

2000 UTC 11 September 2019 Forecast Discussion

Current Ship Location: Near 18.2N, 126.2E

**Summary:** 95W is currently centered around 16.3N and 136.8E. The large circulation has been identified as more of a monsoon gyre than a typical pre-depression disturbance making genesis less likely. Disagreement between the GFS and ECMWF show the potential for the disturbance to track closer to the area of operation before moving northward with the GFS favoring the closer track. Impacts in the form of winds and significant wave heights will continue in the area of operation, with a slight intensification beyond 24 hours. BSISO is currently in phase 6 with potential for a weaker amplitude phase 5 next week.

**Day One (24 hr) Outlook:** Tropical cyclogenesis of 95W not likely to occur. Deep convective precipitation associated with the western edge of the monsoon gyre is expected to persist. Winds of 15-20 kts to continue. Significant wave heights will likely increase slowly to 8-11 ft.

**Day Two (48 hr) Outlook:** Chances of tropical cyclogenesis of 95W are still low. However, impacts to the ship are not expected to change from Day One, except some slight increase in wind speeds. Deep convection and precipitation are expected to increase around the current ship location (18.2N and 126.2E). Potential for winds exceeding 20 kts in the operation area. Wave heights should remain similar to Day 1, but might increase to 9-12 ft through Day 2.

**Extended Outlook:** GFS and ECMWF suggest 95W will continue to move northwestward, though the suggested circulation is elongated, with northeasterly winds over the area of operations. Neither model shows a consolidation or intensification of 95W through 0Z on 15 September. Elevated winds and wave heights will persist for a couple more days until 95W has moved far enough north. There is uncertainty in the longer term if 95W will exit the area in the long term or if a system will persist near the area of operation. This will need to be watched going forward if the ship exits the area of operation as this could complicate re-entry.

## Discussion

**TCs:** 95W, currently centered around 16.3N and 136.8E, and is tagged with a medium chance for genesis by JTWC with genesis not expected within 24 hours. Although the center location has shifted somewhat from yesterday, the overall movement of the system continues to be nearly stationary. The system has been further classified as a "monsoon depression" by JTWC which is consistent with its large size and ragged organization. The model guidance has shifted more westward today as compared to yesterday's more northern solutions. Both the GFS and ECMWF continue to show an elongation and split of the depression which should inhibit genesis in the near term but potentially complicate the forecast going forward with ambiguity in what may happen after this. Winds are expected to increase near the ship over the next 48hrs with the potential to exceed 20kts after 24hrs depending on how westward 95W tracks.

**Convection:** Latest email from Captain Ian Lawrence indicates that the Sally Ride does not have plans to depart the area of operation until Friday (Sept. 13). High chances for precipitation and deep convection continue for the operation area associated with 95W. GFS indicates that the current location of the ship (around 18N 126E) will be just on the outer edge of a maximum in precipitation accumulation associated with 95W between 12Z Sept. 12 through at least 12Z Sept. 14, as models are indicating a more westward track of the system closer to the operation area.

