TYPHOON GLORIA - 051200Z to 140600Z SEPTEMBER

I. DATA

A. Statistics

1. Calendar days of tropical warning - 9
2. Calendar days of typhoon intensity - 5 3/4
3. Total distance traveled during tropical warning period - 1638 mi.

B. Characteristics as a typhoon

1. Minimum observed SLP - 921mb, 100600Z
2. Minimum observed 700mb height - 2384m, 100600Z
3. Max radius of SFC circulation - 550 mi
4. Max surface winds - 135 kts

II. DEVELOPMENT

A. Initial impetus - Surge from westerlies into easterlies after fracture of polar trough at 200mb.

B. Initial surface vortex

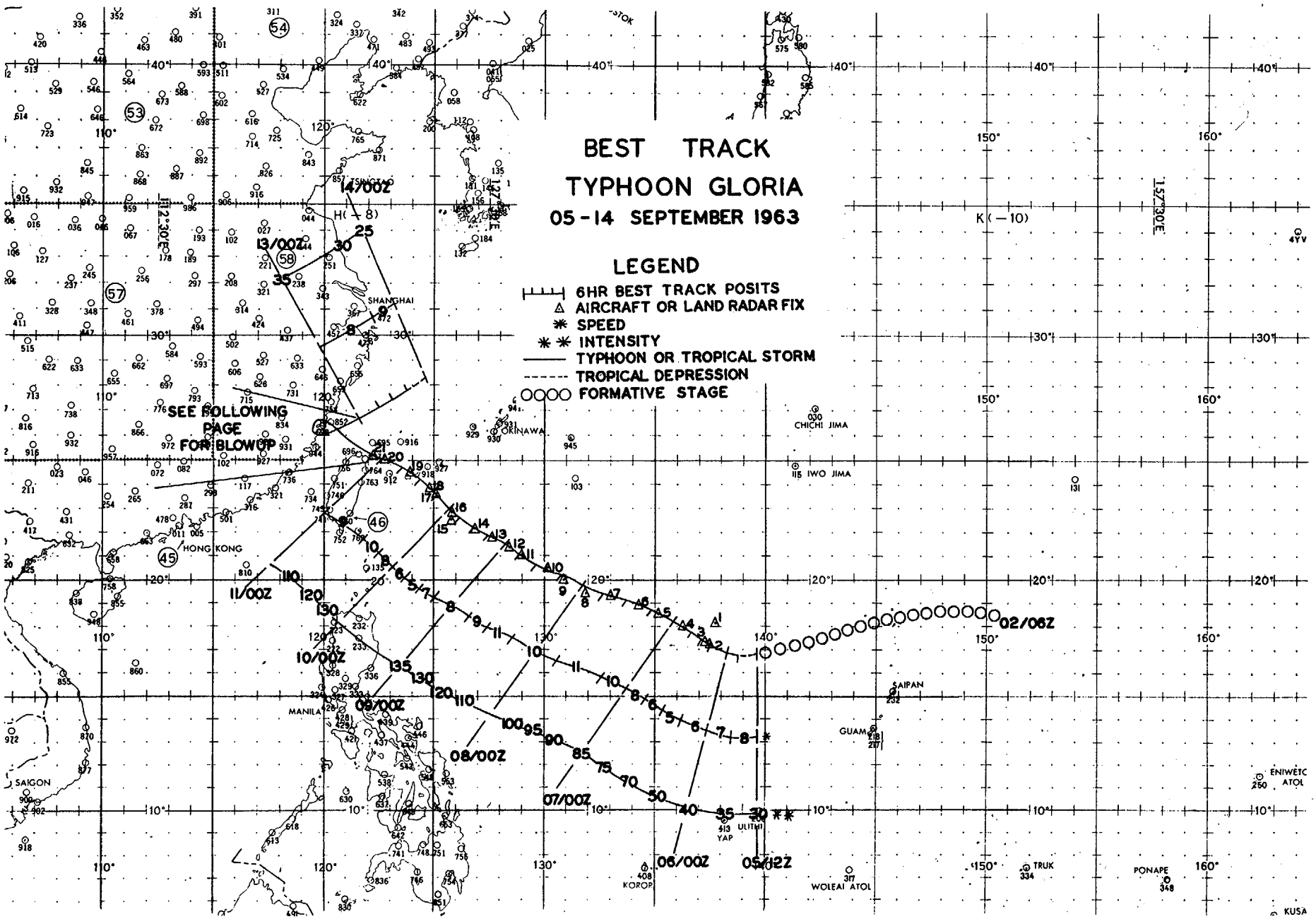
1. Embedded vortex at 020600Z
2. Surface pressure less than 1006mb

