

2000 UTC 31 August 2019 Forecast Discussion
Current Ship Location: Keelung City, Taiwan (Pre-Departure)

Summary

Conditions in Keelung continue to be favorable, with possibly some isolated showers. There should be no weather delays for departure, but caution is advised when travelling to the area of operation because Invest 92W is expected to impact operations.

Invest 92W has the potential to undergo tropical cyclogenesis in the next 48 hours which will have impacts on the routing of the R/V Sally Ride. The situation should be monitored closely over the next few days as the intensity forecast at this point is unreliable with a large spread. No change in MJO/BSISO forecasts at this time.

Day One (24 hr) Outlook: There is potential for tropical cyclogenesis in the next 24 hours of Invest 92W. There is an overall favorable environment for genesis at this time but the latest infrared and microwave imagery shows the deepest convection in a band to the north of the surface low with a consistent deep convection lacking from the center. Temperatures should reach into the low 90s °F in Keelung City, Taiwan with a 10-20% chance for precipitation.

Day Two (48 hr) Outlook: Invest 92W is expected to undergo genesis within the next 48 hours east of the Philippines (around 12.5N, 127E). There is still a spread in the location of genesis and an unreliable intensity forecast but ship routing will be a concern. Temperatures should again reach the low 90s°F with a 10-20% chance for precipitation near Keelung City, Taiwan.

Extended Outlook: With estimated departure date being on the morning of September 2nd local time, conditions should still be pleasant near Keelung City. Invest 92W is still forecast to move towards Taiwan, but both the GFS and ECMWF forecast track has shifted eastward such that Invest 92W now tracks slightly east of Taiwan rather than making landfall around 00Z Sep 08. Caution is strongly advised in developing ship routes to the area of operation, and Invest 92W will continue to be closely monitored.

Discussion

TCs: Invest 92W has been officially declared by JTWC with a “High” likelihood of genesis occurring in the next 24 hours. The 12Z Aug 31 ECMWF shows Invest 92W undergoing TC genesis around approximately 12Z Sep 01 further West than previously runs (12.5N, 127E). There is a modest chance that genesis will occur later closer to the 24-48 hour mark because the center of the low-level circulation is devoid of consistent deep convection. There is also quite a bit of model spread even in the next 24-48 hours as evident by the GFS ensembles in Figure 2. Caution will be necessary when developing the ship route to the area of operation as genesis is likely and Invest 92W will be closely monitored. HWRF is suggesting the possibility of a Typhoon with minimum pressure near 970 mb on 00Z September 3; however, the intensity

forecasts at this time are unreliable from both the global models and the dynamical cores. Invest 92W should continue to be monitored closely.

Convection: The stationary frontal system has shifted slightly further northeast of Taiwan, and may still provide an unstable environment for convection to develop. Isolated precipitation may occur for the next 24-h around northern Taiwan. The frontal system is expected to continue moving northward.

MJO/BSISO: Models are suggesting that BSISO is in phase 4 right now but disagree with future propagation. CWB expects a retrograde towards phase 3 while ECM has a continual propagation towards phase 5 and 6. The GFS is forecasting a decay of the BSISO amplitude. Regardless, BSISO is not expected to bring enhanced convection in the northwest Pacific over the next couple weeks based on the latest models.

SSTs: SSTs are still expected to be warm between 29-31°C.

Currents and Wave Heights: Wave heights are expected to be 3-5 ft at the day of departure near the Keelung harbor (Sep 02), and wave heights around the area of operation are forecast to be 4-5 ft. Wave heights potentially increase to 21 ft around the area of operation on 00Z Sep 03.

CAMP-EX: no coordination planned in the next 48 hours.

