2000 UTC 10 September 2019 Forecast Discussion
Current Ship Location: Near 17.2N, 126.2E

Summary: 95W is currently centered around 12.6N and 136.9E with little movement currently. 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. Significant wave heights should remain below 6ft.

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 on the western periphery should continue as 95W moves northwestward. Wave heights are expected to increase slightly, though models suggest they will remain below 8-9 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 12Z on 15 September. Elevated winds and wave heights will persist for a couple more days until 95W has moved far enough north.

Discussion

TCs: 95W, currently centered around 12.6N and 136.9E, is tagged with a medium chance for genesis by JTWC with genesis not expected within 24 hours. As it has become increasingly clear that this large ragged circulation is a monsoon gyre rather than a typical pre-depression disturbance, genesis of the system at large is not the chief concern. Both the GFS and ECMWF predict the system will migrate northward and elongate with the potential to create seed disturbances for genesis, but this is in the longer term forecast. The GFS solution predicts a more westward component of motion before the gyre shifts northward which could bring slightly stronger winds (15 to 20 kts) from the system to the area of operation as soon as +24hrs. As winds are weaker on the north side of the system, the main threat is waves which are discussed further in the wave heights section of this discussion.

Convection: Latest email from Jim Moum indicates that the Sally Ride currently does not have any plans to depart the area of operation. GFS is showing continued high chances of deep convection and precipitation in the area of operation through Sept. 13, as the circulation center of the monsoon gyre (95W) tracks north-northwestward close to the area of operation. GFS is indicating that the bulk of this precipitation will remain south of the area of operation.

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 that 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℃.

Currents and Wave Heights: 95W continue to slowly move toward the NW, but wave heights on the western edge of the gyre remain fairly low. Large-scale models suggest wave heights will remain under 6 feet through 12Z on 11 Sep, with a slow increase to 7-9 feet possible through 12Z on 12 Sep. Slow, steady increases up to 10 feet are possible after that time, but wave heights should lower after 95W begins to turn northward. Currents should remain variable between 1-2 kts.

CAMP2EX: P3 flight is cancelled for today due to the expected movement of convection associated with 95W. They will have down days Wed, Thu, Fri. The Lear may still fly out to join with the Sally Ride later this morning, but they have to discuss whether the pilots are comfortable with the current cloud depths near the Sally Ride. Hard down day for the CAMP2EX flight crew on Thursday Sept. 12 through Saturday Sept. 14.

FORECASTER: DEHART, DESROSIERS, RAZIN

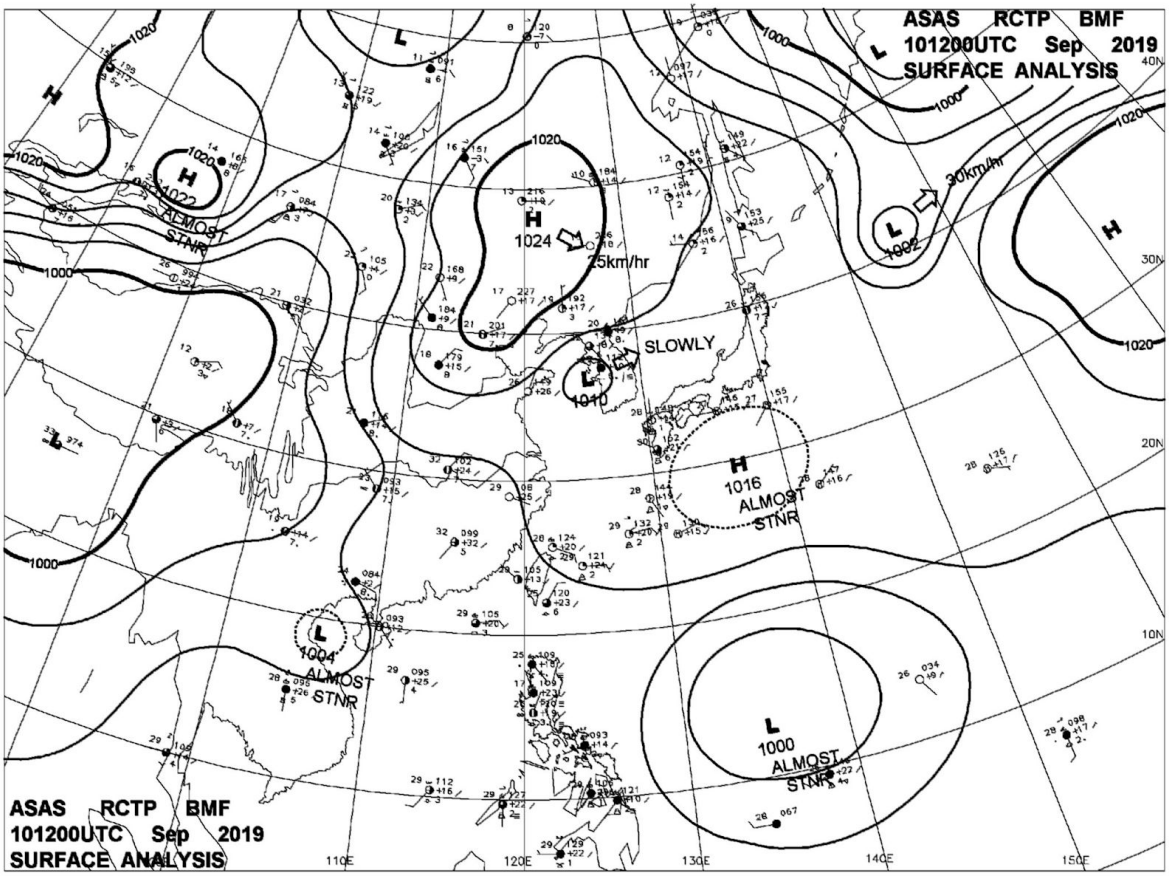

Fig. 1. CWB surface analysis at 12Z on Sept. 10th.