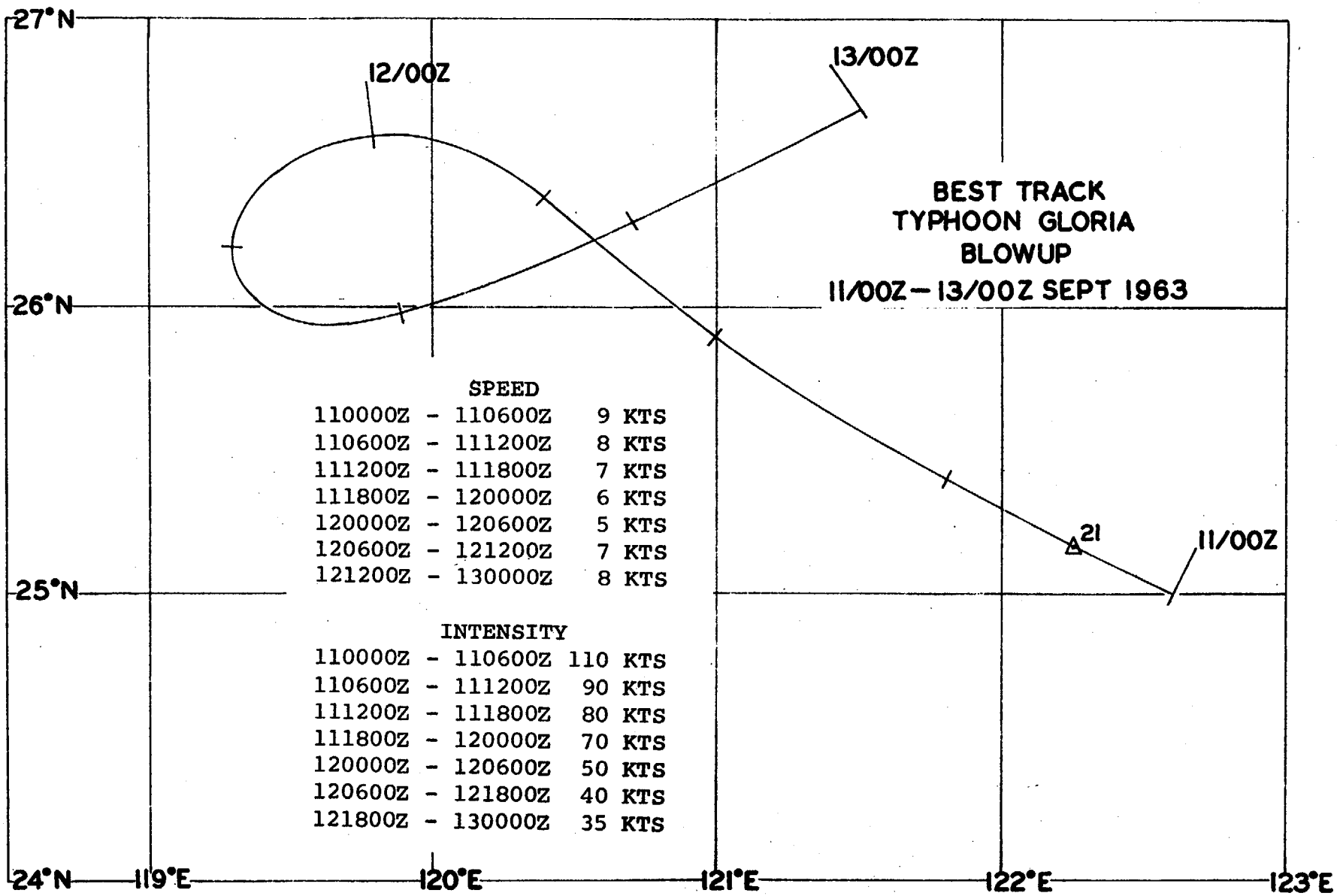
C. Zenith flow at 200 mb

1. Relative position surface vortex - Southeast quadrant of anticyclone
2. Wind direction over vortex - ENE

III. Final Disposition

A. Became extratropical


BEST TRACK
TYPHOON GLORIA
05 - 14 SEPTEMBER 1963
LEGEND
6HR BEST TRACK POSITS
AIRCRAFT OR LAND RADAR FIX
SPEED
INTENSITY
TYPHOON OR TROPICAL STORM
TROPICAL DEPRESSION
FORMATIVE STAGE
SEE FOLLOWING PAGE FOR BLOWUP
14/00Z
13/00Z
11/00Z
10/00Z
09/00Z
08/00Z
07/00Z
06/00Z
05/12Z
02/06Z
H(-8)
K(-10)
SHANGHAI
OKINAWA
HONG KONG
MANILA
SAIGON
CHICHI JIMA
IWO JIMA
SAIPAN
GUAM
ULITHI
YAP
KOROR
WOLEAI ATOL
TRUK
PONAPE
ENIWETOK ATOL
KUSA


27°N
26°N
25°N
24°N
119°E
120°E
121°E
122°E
123°E
12/00Z
13/00Z
11/00Z
21
BEST TRACK
TYPHOON GLORIA
BLOWUP
11/00Z – 13/00Z SEPT 1963
SPEED
110000Z - 110600Z 9 KTS
110600Z - 111200Z 8 KTS
111200Z - 111800Z 7 KTS
111800Z - 120000Z 6 KTS
120000Z - 120600Z 5 KTS
120600Z - 121200Z 7 KTS
121200Z - 130000Z 8 KTS
INTENSITY
110000Z - 110600Z 110 KTS
110600Z - 111200Z 90 KTS
111200Z - 111800Z 80 KTS
111800Z - 120000Z 70 KTS
120000Z - 120600Z 50 KTS
120600Z - 121800Z 40 KTS
121800Z - 130000Z 35 KTS

LAND RADAR AND AIRCRAFT FIXES - TYPHOON GLORIA

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 060000Z	18.2N	137.8E	VW1-R-05	-	-	-	-	-	- -	CIRC 22 MI DIA,OPEN S
2 060600Z	17.1N	137.5E	VW1-P-10	45	-	-	983	-	- -	CIRC 38 MI DIA,OPEN N, POORLY ORGANIZED
3 061000Z	17.3N	137.3E	VW1-P-10	50	-	2970	980	990	13/-	CIRC 30 MI DIA,OPEN E, POORLY ORGANIZED
4 062200Z	18.0N	136.3E	56-P-05	60	60	2932	979	983	17/13	CIRC 50 MI DIA,CLSD
5 070330Z	18.6N	135.2E	56-P-05	70	60	2911	985	980	17/12	CIRC 30 MI DIA,OPEN S
6 071000Z	18.9N	134.3E	VW1-R-10	-	-	-	-	-	- -	HVY WALL CLD E
7 071530Z	19.3N	133.0E	VW1-R-10	-	-	-	-	-	- -	CIRC 28 MI DIA,WEAK WALL CLDS ALL QUADS
8 072156Z	19.4N	131.9E	56-P-10	65	90	2731	960	962	16/13	OVAL 60 MI NW-SE,30 MI NE-SW,CLSD
9 080437Z	20.0N	130.9E	56-P-¼	100	70	2722	942	959	16/12	CIRC 30 MI DIA,WALL CLDS NW-N
10 080920Z	20.5N	130.3E	VW1-R-05	-	-	-	-	-	- -	CIRC 48 MI DIA,CLSD,17 MI THICK SW SEMI,10 MI THICK NE SEMI
11 081600Z	21.1N	129.0E	VW1-R-03	-	-	-	-	-	- -	CONCENTRIC,INNER DIA 42 MI, OUTER DIA 165 MI,INNER WALL CLDS 6 MI THICK
12 082200Z	21.3N	128.4E	56-P-05	105	98	2539	954	938	18/14	ELLIP 45 MI NW-SE,30 MI NE-SW,CLSD,WALL CLD TOPS 45000'

