

Summary

Both Typhoon Soulik and Invest 91W are continuing to intensify in favorable environments consisting of warm SSTs, mid-level RH, and pockets of weak vertical wind shear. Typhoon Soulik is forecasted to reach peak intensity of 115 kt on 12Z August 19 with the track to the north around the subtropical ridge to the west. Invest 91W is expected to undergo genesis within 24 hours but will track to the northwest following a similar track as Soulik. Both systems will cause enhanced significant wave heights along the transit region, primarily beyond 36 hours of expected departure time. The monsoonal flow is forecasted to retreat westward and northward; however, a convergence zone is expected to form along the eastward periphery of Invest 91W in both the GFS and ECMWF that will likely contribute to enhanced rainfall over a large area east of the Philippines and north of the area of operation. Winds are expected to increase over the transit region beyond 48 hours but expected to remain below 35 knots in the GFS.

Day One (24 hr) Outlook: Typhoon Soulik will continue moving northwestward and is forecast to intensify by ~25 kts. 91W will continue moving westward, with genesis possible. No impacts to transit region. Convection has shifted west and northwest of the research domain.

Day Two (48 hr) Outlook: As Soulik moves northwestward, additional intensification of ~10 kts is possible. 91W will start to shift to the west-northwest, with genesis possible. The degree of the right turn will depend on genesis timing. Only impacts appear to be slightly enhanced wave heights of 5-7 feet.

Extended Outlook: Although Soulik and 91W will track far north of the transit region, intensification of both systems will likely affect wave heights in the transit region. FNMOG is forecasting wave heights between 7-12 feet are possible on 20 August along the transit route.

Discussion

TCs: Typhoon Soulik (23.7N, 140.1E) continues its northwestward march at an intensity of 80 kts in a relatively low shear environment. Continued intensification is expected as Soulik remains in a favorable environment. Invest 91W (12.6N, 158.3E) now has a weak surface circulation and convection sheared to the southwest side of the circulation. 91W is surrounded by substantial shear, but the rest of the environment remains favorable for genesis, which JTWC has upgraded to high over the next 24 hours. Neither poses a direct impact on the transit, although strong convergent flow on the southern side of 91W could pose issues in the long-term (see convection and wave heights discussion).

Convection: There is little to no convection east of the Philippines, with little cold cloud coverage. The convection has shifted west of the Philippines and southeast of Taiwan tracking

with the convergent flow just downstream of the low-level monsoonal flow. Weak, divergent flow at low levels in the research domain should keep convective coverage and intensity weak for the next few days (through ~19/20 August). As the monsoonal flow surges back toward the east, convection will be expected to increase in coverage and intensity over the research domain east of the Philippines.

MJO/BSISO: The signals remain weak in amplitude with the BSISO and MJO signals again being dominated by low frequency modes including the monsoonal flow and TC. The ECM and BOM do suggest a continued weakening trend of the BSISO signal.

SSTs: 29-30C waters remain the area of operations.

Currents and Wave Heights: Significant wave heights around the tip of Taiwan are around 5-7 ft decreasing in the small region to the southeast before increasing again to 5-7 ft. Over the next 48 hours we expect the 5-7 feet waves to continue; however larger waves will be possible beyond 48 hours. FNMOC models suggest the possibility of 9-12 feet significant wave heights depending on the genesis and intensification expected with Invest 91W.

