TYPHOON SHIRLEY - 040000Z TO 101800Z SEPTEMBER

I. DATA

A. Statistics

1. Number of warnings issued - 28
2. Number of warnings with typhoon intensity - 19
3. Total distance traveled during tropical warning period - 2255 mi

B. Characteristics as a typhoon

1. Minimum observed SLP - 936mbs at 082100Z and 092110Z
2. Minimum observed 700mb height - 2542m. at 082100Z
3. Maximum surface wind - 130 kts (From Best Track)
4. Maximum radius of surface circulation - 625 mi

II. DEVELOPMENT

A. Initial impetus - Divergence aloft and surge of low and mid level inflow from Southern Hemisphere

B. Initial surface vortex

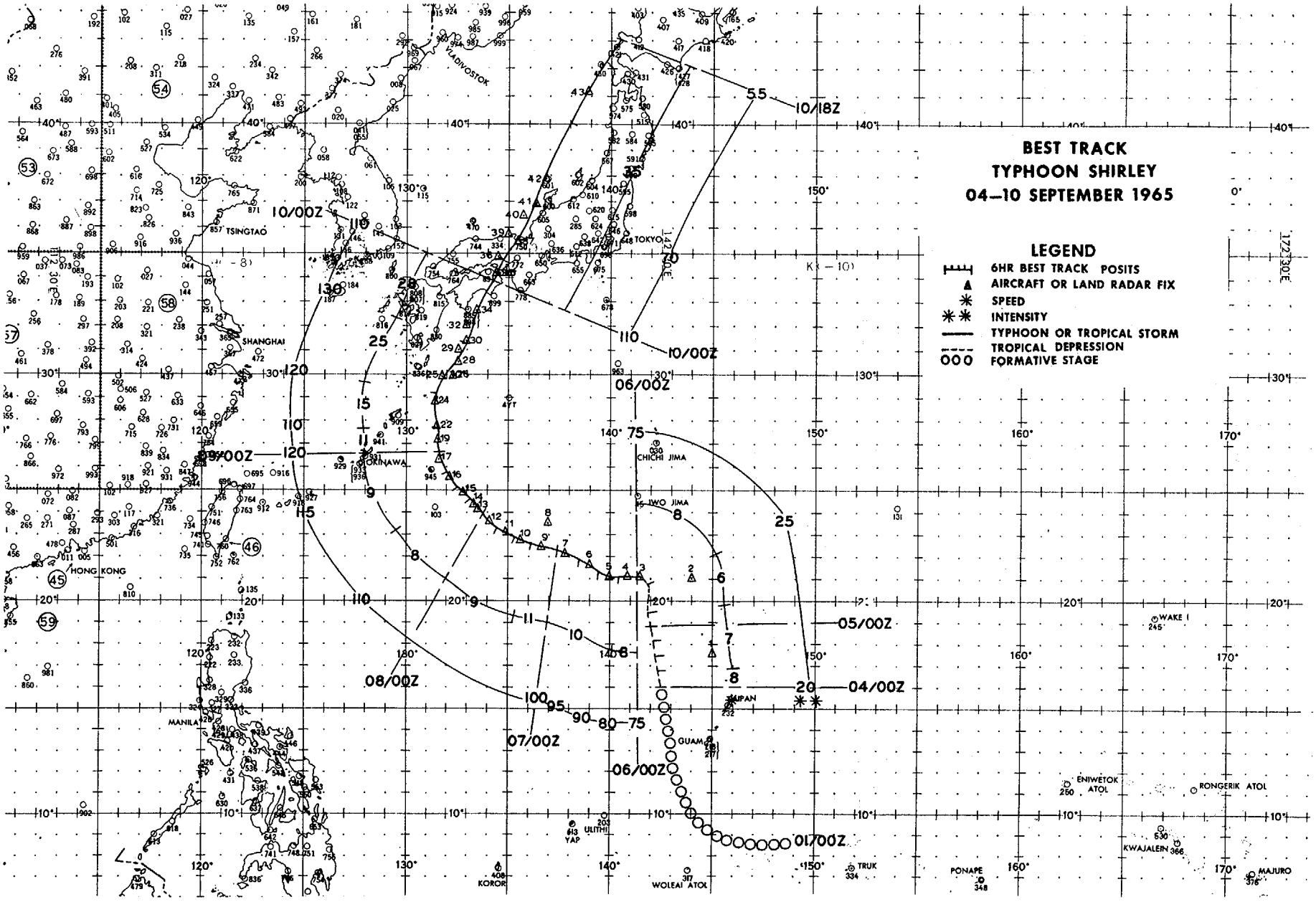
1. Junction vortex at 010000Z
2. Surface pressure less than 1007mbs