*Computed

LAND RADAR AND AIRCRAFT FIXES - TYPHOON GLORIA (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
13 090345Z	21.8N	127.6E	56-P-02	95	85	2447	935	928	18/16	CIRC 20 MI DIA,CLSD WALL CLDS 10 MI THICK
14 091000Z	22.3N	126.8E	VW1-R-05	-	-	-	-	-	- -	CIRC 40 MI DIA,HVY FEEDER BANDS ALL QUADS
15 091530Z	22.4N	125.8E	VW1-R-03	-	-	-	-	-	- -	CIRC 38 MI DIA,NUMEROUS FEEDER BANDS
16 092206Z	22.7N	125.8E	56-P-03	50	110	2414	912	924	19/17	CIRC 80 MI DIA,CLSD
17 100600Z	23.6N	125.1E	56-P-02	65	92	2384	925	921	- -	CIRC 36 MI DIA,CLSD
18 101000Z	23.8N	124.8E	VW1-R-05	-	-	-	-	-	- -	CIRC 30 MI DIA,CLSD WALL CLDS 6 MI THICK
19 101530Z	24.5N	123.9E	VW1-R-01	-	-	-	-	-	- -	OVAL 32 MI NW-SE,27 MI NE-SW,CLSD WALL CLDS 10 MI THICK
20 102225Z	25.0N	122.6E	56-P-01	100	85	2512	932	936	17/16	CIRC 10 MI DIA,CLSD,EYE FILLING WITH CLDS
21 110400Z	25.1N	122.2E	56-P-01	110	80	2528	920	938	18/16	CIRC 10 MI DIA,CLSD,STRONG WALL CLDS S