FORECASTERS: DEHART and TRABING

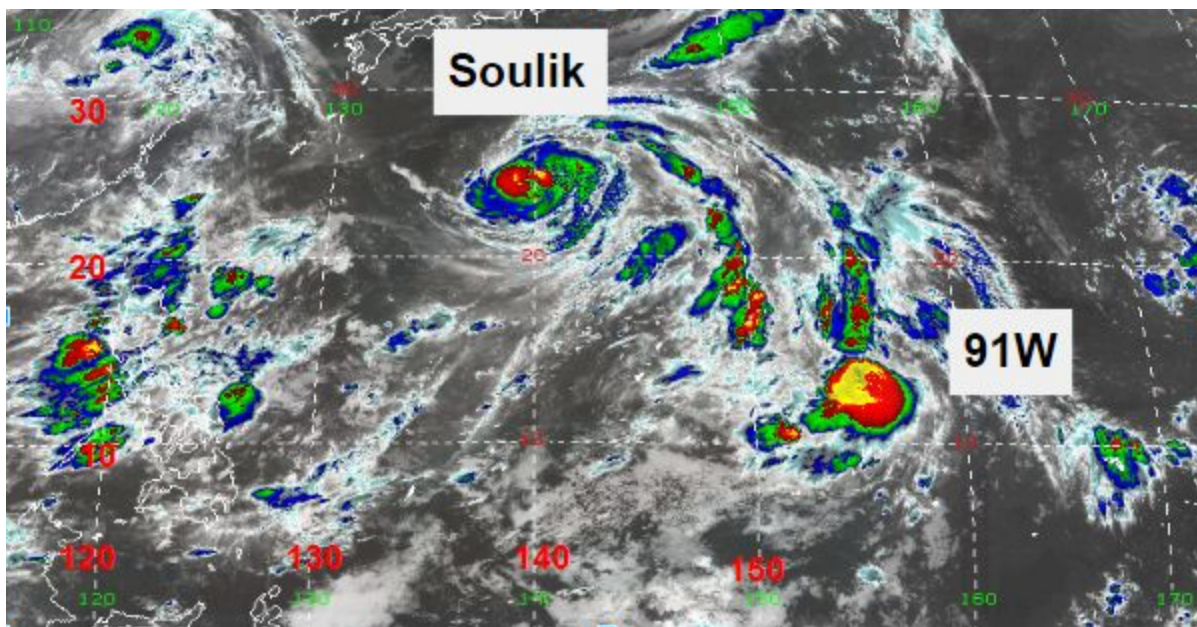


Fig. 1. 1710 UTC August 17 11.2 micron IR image from Himawari-8 [1]

Valid 2018 08 17 0000 UTC

Observed (black) ECMWF (khaki) control (tomato)

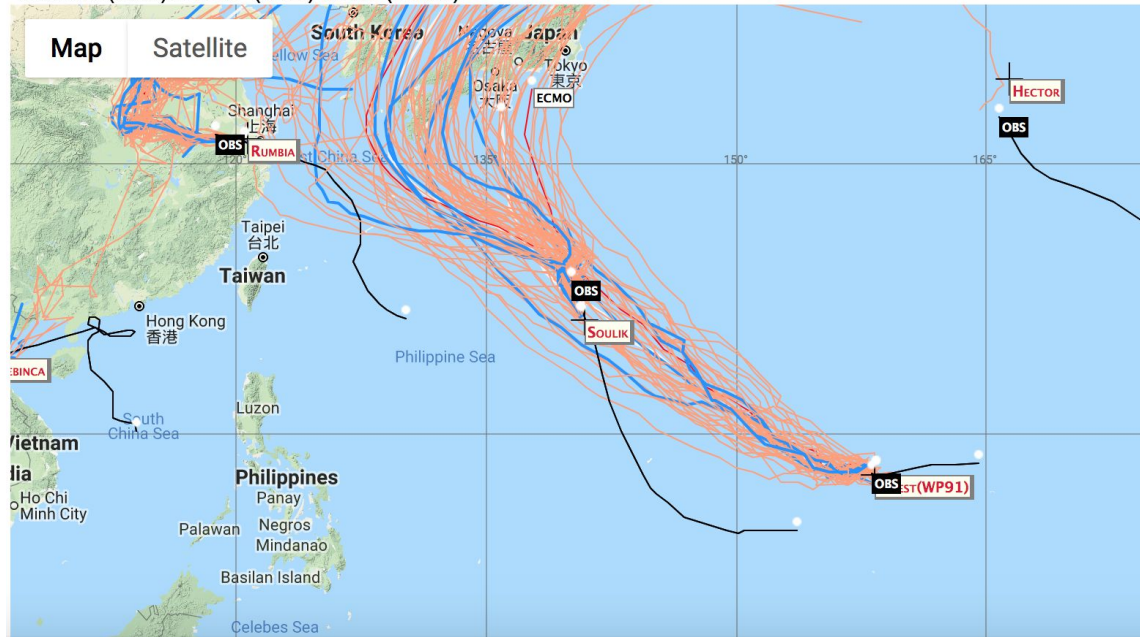
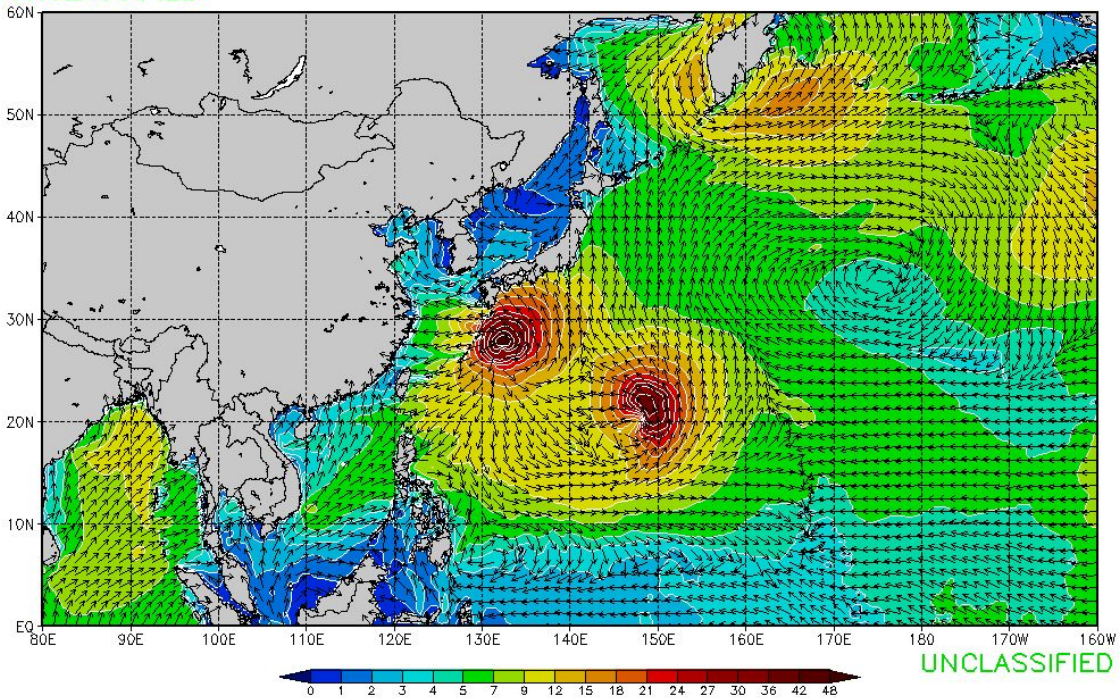


