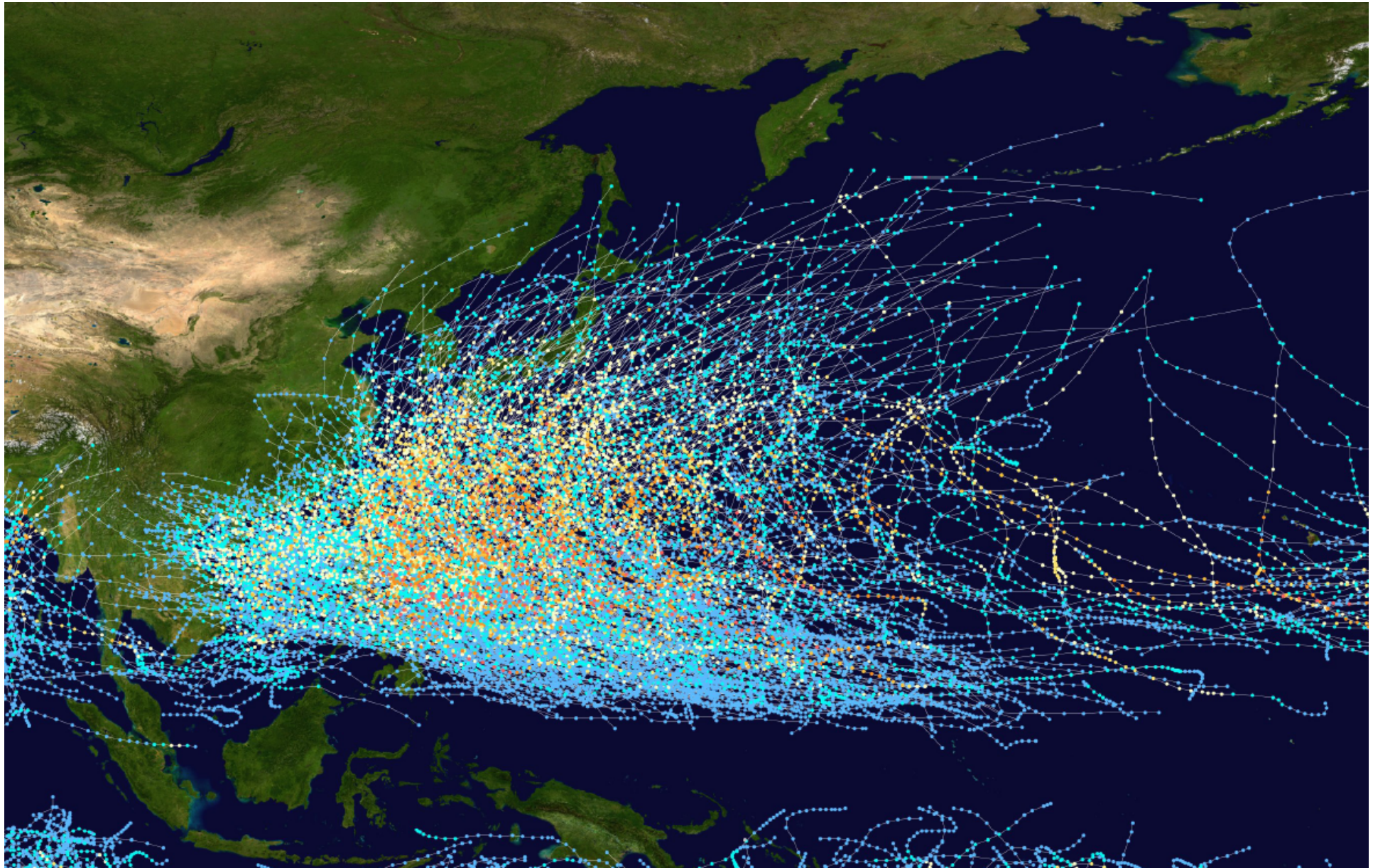


Antonio Garcia-Mendez
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Typhoon tracks 1985-2005



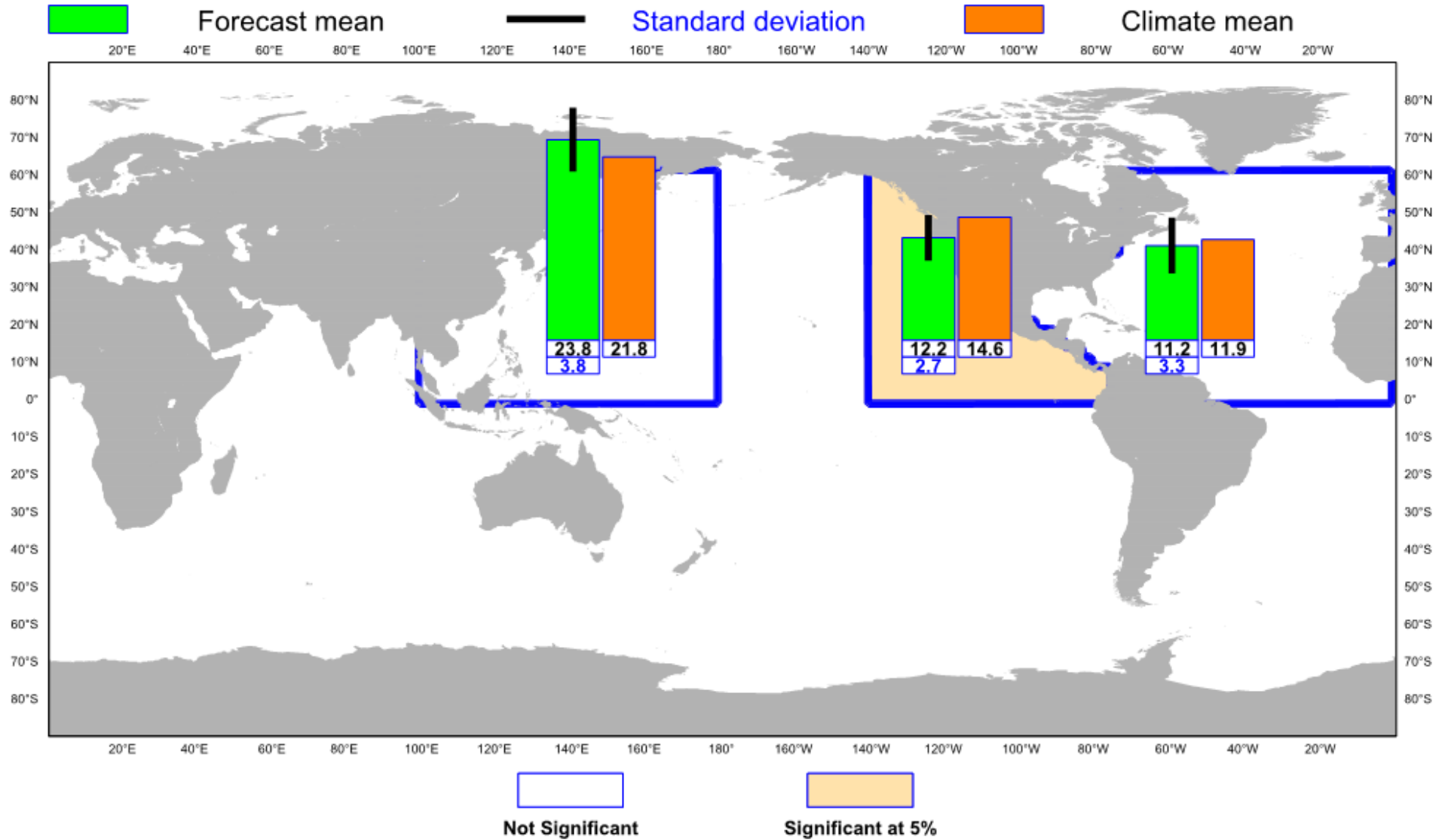
Forecast in the Northwestern tropical Pacific

- **Seasonal forecast**
- **Monthly forecast**
- **EPS**
 - **EPSgrams**
 - **EFI**
 - **Probabilities**
- **Deterministic forecast**

ECMWF Seasonal Forecast Tropical Storm Frequency

Forecast start reference is 01/04/2011
Ensemble size = 41, climate size = 176

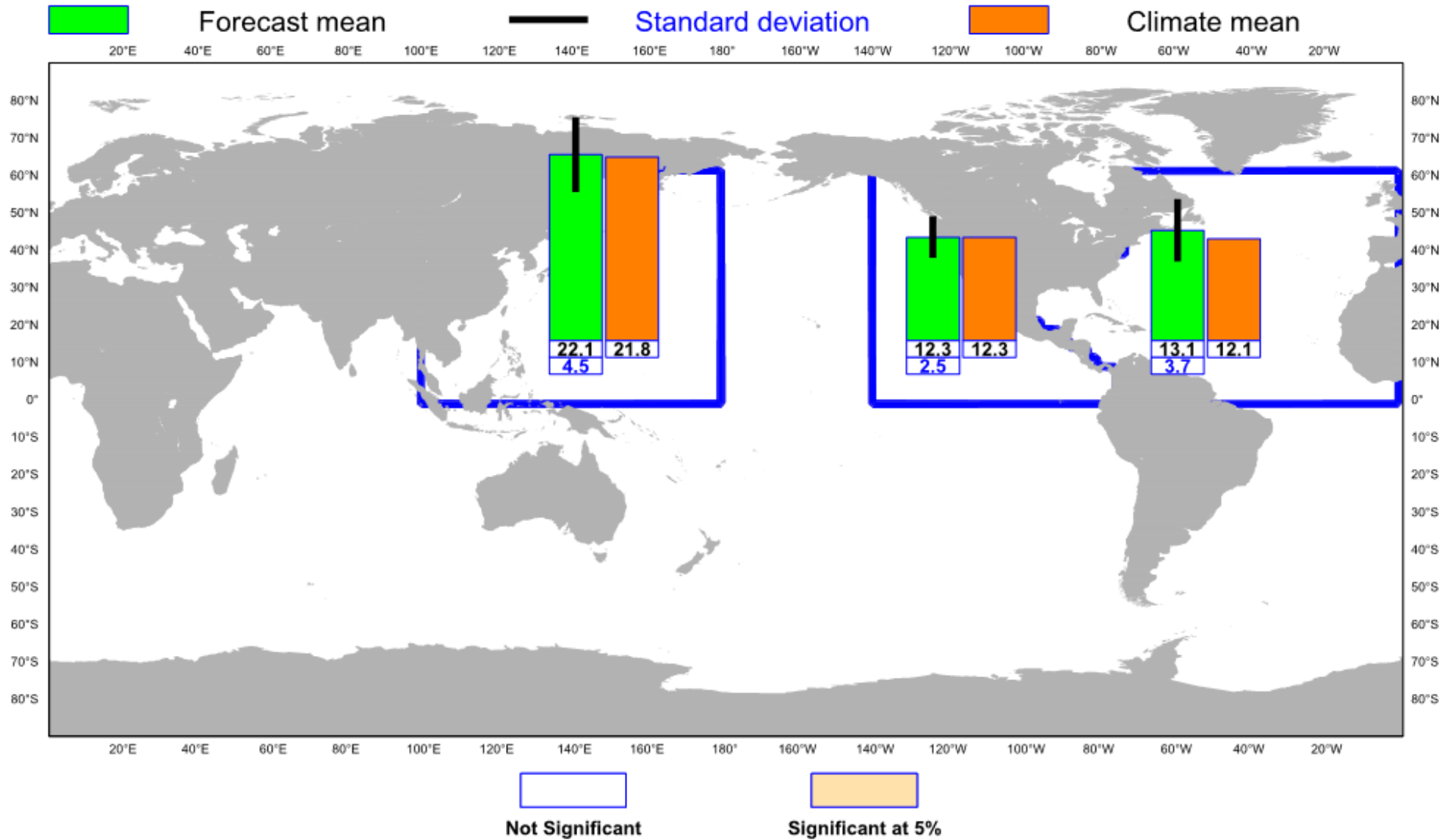
System 3
MJJASO 2011
Climate = 1990-2005



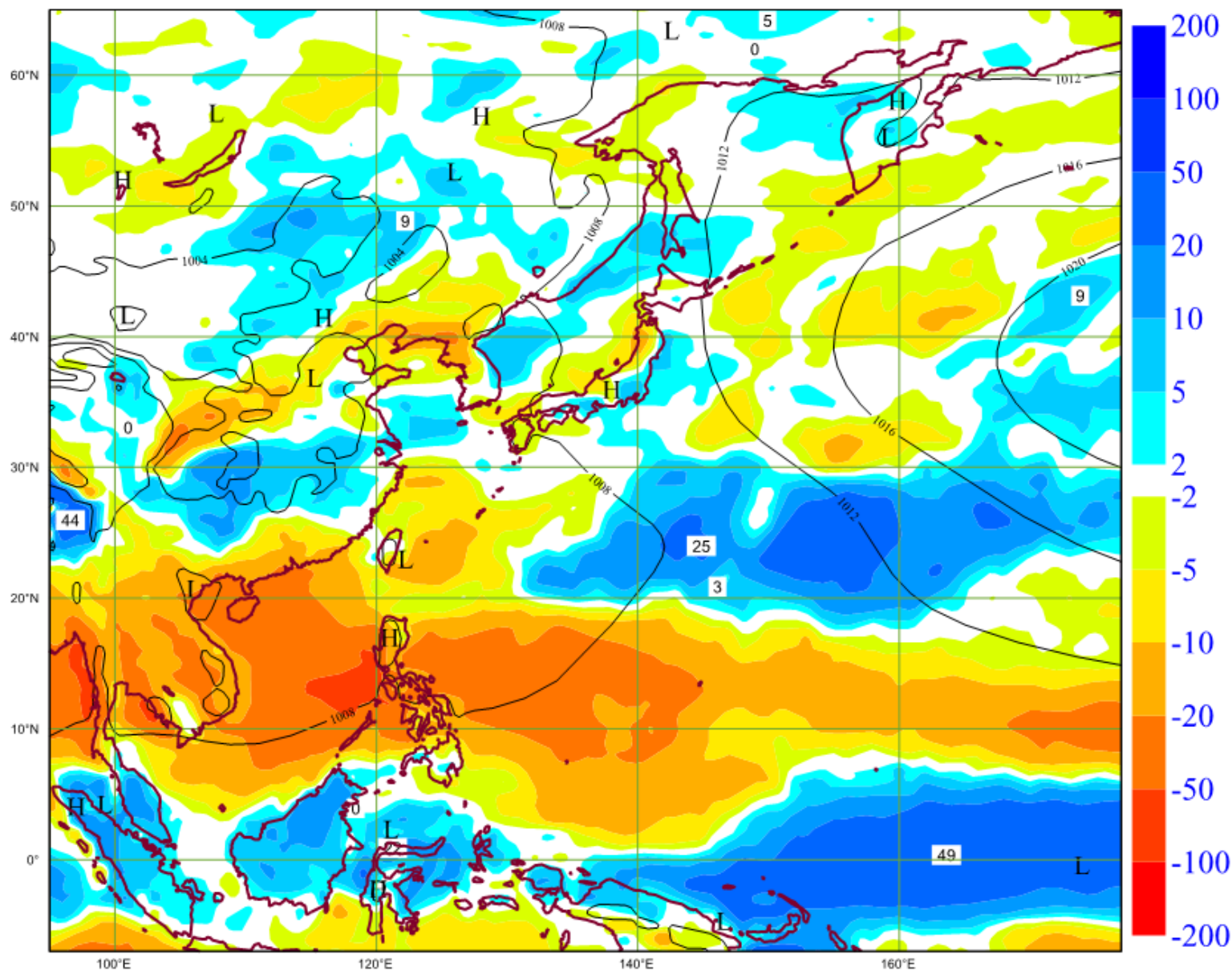
ECMWF Seasonal Forecast Tropical Storm Frequency

Forecast start reference is 01/06/2011
Ensemble size = 41, climate size = 176

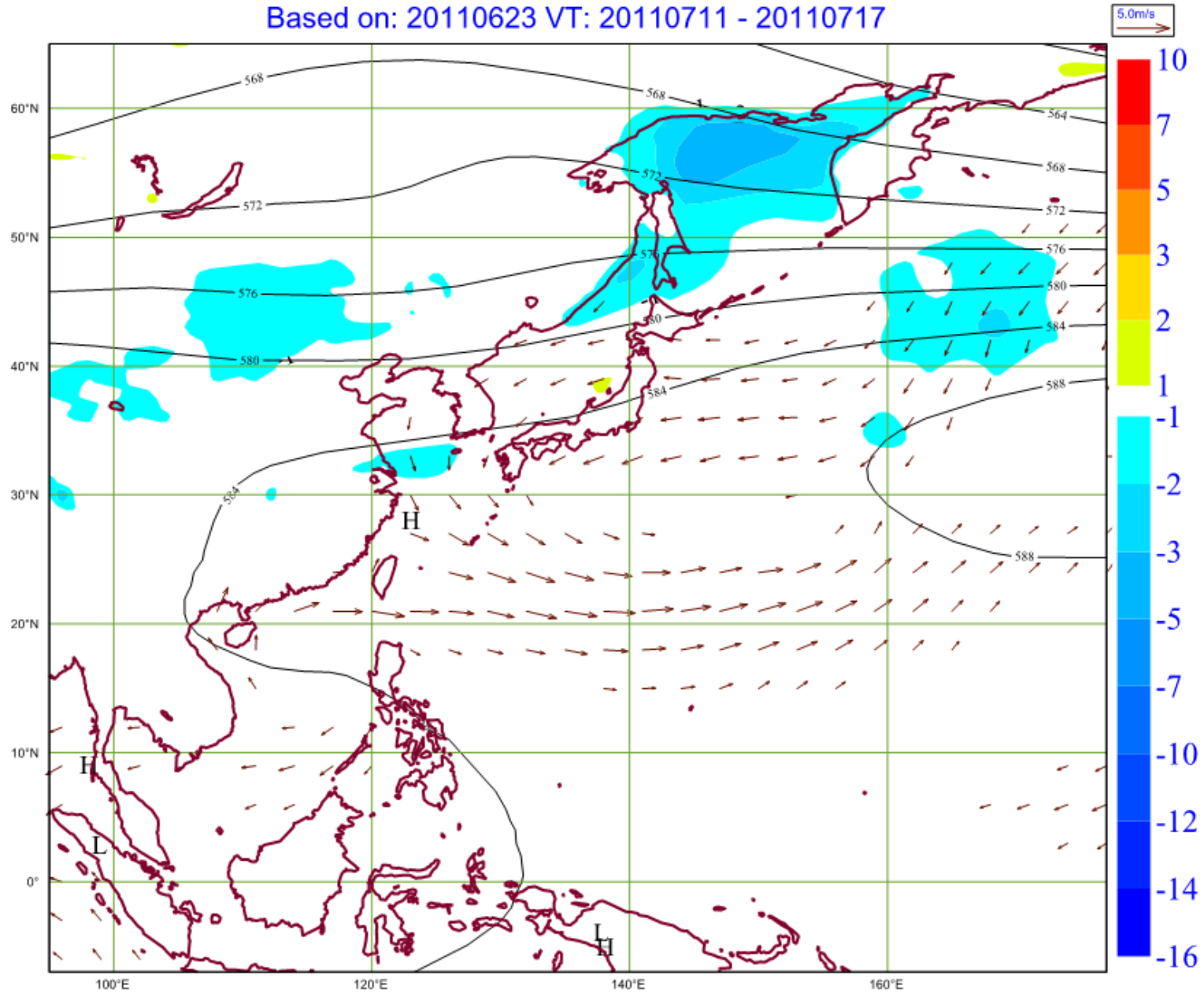
System 3
JASOND 2011
Climate = 1990-2005



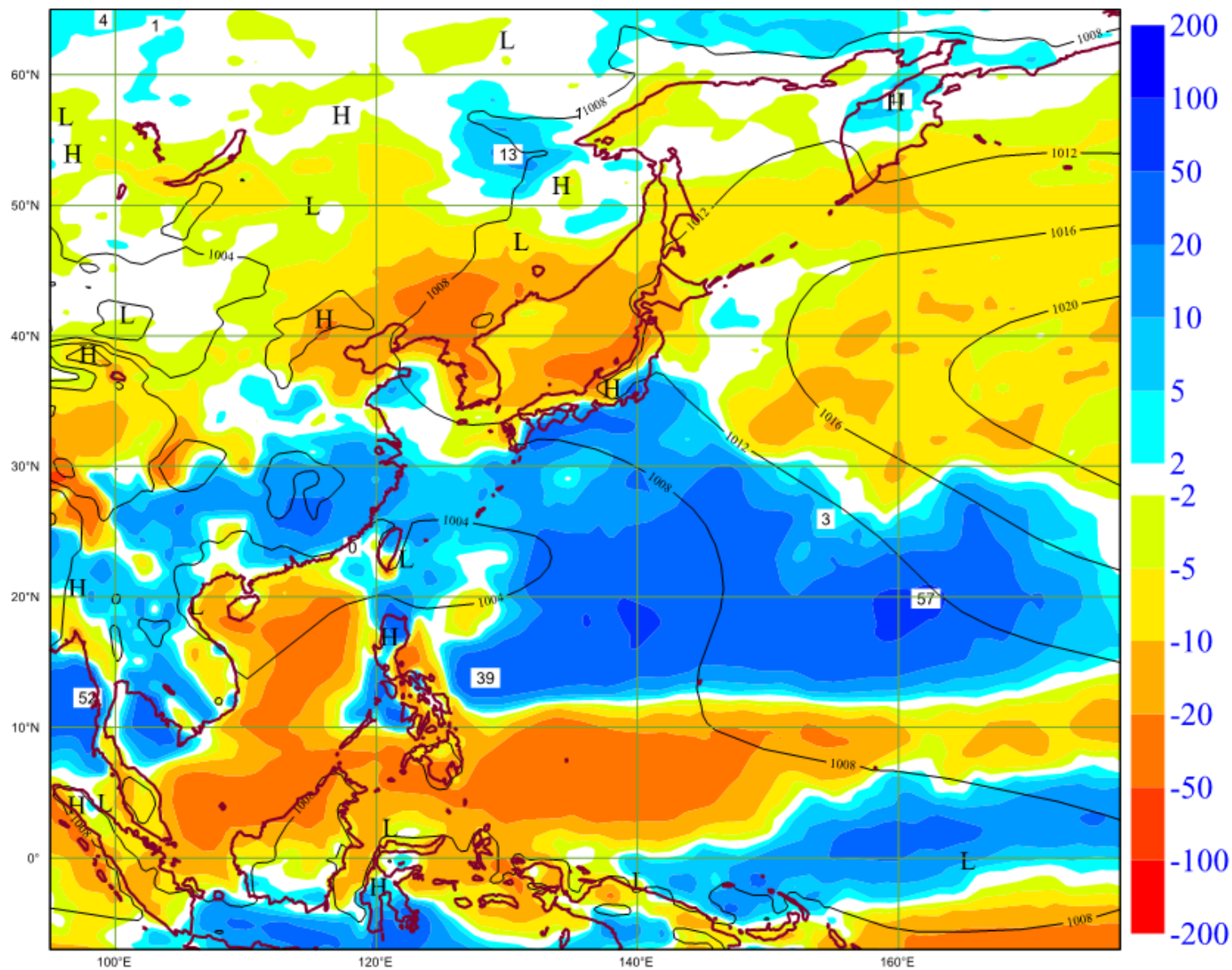
Weekly means of MSLP , and Total precipitation anomaly
Based on: 20110623 VT: 20110711 - 20110717



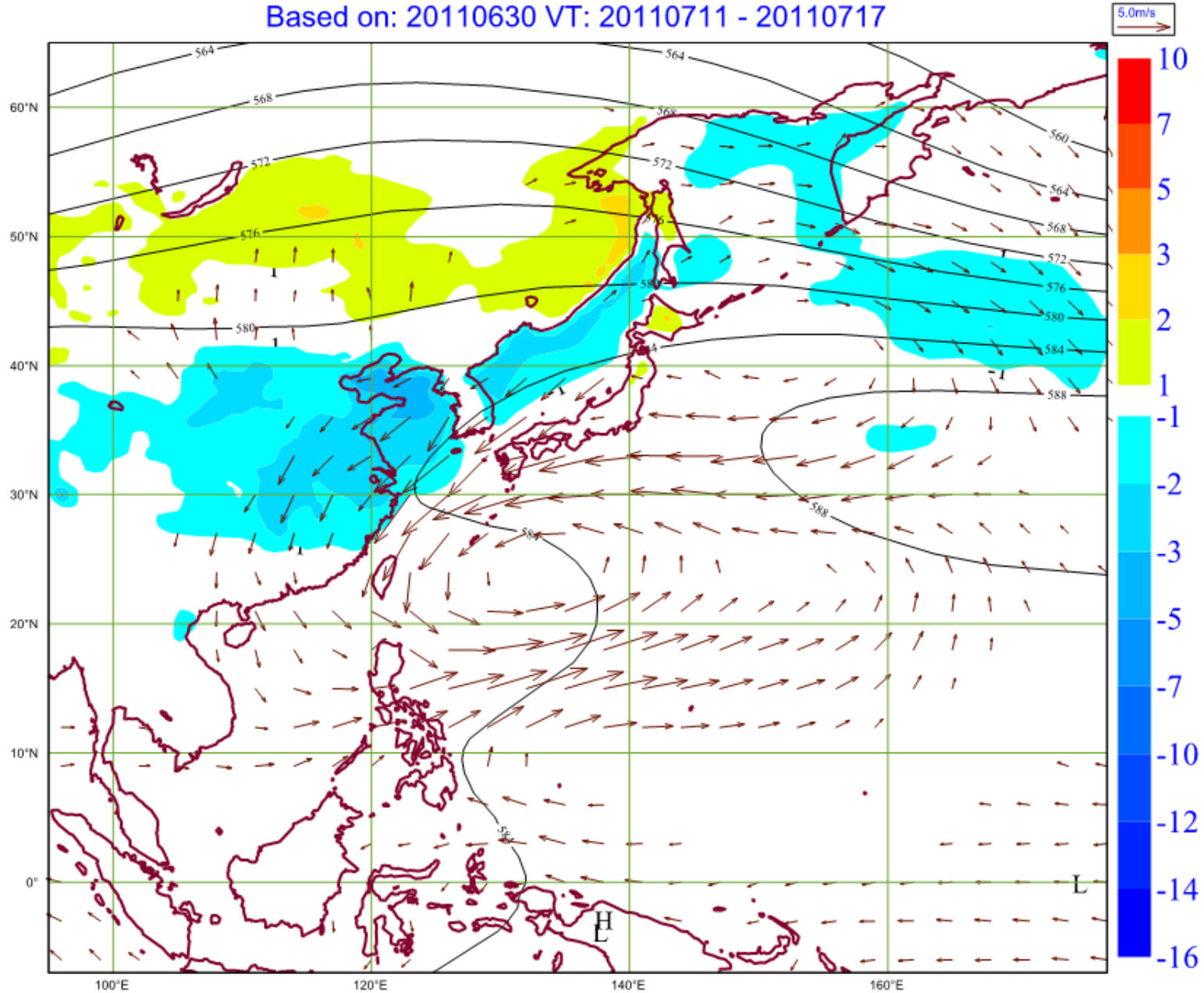
Weekly means of 500 hPa height , 10m wind anomaly , 2m temperature anomaly
Based on: 20110623 VT: 20110711 - 20110717



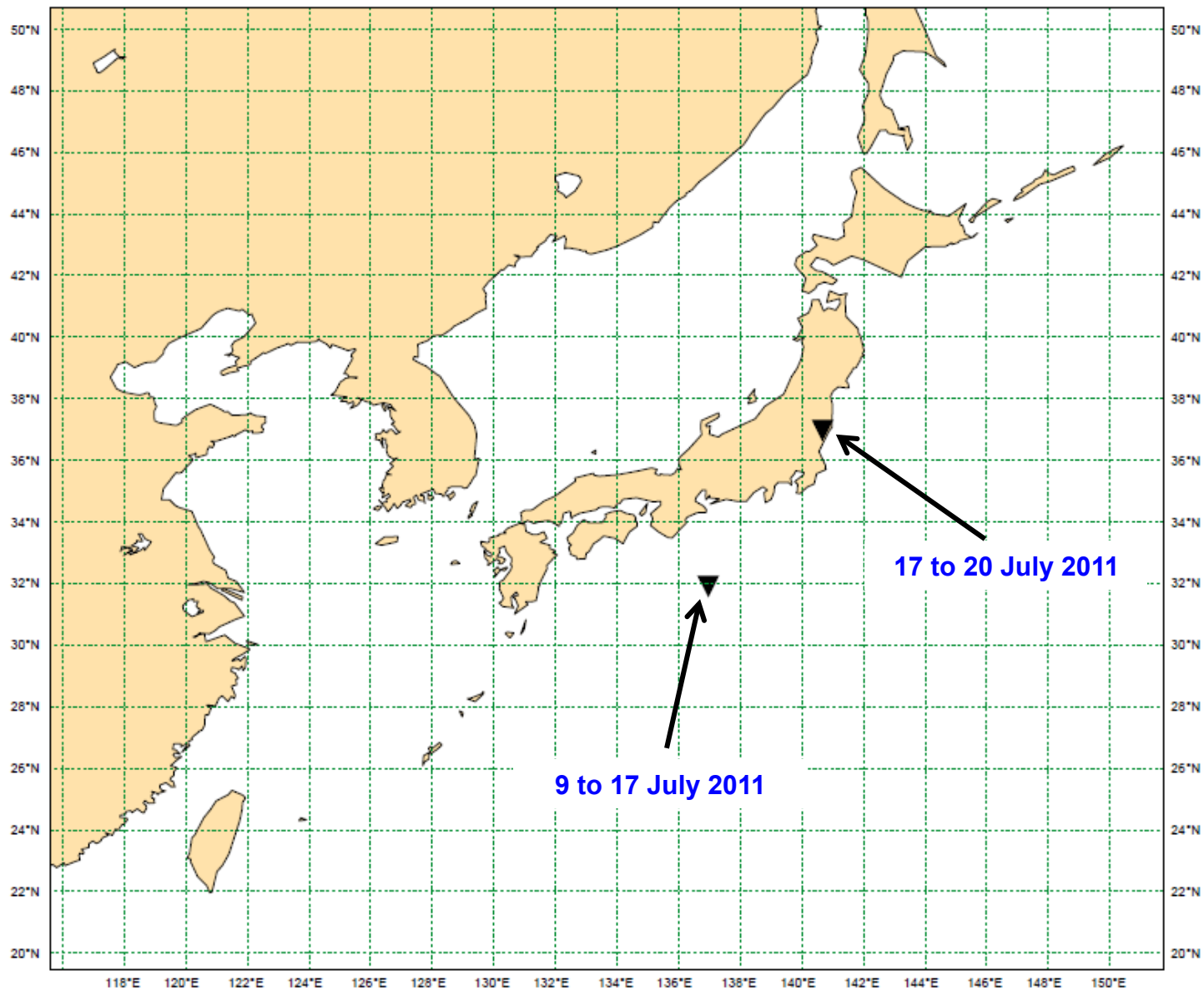
Weekly means of MSLP , and Total precipitation anomaly
Based on: 20110630 VT: 20110711 - 20110717



Weekly means of 500 hPa height , 10m wind anomaly , 2m temperature anomaly
Based on: 20110630 VT: 20110711 - 20110717



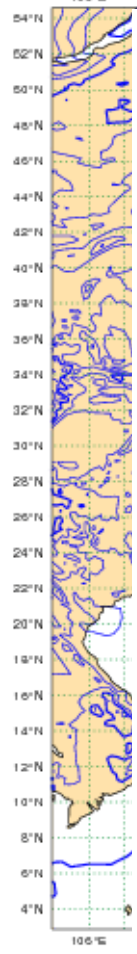
Location of EPSgrams



998.98 - 1000
Friday 8 July 2011 00UTC ECMWF Forecast t+12 VT: Friday 8 July 2011 12UTC Surface: Mean sea level pressure

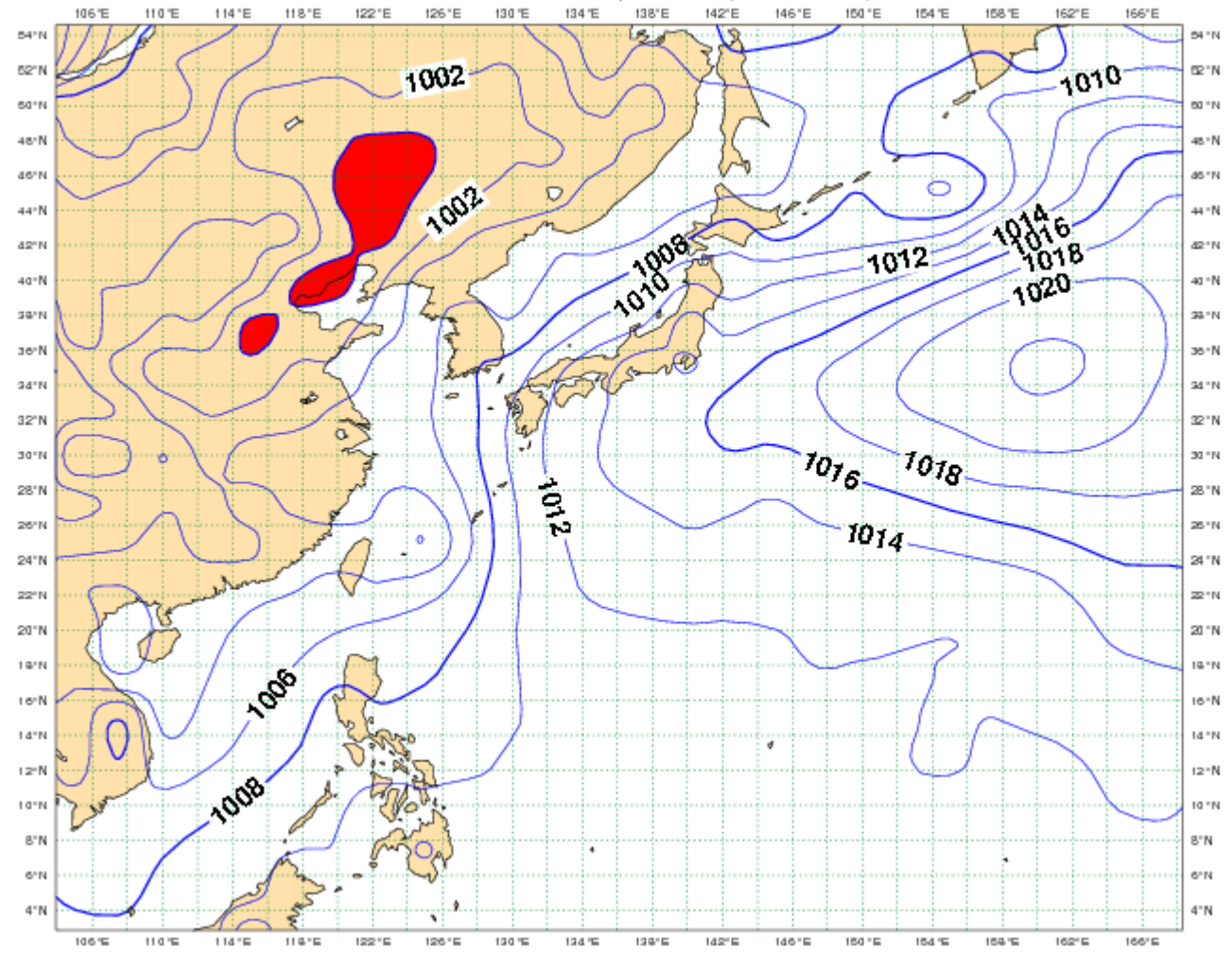
T1279

8/July/2011
00 UTC



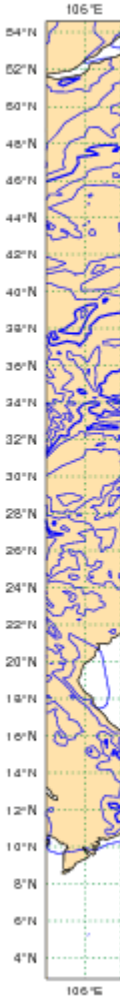
8 July 2011 00UTC ECMWF EPS Ensemble Mean Forecast t+12 VT: Friday 8 July 2011 12UTC
Surface: Mean sea level pressure (51 Members)

EPS mean



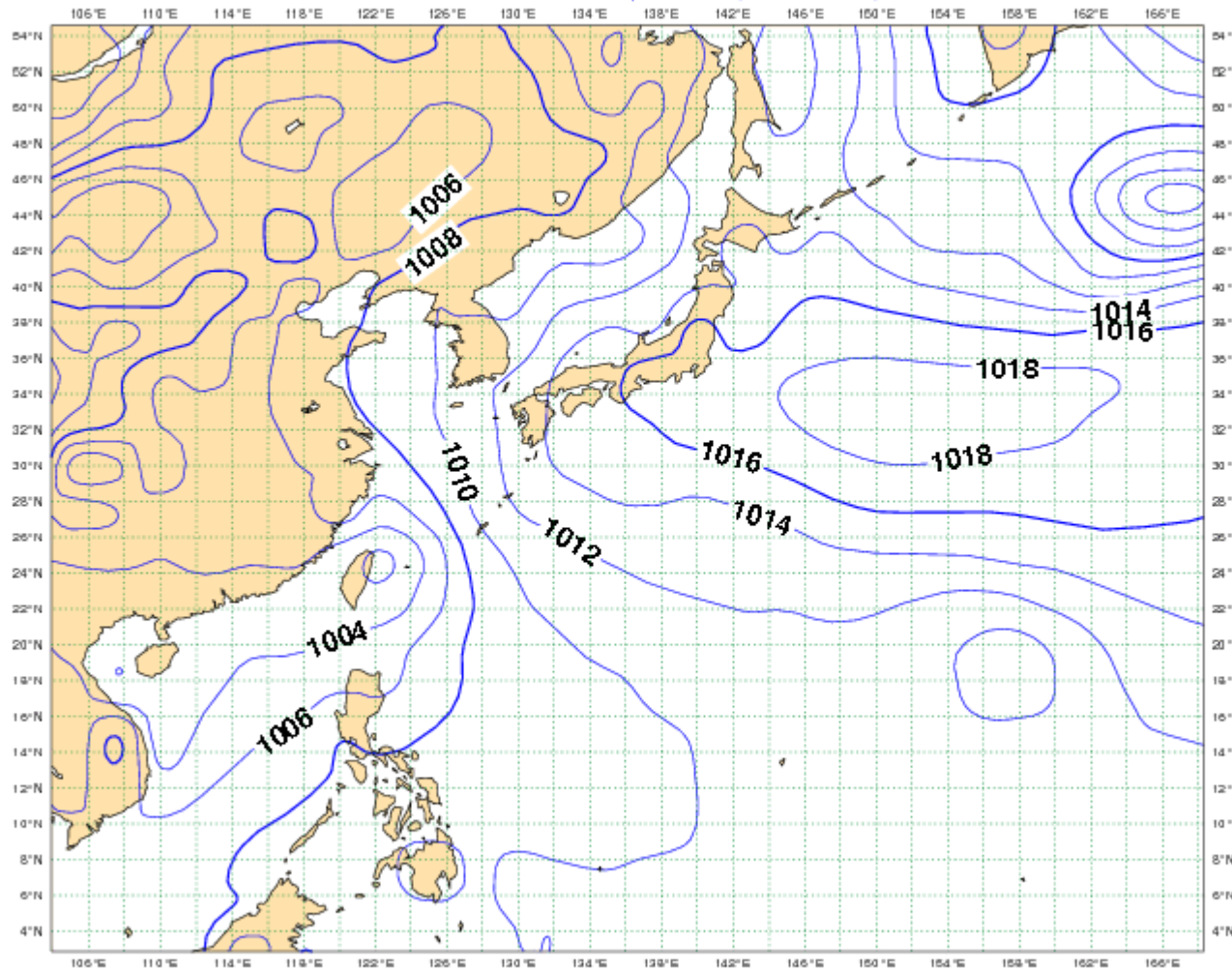
T1279

999.06 - 1000
Saturday 9 July 2011 00UTC ECMWF Forecast t+12 VT: Saturday 9 July 2011 12UTC Surface: Mean sea level pressure

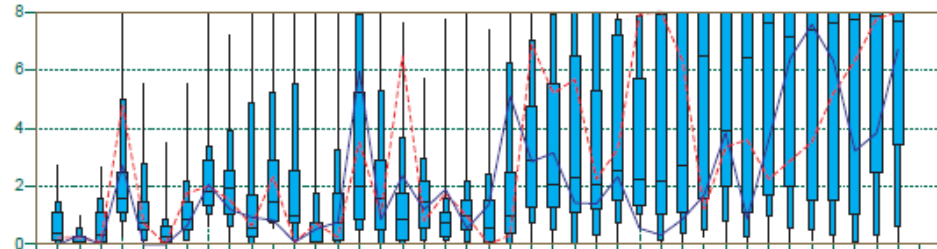


Saturday 9 July 2011 00UTC ECMWF EPS Ensemble Mean Forecast t+12 VT: Saturday 9 July 2011 12UTC
Surface: Mean sea level pressure (51 Members)

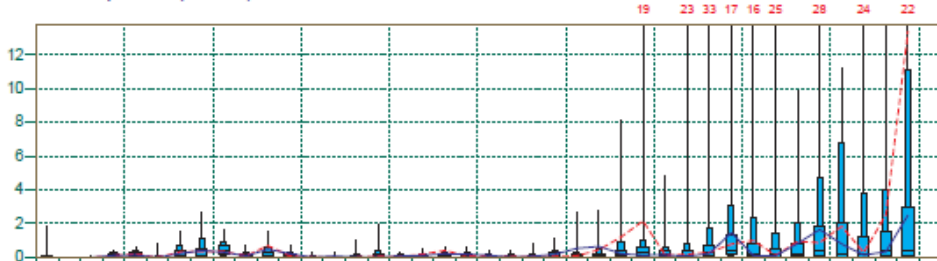
EPS mean



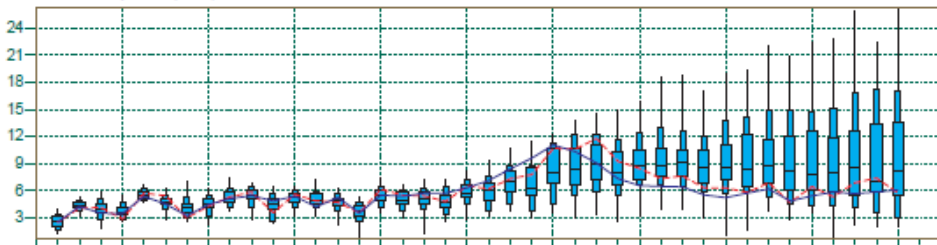
EPS Meteogram
 SW 31.9°N 136.96°E (EPS sea point) 0 m (T1279)
 Deterministic Forecast and EPS Distribution Saturday 9 July 2011 00 UTC
 Total Cloud Cover (okta)



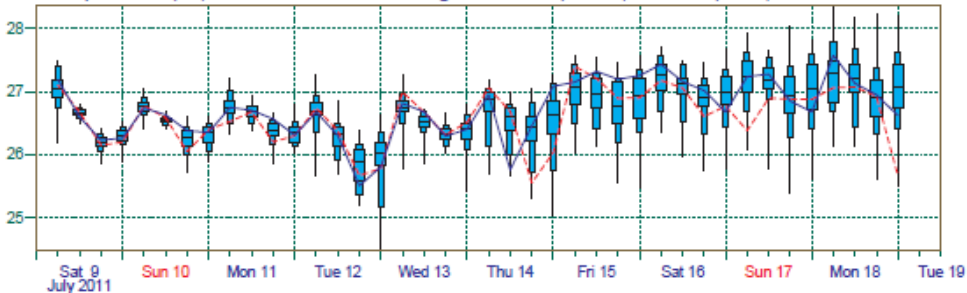
Total Precipitation (mm/6h)



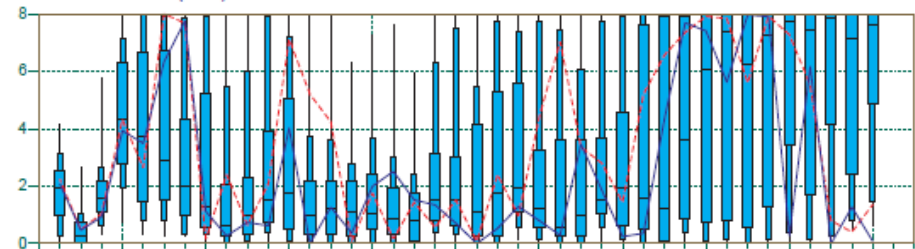
10m Wind Speed (m/s)



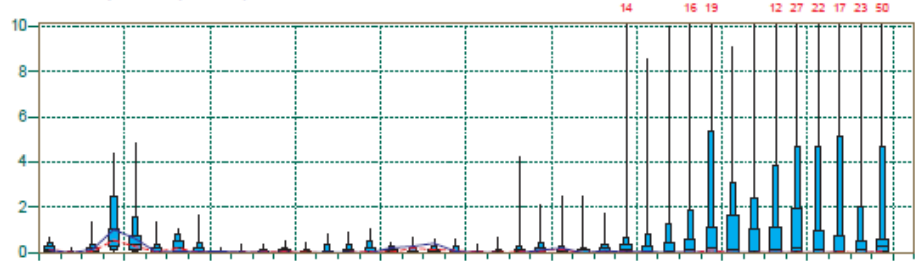
2m Temperature (°C) reduced to the station height from 0 m (T1279) and 2 m (T639)



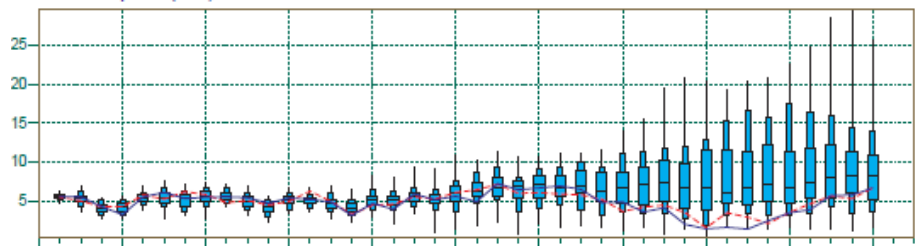
EPS Meteogram
 SW 31.9°N 136.96°E (EPS sea point) 0 m (T1279)
 Deterministic Forecast and EPS Distribution Sunday 10 July 2011 00 UTC
 Total Cloud Cover (okta)



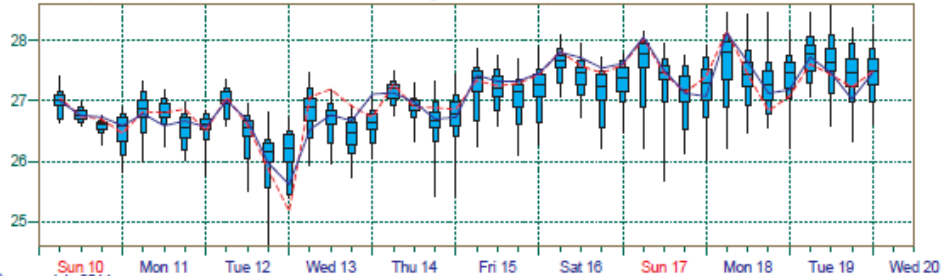
Total Precipitation (mm/6h)



10m Wind Speed (m/s)



2m Temperature (°C) reduced to the station height from 0 m (T1279) and 2 m (T639)

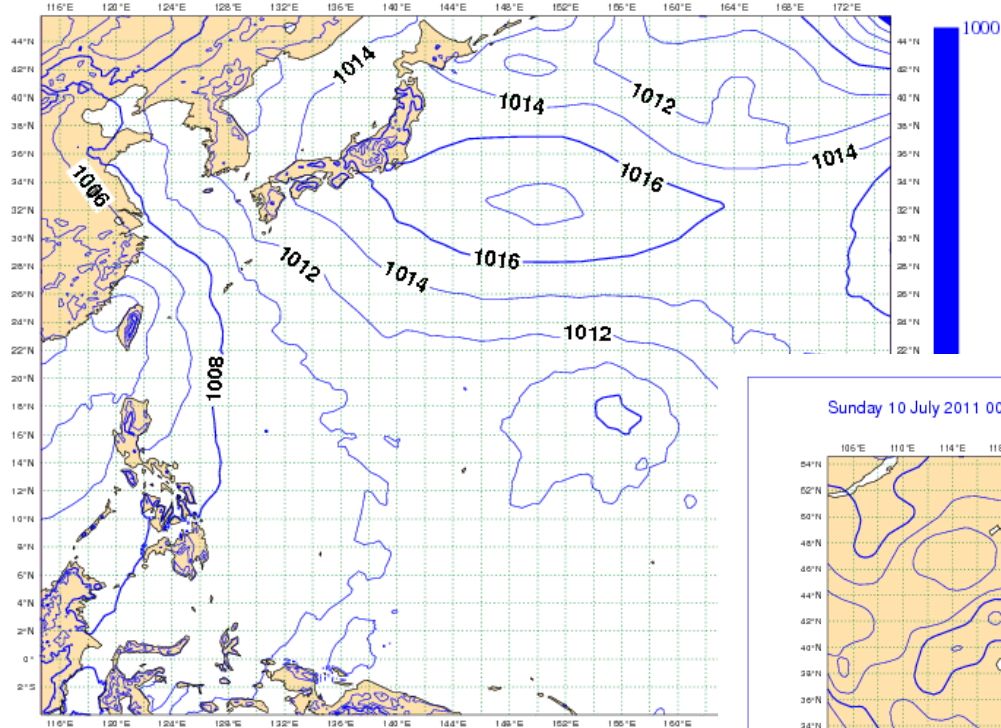


T1279

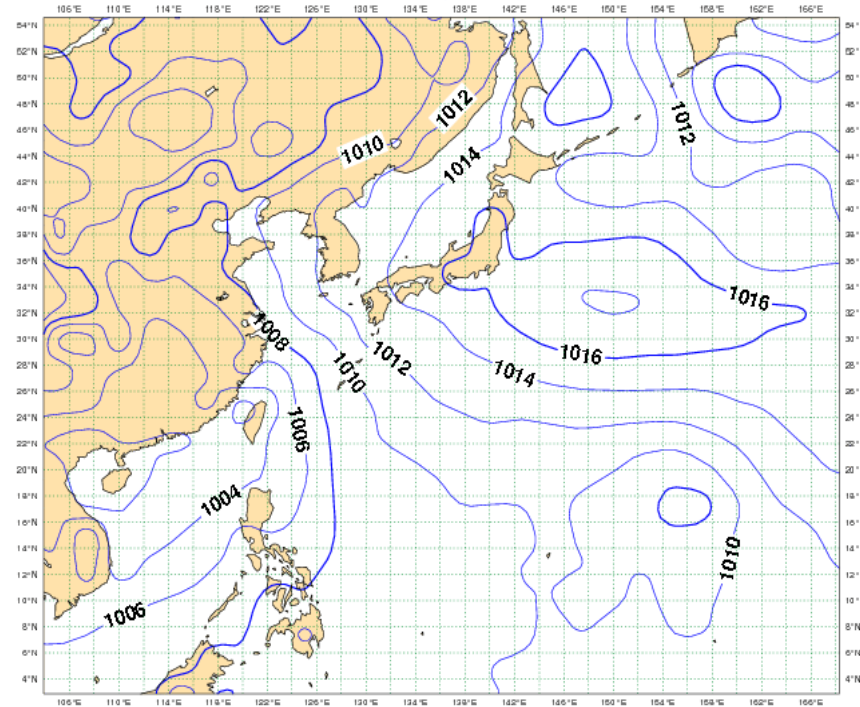
10/July/2011
00 UTC

EPS mean

Sunday 10 July 2011 00UTC ECMWF Forecast t+12 VT: Sunday 10 July 2011 12UTC Surface: Mean sea level pressure



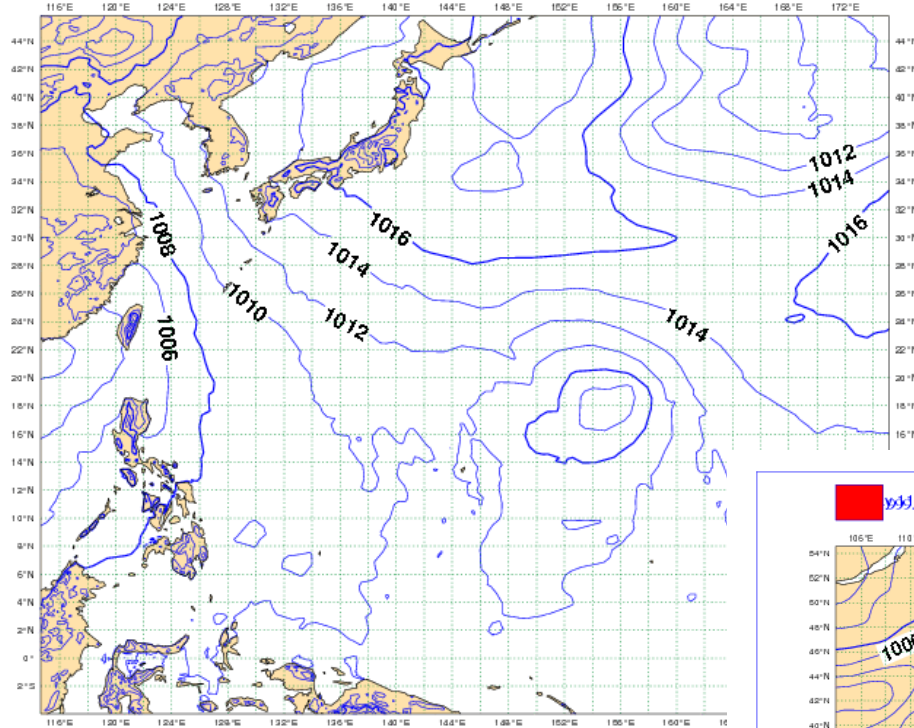
Sunday 10 July 2011 00UTC ECMWF EPS Ensemble Mean Forecast t+12 VT: Sunday 10 July 2011 12UTC
Surface: Mean sea level pressure (51 Members)



11/July/2011
00 UTC

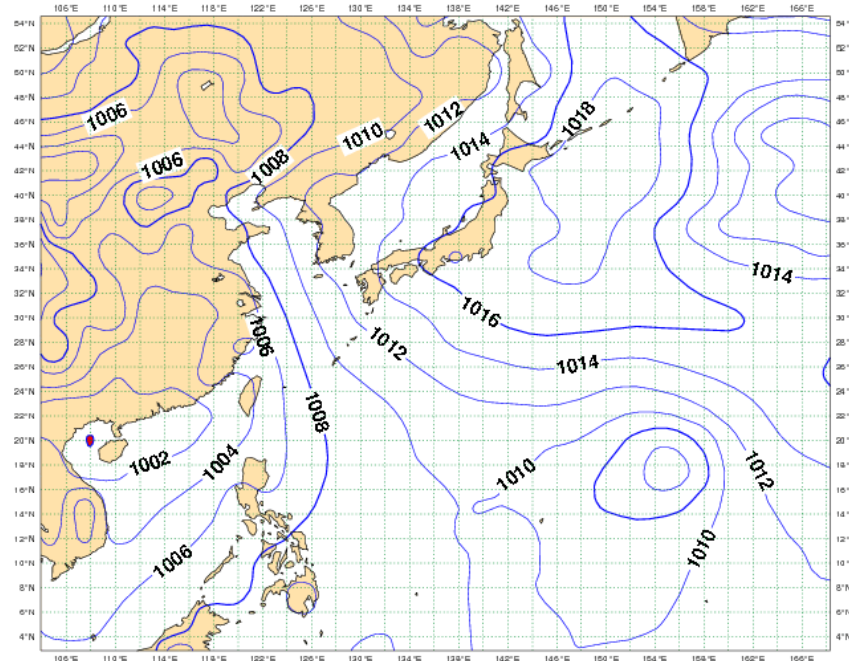
T1279

Monday 11 July 2011 00UTC ECMWF Forecast t+12 VT: Monday 11 July 2011 12UTC Surface: Mean sea level pressure

