2000 UTC 04 September 2018 Forecast Discussion

Summary

Invest 98W has officially been declared by JTWC, but is not expected to affect the area of operation (10.2N 133.0E). Widespread convective activity is expected to decrease with chances of scattered precipitation over the area of operation over the next few days. Further out, a developing disturbance may affect science operations around the time of the crew switch in Palau according to global models. Winds from the WSW of 10-15 kts with possible 15-20 kts are expected for the next 48 hours. Wave heights will be continued to decrease from 6-8 ft to 4-6 ft over 48 hours.

Day One (24 hr) Outlook: Diminishing widespread convection with chances of scattered precipitation. Winds coming from west-southwest at 10-15 knots with possible 15-20 knot winds. Significant wave height of 6-8 feet.

Day Two (48 hr) Outlook: Chances of scattered precipitation. Winds coming from west-southwest at 10-15 knots with possible 15-20 knot winds. Significant wave height expected to decrease to 4-6 feet.

Extended Outlook: Chances of scattered precipitation expected to decrease gradually over the next few days. Beyond that, a disturbance may intensify and approach the area of operation close to the time when the ship is scheduled to depart Palau for Leg 3.

Discussion

TCs: The area of closed circulation mentioned in yesterday's forecast discussion has officially been declared as Invest 98W by JTWC. CIRA's multiplatform 700 mb wind analysis showed the circulation center located around 18N 134.5E. Convection associated with 98W have been generally weaker compared to the convective activity seen over the area of operation in the past few days, with satellite IR imagery depicting cloud tops warmer than -50C as of the writing of this discussion. Invest 98W is expected to intensify only slightly. But due to its forecast northwestward track, it is not expected to affect the area of operation. The GEFS 10-m circulation forecast has been depicting a closed circulation located around 15N and 150E. Satellite shortwave imagery did show a cyclonic rotation of the low-level clouds at around 1730 UTC. However, the global models do not seem to favor further intensification of this system as it tracks westward and dissipates. Further out, both GFS and ECMWF seem to favor intensification of an area of disturbance currently located around 10N 180. This disturbance is currently too far out in space and time for any practical operational forecasting purposes. However, close attention will be paid to this system. If the models verify and the systems follow the track and intensity as forecast by the 12Z GFS and ECMWF model run, science operations may be affected, especially as the ship departs Palau on the Leg 3 cruise.

Convection: Widespread convective activity has diminished over the area of operation since yesterday's forecast discussion. Both COAMPS and GFS indicate scattered precipitation over the operation area for the next 48 hours. Convection associated with 98W will stay north of the area of operation. According to GFS, the chance of widespread convection seems to decrease over 72 hours, until the disturbance currently around 10N 180 starts to affect the area of operation (beyond 162 hours).

MJO/BSISO: MJO forecasts by ECMWF and NCEP issued on 0904 are consistent with yesterday's - phase change into 1 & 8 in a week and it remains to be weak amplitudes. No updated forecast available for BSISO indices - the most recent one was issued on 0830 and showed weak amplitudes with ensemble runs spread over all over the phase diagram.

SSTs: Sea surface temperatures should remain between 29-31 C

Currents and Wave Heights: The wave heights are expected to remain 4-6 ft by 0905 00z and then decrease to 3-5 ft. Currents from the west of 0.1 - 0.5 cm/s are forecast.

