

2000 UTC 23 August 2018 Forecast Discussion

Summary

No TC impacts are expected over the next week as Cimaron has made landfall, 92W is expected to move over China, and despite possible genesis of 93W it should track northwest away from operations. Winds and wave heights should be relatively light over the next week. The region of convection that had detached from Cimaron has continued tracking west-northwest, while the southern component of the convection observed yesterday has dissipated. Additional convection is currently active east of 140E and south of 10N (in an ___ shaped pattern). The exact trajectory is complicated by significant turning of the winds through the atmosphere, but the convection could pass over the intended location of the Mirai and Thompson. The likelihood of organized deep convection beyond 48 hours looks low, but isolated convection is certainly possible (model soundings do show sufficient CAPE). Deterministic GFS and ECMWF both suggest an easterly wave moving towards the area of operations around 12Z August 28.

Day One (24 hr) Outlook: Invest 92W still has a likely chance of undergoing genesis in the next 24 hours once it moves back over water with impacts on Taiwan and eastern China. Invest 93W will remain a broad area of deep convection under moderate to heavy vertical wind shear as it moves west-northwest. No TC impacts on the area of operation expected. Deep convection moving from the southeast currently located near (10N 142E) is expected to move northwest and should move into range of the radar in the next 24 hours. Surface winds and wave heights will remain relatively weak (<15 kts, <4 ft).

Day Two (48 hr) Outlook: It is possible that Invest 93W undergoes genesis east of Taiwan but there will be no impacts on operation. Invest 92W should move over eastern China and begin to dissipate although the global models suggests a meandering of the low-level circulation. No TC impacts on the area of operations is expected. Winds should start to transition to more southeasterly but should remain below 20 kt at 10-m. Deep convection will be possible around (13N, 137E) over the next 48-hours.

Extended Outlook: Beyond 48-hours the chances for organized deep convection around 13N 137E will be reduced with isolated-scattered convection possible. No TCs are expected around the observational area over the next 96 hours with impacts on operations with Invest 93W moving northwest. Around 12Z August 28 the GFS and ECMWF deterministic models are suggesting a tropical easterly wave will be close to the operation area as it rides westward along the southern periphery of the subtropical ridge. The global models are currently keeping the easterly wave weak but it may bring some organized convection into the area of operations.

Discussion

TCs: Typhoon Cimaron will no longer be discussed as it is currently making landfall near Japan and will not impact operations. Invest 91W which had a high likelihood of undergoing genesis

yesterday moved over Taiwan disrupting the low-level circulation center. Orographic enhancement of the convection near the circulation center is evident and genesis is still forecast once the center moves towards the north-northwest back over the ocean. There should be no impacts from Invest 91W. Invest 92W has been declared around 20N, 132E encompassing the broad area of convection that was once collocated with Typhoon Cimaron early this week. There appears to be some low-to-mid level rotation in the 3.9 micron imagery but strong shear is persistent to the northwest of the convection as the invest moves towards the northwest. Genesis of 92W is not expected in the next 24 hours. The GFS suggests an easterly wave moving towards the area of operation around 12Z August 28.

Convection: The area of convection we had been monitoring has continued to push to the west northwest and is now located near 20N, 132E. The southern extent which we mentioned yesterday could linger has dissipated and no deep convection is located near the area of operation with CIMSS showing unfavorable upper-level convergence. There is an active area of ongoing convection to the east of the research area around 15N 141E with favorable upper-level divergence which is looking to track west-northwestward. This area of convection is moving relatively fast and would likely decay before the Thompson's arrival near the Mirai (~12Z August 24). The broader area of convection towards the southeast around 10N, 142E could be around 13N 137E depending on the evolution of the flow and convective depth. The track of this area of convection is complicated by low-level southeasterlies, mid-level easterlies, and upper-level northerly winds but the GFS has the precipitation pattern propagating towards the northwest with increasing low-level southeasterly flow strengthening near 13N, 137E over the next couple of days. The chances for widespread organized deep convection in the forecast area looks to decline beyond 48 hours out until the approach an easterly wave around 12Z August 28; however, scattered convection is still possible.

