

2000 UTC 02 September 2019 Forecast Discussion

Current Ship Location: Near 25.3N, 123.7E (Ferry to Ops Area)

Summary

Tropical Storm Lingling (15W) should remain to the southwest of the ship in the next 24 hours, then pass to the west of the ship in the 48-hr time frame. The JTWC 34-kt wind danger zone expands over time, but stays west of 130E. Wave heights will increase, and could reach as high as 11-ft near 130E in 48-hrs according to the WW3 product. No other TCs pose a threat at the current time, and there is no change in MJO/BSISO forecasts at this time.

Day One (24 hr) Outlook: Invest 92W has developed into Tropical Storm Lingling (15W) located at 17.9N 124.5E with 35 kt winds at 12 UTC 2 Sep. JTWC forecast is to continue to intensify and track NW over the next 24 hours (Fig. 1). Estimated position and intensity in 24 hours are 21.5N 123.3E at 55 kts, which should remain ~400 nm south of the current ship latitude. Winds at the ship will increase slightly as Lingling approaches, but the radius of 34 kt winds is forecast to be 110 nm in the NE quadrant. Some isolated showers are expected.

Day Two (48 hr) Outlook: The track guidance begins to diverge after 24 hours, but all models indicate a northward track. GFS and HWRF have a more eastward track bringing the center closer to 125E, while the ECMWF and NAVGEM models have a more westward track closer to Taiwan. The official JTWC track is in between these two solutions and has Lingling as a 70 kt hurricane at 24.5N 123.7E at 12 UTC 4 Sep. None of the model guidance brings the TC further east than ~126N, and the radius of 34 kt winds is forecast to be 130 nm on the east side. Even with the track uncertainty, the ship destination of 130E is forecast to be outside the JTWC 34-kt wind danger zone. WW3 initialized from GFS (which has a more easterly track) brings the SWH to ~11 ft near 130E.

Extended Outlook: Lingling is expected to begin to accelerate to the N-NW towards Korea after it passes N of Taiwan. The TC is expected to continue to intensify and grow in size, but winds and waves should decrease behind the storm. TS 14W is well east of the Ops Area and forecast to head W-NW and does not appear that it will impact ship operations.

Discussion

TCs: JTWC has upgraded 92W to TS 15W (Lingling) and forecast a northerly track. As discussed in the 24-hr and 48-hr outlooks, the TC is expected to stay south of the ship location in the near term, and then pass west of the ship in the extended term. GFS ensembles are a bit further east than some of the other guidance, but generally keep the storm west of 126N (Fig. 2).

Two other tropical systems (91W and 14W) are far away and pose no threat to operations. The track of 14W is expected to stay well north of the ship Ops Area.

GFS ensembles suggest some possible development of an area of disturbed convection to the SE of the Ops Area, but it has not been designated an Invest by JTWC at this time. We will continue to monitor the models and satellite for signs of organization.

Convection: Precipitation from outer rainbands of Lingling is expected over the ship, but the core of convection will remain at a significant distance.

MJO/BSISO: No updates from previous day's forecasts. 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 around 29°C, but the ship may encounter the cold wake of Lingling when it moves westward towards the Ops Area in the next few days.

Currents and Wave Heights: Wave heights are expected to increase as Lingling approaches. WW3 suggests maximum SWH could approach ~11 ft near 130E, but is difficult to assess from that product due to the very strong gradient in SWH (Fig. 3). Updated COAMPS guidance on SWH was not available at the time of this briefing.

