# Typhoon (TY) 11W (Etau)*

First Poor : 0600Z 30 Jul 03

First Fair : 2330Z 31 Jul 03

First TCFA : 2230Z 01 Aug 03

First Warning : 0000Z 02 Aug 03

Last Warning : 1800Z 09 Aug 03, Extratropical

Max Intensity : 110 kts, gusts to 135 kts

Landfall : Multiple Events

Total Warnings : 28

Remarks:

1) Typhoon (TY) 11W initially developed approximately 140 nm northwest of Chuuk on 31 July, 2003. The first warning was issued at 0000Z on 02 August. The cyclone remained a tropical depression for the first 24 hours and then rapidly developed at greater than a Dvorak T-number per day over the next 48 hours as a result of of the presence of dual outflow channels. In addition to synoptic equatorward outflow, an upper level cyclone to the northeast provided the second enhanced outflow path.

TY 11W tracked steadily northwestward along the subtropical ridge located east of Japan for the first 96 hours. The cyclone then turned poleward and tracked over Naha, Okinawa at 0000Z on August 7 while at peak intensity of 110 knots. Available synoptic reports from Kadena, Okinawa estimated surface winds at 60 knots gusting to 98 knots just prior to eyewall passage. The lowest pressure reported for this cyclone was 949 mb over Naze, Amami O Shima.

TY 11W maintained 110 knot intensity for approximately 18 hours while tracking northeastward along the northwest periphery of the subtropical ridge. After TY 11W tracked over the Ryukus Island chain, it began to slowly weaken as it encountered increasing vertical wind shear, cool air and the mountainous terrain of Shikoku and Honshu. The cyclone transitioned into an extra-tropical cyclone just north of Misawa, Japan and was subsequently finaled.

2) Reports indicated 10 fatalities, 10 injuries and 11 missing persons in Japan resulting from heavy rains and landslides. Other damage reports indicated there were grounded flights, disrupted train service, and loss of power to 22,500 homes in mainland Japan.

