

Typhoon Targeting and Recurvature



Tetsuo Nakazawa and Muneyuki Yamaguchi

**We assume Each Platform has its own HQ,
but,**

A/C
Korea

MTSAT
Rapid-
Scan

A/C
China

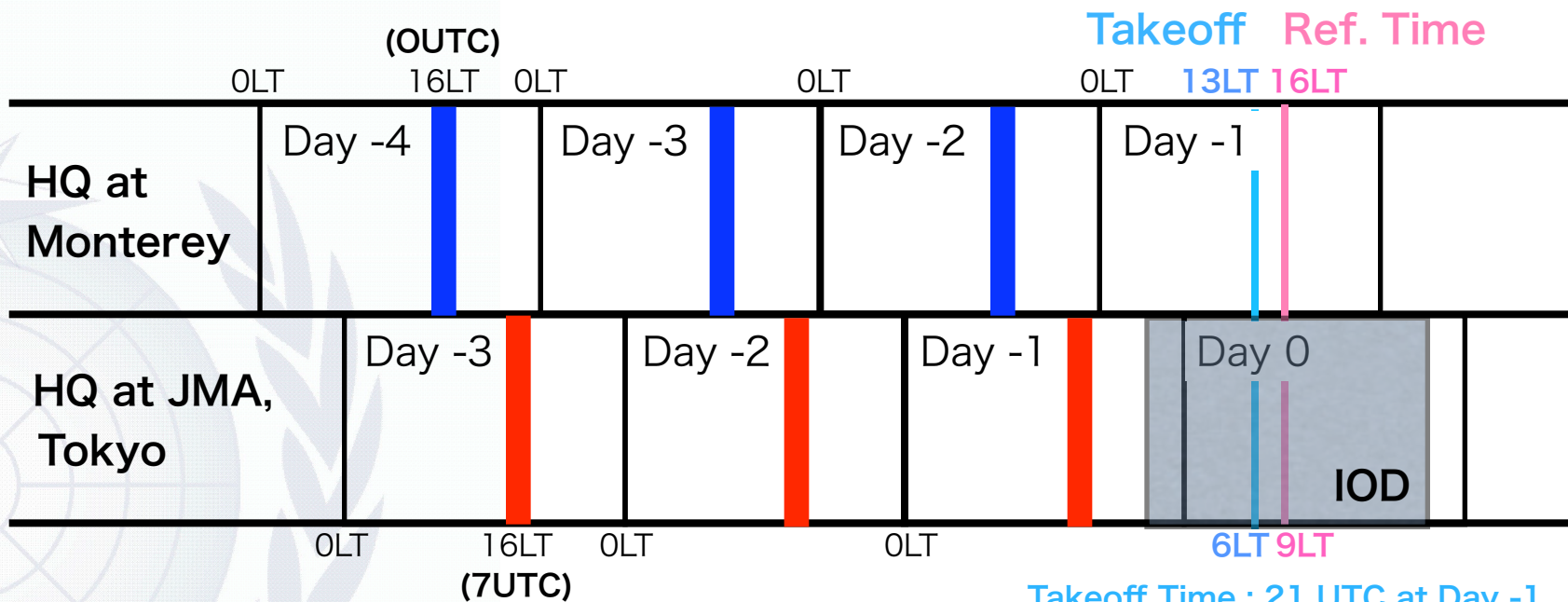
A/C
Japan

A/C
DOTSTAR

A/C
US

Driftsonde
Ope.

Flight Decision Schedule (Plan)



Takeoff Time : 21 UTC at Day -1
Reference Time : 00 UTC at Day 0
IOD: 24 hours from 12 UTC at Day -1

Day -4	16LT at Monterey	Tentative Decision on Day 0 Operation
Day -3	16LT at Tokyo	Confirmation of Tentative Decision
Day -3	16LT at Monterey	Final Decision on Day 0 Operation
Day -2	16LT at Tokyo	Confirmation of Final Decision
Day -2	16LT at Monterey	Confirmation of Final Decision
Day -1	16LT at Tokyo	Confirmation of Final Decision
Day 0	6LT at Tokyo	Takeoff and Landing at 10LT ₃

Virtual Observation for 2007.10.05(Fri) 00UTC

① **Thursday (9/27) Meeting (local time 15:00JST)**

For rapid-scan operation in the coming week

② **D - 3days (local time 15:00JST)**

To prepare of A/C and in-situ observation during IOD

③ **D - 2days (local time 15:00JST)**

To decide to set IOD and inform to Aviation Auth.

