

## Summary

The GFS tracks a low-pressure circulation over the area of operation towards the end of the 48 h forecast period, bringing along increased precipitation. COAMPS does not appear to track this circulation over the area of operation and therefore favors less (scattered) convective activity compared to the GFS in the next 48 h. No TC impacts are expected in the 5-day forecast, however Invest 99W is being closely monitored as both the GFS and ECMWF have it tracking near the area of operation between 11-13 September. MJO is forecast to remain phase 1 over the next week (enhanced convection over Africa), and BSISO2 is forecast to remain Phase 6 over the next 48 h (enhanced convection over SE Asia). The extended MJO and BSISO forecasts show weak-amplitude signals beyond the 48 h forecast period. Wave heights between 3-4 feet are forecasted over the area of operation during the next 48 h.

**Day One (24 hr) Outlook:** Scattered precipitation is expected during the next 24 h. Winds from the W-SW between 5-15 knots are expected to persist over the area of operation, shifting to NW at the end of the 24 h forecast period. Wave heights of 3-4 ft are forecasted over the area of operation.

**Day Two (48 hr) Outlook:** Scattered precipitation is expected to increase after the 24 h forecast and throughout the 48 h period, as the GFS brings a low pressure circulation over the area of operation. COAMPS keeps the circulation off to the east and correspondingly forecasts less precipitation over the area of operation in the next 48 h. Winds will remain from the W-NW throughout the forecast period between 5-15 knots. Wave heights of 3-4 ft are forecasted over the area of operation.

**Extended Outlook:** Isolated convection is expected to dissipate after 48 h, and conditions are expected to be relatively clear until 99W approaches the area of operation around Sep. 12th. Wave heights are also expected to decrease to 2-3 ft until the expected TC-induced swell enters the area of operation (around Sep. 12th).

## Discussion

**TCs:** The area of convection discussed for the past couple days has been officially declared 99W by JTWC, and it is currently located around 11N, 170W. Both the 12Z ECMWF and GFS still favor development of 99W, and it is located in a favorable environment with low vertical wind shear, high SSTs, and high amounts of mid-level water vapor. The convection in 99W has substantially grown in size since yesterday, and it is starting to show signs of organization. There is still large track and intensity disagreement between the 12Z ECMWF and GFS, but the GFS forecast track is trending southward towards the ECMWF forecast track, and the deterministic ECMWF forecast is nearly unchanged from yesterday. The 12Z GFS track is closer to Guam, and the ECMWF track is closer to the area of operation. The track and intensity

uncertainties seems to stem from the uncertainty of interactions with a cold low that is currently northwest of 99W at 22N, 160W, and we will continue to monitor 99W closely for impacts.

It is also worth noting that JTWC has also declared Invest 90W east of Luzon, which both the 12Z GFS and ECMWF intensify as it crosses over Luzon and then immediately turns north. 90W is not expected to impact operations if it develops.

**Convection:** Convective activity has been subsiding over the area of operation. Scattered precipitation remains in the forecast during the next 48 h as soundings released by the ship show current CAPE values in excess of 3000 J/kg. The GFS has a low-pressure circulation tracking towards the area of operation during the 24-48 h forecast period which is expected to increase precipitation in the area of operation. Convective activity is anticipated to increase in the long term forecast (~12 September) as Invest 99W tracks towards the area of operation.

**MJO/BSISO:** The MJO forecast provided by the ECMWF was updated to include the two week period beginning on 06 September while the BOM has not been updated since 02 September. As in yesterday's forecast, the two models show a signal in phase 8 of the MJO over the next two weeks, indicative of enhanced convective activity over the African continent. ECMWF shows a higher amplitude in the signal during the first week compared to the BOM which then decays through week 2. The BSISO indices from ECMWF and BOM were not updated from yesterday's forecast and therefore still show forecasts initiated at 03 September and 02 September, respectively. During the remaining 24-48 h in the 1-5 day forecast, the ECMWF indicates an increased amplitude in the BSISO2 signal which is reflected in the 1-5 day outgoing longwave radiation (OLR) anomaly forecast, showing negative anomalies over southeast Asia. The BOM shows a slightly weaker signal, but is in general agreement over the next 48 h. In the extended outlook, beyond 5 days from initialization, the models diverge in their forecasts for both BSISO signals.