*Computed

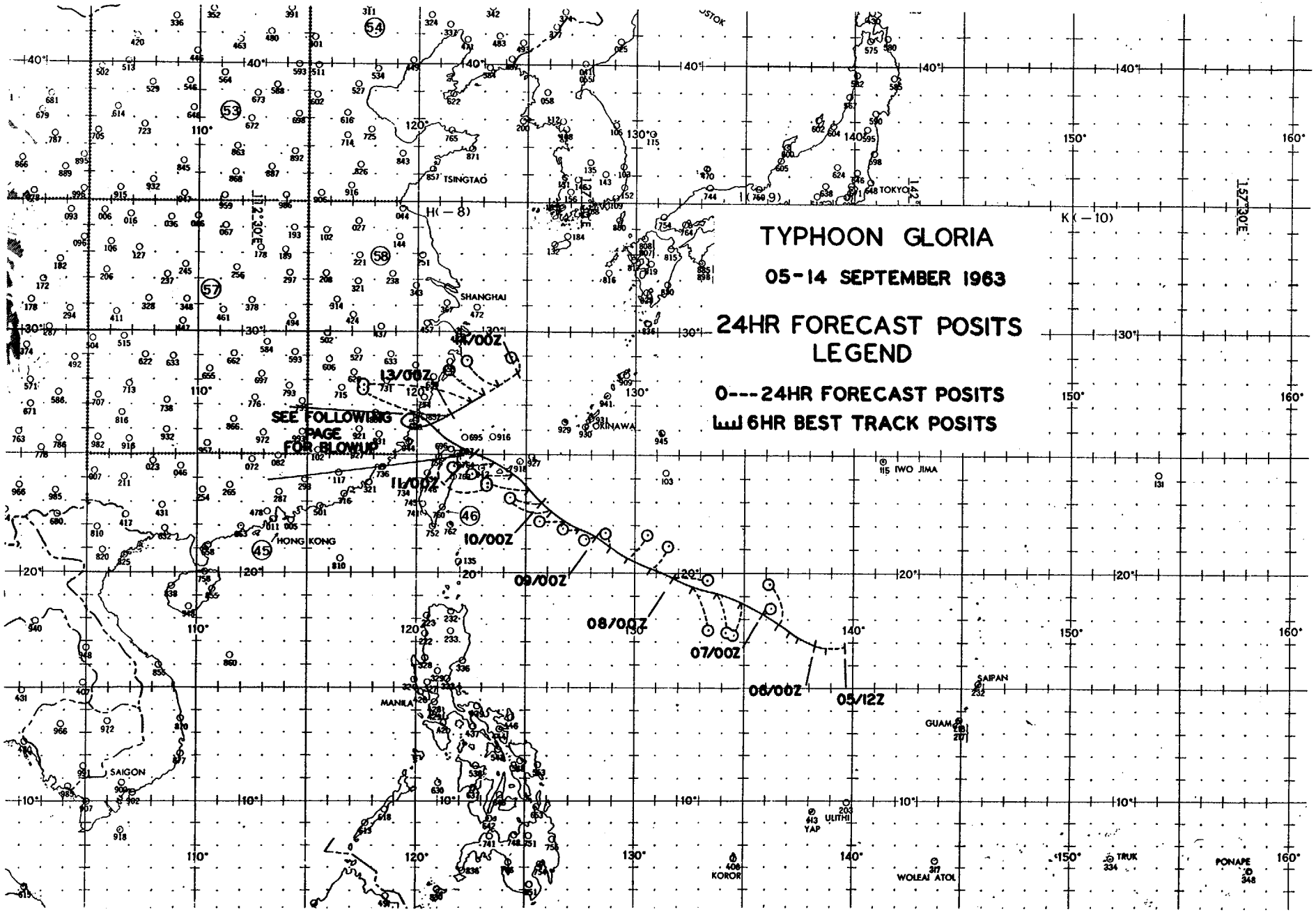
TYPHOON GLORIA 05 SEP-14 SEP 1963
POSITION AND FORECAST VERIFICATION DATA

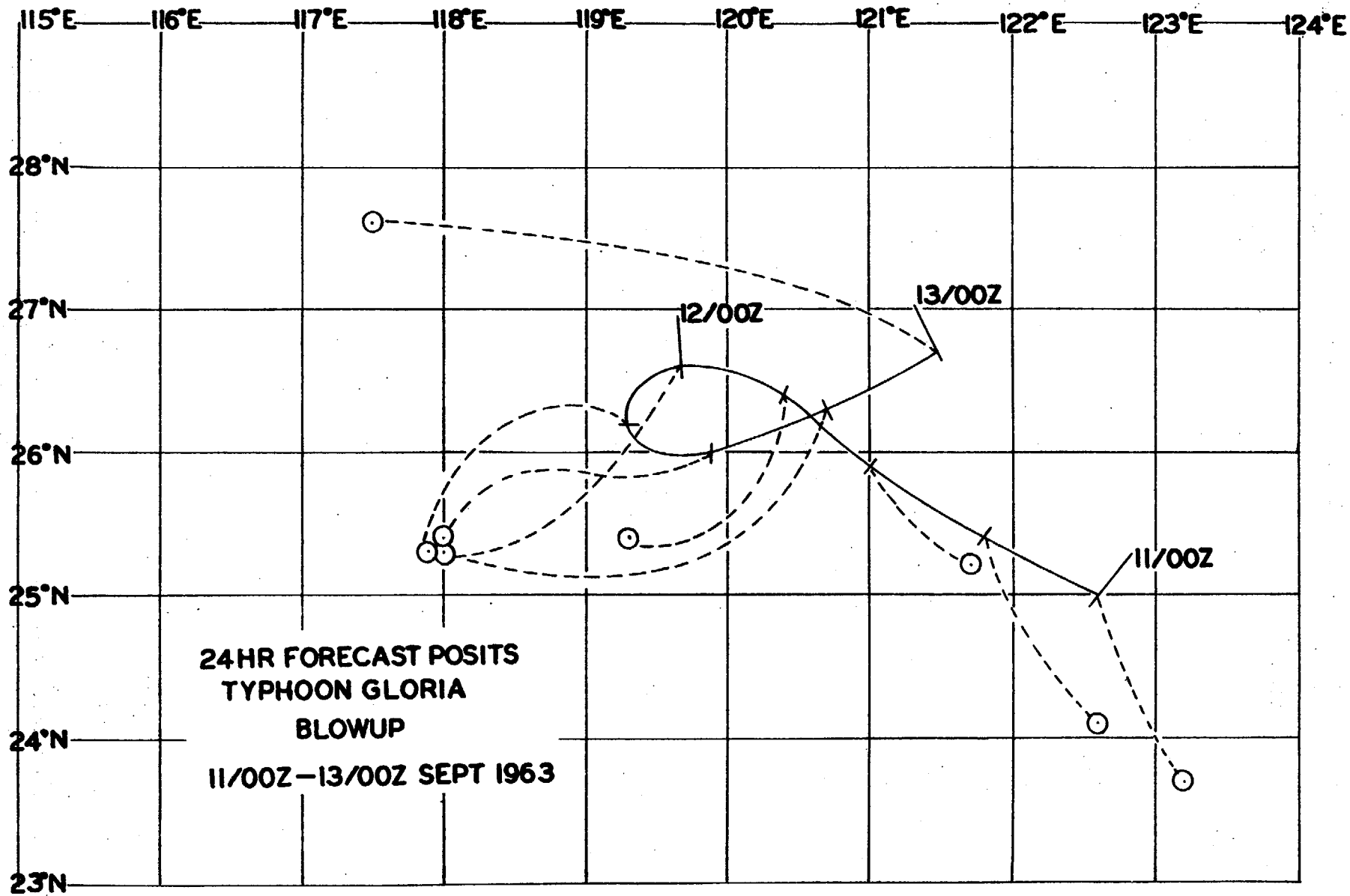
DTG	STORM POSITION LAT.	LONG.	24 HOUR ERROR DEG. DISTANCE	48 HOUR ERROR DEG. DISTANCE
051200Z	16.8N	139.7E	------	------
051800Z	16.7N	138.8E	------	------
060000Z	16.9N	138.1E	------	------
060600Z	17.1N	137.5E	------	------
061200Z	17.4N	137.1E	------	------
061800Z	17.8N	136.6E	346-111	------
070000Z	18.2N	135.9E	063-18	------
070600Z	18.7N	134.9E	192-86	------
071200Z	19.1N	133.8E	169-103	------
071800Z	19.4N	132.7E	162-121	------
080000Z	19.8N	131.7E	094-87	------
080600Z	20.2N	130.8E	043-71	158-154
081200Z	20.7N	129.7E	039-80	153-195
081800Z	21.1N	128.9E	343-36	150-206
090000Z	21.5N	128.2E	268-21	103-115
090600Z	21.9N	127.4E	266-35	339-65
091200Z	22.3N	126.7E	264-60	002-37
091800Z	22.6N	126.2E	293-114	387-48
100000Z	22.9N	125.7E	287-74	267-98
100600Z	23.5N	125.1E	280-105	226-216
101200Z	24.2N	124.4E	287-102	246-240
101800Z	24.7N	123.5E	264-92	098-187
110000Z	25.0N	122.6E	157-87	268-117
110600Z	25.4N	121.8E	148-92	265-138
111200Z	25.9N	121.0E	140-54	248-106
111800Z	26.4N	120.4E	227-83	240-72
120000Z	26.6N	119.7E	232-122	190-168
120600Z	26.2N	119.3E	234-96	215-155
121200Z	26.0N	119.9E	250-112	252-148
121800Z	26.3N	120.7E	248-157	255-276
130000Z	26.7N	121.5E	285-224	258-373
130600Z	27.1N	122.3E	280-260	255-419