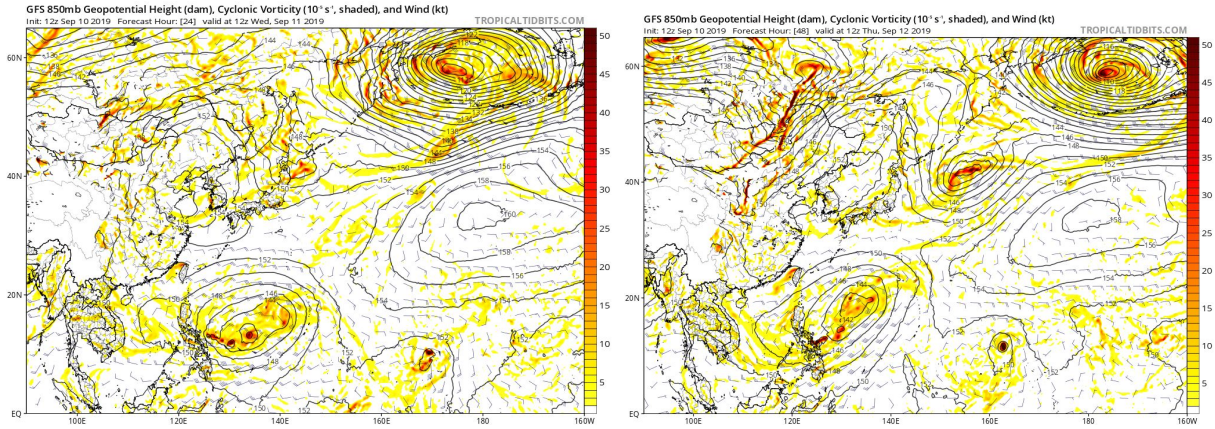

Fig. 2. GFS 850 mb vorticity and wind field and mean sea-level pressure initialized at 12Z on Sept. 10th, valid for 12Z Sept. 11th (left) and 12Z Sept. 12th (right).

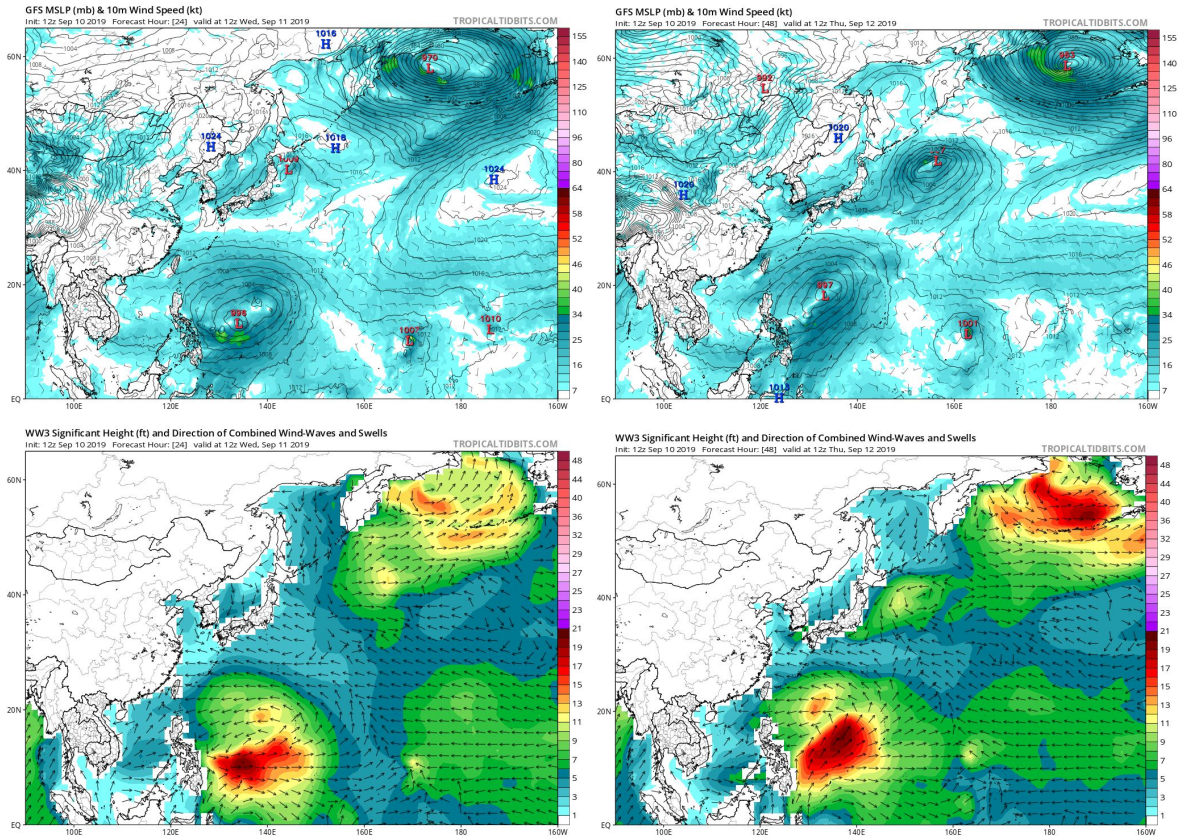

Fig. 3. GFS mean sea level pressure and 10-m winds (top row), and WW3 significant wave heights (bottom row) initialized on Sept. 10th, valid for 12Z Sept. 11th (left column) and 12Z Sept. 12th (right column).