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

FORECASTER: BELL

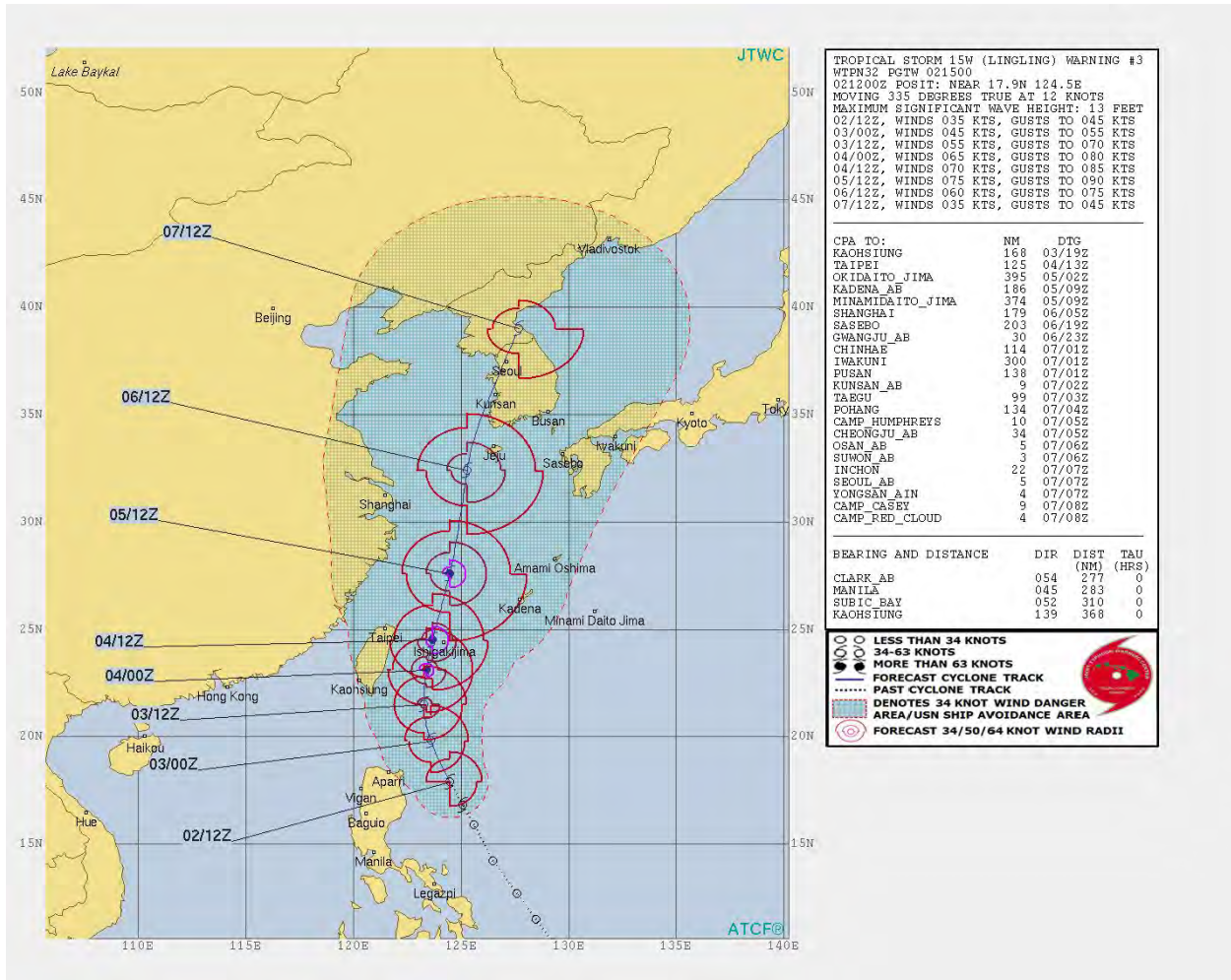


Fig. 1. [1] JTWC tropical cyclone forecast for 15W issued at 1500Z Sep. 02.