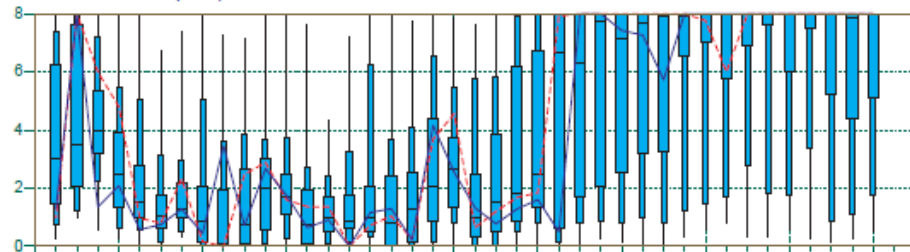


EPS mean

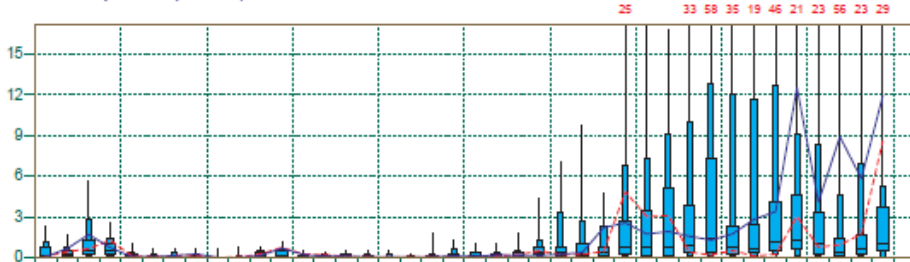
Monday 11 July 2011 00UTC ECMWF EPS Ensemble Mean Forecast t+12 VT: Monday 11 July 2011 12UTC
Surface: Mean sea level pressure (51 Members)



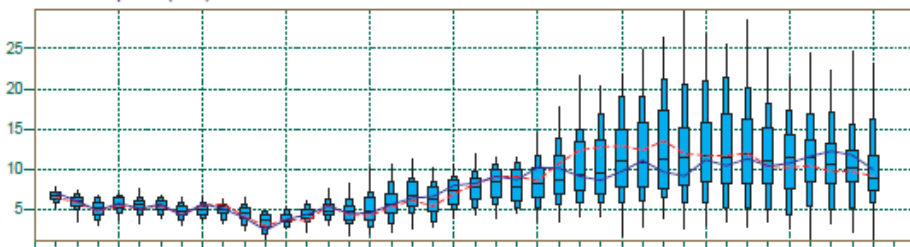
EPS Meteogram
 SW 31.9°N 136.96°E (EPS sea point) 0 m (T1279)
 Deterministic Forecast and EPS Distribution Monday 11 July 2011 00 UTC
 Total Cloud Cover (okta)



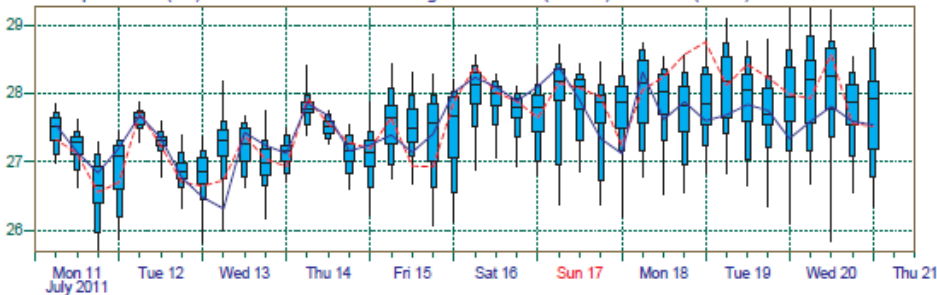
Total Precipitation (mm/6h)



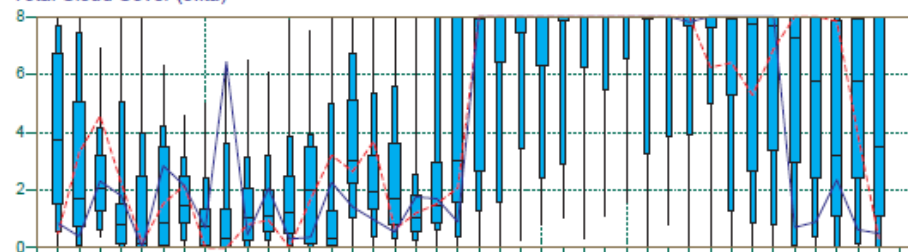
10m Wind Speed (m/s)



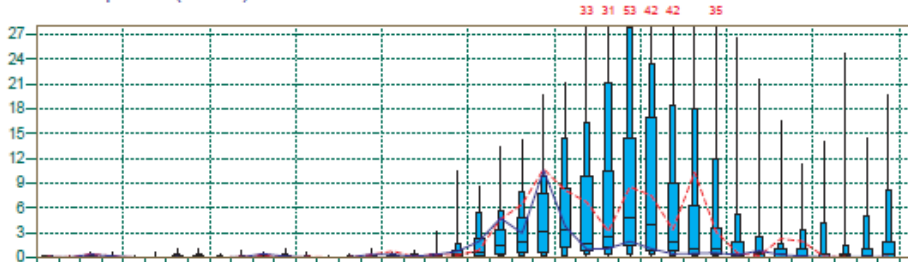
2m Temperature (°C) reduced to the station height from 0 m (T1279) and 2 m (T639)



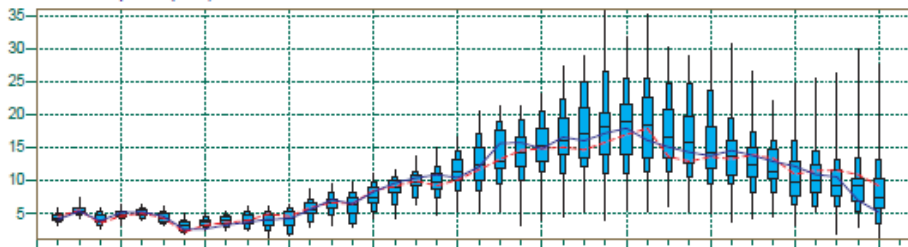
EPS Meteogram
 SW 31.9°N 136.96°E (EPS sea point) 0 m (T1279)
 Deterministic Forecast and EPS Distribution Tuesday 12 July 2011 00 UTC
 Total Cloud Cover (okta)



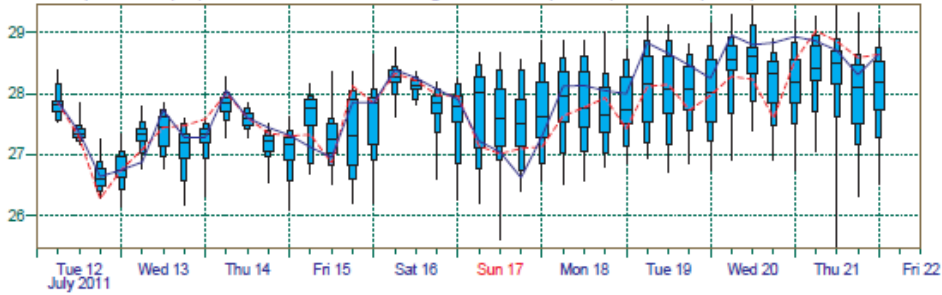
Total Precipitation (mm/6h)



10m Wind Speed (m/s)



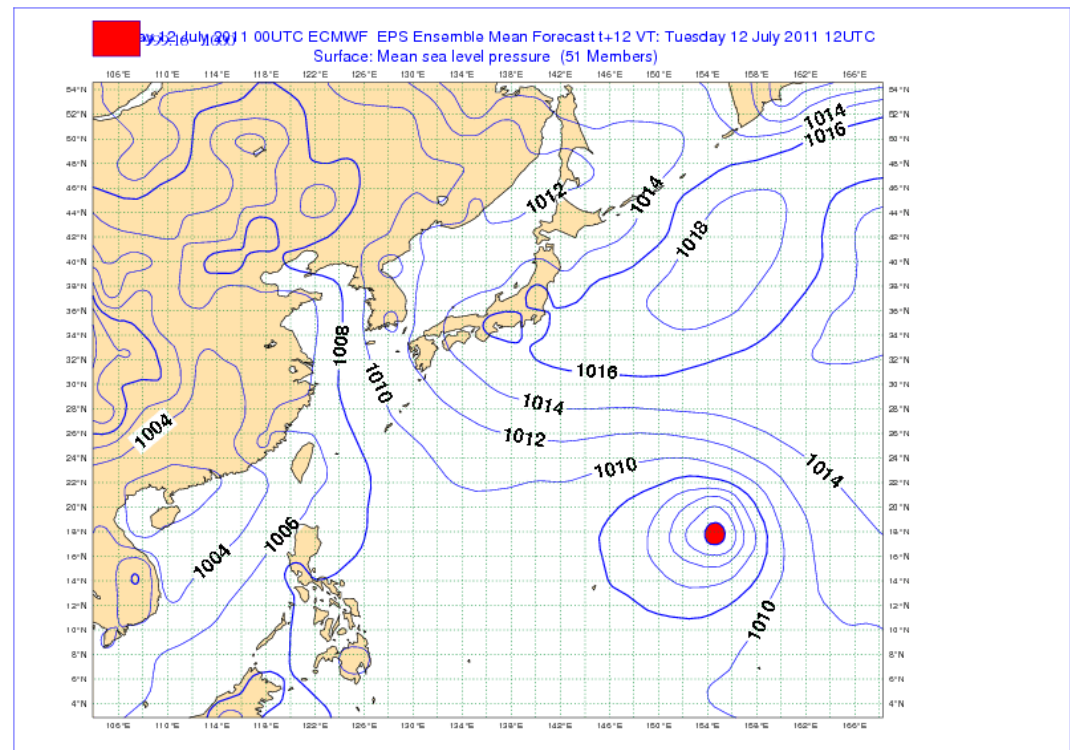
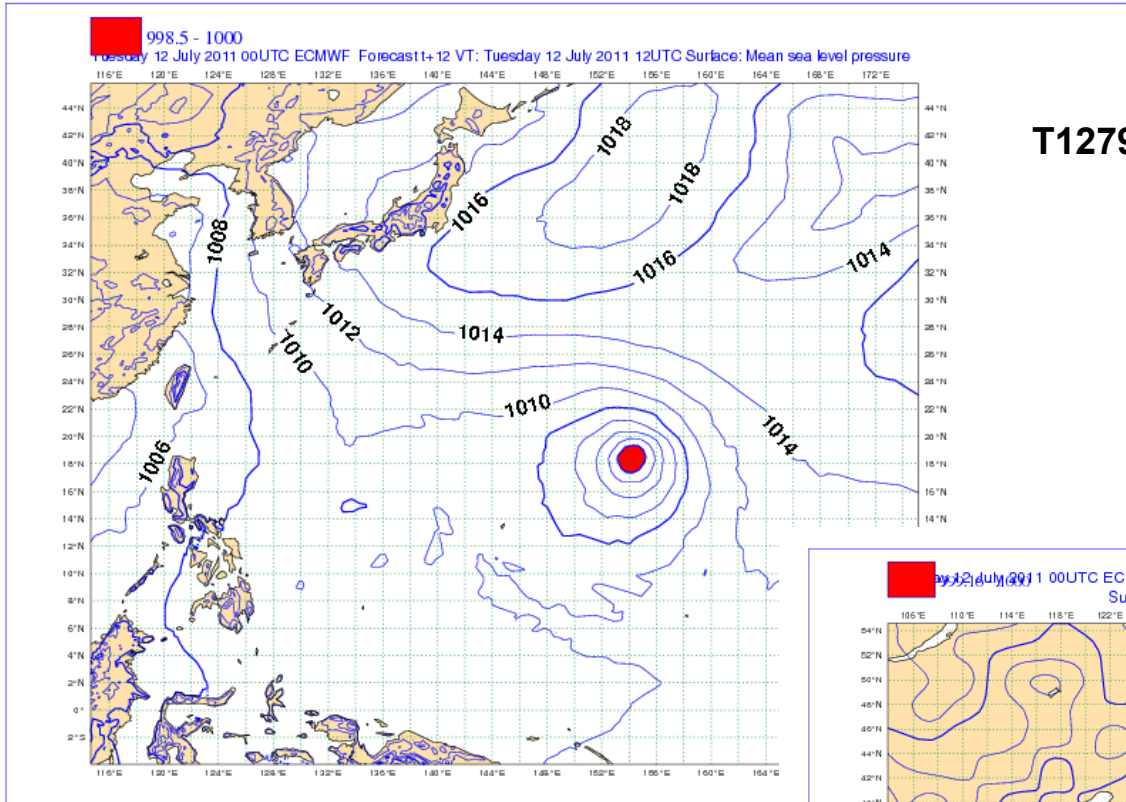
2m Temperature (°C) reduced to the station height from 0 m (T1279) and 2 m (T639)



12/July/2011
00 UTC

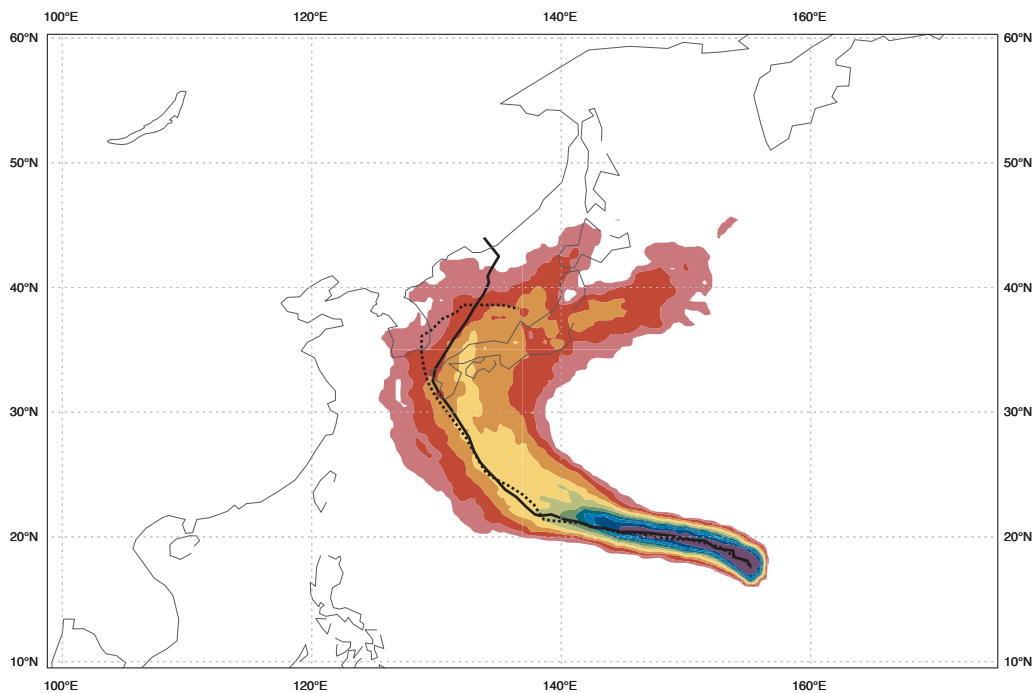
T1279

EPS mean



Date 20110712 00 UTC @ECMWF

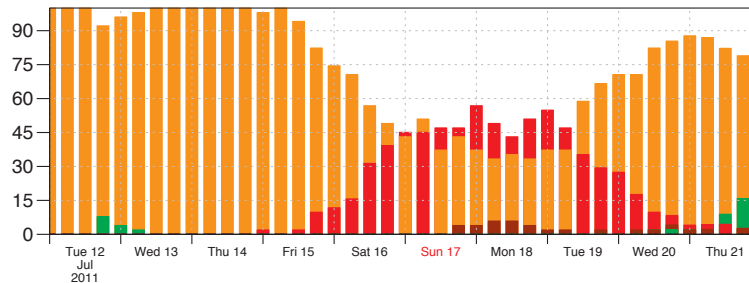
Probability that **09W** will pass within 120 km radius during the next **240** hours
 tracks: **solid**=OPER; **dot**=CTRL



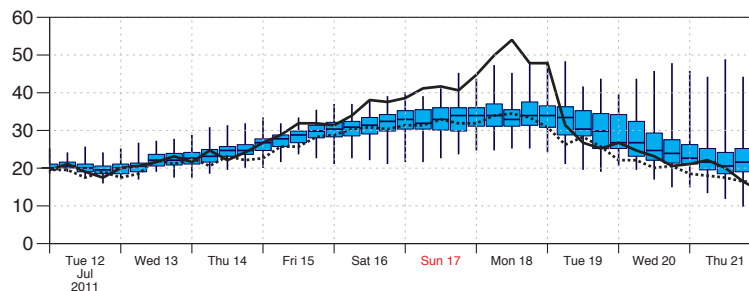
List of ensemble members numbers forecast Tropical Cyclone
 Intensity category in colours: **TD**[up to 16] **TS**[17-32] **HR1**[33-42] **HR2**[43-48] **HR3**[>48 m/s]

+024 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
 +048 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
 +072 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
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 +216 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 14 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
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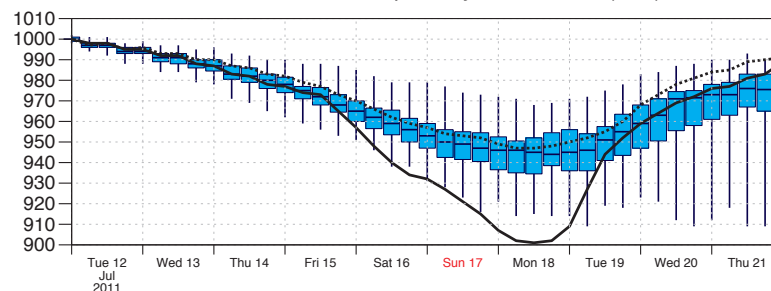
Probability (%) of Tropical Cyclone Intensity falling in each category
TD[up to 16] **TS** [17-32] **HR1**[33-42] **HR2** [43-48] **HR3** [> 48 m/s]



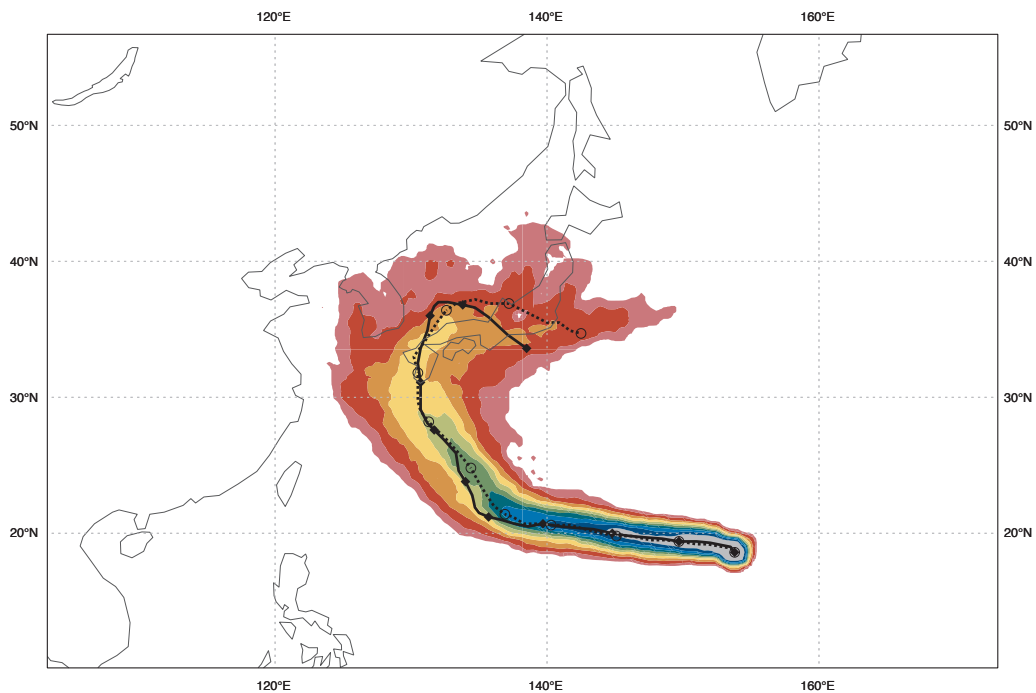
10m Wind Speed (m/s)



Mean Sea Level Pressure in Tropical Cyclone Centre (hPa)



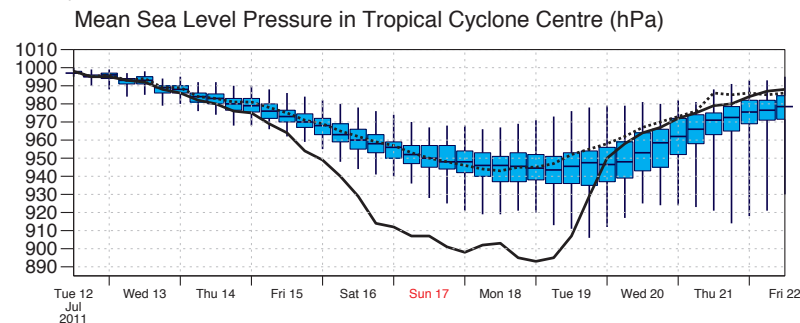
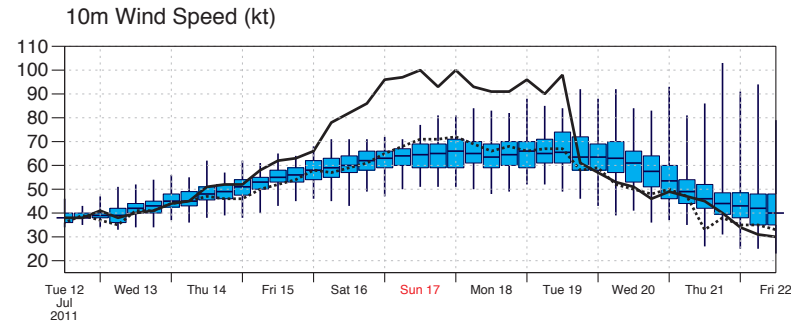
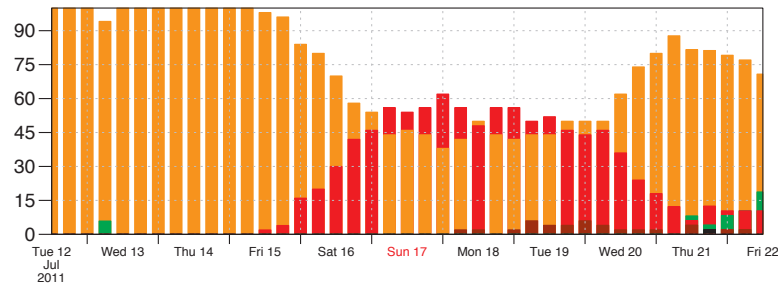
Date 20110712 12 UTC @ECMWF
 Probability that **MA-ON** will pass within 120 km radius during the next **240** hours
 tracks: **solid**=OPER; **dot**=CTRL [reported minimum central pressure (hPa) **996.**]



List of ensemble members numbers forecast Tropical Cyclone
 Intensity category in colours: **TD**[up to 33] **TS**[34-63] **HR1**[64-82] **HR2**[83-95] **HR3**[>95 kt]

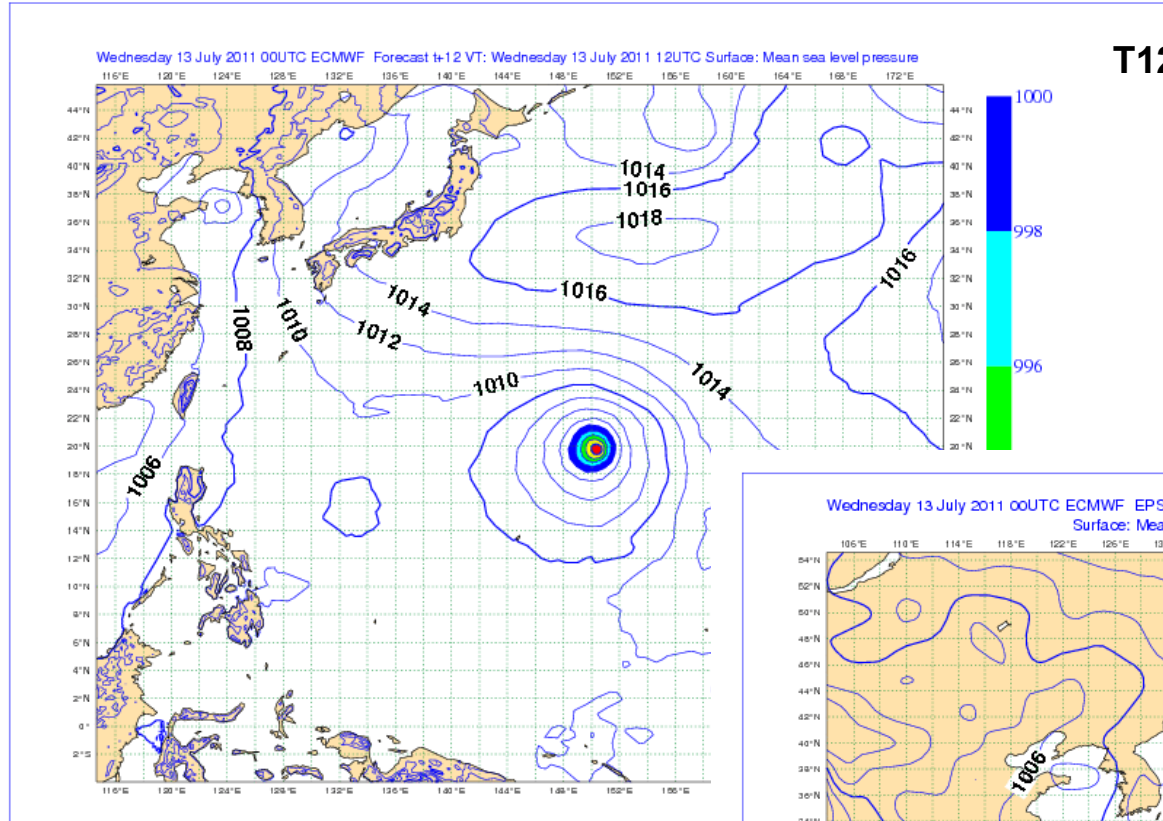
| | | |
|--------|---------|---|
| +024 h | : hr ct | 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 |
| +048 h | : hr ct | 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 |
| +072 h | : hr ct | 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 |
| +096 h | : hr ct | 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 |
| +120 h | : hr ct | 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 |
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| +168 h | : hr ct | 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 |
| +192 h | : hr ct | 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 |
| +216 h | : hr ct | 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 21 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 |
| +240 h | : hr ct | 01 02 03 04 05 06 07 08 10 11 12 13 14 15 16 17 18 19 21 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 |

Probability (%) of Tropical Cyclone Intensity falling in each category
TD[up to 33] **TS**[34-63] **HR1**[64-82] **HR2**[83-95] **HR3**[> 95 kt]

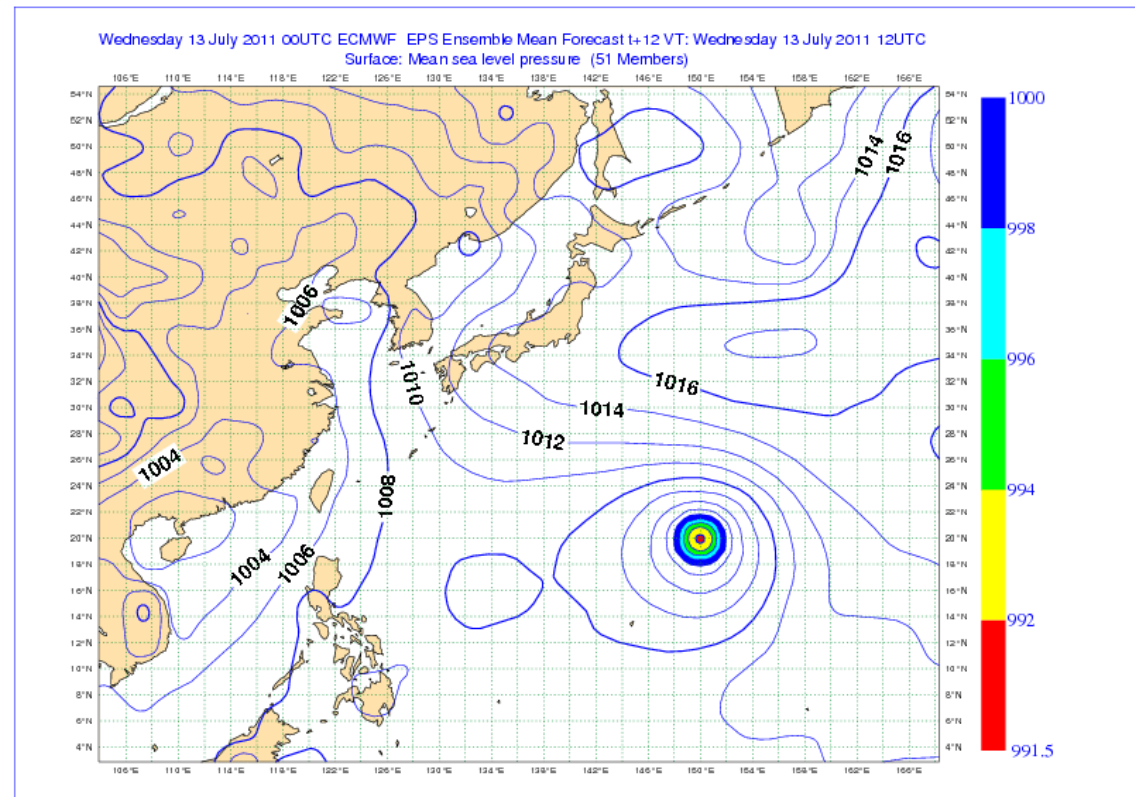


13/July/2011
00 UTC

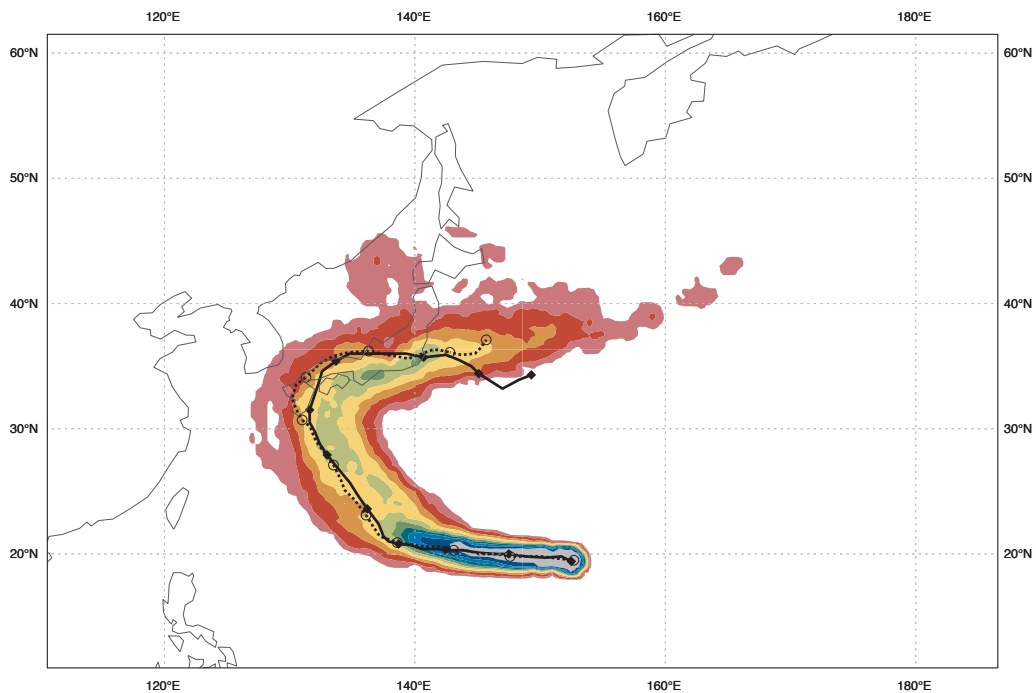
T1279



EPS mean



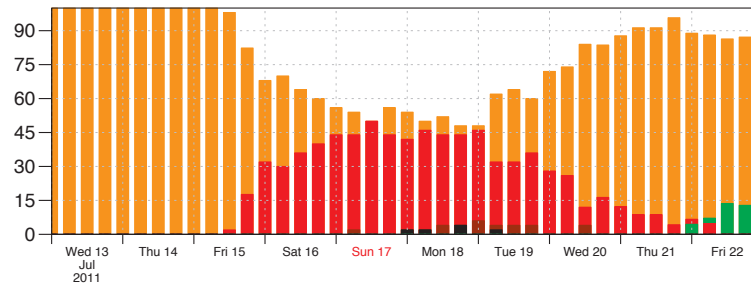
Date 20110713 00 UTC @ECMWF
 Probability that **MA-ON** will pass within 120 km radius during the next **240** hours
 tracks: **solid**=OPER; **dot**=CTRL [reported minimum central pressure (hPa) **985.**]



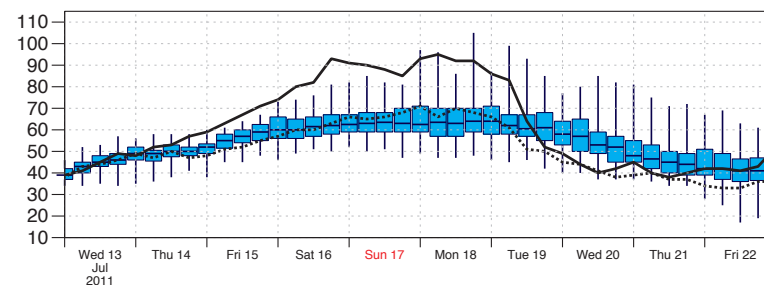
List of ensemble members numbers forecast Tropical Cyclone
 Intensity category in colours: **TD**[up to 33] **TS**[34-63] **HR1**[64-82] **HR2**[83-95] **HR3**[>95 kt]

| | |
|--------|---|
| +024 h | : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 |
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| +096 h | : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 39 40 41 42 43 44 45 46 47 48 49 50 |
| +120 h | : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 39 40 41 42 43 44 45 46 47 48 49 50 |
| +144 h | : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 39 40 41 42 43 44 45 46 47 48 49 50 |
| +168 h | : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 39 40 41 42 43 44 45 46 47 48 49 50 |
| +192 h | : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 36 37 39 40 41 42 43 44 45 46 47 48 49 50 |
| +216 h | : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 15 16 17 18 19 20 21 22 23 25 26 27 28 29 30 32 33 34 36 37 39 40 41 42 43 44 45 47 48 49 50 |
| +240 h | : hr ct 01 02 03 04 05 06 07 08 09 10 11 15 16 17 18 19 20 21 22 24 26 27 29 30 32 33 34 36 39 40 41 43 44 45 47 48 50 |

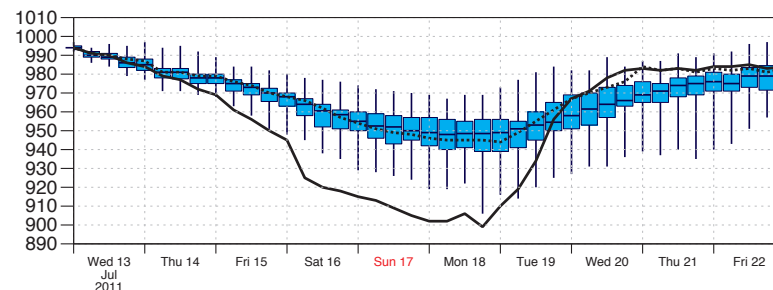
Probability (%) of Tropical Cyclone Intensity falling in each category
TD[up to 33] **TS**[34-63] **HR1**[64-82] **HR2**[83-95] **HR3**[>95 kt]



10m Wind Speed (kt)

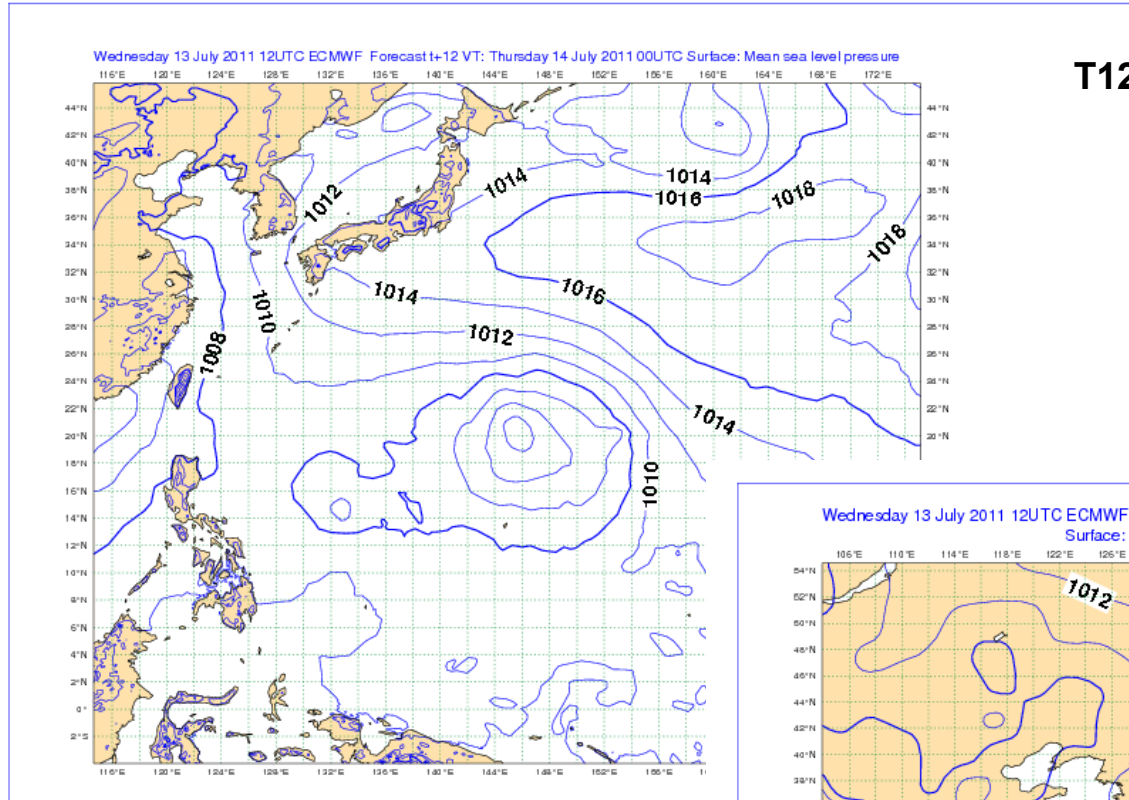


Mean Sea Level Pressure in Tropical Cyclone Centre (hPa)

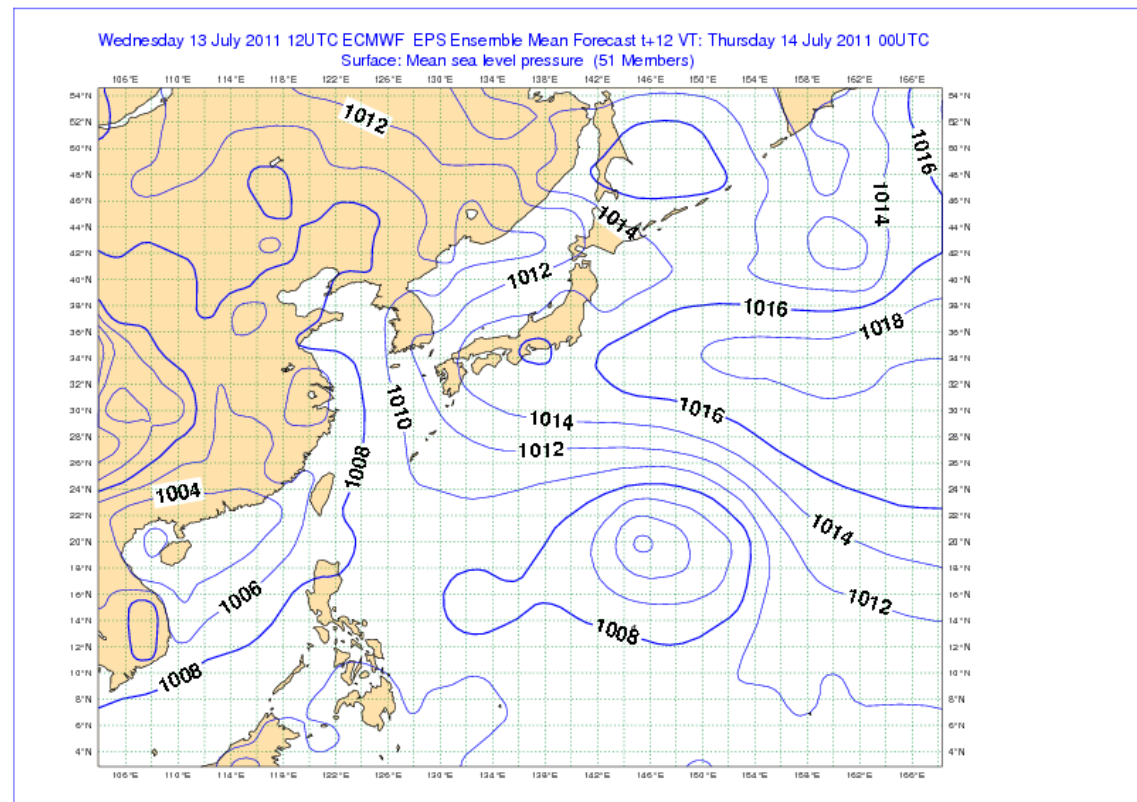


13/July/2011
12 UTC

T1279

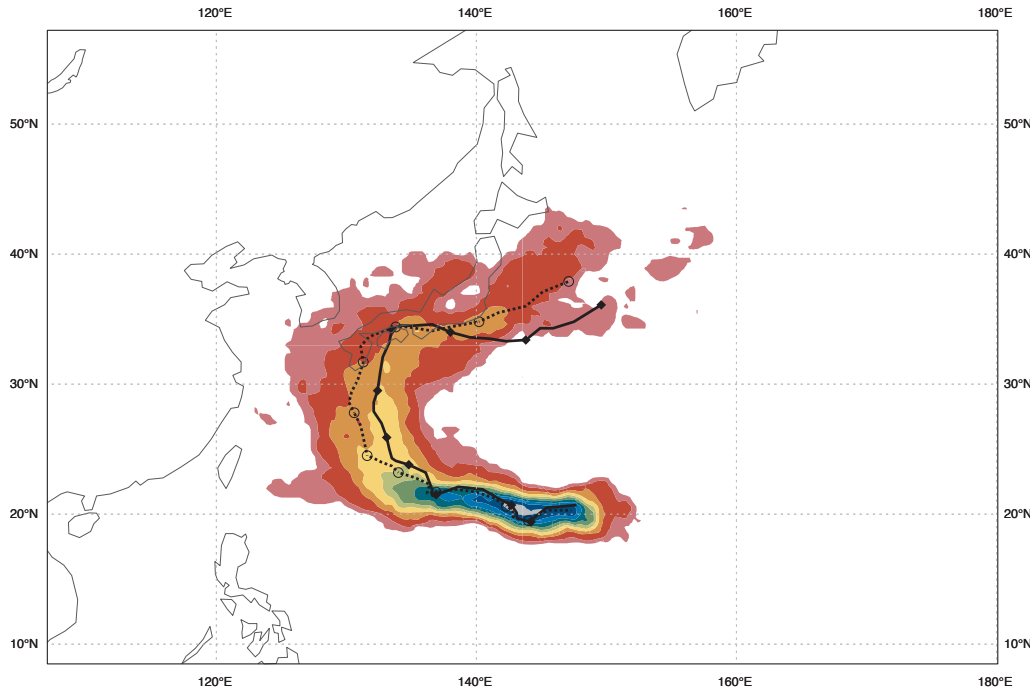


EPS mean



Date 20110713 12 UTC @ECMWF

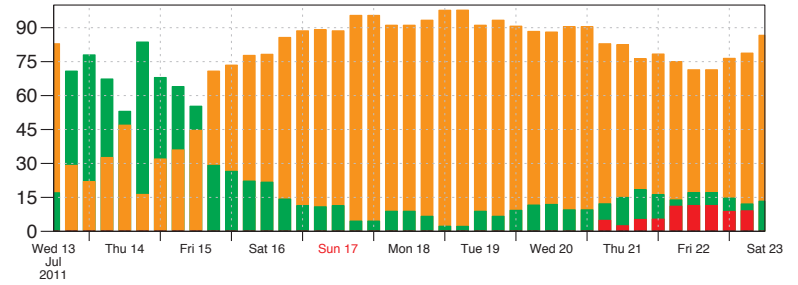
Probability that **MA-ON** will pass within 120 km radius during the next **240** hours
 tracks: **solid**=OPER; **dot**=CTRL [reported minimum central pressure (hPa) **970.**]



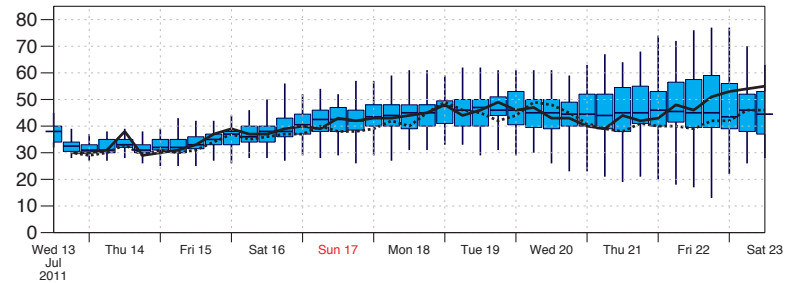
List of ensemble members numbers forecast Tropical Cyclone
 Intensity category in colours: **TD**[up to 33] **TS**[34-63] **HR1**[64-82] **HR2**[83-95] **HR3**[>95 kt]

| | | |
|--|--|--|
| +024 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 | 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 | 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 |
| +048 h : hr ct 01 02 03 04 05 06 07 08 | 10 11 12 13 14 16 17 18 19 20 21 22 23 24 25 26 | 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 50 |
| +072 h : hr ct 01 02 03 04 06 07 08 09 10 11 12 14 | 16 17 18 19 20 21 22 23 24 | 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 |
| +096 h : hr ct 01 02 03 04 05 06 07 08 | 10 11 12 16 17 18 19 20 21 22 23 | 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 46 47 48 49 50 |
| +120 h : hr ct 01 02 03 04 05 06 07 08 | 10 11 12 16 17 18 19 20 21 22 23 24 | 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 46 47 48 49 50 |
| +144 h : hr ct 01 02 03 04 05 06 07 08 | 10 11 12 16 17 18 19 20 21 22 23 24 | 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 46 47 48 49 50 |
| +168 h : hr ct 01 02 03 04 06 07 08 | 10 11 12 16 17 18 19 20 21 22 23 24 | 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 46 47 48 50 |
| +192 h : hr ct 01 02 03 04 06 07 08 | 10 11 16 17 18 19 20 21 22 23 | 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 46 47 48 50 |
| +216 h : hr ct 01 02 03 04 06 07 08 | 10 16 17 18 19 20 21 22 23 | 26 27 28 29 30 32 33 34 35 36 38 39 40 41 42 43 46 48 |
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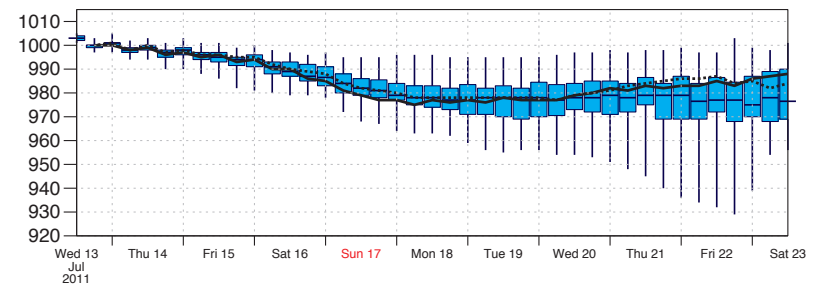
Probability (%) of Tropical Cyclone Intensity falling in each category
TD[up to 33] **TS**[34-63] **HR1**[64-82] **HR2**[83-95] **HR3**[>95 kt]



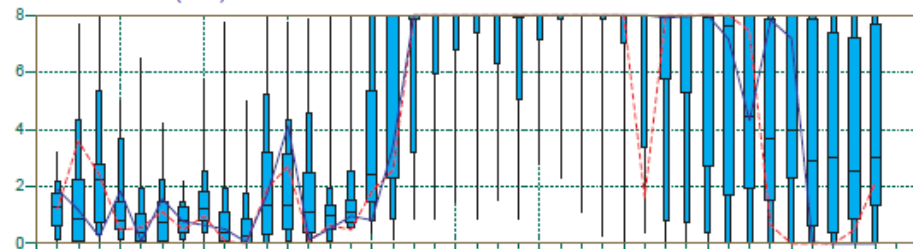
10m Wind Speed (kt)



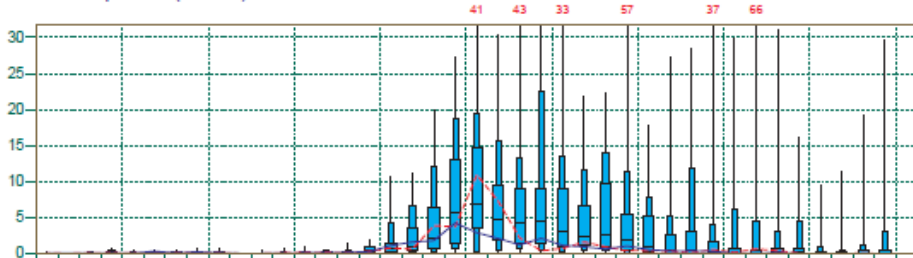
Mean Sea Level Pressure in Tropical Cyclone Centre (hPa)



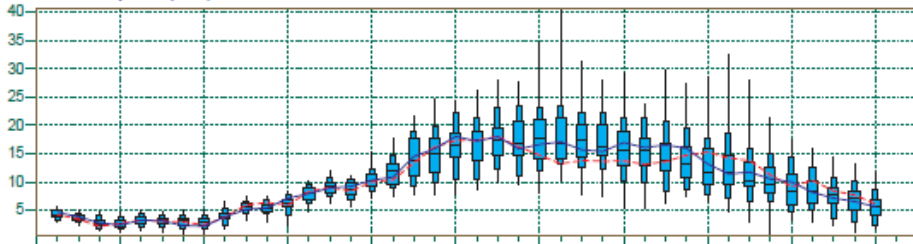
EPS Meteogram
 SW 31.9°N 136.96°E (EPS sea point) 0 m (T1279)
 Deterministic Forecast and EPS Distribution Wednesday 13 July 2011 00 UTC
 Total Cloud Cover (okta)



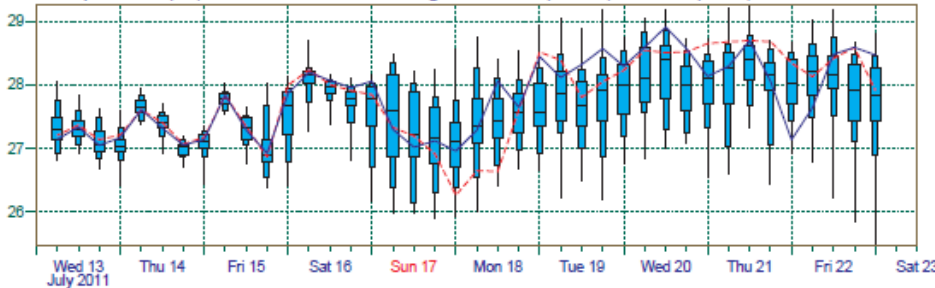
Total Precipitation (mm/6h)



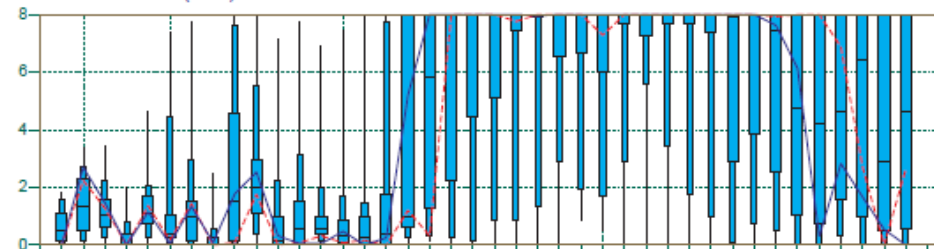
10m Wind Speed (m/s)



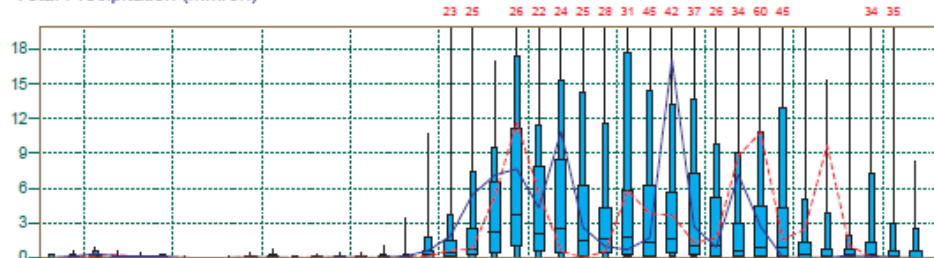
2m Temperature (°C) reduced to the station height from 0 m (T1279) and 2 m (T639)



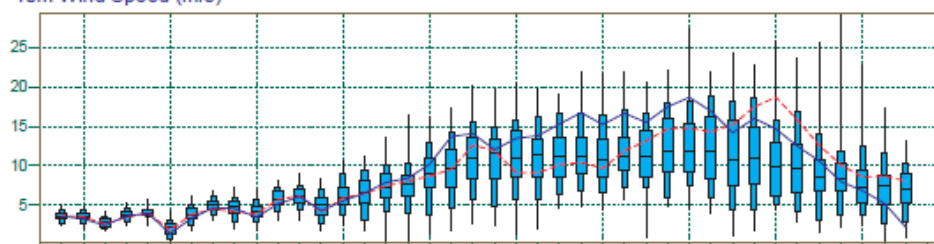
EPS Meteogram
 SW 31.9°N 136.96°E (EPS sea point) 0 m (T1279)
 Deterministic Forecast and EPS Distribution Wednesday 13 July 2011 12 UTC
 Total Cloud Cover (okta)



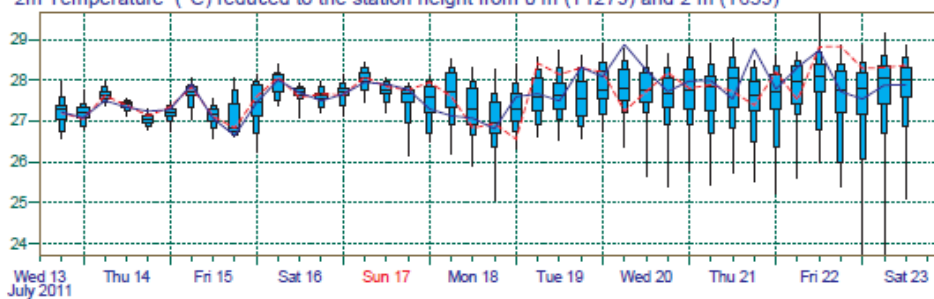
Total Precipitation (mm/6h)



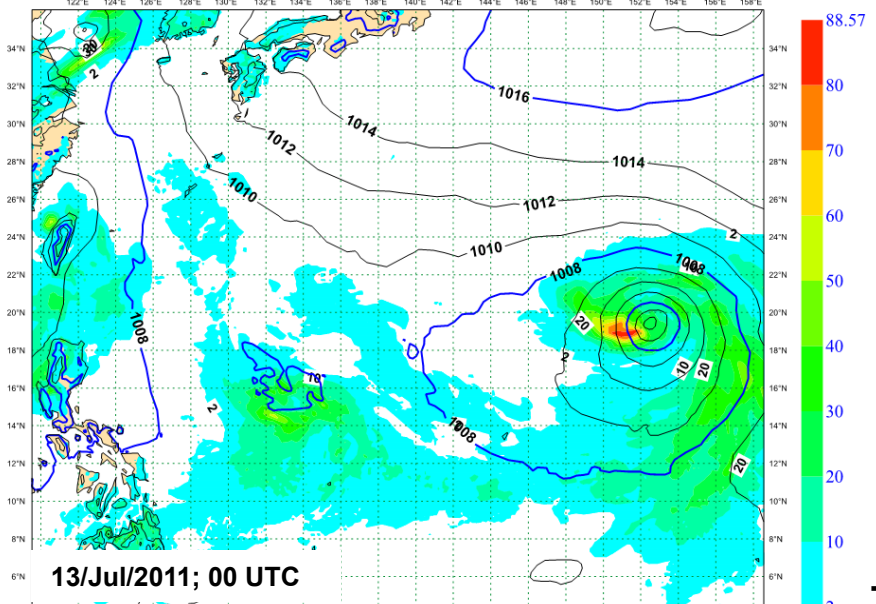
10m Wind Speed (m/s)