*Named by WMO Designated RSMC

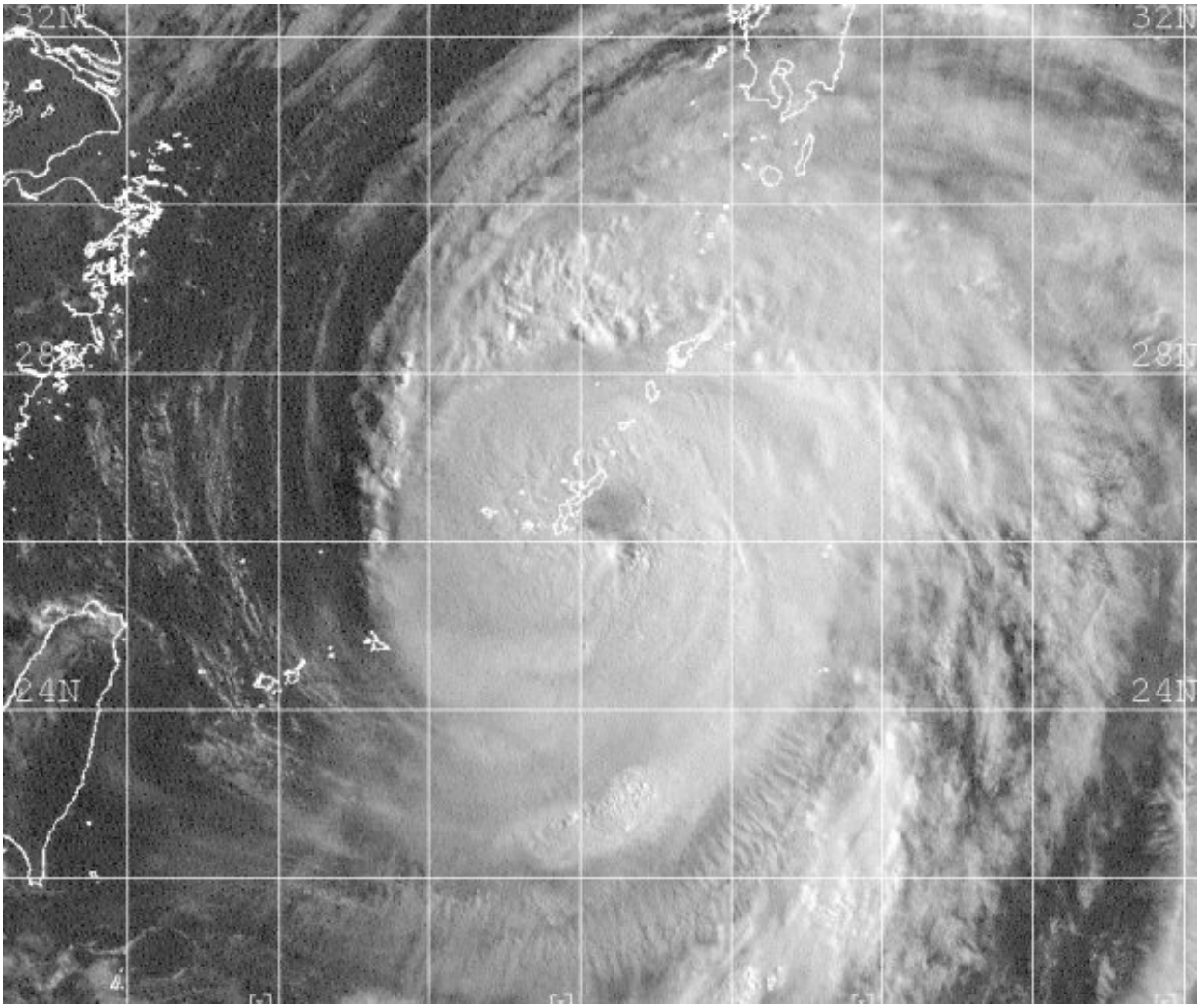



Figure 1-11W-1. 062213Z August 2003 GOES-9 visible imagery of TY 11W (Etau), located 45 nm southeast of Okinawa, Japan at its peak intensity of 110 knots.