④ **D - 1days (local time 15:00JST)**

To inform the detailed flight path to Aviation Auth.

D -3 hours the departure of an airplane

Observation

(2007.10.05 00UTC)

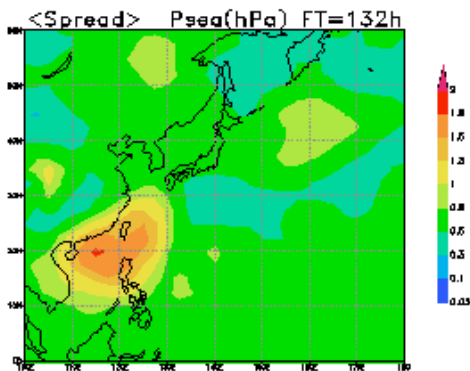
① Thursday (9/27) Meeting (local time 15:00JST)

Discussion

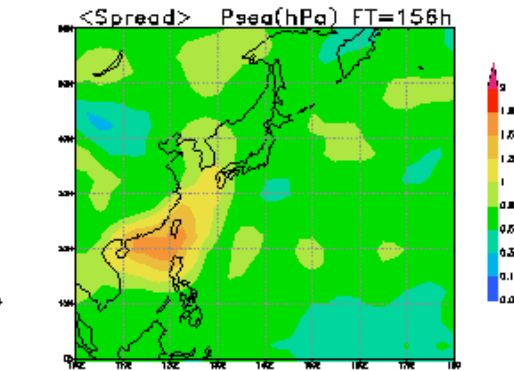
To decide if we need IOD in the coming week (Sep.28 - Oct. 5)

Data

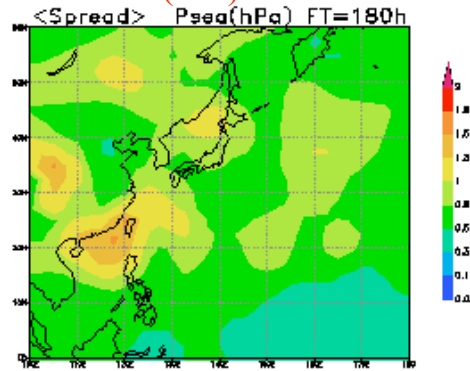
10.02(Tue) 00UTC



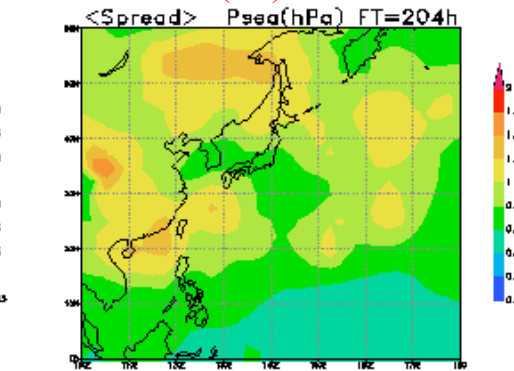
10.03(Wed) 00UTC



10.04(Thu) 00UTC



10.05(Fri) 00UTC



Spread of 51 members Ps in Weekly Ensemble Forecast.

The area with warmer color denotes that with larger spread, indicating more probability of the existence of Typhoon.

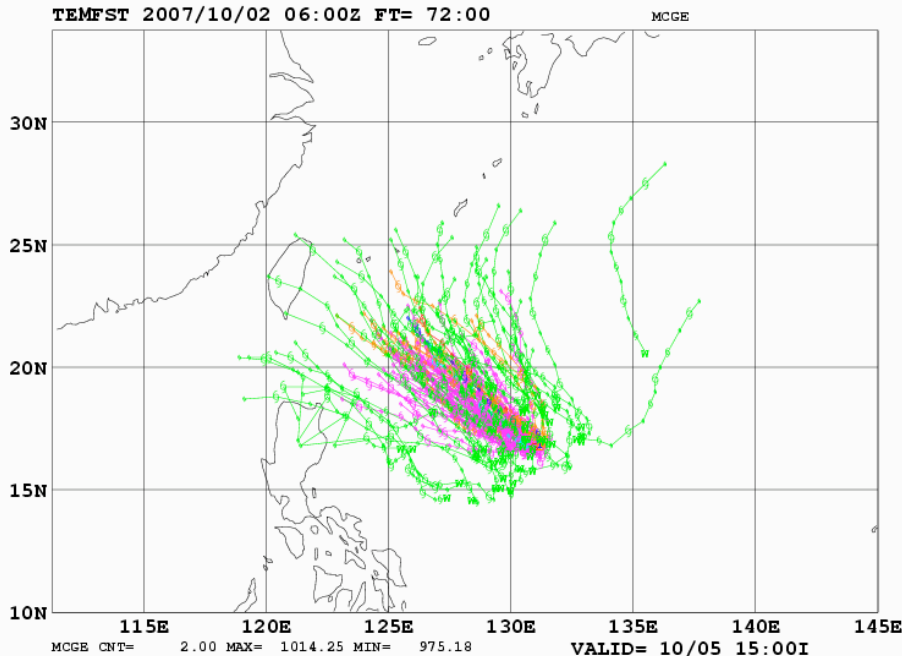
② D - 3days (Oct. 2 15:00JST)