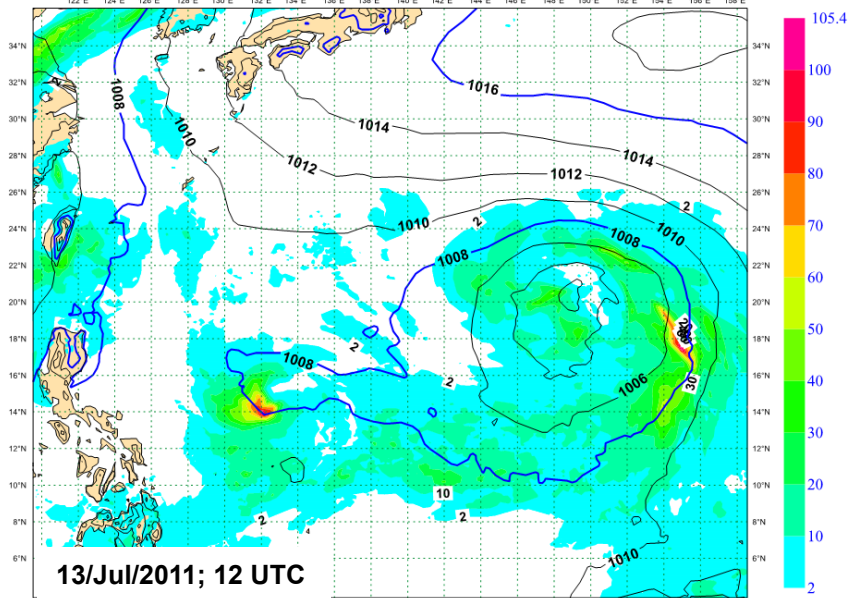
2m Temperature (°C) reduced to the station height from 0 m (T1279) and 2 m (T639)



ECMWF Analysis VT: Wednesday 13 July 2011 00UTC Surface: Mean sea level pressure
 Wednesday 13 July 2011 00UTC ECMWF Forecast +12 VT: Wednesday 13 July 2011 12UTC Surface: **Stratiform precipitation (Large-scale precipitation)

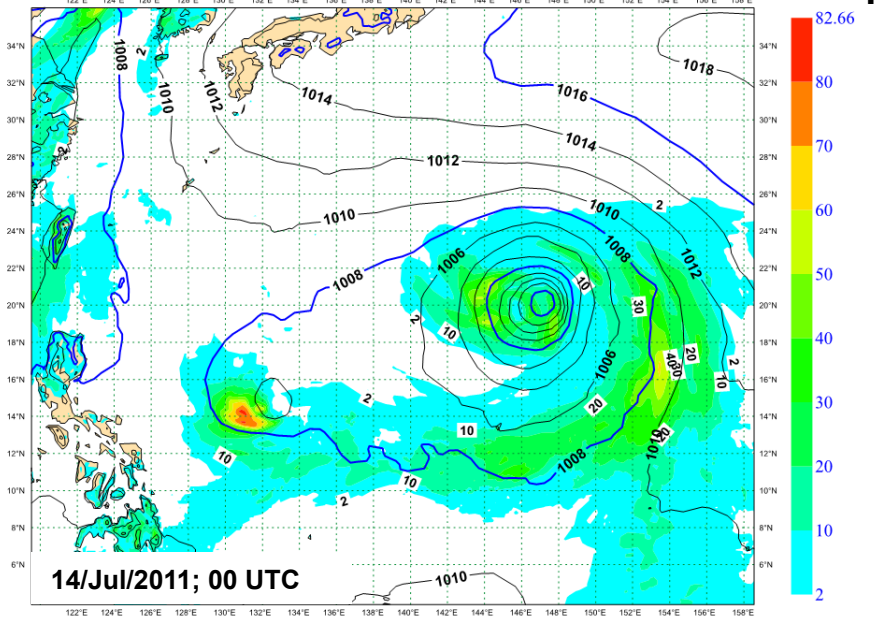


ECMWF Analysis VT: Wednesday 13 July 2011 12UTC Surface: Mean sea level pressure
 Wednesday 13 July 2011 12UTC ECMWF Forecast +12 VT: Thursday 14 July 2011 00UTC Surface: **Stratiform precipitation (Large-scale precipitation)

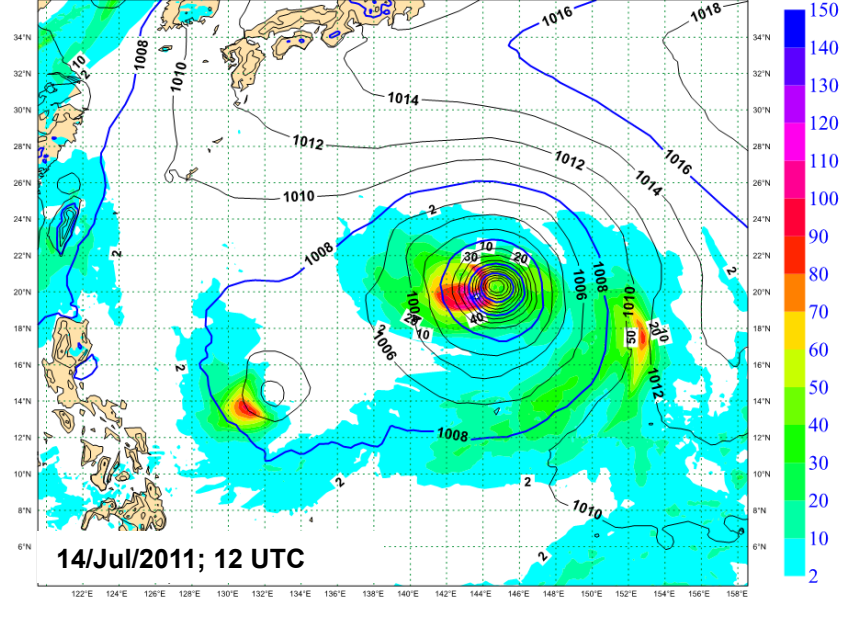


T1279 AN
 H+12 prec

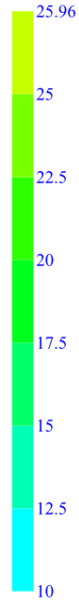
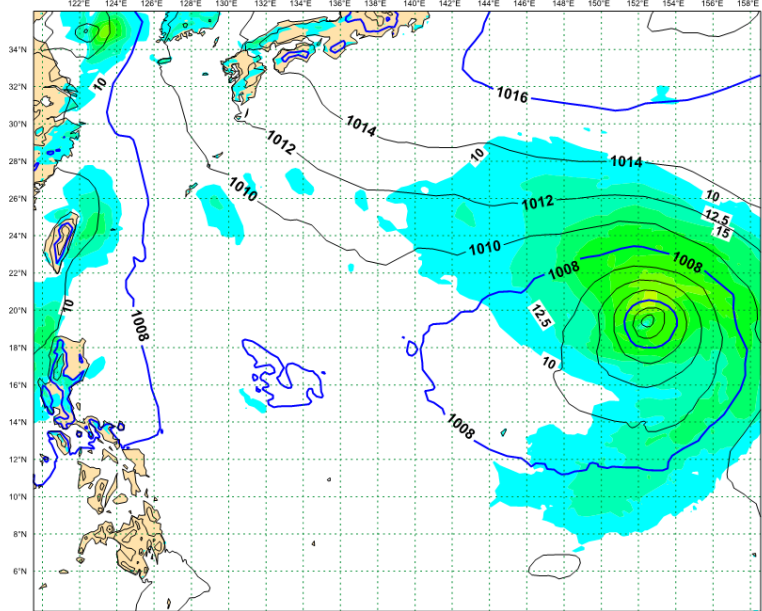
ECMWF Analysis VT: Thursday 14 July 2011 00UTC Surface: Mean sea level pressure
 Thursday 14 July 2011 00UTC ECMWF Forecast +12 VT: Thursday 14 July 2011 12UTC Surface: **Stratiform precipitation (Large-scale precipitation)



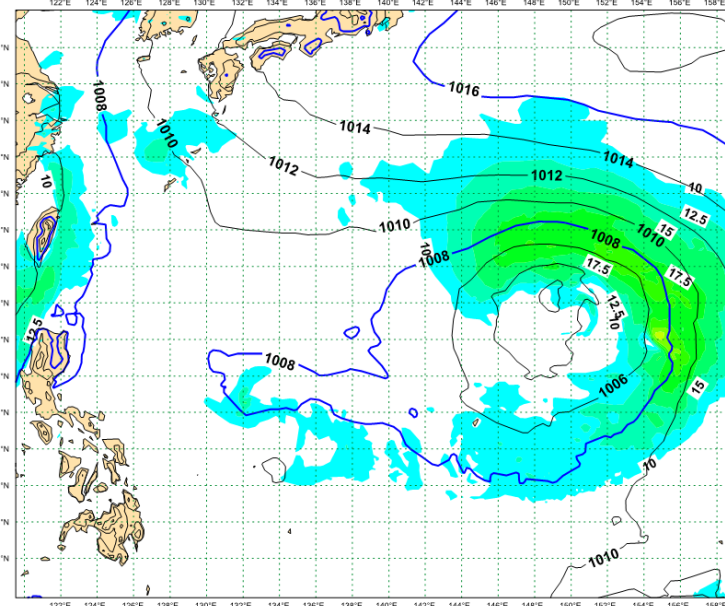
ECMWF Analysis VT: Thursday 14 July 2011 12UTC Surface: Mean sea level pressure
 Thursday 14 July 2011 12UTC ECMWF Forecast +12 VT: Friday 15 July 2011 00UTC Surface: **Stratiform precipitation (Large-scale precipitation)



ECMWF Analysis VT: Wednesday 13 July 2011 00UTC Surface: Mean sea level pressure
 Wednesday 13 July 2011 00UTC ECMWF Forecast t+(0-3) VT: Wednesday 13 July 2011 03UTC Surface: 10 metre wind gust

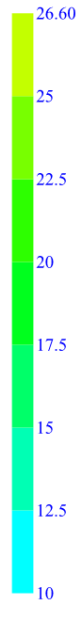
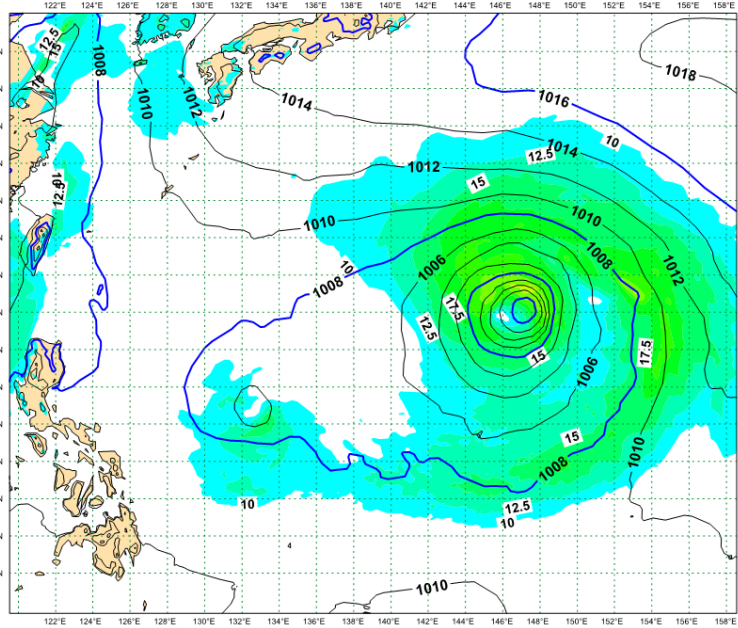


ECMWF Analysis VT: Wednesday 13 July 2011 12UTC Surface: Mean sea level pressure
 Wednesday 13 July 2011 12UTC ECMWF Forecast t+(0-3) VT: Wednesday 13 July 2011 15UTC Surface: 10 metre wind gust

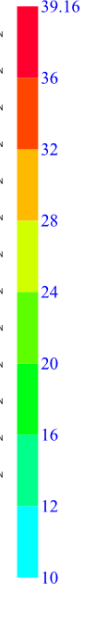
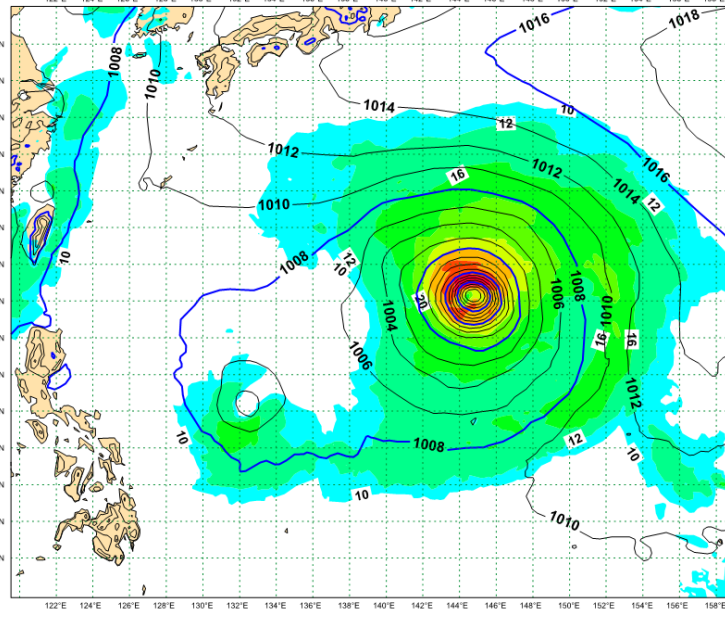


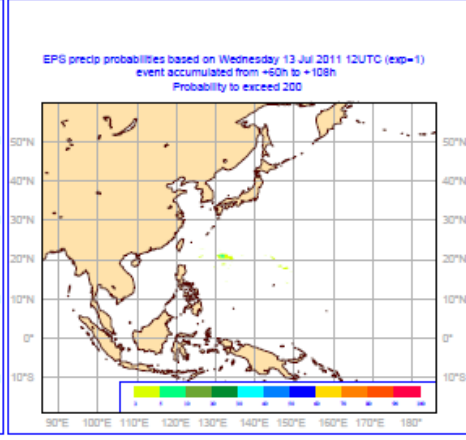
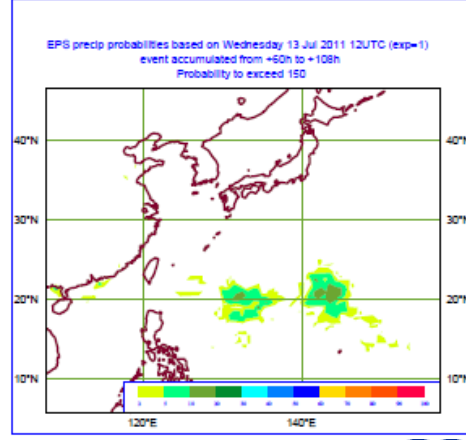
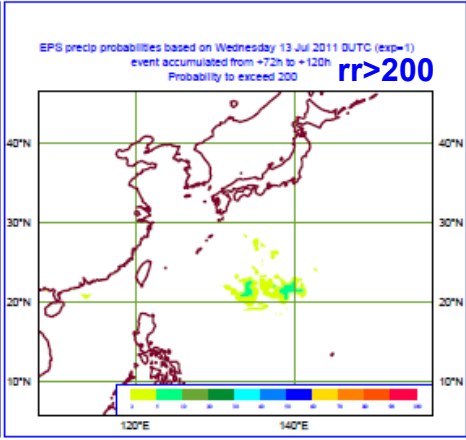
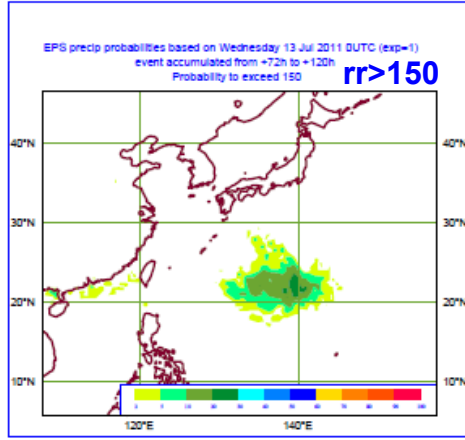
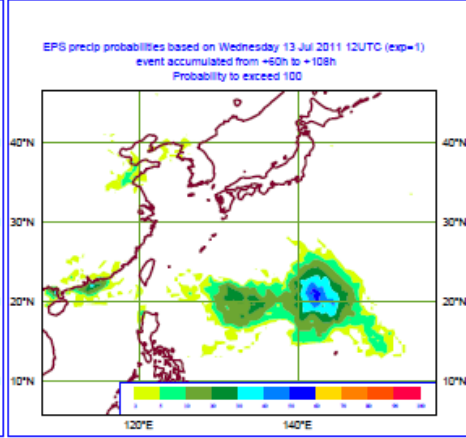
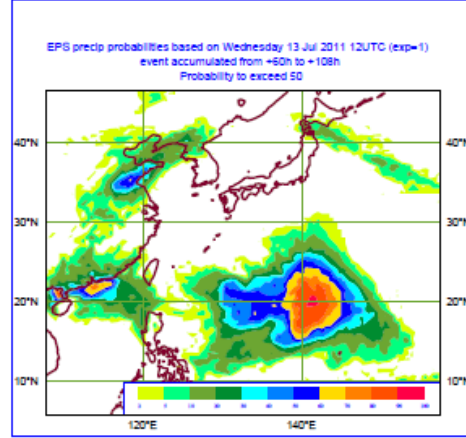
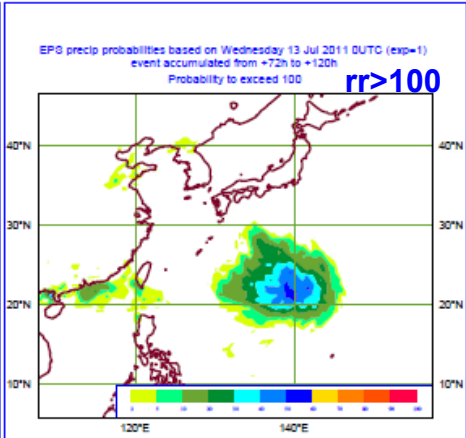
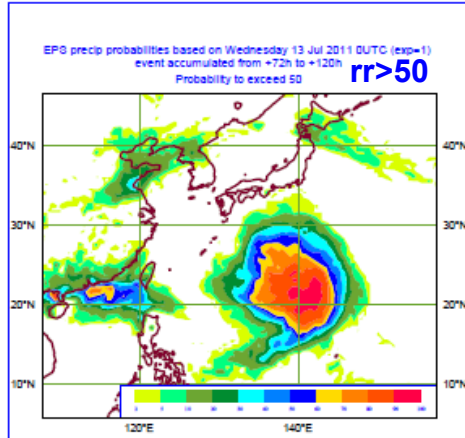
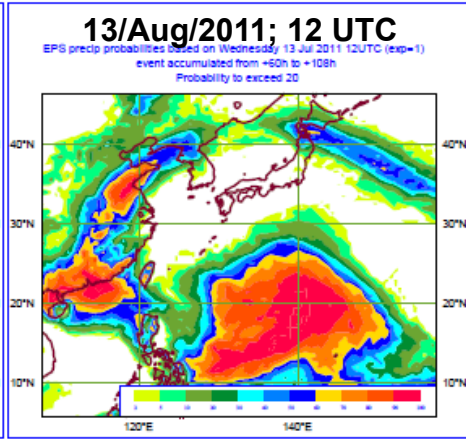
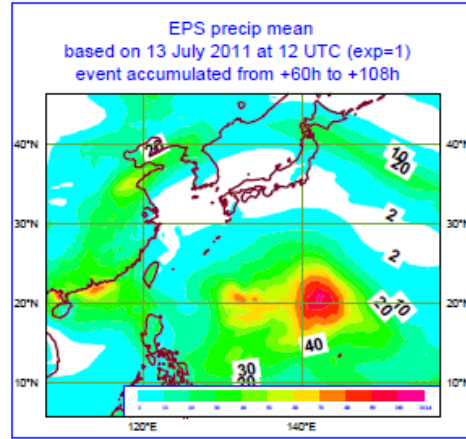
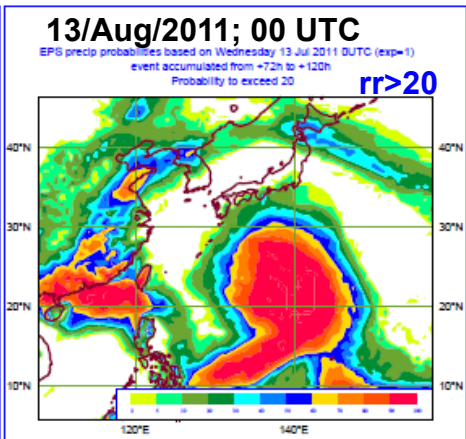
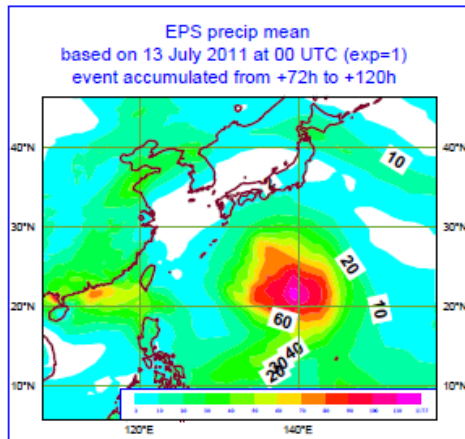
**T1279 AN
 H+3
 windgusts**

ECMWF Analysis VT: Thursday 14 July 2011 00UTC Surface: Mean sea level pressure
 Thursday 14 July 2011 00UTC ECMWF Forecast t+(0-3) VT: Thursday 14 July 2011 03UTC Surface: 10 metre wind gust

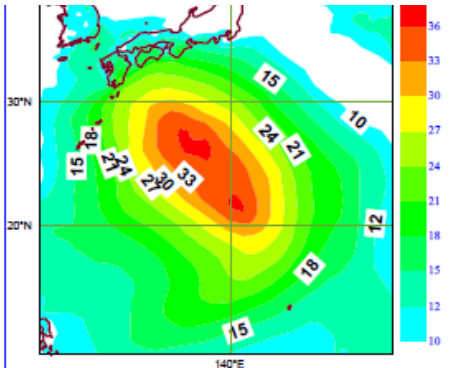


ECMWF Analysis VT: Thursday 14 July 2011 12UTC Surface: Mean sea level pressure
 Thursday 14 July 2011 12UTC ECMWF Forecast t+(0-3) VT: Thursday 14 July 2011 15UTC Surface: 10 metre wind gust

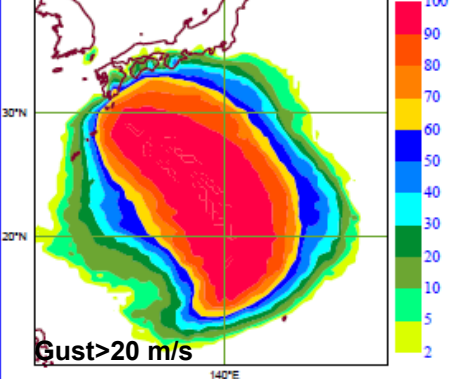




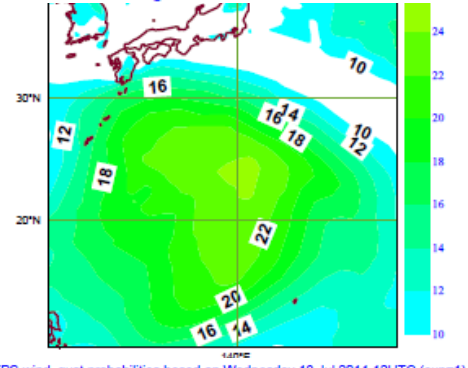
EPS wind_gust mean (of maximum values from all timesteps)
based on 13 July 2011 at 00 UTC (exp=1)
event occurring at least once from +72h to +120h



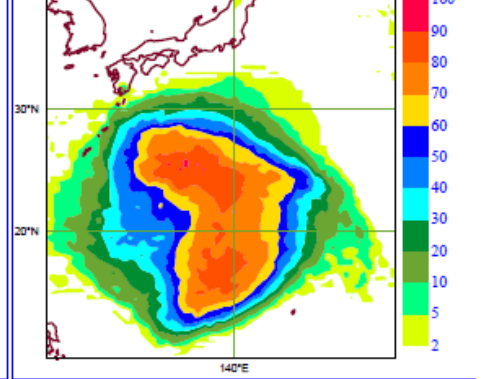
EPS wind_gust probabilities based on Wednesday 13 Jul 2011 00 UTC (exp=1)
event occurring at least once from +72h to +120h
Probability to exceed 20



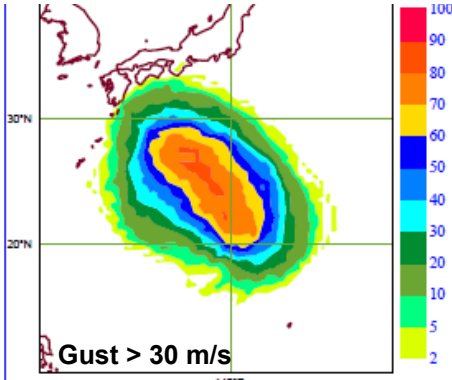
EPS wind_gust mean (of maximum values from all timesteps)
based on 13 July 2011 at 12 UTC (exp=1)
event occurring at least once from +80h to +108h



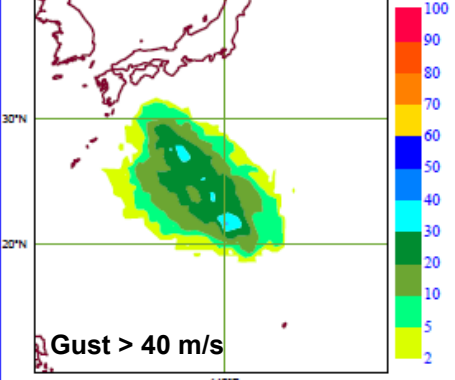
EPS wind_gust probabilities based on Wednesday 13 Jul 2011 12 UTC (exp=1)
event occurring at least once from +80h to +108h
Probability to exceed 20



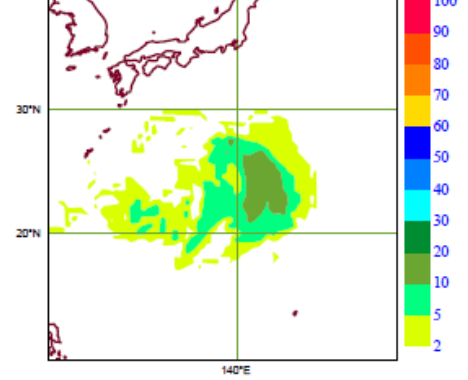
EPS wind_gust probabilities based on Wednesday 13 Jul 2011 00 UTC (exp=1)
event occurring at least once from +72h to +120h
Probability to exceed 30



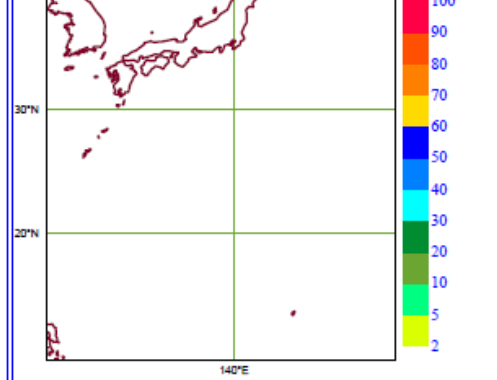
EPS wind_gust probabilities based on Wednesday 13 Jul 2011 00 UTC (exp=1)
event occurring at least once from +72h to +120h
Probability to exceed 40



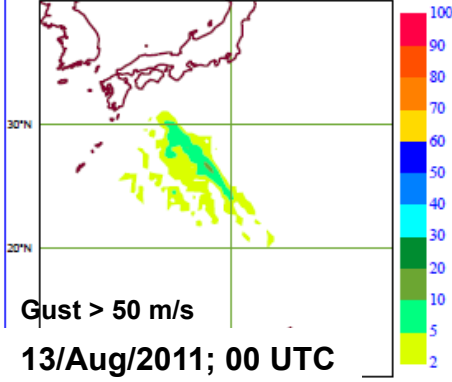
EPS wind_gust probabilities based on Wednesday 13 Jul 2011 12 UTC (exp=1)
event occurring at least once from +80h to +108h
Probability to exceed 30



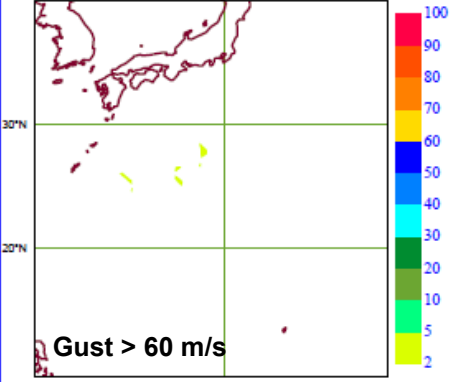
EPS wind_gust probabilities based on Wednesday 13 Jul 2011 12 UTC (exp=1)
event occurring at least once from +80h to +108h
Probability to exceed 40



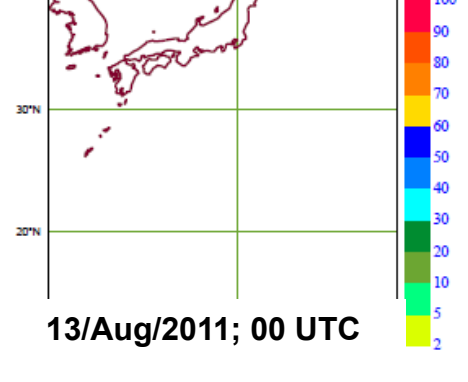
EPS wind_gust probabilities based on Wednesday 13 Jul 2011 00 UTC (exp=1)
event occurring at least once from +72h to +120h
Probability to exceed 50



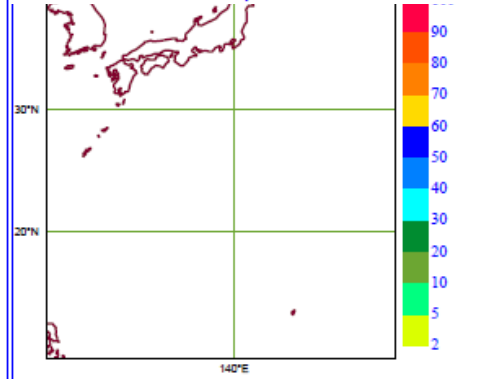
EPS wind_gust probabilities based on Wednesday 13 Jul 2011 00 UTC (exp=1)
event occurring at least once from +72h to +120h
Probability to exceed 60



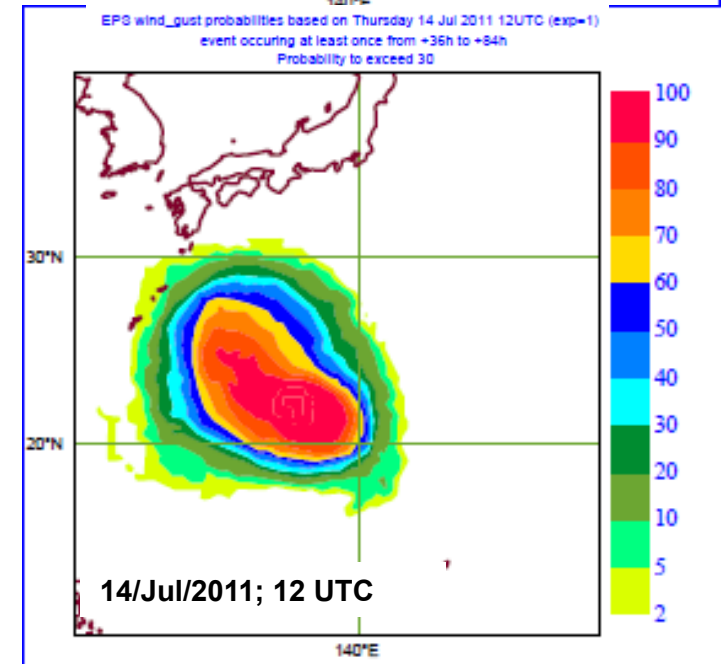
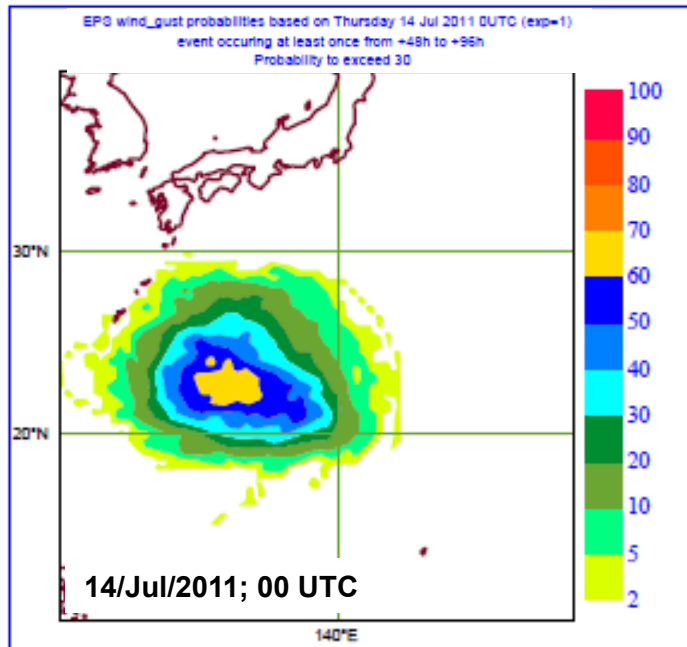
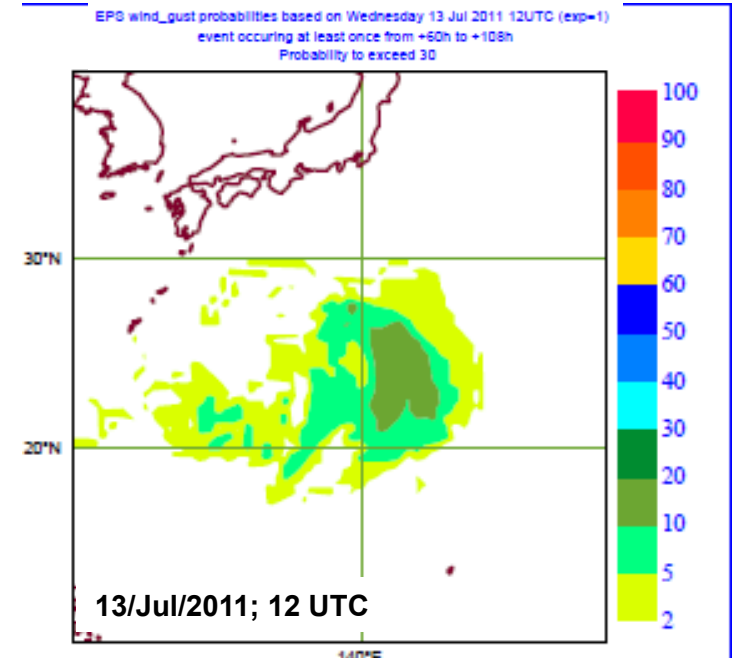
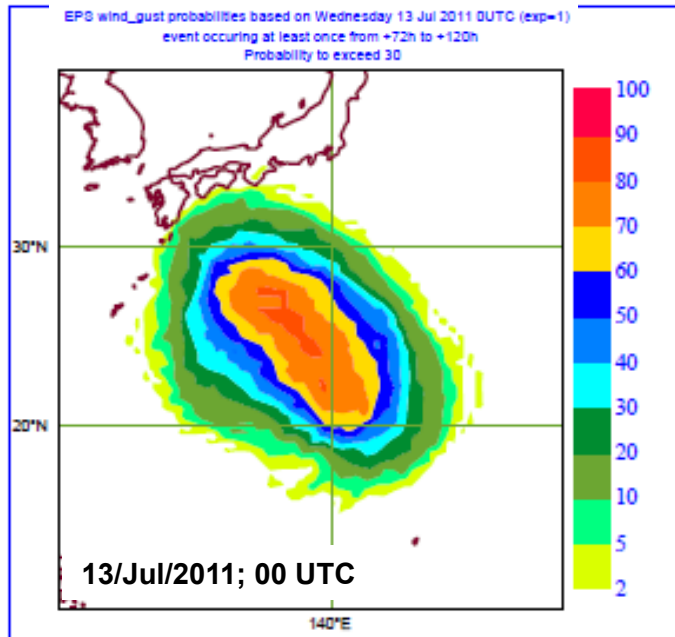
EPS wind_gust probabilities based on Wednesday 13 Jul 2011 12 UTC (exp=1)
event occurring at least once from +80h to +108h
Probability to exceed 50



EPS wind_gust probabilities based on Wednesday 13 Jul 2011 12 UTC (exp=1)
event occurring at least once from +80h to +108h
Probability to exceed 60



Probabilities of wind gusts exceeding 30 m/s 16 to 18 July 2011





ECMWF Daily Meteorological Operations Summary

By Antonio

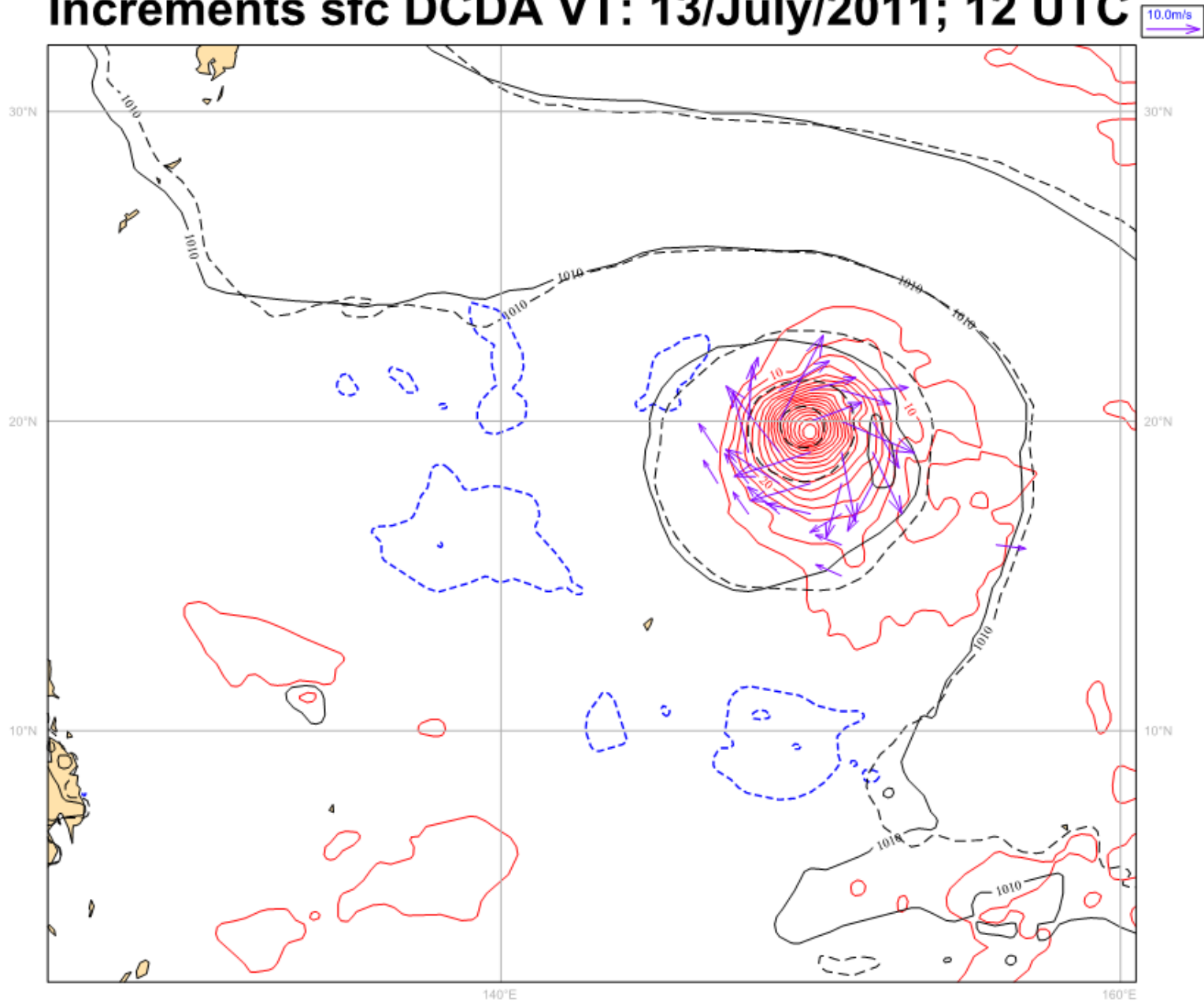
14.07.2011

2 DATA QUALITY, FIRST-GUESS AND ANALYSIS QUALITY

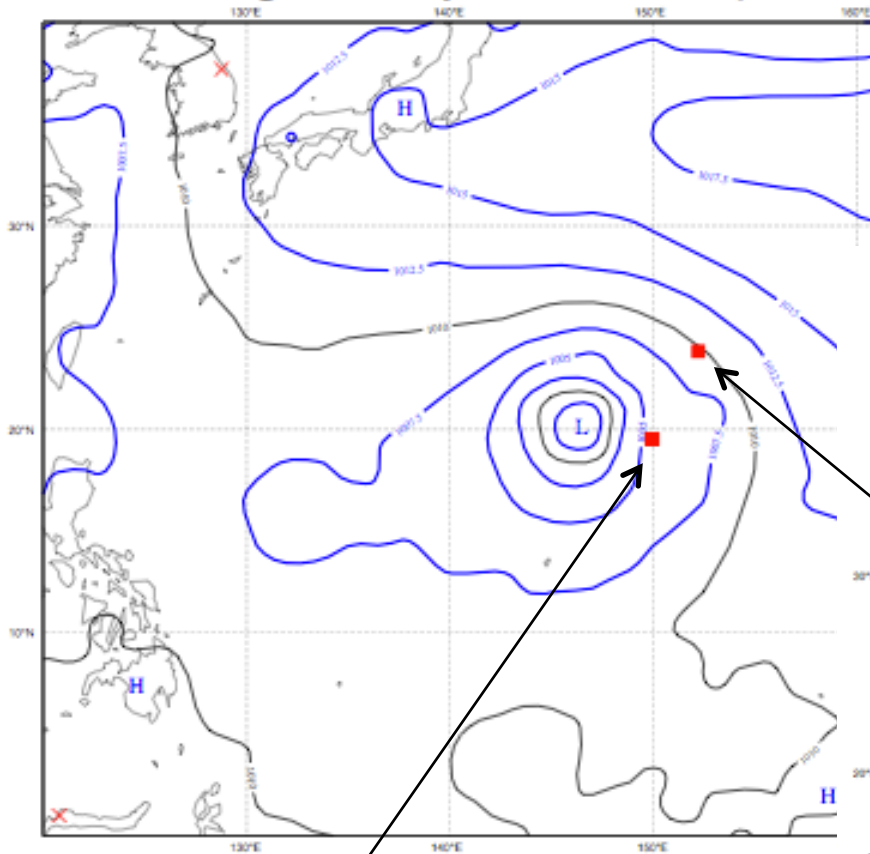
2.1 Significant increments

Increments on Typhoon MA-ON at 12 and 00 UTC. The increments at 12 UTC strongly deteriorated the analysis and as result the forecast. The increments at 00 UTC produced again a deeper low and a better forecast. At 12 UTC a single Buoy reporting from the center of the typhoon introduced the errors. The buoy with Id: 21944 got a faulty pressure sensor since the beginning of July and is introducing noisy departures from the model(see the time series). The pressure observation was accepted with low weight producing a wrong analysis of the typhoon. Broken sensors in buoys happen from time to time and they come to light when updating the blacklist. Before that we could use the history of individual platforms which is the base for the pressure bias correction to detect faulty sensors and activate an automatic blacklist. This buoy is not blacklisted either in Meteo France or UKMO although is more than likely that their assimilation rejected the observation.

Increments sfc DCDA VT: 13/July/2011; 12 UTC



ECMWF Analysis o_suite VT: 14 Jul 2011 MSL & weight lt 0.2 pressure data (not bla

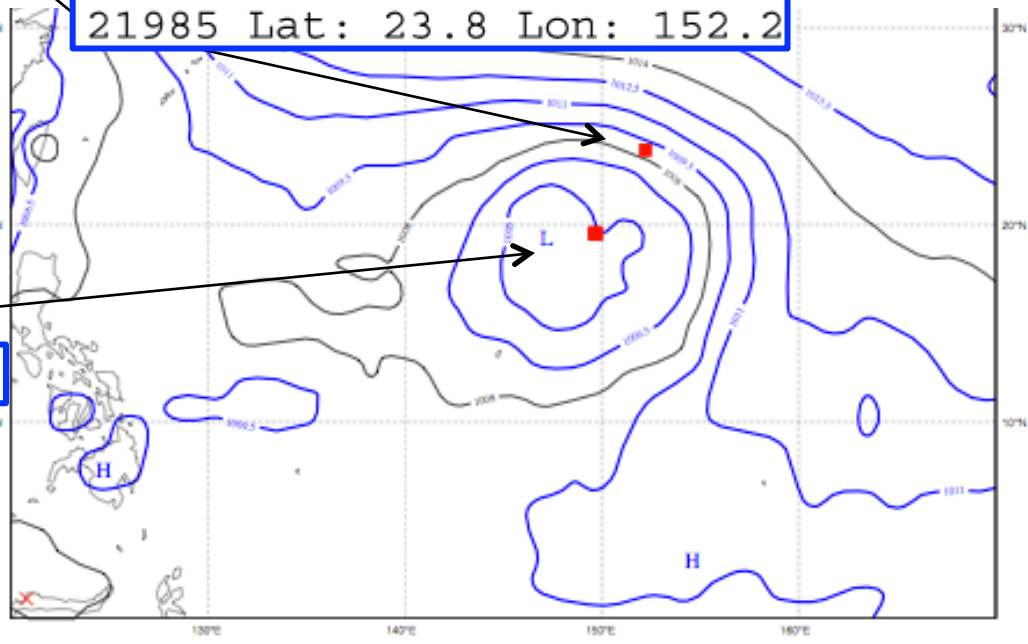


21994 Lat: 19.5 Lon: 149.7

ECMWF_Data_Monitoring

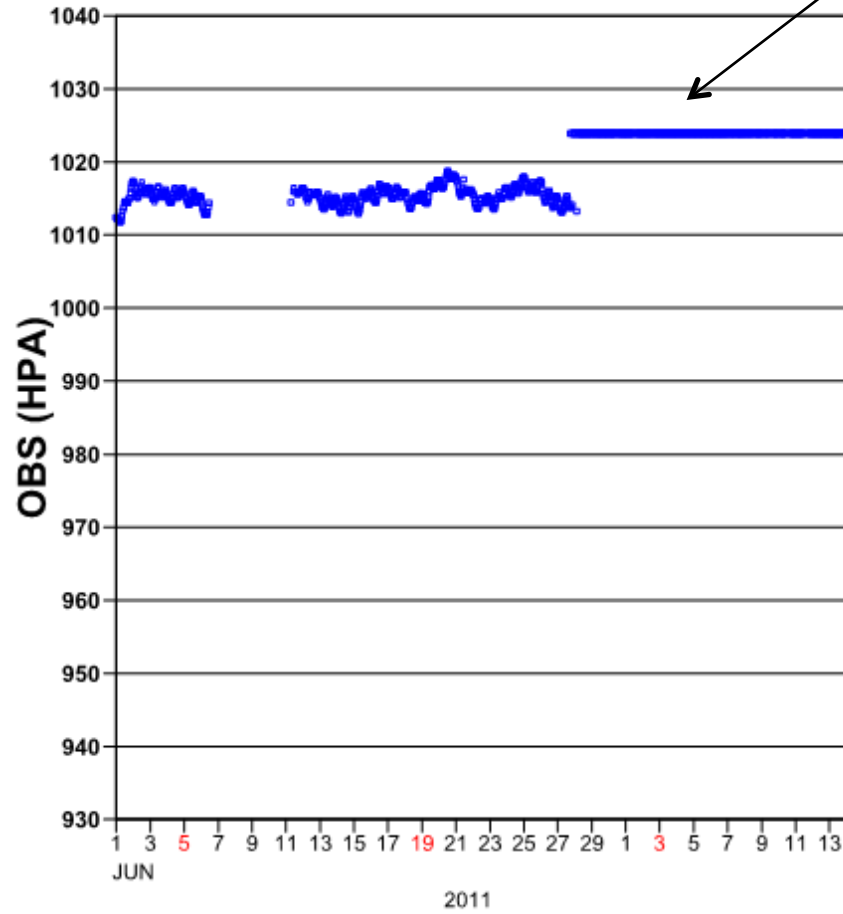
| BUOY | 21985 Lat: 23.8 Lon: 152.2 | Type/subst: | 4 | 21 Date: 2011-07-13 12:00:00 | Corrp |
|-------------|----------------------------|-------------|--------|------------------------------|---------------------------------------|
| Pr1 | Pr2 | Tk | Rh | Wind | |
| OBS: 1023.9 | 0010 1014.1 | 1010 | 9999.9 | 0000 | 9999.9 0000 999999 0000 9.8 qc: 0.89 |
| DFG: 15.8 | 6.0 | 9999.9 | 9999.9 | 9999.9 | |
| DAN: 15.4 | 5.6 | 9999.9 | 9999.9 | 9999.9 | |
| BUOY | 21994 Lat: 19.5 Lon: 149.7 | Type/subst: | 4 | 21 Date: 2011-07-13 11:30:00 | Corrp |
| OBS: 1023.9 | 0010 1010.8 | 1010 | 9999.9 | 0000 | 9999.9 0000 999999 0000 13.1 qc: 0.92 |
| DFG: 31.1 | 18.0 | 9999.9 | 9999.9 | 9999.9 | |
| DAN: 20.7 | 7.6 | 9999.9 | 9999.9 | 9999.9 | |
| BUOY | 21994 Lat: 19.6 Lon: 149.7 | Type/subst: | 4 | 21 Date: 2011-07-13 09:30:00 | Corrp |
| OBS: 1023.9 | 0010 1010.8 | 1010 | 9999.9 | 0000 | 9999.9 0000 999999 0000 13.1 qc: 0.93 |
| DFG: 28.4 | 15.3 | 9999.9 | 9999.9 | 9999.9 | |
| DAN: 21.3 | 8.2 | 9999.9 | 9999.9 | 9999.9 | |
| BUOY | 21994 Lat: 19.5 Lon: 149.7 | Type/subst: | 4 | 21 Date: 2011-07-13 14:30:00 | Corrp |
| OBS: 1023.9 | 0010 1010.8 | 1010 | 9999.9 | 0000 | 9999.9 0000 999999 0000 13.1 qc: 0.93 |
| DFG: 31.2 | 18.1 | 9999.9 | 9999.9 | 9999.9 | |
| DAN: 21.3 | 8.2 | 9999.9 | 9999.9 | 9999.9 | |
| BUOY | 21994 Lat: 19.5 Lon: 149.7 | Type/subst: | 4 | 21 Date: 2011-07-13 13:30:00 | Corrp |
| OBS: 1023.9 | 0010 1010.8 | 1010 | 9999.9 | 0000 | 9999.9 0000 999999 0000 13.1 qc: 0.92 |
| DFG: 31.9 | 18.8 | 9999.9 | 9999.9 | 9999.9 | |
| DAN: 20.6 | 7.5 | 9999.9 | 9999.9 | 9999.9 | |

21985 Lat: 23.8 Lon: 152.2



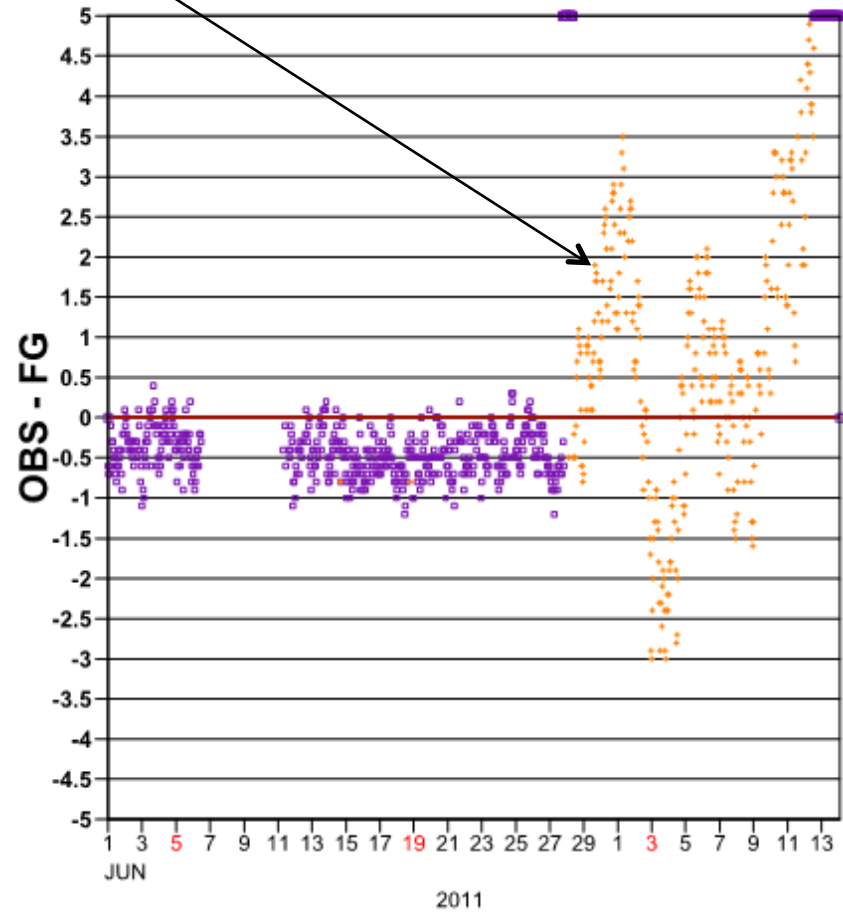
Stuck pressure sensor

SHIP/BUOY 21994 (19.5N,149.7E)
PRESSURE



NO. OF OBS: 866 MEAN: 1018.9 STD: 4.3

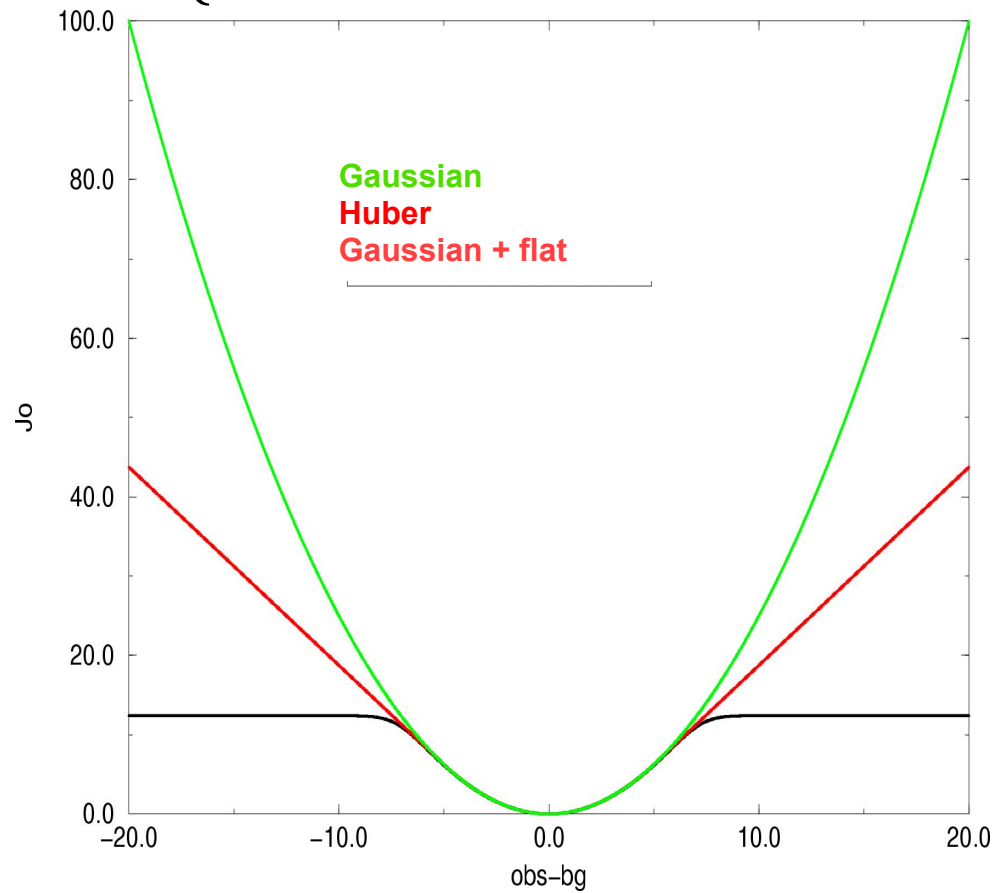
SHIP/BUOY 21994 (19.5N,149.7E)
PRESSURE



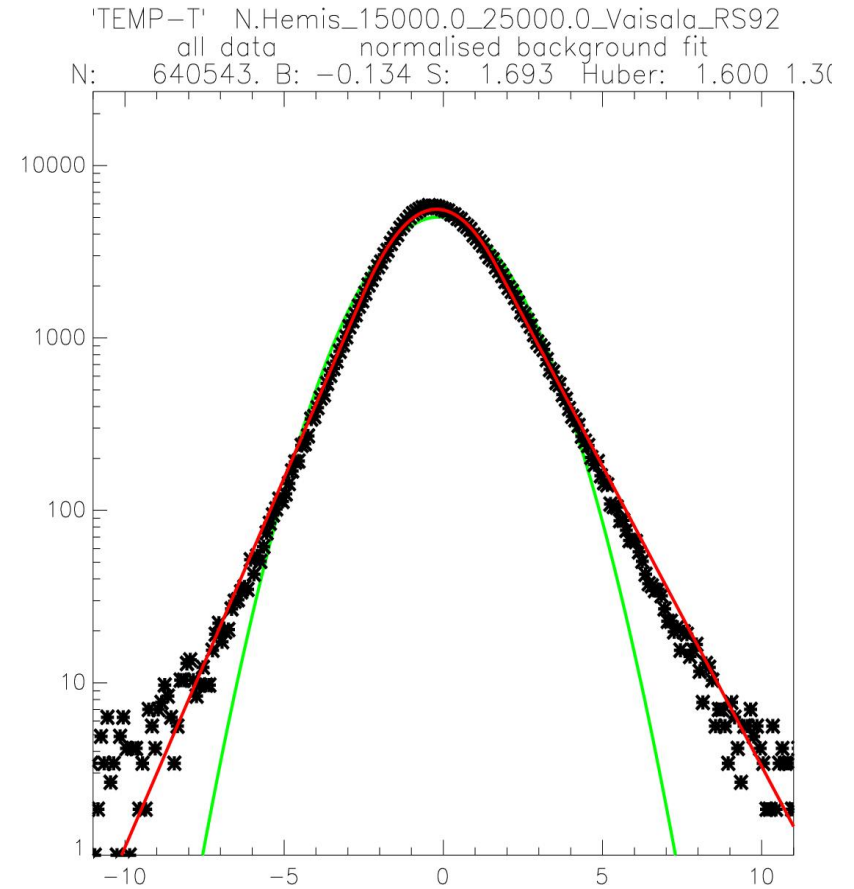
NO. OF OBS: 865 BIAS: 0.6 STD: 2.9
NO. OF USED OBS: 500 (58 %)