FORECASTERS: CASAS, TRABING

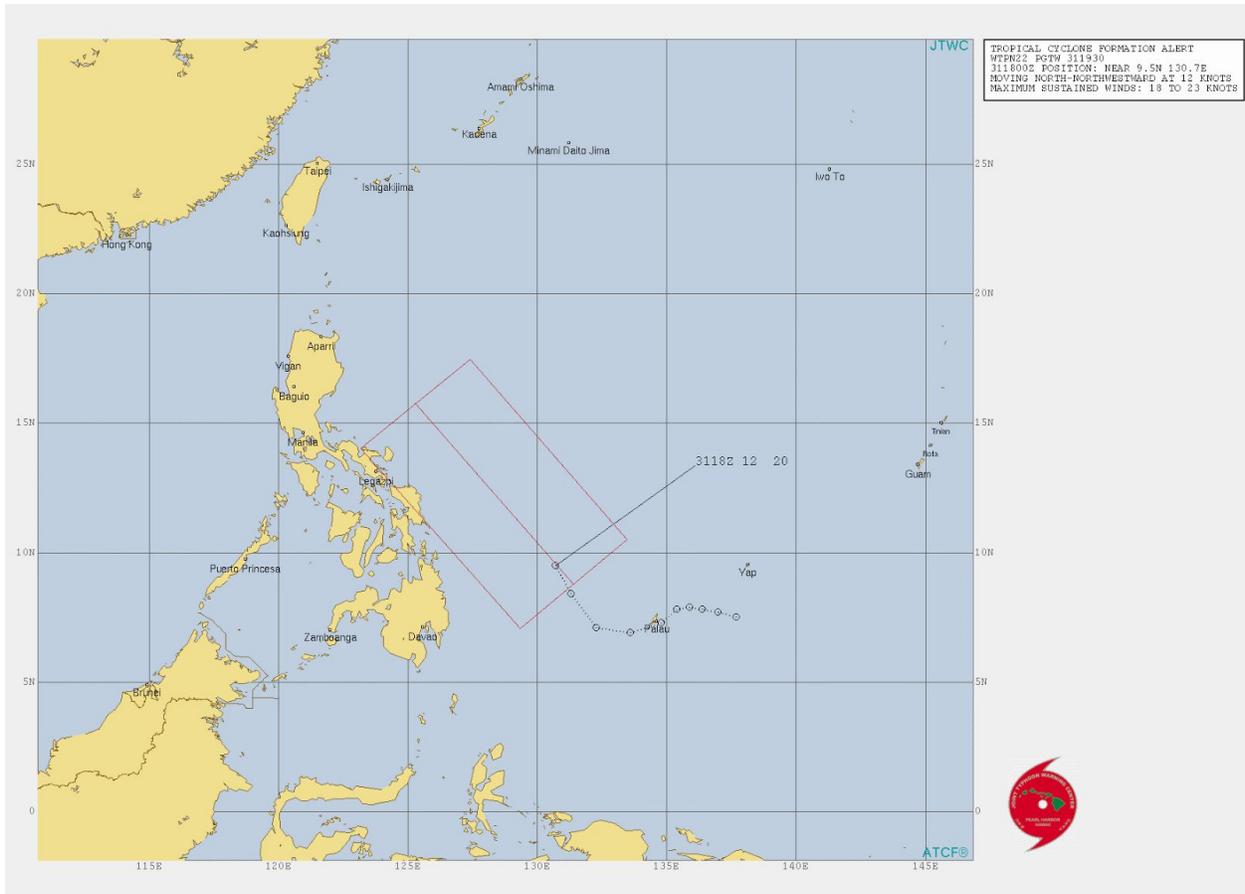
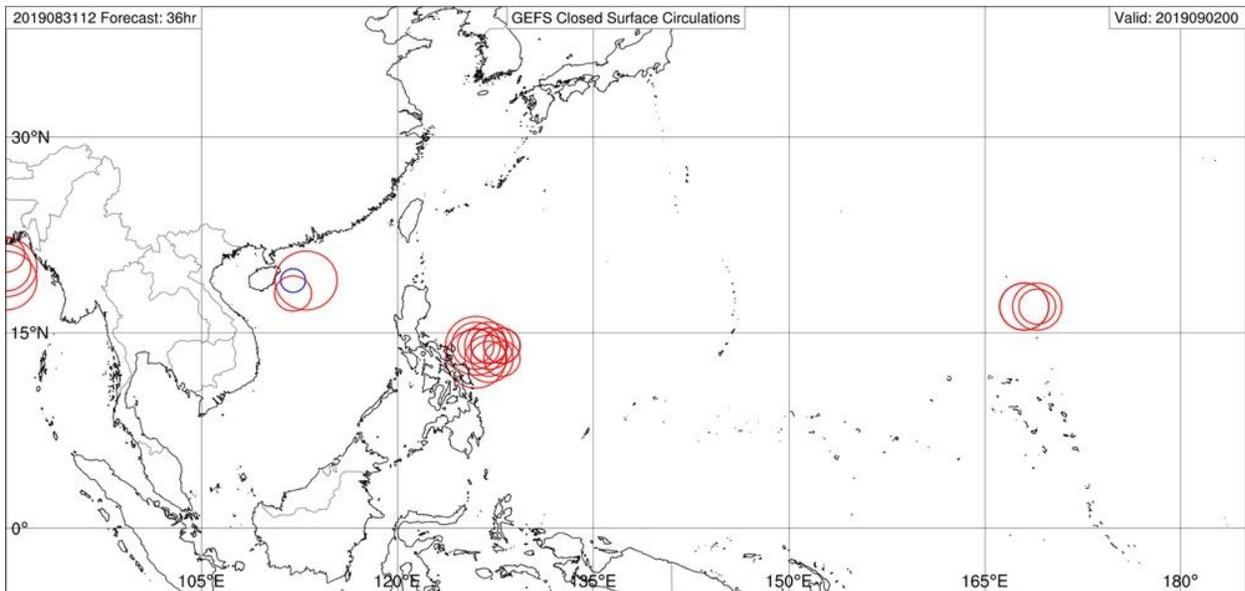


