

Summary

Typhoon Soulik should maintain its intensity over the next 48 hours and TS Cimaron should intensify despite moderate shear. No other TC genesis is expected in the short term. The transit from Taiwan to the operation area or the location of the Mirai (~13N, 137E) should experience westerly to southwesterly winds which will increase with time and as the Thompson moves south. Strengthening monsoonal flow along the transit region in the NAVGEM shows the possibility of 10-m winds exceeding 30 kt over a large swath covering the transit region. Significant wave heights are expected to also increase with time with the potential for waves of 15-18 ft.

Day One (24 hr) Outlook: Typhoon Soulik will maintain its current intensity (95 kts) as it tracks northwest. TS Cimaron will likely intensify steadily in spite of strong shear by ~15 kts (70 kts). No direct threat to operations from either storm. Significant wave heights are expected to increase to 7-9 feet. Scattered convection between southern Taiwan and the northern Philippines will persist along the transit route. 10-m winds between the Luzon strait and just east of the Luzon could reach 20-25 kt.

Day Two (48 hr) Outlook: Typhoon Soulik might intensify another 5 kts, but that should bring it to its maximum intensity before interacting with the jet stream south of Korea. TS Cimaron should continue steadily intensifying by another ~10 kts as it passes just north of the northern Mariana islands. Significant wave heights up to 12 feet possible. 10-m winds between 25-30 kt are possible just east of the Luzon coast.

Extended Outlook: No TC formation is expected over the next 96 hours in the global models with the GFS still creating a TC east of Taiwan ~108 hours out. There is low confidence that any TC will form. Typhoon Soulik will likely begin to weaken after interacting with South Korea and strong shear from an approaching trough. TS Cimaron is now forecasted to continue its northwestward track with the subtropical ridge to the northeast maintaining its strength. Beyond 48 hours the 10-m winds in the global models east of Luzon are to remain around 20 kt. The higher resolution NAVGEM suggests the potential for stronger winds growing beyond 72 hours that may exceed 35 kt in some isolated areas and an elongated southwest to northeast oriented band of 30-35 kt winds (See Fig. 3). Associated significant wave heights in the 12-15 ft range are possible with pockets of 15-18 ft forming (Fig. 4). The Mirai should stay on the southern side of the strengthening monsoon flow and should only be impacted by significant wave heights around 9-12 ft.

Discussion

TCs: Typhoon Soulik (25.2N, 138.1E) has started a sharp turn left towards the west under the influence of easterly steering flow. Intensity slightly lower than yesterday's estimate as dry air

wraps around the western side, but it will continue moving northwest until it gets picked up by the jet stream bringing impacts to Korea and southwest Japan. Modest intensification possible as shear and SSTs remain favorable, but dry air could hamper it. Tropical Storm Cimaron (16.0N, 150.5E) has managed to intensify slightly, in spite of strong shear, likely due to favorable SSTs, upper-level outflow, and moisture. Steady intensification possible in the marginally favorable environment as it tracks over the northern Mariana islands. No direct impacts on the transit, but wave heights remain enhanced due to the large field of strong winds. Convection west of Cimaron will likely impact the eastern research domain and the location of the Mirai as well. See relevant discussions below for more information.

Convection: Currently, convection is focused in two regions: from southeast Taiwan to the east side of the northern Philippines and west of TS Cimaron centered around 140E. Global models suggest that the precipitation west of Cimaron, which is supported by broad upper-level divergence and some low-level convergence, will persist over the next few days. But as Cimaron continues moving north, the precipitation should push north alongside it. In terms of the Mirai location, global models expect Cimaron-associated convection occurring roughly between ~00Z 20 August and ~00Z 22 August (probably take this with a heap of salt, given usage of only global models). In terms of the transit route, models suggest continued scattered convection over the next 48 hours southeast of Taiwan and east of the Philippines. This should persist over the next few days as low-level winds pick up 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: Temperatures remain warm around 28-29C in the operation area. SSTs should be between 28-30C during the transit.