Discussion

To decide the operation at Day 0

Data

Ensemble Forecast Data
(Initial: 2007. 10. 2. 06UTC)



Green(51) : JMA Medium-Range EPS
(updated once a day)

Orange(11) : JMA Typhoon EPS
(updated 4 times a day)

Pink(51) : ECMWF EPS
(updated 2 times a day)

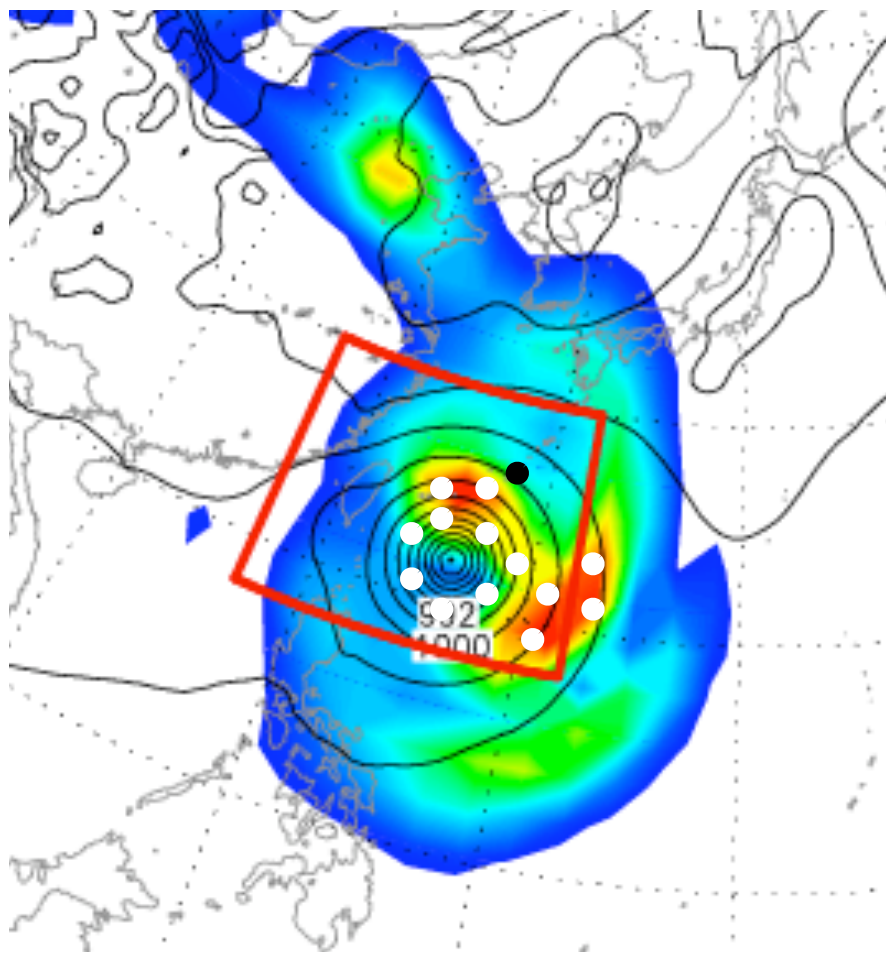
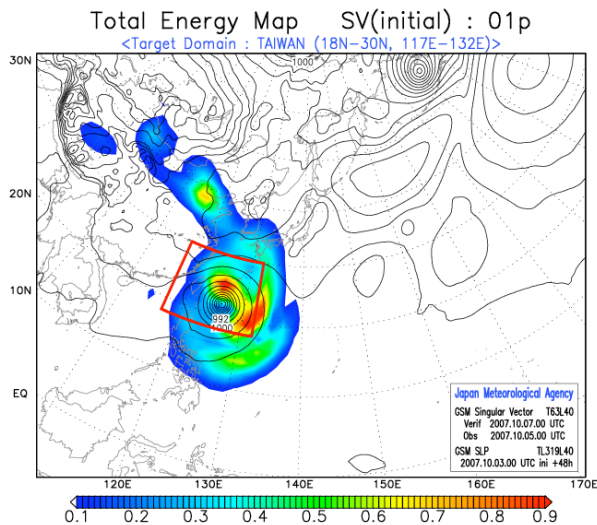
③ D - 2days (Oct. 3 15:00JST)