C. 200mb flow above surface vortex

1. Initial - northeasterly divergent flow
2. Upon reaching typhoon intensity - southerly flow

III. FINAL DISPOSITION

A. Became extratropical


BEST TRACK
TYPHOON SHIRLEY
04—10 SEPTEMBER 1965
LEGEND
6HR BEST TRACK POSITS
AIRCRAFT OR LAND RADAR FIX
SPEED
INTENSITY
TYPHOON OR TROPICAL STORM
TROPICAL DEPRESSION
FORMATIVE STAGE
VLADIVOSTOK
TSINGTAO
SHANGHAI
TOKYO
OKINAWA
HONG KONG
MANILA
CHICHI JIMA
IWO JIMA
SAIPAN
GUAM
YAP
ULITHI
KOROR
WOLEAI ATOL
TRUK
PONAPE
ENIWETOK ATOL
RONGERIK ATOL
KWAJALEIN
MAJURO
WAKE I
10/18Z
10/00Z
06/00Z
05/00Z
04/00Z
01/00Z
06/00Z
07/00Z
08/00Z
09/00Z

EYE FIXES TYPHOON SHIRLEY

FIX NO.	TIME	POSIT	UNIT-METHOD -ACCY	FLT LVL	FLT LVL WND	OBS SFC WND	OBS MIN SLP	MIN 700MB HGT	FLT LVL TT/TD	REMARKS
1	040146Z	17.5N 145.0E	TIROS X	--	--	--	--	---	--/--	
2	050115Z	21.0N 144.0E	TIROS	--	--	--	--	---	--/--	STAGE X, DIA 4, BNDS 2 MOD TO STG EXTERNAL BNDG TO NW
3	052200Z	21.1N 141.5E	VW1-P-P10	305M	--	80	981	---	28/24	EYE CIRC 25 MI DIA
4	060245Z	21.2N 140.8E	VW1-R-P15	957mb	--	45	--	---	--/--	EYE CIRC 30 MI DIA
5	060900Z	21.1N 140.0E	54-P-P5	700mb	60	85	978	2920	20/--	EYE CIRC 18 MI DIA
6	061445Z	21.6N 139.0E	VW1-P-P5	723mb	50	60	--	2811	18/15	EYE ELIP 25 X 18 E-W
7	062100Z	22.1N 137.8E	56-P-P10	700mb	75	100	970	---	17/15	EYE CIRC 20 MI DIA
8	070156Z	23.5N 137.0E	TIROS	--	--	--	--	---	--/--	STAGE X, DIA 4, BNDS 3
9	070330Z	22.4N 136.6E	54-P-P3	700mb	60	100	960	2786	18/--	OVAL 10 X 20
10	071000Z	22.7N 135.6E	VW1-R-P5	320M	--	--	--	---	--/--	EYE CIRC 25 MI DIA
11	071500Z	23.1N 134.9E	VW1-P-P5	694mb	--	--	--	2786	16/13	EYE ELIP 25 X 20 NNE-SSW
12	072100Z	23.6N 134.1E	54-P-P5	700mb	--	100	951	2694	17/--	EYE CIRC 10 MI DIA
13	080120Z	24.1N 133.6E	54-P-U	700mb	--	--	--	2694	--/--	
14	080300Z	24.3N 133.4E	54-P-P5	700mb	80	130	949	2691	17/--	EYE CIRC 10 MI DIA
15	080856Z	24.8N 132.8E	VW1-R-P4	305M	60	80	--	---	--/--	EYE CIRC 8 MI DIA
16	081445Z	25.5N 132.2E	VW1-R-P5	1450ft	--	--	--	---	--/--	EYE CIRC 9 MI DIA

