

## 20 UTC 15 August 2018 Forecast Discussion

**Summary:** Two areas of interest (TD 22W and Invest 91W) are currently located in favorable conditions (low shear, warm SSTs, strong upper-level divergence) and potential intensification/genesis seems likely in the next few days. Luckily, both systems are east of 140E and are expected to eventually move north (on either side of the northern Marianas Islands), leading to little impact on transit or research operations. Low-level monsoonal flow is expected to weaken/retreat westward over the next few days, leading to favorable transit conditions in the short term and reduced precipitation, before the monsoonal flow surges back east of Luzon after ~120 hours. Winds should still be under 35 kts during this time, though. MJO and BSISO indices continue to be weak in amplitude.

**Day One (24 hr) Outlook:** TD 22W (12.5N, 144.4E) is expected to move northward while intensifying ~20 kts. Invest 91W is expected to move west, but no intensification/genesis yet. No impact to operations. Winds in transit region should remain under 25 kts.

**Day Two (48 hr) Outlook:** TD 22W (12.5N, 144.4E) is expected to move northward while intensifying ~25 kts. Invest 91W continues moving west, but no intensification/genesis yet. No impact to operations. Winds in transit region should remain under 25 kts.

**Extended Outlook:** TD 22W will continue pushing north with continued intensification possible. 91W should march westward until ~12Z 18 August when it begins to turn north. Genesis possible over the next 96 hours. No threat to operations expected. Wind speeds should remain lighter through ~12Z 20 August, but GFS hints that the low-level monsoonal flow will pick back up after this time, with stronger southwesterlies (still under 35 kts) from Taiwan to the research domain.

## Discussion

**TCs:** Two areas of slight interest far east of Taiwan and operations area: TD 22W and Invest 91W. TD 22W is currently located in a region of low shear, warm SSTs, and upper-level divergence. Forecasted to move north (west of the northern Mariana Islands), intensifying while it remains under favorable conditions, but no threat to operations (in Taiwan or along transit route) expected. 91W lies further east (12.7N, 167.2E) in a region of similarly favorable conditions. Genesis forecasted by global deterministic models (plus GEFS), but influence from the subtropical high should also draw 91W north (east of the northern Mariana Islands). No threat to operations expected.

**Convection:** Scattered areas of convection have been persistent in the area around 12N 134.5E. A broad area of upper-level divergence and strong low-level convergence around 8N

133E is supporting convection in the area. These storms will push westward and convection over the observational area should diminish in intensity over the next few days. The GFS is suggesting that on the day of the cruise most of the precipitation will be scattered along the coasts of Luzon. COAMPS products are currently not available.

**MJO/BSISO:** Over the last week the BSISO index shifted towards a weak amplitude phase 6 (South China Sea) signal but is forecasted to further decline in amplitude over this next week. The BSISO/MJO signals remain disorganized with the pattern being heavily influenced by the TCs. The weak amplitude signal is expected to persist and the overall signal is expected to be dominated by TCs.

**SSTs:** Temperatures remain near 29-30C around

**Currents and Wave Heights:** Significant wave heights from the GFS driven Wave Watch 3 model (COAMPS unavailable) are expected to be under 2 meters. Ocean current forecast is unavailable.