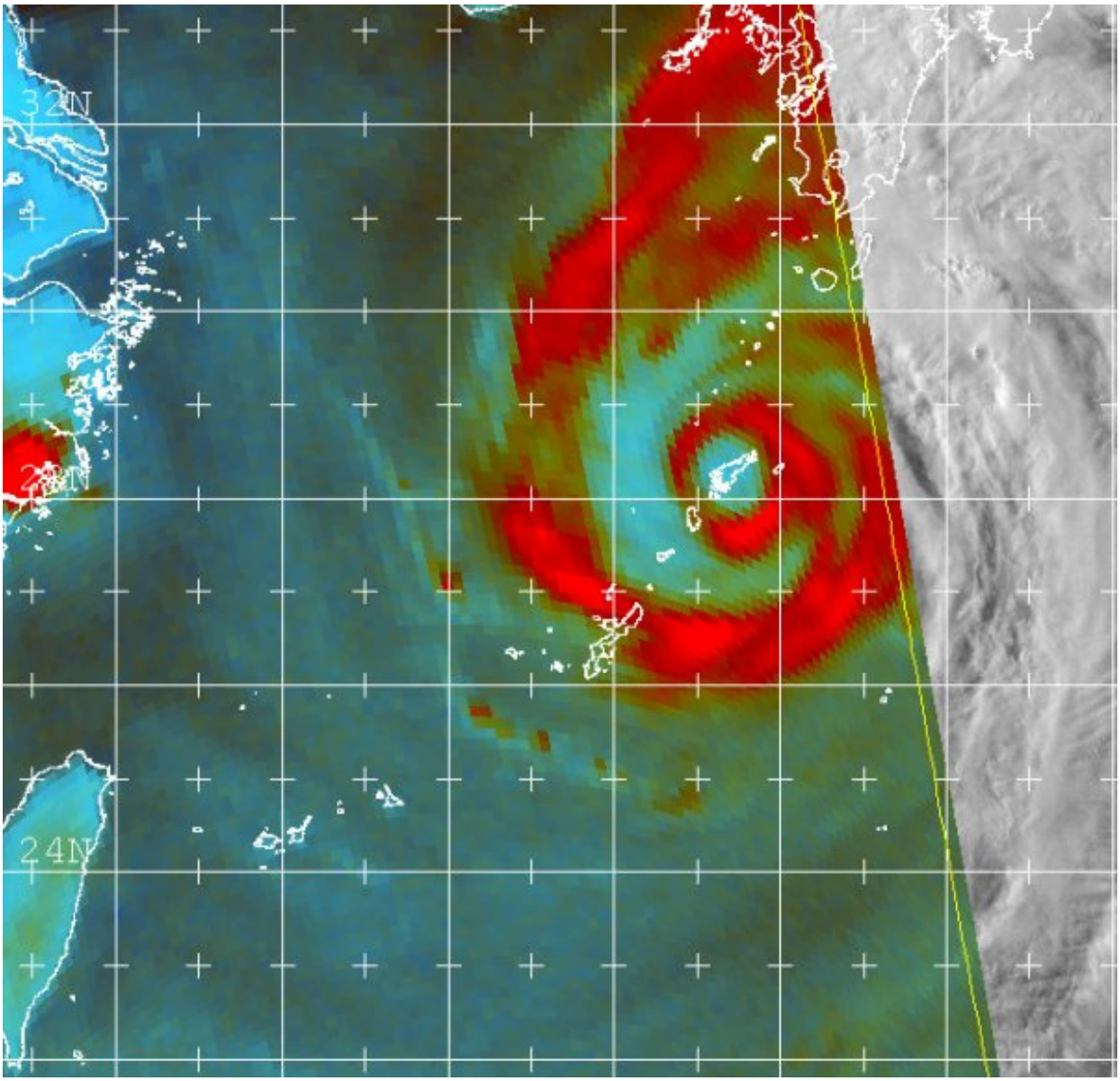



Figure 1-11W-2. 071116Z August 2003 GOES-9 85 GHz SSM/I imagery of TY 11W (Etau), located on over Amami Shima island, Japan at its peak intensity of 110 knots.