Discussion

To decide if we fly, based on sensitivity analysis

Red Box: Verification Area

Color Contours: Sensitivity Analysis for the verification time at Oct. 5, 00UTC.

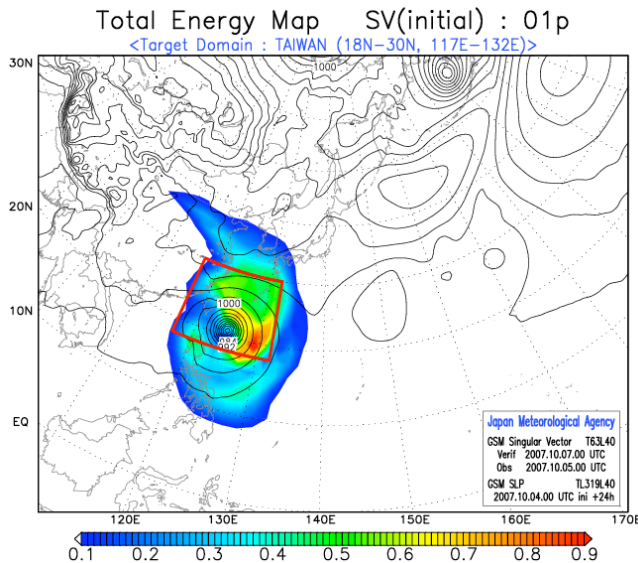


④ D - 1days (Oct. 4 15:00JST)

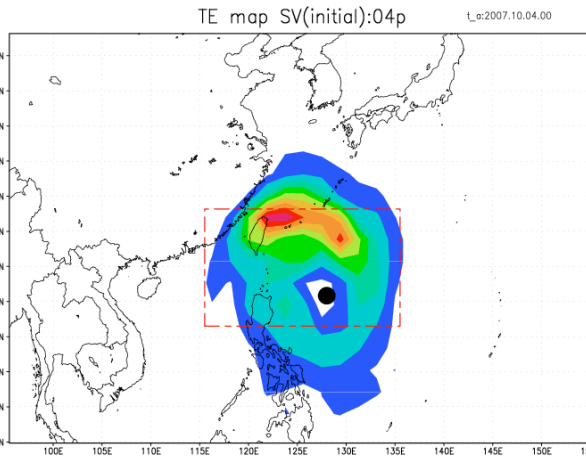
Discussion

To check if any modification is necessary.

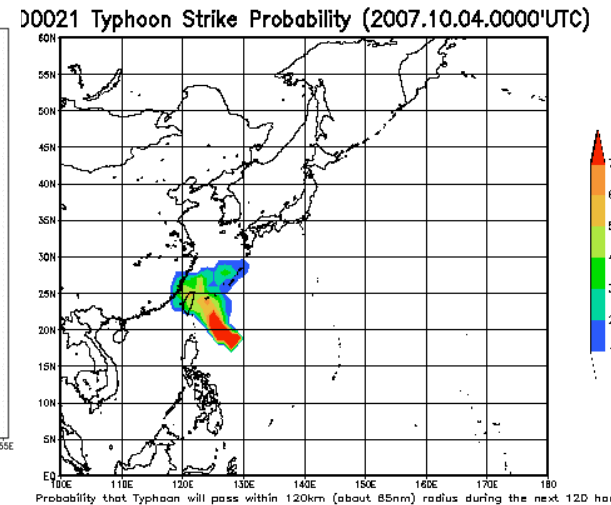
Data



Latest sensitivity analysis



Sensitivity analysis for 10/4 00UTC



Probability Map for typhoon approach, starting from 10/4 00UTC