	936	15/15	CIRC 40 MI DIA
30 271000Z	19.7N	140.0E	VW1-R-02	-	-	-	-	-	- -	ELLIP NE-SW,40X30 MI

*Computed

LAND RADAR AND AIRCRAFT FIXES - TYPHOON SUSAN (CONT'D)

FIX NO/TIME	LAT.	LONG.	UNIT METHOD & ACCY	MAX SFC WND	MAX 700MB WND	MIN 700MB HGT	RECON MIN SLP MBS	JTWC MIN SLP *MBS	700MB T/Td (°C)	EYE CHARACTERISTICS
31 271530Z	20.4N	141.3E	VW1-R-05	-	-	-	-	-	- -	ELLIP N-S, 24X19 MI
32 272200Z	21.7N	143.7E	56-P-03	115	110	2646	952	952	18/18	CIRC 25 MI DIA
33 280400Z	23.1N	146.1E	56-P-04	125	115	2661	936	954	17/17	RAGGED, CIRC 10 MI DIA, RAIN-CLDS IN EYE
34 280930Z	23.7N	149.2E	VW1-R-10	-	-	-	-	-	- -	CIRC 20 MI DIA, OPEN E & SE
35 281550Z	24.4N	153.0E	VW1-R-03	-	-	-	-	-	- -	RAGGED, CIRC 45 MI DIA, NO WALL CLDS

