

Summary

Currently in the observation area we have monsoon southwesterly low-level flow and upper-low northeasterly winds providing 40-50 kts of shear. Scattered convection will likely be present over the next several days but no organized convective systems are likely (Fig. 1). There is currently large uncertainty with the forecasts of Invest 96W and TD18 due to the weak steering flow, moderate shear (Fig. 2), and strength of the systems. Current model trends are shifting Invest 96W towards the northwest and not interacting with Taiwan. TD18 is moving towards the northeast currently but a northwestward turn is expected to occur towards Okinawa. Enhanced convection in a large region East of the Philippines centered around 15N, 130E is forecasted over the next 120 hours in the GFS associated with the monsoon trough (Fig. 3).

Day One (24 hr) Outlook: In the study area, models suggest broad, disorganized convection will continue under heavily sheared environment. SE of Taiwan, TD18 is expected to maintain current intensity while tracking slowly to the northeast while hindered by strong shear (Fig. 4). SW of Taiwan, Invest 96W in the South China Sea is expected to remain broad and disorganized under the influence of strong shear. Neither is expected to impact Taiwan in this time frame.

Day Two (48 hr) Outlook: Disorganized convection expected to continue over study area. Slight intensification of TD18 possible, but shear continues to impact it. Slow northward movement expected. 96W in the South China Sea will track slowly north/northwest, no development expected due to unfavorable environment.

Extended Outlook: TD18's track is somewhat uncertain, but a general northward trend is expected over the next few days before taking a left turn. Models disagree on when (EC deterministic is earlier than GFS, but the GEFS ensemble positions are all over the place), but sometime after 12Z 8/10 seems likely. Not expected to impact southern Taiwan. Similarly, lots of uncertainty with Invest 96W, especially with regards to track and intensity. GFS and GEFS have backed off passage south of Taiwan, FWIW. Models and BSISO index patterns suggest positive OLR anomalies over the study region in the 6-14 day time period.

Discussion

TCs: Newly formed Tropical Depression 18 has formed from 93W and is still forecast to move towards the northeast. TD18's low-level center is located near 19N 131E (Fig. 1) but deep convection is located towards the southwest due to moderate-strong northeasterly shear. JTWC has lower confidence in the track of TD18 and the strength/timing of a building ridge to the East of TD18 will influence when it makes its forecasted turn to the northwest. The track is currently not expected to impact Taiwan and strong shear will continue to limit any intensification. Invest

96W remains in the South China Sea as a broad low-level circulation with little convective organization and strong 40-50 kt shear. The 12Z GFS has shifted more towards the ECMWF with a more northward instead of northeastward track over the next few days. The invest will be moving into a more favorable environment with 10-15 kts of vertical wind shear and an upper-level low over Eastern China is forecast to move to the northwest. No tropical cyclone formation near the operation area (12N, 134.5E) is expected over the next 5 days.

Convection: At the operation location near 12N, 134.5E there are no ongoing thunderstorms; however, some scattered thunderstorms are present in a band towards the north around 14N. The current environment is highly sheared from the northeast and most cells are transient with little organization. COAMPS is continuing to suggest the possibility of scattered storms in the area over the next 48 hours.

MJO/BSISO: The BSISO magnitude remains small and is forecast to remain weak over the next week according to BOM and ECM ensembles. The ensemble mean shows movement towards low amplitude Phase 6 (South China Sea) near August 20 but the ensemble spread shows lower confidence. The influence of the monsoon may dominate the signal over the next week.

SSTs: SSTs remain warm between 28-30°C.

Currents and Wave Heights: Decreasing wave heights from 4-6 ft to 2-4 ft over the next 48 hours is expected. Currents are toward the southwest at .25-.5 cm/s.