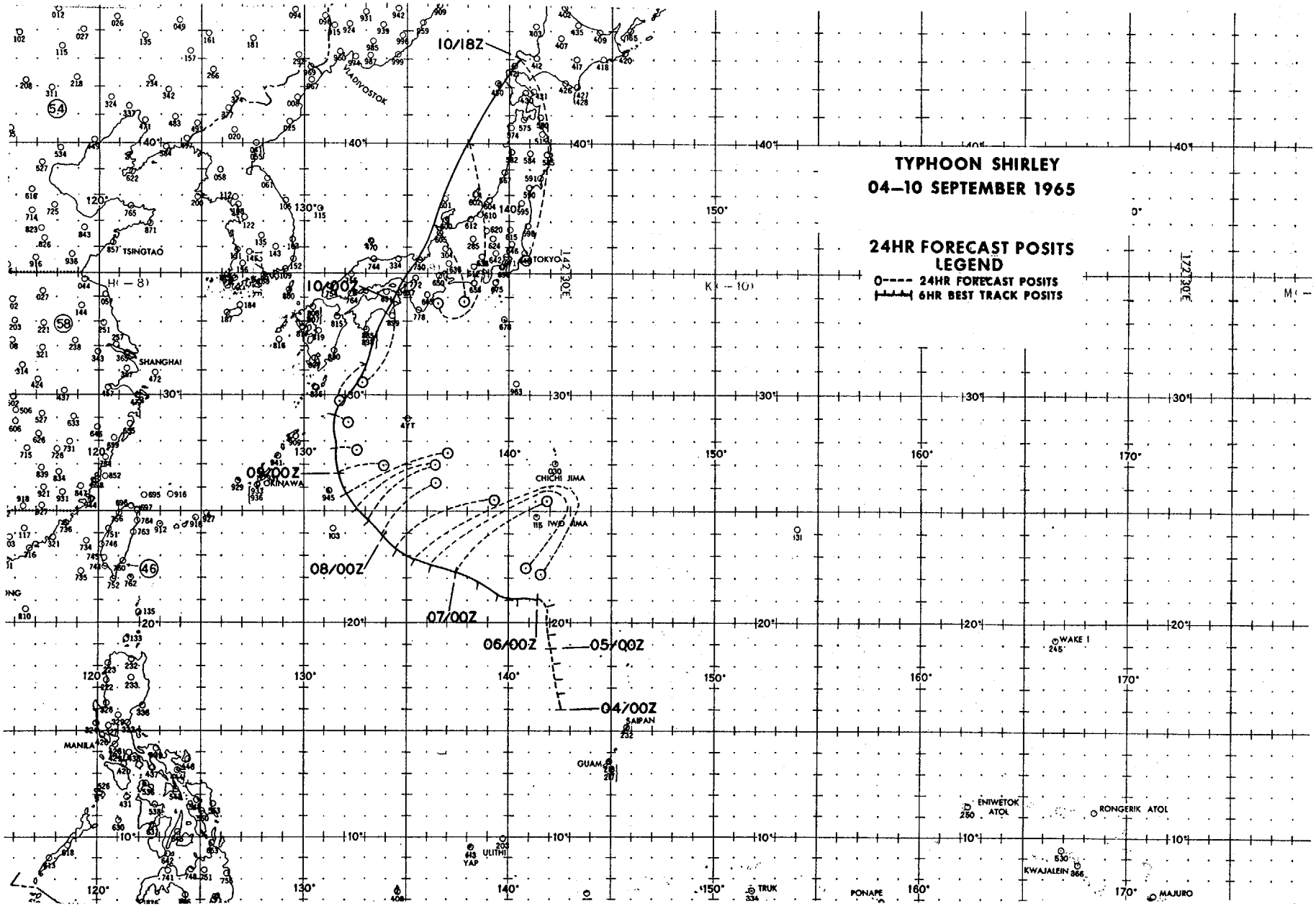
FIX NO.	TIME	POSIT	UNIT-METHOD-ACCY	FLT LVL	FLT LVL WND	OBS SFC WND	OBS MIN SLP	MIN 700MB HGT	FLT LVL TT/TD	REMARKS
17	082100Z	26.3N 131.7E	56-P-P3	700mb	85	120	936	2542	17/13	EYE CIRC 15 MI DIA NO SFC CALM EYE VERTICAL
18	090000Z	26.2N 131.5E	LND RDR	--	--	--	--	---	--/--	STA 47909
19	090200Z	27.2N 131.6E	56-P-P2	700mb	75	100	944	2612	19/14	EYE CIRC 25 MI DIA NO RDR EYE STM APPRS TO BE BRKG UP
20	090300Z	27.2N 131.6E	LND RDR	--	--	--	--	---	--/--	STA 47909
21	090445Z	27.6N 131.5E	LND RDR	--	--	--	--	---	--/--	AMAMI SHIMA
22	090600Z	27.7N 131.6E	LND RDR	--	--	--	--	---	--/--	STA 47909
23	090900Z	28.7N 131.6E	LND RDR	--	--	--	--	---	--/--	STA 47909
24	090915Z	28.8N 131.4E	VW1-R-F5	850mb	--	75	--	---	--/--	EYE CIRC 10 MI DIA
25	091200Z	29.9N 131.8E	LND RDR	--	--	--	--	---	--/--	STA 47909
26	091400Z	29.9N 132.2E	LND RDR	--	--	--	--	---	--/--	STA 47808
27	091450Z	30.2N 132.3E	LND RDR	--	--	--	--	---	--/--	STA 47808
28	091554Z	30.5N 132.6E	VW1-R-P5	700mb	--	--	--	---	--/--	EYE CIRC 25 MI DIA WND EYE BY HOLE IN SEA RETURN CONFIRMS RDR EYE
29	091600Z	31.0N 132.7E	LND RDR	--	--	--	--	---	--/--	KUSUGA
30	091800Z	31.3N 133.0E	LND RDR	--	--	--	--	---	--/--	STA 47869
31	091900Z	32.1N 133.3E	LND RDR	--	--	--	--	---	--/--	STA 47869
32	092000Z	32.0N 133.0E	LND RDR	--	--	--	--	---	--/--	KUSUGA