Currents and Wave Heights: Over the next 24 hours significant wave heights northeast of Luzon (~20N 124E) will be increasing to 7-9 ft waves and to 9-12 ft over 36-h. The models are suggesting a large area of 9-12 ft waves occurring east of the Luzon in the transit region. As TS Cimaron is forecast to intensify, significant wave heights after 00Z August 22 are expected. There is potential for wave heights east of Luzon to reach 15-18 ft by 00Z August 23 which grows in coverage in an elongated band orientated from southwest to northeast at 18Z August 23 from (17N, 126E to 25N, 140E). The Mirai (~13N, 137E) should remain to the south of the 9-12 ft significant wave heights as Typhoon Cimaron moves towards the northwest over the next 72 hours.

FORECASTERS: DEHART and TRABING

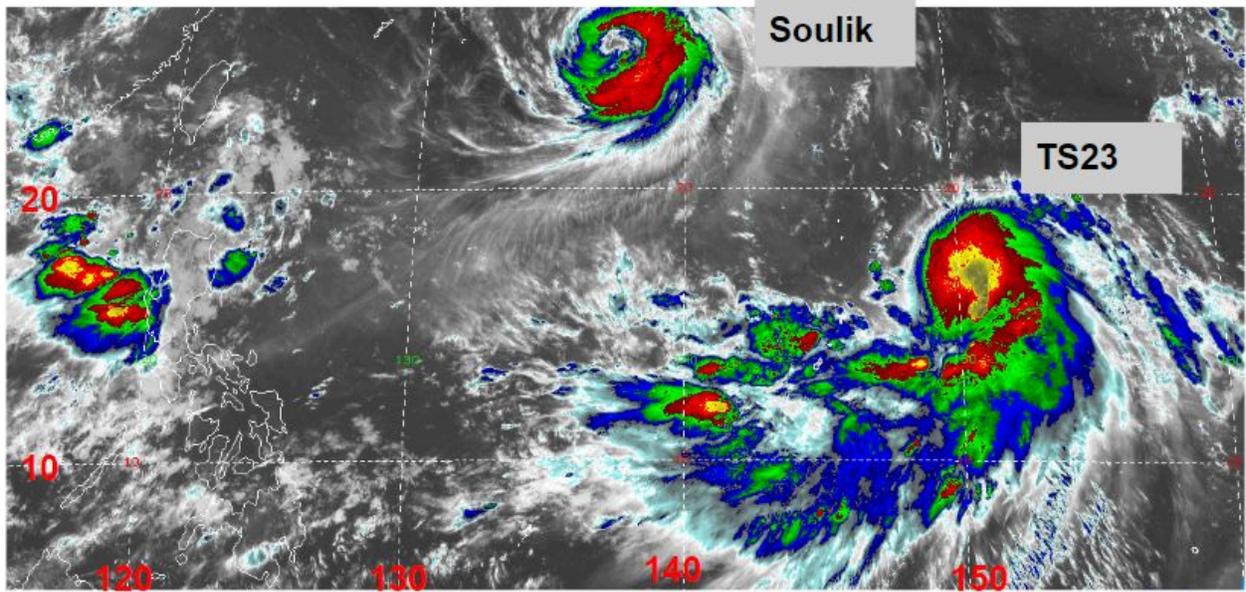


Fig. 1. 11.2 micron IR imagery at 1800 UTC 19 August. [1]