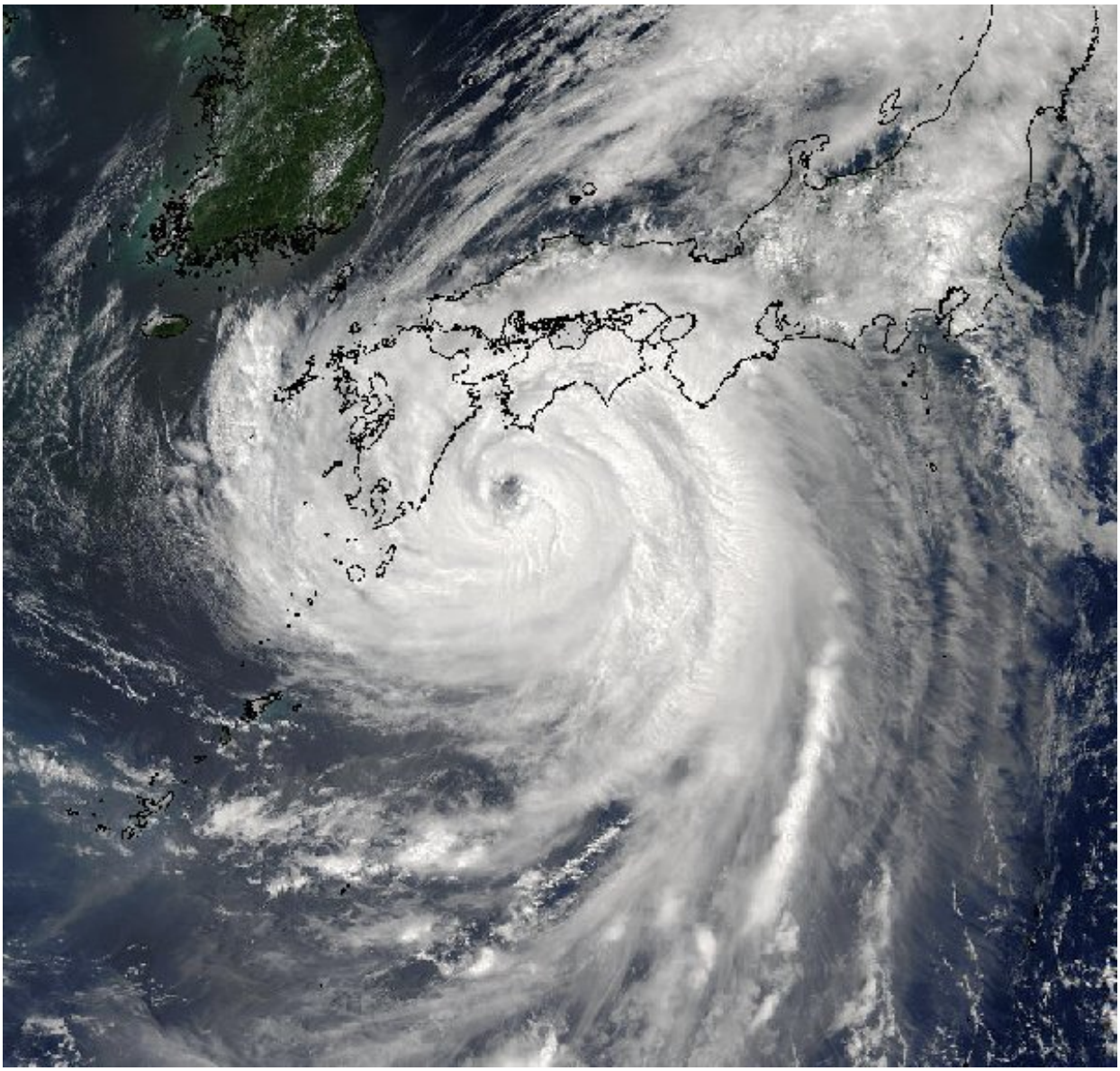
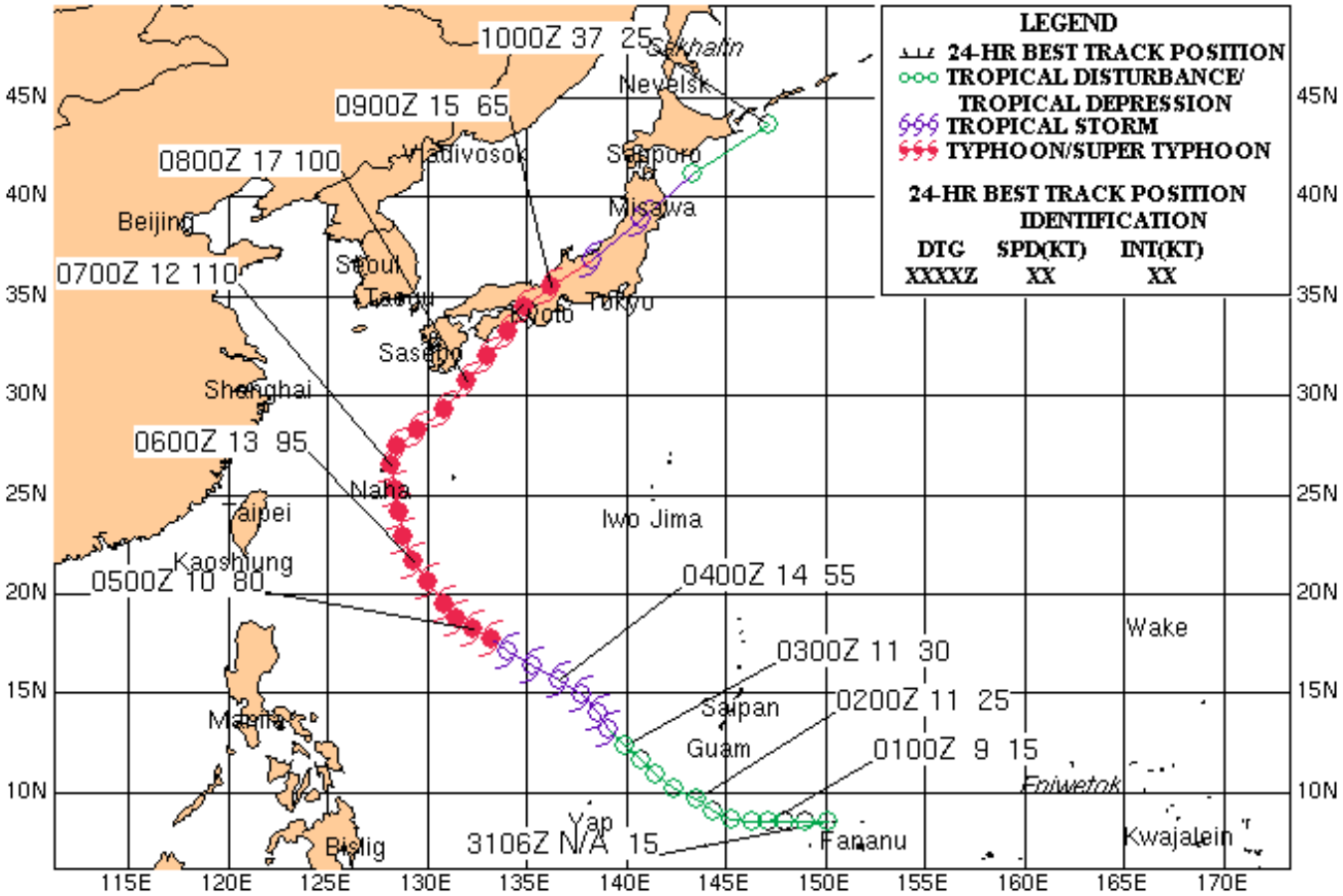