MJO/BSISO: The BSISO signal remains weak amplitude over the next 4-5 days before the signal starts to increase in magnitude. The BOM and ECM disagree over the phase transitions over the next week with the BOM hinting at a transition from phase 4-5 and the ECM staying at phase 4-3. The BOM also is suggesting a weak-moderate amplitude signal next week while the ECM has the amplitude approaching zero.

SSTs: Ocean temperatures should remain between the 28-29C range.

Currents and Wave Heights: Significant wave heights should remain between 2-4 ft over the next 72 hours. The wave period from the north should decrease slightly from 9-10 s to 8-9 s over the next 48 hours. Currents are to the west-southwest ~.1-.5 cm/s.

FORECASTERS: TRABING and DEHART

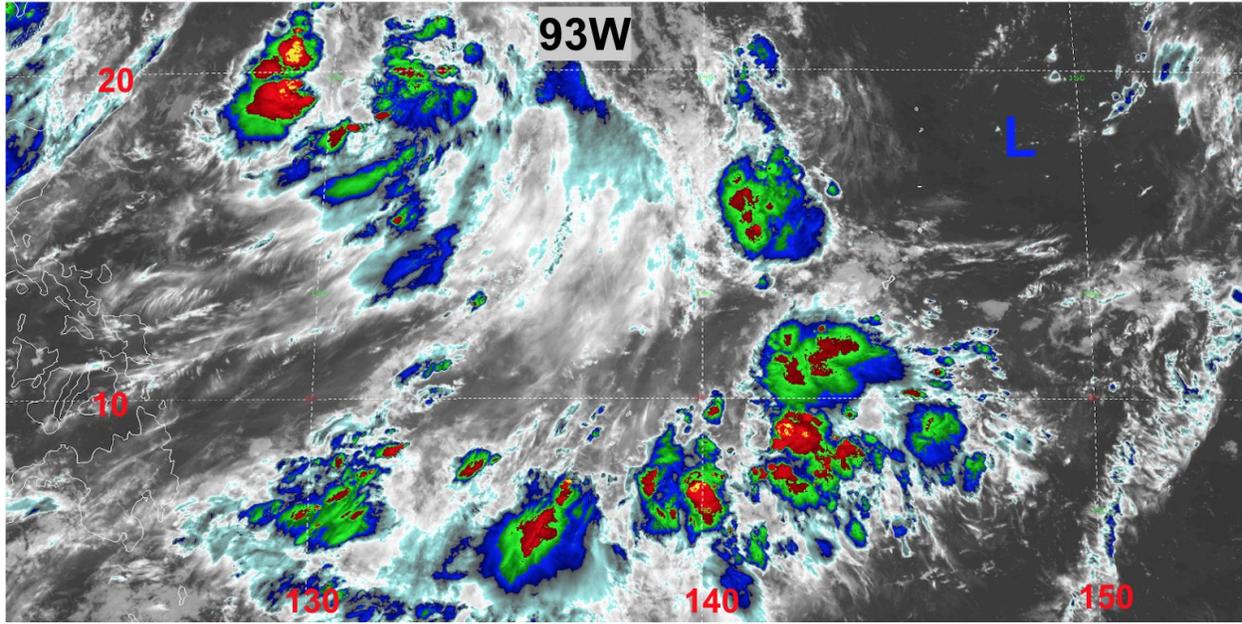


Fig. 1. 11.2 micron imagery from 1720 UTC August 23. [1]