Normalizacion de Huber

$$p^H = \begin{cases} x^2 / 2 & \text{if } |x| \leq k, \\ k|x| - k^2 / 2 & \text{if } |x| > k, \end{cases}$$



**18 months of conventional data
Feb 2006 – Sep 2007
Normalised fit of PDF to data**



Fitting the Huber norm parameters to observed probability density function (pdf) of obs-bg

➤ 18 months of conventional data used for computing statistics

➤ Normalised fit of pdf to data

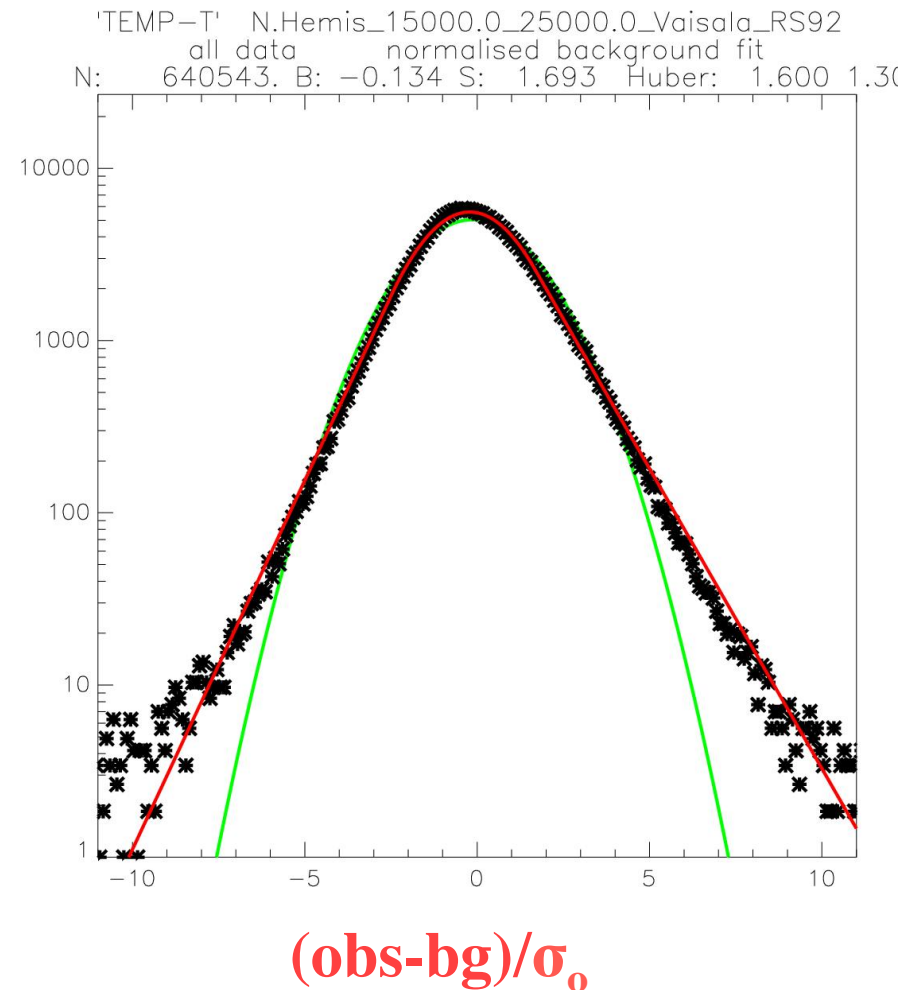
- Best Gaussian fit
- Best Huber norm fit => smaller σ_0

➤ Huber norm used for

- SYNOP, METAR, DRIBU: surface pressure, 10m wind
- TEMP, AIREP: temperature, wind
- PILOT: wind

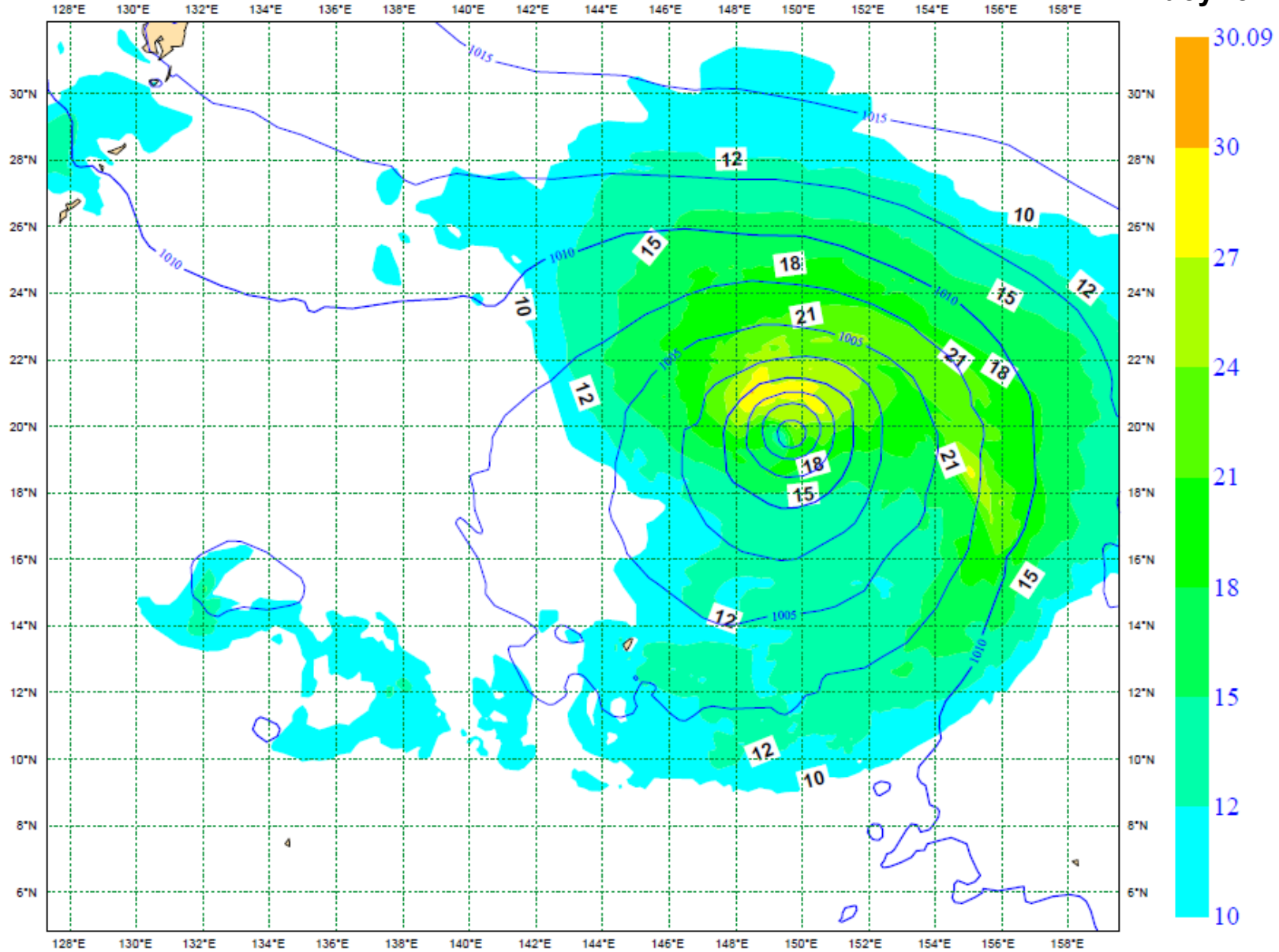
➤ Very relaxation of the fg-check

- Obs accepted as long as $|\text{obs}-\text{bg}| < 20 \sigma_0$

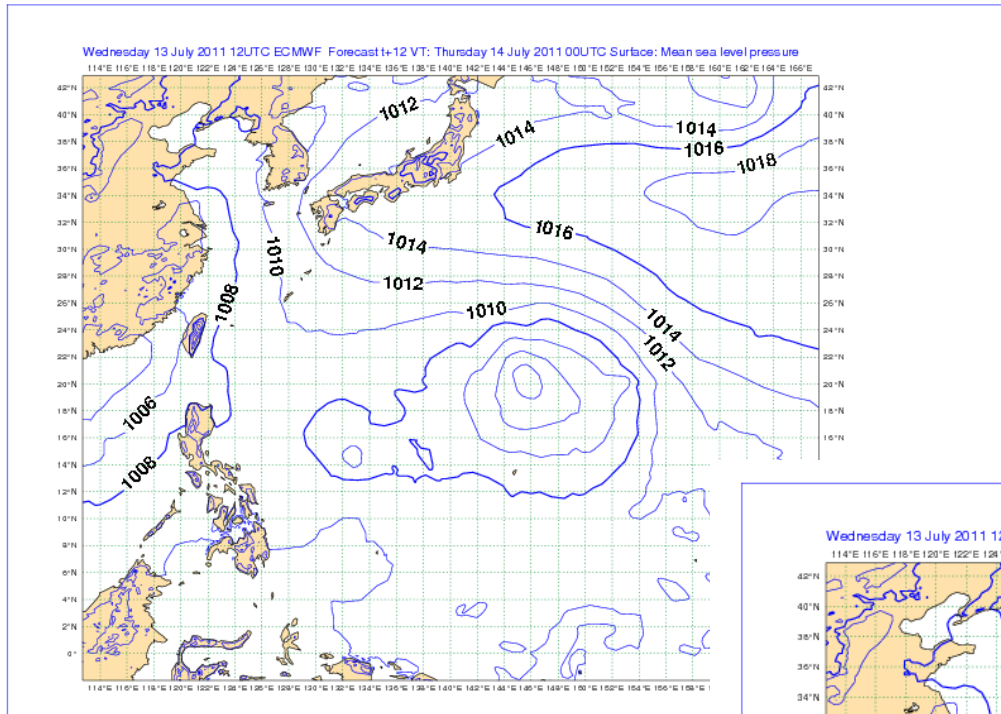


ECMWF Analysis VT: Wednesday 13 July 2011 12UTC Surface: Mean sea level pressure
Wednesday 13 July 2011 12UTC ECMWF Forecast t+(0-3) VT: Wednesday 13 July 2011 15UTC Surface: 10 metre wind gust

expver=fk2m
Buoy removed

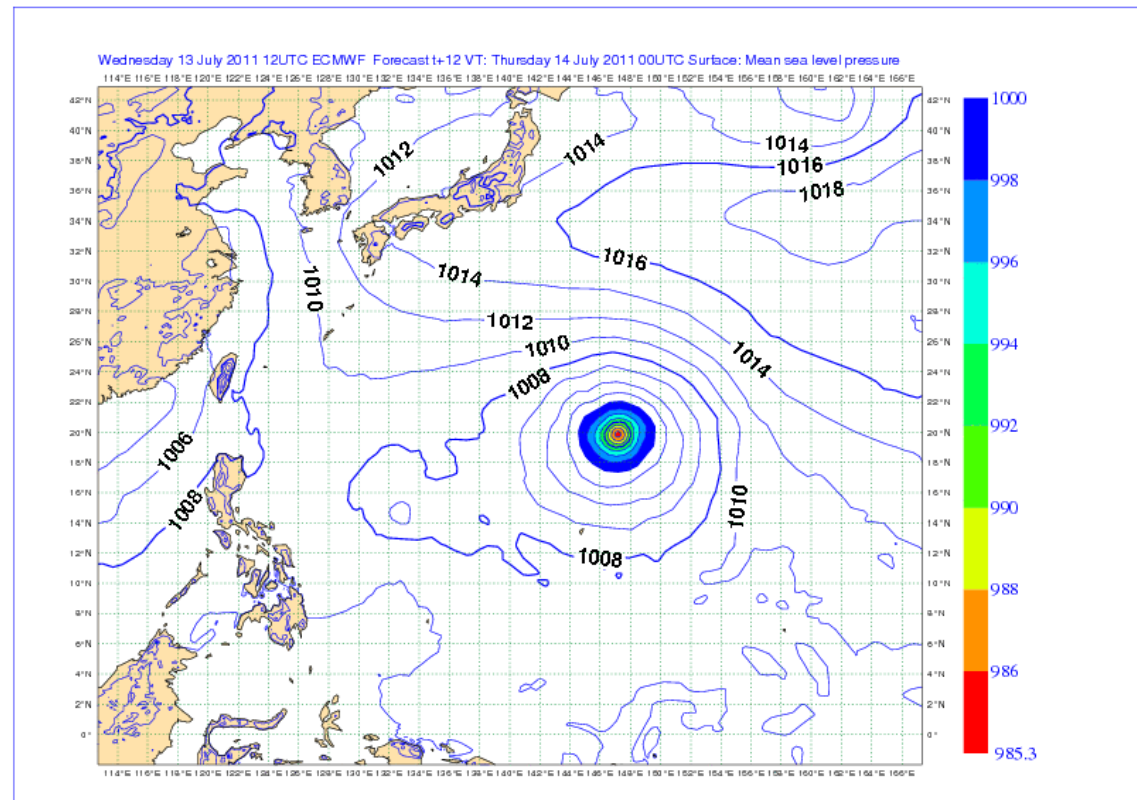


13/July/2011; 12 UTC

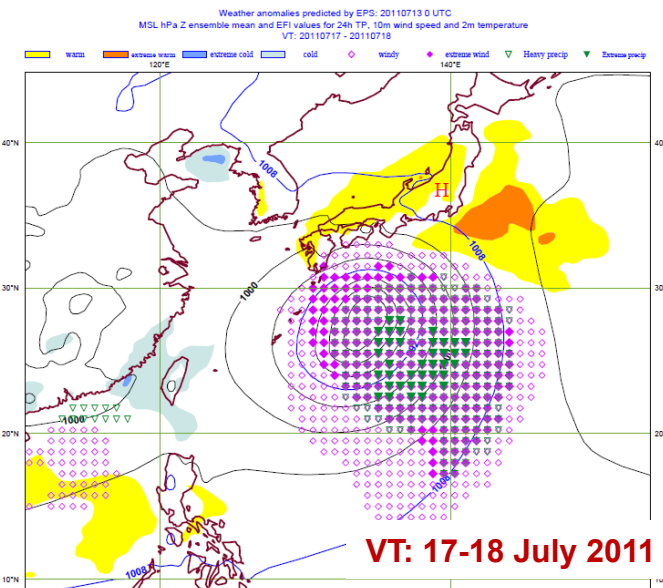
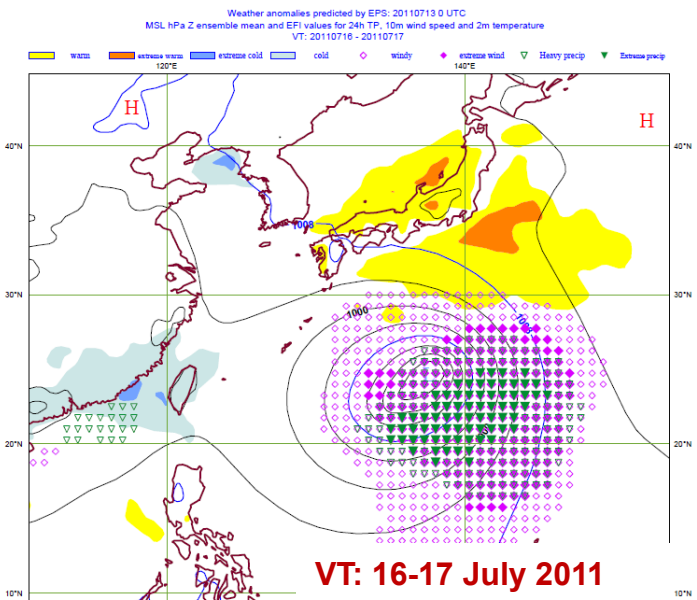
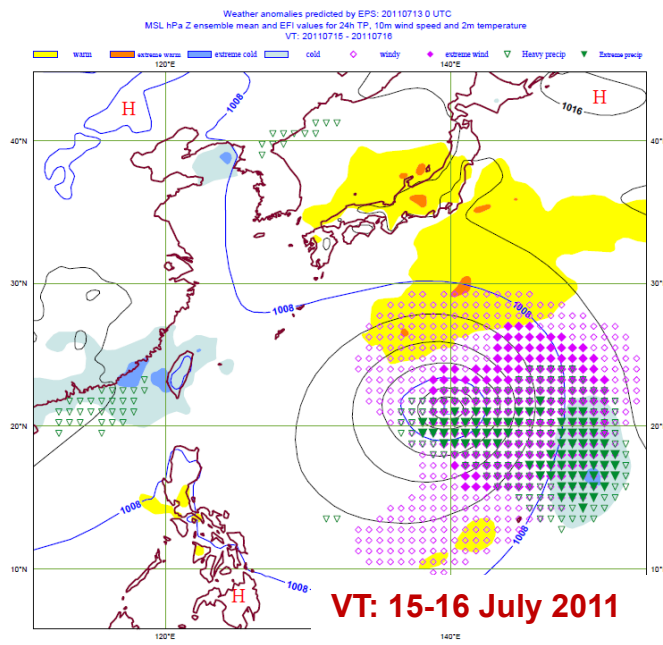
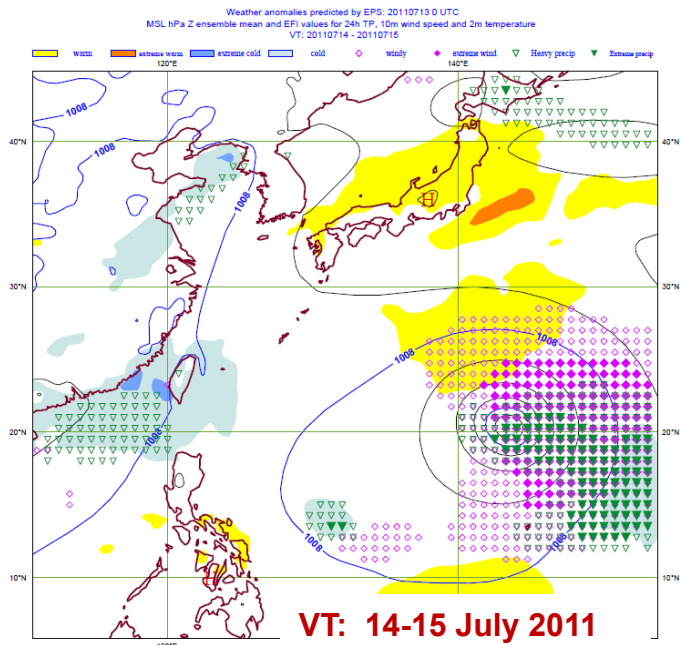


T1279 oper

T1279 expver=fk2m

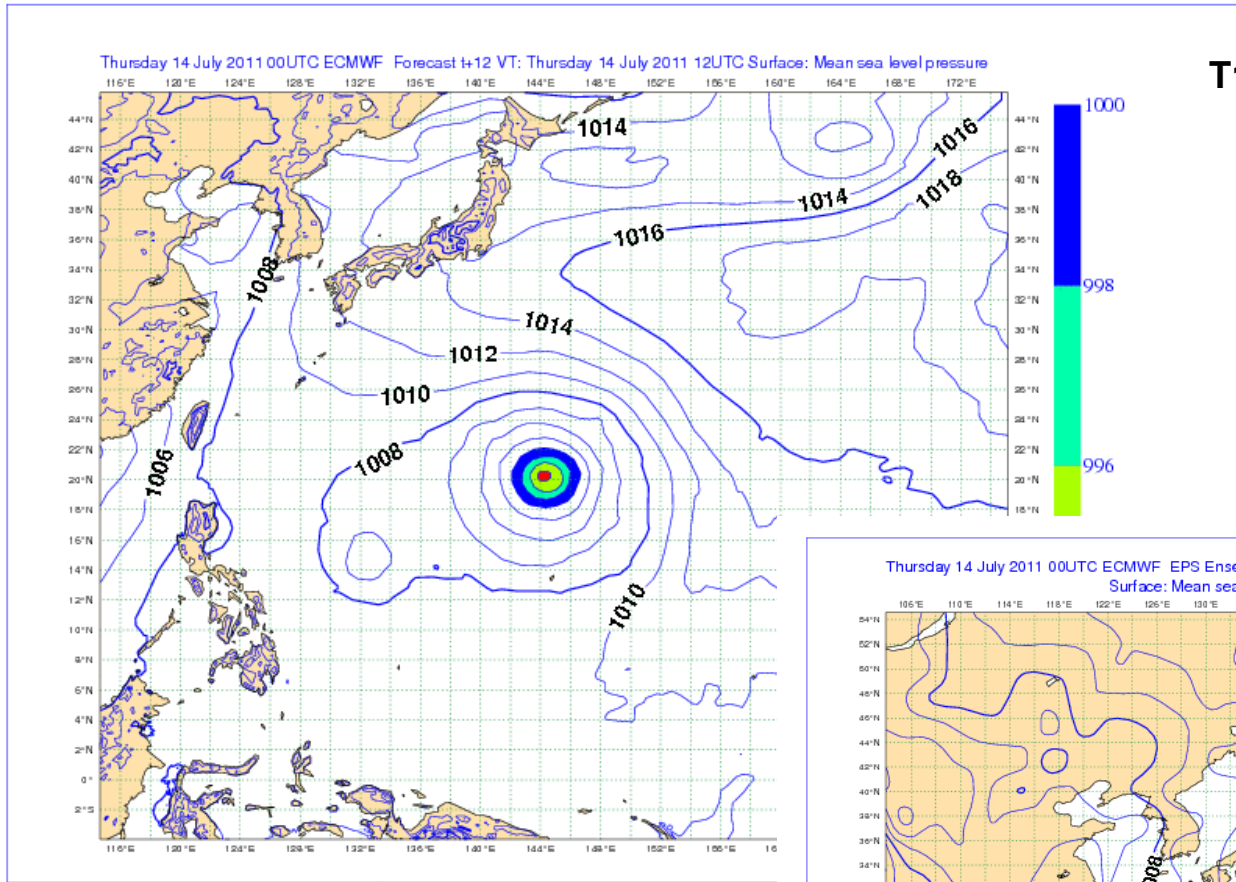


EFI based on 13/July/2011; 00 UTC

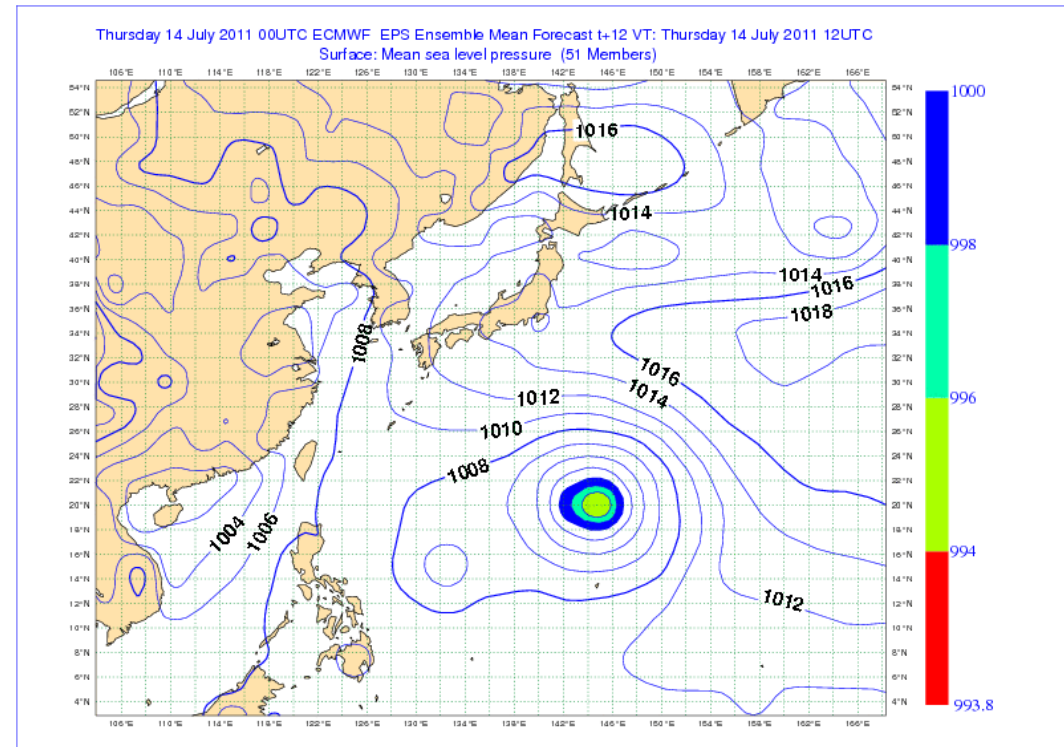


14/July/2011
00 UTC

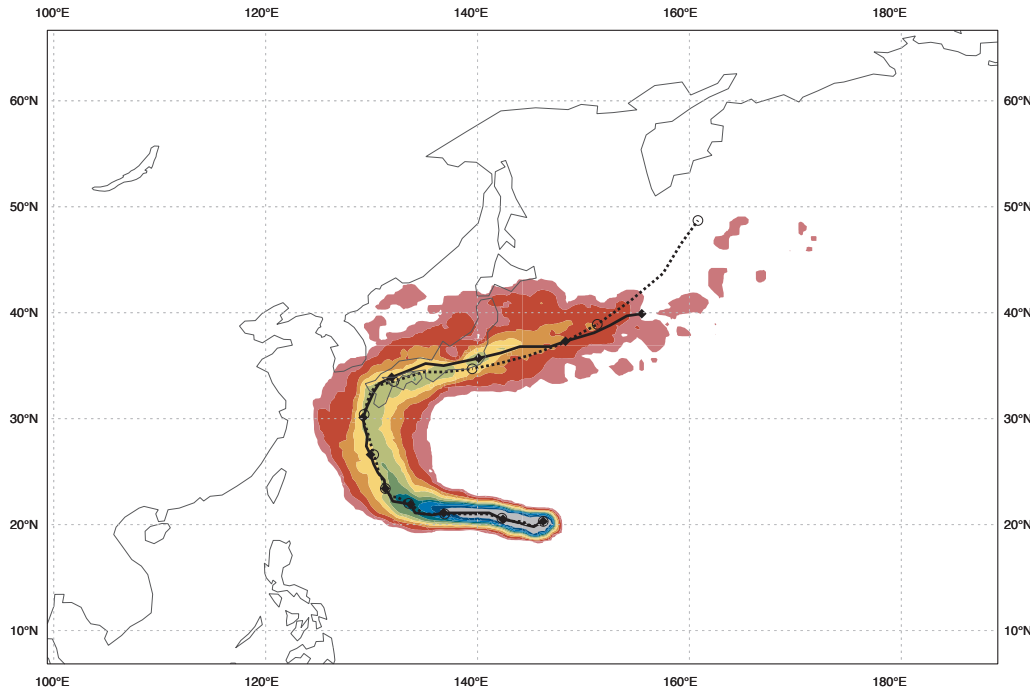
T1279



EPS mean



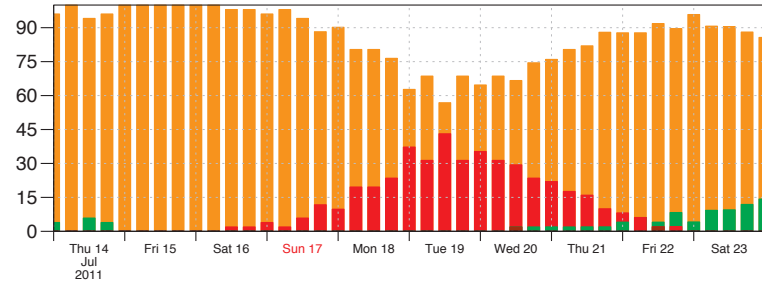
Date 20110714 00 UTC @ECMWF
 Probability that **MA-ON** will pass within 120 km radius during the next **240** hours
 tracks: **solid**=OPER; **dot**=CTRL [reported minimum central pressure (hPa) **960.**]



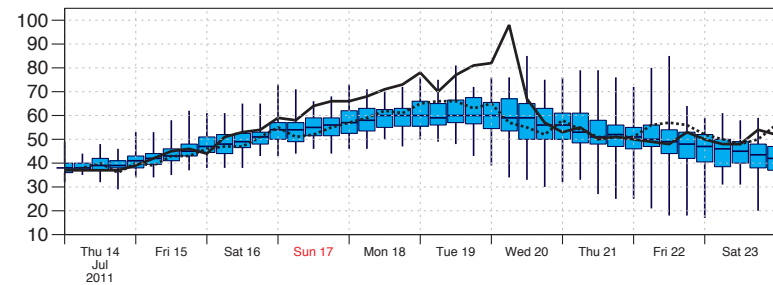
List of ensemble members numbers forecast Tropical Cyclone
 Intensity category in colours: **TD**[up to 33] **TS**[34-63] **HR1**[64-82] **HR2**[83-95] **HR3**[>95 kt]

+024 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
 +048 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
 +072 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
 +096 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
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 +216 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
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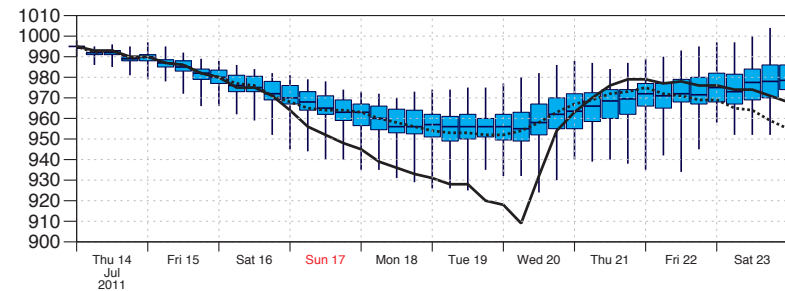
Probability (%) of Tropical Cyclone Intensity falling in each category
TD[up to 33] **TS**[34-63] **HR1**[64-82] **HR2**[83-95] **HR3**[> 95 kt]



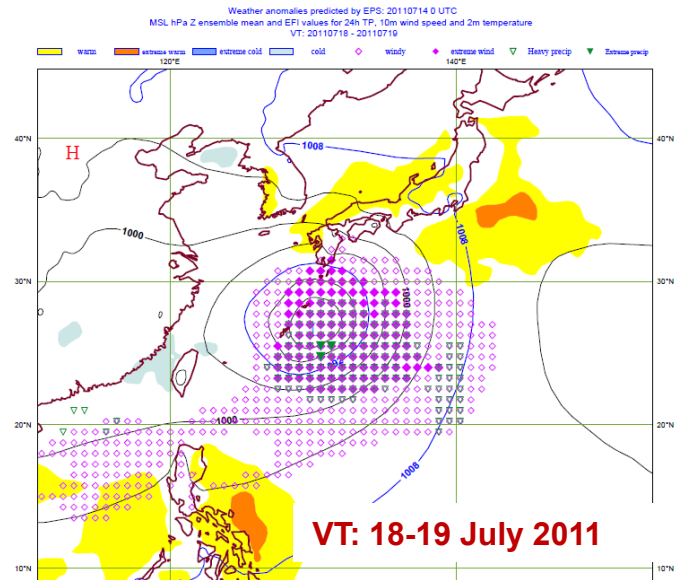
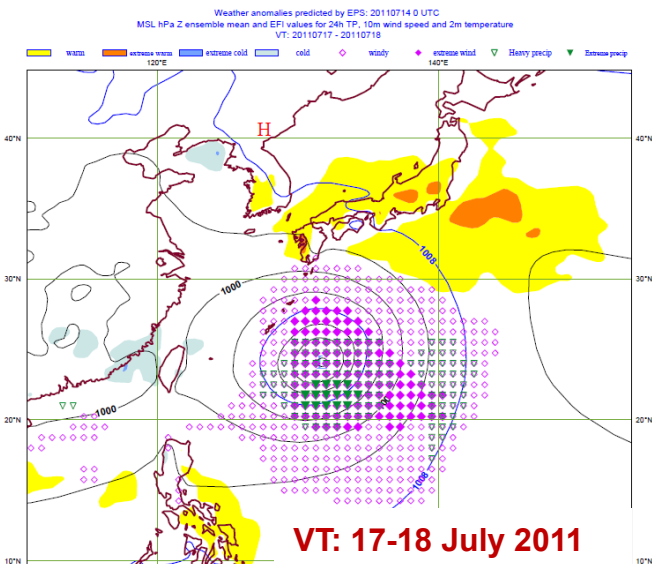
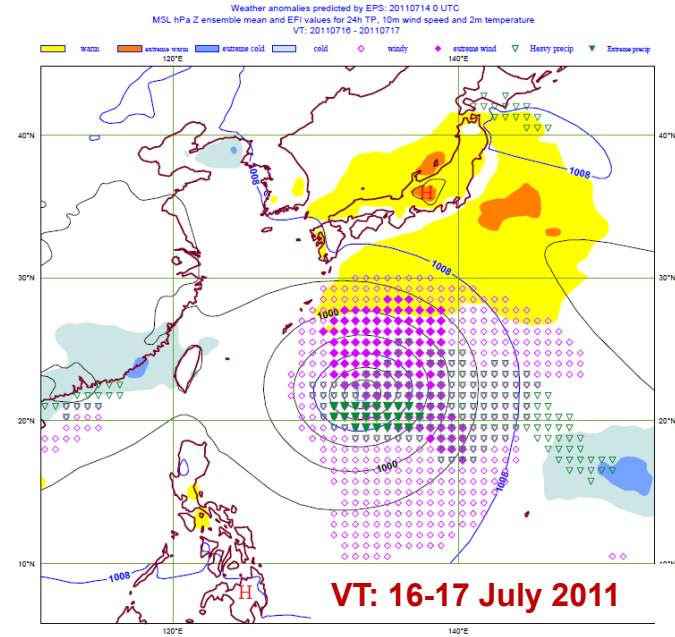
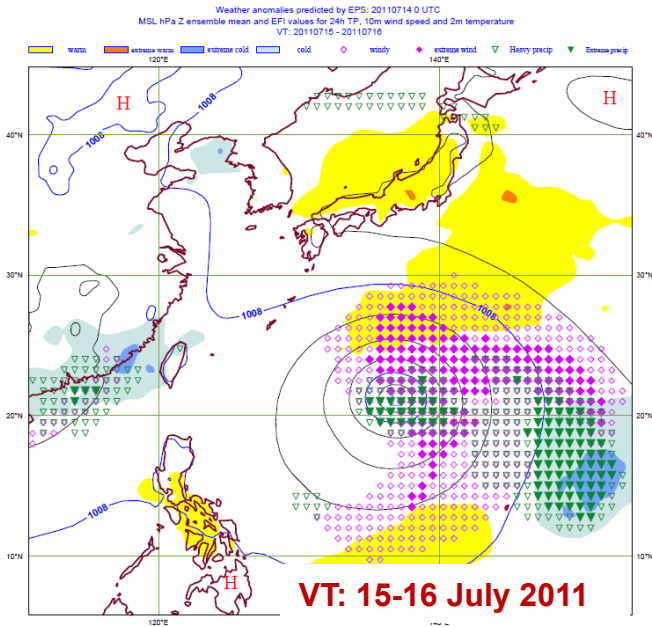
10m Wind Speed (kt)



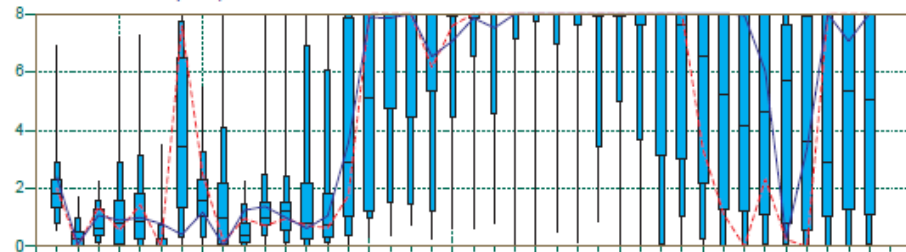
Mean Sea Level Pressure in Tropical Cyclone Centre (hPa)



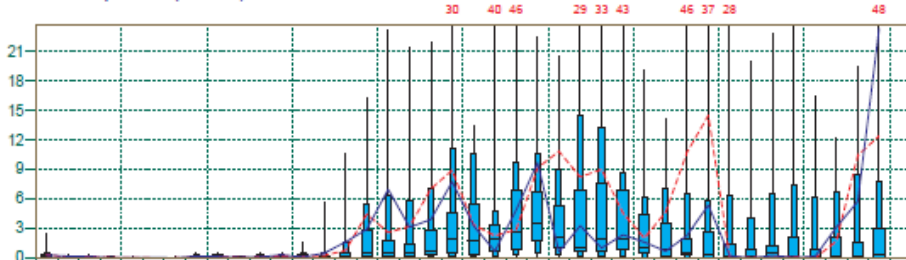
EFI based on 14/July/2011; 00 UTC



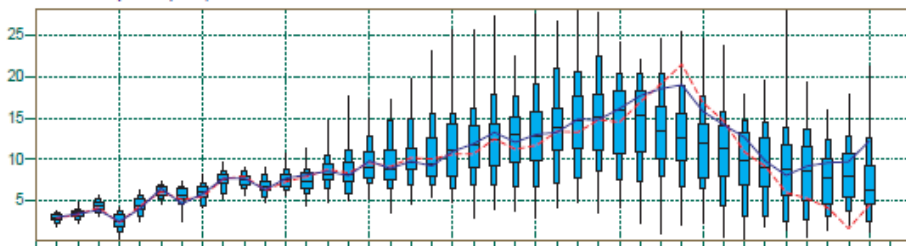
EPS Meteogram
 SW 31.9°N 136.96°E (EPS sea point) 0 m (T1279)
 Deterministic Forecast and EPS Distribution Thursday 14 July 2011 00 UTC
 Total Cloud Cover (okta)



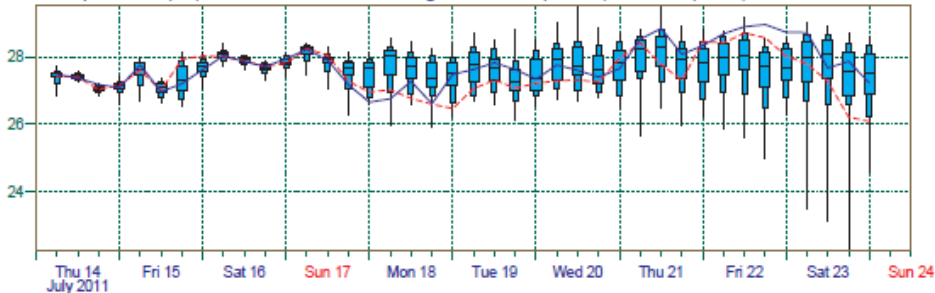
Total Precipitation (mm/6h)



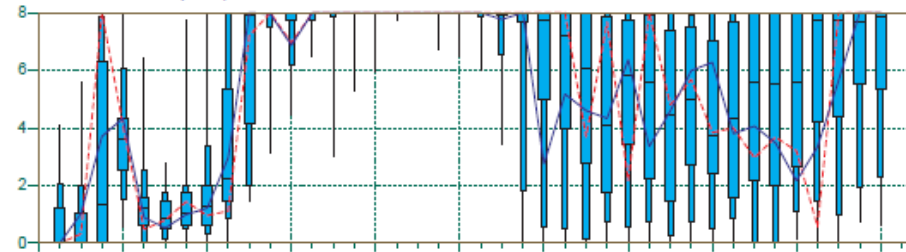
10m Wind Speed (m/s)



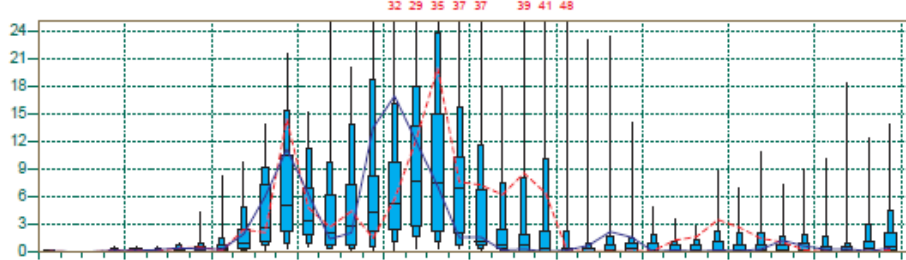
2m Temperature (°C) reduced to the station height from 0 m (T1279) and 2 m (T639)



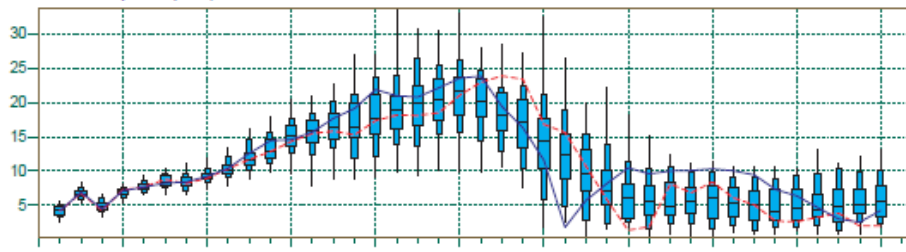
EPS Meteogram
 SW 31.9°N 136.96°E (EPS sea point) 0 m (T1279)
 Deterministic Forecast and EPS Distribution Friday 15 July 2011 00 UTC
 Total Cloud Cover (okta)



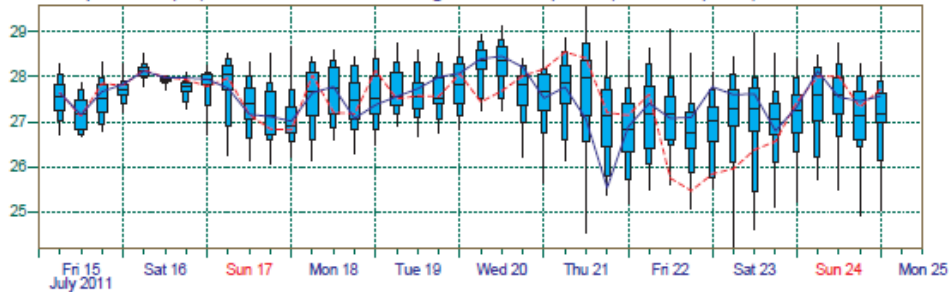
Total Precipitation (mm/6h)



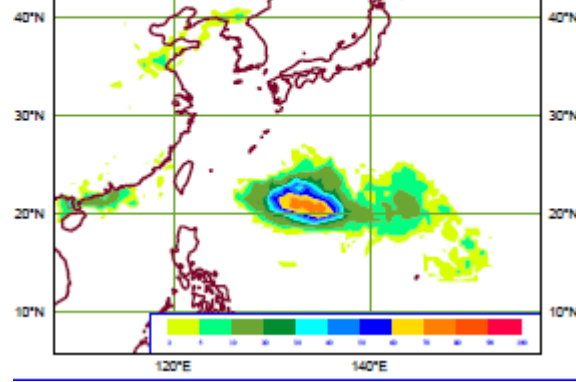
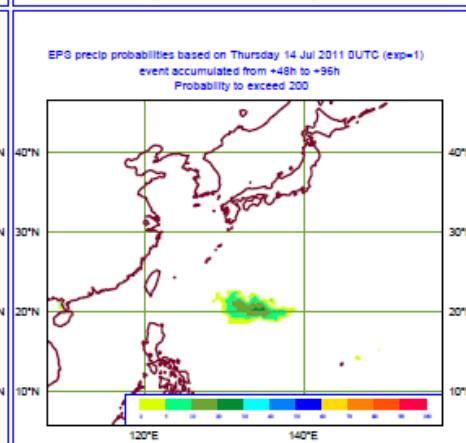
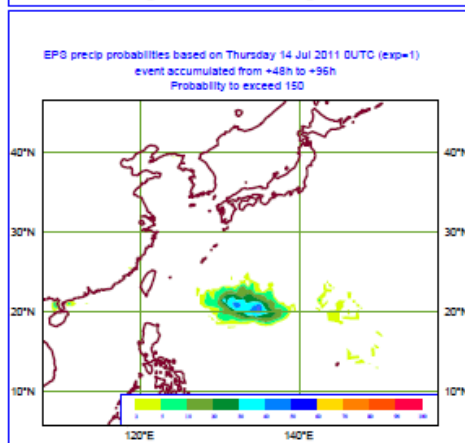
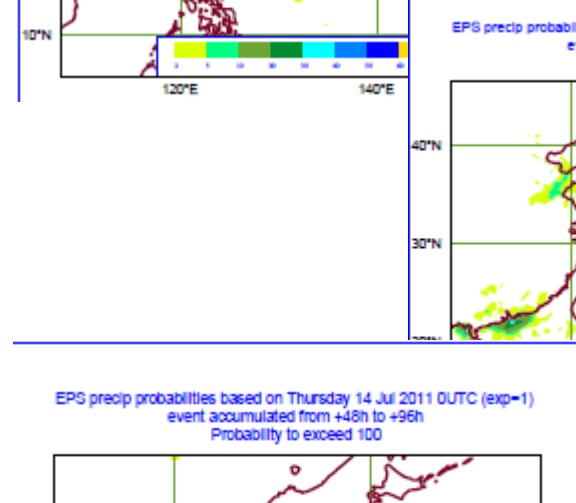
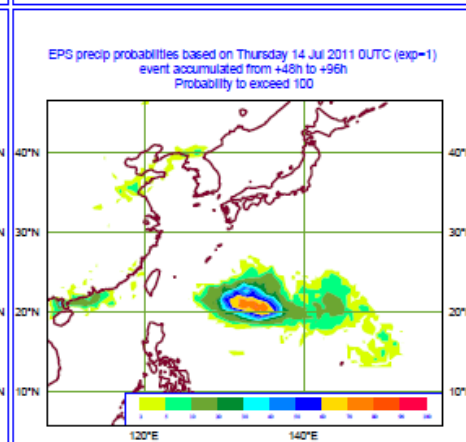
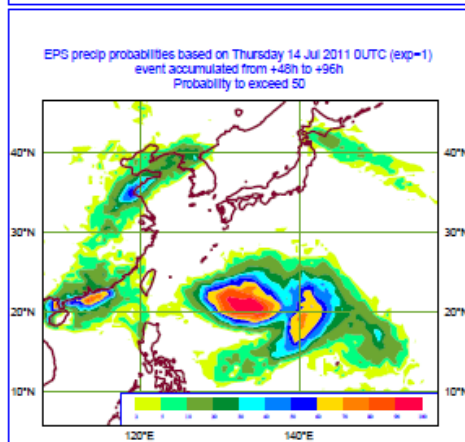
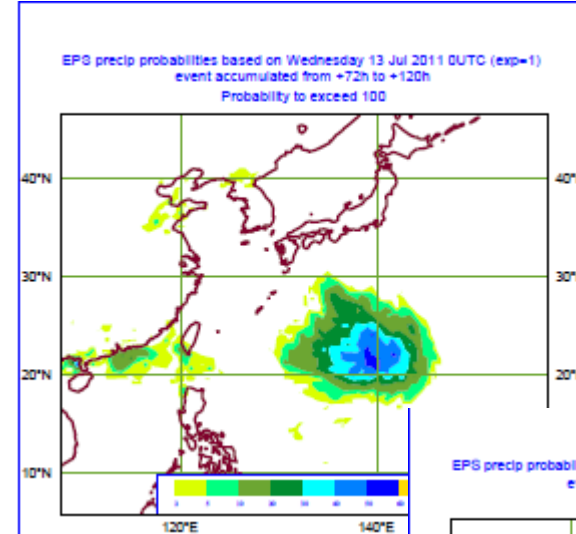
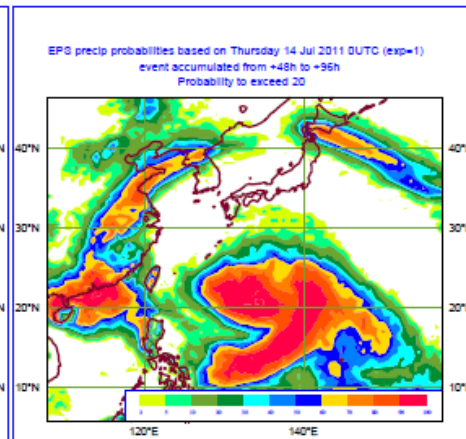
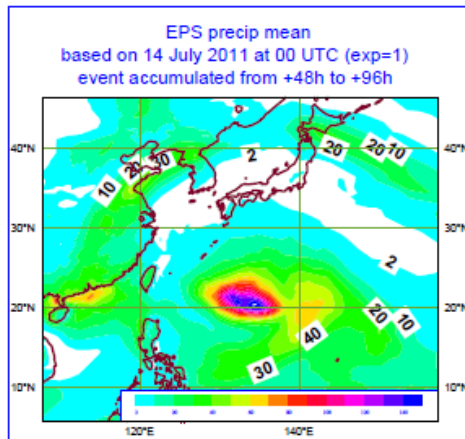
10m Wind Speed (m/s)



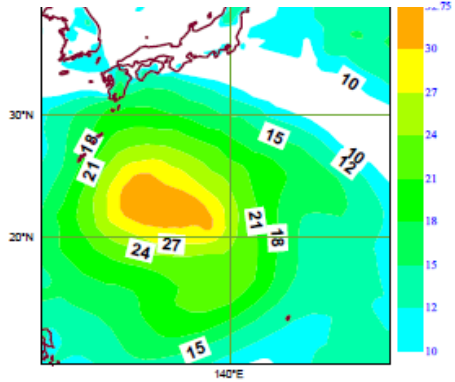
2m Temperature (°C) reduced to the station height from 0 m (T1279) and 2 m (T639)



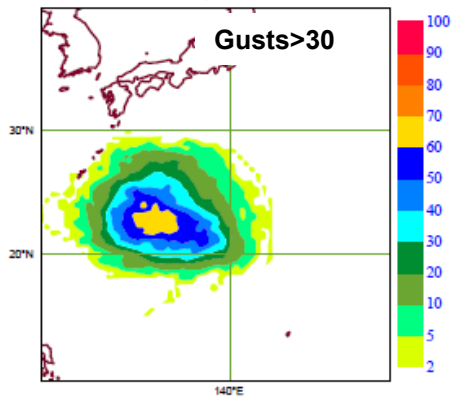
Probabilities VT: 16-18 July 2011



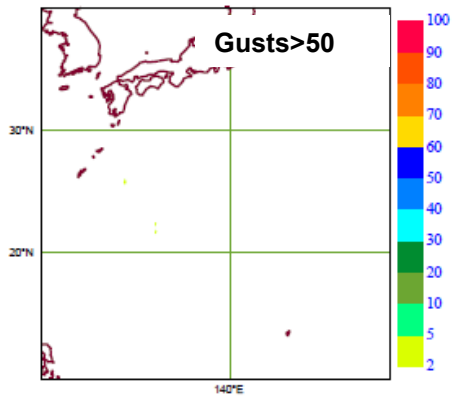
14/Jul/2011; 00 UTC



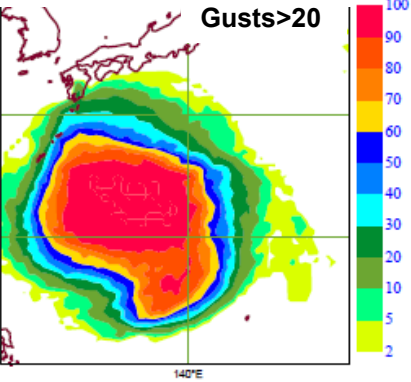
EPS wind_gust probabilities based on Thursday 14 Jul 2011 00UTC (epcrt)
event occurring at least once from +08h to +48h
Probability to exceed 30



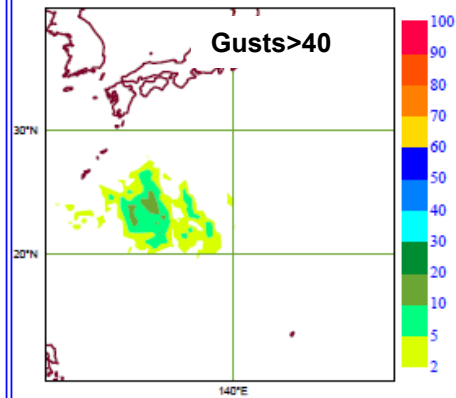
EPS wind_gust probabilities based on Thursday 14 Jul 2011 00UTC (epcrt)
event occurring at least once from +08h to +48h
Probability to exceed 50



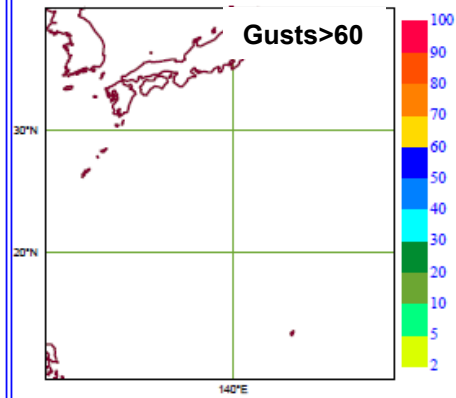
VT: 16-18 Jul/2011



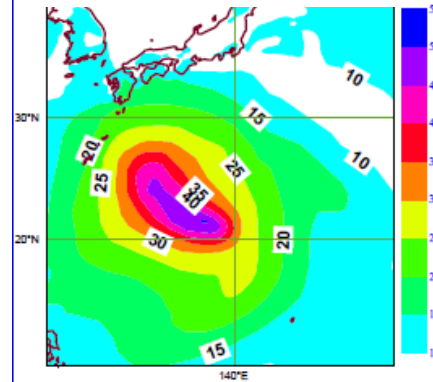
EPS wind_gust probabilities based on Thursday 14 Jul 2011 00UTC (epcrt)
event occurring at least once from +48h to +168h
Probability to exceed 40



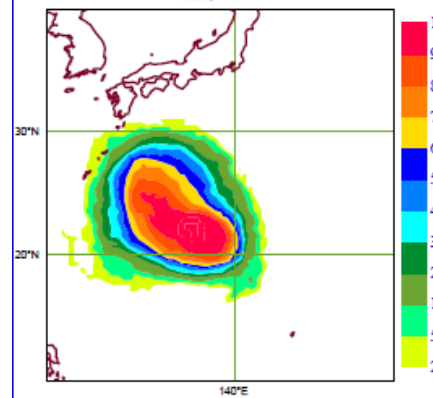
EPS wind_gust probabilities based on Thursday 14 Jul 2011 00UTC (epcrt)
event occurring at least once from +48h to +168h
Probability to exceed 60