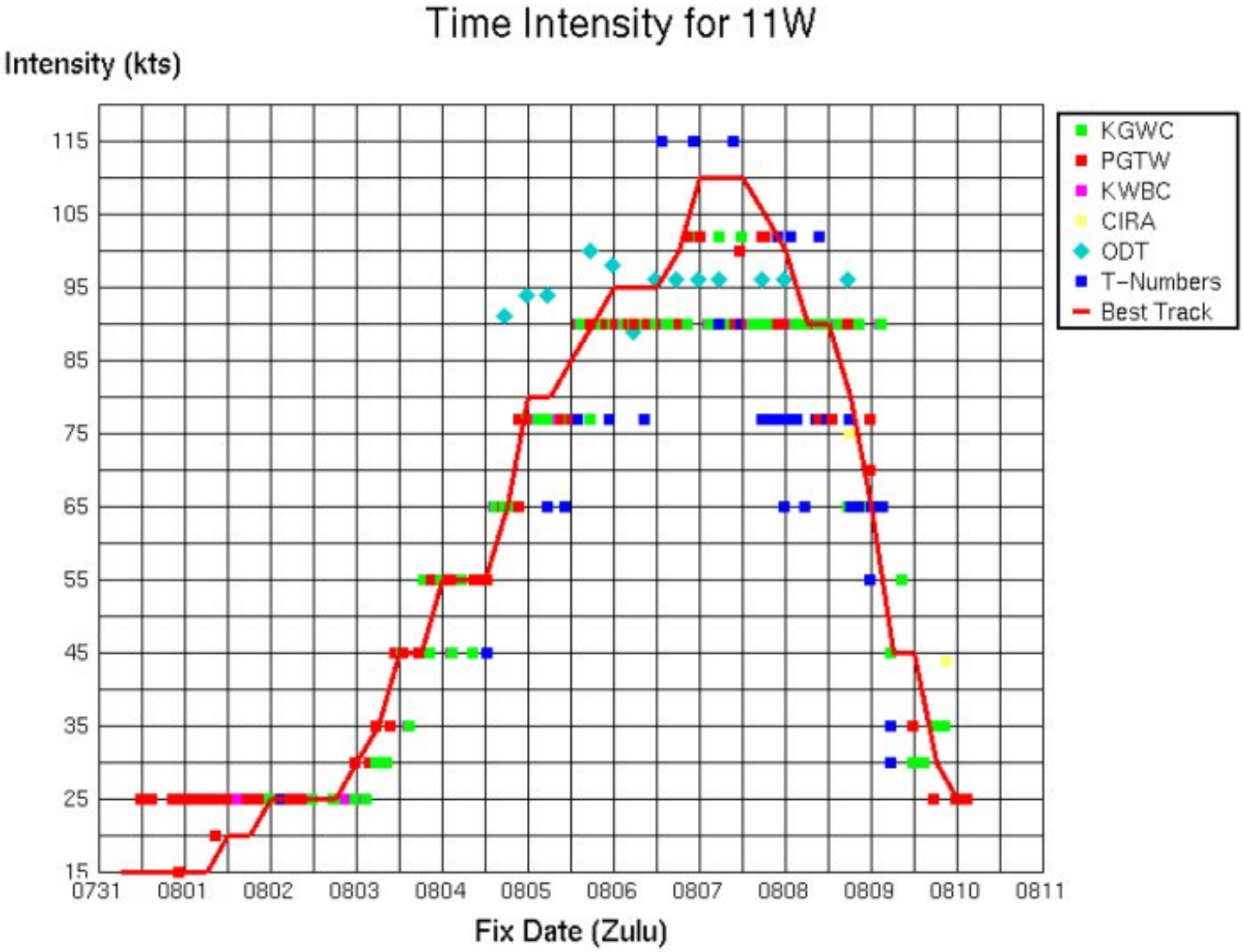