FORECASTERS: DEHART and TRABING

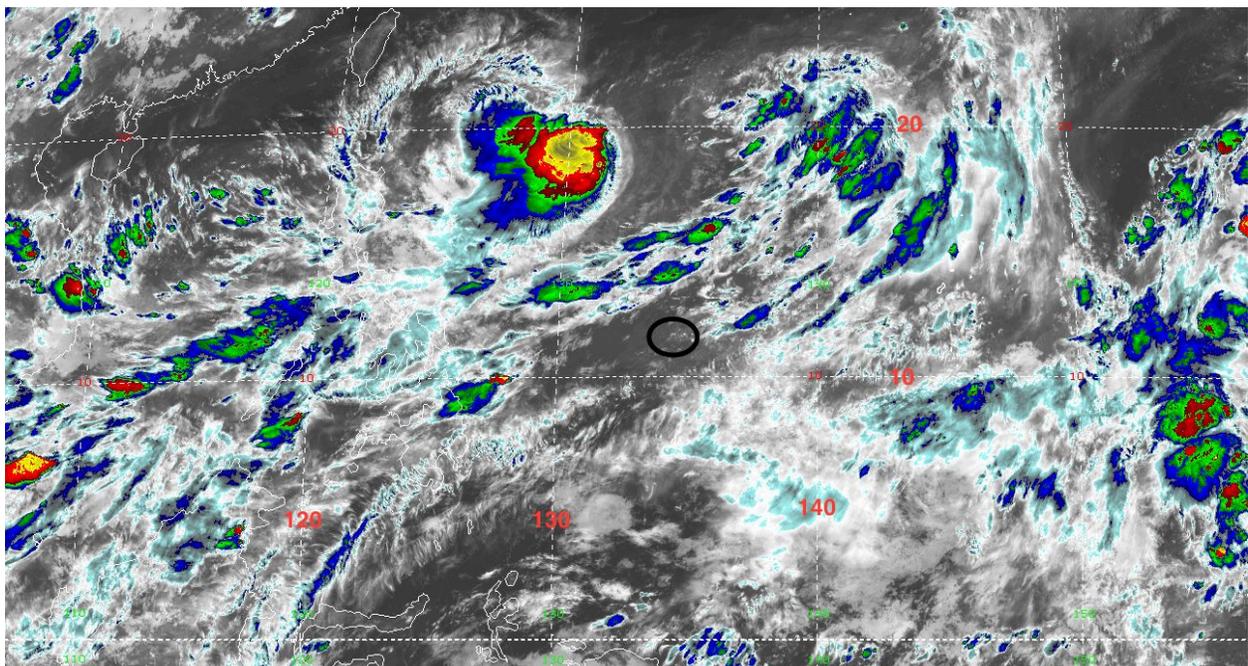


Fig. 1. 11.2 micron Himawari IR imagery from 1620Z August 7. [1]

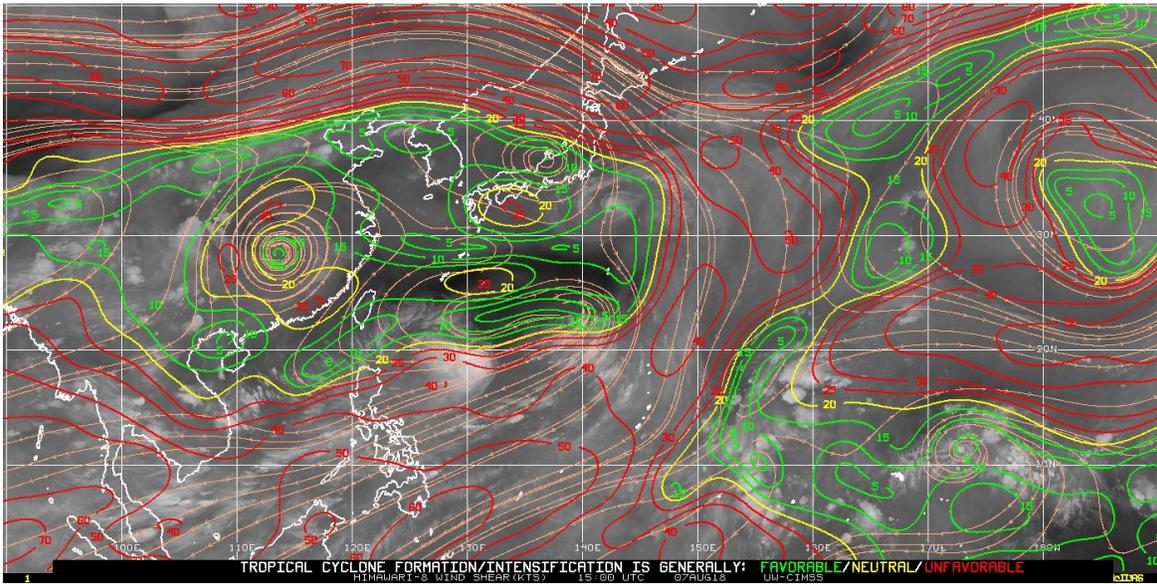


Fig. 2. CIMSS Vertical wind shear on 18Z August 7 [2]