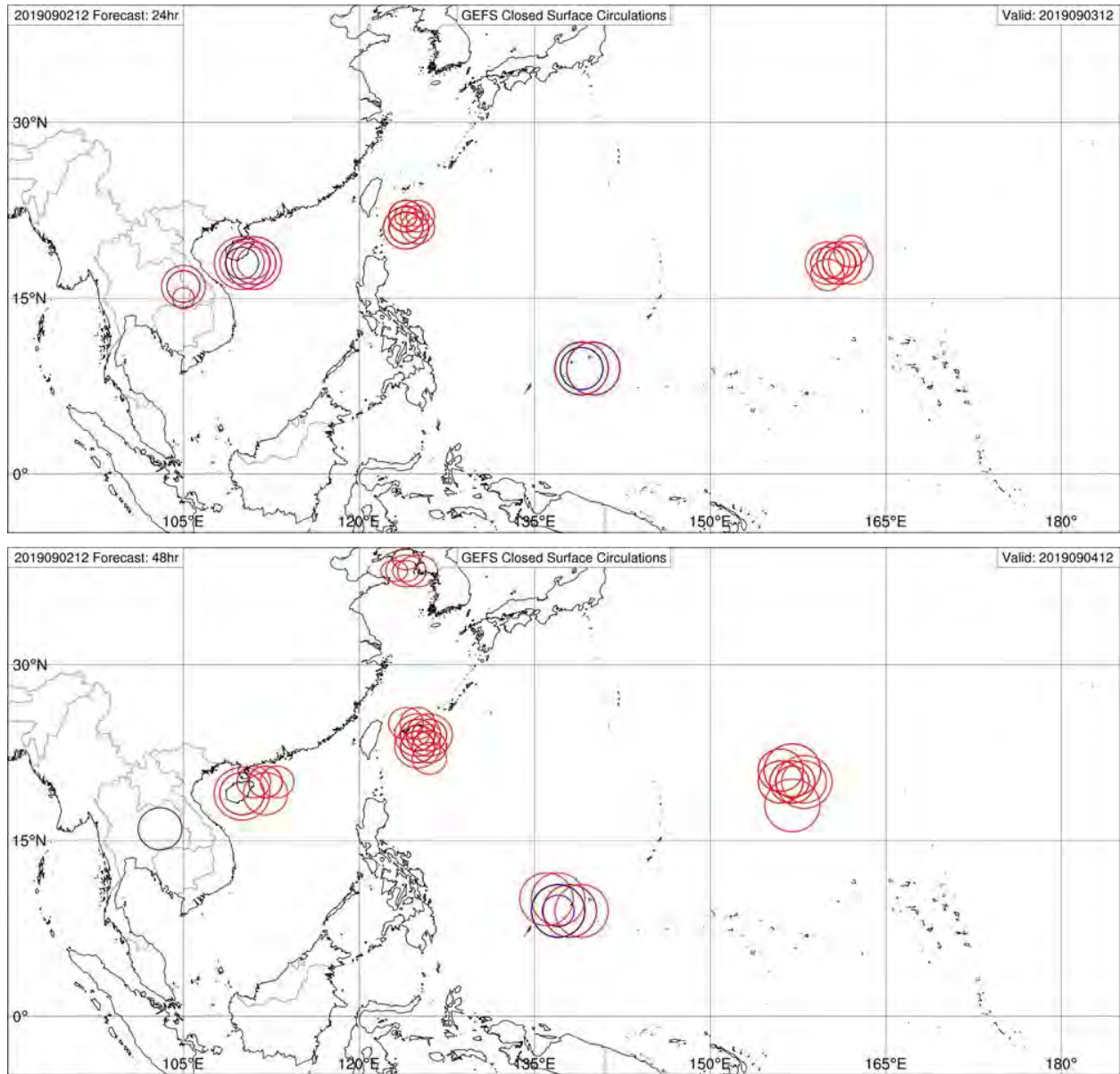


Fig. 2. [2] Alan Brammer's GEFS Closed Surface Circulation initialized at 12Z Sep. 02, valid at 12Z Sep 03 (Top) and 12Z Sep 04 (Bottom).