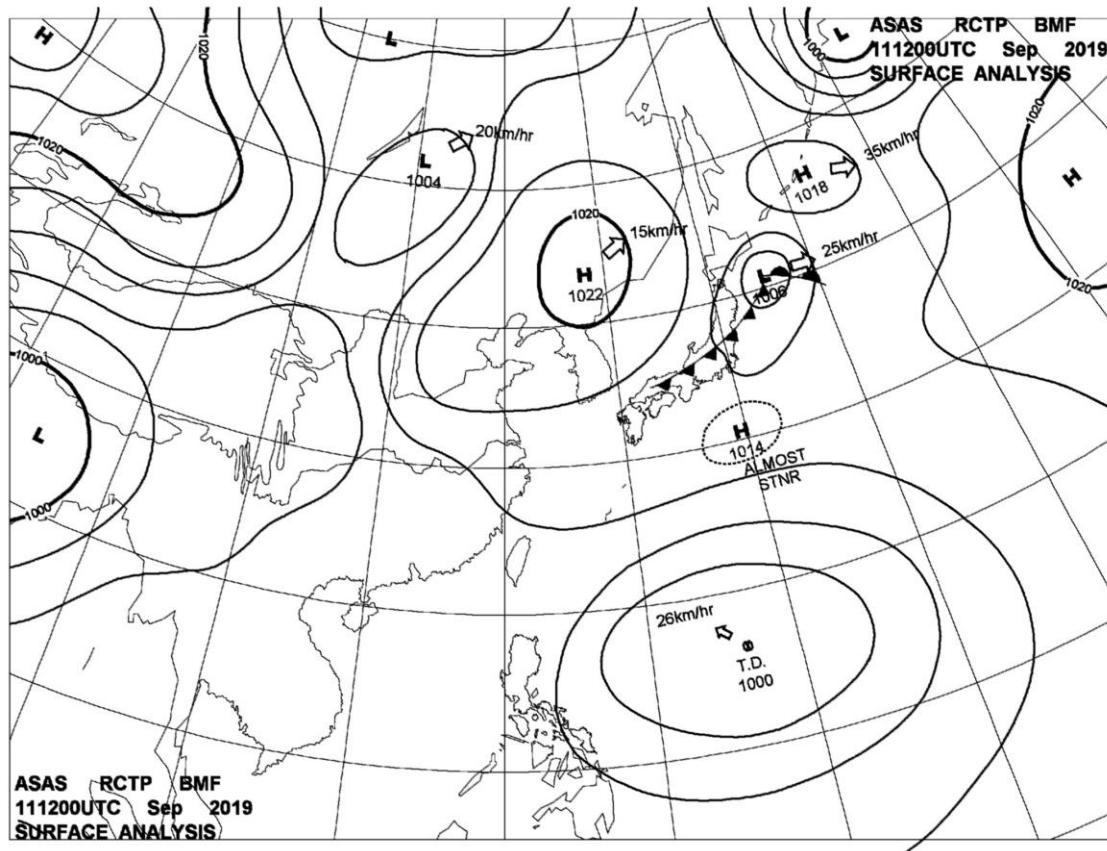
**MJO/BSISO:** No change to the BSISO forecast from yesterday. The current BSISO index is in phase 6. Both GFS and ECMWF are in agreement of a retrograde to phase 5 next week, before propagating back to a phase 6 and onward. However, GFS is indicating a stronger amplitude than the ECMWF. The ECMWF MJO index has a weak amplitude phase 5 but remains near the border of phase 6. The amplitude is expected to weaken with a phase no longer able to be indicated. The long range shows a reemergence into a weak amplitude phase 8 at the end of the ECMWF MJO forecast period.

**SSTs:** SSTs are still expected to remain warm around 29°C.

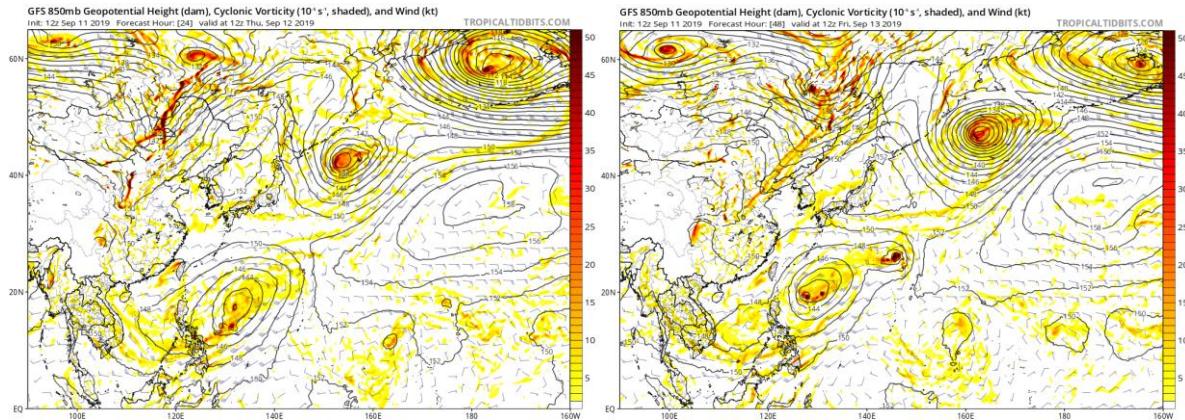
**Currents and Wave Heights:** 95W continue to slowly move toward the NW, but wave heights on the western edge of the gyre have started to slowly increase. Large-scale models suggest wave heights will increase to 8-11 feet through 12Z on 12 Sep, with a possible increase to 9-12 feet possible starting 0Z on 13 Sep. These heights are discerned from COAMPS, but WW3 is in general agreement with this. Currents should remain E at 1-3kts through the next 36hrs.