FIX NO.	TIME	POSIT	UNIT-METHOD -ACCY	FLT LVL	FLT LVL WND	OBS SFC WND	OBS MIN SLP	MIN 700MB HGT	FLT LVL TT/TD	REMARKS
33	092100Z	32.4N 133.3E	LND RDR	--	--	--	--	---	--/--	KUSUGA
34	092110Z	32.6N 133.4E	54-P-P5	700mb	110	150	936	2557	18/--	EYE CIRC 50 MI DIA RDR EYE 160/10 FM FIX NO SFC CALM
35	100030Z	34.2N 134.4E	54-U-U	--	--	--	--	---	--/--	
36	100200Z	34.8N 134.5E	54-R-U5	500mb	--	--	--	---	--/--	
37	100250Z	35.5N 135.5E	54-P-L15	500mb	80	100	--	---	08/--	500MB HT 5550M CIRC BRKG UP RAPIDLY LAST 4 HRS
38	100300Z	35.4N 135.4E	LND RDR	--	--	--	--	---	--/--	FUJI RDR
39	100300Z	35.7N 135.0E	LND RDR	--	--	--	--	---	--/--	STA 47636
40	100400Z	36.4N 135.7E	LND RDR	--	--	--	--	---	--/--	STA 47636
41	100500Z	36.9N 136.3E	LND RDR	--	--	--	--	---	--/--	STA 47636
42	100900Z	37.9N 136.8E	VW1-P-P2	700mb	--	75	--	2847	18/11	EYE CIRC 20 MI DIA WND EYE 5 MI DIA SAME POSIT
43	101500Z	41.2N 138.9E	VW1-P-F2	700mb	--	60	--	2862	15/11	PRES POS, RDR POOR SFC WND OBSERVED BY MOON

TYPHOON SHIRLEY 04 SEPT-10 SEPT 1965
POSITION AND FORECAST VERIFICATION DATA

DTG	STORM POSITION LAT.	LONG.	24 HOUR ERROR DEG. DISTANCE	48 HOUR ERROR DEG. DISTANCE
040000Z	16.0N	142.5E	------	------
040600Z	16.7N	142.4E	------	------
041200Z	17.4N	142.3E	------	------
041800Z	18.2N	142.2E	------	------
050000Z	18.8N	142.1E	------	------
050600Z	19.5N	142.0E	------	------
051200Z	20.1N	141.9E	------	------
051800Z	20.7N	141.9E	------	------
060000Z	21.2N	141.3E	------	------
060600Z	21.1N	140.4E	------	------
061200Z	21.3N	139.4E	------	------
061800Z	21.8N	138.5E	------	------
070000Z	22.3N	137.5E	052-310	------
070600Z	22.5N	136.2E	090-252	------
071200Z	22.8N	135.3E	096-343	------
071800Z	23.3N	134.5E	065-295	------
080000Z	23.9N	133.8E	045-195	065-720
080600Z	24.6N	133.2E	049-227	082-483
081200Z	25.1N	132.6E	060-232	085-510
081800Z	25.7N	132.0E	068-291	074-654
090000Z	26.6N	131.6E	082-125	069-630
090600Z	27.7N	131.5E	092-50	068-848
091200Z	29.2N	131.5E	127-41	073-814
091800Z	31.3N	132.9E	218-110	080-743
100000Z	33.8N	134.3E	200-208	112-383
100600Z	36.9N	136.3E	159-194	175-325
101200Z	40.1N	138.1E	192-376	178-428
101800Z	43.1N	140.4E	178-454	187-530

AVERAGE 24 HOUR ERROR 231 MI
AVERAGE 48 HOUR ERROR 589 MI


TYPHOON SHIRLEY
04–10 SEPTEMBER 1965
24HR FORECAST POSITS
LEGEND
0---- 24HR FORECAST POSITS
6HR BEST TRACK POSITS
10/18Z
10/00Z
09/00Z
08/00Z
07/00Z
06/00Z
05/00Z
04/00Z
VLADIVOSTOK
TSINGTAO
SHANGHAI
TOKYO
OKINAWA
CHICHI JIMA
IWO JIMA
MANILA
GUAM
SAIPAN
WAKE I
ENIWETOK ATOL
RONGERIK ATOL
KWAJALEIN
MAJURO
PONAPE
TRUK
ULITHI
YAP
142°30'E
122°30'E