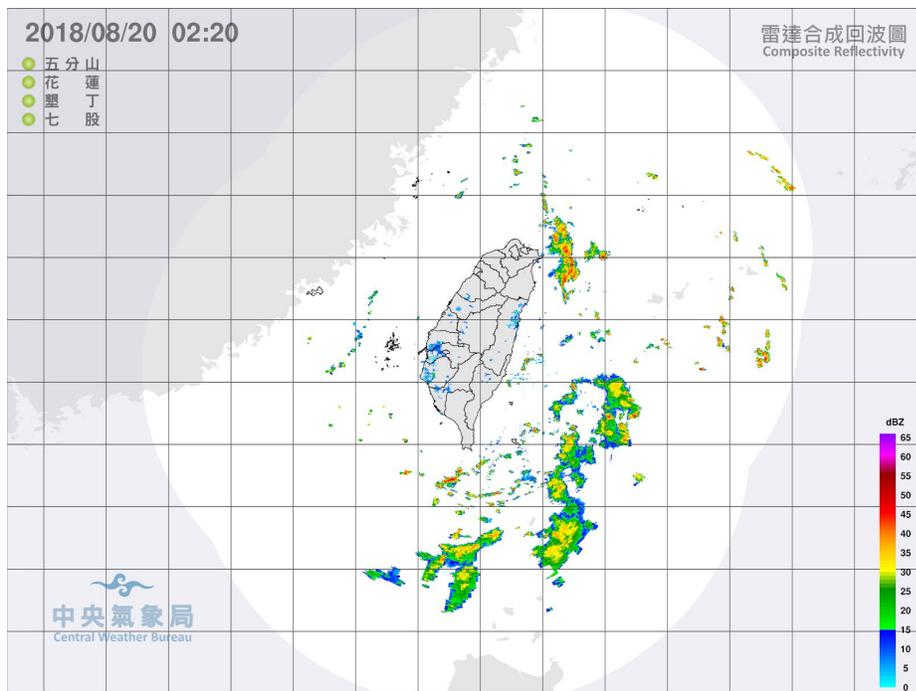


Fig. 2. Taiwan radar [2]

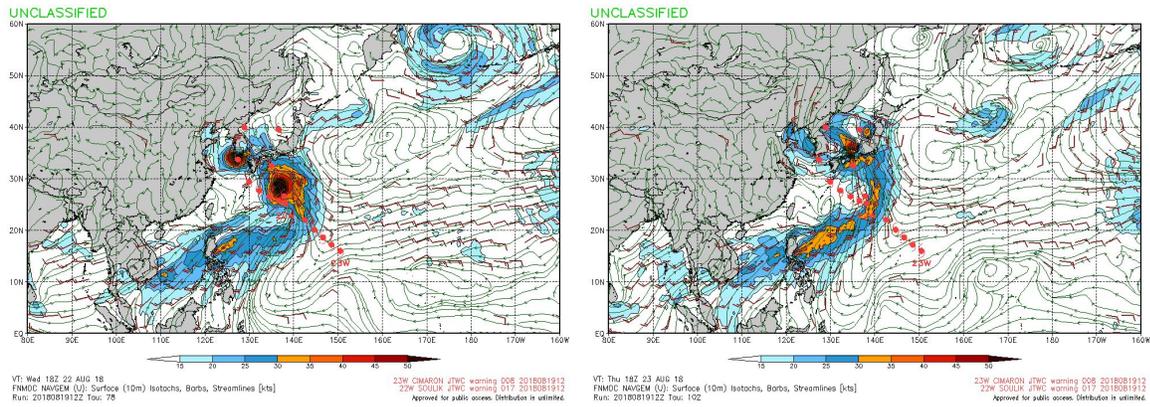


Fig 3. 10-m winds from NAVGEM valid 18Z August 22 (left) and 18Z August 23 (right) showing potential for winds exceeding 30 kt in the orange. [3]