FORECASTERS: RAZIN and NAM

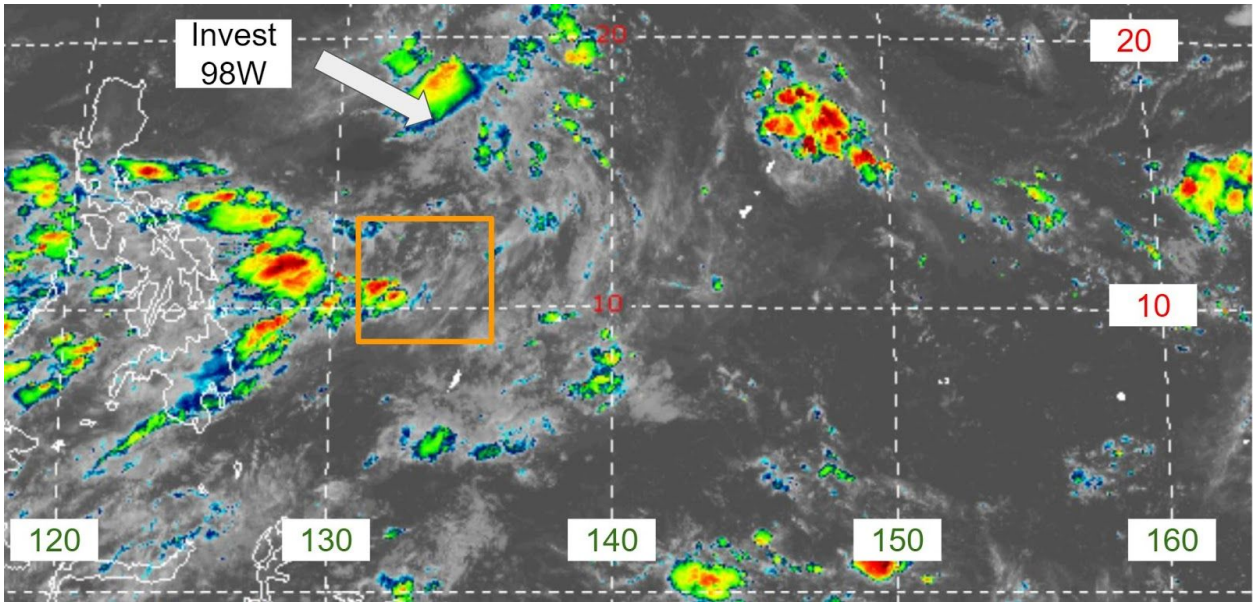

Fig. 1. Himawari IR (10.4 microns) imagery at 20180904 1710 UTC. [1]