WW3 Significant Height (ft) and Direction of Combined Wind-Waves and Swells

Init: 12z Sep 02 2019 Forecast Hour: [48] valid at 12z Wed, Sep 04 2019

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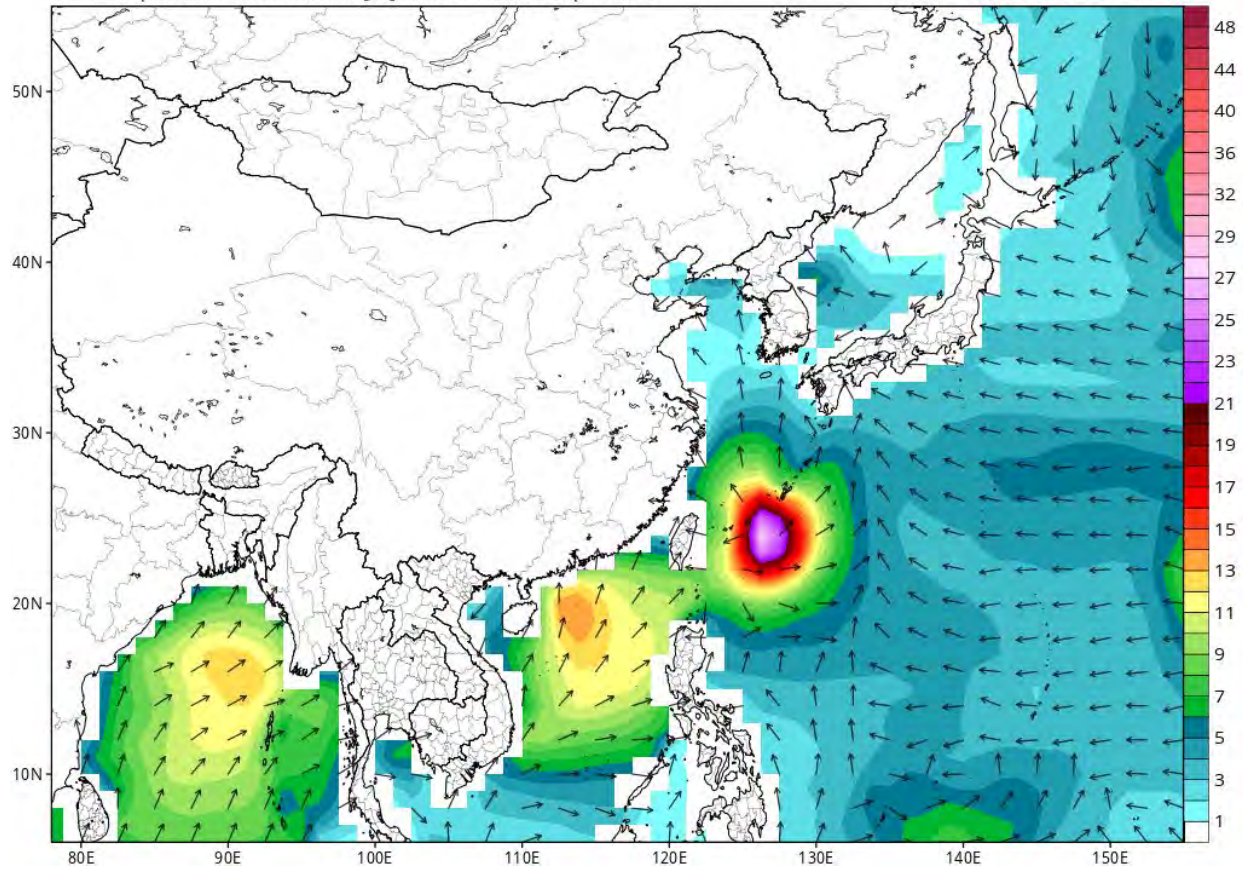


Fig. 3. [3] WW3 significant wave heights initialized at 12Z Sep. 02, valid at 12Z Sep 04.