TYPHOON GLORIA 05 SEP-14 SEP 1963
POSITION AND FORECAST VERIFICATION DATA (CONT'D)

DTG	STORM POSITION LAT.	LONG.	24 HOUR ERROR DEG.	DISTANCE	48 HOUR ERROR DEG.	DISTANCE
131200Z	27.5N	123.0E	306	-101	251	-442

AVERAGE 24 HOUR ERROR 97 MI
AVERAGE 48 HOUR ERROR 181 MI


TYPHOON GLORIA
05-14 SEPTEMBER 1963
24HR FORECAST POSITS LEGEND
0---24HR FORECAST POSITS
6HR BEST TRACK POSITS
SEE FOLLOWING PAGE FOR BLOWUP
05/12Z
06/00Z
07/00Z
08/00Z
09/00Z
10/00Z
11/00Z
12/00Z
13/00Z
14/00Z
TSINGTAO
SHANGHAI
OKINAWA
HONG KONG
MANILA
SAIGON
IWO JIMA
SAIPAN
GUAM
YAP
ULITHI
KOROR
WOLEAI ATOL
TRUK
PONAPE
TOKYO


115°E
116°E
117°E
118°E
119°E
120°E
121°E
122°E
123°E
124°E
28°N
27°N
26°N
25°N
24°N
23°N
12/00Z
13/00Z
11/00Z
24HR FORECAST POSITS
TYPHOON GLORIA
BLOWUP
11/00Z–13/00Z SEPT 1963