Fig. 1. [1] JTWC tropical cyclone formation alert for Invest 92W issued at 18Z Aug. 31.



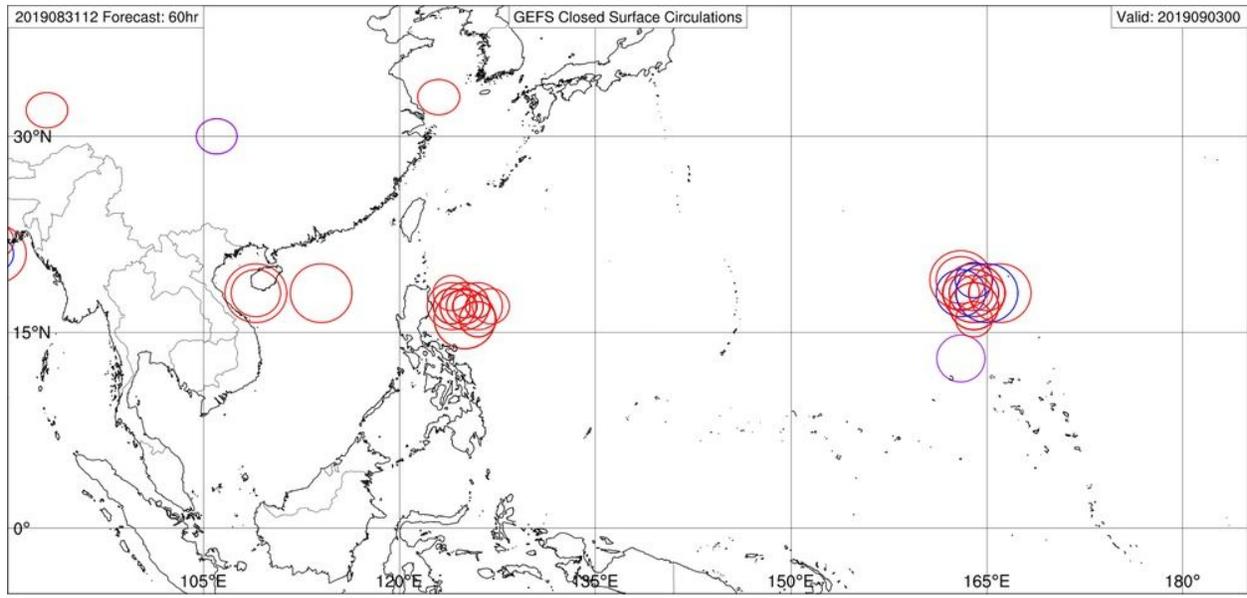


Fig. 2. [2] Alan Brammer's GEFS Closed Surface Circulation initialized at 12Z Aug. 31, valid at 00Z Sep 02 (Top, ~Departure) and 00Z Sep 03 (Bottom, ~Near arrival).