**SSTs:** Sea surface temperatures are expected to be between 29-31 C.

**Currents and Wave Heights:**

FORECASTERS: CASAS (DELAP) and MARTINEZ

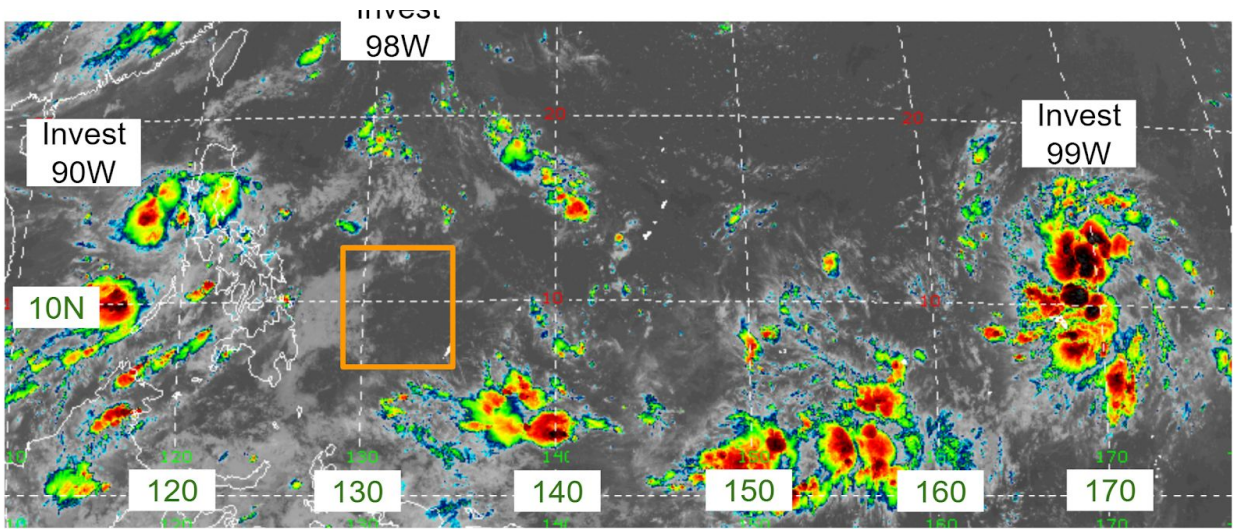


Fig. 1. Himawari IR imagery (10.4 microns) valid at 1800 UTC 06 September 2018. [1]

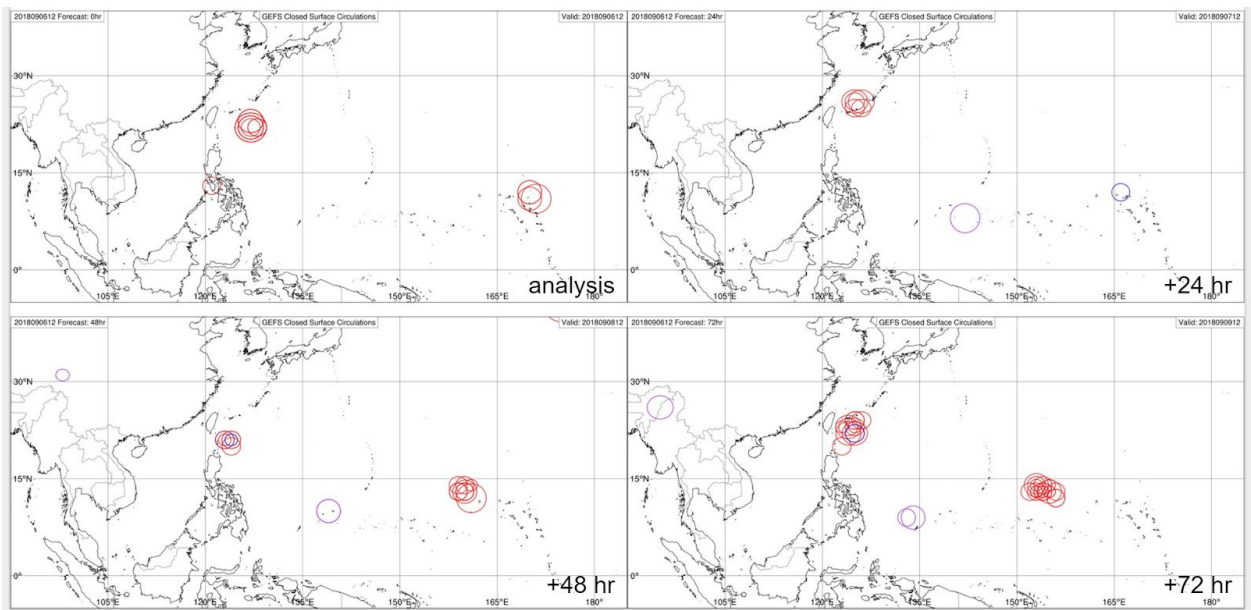


Fig. 2. GEFS ensemble 10m circulation forecast initiated at 1200 UTC 06 September 2018. [2]