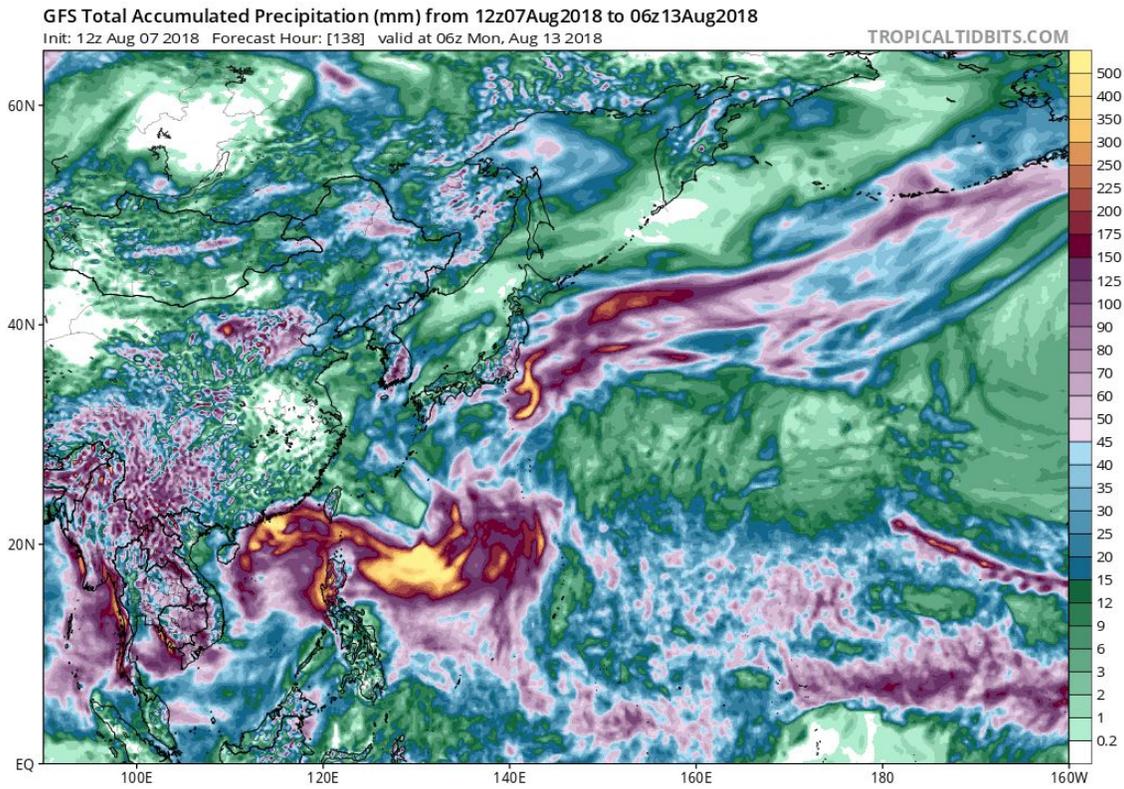


Fig 3. 12Z GFS Accumulated precipitation over 138 hours [3]

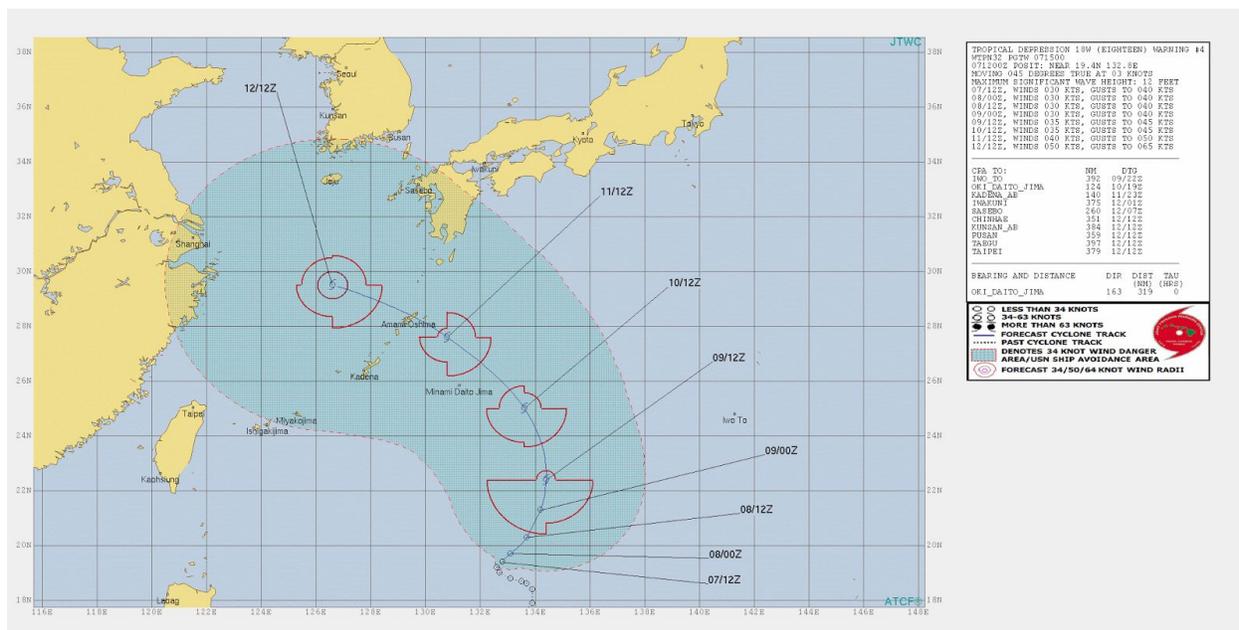


Fig. 4. JTWC TD18 track forecast [4]