HWRf INVEST-92W Composite Reflectivity (dBZ) & MSLP (mb)

Init: 18z Aug 31 2019 Forecast Hour: [54] valid at 00z Tue, Sep 03 2019

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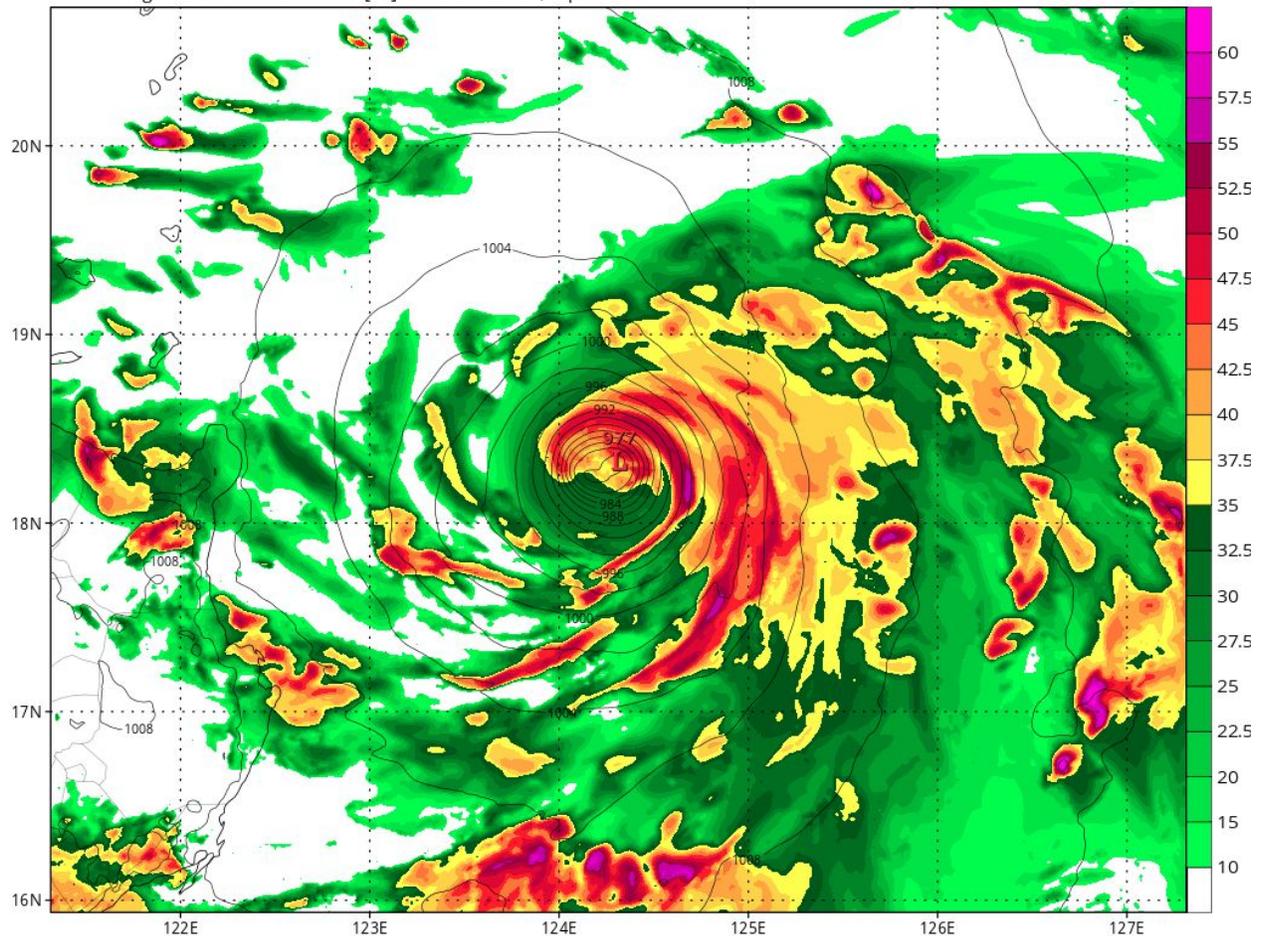


Fig. 3. [3] HWRf forecast for Invest 92W at 00Z on September 3 initialized at 18Z Aug. 31.