**CAMP2EX:** Hard down day for the CAMP2EX flight crew on Thursday Sept. 12 through Saturday Sept. 14. They are considering a Learjet flight tomorrow Friday, Sept. 13th.

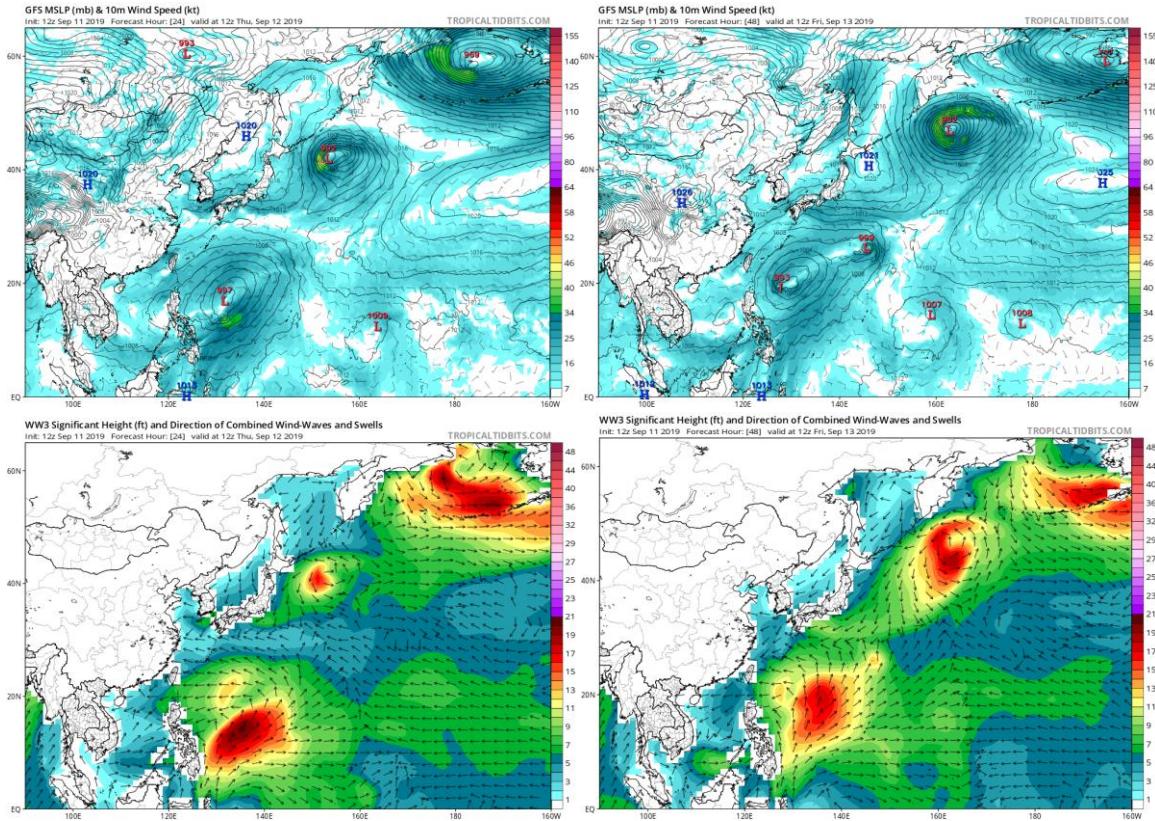
FORECASTER: DEHART, DESROSIERS, RAZIN



**Fig. 1.** CWB surface analysis at 12Z on Sept. 10th.



**Fig. 2.** GFS 850 mb vorticity and wind field and mean sea-level pressure initialized at 12Z on Sept. 11th, valid for 12Z Sept. 12th (left) and 12Z Sept. 13th (right).



**Fig. 3.** GFS mean sea level pressure and 10-m winds (top row), and WW3 significant wave heights (bottom row) initialized on Sept. 11th, valid for 12Z Sept. 12th (left column) and 12Z Sept. 13th (right column).