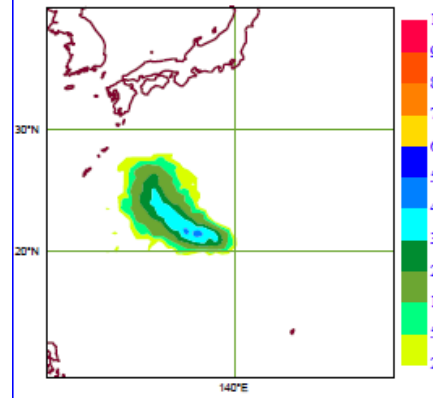
14/Jul/2011; 12 UTC



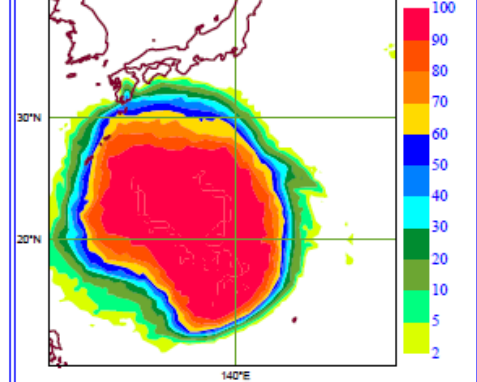
EPS wind_gust probabilities based on Thursday 14 Jul 2011 12UTC (epcrt)
event occurring at least once from +08h to +48h
Probability to exceed 30



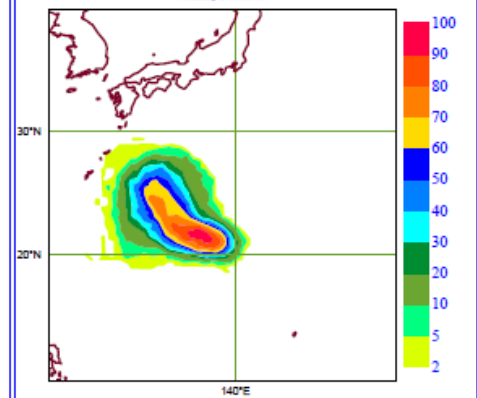
EPS wind_gust probabilities based on Thursday 14 Jul 2011 12UTC (epcrt)
event occurring at least once from +08h to +48h
Probability to exceed 50



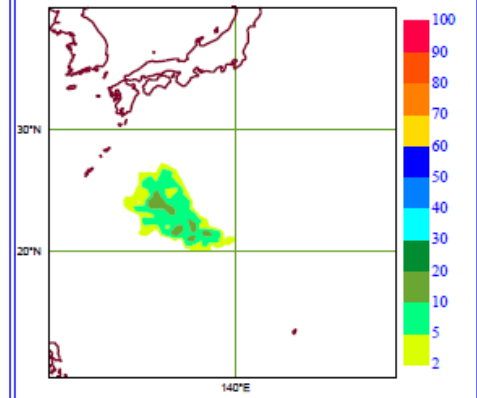
EPS wind_gust probabilities based on Thursday 14 Jul 2011 12UTC (epcrt)
event occurring at least once from +08h to +48h
Probability to exceed 50



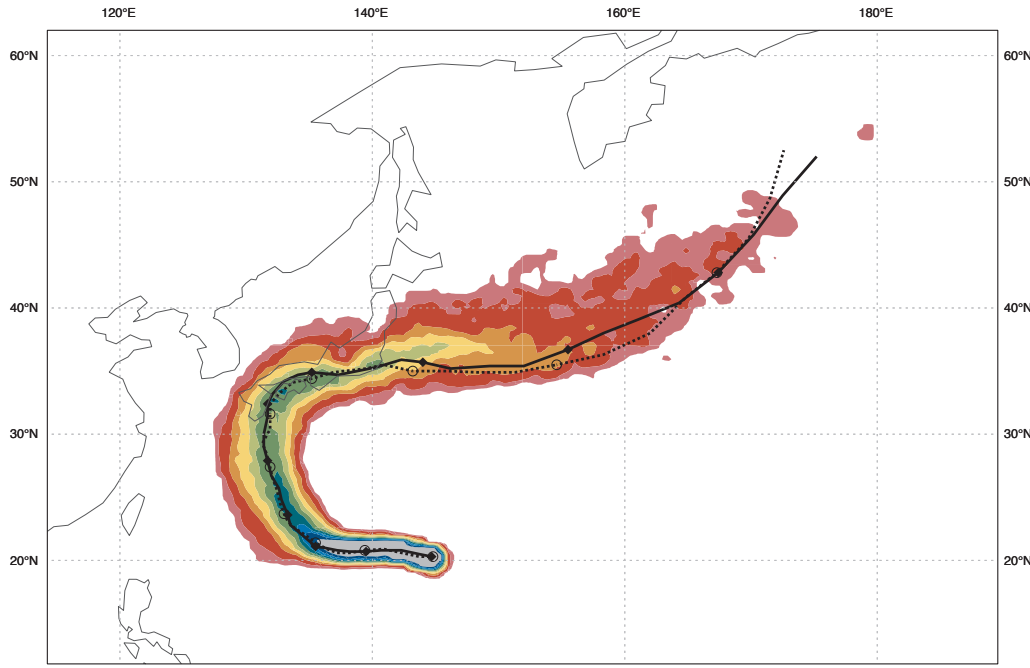
EPS wind_gust probabilities based on Thursday 14 Jul 2011 12UTC (epcrt)
event occurring at least once from +08h to +48h
Probability to exceed 40



EPS wind_gust probabilities based on Thursday 14 Jul 2011 12UTC (epcrt)
event occurring at least once from +08h to +48h
Probability to exceed 60



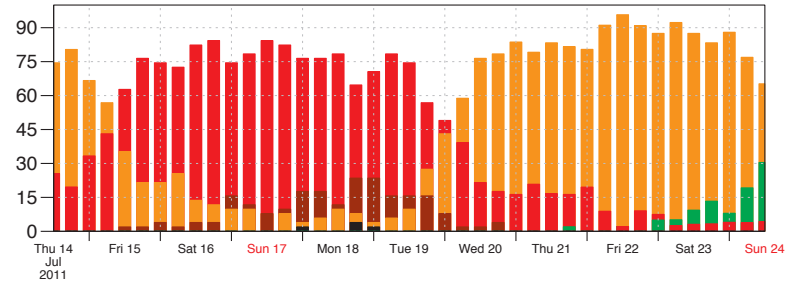
Date 20110714 12 UTC @ECMWF
 Probability that **MA-ON** will pass within 120 km radius during the next **240** hours
 tracks: **solid**=OPER; **dot**=CTRL [reported minimum central pressure (hPa) **955.**]



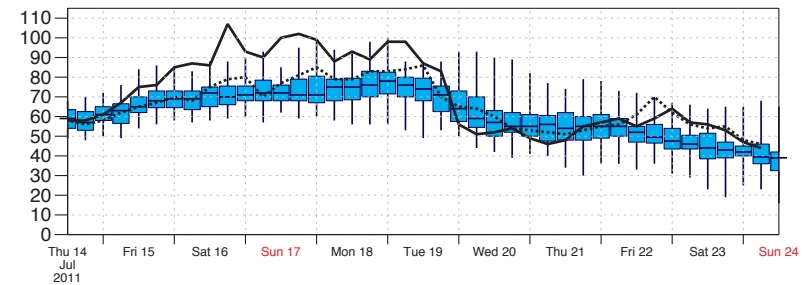
List of ensemble members numbers forecast Tropical Cyclone
 Intensity category in colours: **TD**[up to 33] **TS**[34-63] **HR1**[64-82] **HR2**[83-95] **HR3**[>95 kt]

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| +024 h : hr ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| +048 h : hr ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
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| +168 h : hr ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | | |
| +192 h : hr ct | 01 | 02 | 03 | 04 | 05 | 06 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | | | |
| +216 h : hr ct | 01 | 02 | 03 | 06 | 09 | 11 | 13 | 14 | 15 | 16 | 17 | 19 | 21 | 22 | 23 | 24 | 28 | 29 | 31 | 32 | 34 | 37 | 39 | 41 | 42 | 44 | 45 | 46 | 47 | 48 | 50 | | | | | | | | | | | | | | | | | | | |
| +240 h : | 01 | 03 | 06 | 09 | 11 | 13 | 14 | 16 | 19 | 23 | 24 | 28 | 29 | 31 | 36 | 37 | 39 | 41 | 42 | 44 | 46 | 49 | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

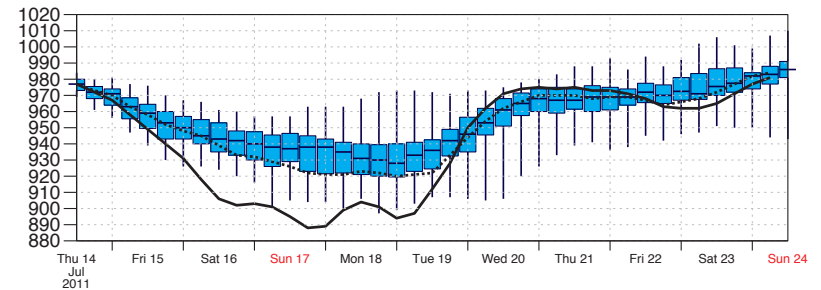
Probability (%) of Tropical Cyclone Intensity falling in each category
TD[up to 33] **TS**[34-63] **HR1**[64-82] **HR2**[83-95] **HR3**[>95 kt]



10m Wind Speed (kt)

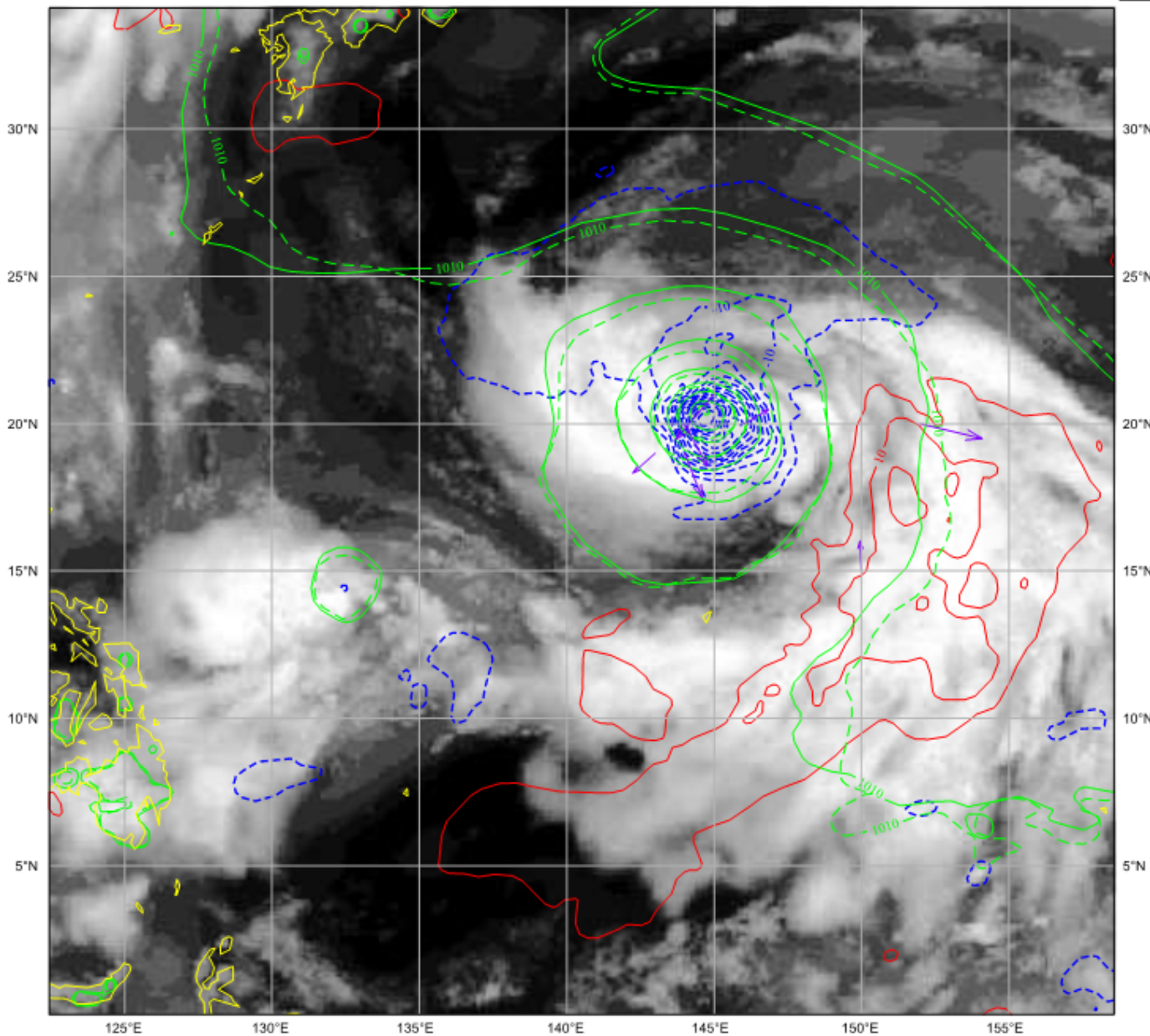


Mean Sea Level Pressure in Tropical Cyclone Centre (hPa)

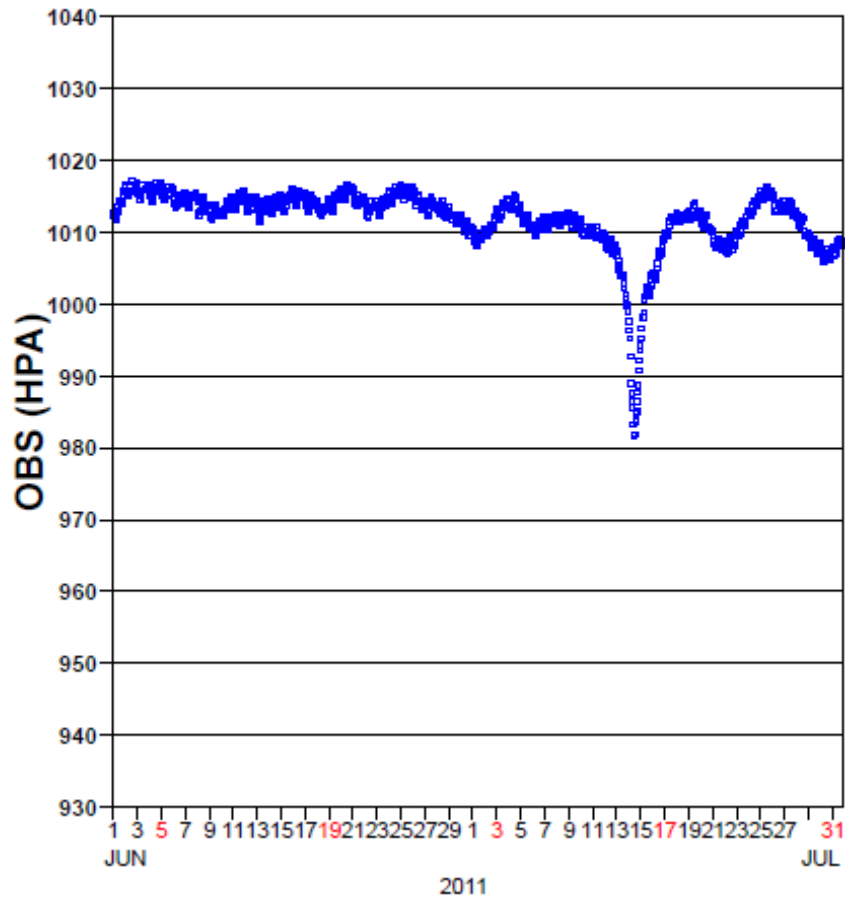


Increments scf DCDA & SIM IR H+12 VT: 14/July/2011; 12 UTC

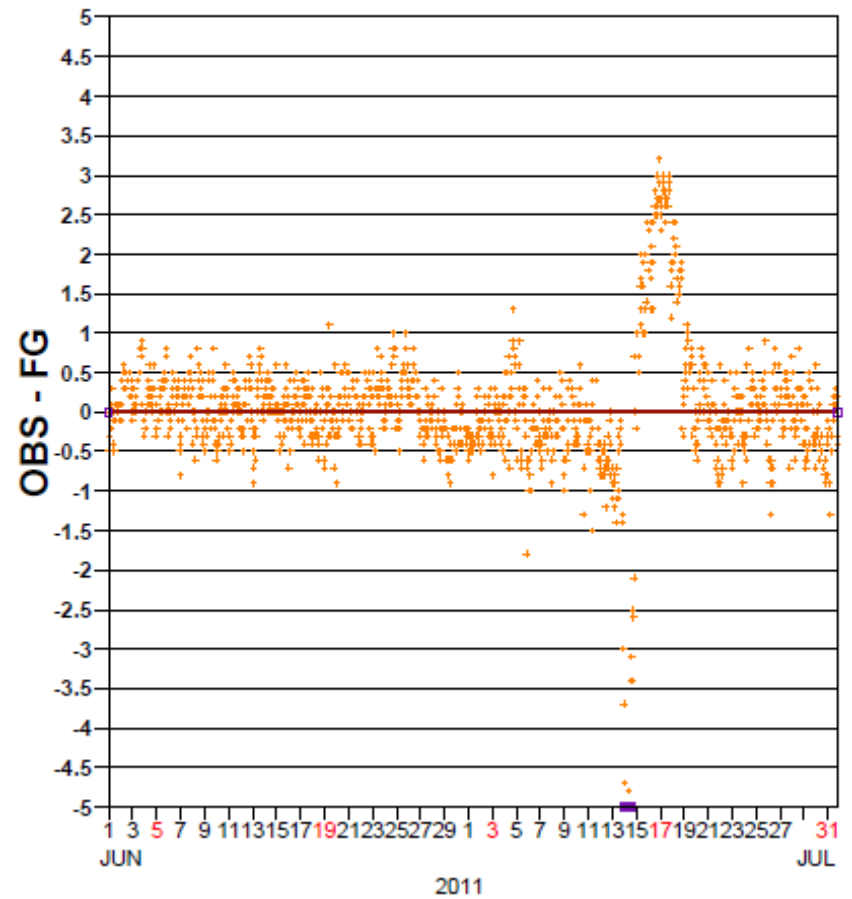
10.0m/s



SHIP/BUOY 21972 (24.5N,143.8E)
PRESSURE

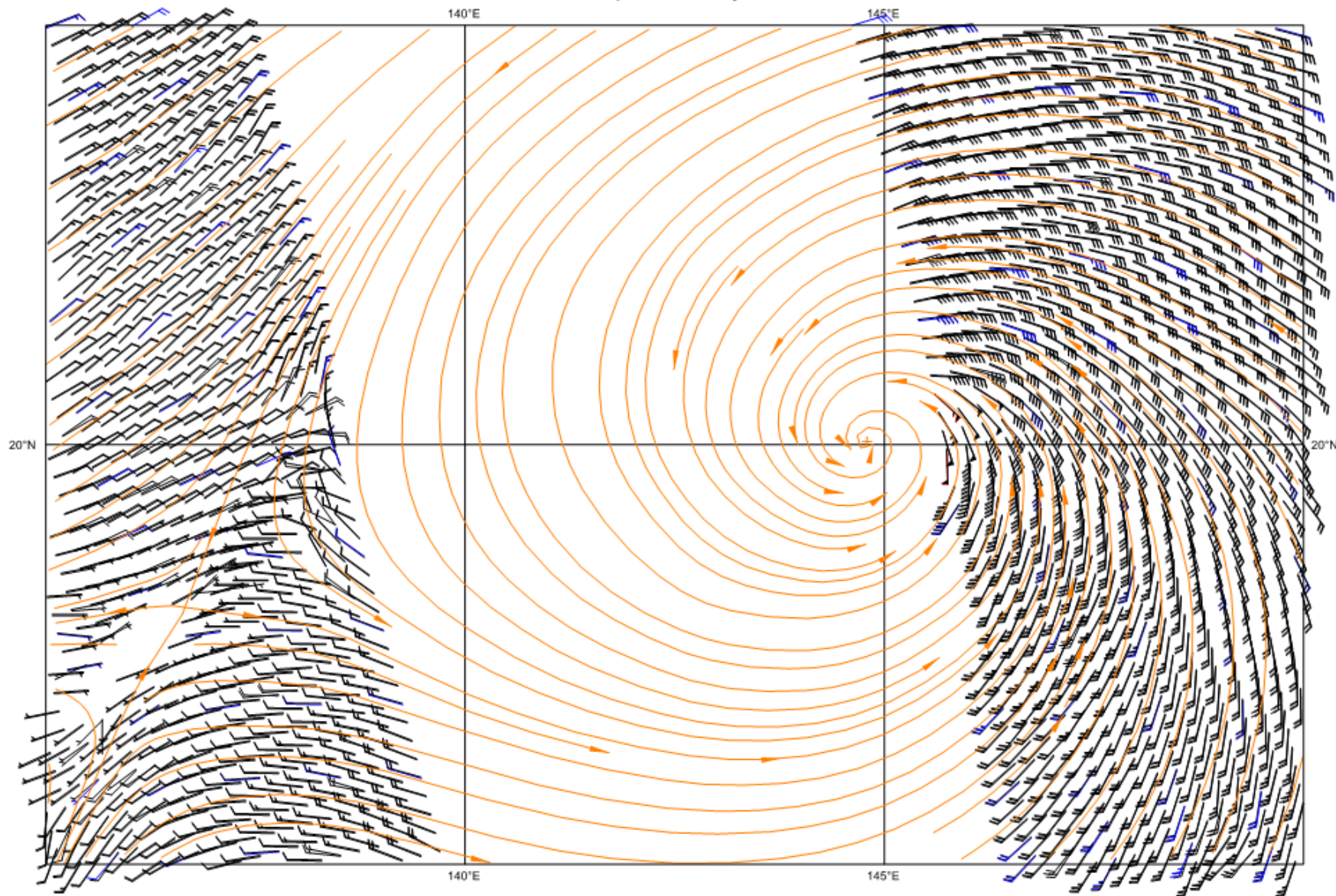


SHIP/BUOY 21972 (24.5N,143.8E)
PRESSURE

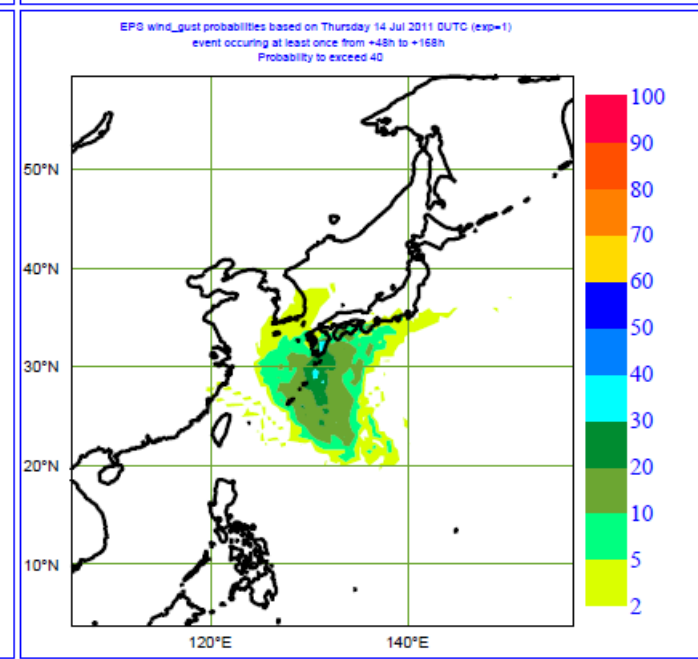
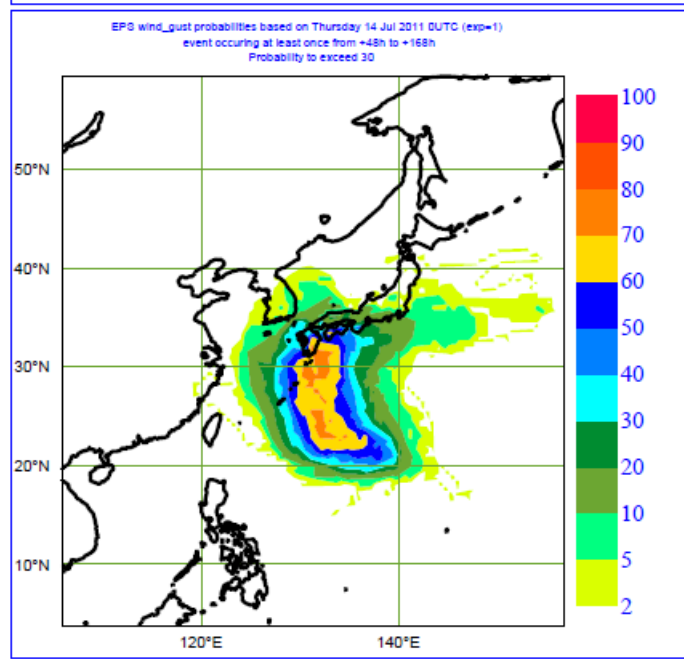
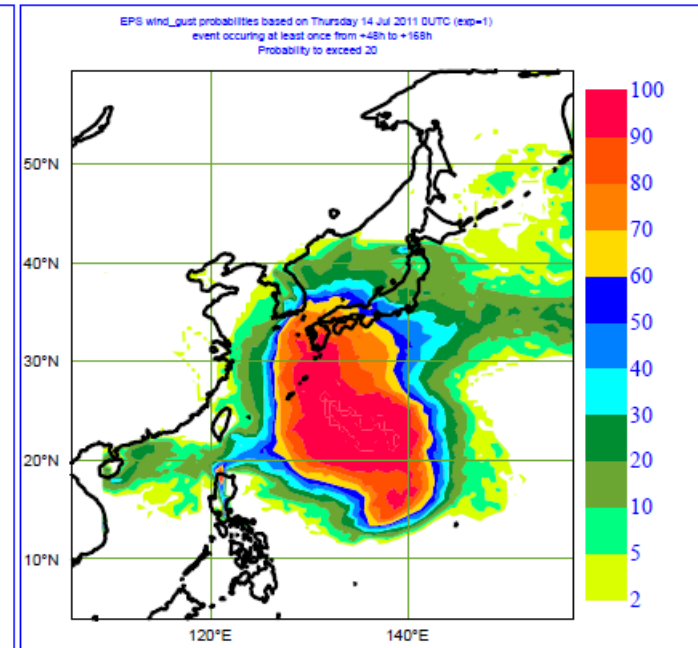
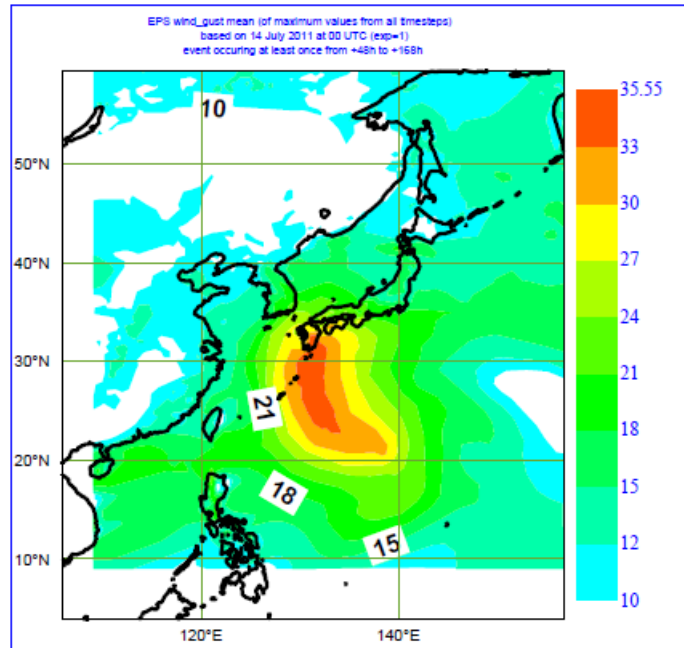


14 JUL 2011 12 UTC
SURFACE 2896 obs (FG: 2.6,AN: 1.4,IN: 1.9)
ANALYSIS STREAMLINES: 1000 HPA

BLACK: Redundant, BLUE: Accepted, RED: Rejected MAGENTA: Blacklisted



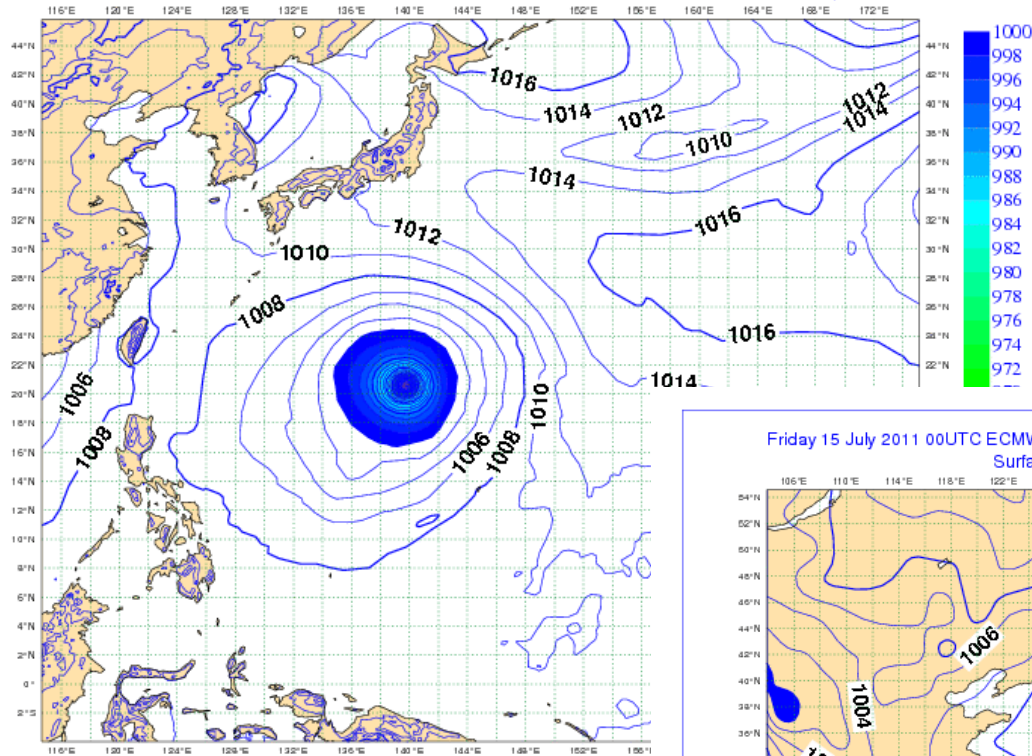
**EPS probabilities of
wind gusts exceeding
20/30/40 m/s
Based on:
14/July/2011; 00 UTC
D+2 to D+7**



15/July/2011
00 UTC

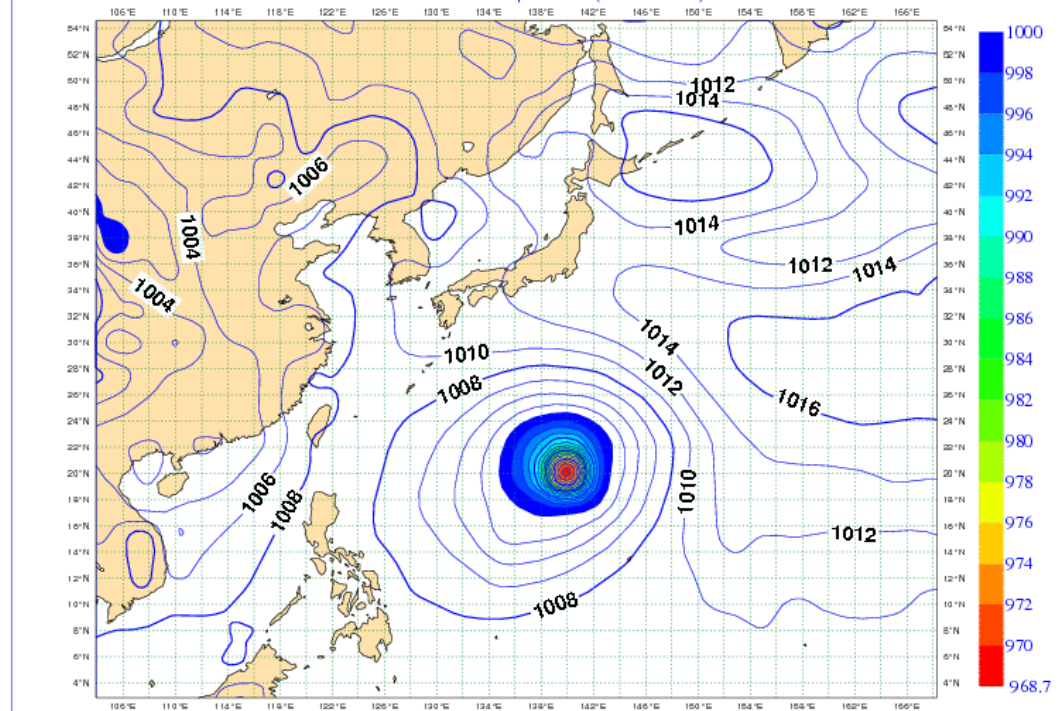
T1279

Friday 15 July 2011 00UTC ECMWF Forecast t+12 VT: Friday 15 July 2011 12UTC Surface: Mean sea level pressure

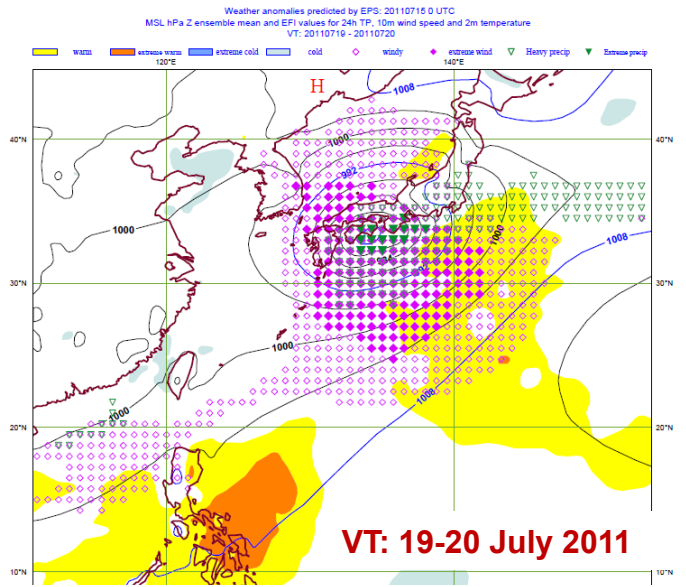
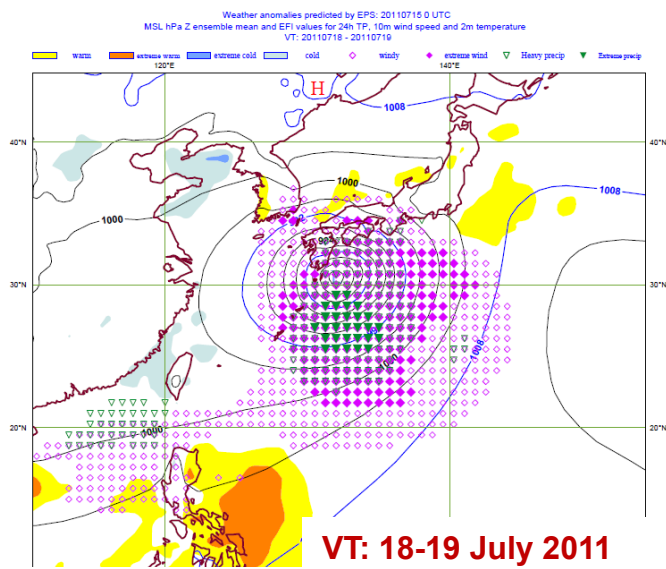
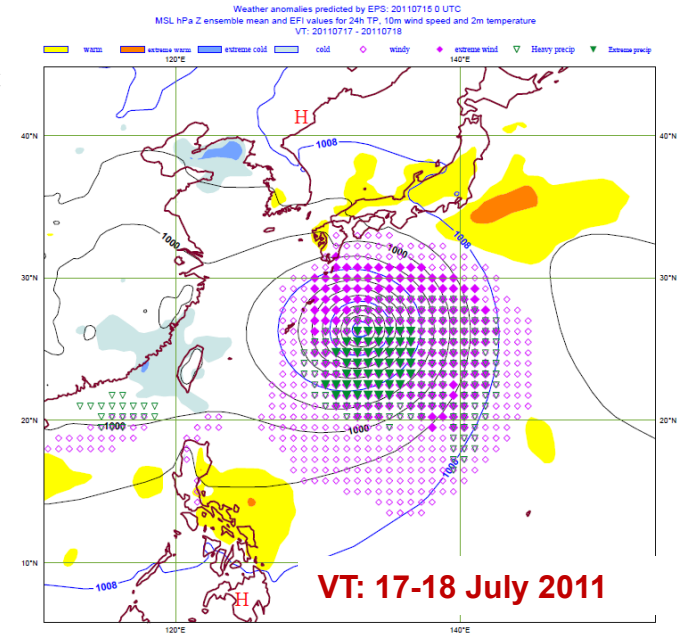
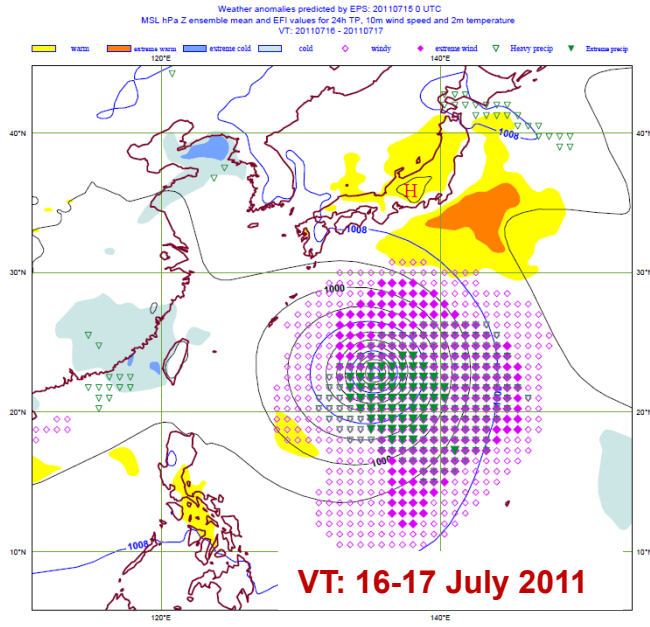


EPS mean

Friday 15 July 2011 00UTC ECMWF EPS Ensemble Mean Forecast t+12 VT: Friday 15 July 2011 12UTC Surface: Mean sea level pressure (51 Members)

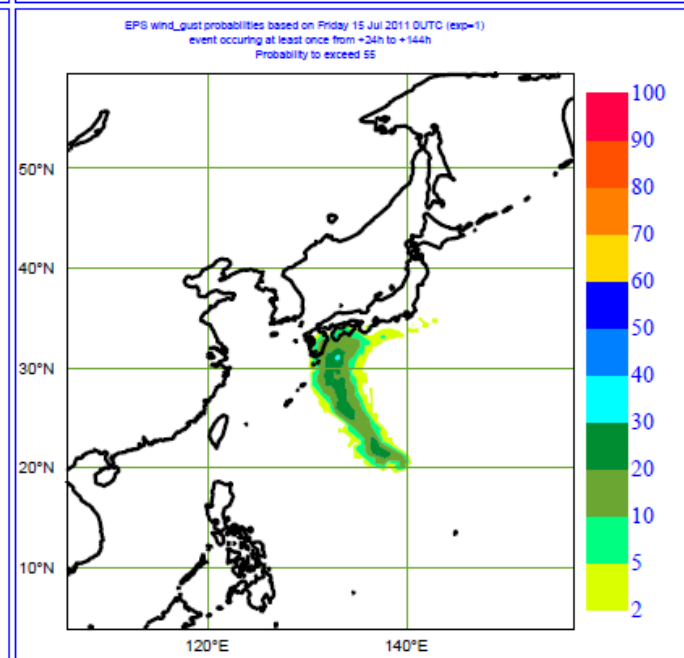
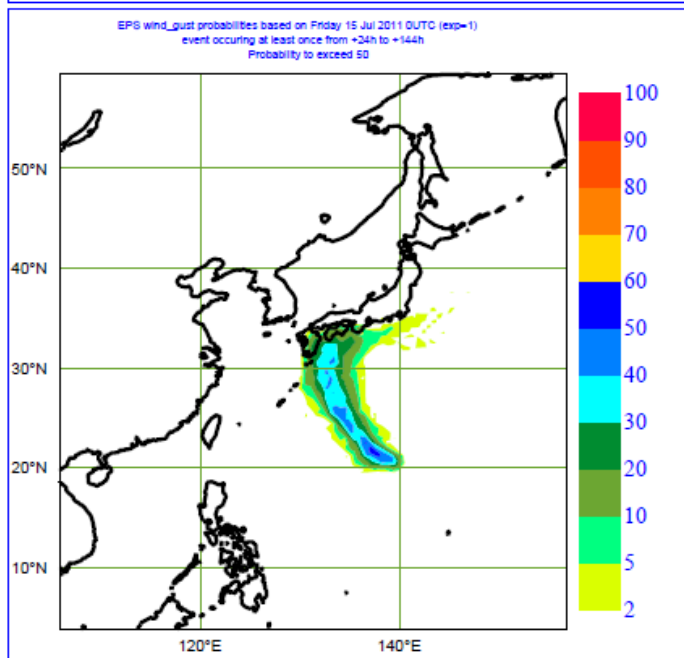
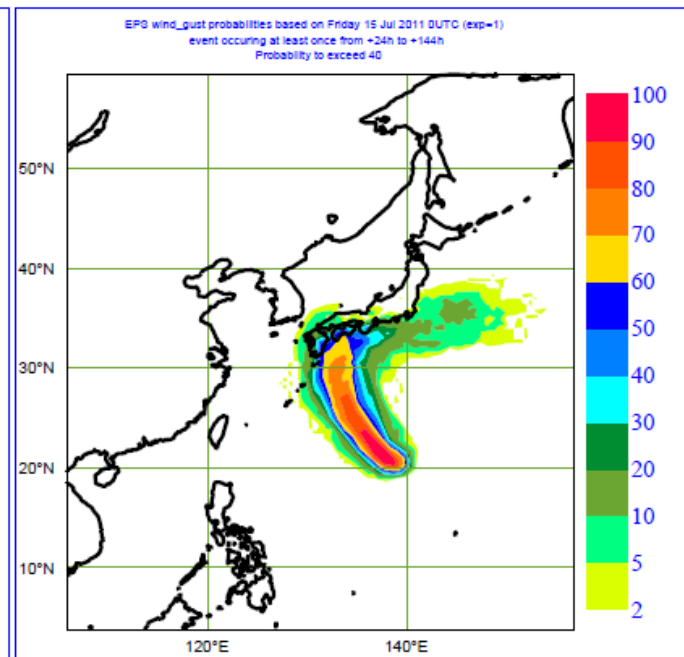
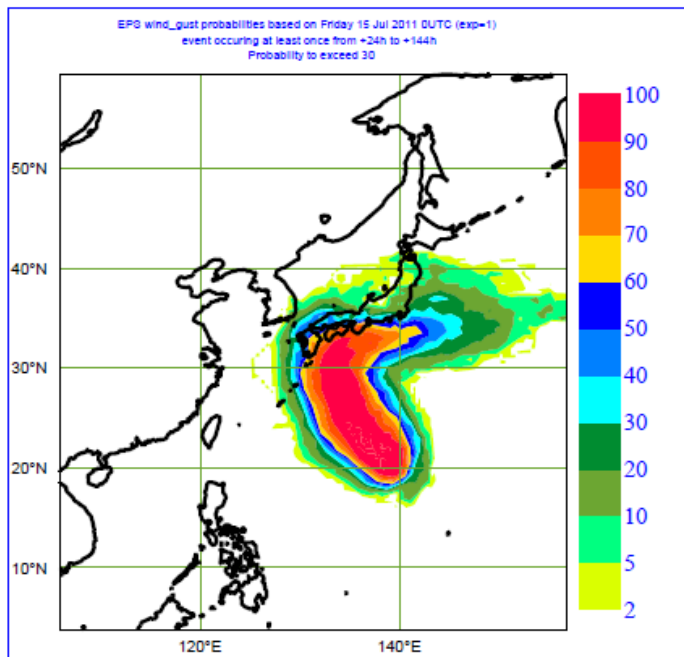


EFI Based on 15/July/2011; 00 UTC

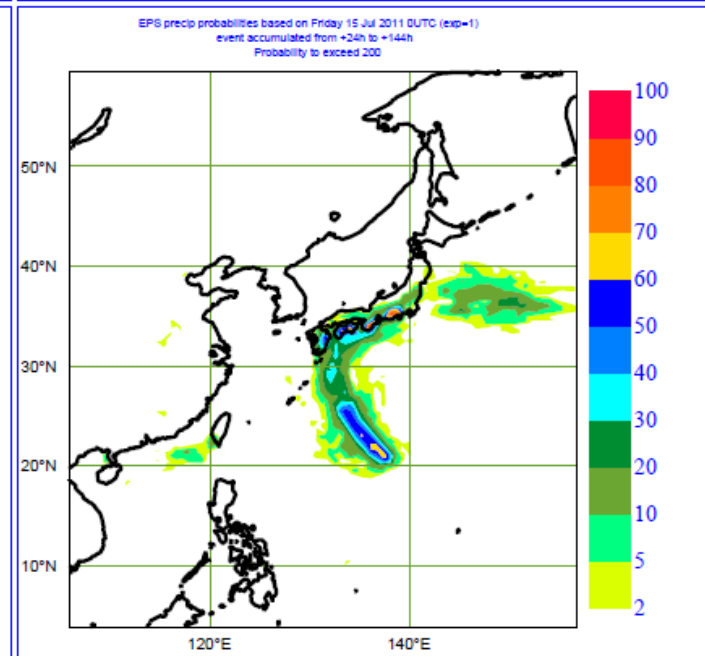
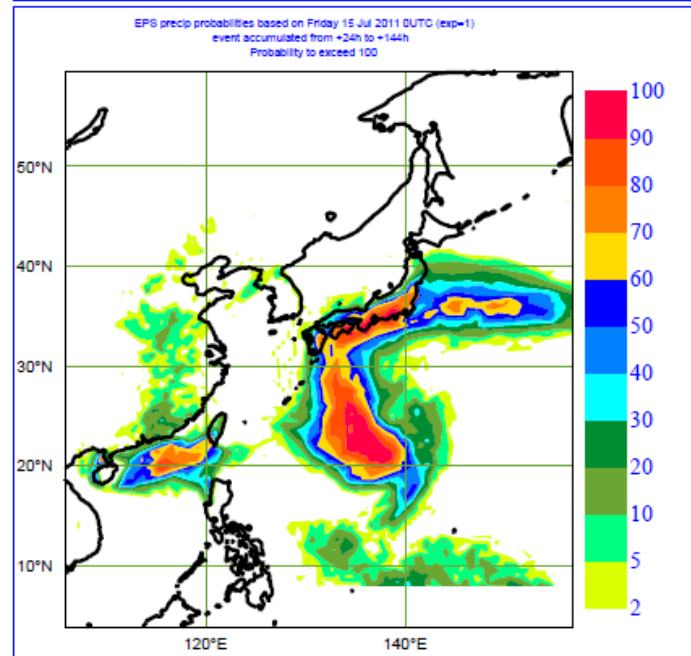
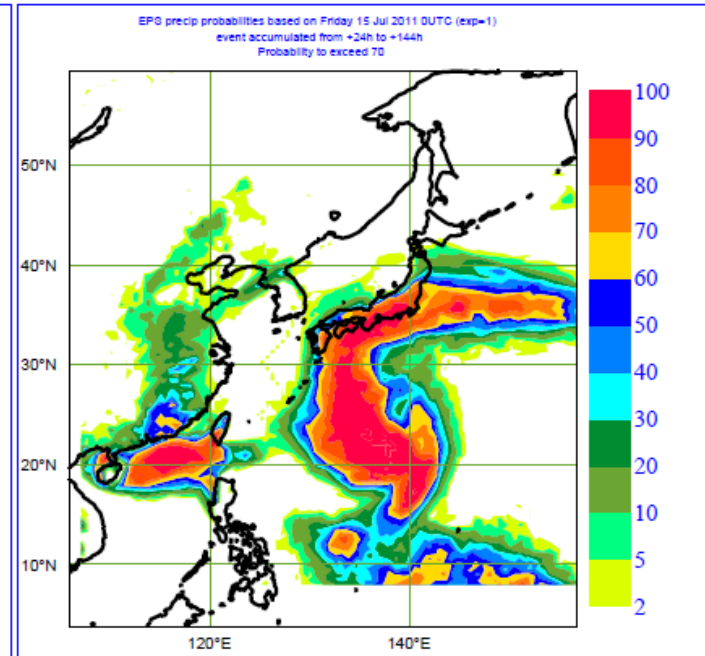
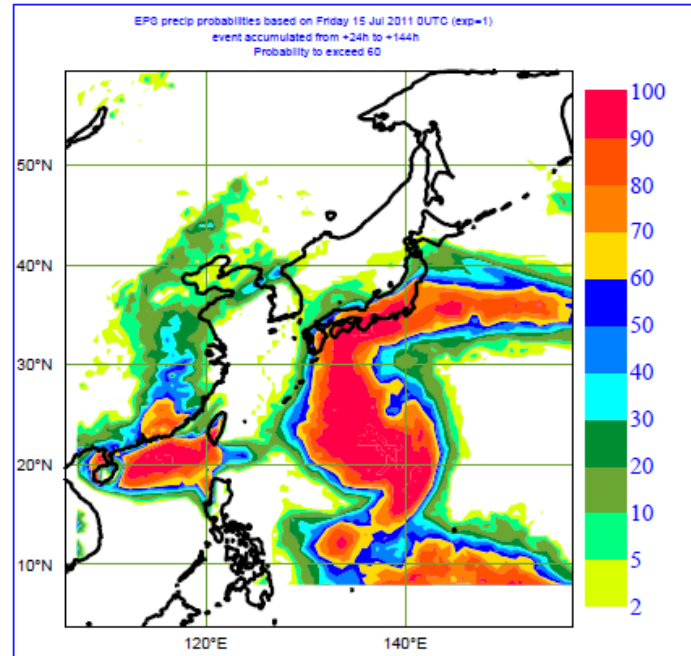


EPS probabilities of wind gusts exceeding 30/40/55/55 m/s

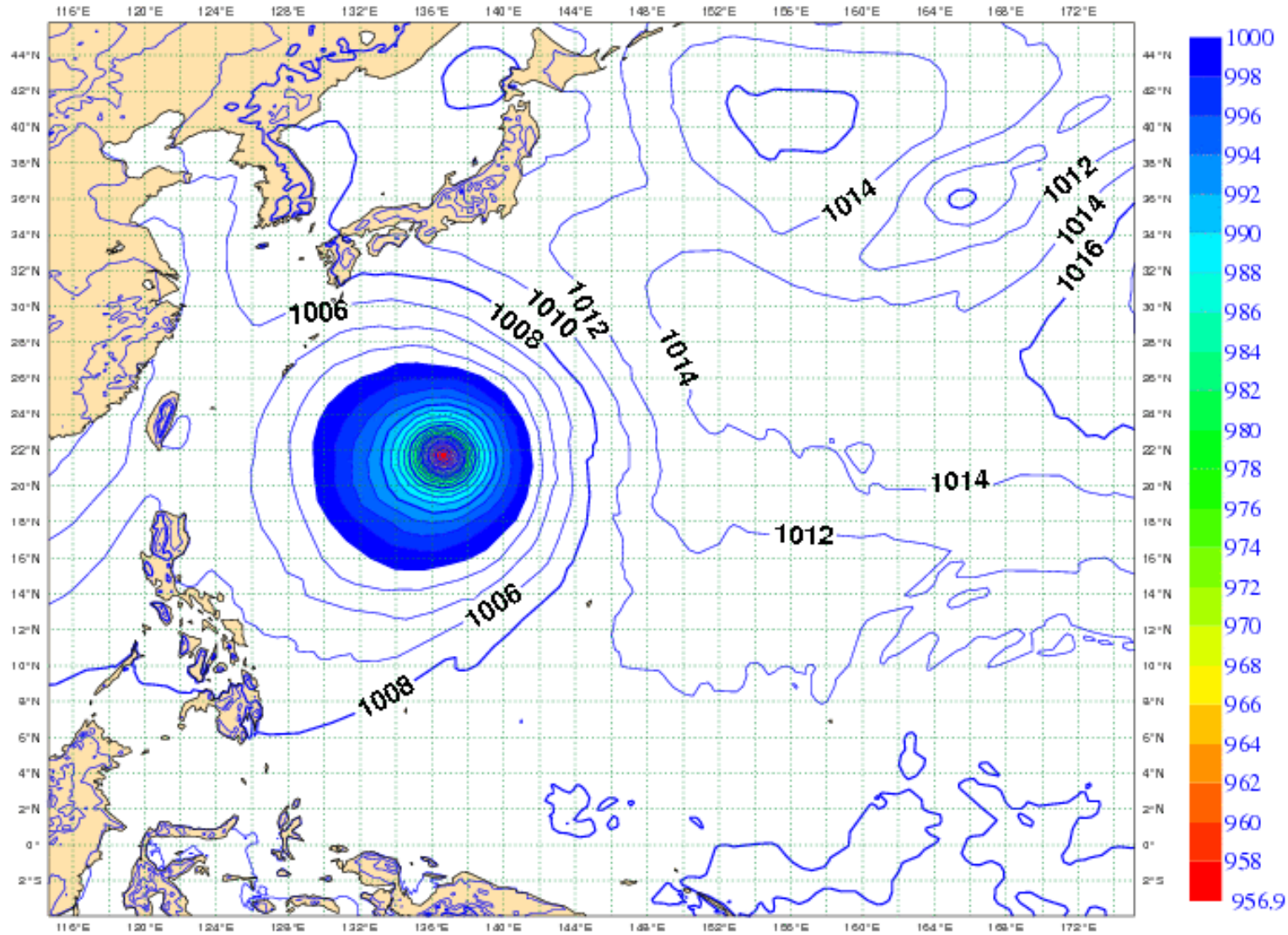
**Based on:
15/July/2011; 00 UTC
D+1 to D+6**



EPS probabilities of accumulated precip exceeding 60, 70, 100 and 200 mm
Based on:
15/July/2011; 00 UTC
D+1 to D+6