FORECASTERS: TRABING and DEHART

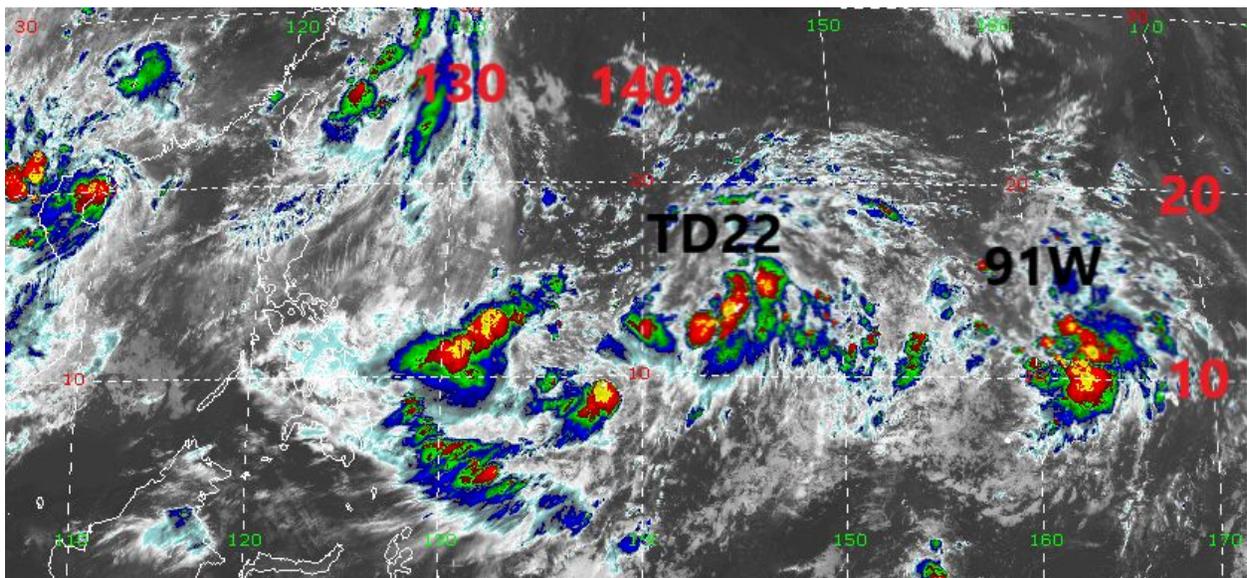


Fig. 1. 11.2 micron Himawari imagery at 1830Z 15 August. [1]