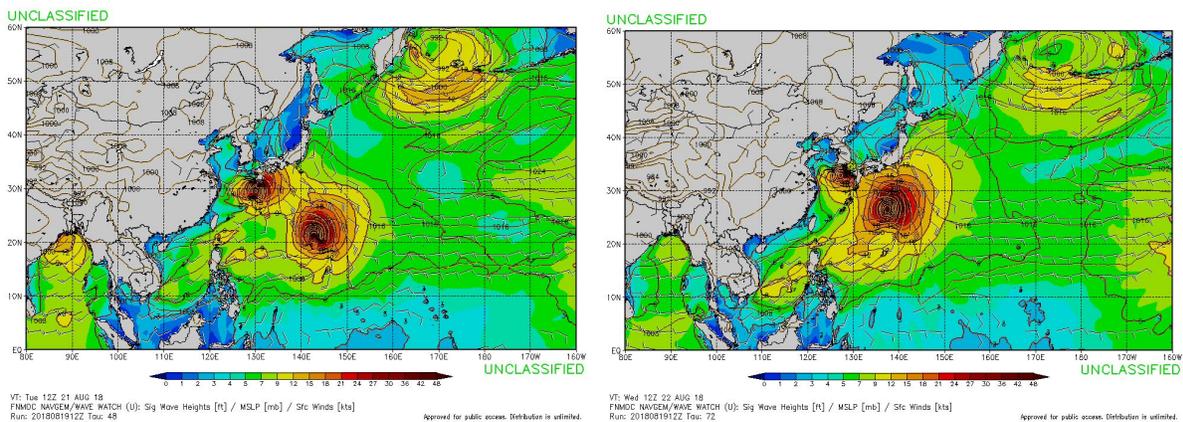
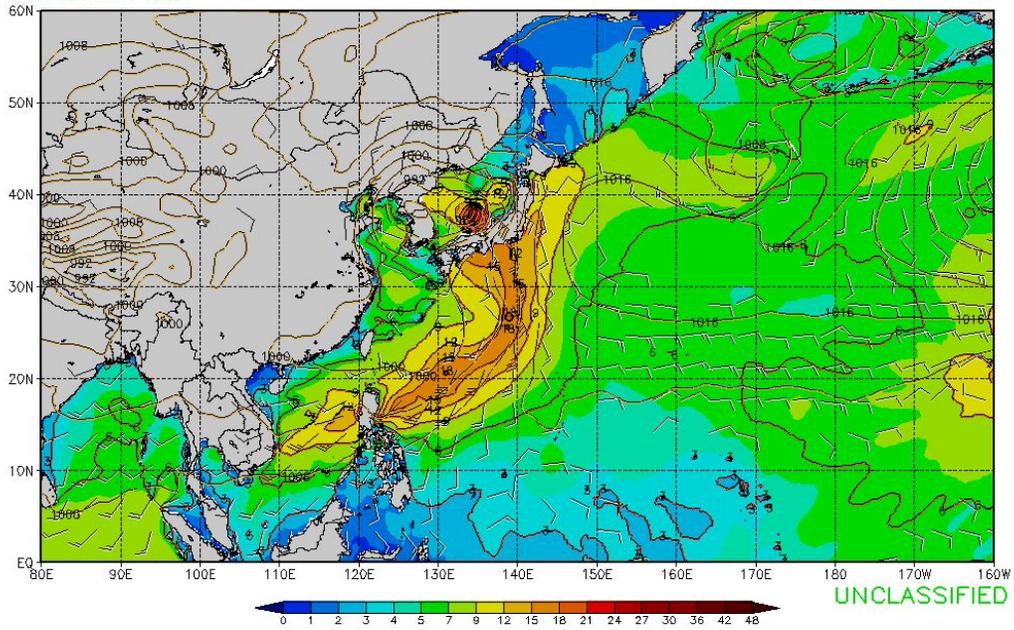


Fig. 4. Left 48h (12Z August 21) significant wave heights and right 72h (12Z August 22) significant wave heights from NAVGEM. [4]

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VT: Fri 00Z 24 AUG 18
FNMOG NAVGEM/WAVE WATCH (U): Sig Wave Heights [ft] / MSLP [mb] / Sfc Winds [kts]
Run: 2018081912Z Tau: 108

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Fig. 5. 00Z August 21 significant wave heights from NAVGEM with potential for 15-18 ft waves.

[5]