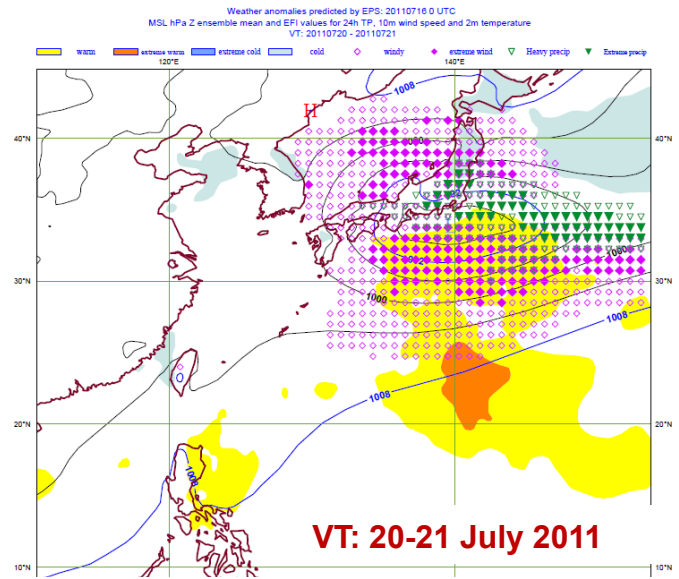
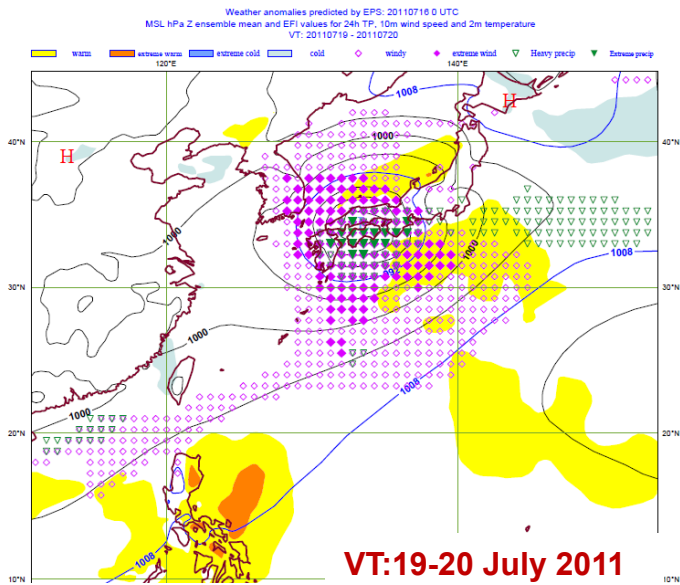
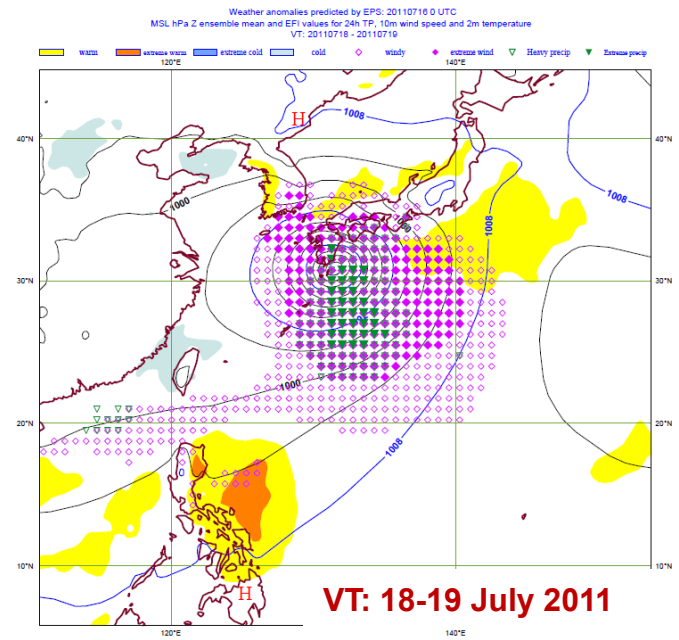
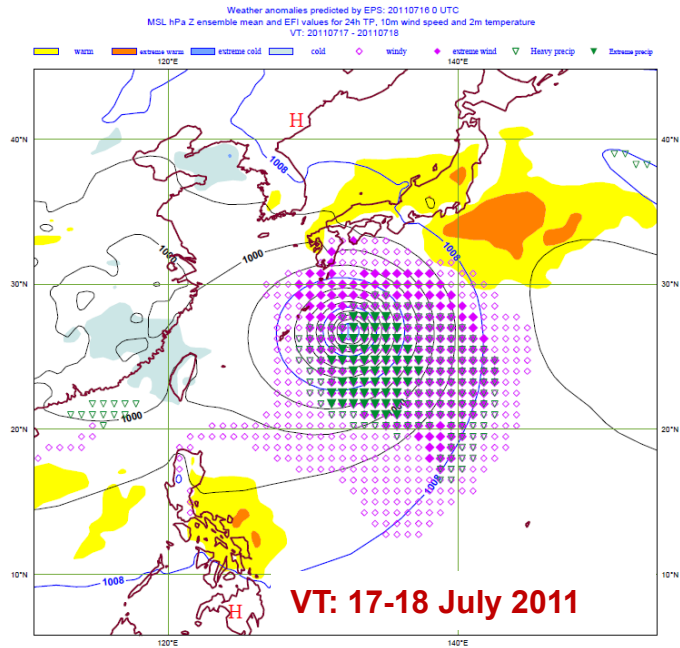


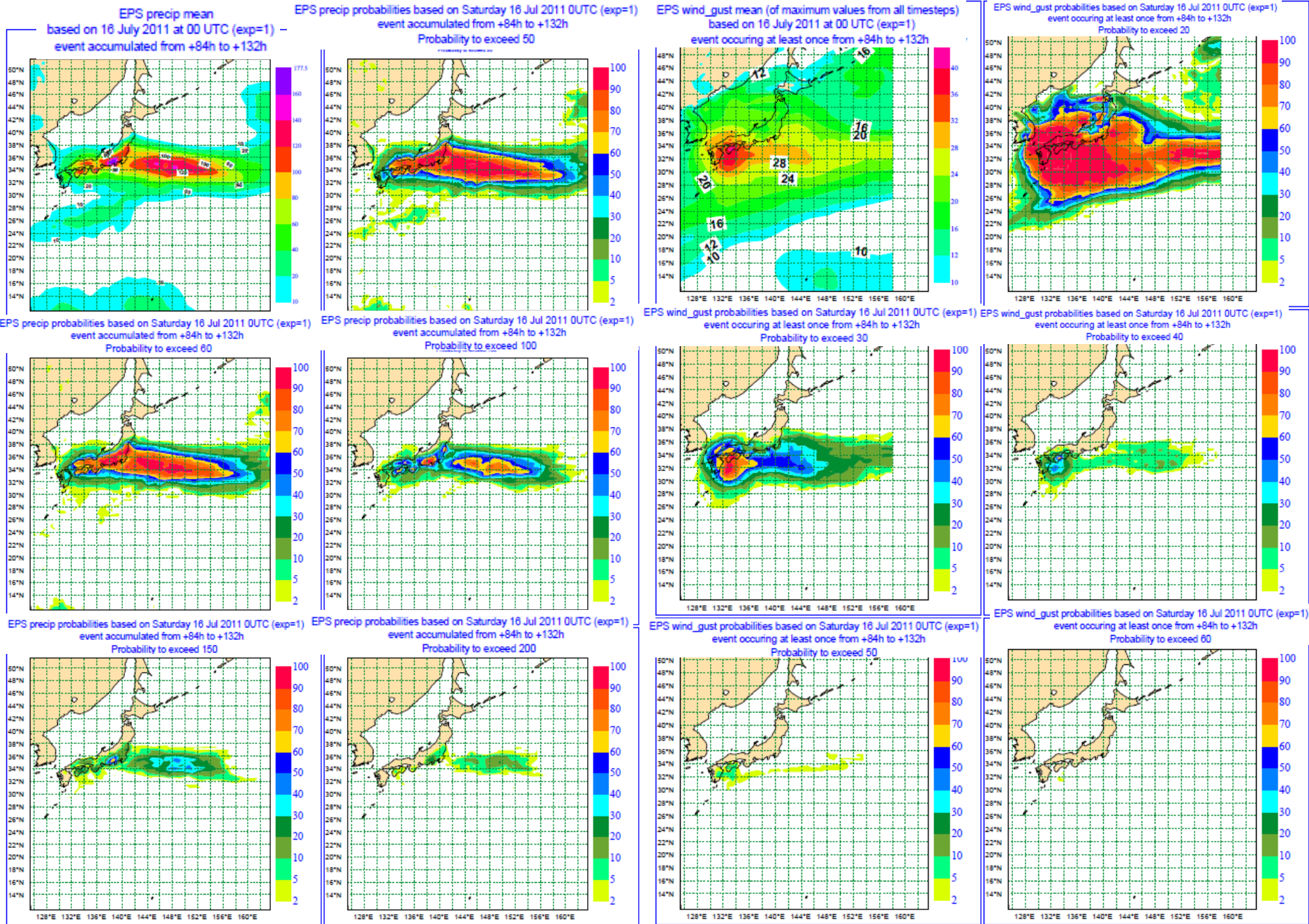
Saturday 16 July 2011 00UTC ECMWF Forecast t+12 VT: Saturday 16 July 2011 12UTC Surface: Mean sea level pressure



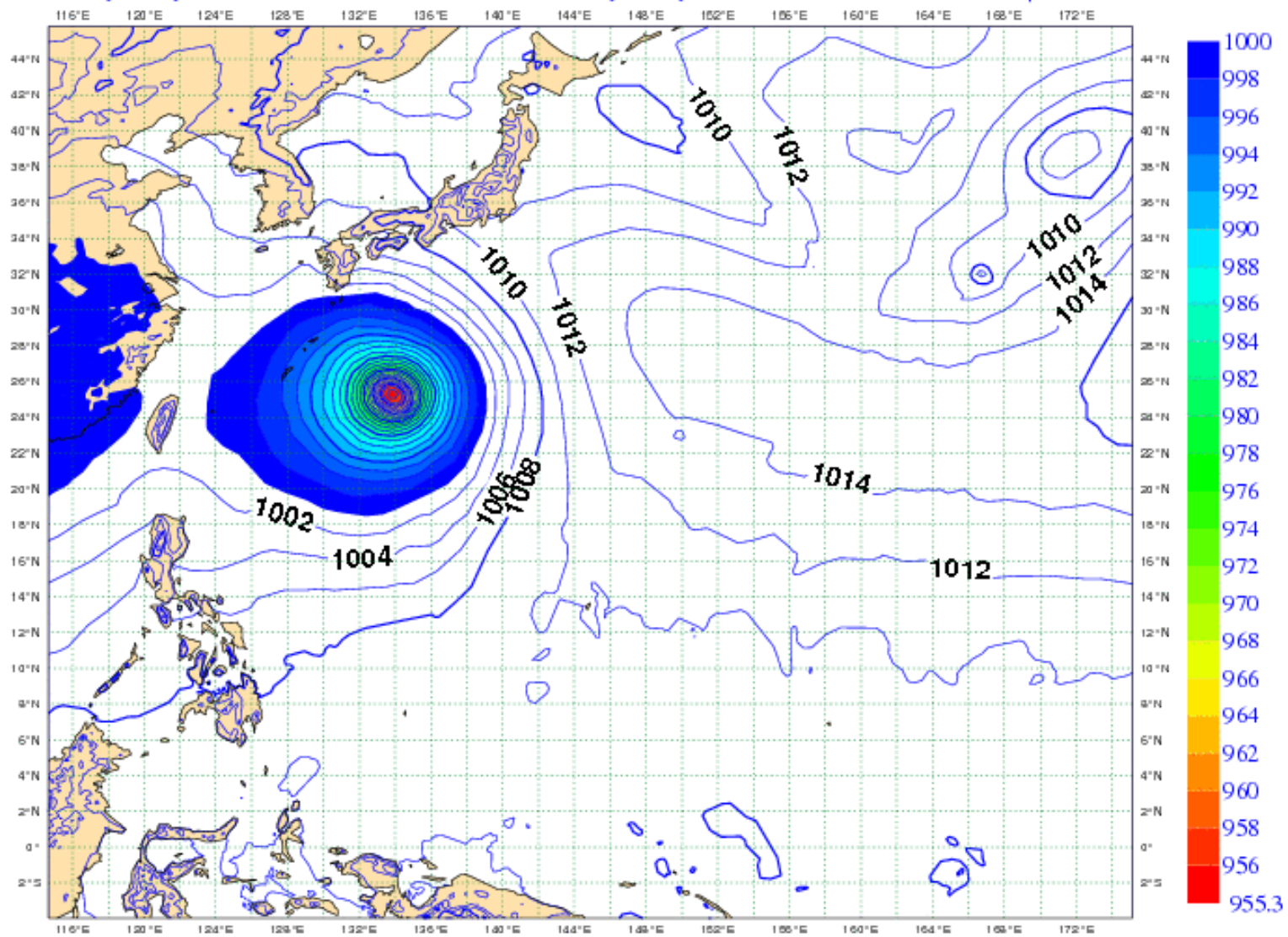
EFI

Based on 16/July/2011; 00 UTC





Sunday 17 July 2011 00UTC ECMWF Forecast t+12 VT: Sunday 17 July 2011 12UTC Surface: Mean sea level pressure

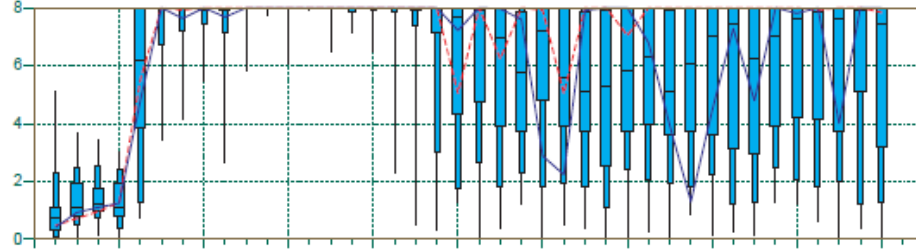


EPS Meteogram
 SW1 31.9°N 136.96°E (EPS sea point) 0 m (T1279)

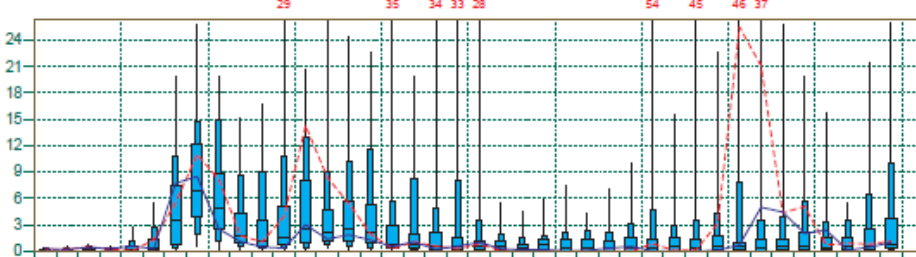
Near Fukushima

Deterministic Forecast and EPS Distribution Saturday 16 July 2011 00 UTC

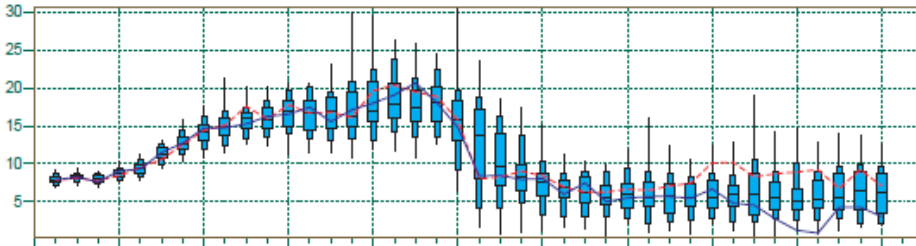
Total Cloud Cover (okta)



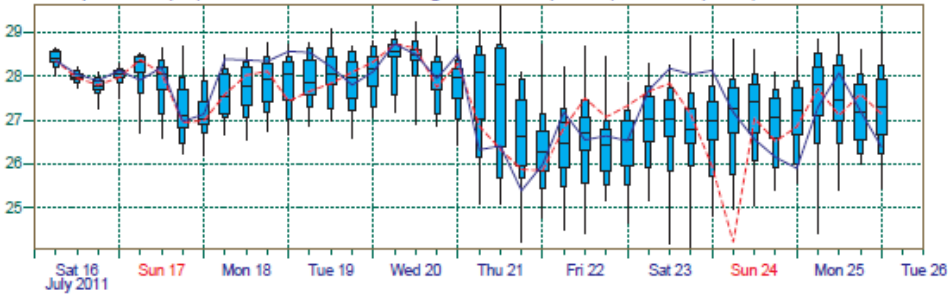
Total Precipitation (mm/6h)



10m Wind Speed (m/s)



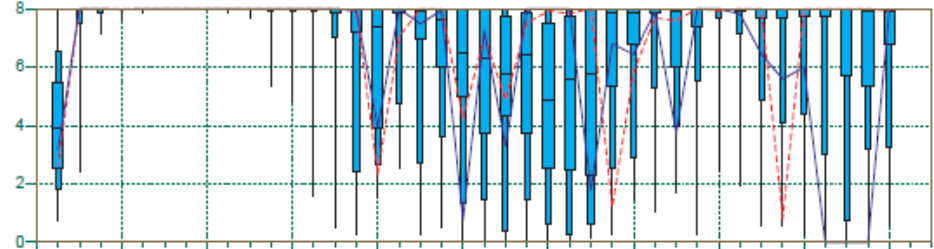
2m Temperature (°C) reduced to the station height from 0 m (T1279) and 2 m (T639)



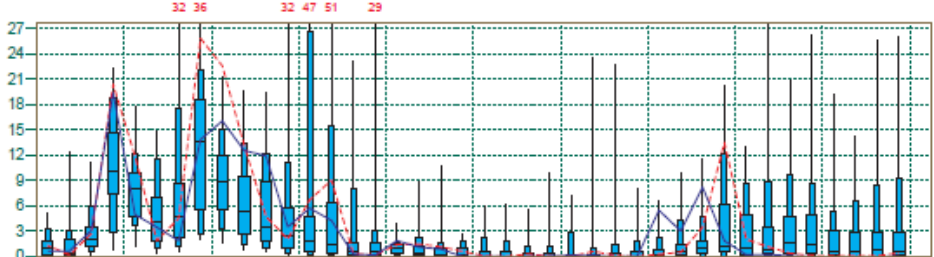
EPS Meteogram
 SW2 31.9°N 136.96°E (EPS sea point) 0 m (T1279)

Deterministic Forecast and EPS Distribution Sunday 17 July 2011 00 UTC

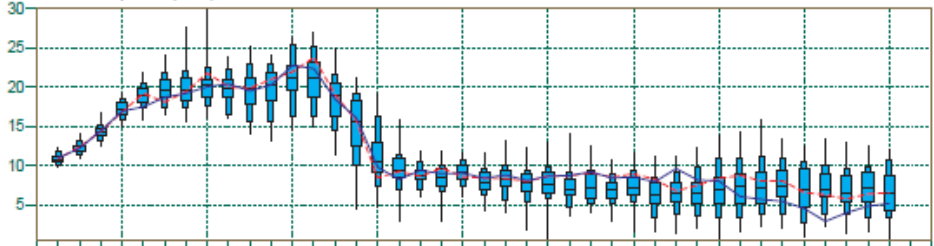
Total Cloud Cover (okta)



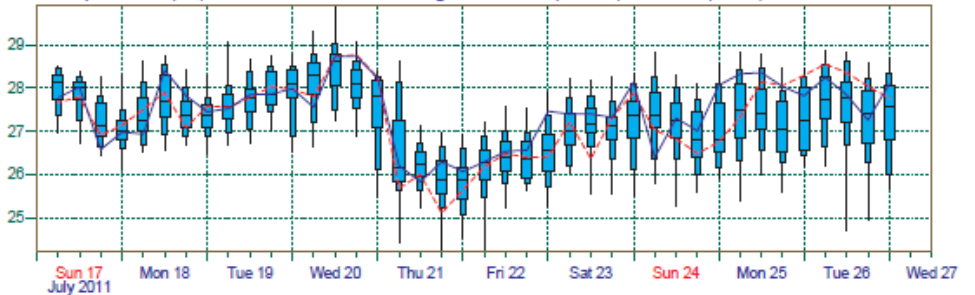
Total Precipitation (mm/6h)

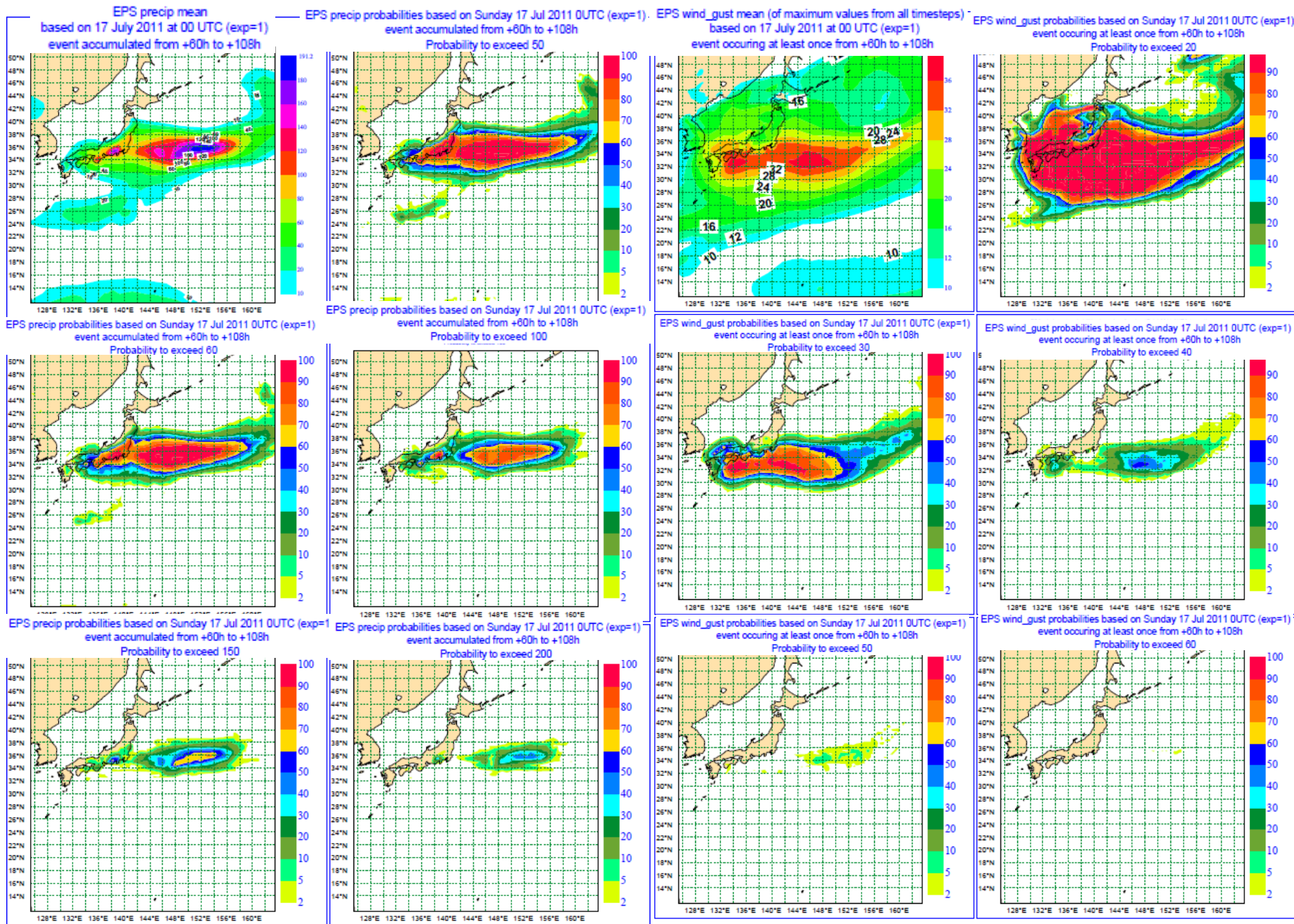


10m Wind Speed (m/s)



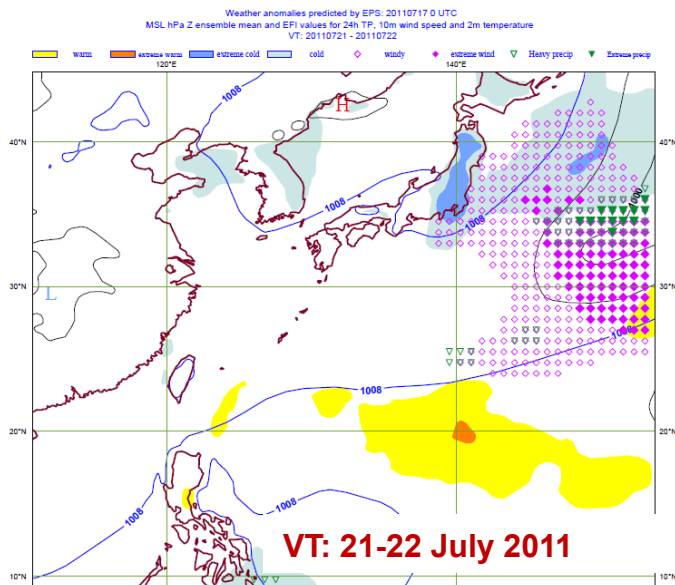
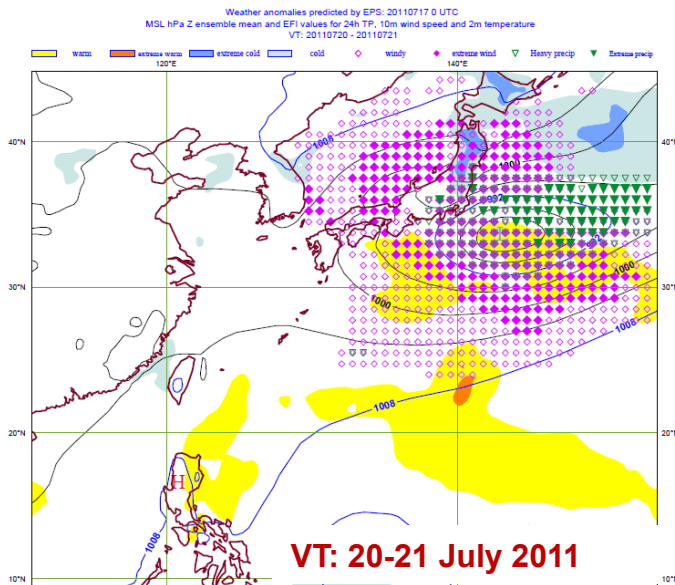
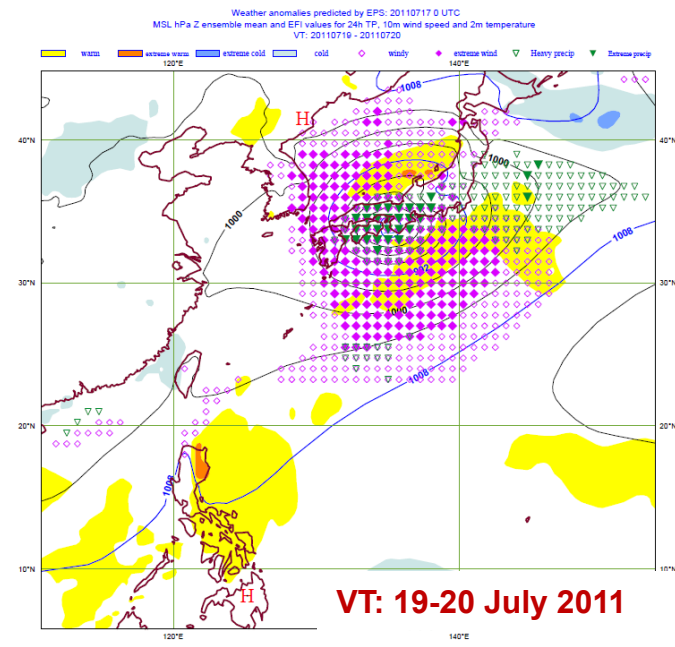
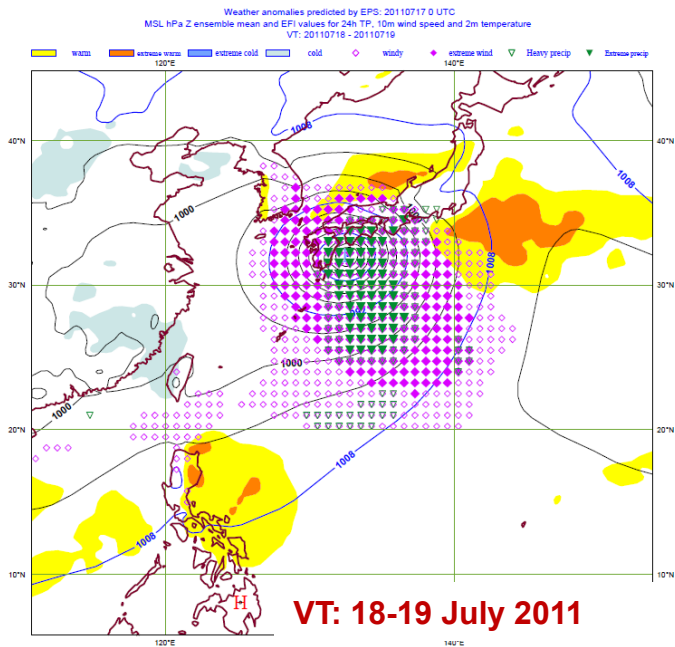
2m Temperature (°C) reduced to the station height from 0 m (T1279) and 2 m (T639)



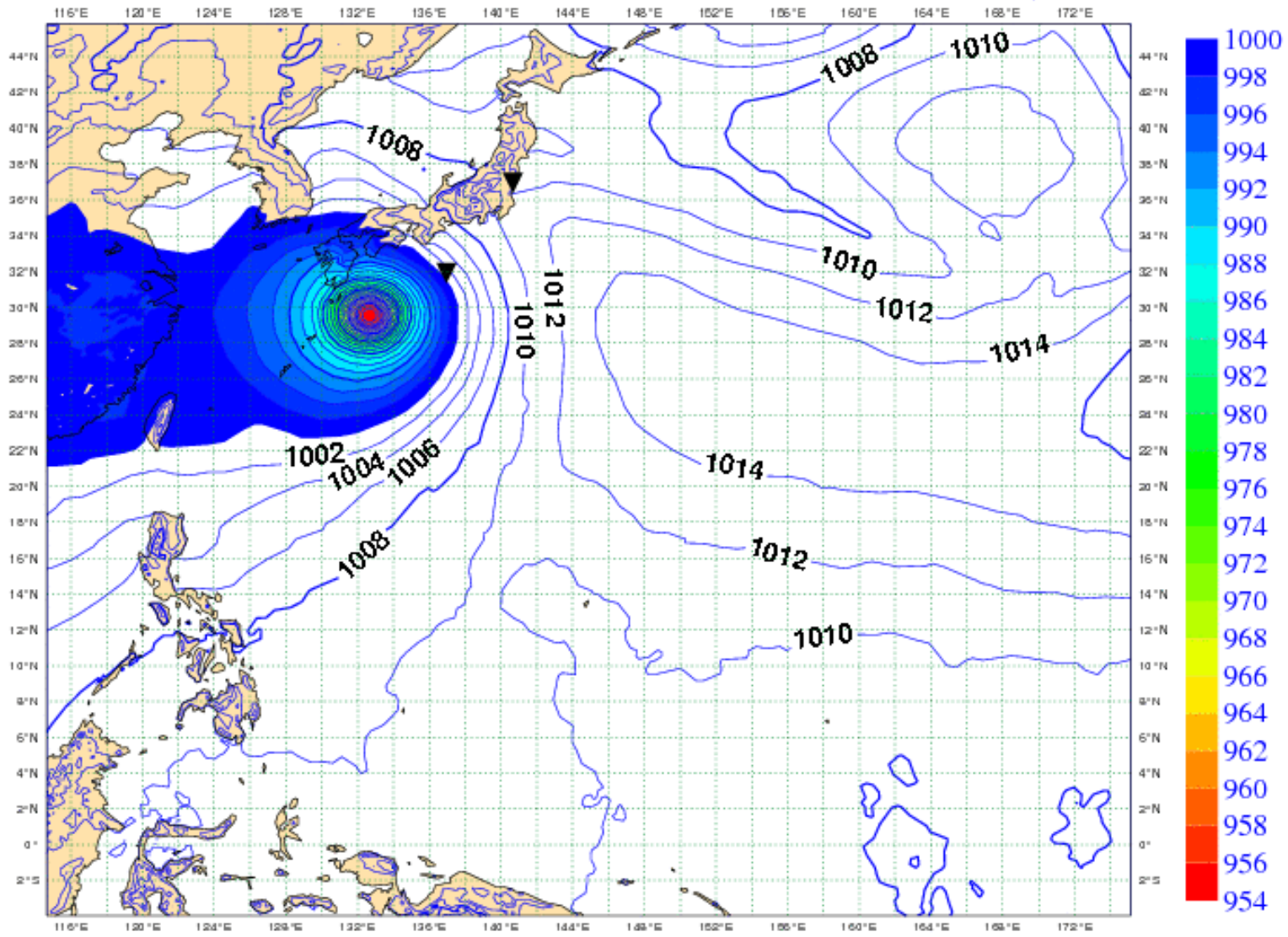


EFI

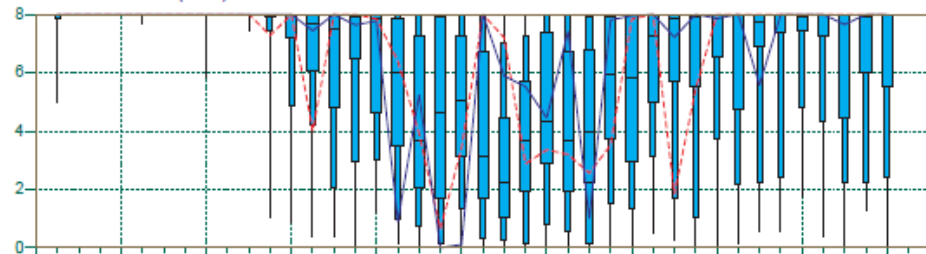
Based on 17/July/2011; 00 UTC



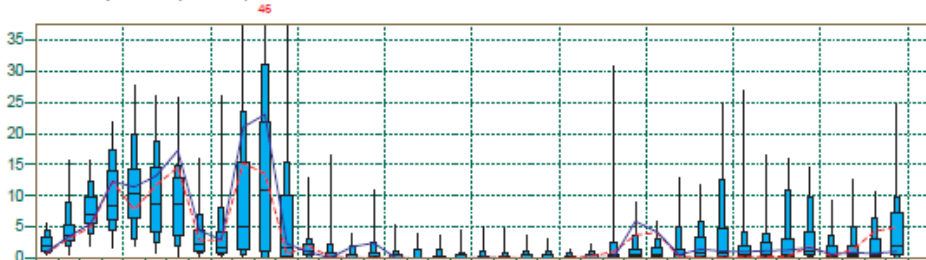
Monday 18 July 2011 00UTC ECMWF Forecast t+12 VT: Monday 18 July 2011 12UTC Surface: Mean sea level pressure



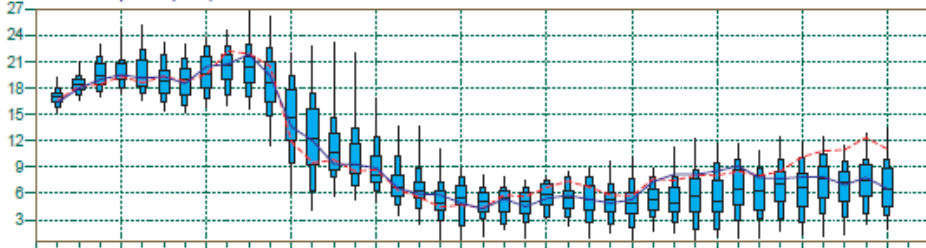
EPS Meteogram
 SW1 31.9°N 136.96°E (EPS sea point) 0 m (T1279)
 Deterministic Forecast and EPS Distribution Monday 18 July 2011 00 UTC
 Total Cloud Cover (okta)



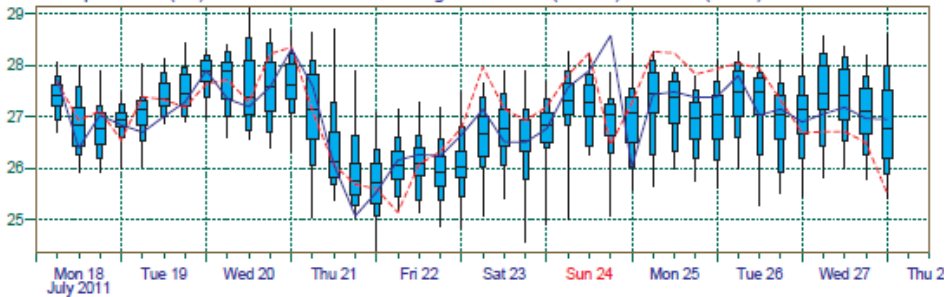
Total Precipitation (mm/6h)



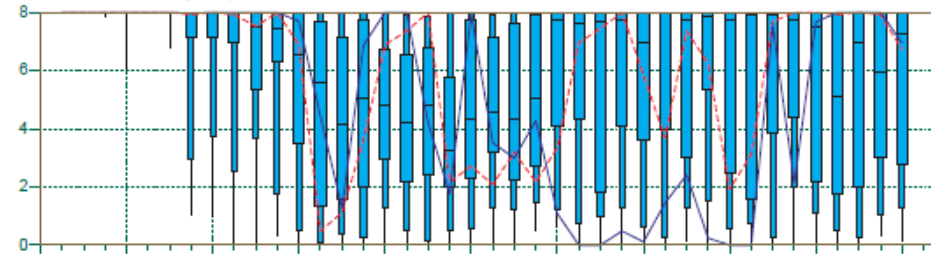
10m Wind Speed (m/s)



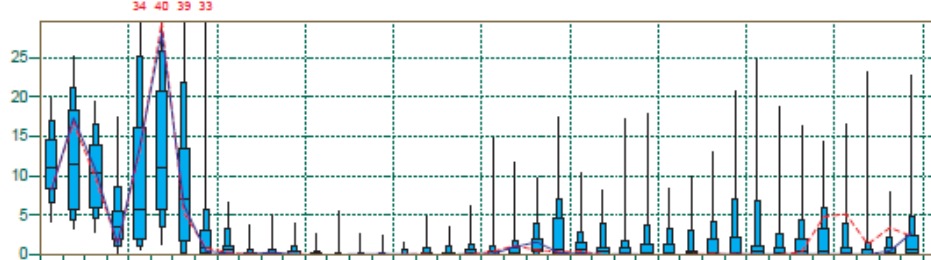
2m Temperature (°C) reduced to the station height from 0 m (T1279) and 2 m (T639)



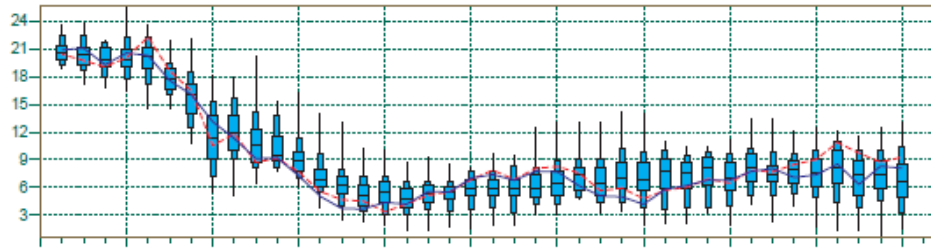
EPS Meteogram
 SW2 31.9°N 136.96°E (EPS sea point) 0 m (T1279)
 Deterministic Forecast and EPS Distribution Tuesday 19 July 2011 00 UTC
 Total Cloud Cover (okta)



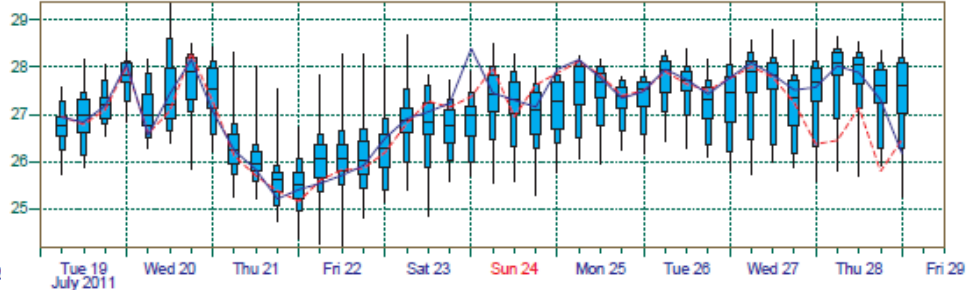
Total Precipitation (mm/6h)



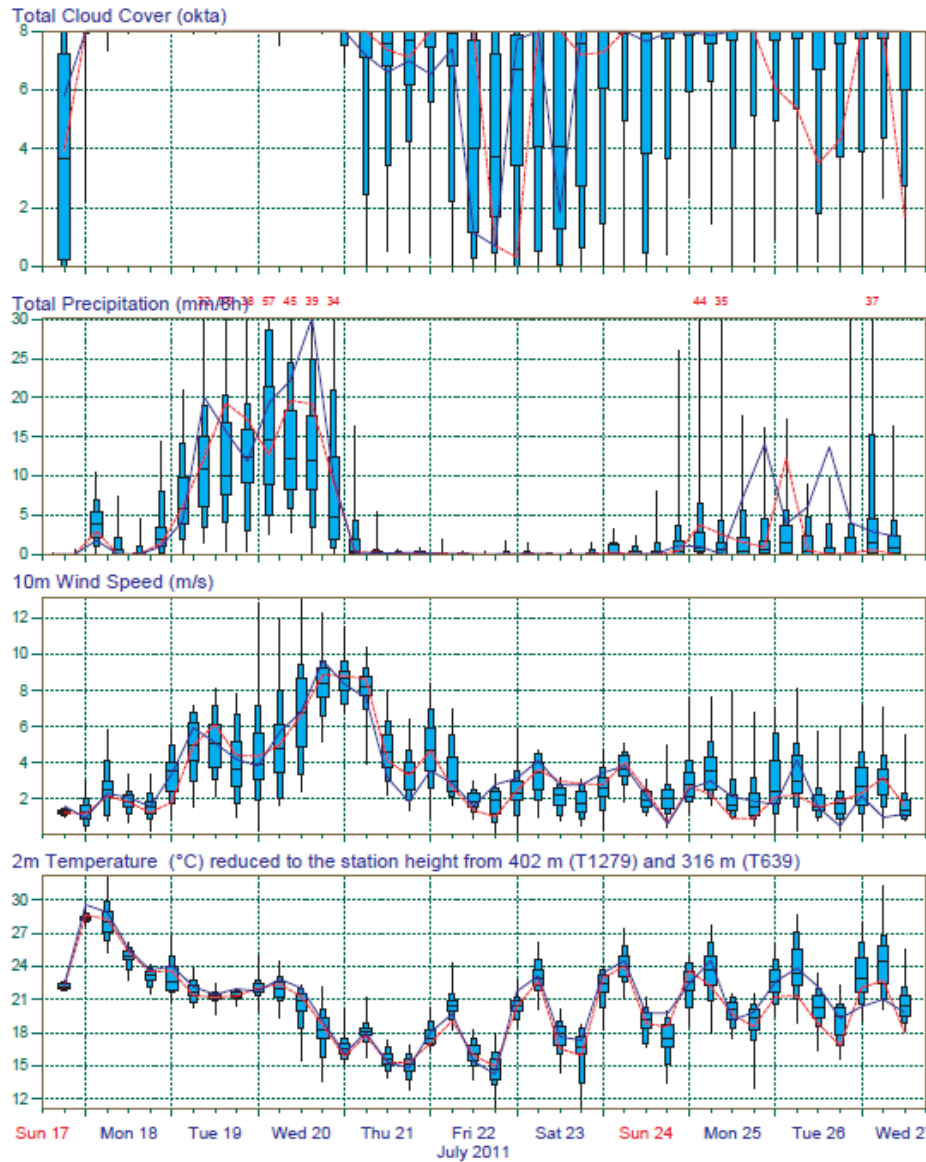
10m Wind Speed (m/s)



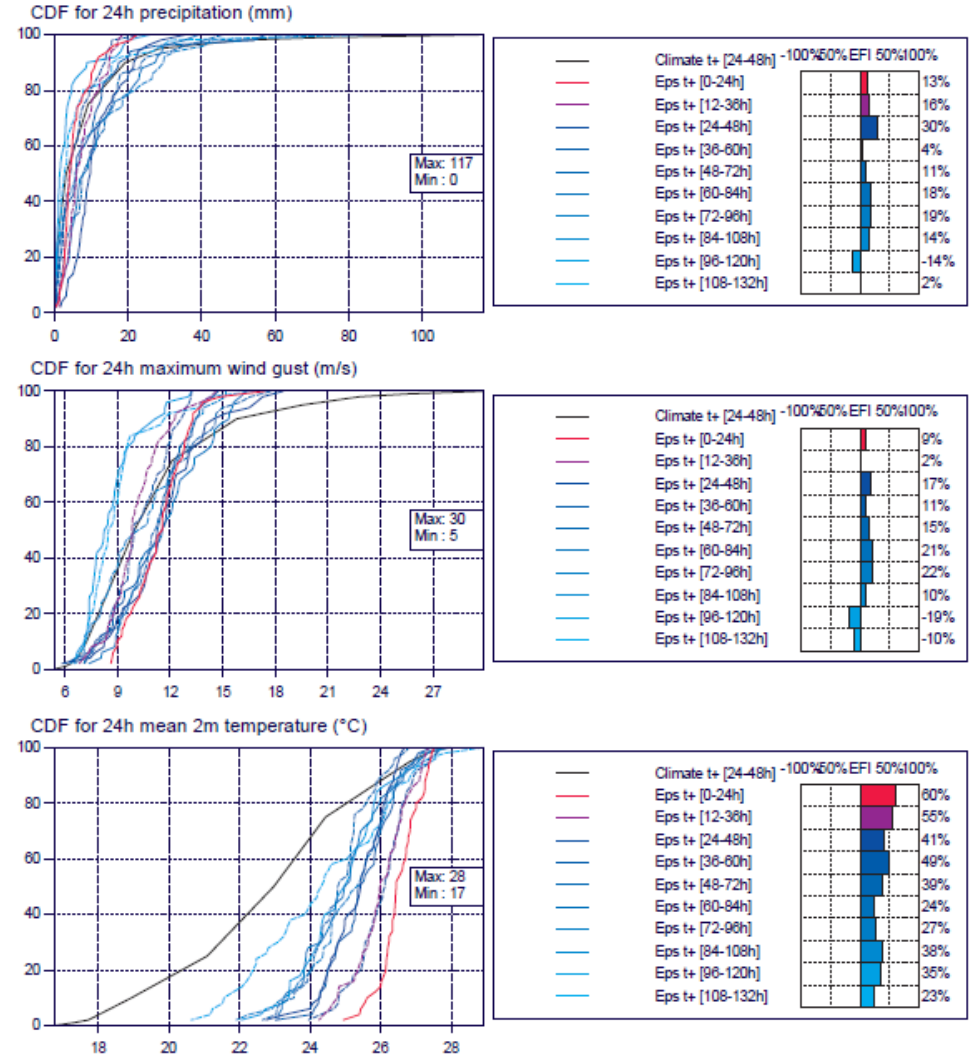
2m Temperature (°C) reduced to the station height from 0 m (T1279) and 2 m (T639)



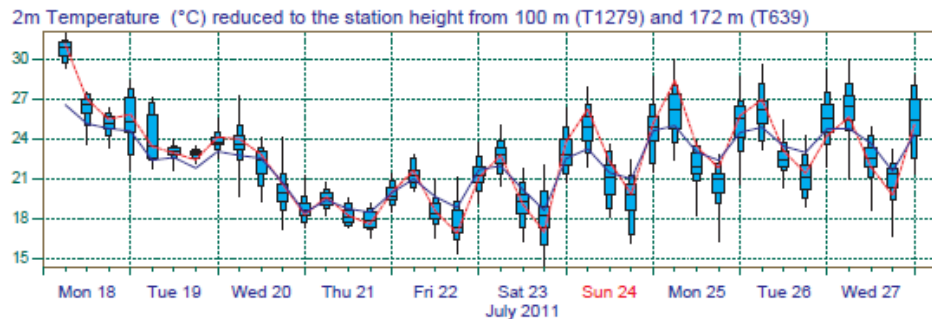
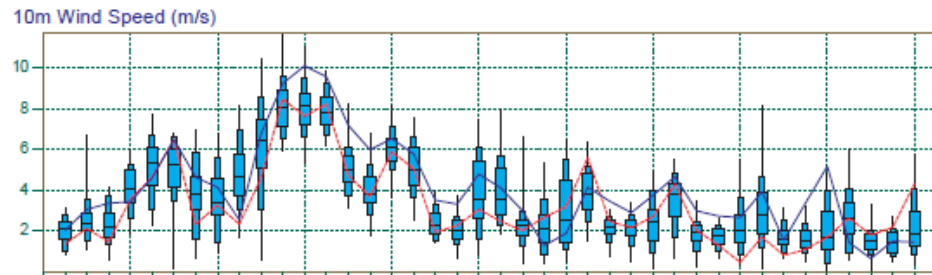
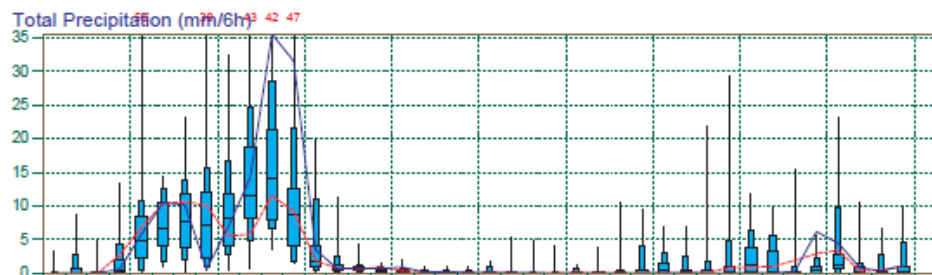
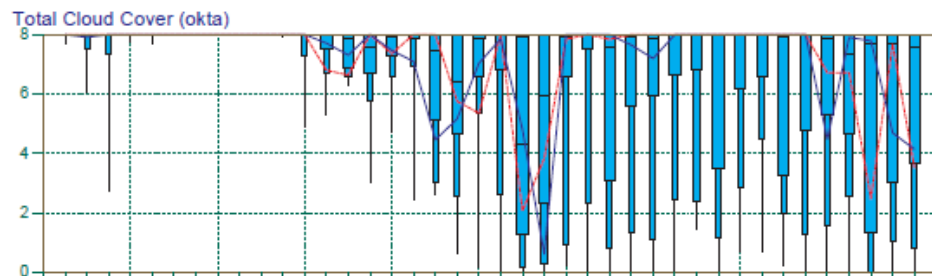
EPS Meteogram
 36.96°N 140.67°E (EPS land point) 402 m (T1279)
 Deterministic Forecast and EPS Distribution Sunday 17 July 2011 12 UTC



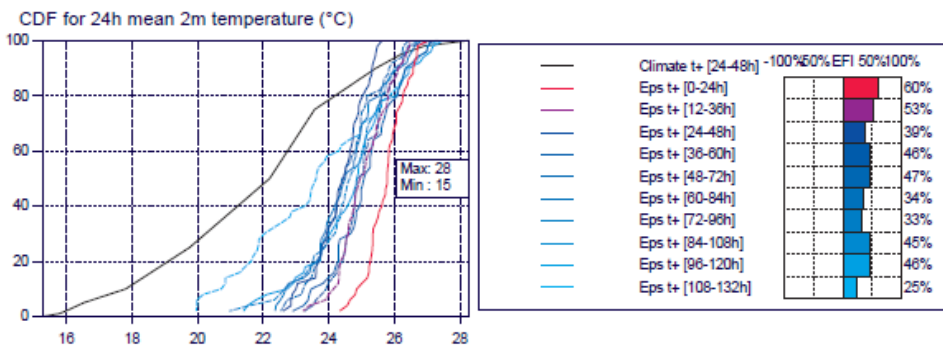
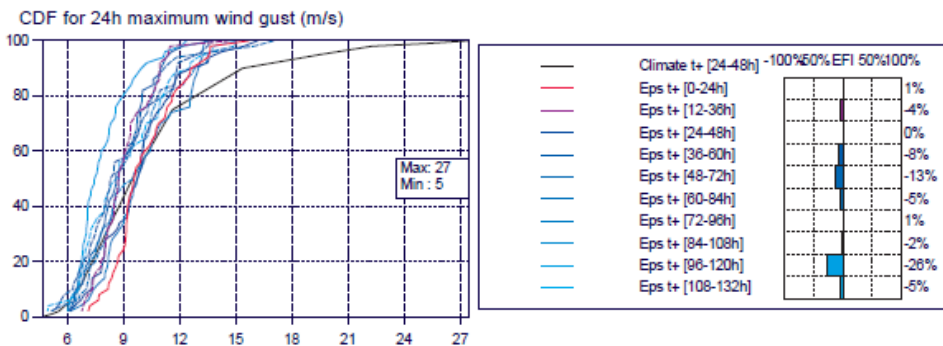
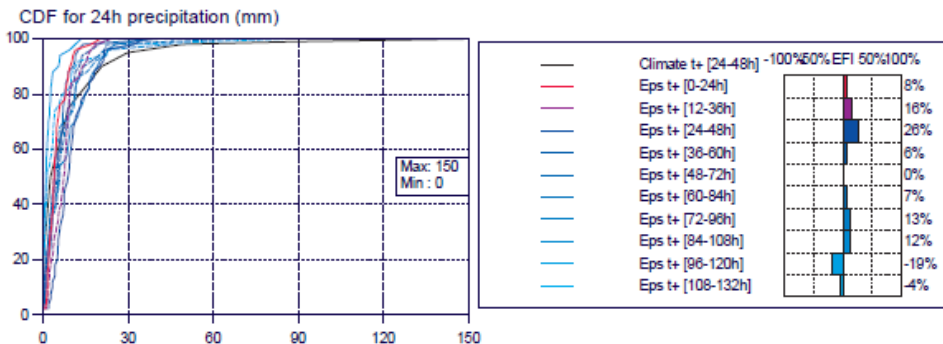
Forecast and M-Climate cumulative distribution functions with EFI values at 36.9°N/140.91°E valid for 24 hours from Monday 18 July 2011 00 UTC to Tuesday 19 July 2011 00 UTC



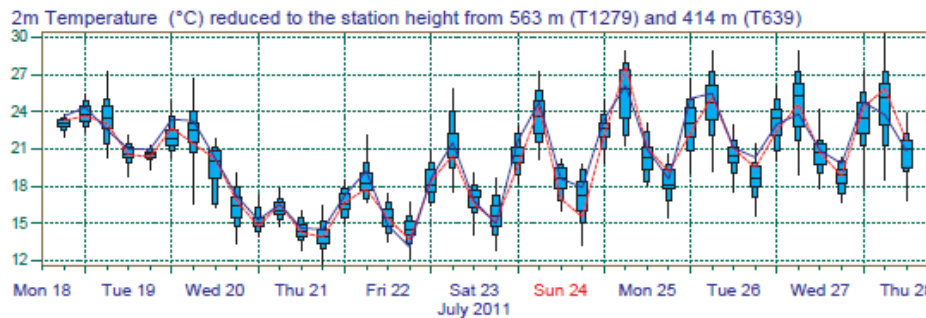
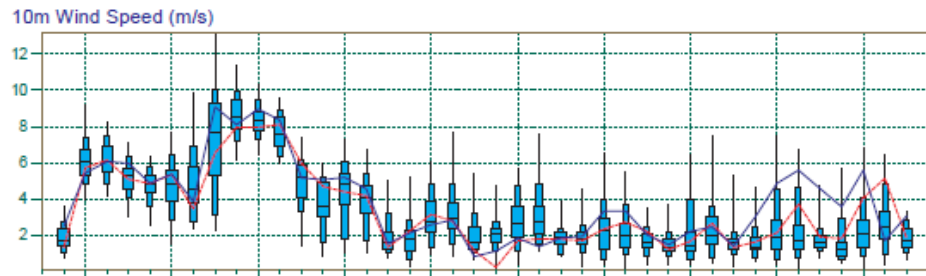
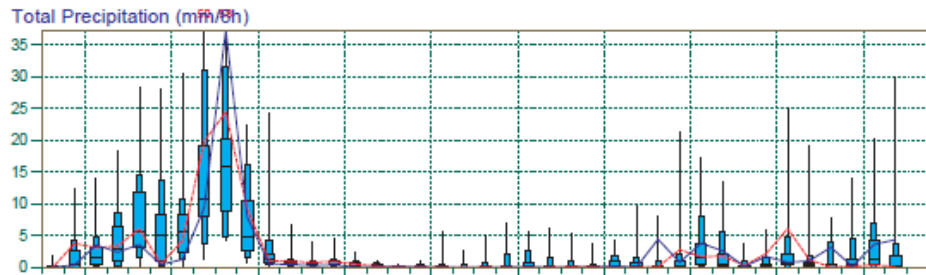
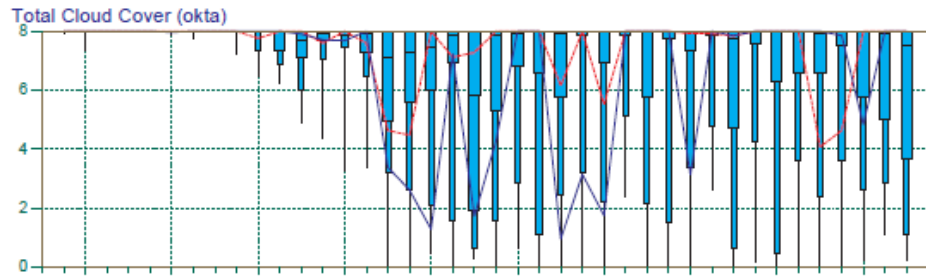
EPS Meteogram
 37.24°N 141°E (EPS land point) 100 m (T1279)
 Deterministic Forecast and EPS Distribution Monday 18 July 2011 00 UTC