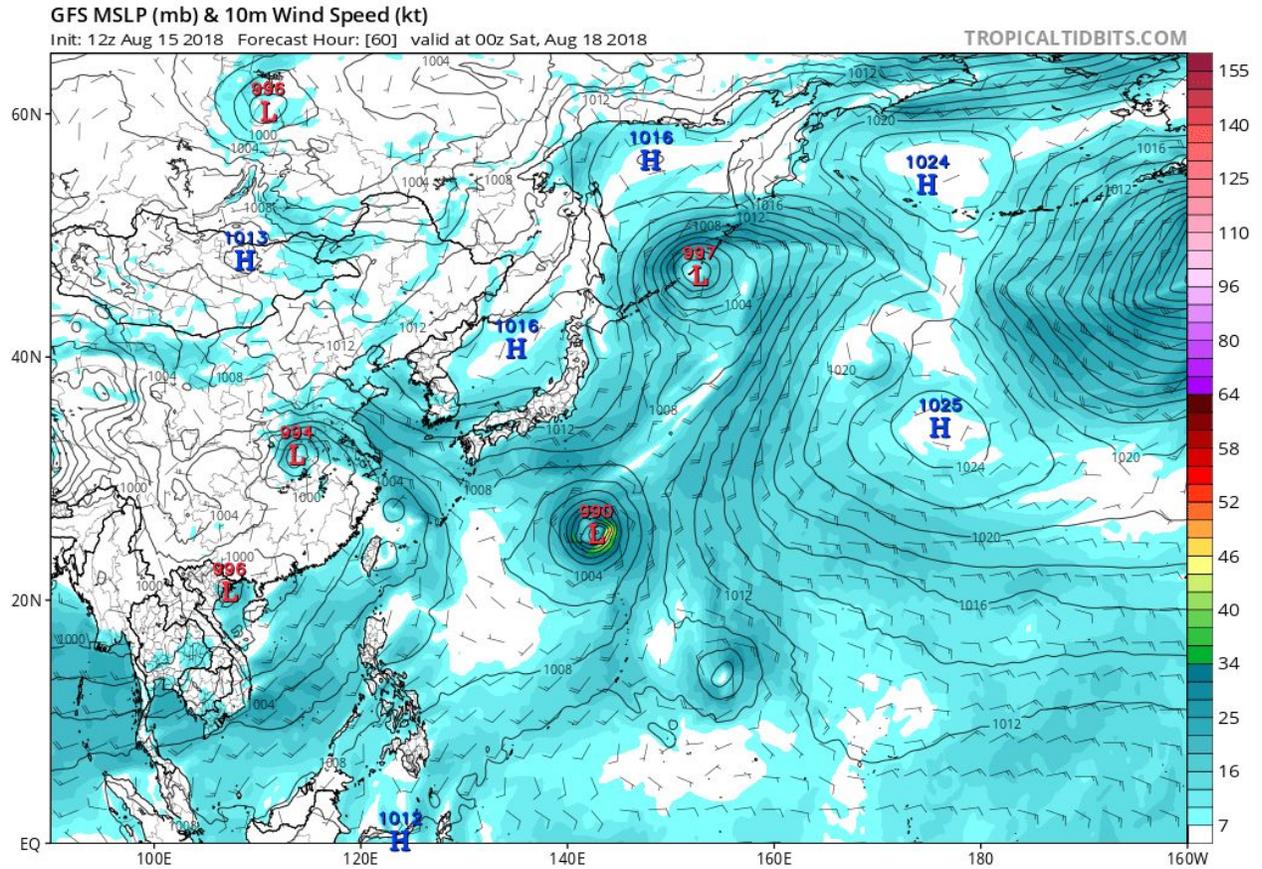


Fig. 2. MSLP and 10-m winds from 12Z 15 August GFS for 8AM local time on August 18 (earliest departure time). [2]

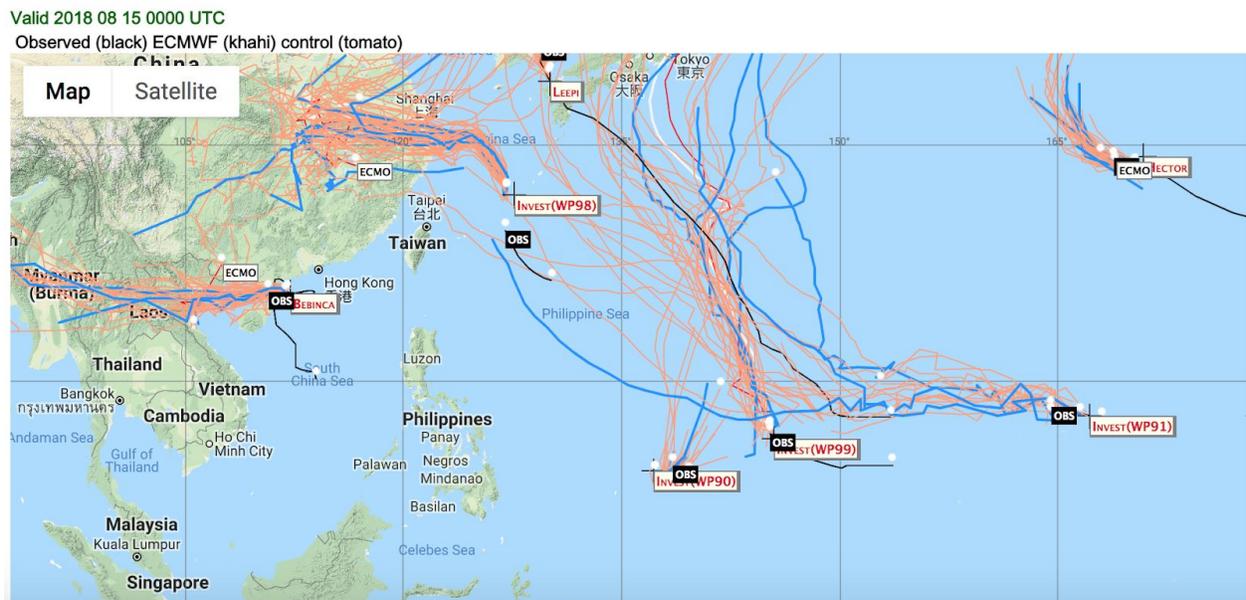


Fig 3. ECMWF ensemble tracks from 00Z 15 August [3]