Figure 1-11W-3. 080425Z August 2003 MODIS true-color image of TC 11W (Etau), located off the Japanese coast, with an intensity of 90 knots.

# TYPHOON 11W (ETAU)
## 31 JULY - 09 AUGUST 2003




Time Intensity for 11W
Intensity (kts)
115
105
95
85
75
65
55
45
35
25
15
0731
0801
0802
0803
0804
0805
0806
0807
0808
0809
0810
0811
Fix Date (Zulu)
KGWC
PGTW
KWBC
CIRA
ODT
T-Numbers
Best Track

## Statistics for JTWC on TY11W

| | WRN | BEST TRACK | | | POSITION ERRORS | | | | | | | | WIND ERRORS | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DTG | NO. | LAT | LONG | wind | 00 | 12 | 24 | 36 | 48 | 72 | 96 | 120 | 00 | 12 | 24 | 36 | 48 | 72 | 96 | 120 |
| 03073106 | | 8.6N | 150.1E | 15 | | | | | | | | | | | | | | | | |
| 03073112 | | 8.6N | 149.0E | 15 | | | | | | | | | | | | | | | | |
| 03073118 | | 8.6N | 148.0E | 15 | | | | | | | | | | | | | | | | |
| 03080100 | | 8.6N | 147.1E | 15 | | | | | | | | | | | | | | | | |
| 03080106 | | 8.6N | 146.3E | 15 | | | | | | | | | | | | | | | | |
| 03080112 | | 8.7N | 145.3E | 20 | | | | | | | | | | | | | | | | |
| 03080118 | | 9.1N | 144.4E | 20 | | | | | | | | | | | | | | | | |
| 03080200 | | 9.7N | 143.5E | 25 | | | | | | | | | | | | | | | | |
| 03080206 | | 10.2N | 142.4E | 25 | | | | | | | | | | | | | | | | |
| 03080212 | | 10.9N | 141.5E | 25 | | | | | | | | | | | | | | | | |
| 03080218 | | 11.6N | 140.7E | 25 | | | | | | | | | | | | | | | | |
| 03080300 | 1 | 12.4N | 139.9E | 30 | 0 | 8 | 59 | 120 | 120 | 127 | | | -5 | -10 | -10 | -5 | -20 | -30 | | |
| 03080306 | 2 | 13.2N | 139.1E | 35 | 0 | 24 | 97 | 166 | 207 | 216 | 298 | 377 | 0 | 0 | 0 | 0 | -5 | 5 | -35 | -35 |
| 03080312 | 3 | 14.0N | 138.6E | 45 | 5 | 64 | 150 | 188 | 215 | 219 | 230 | 256 | 0 | 0 | 15 | 0 | 10 | 20 | -5 | -15 |
| 03080318 | 4 | 14.9N | 137.8E | 45 | 18 | 86 | 133 | 178 | 208 | 207 | 327 | 389 | 0 | 15 | 25 | 25 | 25 | 20 | -5 | 5 |
| 03080400 | 5 | 15.7N | 136.6E | 55 | 13 | 81 | 107 | 143 | 169 | 205 | 265 | 320 | 0 | 20 | 15 | 20 | 20 | 10 | -10 | -5 |
| 03080406 | 6 | 16.4N | 135.3E | 55 | 16 | 19 | 70 | 107 | 130 | 144 | 289 | 384 | 0 | 10 | 10 | 10 | 15 | 10 | -40 | 10 |
| 03080412 | 7 | 17.1N | 134.0E | 55 | 0 | 36 | 73 | 75 | 75 | 146 | 255 | 420 | 0 | -10 | 0 | 0 | 10 | 10 | -35 | 5 |
| 03080418 | 8 | 17.7N | 133.2E | 65 | 12 | 37 | 70 | 85 | 93 | 130 | 170 | 87 | 5 | 10 | 15 | 25 | 25 | 5 | -35 | 10 |