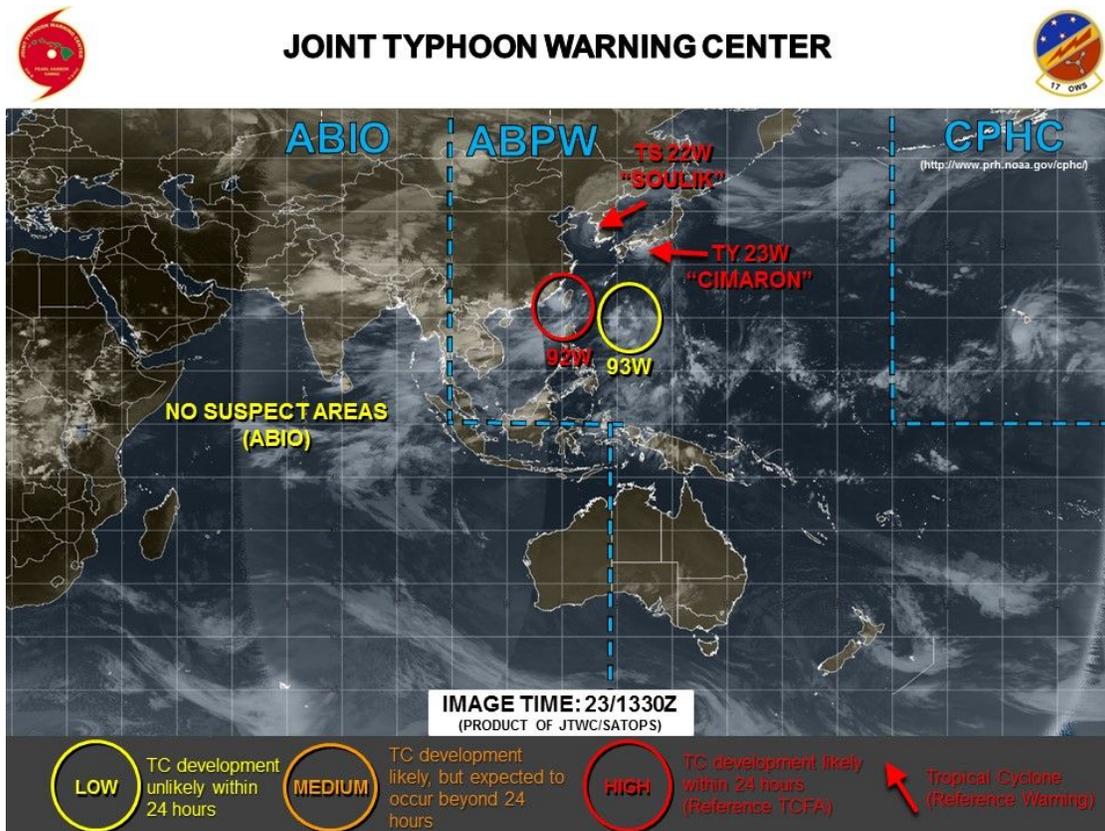


Fig. 2. JTWC outlook [2]

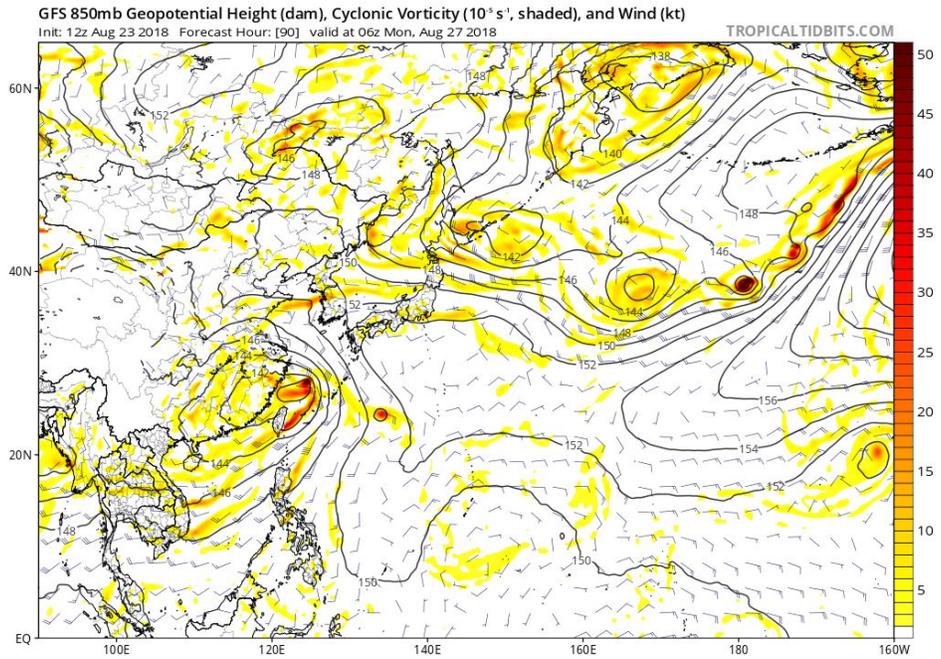


Fig 3. 850 mb vorticity and geopotential heights from GFS showing easterly wave on 6Z August 27. [3]