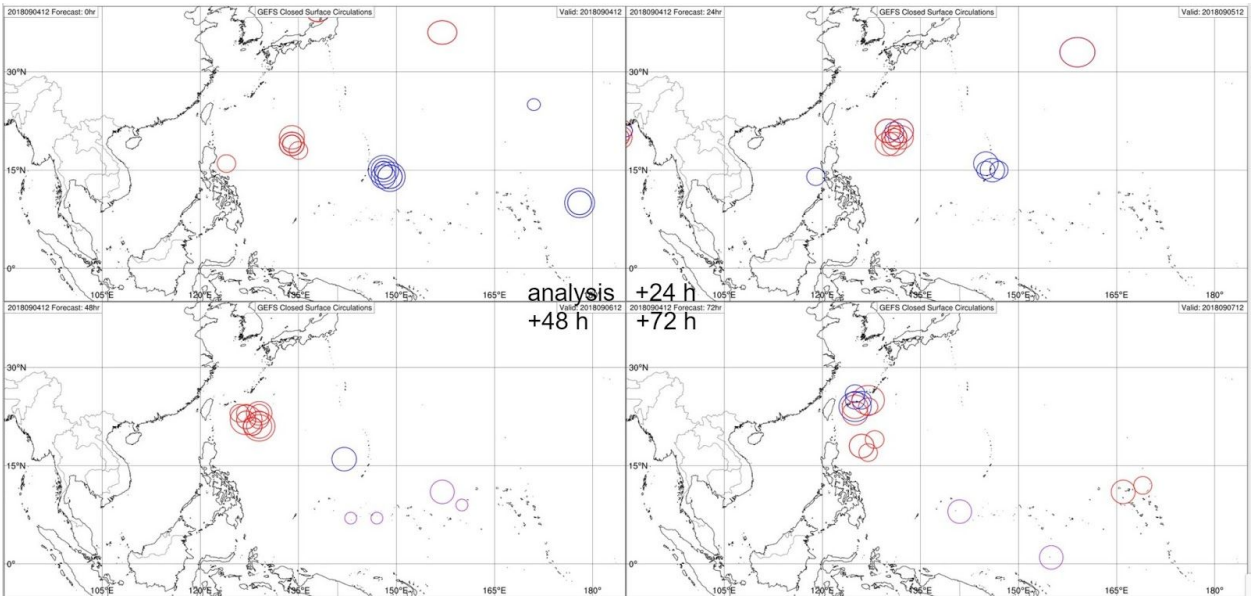

Fig. 2. GEFS ensemble 10m circulation forecast initiated at 1200 UTC 0904 [2]

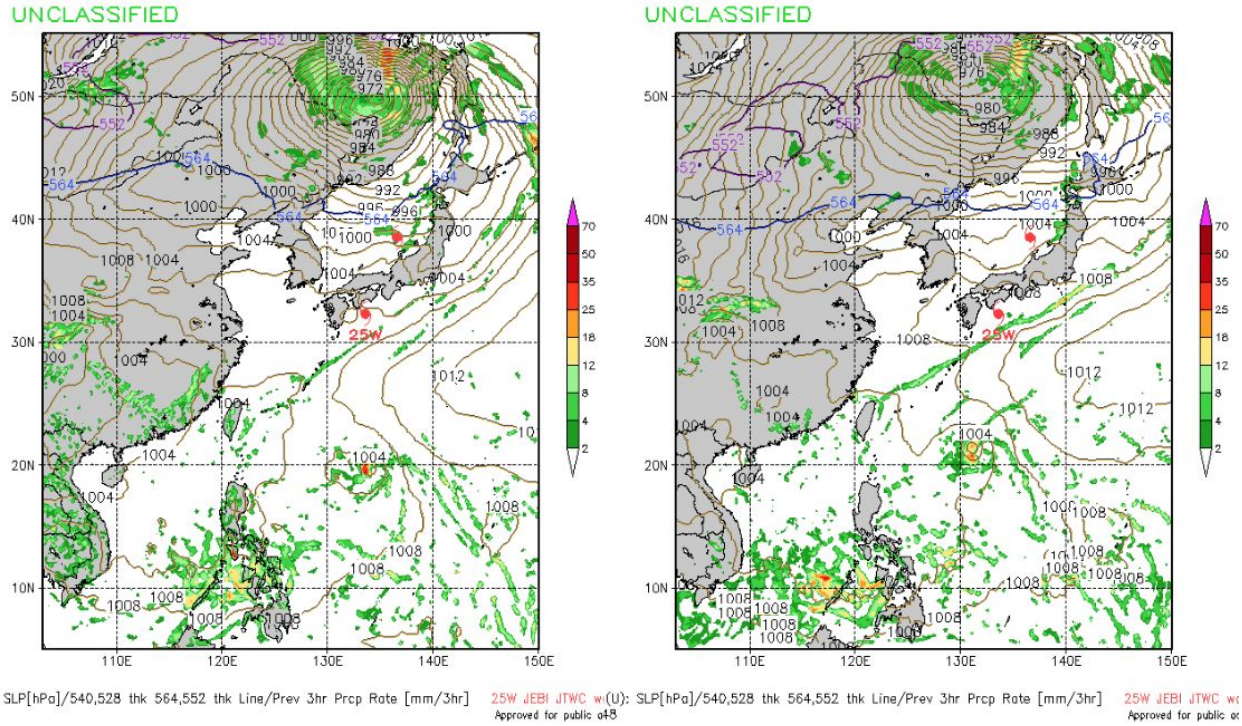

Fig 3. Precipitation (mm/3hr) forecast from COAMPS (left) valid at 0905 12z (right) valid at 0906 00z