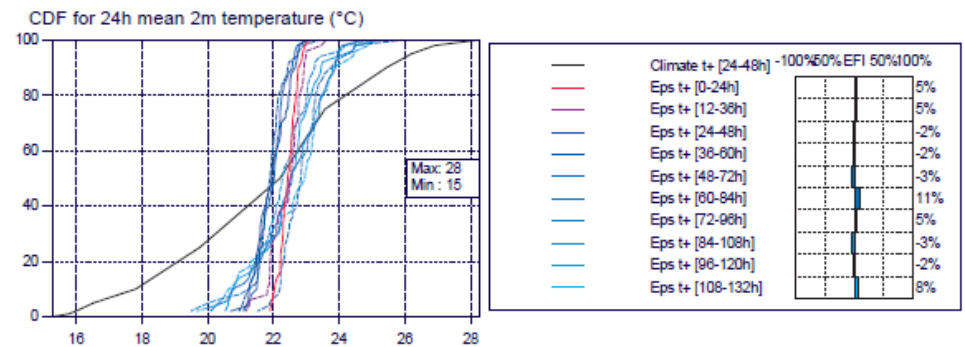
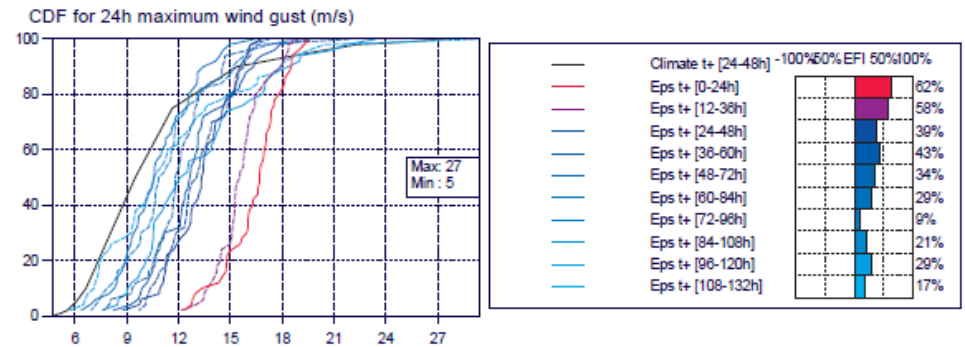
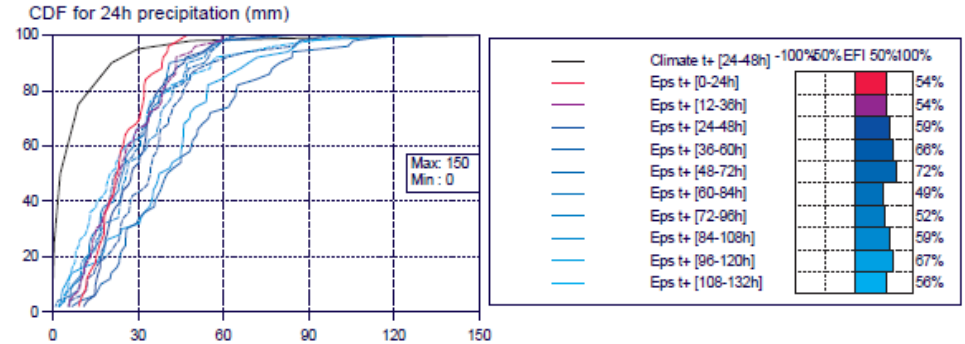
Forecast and M-Climate cumulative distribution functions with EFI values at 37.32°N/140.91°E valid for 24 hours from Monday 18 July 2011 00 UTC to Tuesday 19 July 2011 00 UTC



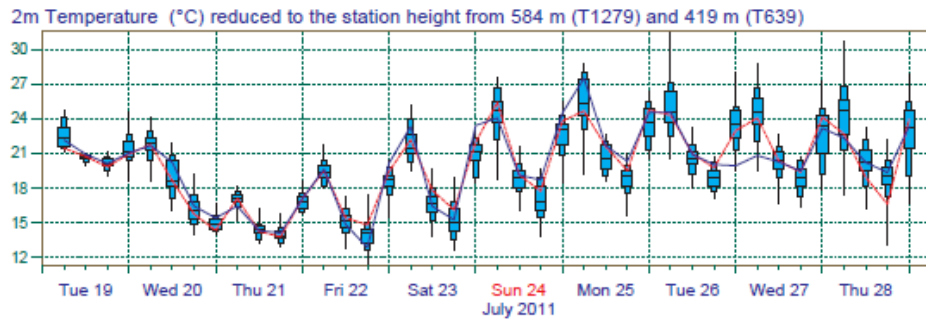
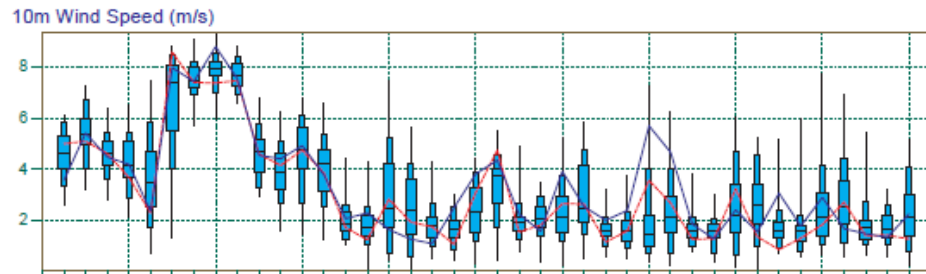
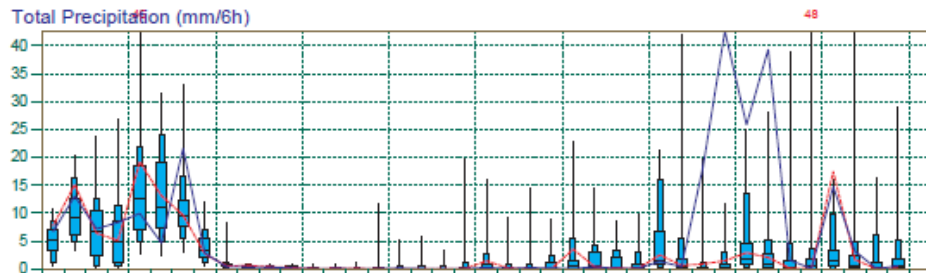
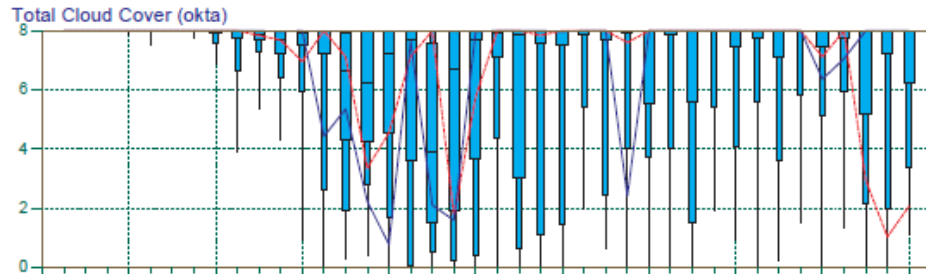
EPS Meteogram
 37.52°N 140.67°E (EPS land point) 563 m (T1279)
 Deterministic Forecast and EPS Distribution Monday 18 July 2011 12 UTC



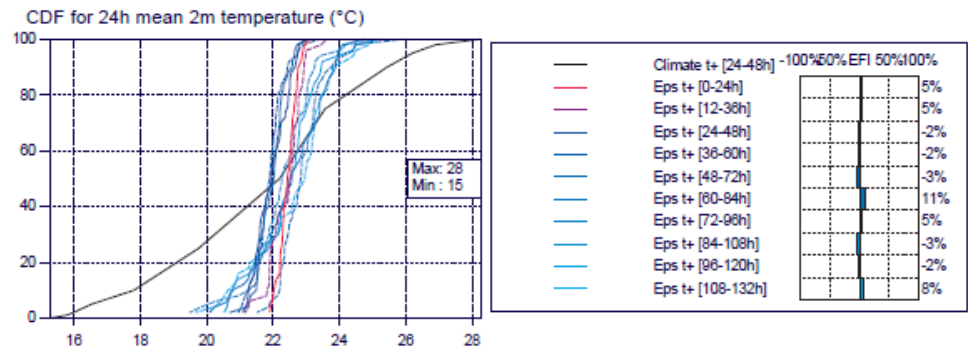
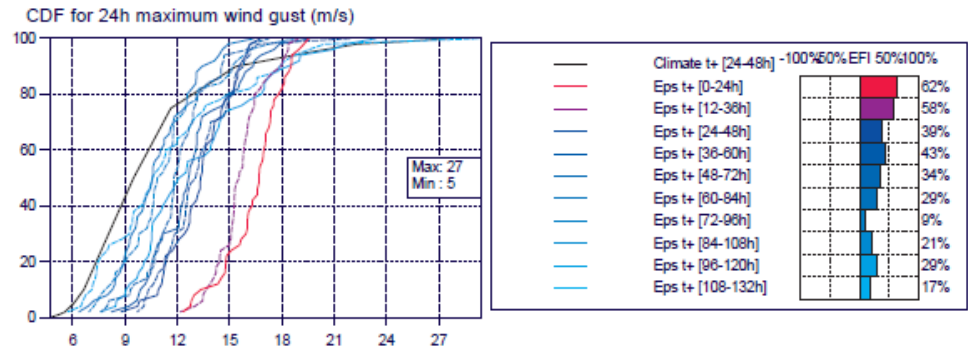
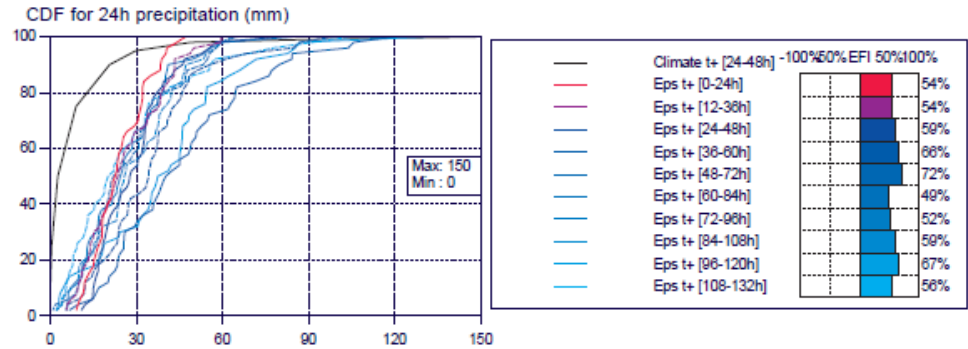
Forecast and M-Climate cumulative distribution functions with EFI values at 37.53°N/140.7°E valid for 24 hours from Tuesday 19 July 2011 00 UTC to Wednesday 20 July 2011 00 UTC



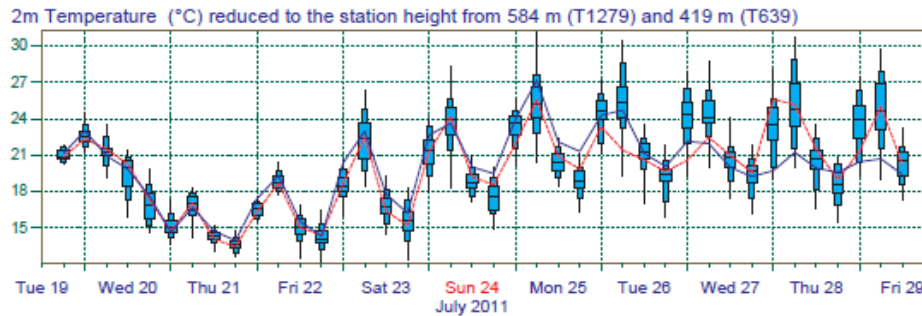
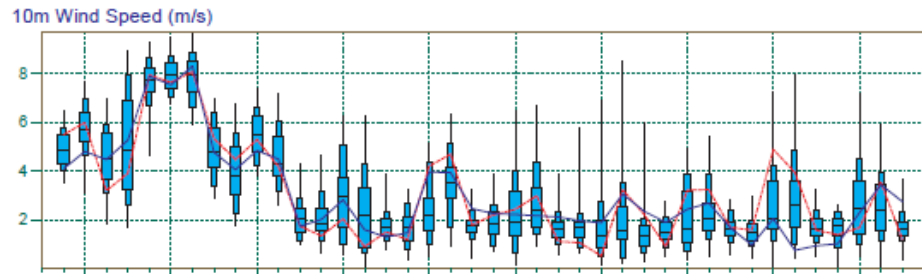
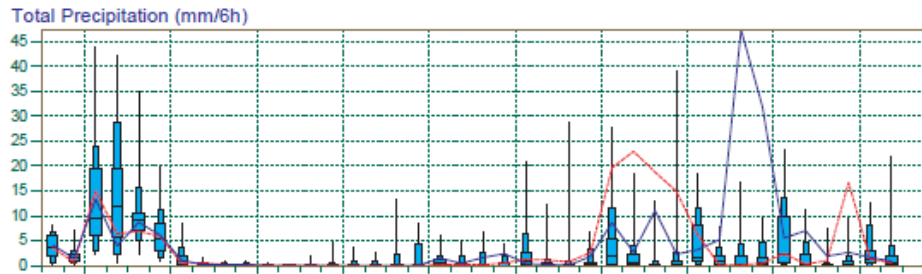
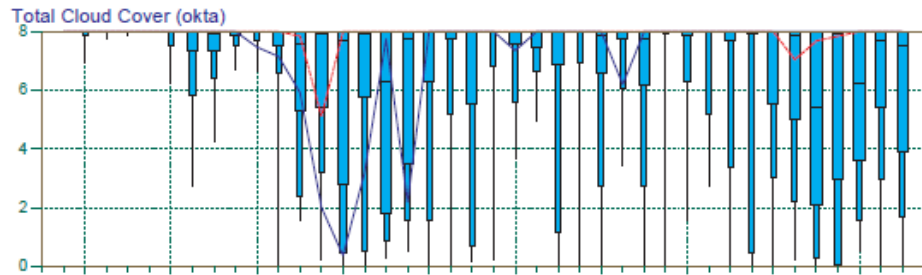
EPS Meteogram
 37.24°N 140.67°E (EPS land point) 584 m (T1279)
 Deterministic Forecast and EPS Distribution Tuesday 19 July 2011 00 UTC



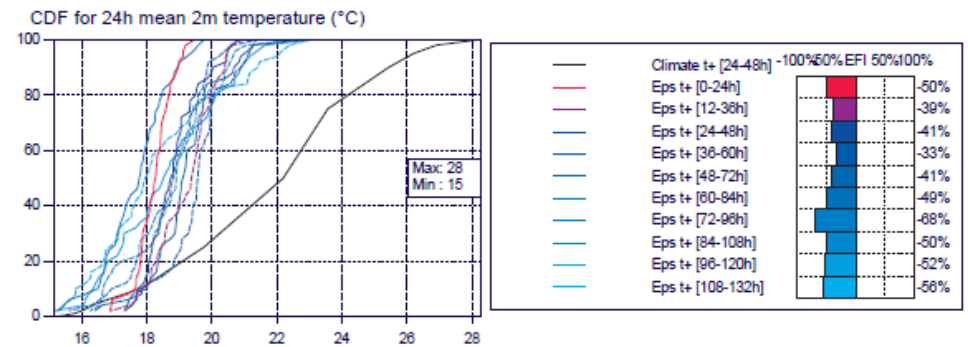
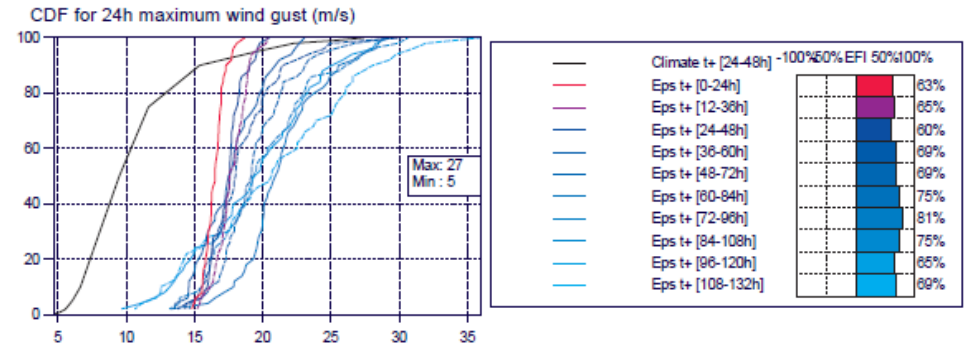
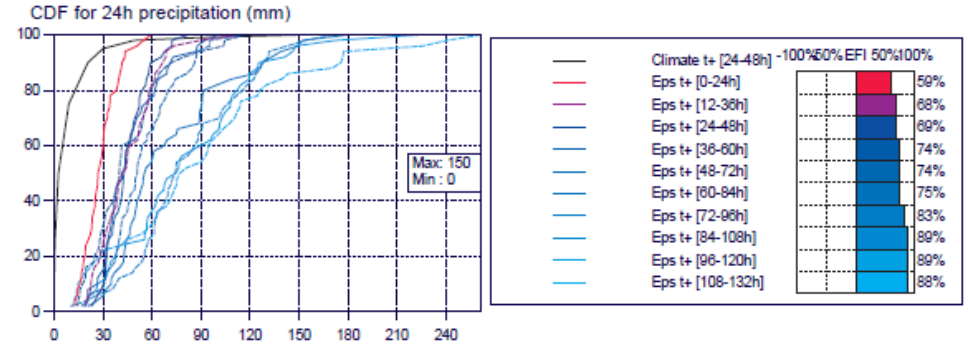
Forecast and M-Climate cumulative distribution functions with EFI values at 37.11°N/140.7°E valid for 24 hours from Tuesday 19 July 2011 00 UTC to Wednesday 20 July 2011 00 UTC



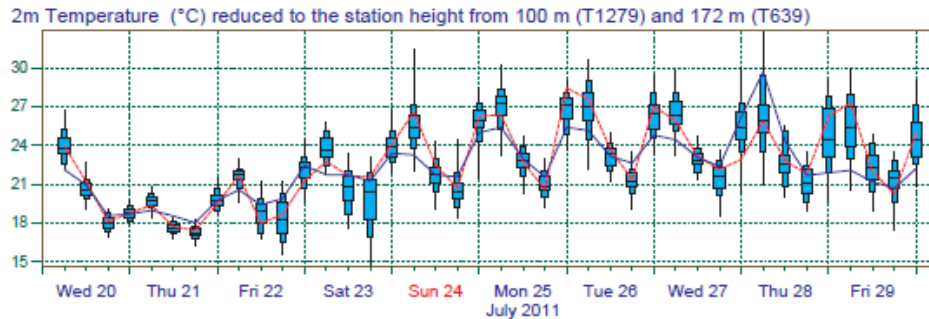
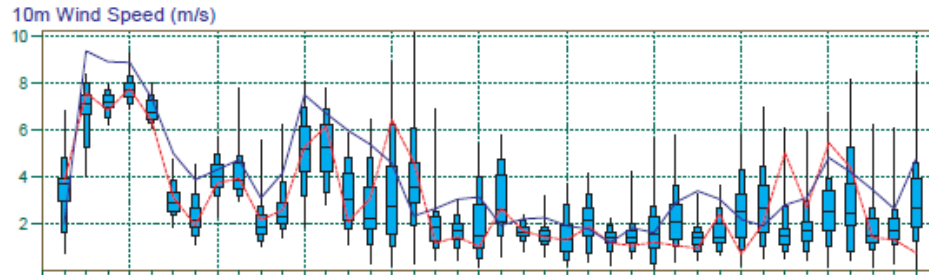
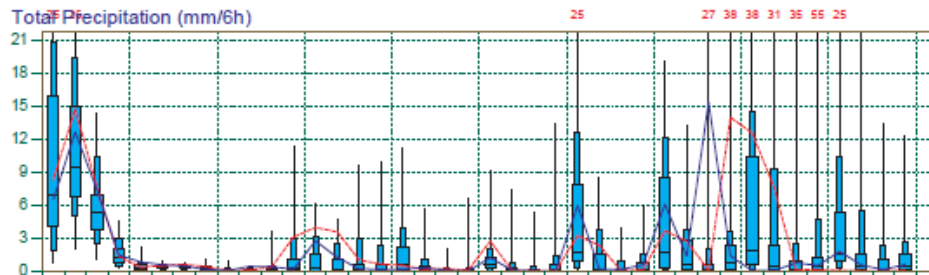
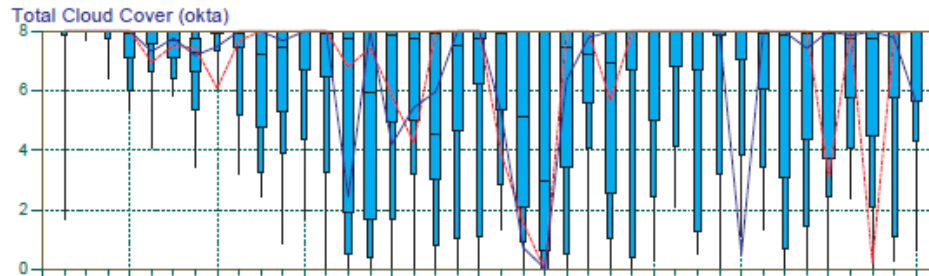
EPS Meteogram
 37.24°N 140.67°E (EPS land point) 584 m (T1279)
 Deterministic Forecast and EPS Distribution Tuesday 19 July 2011 12 UTC



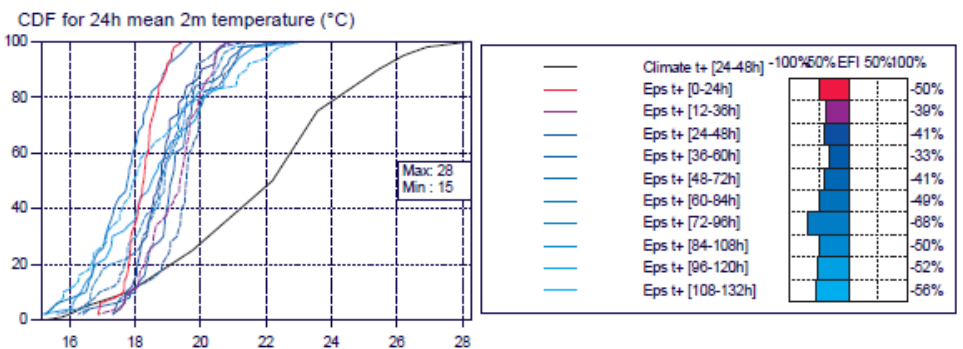
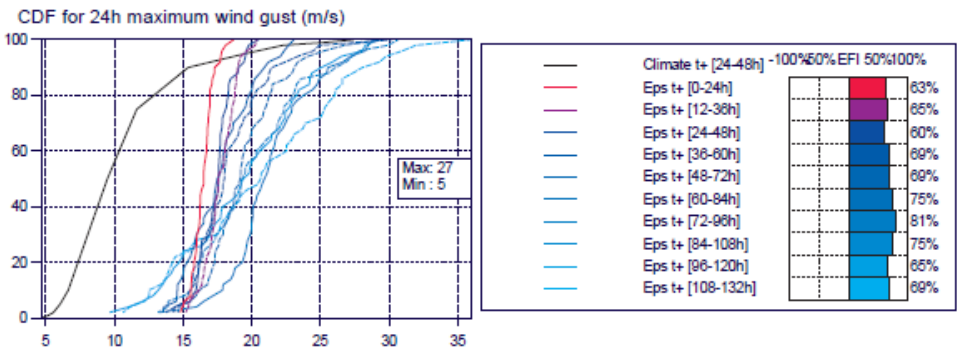
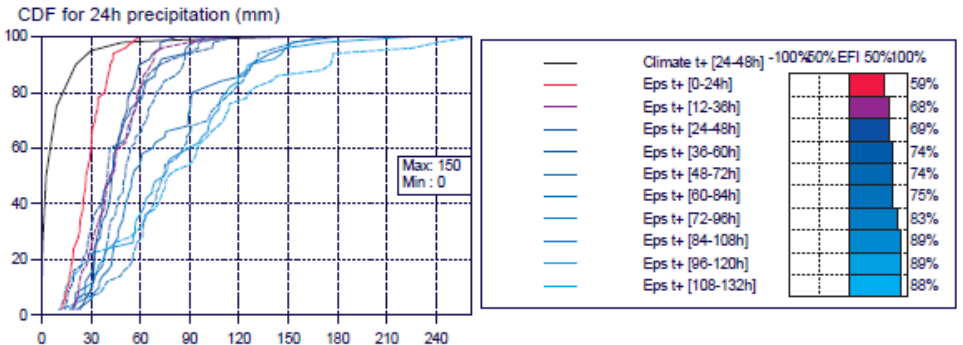
Forecast and M-Climate cumulative distribution functions with EFI values at 37.32°N/140.7°E valid for 24 hours from Wednesday 20 July 2011 00 UTC to Thursday 21 July 2011 00 UTC



EPS Meteogram
 37.24°N 141°E (EPS land point) 100 m (T1279)
 Deterministic Forecast and EPS Distribution Wednesday 20 July 2011 00 UTC



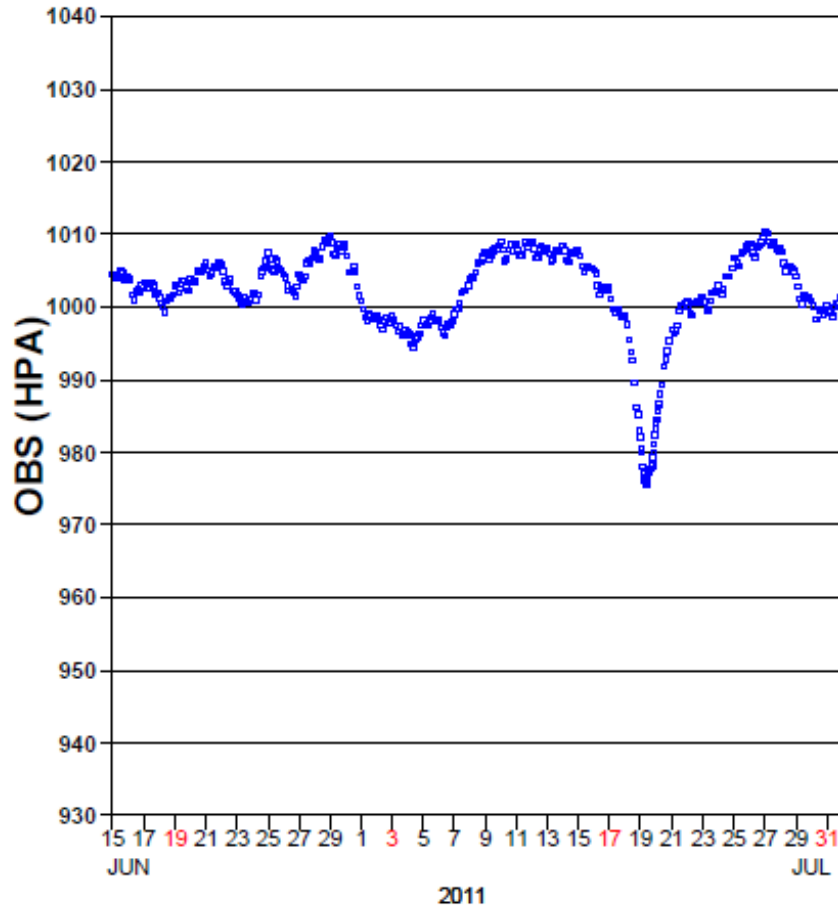
Forecast and M-Climate cumulative distribution functions with EFI values at 37.32°N/140.91°E valid for 24 hours from Wednesday 20 July 2011 00 UTC to Thursday 21 July 2011 00 UTC



Tracks and features verification

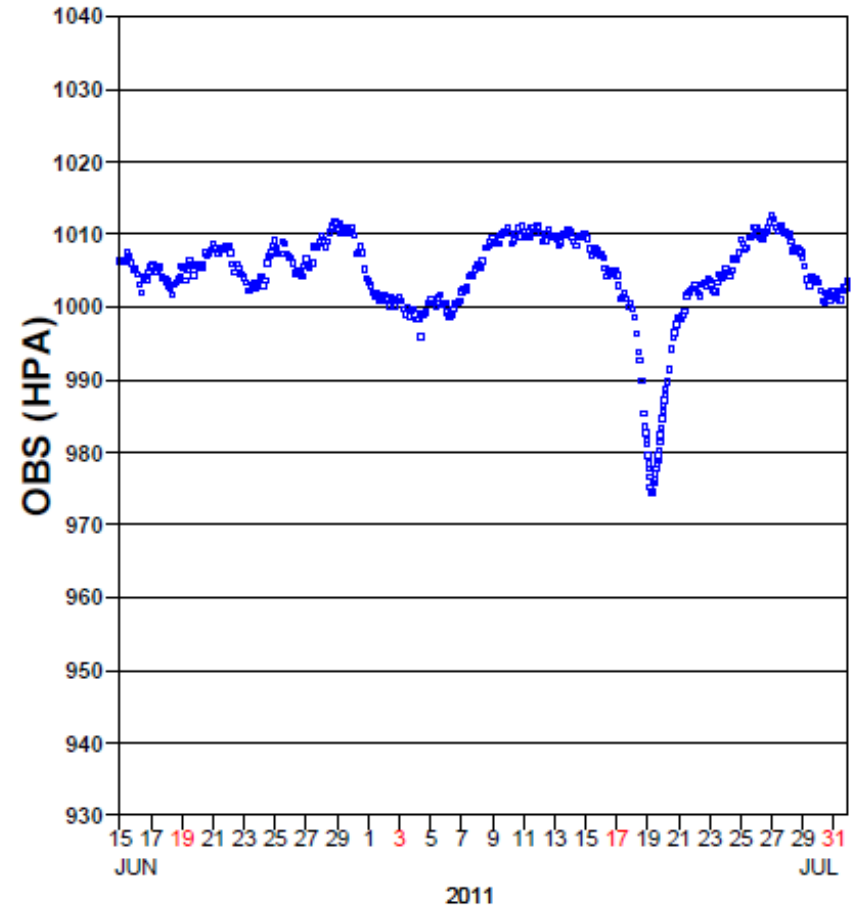
Synop pressure observations Japan

SYNOP 47765 (34.4N,132.5E)
PRESSURE



NO. OF OBS: 396 MEAN: 1001.2 STD: 7.5

SYNOP 47887 (33.8N,132.8E)
PRESSURE

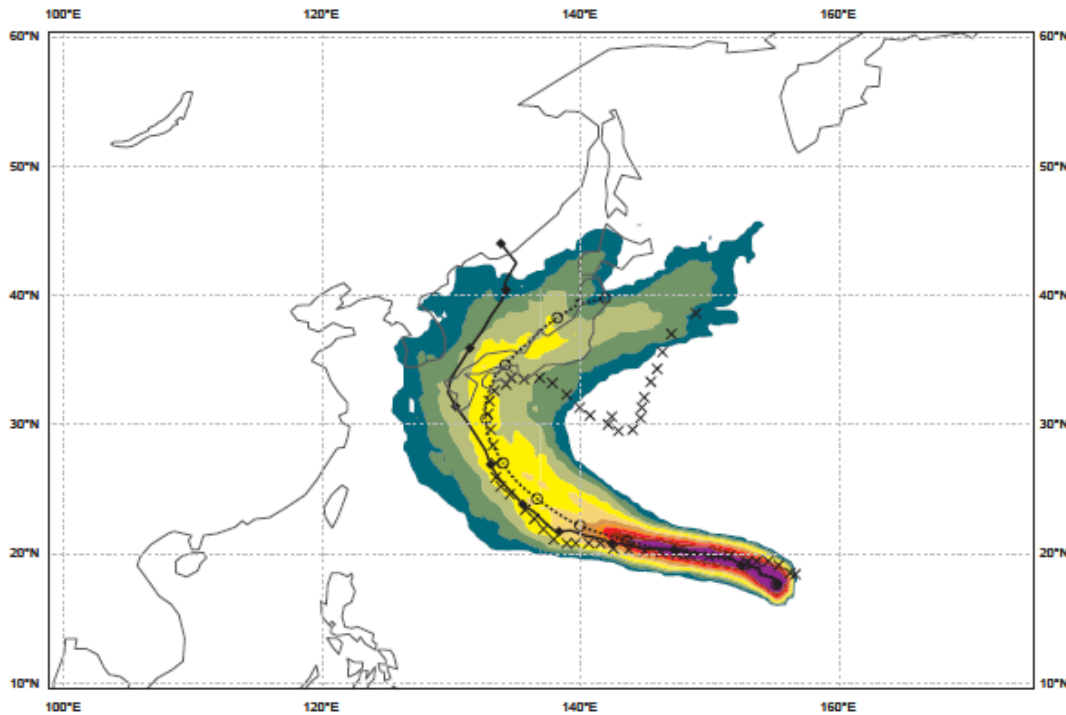


NO. OF OBS: 398 MEAN: 1003.2 STD: 8.1

Date 20110712 00 UTC @ECMWF

Probability that **09W** will pass within 120 km radius during the next 240 hours
 tracks: **solid=OPER**; **dot=Ens Mean** [reported minimum central pressure (hPa) **1004**]

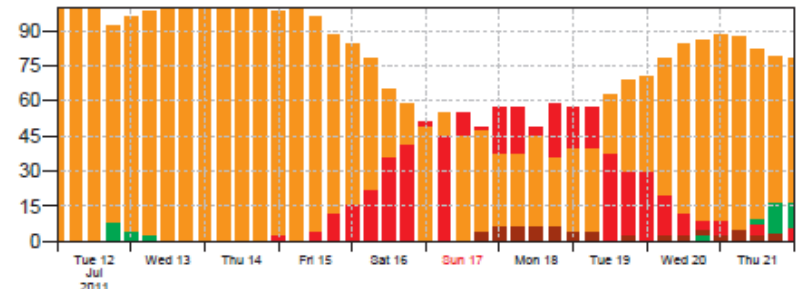
■ 5-10 ■ 10-20 ■ 20-30 ■ 30-40 ■ 40-50 ■ 50-60 ■ 60-70 ■ 70-80 ■ 80-90 ■ > 90 %



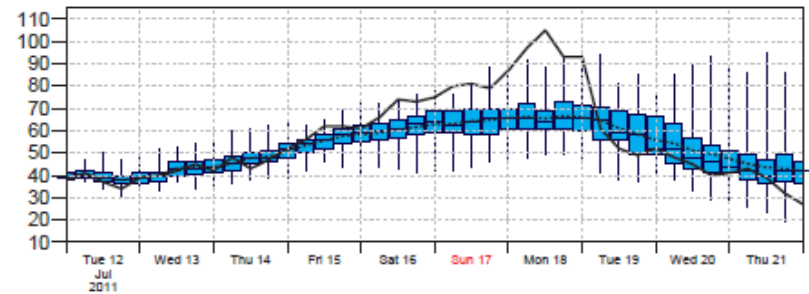
List of ensemble members numbers forecast Tropical Cyclone intensity category in colours: TD[up to 33] TS [34-63] HR1[64-82] HR2[83-95] HR3[>95 kt]

+024 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
 +048 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
 +072 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
 +096 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
 +120 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
 +144 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
 +168 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
 +192 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
 +216 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 14 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
 +240 h : hr ct 02 03 04 05 06 07 08 10 11 12 14 16 17 18 20 21 22 24 25 26 27 28 29 30 31 32 33 34 36 37 39 40 41 43 49 50

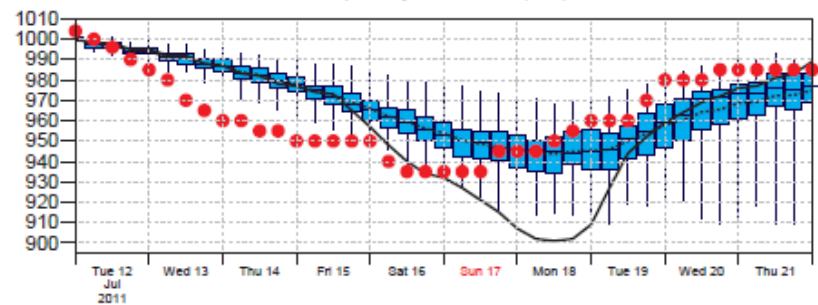
Probability (%) of Tropical Cyclone Intensity falling in each category
 TD[up to 33] TS [34-63] HR1[64-82] HR2 [83-95] HR3 [> 95 kt]



10m Wind Speed (kt) solid=OPER; dot=Ens Mean



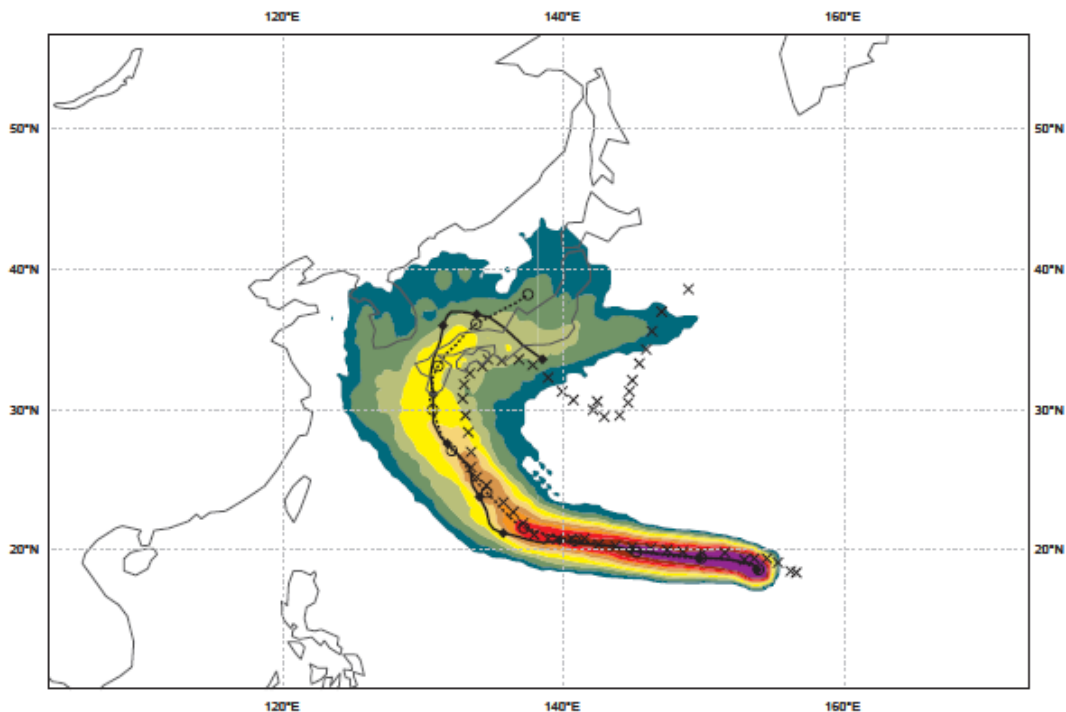
Mean Sea Level Pressure in Tropical Cyclone Centre (hPa) solid=OPER; dot=Ens Mean



Date 20110712 12 UTC @ECMWF

Probability that **MA-ON** will pass within 120 km radius during the next 240 hours
 tracks: **solid**=OPER; **dot**=Ens Mean [reported minimum central pressure (hPa) **996**]

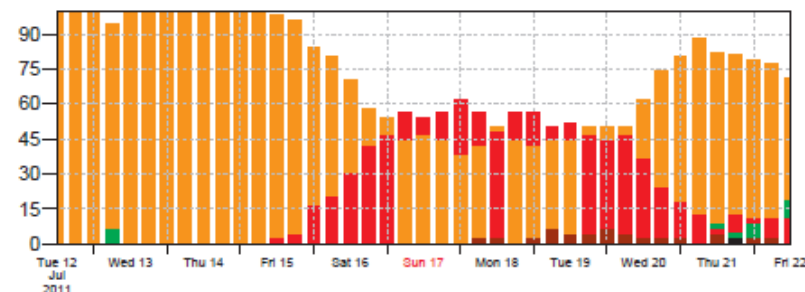
5-10 10-20 20-30 30-40 40-50 50-60 60-70 70-80 80-90 > 90 %



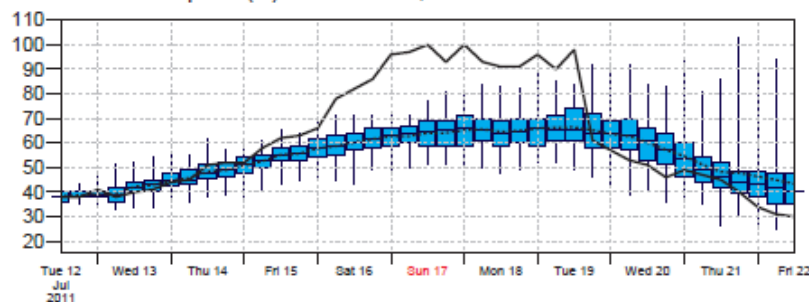
List of ensemble members numbers forecast Tropical Cyclone intensity category in colours: TD[up to 33] TS [34-63] HR1[64-82] HR2[83-95] HR3[>95 kt]

+024 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
 +048 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
 +072 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
 +096 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
 +120 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
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 +168 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
 +192 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
 +216 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 21 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
 +240 h : hr ct 01 02 03 04 05 06 07 08 10 11 12 13 14 15 16 17 18 19 21 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

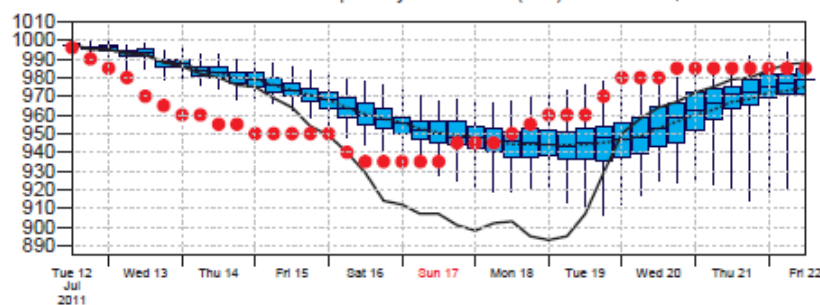
Probability (%) of Tropical Cyclone Intensity falling in each category
 TD[up to 33] TS [34-63] HR1[64-82] HR2 [83-95] HR3 [> 95 kt]



10m Wind Speed (kt) solid=OPER; dot=Ens Mean



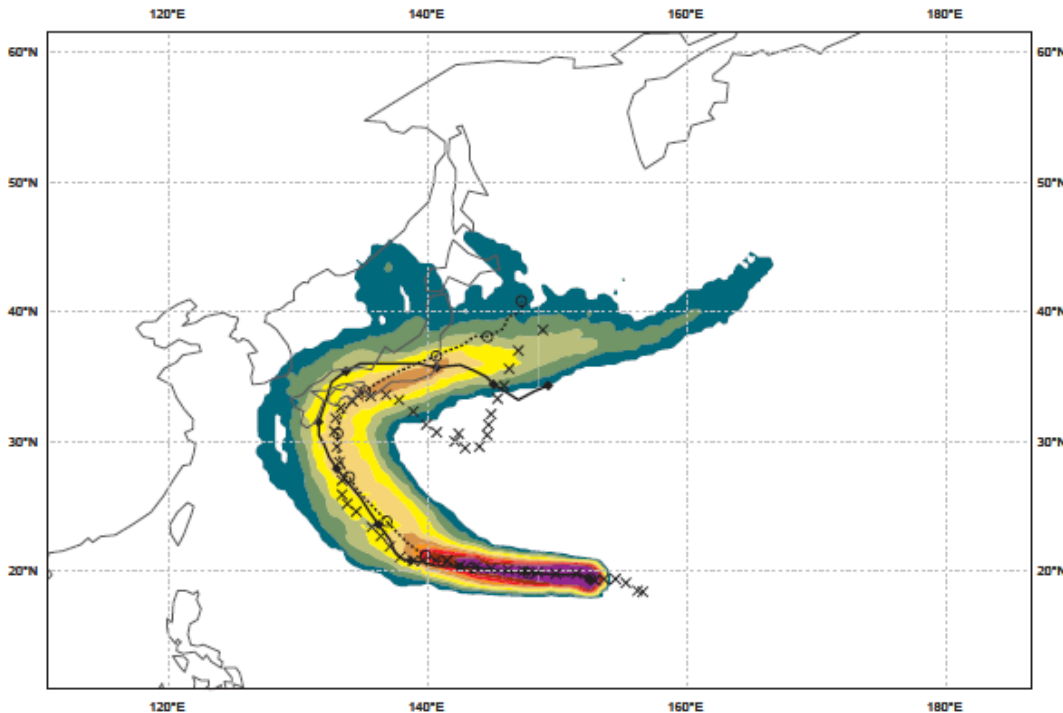
Mean Sea Level Pressure in Tropical Cyclone Centre (hPa) solid=OPER; dot=Ens Mean



Date 20110713 00 UTC @ECMWF

Probability that **MA-ON** will pass within 120 km radius during the next **240 hours**
 tracks: **solid=OPER**; **dot=Ens Mean** [reported minimum central pressure (hPa) **985**]

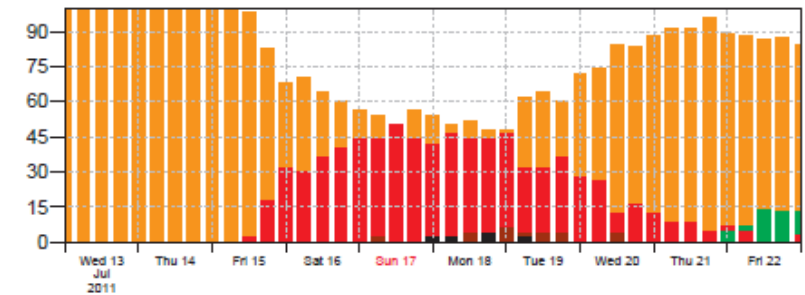
5-10 10-20 20-30 30-40 40-50 50-60 60-70 70-80 80-90 > 90 %



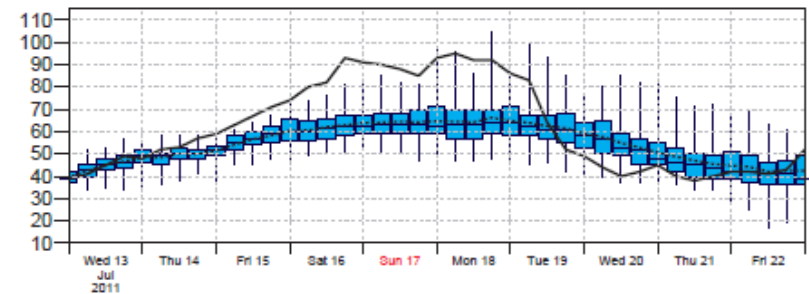
List of ensemble members numbers forecast Tropical Cyclone Intensity category in colours: TD[up to 33] TS[34-63] HR1[64-82] HR2[83-95] HR3[>95 kt]

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| +024 h: | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| +048 h: | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| +072 h: | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| +096 h: | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| +120 h: | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| +144 h: | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| +168 h: | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| +192 h: | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| +216 h: | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| +240 h: | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |

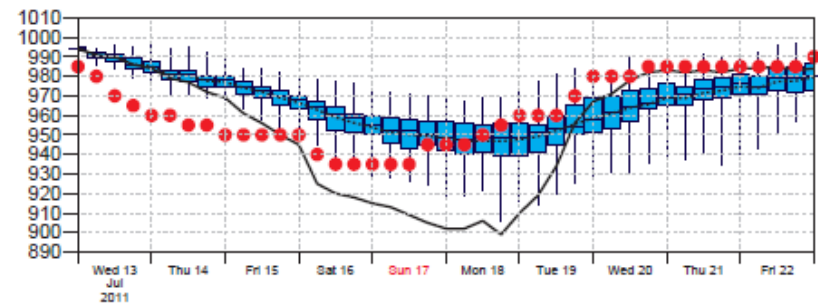
Probability (%) of Tropical Cyclone Intensity falling in each category
 TD[up to 33] TS [34-63] HR1[64-82] HR2 [83-95] HR3 [> 95 kt]



10m Wind Speed (kt) solid=OPER; dot=Ens Mean



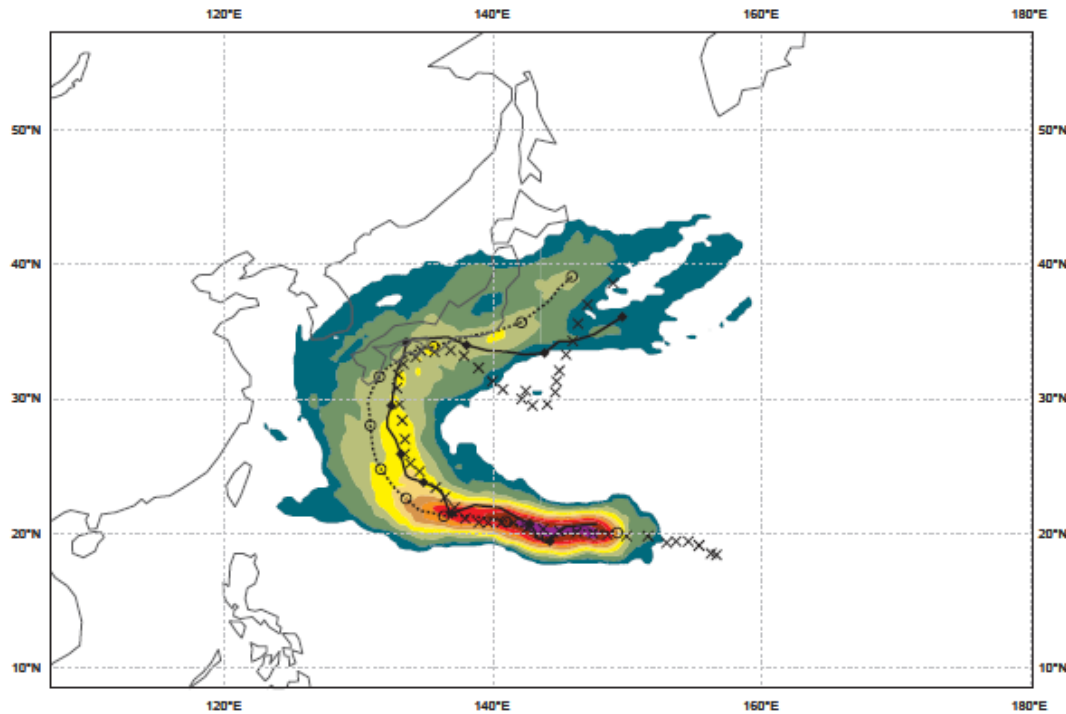
Mean Sea Level Pressure in Tropical Cyclone Centre (hPa) solid=OPER; dot=Ens Mean



Date 20110713 12 UTC @ECMWF

Probability that **MA-ON** will pass within 120 km radius during the next **240 hours**
 tracks: **solid**=OPER; **dot**=Ens Mean [reported minimum central pressure (hPa) **970**]

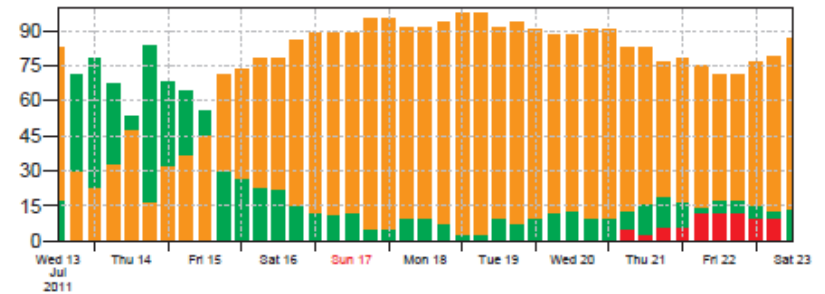
■ 5-10 ■ 10-20 ■ 20-30 ■ 30-40 ■ 40-50 ■ 50-60 ■ 60-70 ■ 70-80 ■ 80-90 ■ > 90 %



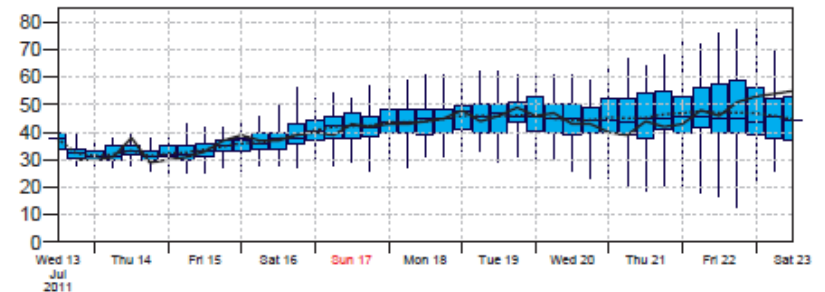
List of ensemble members numbers forecast Tropical Cyclone intensity category in colours: TD (up to 33) TS [34-63] HR1 [64-82] HR2 [83-95] HR3 [>95 kt]

| | | |
|--|--|--|
| +024 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 | 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 | 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 |
| +048 h : hr ct 01 02 03 04 05 06 07 08 10 11 12 13 14 | 16 17 18 19 20 21 22 23 24 25 26 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 50 | |
| +072 h : hr ct 01 02 03 04 06 07 08 09 10 11 12 14 | 16 17 18 19 20 21 22 23 24 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 42 43 44 45 46 47 48 49 50 | |
| +096 h : hr ct 01 02 03 04 05 06 07 08 10 11 12 | 16 17 18 19 20 21 22 23 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 46 47 48 49 50 | |
| +120 h : hr ct 01 02 03 04 05 06 07 08 10 11 12 | 16 17 18 19 20 21 22 23 24 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 46 47 48 49 50 | |
| +144 h : hr ct 01 02 03 04 05 06 07 08 10 11 12 | 16 17 18 19 20 21 22 23 24 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 46 47 48 49 50 | |
| +168 h : hr ct 01 02 03 04 06 07 08 10 11 12 | 16 17 18 19 20 21 22 23 24 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 46 47 50 | |
| +192 h : hr ct 01 02 03 04 06 07 08 10 11 | 16 17 18 19 20 21 22 23 26 27 28 29 30 32 33 34 35 36 37 38 39 40 41 42 43 44 46 47 48 50 | |
| +216 h : hr ct 01 02 03 04 06 07 08 10 | 16 17 18 19 20 21 22 23 26 27 28 29 30 32 33 34 35 36 38 39 40 41 42 43 46 48 | |
| +240 h : hr ct 02 03 04 06 07 08 10 | 16 17 18 19 20 21 22 23 26 28 29 30 33 35 36 38 39 40 41 42 43 46 48 | |

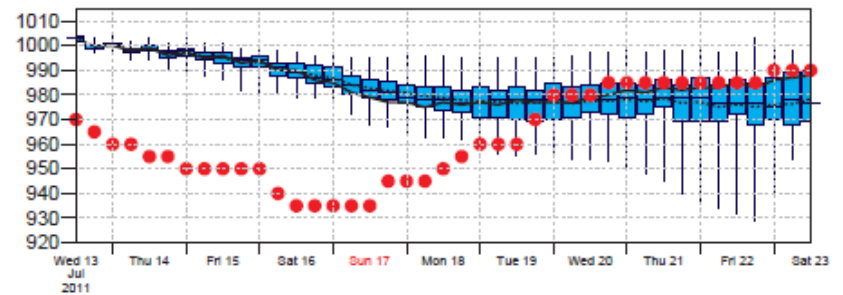
Probability (%) of Tropical Cyclone Intensity falling in each category
 TD [up to 33] TS [34-63] HR1 [64-82] HR2 [83-95] HR3 [> 95 kt]



10m Wind Speed (kt) solid=OPER; dot=Ens Mean



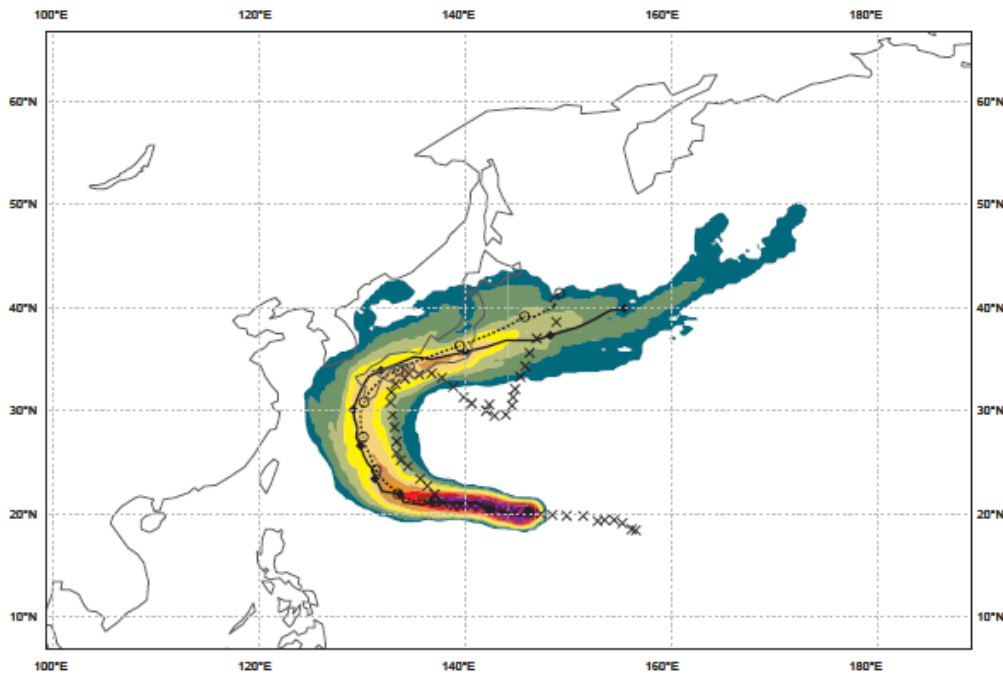
Mean Sea Level Pressure in Tropical Cyclone Centre (hPa) solid=OPER; dot=Ens Mean