Fig. 2. ECMWF ensemble storm tracks from 00Z on 17 August. [2]

UNCLASSIFIED



VT: Mon 18Z 20 AUG 18
FNMOG WAVE WATCH (U): Significant Wave Height [ft] and Direction
Run: 2018081712Z Tau: 78

Approved for public access. Distribution is unlimited.

Fig 3. Significant wave heights from FNMOG derived from GFS conditions valid 18Z August 20 [3]

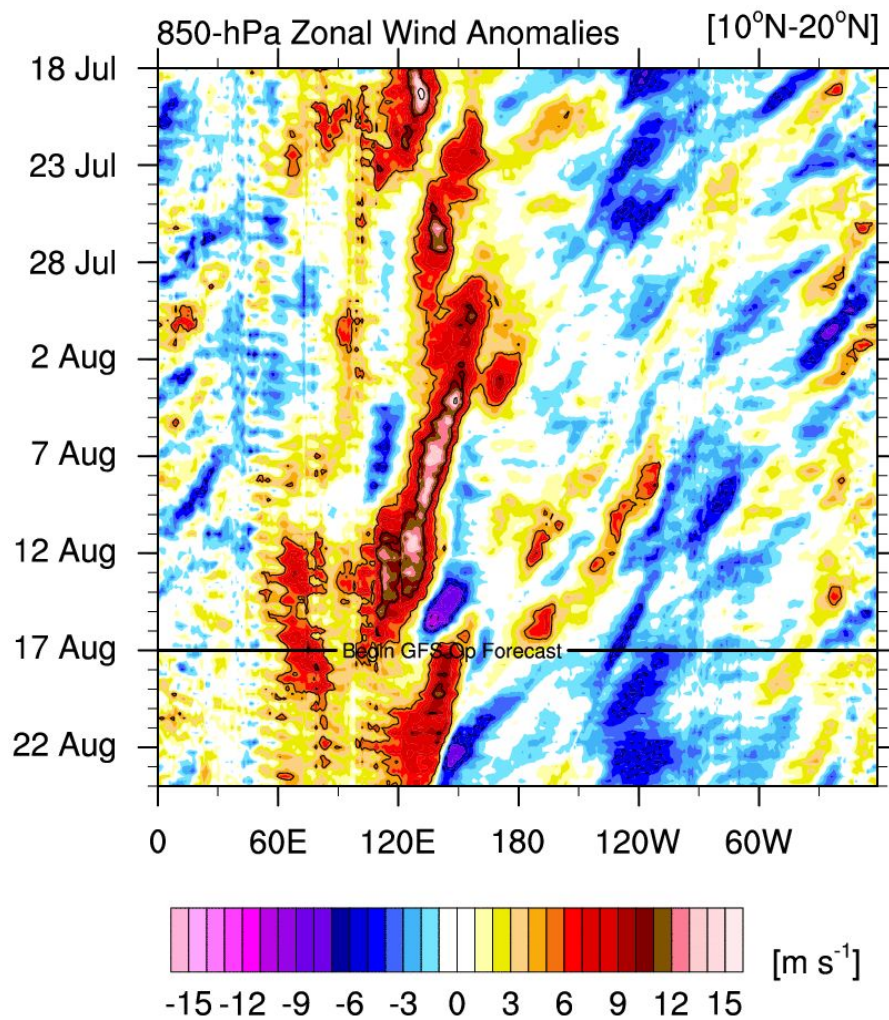


Fig. 4. 20N-10N zonal wind anomalies showing that around 134.5E and the transit region enhanced zonal winds will be expected. [4]