*Computed

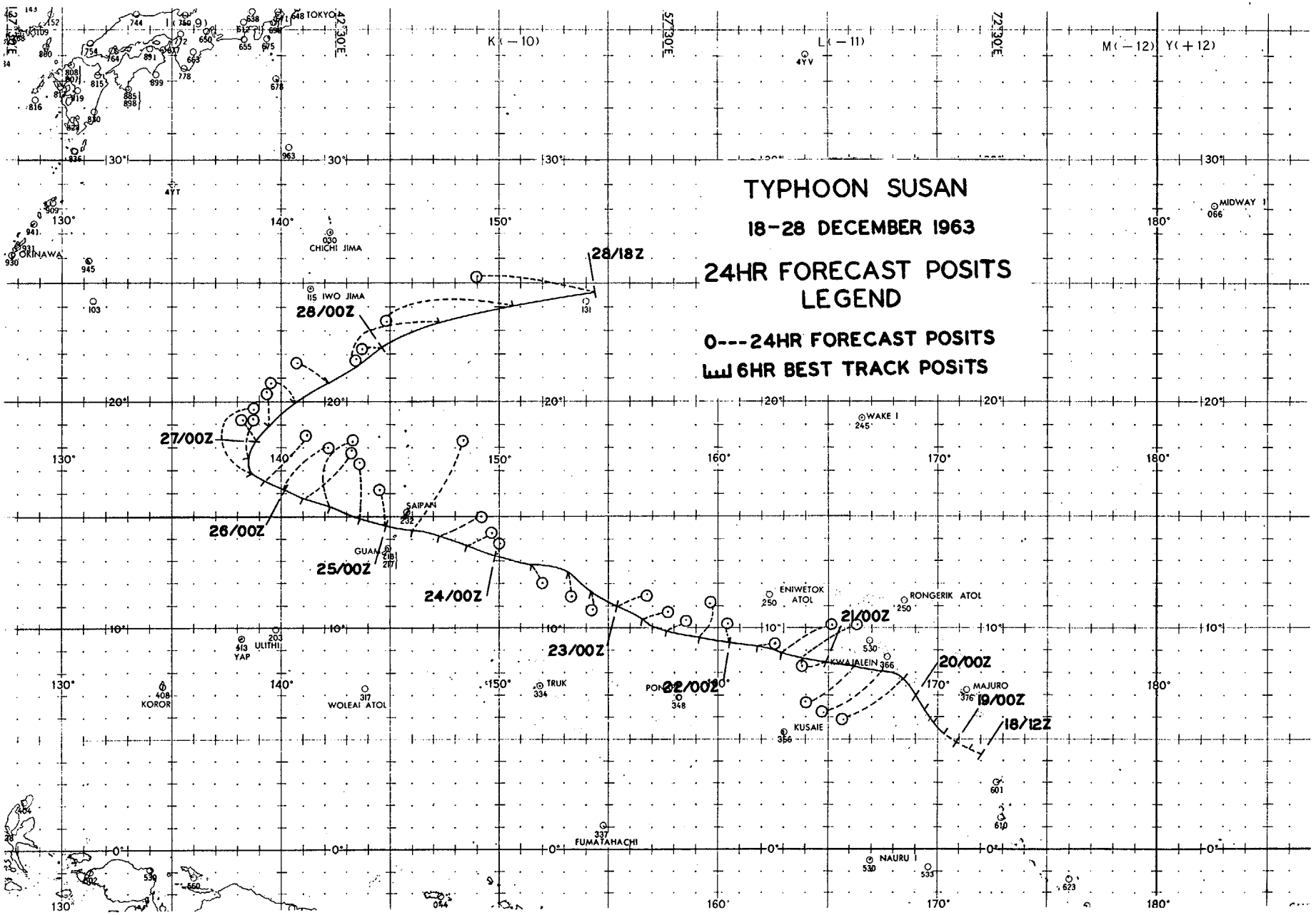
TYPHOON SUSAN 18 DEC-28 DEC 1963
POSITION AND FORECAST VERIFICATION DATA

DTG	STORM POSITION LAT.	LONG.	24 HOUR ERROR DEG. DISTANCE	48 HOUR ERROR DEG. DISTANCE
181200Z	04.3N	172.0E	------	------
181800Z	04.6N	171.5E	------	------
190000Z	04.8N	170.9E	------	------
190600Z	05.2N	170.3E	------	------
191200Z	05.7N	169.8E	------	------
191800Z	06.3N	169.5E	------	------
200000Z	07.0N	169.0E	------	------
200600Z	07.8N	168.5E	237-208	------
201200Z	08.0N	167.3E	232-172	------
201800Z	08.1N	166.1E	228-121	------
210000Z	08.4N	164.8E	266-65	------
210600Z	08.7N	163.9E	059-166	------
211200Z	08.9N	162.9E	060-153	------
211800Z	09.1N	161.8E	085-55	------
220000Z	09.2N	160.5E	346-58	332-55
220600Z	09.5N	159.1E	018-115	062-135
221200Z	09.9N	157.7E	054-55	067-150
221800Z	10.4N	156.4E	070-78	055-114
230000Z	11.0N	155.3E	074-94	031-104
230600Z	11.6N	154.2E	192-47	034-147
231200Z	12.4N	153.1E	174-63	069-95
231800Z	12.8N	151.4E	145-59	077-167
240000Z	13.1N	149.8E	056-80	072-212
240600Z	13.8N	148.4E	067-78	097-109
241200Z	14.1N	147.1E	066-130	079-145
241800Z	14.3N	146.0E	031-268	066-199
250000Z	14.6N	144.8E	348-98	043-303
250600Z	14.9N	143.5E	359-136	050-360
251200Z	15.4N	142.2E	016-176	057-430
251800Z	15.8N	140.9E	045-174	055-740

TYPHOON SUSAN 18 DEC-28 DEC 1963
POSITION AND FORECAST VERIFICATION DATA (CONT'D)

DTG	STORM POSITION LAT.	LONG	24 HOUR ERROR DEG. DISTANCE	48 HOUR ERROR DEG. DISTANCE
260000Z	16.2N	140.1E	046-158	033-318
260600Z	16.5N	139.3E	042-159	038-410
261200Z	16.9N	138.7E	360-164	055-547
261800Z	17.5N	138.6E	003-113	058-510
270000Z	18.2N	138.9E	228-73	060-445
270600Z	18.9N	139.3E	360-83	063-395
271200Z	20.0N	140.4E	308-65	001-90
271800Z	20.8N	142.1E	297-96	014-145
280000Z	22.2N	144.4E	271-40	292-126
280600Z	23.4N	147.2E	248-235	280-209
281200Z	24.0N	150.6E	262-330	276-345
281800Z	24.6N	154.4E	278-295	279-448

AVERAGE 24 HOUR ERROR 127 MI
AVERAGE 48 HOUR ERROR 266 MI


TYPHOON SUSAN
18-28 DECEMBER 1963
24HR FORECAST POSITS
LEGEND
0---24HR FORECAST POSITS
6HR BEST TRACK POSITS
28/18Z
28/00Z
27/00Z
26/00Z
25/00Z
24/00Z
23/00Z
22/00Z
21/00Z
20/00Z
19/00Z
18/12Z
TOKYO
CHICHI JIMA
IWO JIMA
OKINAWA
SAIPAN
GUAM
YAP
ULITHI
KOROR
WOLEAI ATOL
TRUK
PONAPE
ENIWETOK ATOL
RONGERIK ATOL
KWAJALEIN
KUSAIE
WAKE I
MAJURO
MIDWAY I
NAURU I
FUMATAHACHI
K(-10)
L(-11)
M(-12)
Y(+12)
42°30'E
57°30'E
72°30'E