| 03080500 | 9 | 18.3N | 132.3E | 80 | 0 | 25 | 33 | 30 | 65 | 61 | 227 | 177 | 5 | 15 | 20 | 35 | 15 | 0 | -20 | 15 |
| 03080506 | 10 | 18.8N | 131.5E | 80 | 0 | 17 | 28 | 44 | 77 | 39 | 200 | | 5 | 25 | 20 | 30 | 15 | 10 | 5 | |
| 03080512 | 11 | 19.5N | 130.8E | 85 | 13 | 37 | 45 | 76 | 64 | 63 | 92 | | 0 | 5 | 25 | 20 | 15 | 10 | 0 | |
| 03080518 | 12 | 20.6N | 130.0E | 90 | 5 | 21 | 24 | 49 | 37 | 144 | | | 0 | 10 | 20 | 15 | -5 | -30 | | |
| 03080600 | 13 | 21.7N | 129.3E | 95 | 0 | 13 | 22 | 20 | 19 | 147 | | | 0 | 15 | 15 | 5 | -10 | -20 | | |
| 03080606 | 14 | 22.9N | 128.8E | 95 | 0 | 6 | 16 | 26 | 20 | 228 | | | 0 | 10 | 15 | 5 | 5 | -10 | | |
| 03080612 | 15 | 24.1N | 128.6E | 95 | 8 | 25 | 24 | 12 | 82 | 211 | | | 0 | 0 | 0 | -10 | -15 | -10 | | |
| 03080618 | 16 | 25.3N | 128.4E | 100 | 0 | 22 | 16 | 18 | 71 | 105 | | | 0 | 5 | 5 | 15 | -5 | 5 | | |
| 03080700 | 17 | 26.5N | 128.2E | 110 | 0 | 29 | 32 | 12 | 36 | 147 | | | 0 | 5 | 10 | 15 | 0 | 5 | | |
| 03080706 | 18 | 27.4N | 128.5E | 110 | 5 | 27 | 35 | 54 | 170 | | | | 0 | 10 | 15 | -20 | -10 | | | |
| 03080712 | 19 | 28.3N | 129.5E | 110 | 5 | 32 | 37 | 43 | 103 | | | | 0 | 0 | -10 | -25 | -5 | | | |
| 03080718 | 20 | 29.3N | 130.8E | 105 | 0 | 32 | 24 | 53 | 89 | | | | 0 | 0 | -10 | -5 | 10 | | | |
| 03080800 | 21 | 30.7N | 132.0E | 100 | 0 | 25 | 51 | 84 | 110 | | | | 0 | 0 | -5 | -5 | 10 | | | |
| 03080806 | 22 | 32.0N | 133.0E | 90 | 5 | 23 | 57 | 42 | | | | | 0 | 0 | 0 | 5 | | | | |
| 03080812 | 23 | 33.2N | 134.0E | 90 | 5 | 28 | 20 | 60 | | | | | 0 | -15 | -10 | 15 | | | | |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03080818 | 24 | 34.4N | 134.9E | 80 | 4 | 43 | 25 | | | | | | 0 | 5 | 10 | | | | | |
| 03080900 | 25 | 35.5N | 136.2E | 65 | 0 | 37 | 76 | | | | | | 0 | 0 | 15 | | | | | |
| 03080906 | 26 | 36.8N | 138.3E | 45 | 12 | 44 | | | | | | | 0 | 15 | | | | | | |
| 03080912 | 27 | 38.9N | 140.7E | 45 | 5 | 117 | | | | | | | 0 | 20 | | | | | | |
| 03080918 | 28 | 41.2N | 143.3E | 30 | 7 | | | | | | | | 0 | | | | | | | |
| 03081000 | | 43.6N | 147.1E | 25 | | | | | | | | | | | | | | | | |
| | | | AVERA | GE | 5 | 35 | 53 | 73 | 103 | 149 | 235 | 301 | 1 | 9 | 12 | 13 | 12 | 12 | 19 | 13 |
| | | | BIAS | | | | | | | | | | 0 | 6 | 8 | 7 | 5 | 1 | -18 | -1 |
| | | | # CAS | ES | 28 | 27 | 25 | 23 | 21 | 17 | 10 | 8 | 28 | 27 | 25 | 23 | 21 | 17 | 10 | 8 |