Date 20110714 00 UTC @ECMWF

Probability that **MA-ON** will pass within 120 km radius during the next **240 hours**
 tracks: **solid=OPER**; **dot=Ens Mean** [reported minimum central pressure (hPa) **960**]

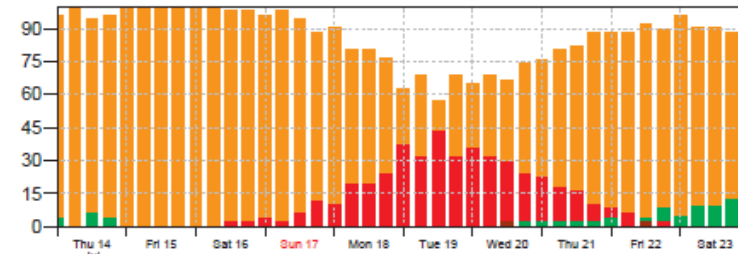
5-10 10-20 20-30 30-40 40-50 50-60 60-70 70-80 80-90 > 90 %



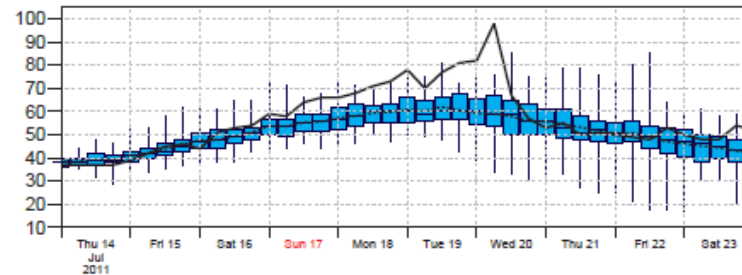
List of ensemble members numbers forecast Tropical Cyclone Intensity category in colours: TD[up to 33] TS[34-63] HR1[64-82] HR2[83-95] HR3[>95 kt]

+024 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
 +048 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
 +072 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
 +096 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
 +120 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
 +144 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
 +168 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 43 44 45 46 47 48 49 50
 +192 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 14 15 16 17 18 19 20 21 22 23 24 25 26 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
 +216 h : hr ct 01 02 03 05 06 07 08 09 10 11 12 14 15 16 17 18 19 20 21 22 23 24 25 26 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
 +240 h : hr ct 01 02 05 06 07 08 09 10 12 14 15 16 17 18 19 20 21 22 23 24 25 26 28 29 30 31 32 33 34 35 36 37 39 40 41 42 44 45 46 49 50

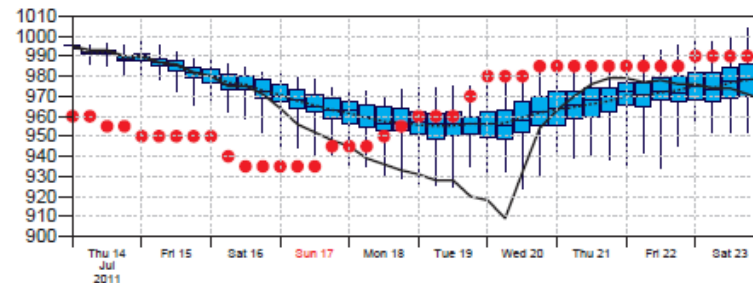
Probability (%) of Tropical Cyclone Intensity falling in each category
 TD[up to 33] TS [34-63] HR1[64-82] HR2 [83-95] HR3 [> 95 kt]



10m Wind Speed (kt) solid=OPER; dot=Ens Mean



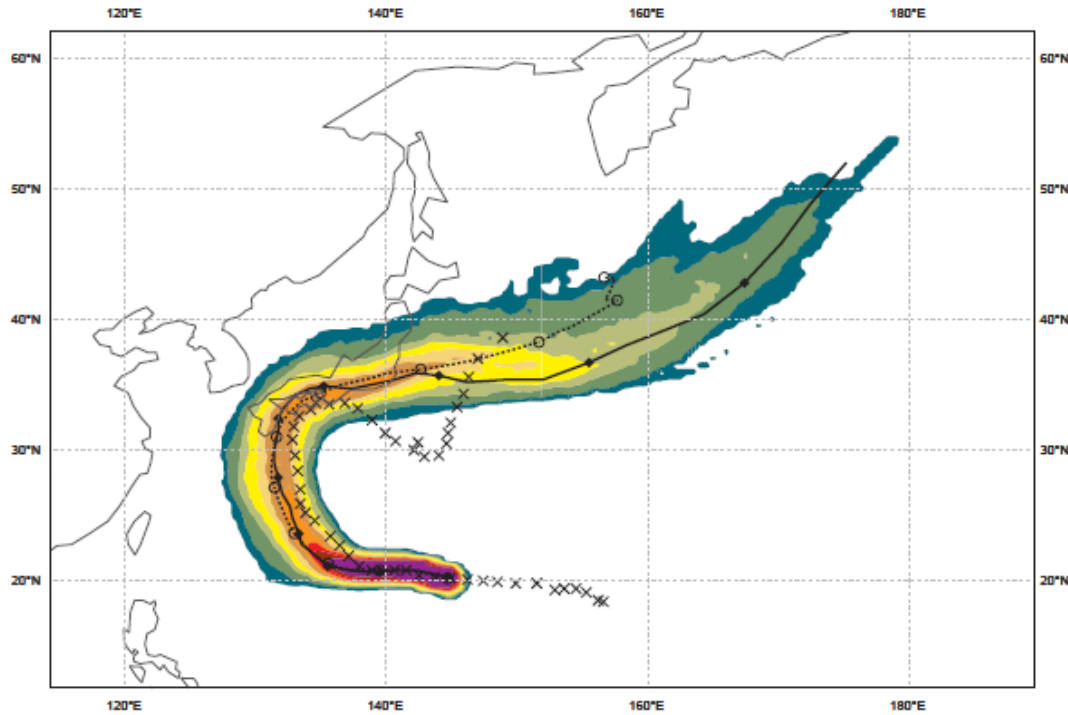
Mean Sea Level Pressure in Tropical Cyclone Centre (hPa) solid=OPER; dot=Ens Mean



Date 20110714 12 UTC @ECMWF

Probability that MA-ON will pass within 120 km radius during the next 240 hours
 tracks: solid=OPER; dot=Ens Mean [reported minimum central pressure (hPa) 955]

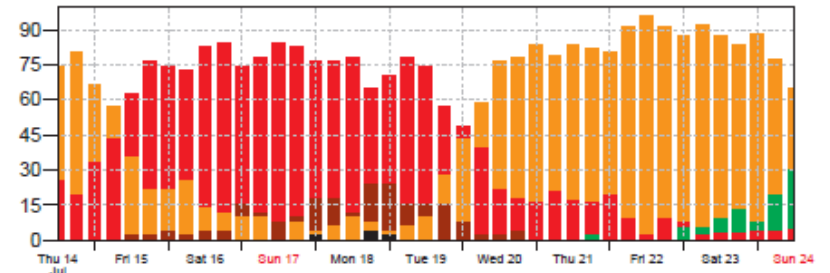
5-10 10-20 20-30 30-40 40-50 50-60 60-70 70-80 80-90 > 90 %



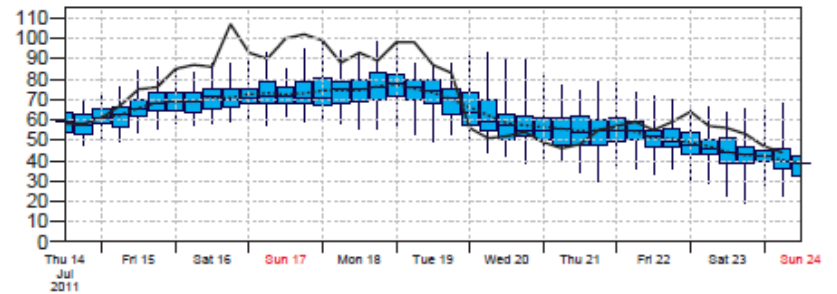
List of ensemble members numbers forecast Tropical Cyclone
 Intensity category in colours: TD[up to 33] TS[34-63] HR1[64-82] HR2[83-95] HR3[>95 kt]

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| +024 h: | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| +048 h: | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| +072 h: | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| +096 h: | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| +120 h: | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| +144 h: | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| +168 h: | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 28 | 29 | 30 | 31 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | | |
| +192 h: | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | | | | |
| +216 h: | hr | ct | 01 | 02 | 03 | 06 | 09 | 11 | 13 | 14 | 15 | 16 | 17 | 19 | 21 | 22 | 23 | 24 | 28 | 29 | 31 | 32 | 34 | 37 | 39 | 41 | 42 | 44 | 45 | 46 | 47 | 48 | 50 | | | | | | | | | | | | | | | | | | | |
| +240 h: | | | 01 | 03 | 06 | 09 | 11 | 13 | 14 | 16 | 19 | 23 | 24 | 28 | 29 | 31 | 36 | 37 | 39 | 41 | 42 | 44 | 46 | 49 | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

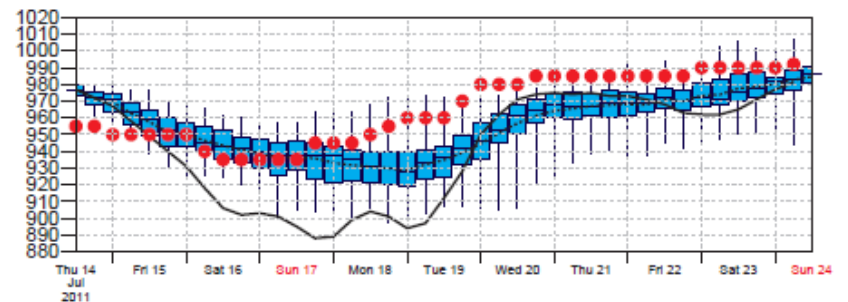
Probability (%) of Tropical Cyclone Intensity falling in each category
 TD[up to 33] TS [34-63] HR1[64-82] HR2 [83-95] HR3 [> 95 kt]



10m Wind Speed (kt) solid=OPER; dot=Ens Mean



Mean Sea Level Pressure in Tropical Cyclone Centre (hPa) solid=OPER; dot=Ens Mean

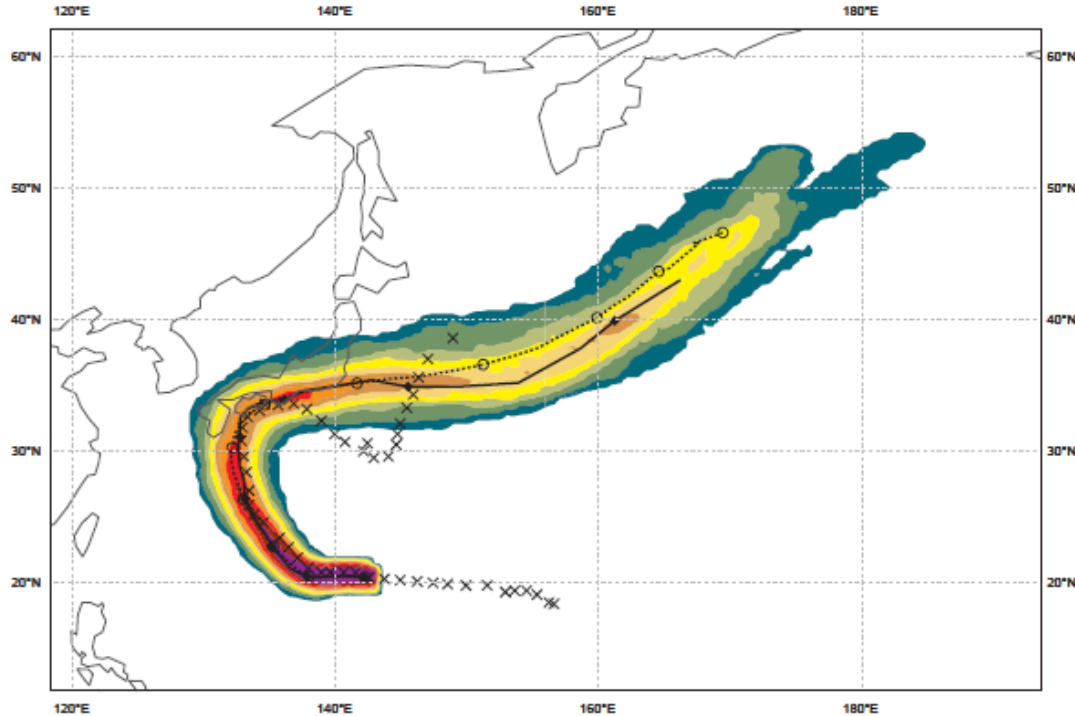


Date 20110715 00 UTC @ECMWF

Probability that **MA-ON** will pass within 120 km radius during the next 240 hours

tracks: **solid=OPER**; **dot=Ens Mean** [reported minimum central pressure (hPa) **950**]

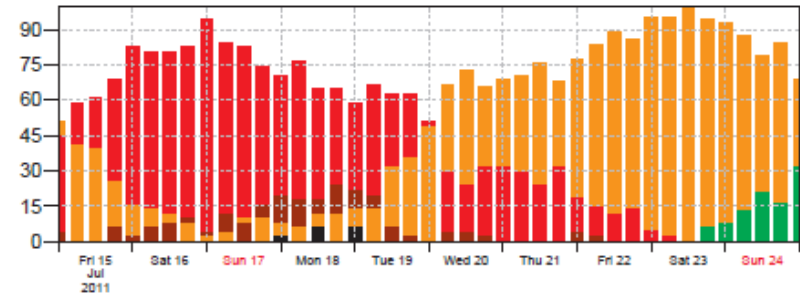
5-10 10-20 20-30 30-40 40-50 50-60 60-70 70-80 80-90 > 90 %



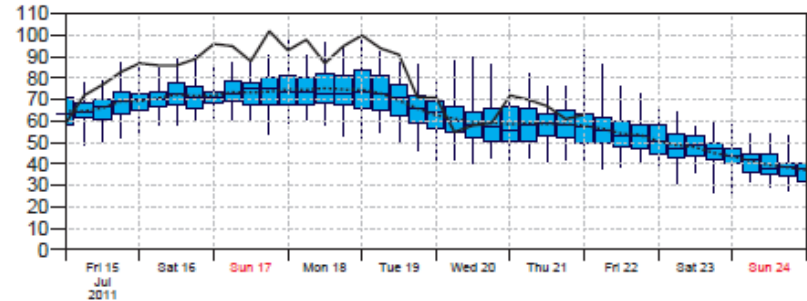
List of ensemble members numbers forecast Tropical Cyclone
Intensity category in colours: TD [up to 33] TS [34-63] HR1 [64-82] HR2 [83-95] HR3 [>95 kt]

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| +024 h : | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| +048 h : | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| +072 h : | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| +096 h : | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| +120 h : | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| +144 h : | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| +168 h : | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| +192 h : | ct | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 22 | 24 | 26 | 27 | 28 | 29 | 30 | 31 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 49 | 50 | | | | | | | |
| +216 h : | ct | 02 | 04 | 05 | 06 | 08 | 09 | 10 | 11 | 13 | 14 | 16 | 18 | 19 | 20 | 22 | 24 | 26 | 28 | 29 | 30 | 31 | 33 | 34 | 35 | 36 | 37 | 39 | 40 | 41 | 42 | 44 | 47 | 49 | 50 | | | | | | | | | | | | | | | | | |
| +240 h : | ct | 02 | 04 | 06 | 09 | | | | | | 16 | 18 | 20 | 22 | 24 | 26 | 27 | 28 | 29 | 30 | 31 | 33 | 34 | 36 | 37 | 39 | 40 | 42 | 44 | 47 | 49 | | | | | | | | | | | | | | | | | | | | | |

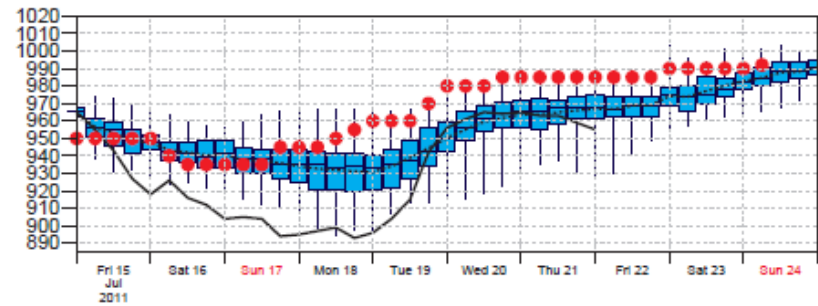
Probability (%) of Tropical Cyclone Intensity falling in each category
TD [up to 33] TS [34-63] HR1 [64-82] HR2 [83-95] HR3 [> 95 kt]



10m Wind Speed (kt) solid=OPER; dot=Ens Mean



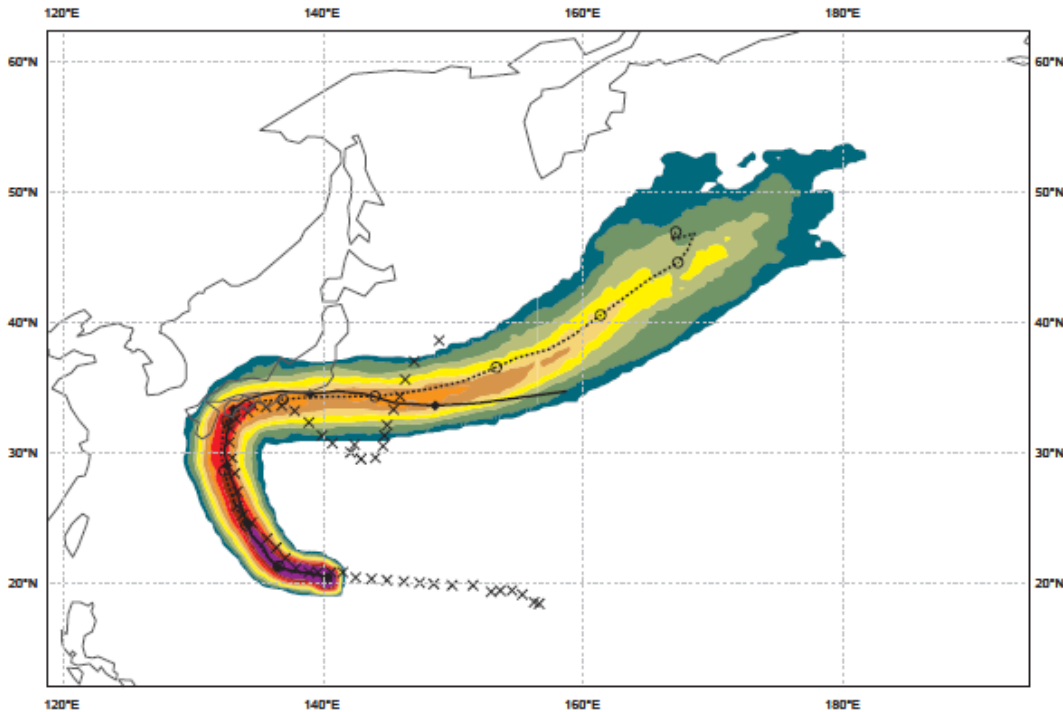
Mean Sea Level Pressure in Tropical Cyclone Centre (hPa) solid=OPER; dot=Ens Mean



Date 20110715 12 UTC @ECMWF

Probability that **MA-ON** will pass within 120 km radius during the next 240 hours
 tracks: **solid=OPER**; **dot=Ens Mean** [reported minimum central pressure (hPa) **950**]

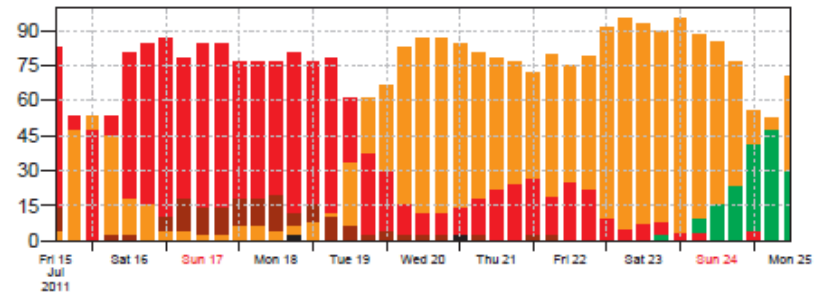
5-10 10-20 20-30 30-40 40-50 50-60 60-70 70-80 80-90 > 90 %



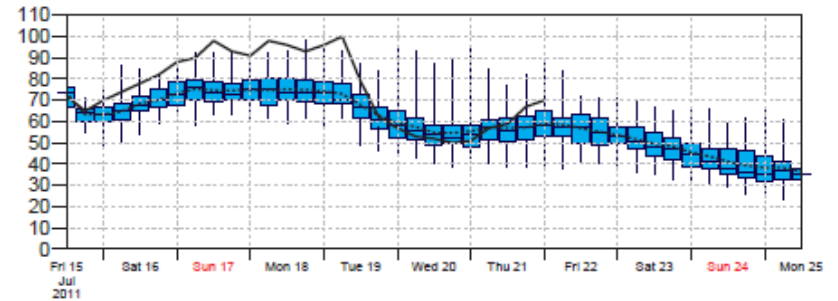
List of ensemble members numbers forecast Tropical Cyclone Intensity category in colours: TD[up to 33] TS[34-63] HR1[64-82] HR2[83-95] HR3[>95 kt]

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| +024 h: | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| +048 h: | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| +072 h: | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| +096 h: | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| +120 h: | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| +144 h: | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| +168 h: | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | |
| +192 h: | ct | 01 | 02 | 03 | 04 | 05 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | | |
| +216 h: | ct | 01 | 02 | 03 | 04 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 17 | 19 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | | | | | | |
| +240 h: | 01 | 02 | 03 | 04 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | | | | |

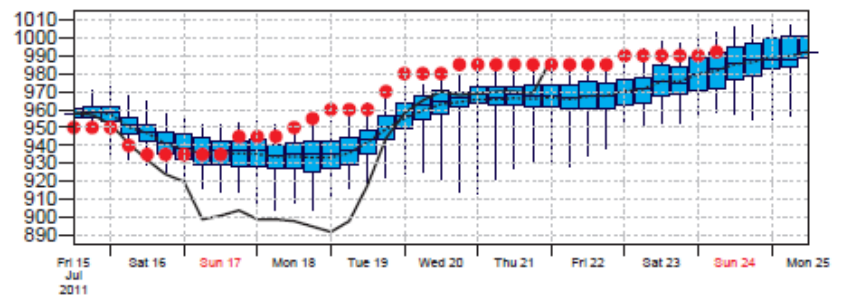
Probability (%) of Tropical Cyclone Intensity falling in each category
 TD[up to 33] TS [34-63] HR1[64-82] HR2 [83-95] HR3 [> 95 kt]



10m Wind Speed (kt) solid=OPER; dot=Ens Mean



Mean Sea Level Pressure in Tropical Cyclone Centre (hPa) solid=OPER; dot=Ens Mean

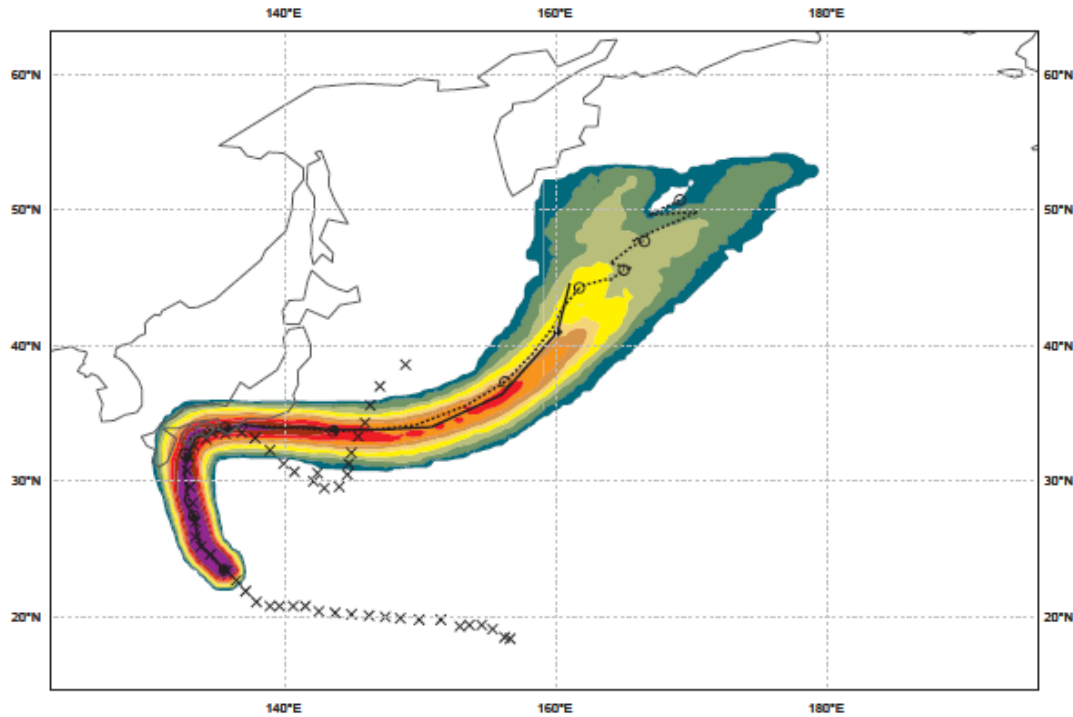


Date 20110717 00 UTC @ECMWF

Probability that **MA-ON** will pass within 120 km radius during the next 240 hours

tracks: **solid=OPER**; **dot=Ens Mean** [reported minimum central pressure (hPa) **935**]

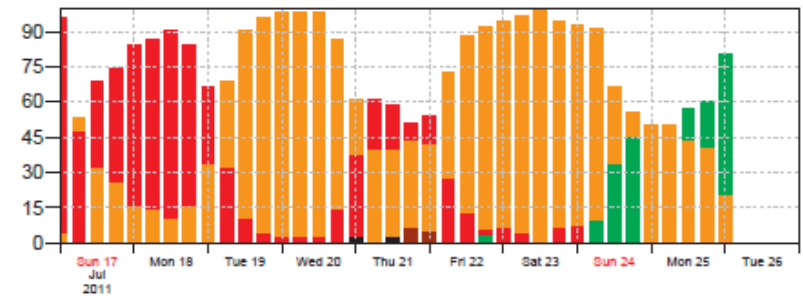
5-10 10-20 20-30 30-40 40-50 50-60 60-70 70-80 80-90 > 90 %



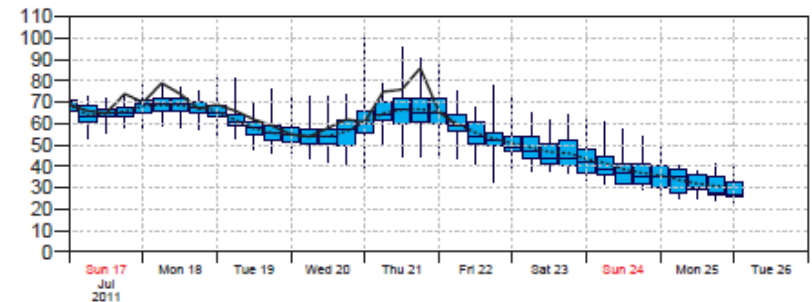
List of ensemble members numbers forecast Tropical Cyclone Intensity category in colours: TD [up to 33] TS [34-63] HR1 [64-82] HR2 [83-95] HR3 [>95 kt]

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| +024 h: | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| +048 h: | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| +072 h: | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| +096 h: | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| +120 h: | hr | ct | 01 | 02 | 03 | 04 | 06 | 07 | 08 | 10 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | | | |
| +144 h: | ct | 02 | 04 | 06 | 06 | 10 | 12 | 13 | 16 | 18 | 19 | 20 | 21 | 23 | 25 | 26 | 29 | 30 | 31 | 33 | 35 | 36 | 37 | 38 | 40 | 41 | 42 | 43 | 44 | 46 | 47 | 48 | 49 | 50 | | | | | | | | | | | | | | | | | | |
| +168 h: | ct | 02 | 06 | 06 | 10 | 12 | 13 | | | | | | | | | 29 | 30 | 31 | 33 | 35 | 36 | 37 | 38 | 40 | 41 | 42 | 43 | 44 | 46 | 47 | 48 | 49 | 50 | | | | | | | | | | | | | | | | | | | |
| +192 h: | ct | 02 | 06 | 10 | 12 | | | | | | | | | | | 29 | 30 | 31 | 33 | 35 | 36 | 37 | 38 | 40 | 41 | 42 | 43 | 44 | 46 | 47 | 48 | 49 | 50 | | | | | | | | | | | | | | | | | | | |
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| +240 h: | ct | 02 | 06 | 10 | 12 | | | | | | | | | | | 29 | 30 | 31 | 33 | 35 | 36 | 37 | 38 | 40 | 41 | 42 | 43 | 44 | 46 | 47 | 48 | 49 | 50 | | | | | | | | | | | | | | | | | | | |

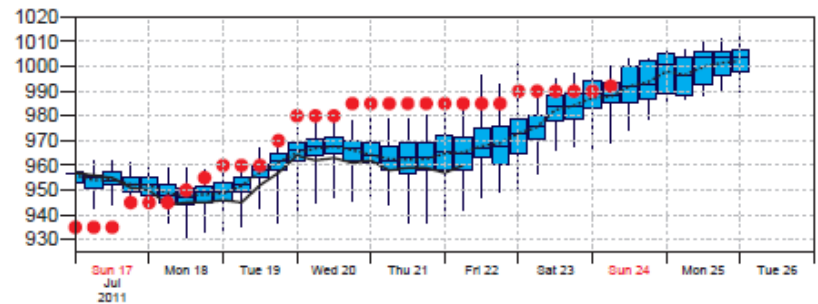
Probability (%) of Tropical Cyclone Intensity falling in each category
 TD [up to 33] TS [34-63] HR1 [64-82] HR2 [83-95] HR3 [> 95 kt]



10m Wind Speed (kt) solid=OPER; dot=Ens Mean



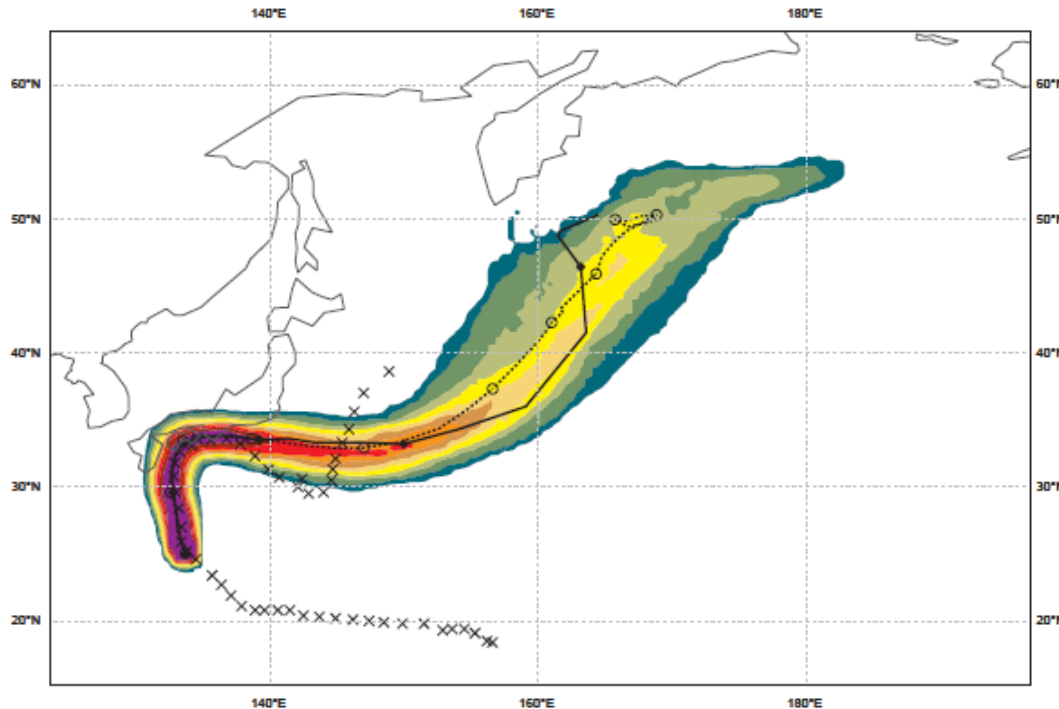
Mean Sea Level Pressure in Tropical Cyclone Centre (hPa) solid=OPER; dot=Ens Mean



Date 20110717 12 UTC @ECMWF

Probability that **MA-ON** will pass within 120 km radius during the next 240 hours
 tracks: **solid**=OPER; **dot**=Ens Mean [reported minimum central pressure (hPa) 935]

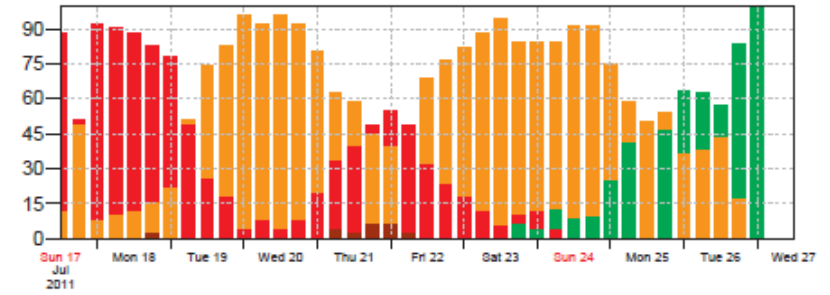
5-10 10-20 20-30 30-40 40-50 50-60 60-70 70-80 80-90 > 90 %



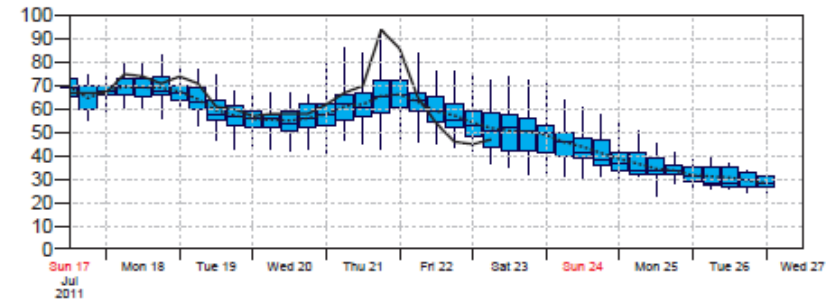
List of ensemble members numbers forecast Tropical Cyclone Intensity category in colours: TD[up to 33] TS[34-63] HR1[64-82] HR2[83-95] HR3[>95 kt]

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|--|--|
| +024 h: | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | | | |
| +048 h: | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | | | |
| +072 h: | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | | | |
| +096 h: | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | | | |
| +120 h: | hr | ct | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | | | |
| +144 h: | | | 01 | | 03 | 04 | | 06 | 07 | 08 | 09 | 10 | | 12 | 13 | 14 | 15 | 16 | 17 | 18 | | 20 | 21 | 22 | 23 | 24 | | 26 | 27 | 29 | | 31 | 32 | | 34 | 35 | | 37 | | 40 | 41 | 42 | | 44 | 45 | 46 | | 48 | 49 | | | | | | |
| +168 h: | | | 01 | | 03 | | 06 | 07 | 08 | 09 | 10 | | 12 | 13 | 14 | 15 | 16 | 18 | | 21 | 23 | | 26 | 27 | 29 | | 32 | | 35 | | 40 | 41 | | 46 | | 48 | 49 | | | | | | | | | | | | | | | | | | |
| +192 h: | | | 01 | | | 06 | 07 | 08 | | 10 | | 12 | 14 | 16 | 18 | | | | | | | | 23 | | 26 | 27 | 29 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| +216 h: | | | | | | | 07 | | | | | | 14 | | | | | | | | | | | | 23 | | 29 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| +240 h: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

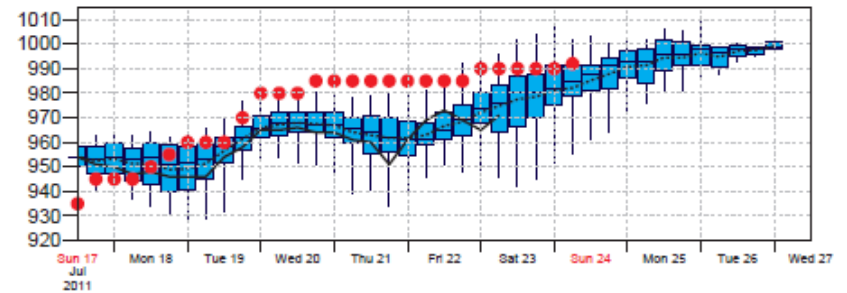
Probability (%) of Tropical Cyclone Intensity falling in each category
 TD[up to 33] TS [34-63] HR1[64-82] HR2 [83-95] HR3 [> 95 kt]



10m Wind Speed (kt) solid=OPER; dot=Ens Mean



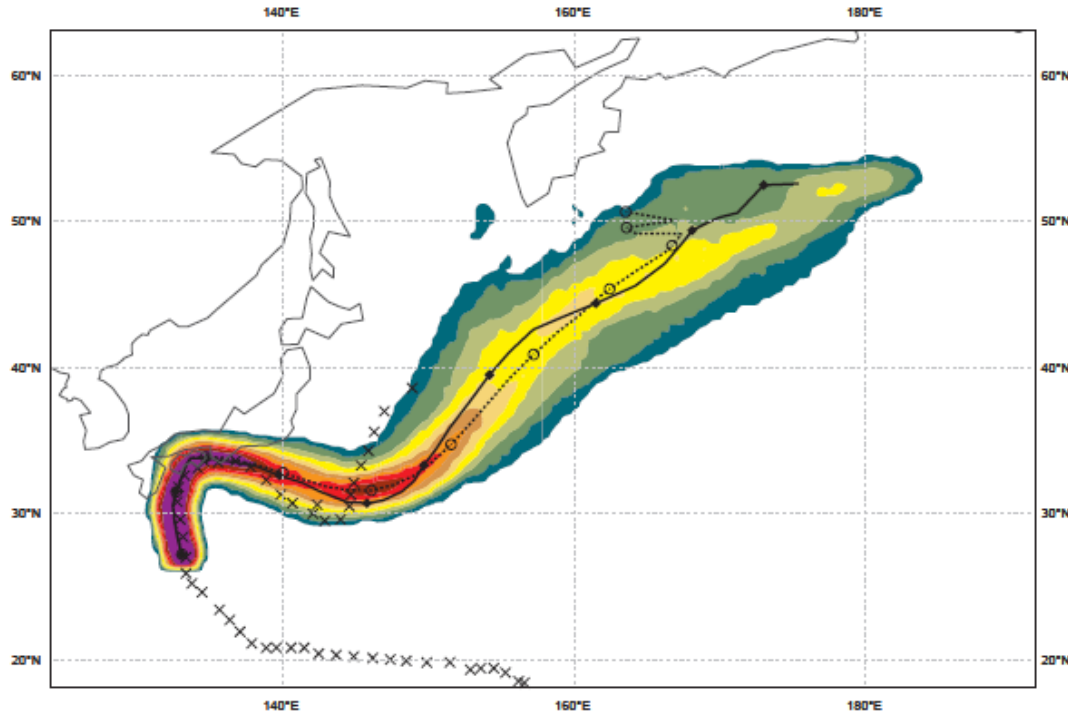
Mean Sea Level Pressure in Tropical Cyclone Centre (hPa) solid=OPER; dot=Ens Mean



Date 20110718 00 UTC @ECMWF

Probability that **MA-ON** will pass within 120 km radius during the next 240 hours
 tracks: **solid**=OPER; **dot**=Ens Mean [reported minimum central pressure (hPa) 945]

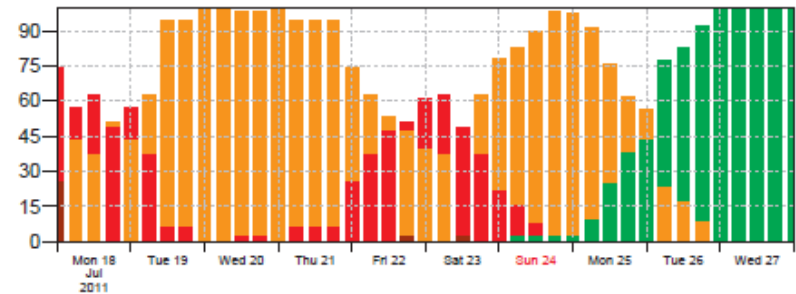
5-10 10-20 20-30 30-40 40-50 50-60 60-70 70-80 80-90 > 90 %



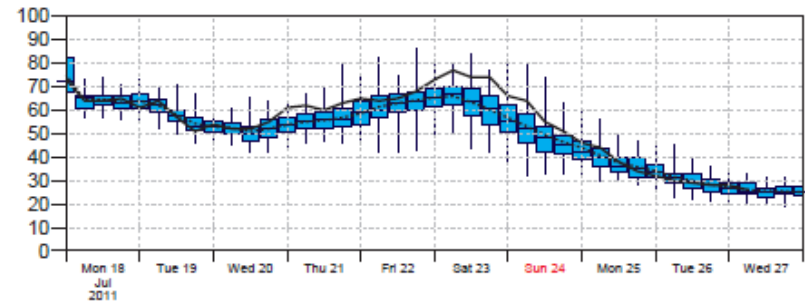
List of ensemble members numbers forecast Tropical Cyclone
 Intensity category in colours: TD[up to 33] TS[34-63] HR1[64-82] HR2[83-95] HR3[>95 kt]

| |
|--|
| +024 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 |
| +048 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 |
| +072 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 |
| +096 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 |
| +120 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 |
| +144 h : hr ct 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 |
| +168 h : hr ct 01 02 03 05 06 07 08 09 10 11 12 13 14 16 17 18 19 20 21 22 23 24 25 26 28 29 30 31 32 33 34 35 36 38 39 40 41 42 43 45 46 47 48 50 |
| +192 h : hr 01 02 03 05 06 07 08 09 10 11 12 13 14 16 17 18 19 21 22 23 24 28 30 31 33 34 35 36 38 39 40 41 42 45 47 48 50 |
| +216 h : hr 01 03 05 09 10 12 16 18 19 23 24 28 31 33 38 39 40 42 45 47 48 |
| +240 h : 01 03 05 09 10 18 23 28 31 33 40 42 45 47 48 |

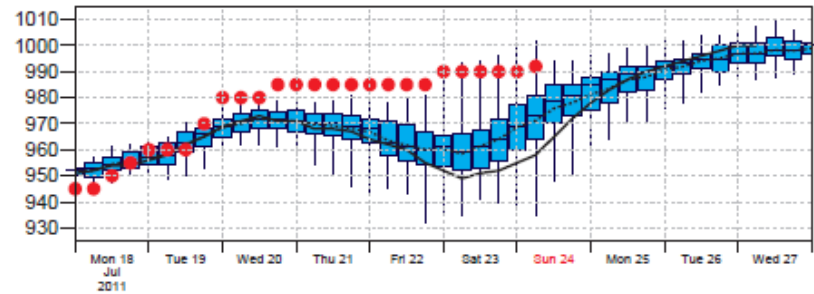
Probability (%) of Tropical Cyclone Intensity falling in each category
 TD[up to 33] TS [34-63] HR1[64-82] HR2 [83-95] HR3 [> 95 kt]



10m Wind Speed (kt) solid=OPER; dot=Ens Mean



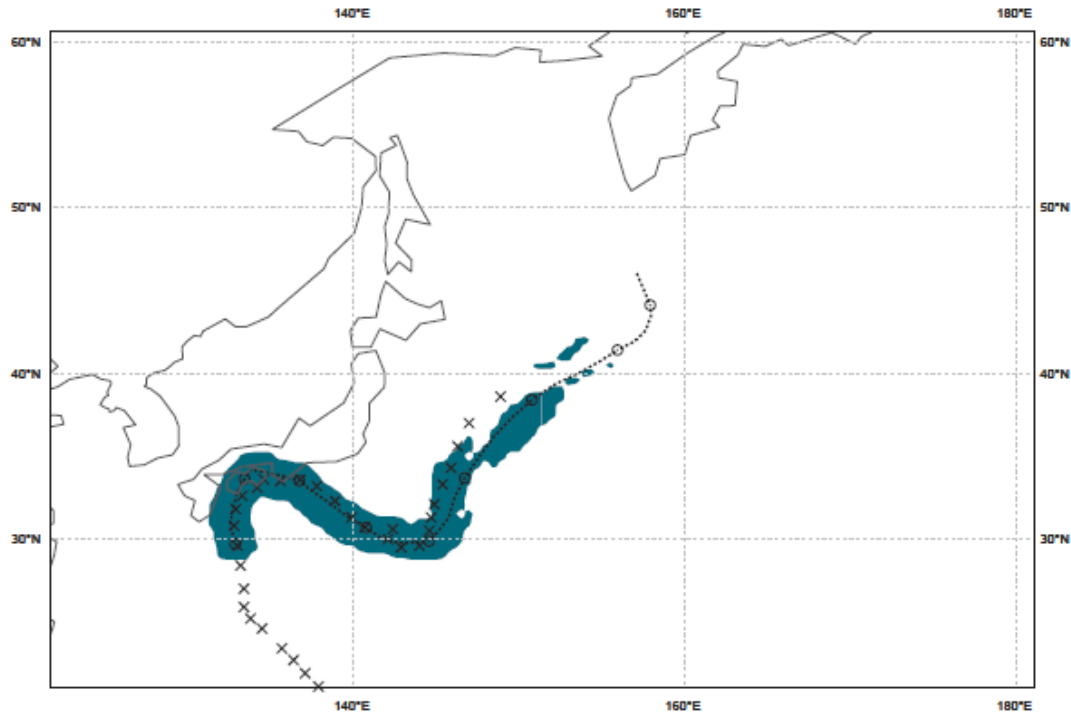
Mean Sea Level Pressure in Tropical Cyclone Centre (hPa) solid=OPER; dot=Ens Mean



Date 20110718 12 UTC @ECMWF

Probability that **MA-ON** will pass within 120 km radius during the next 240 hours
 tracks: **solid=OPER**; **dot=Ens Mean** [reported minimum central pressure (hPa) **950**]

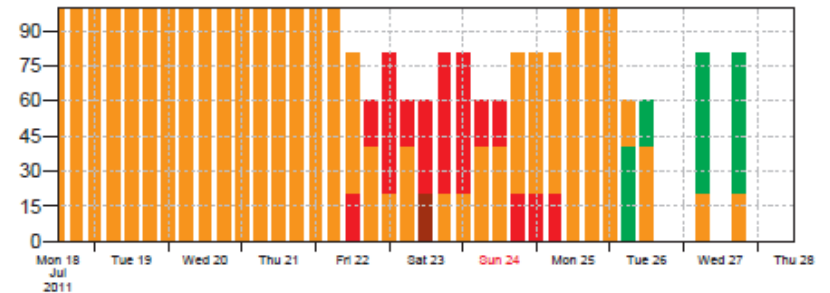
5-10 10-20 20-30 30-40 40-50 50-60 60-70 70-80 80-90 > 90 %



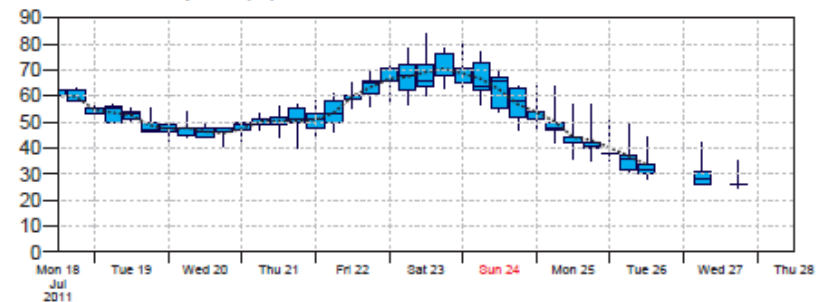
List of ensemble members numbers forecast Tropical Cyclone Intensity category in colours: TD[up to 33] TS[34-63] HR1[64-82] HR2[83-95] HR3[>95 kt]

| | | | | | |
|----------|----|----|----|----|----|
| +024 h : | 05 | 11 | 31 | 36 | 39 |
| +048 h : | 05 | 11 | 31 | 36 | 39 |
| +072 h : | 05 | 11 | 31 | 36 | 39 |
| +096 h : | 05 | 11 | 31 | 36 | 39 |
| +120 h : | 05 | 11 | 31 | 36 | 39 |
| +144 h : | 05 | 11 | 31 | 36 | 39 |
| +168 h : | 05 | 11 | 31 | 36 | 39 |
| +192 h : | 05 | 11 | 31 | 36 | 39 |
| +216 h : | 05 | 11 | 31 | 36 | 39 |
| +240 h : | 05 | | 31 | 36 | 39 |

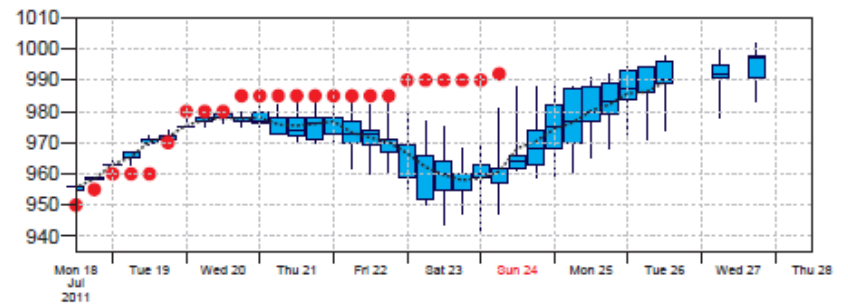
Probability (%) of Tropical Cyclone Intensity falling in each category
 TD[up to 33] TS [34-63] HR1[64-82] HR2 [83-95] HR3 [> 95 kt]



10m Wind Speed (kt) solid=OPER; dot=Ens Mean



Mean Sea Level Pressure in Tropical Cyclone Centre (hPa) solid=OPER; dot=Ens Mean

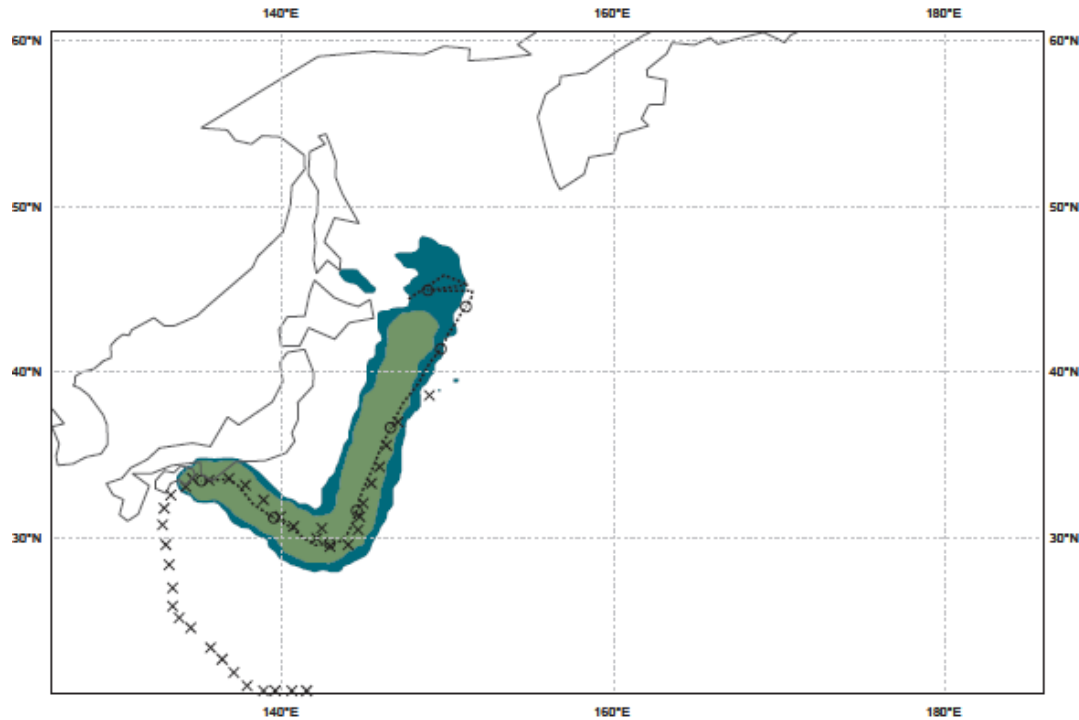


Date 20110720 00 UTC @ECMWF

Probability that **MA-ON** will pass within 120 km radius during the next 240 hours

tracks: **solid**=OPER; **dot**=Ens Mean [reported minimum central pressure (hPa) **980**]

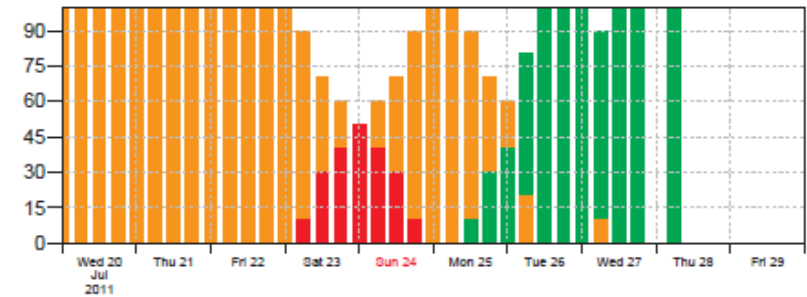
5-10 10-20 20-30 30-40 40-50 50-60 60-70 70-80 80-90 > 90 %



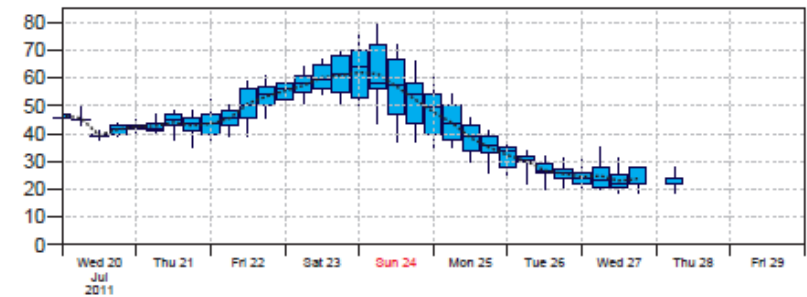
List of ensemble members numbers forecast Tropical Cyclone Intensity category in colours: TD[up to 33] TS[34-63] HR1[64-82] HR2[83-95] HR3[>95 kt]

| | | | | | | |
|---------|-------|-------|-------|-------|-------|----|
| +024 h: | 12 14 | 22 23 | 28 | 32 33 | 36 38 | 50 |
| +048 h: | 12 14 | 22 23 | 28 | 32 33 | 36 38 | 50 |
| +072 h: | 12 14 | 22 23 | 28 | 32 33 | 36 38 | 50 |
| +096 h: | 12 14 | 22 23 | 28 | 32 33 | 36 38 | 50 |
| +120 h: | 12 14 | 22 23 | 28 | 32 33 | 36 38 | 50 |
| +144 h: | 12 14 | 22 23 | 28 | 32 33 | 36 38 | 50 |
| +168 h: | 12 14 | 22 23 | 28 | 32 33 | 36 38 | 50 |
| +192 h: | | 22 23 | 28 | 32 33 | 36 38 | 50 |
| +216 h: | | | 22 23 | 33 | 38 | |
| +240 h: | | | | | | |

Probability (%) of Tropical Cyclone Intensity falling in each category
 TD[up to 33] TS [34-63] HR1[64-82] HR2 [83-95] HR3 [> 95 kt]



10m Wind Speed (kt) solid=OPER; dot=Ens Mean



Mean Sea Level Pressure in Tropical Cyclone Centre (hPa) solid=OPER; dot=Ens Mean

