2000 UTC 01 September 2018 Forecast Discussion

Summary

Typhoon Jebi is not expected to threaten the area of operation (11N 134.5E). Increased chances of precipitation likely through 12 UTC 20180903. Winds will be coming from the southwest at 15-20 knots, with an increase of up to 20-25 knots possible over the next 48 hours. On average, significant wave heights are expected to remain around 7-9 feet, with chances of higher significant wave heights of up to 9-12 feet possible over the first 24 hours.

Day One (24 hr) Outlook: Chances of precipitation is expected to increase over the next 24 hours associated with an area of widespread deep convection propagating into the area of operation. Winds coming from the southwest at 15-20 knots. Northeast swells with significant wave height of 7-9 feet. Chances of higher significant wave heights of up to 9-12 feet possible.

Day Two (48 hr) Outlook: Chances of widespread deep convection will remain high. Winds remain at 15-20 knots from the southwest, with some chances of increasing to 20-25 knots. Significant wave heights expected to decrease near the end of the forecast period, to 6-8 feet.

Extended Outlook: Chances of convection will remain high through 12 UTC 20180903. Swells are expected to remain high at 7-9 ft according to FNMOC through 12 UTC 0904, then decrease to 5-7 ft after that.

Discussion

TCs: As of 12 UTC 20180901, JTWC has the center of Jebi located at 21N 137.4E moving 305 degree direction at 10 knots with 135 knot intensity - a strong Cat. 4. Given that Jebi has now moved far enough from the area of operation, Jebi's track and wind field will no longer be discussed beyond today's forecast discussion. There is no tropical cyclones or Invests in the West Pacific other than Jebi. Following discussion is for possible TC genesis cases according to GFS, ECMWF and GEFS outputs. By 12 UTC on 20180903, GFS seems to indicate the formation of a surface low around 16N 150E, with ECMWF showing a weaker representation of the same system at the same forecast hour. However, both models do not seem to intensify this surface low at this moment, and have it track northwestward and away from the area of operation. Associated with the area of widespread convection discussed below, GFS and ECMWF also seem to indicate the formation of another surface low around 17N 138E by 00 UTC on 20180904. GFS is more aggressive in developing this surface low with a higher vorticity concentration in the 850-hPa model analysis field. But both GFS and ECMWF also have this surface low moving northward and away from the area of operation. Close attention will be paid to both of these developing surface lows in future forecast discussions.

Convection: Convection in the trailing north-south-oriented rainband associated with Jebi was briefly reinvigorated after yesterday's forecast discussion. However, as of the writing of this

forecast discussion, the north-south-oriented area of convection has diminished again. Rather, the area of widespread convection south of the trailing rainband - also discussed in yesterday's discussion and now located around 10N 140E - seems to have grown more intense with a northward extension. Based on satellite imagery, while a smaller area of scattered convection was observed ahead of this westward propagating area of widespread convection over the past 24 hours, the bulk of the heavy precipitation should enter the area of operation within the next 24 hours - should convection persist. GFS analysis shows this area of convection propagating westward into the area of operation and stalling out, bringing high chances of convection in the area of operation through around 12 UTC on 20180903. Beyond 72 hours, GFS, ECMWF and GEFS runs show a couple of surface lows forming east of the area of operation, as discussed in TCs section, that may bring convection into the area of operation depending on their tracks.

MJO/BSISO: Low amplitude of BSISO indices are forecasted for the next two weeks according to BOM and ECMWF outputs issued on Aug 30. Phase change of BSISO is uncertain, since it's inconsistent between BOM and ECMWF and the ensemble runs are widespread all over the phase domain. Models consistently show that MJO will have phase 1 & 8 in 3-4 days, however the amplitude differs - ECMWF shows a low amplitude for next week, but NCEP and GFS shows a significant amplitude at the same time period. ISO filtered OLR forecast provided by SCXTIMX also shows MJO phase change - suppressed convection over the West Pacific expected for next two weeks.

SSTs: Sea surface temperatures should remain between 28-30 C.

Currents and Wave Heights: Here we give wave height forecasts provided by COAMPS, Fleet Weather Center, and FNMOC, as they have slightly different values and timings. COAMPS forecasts shows the smallest wave heights remaining 7-9 ft from 0901 00z to 0903 00z (only 48 hour forecasts available). Fleet Weather Center's advisory shows 8-10 ft wave heights through 0902 18 UTC, then 7-9 ft wave heights from 0903 00 UTC. According to FNMOC Wave Watch model, significant wave heights will be reach the maximum (9-12 ft) over the area of operation around 0902 12 UTC, then soon in three hours decrease to 7-9 ft. FNMOC forecasts wave heights to remain 7-9 ft through 12 UTC 0904, then decrease to 5-7 ft.

FORECASTERS: RAZIN and NAM

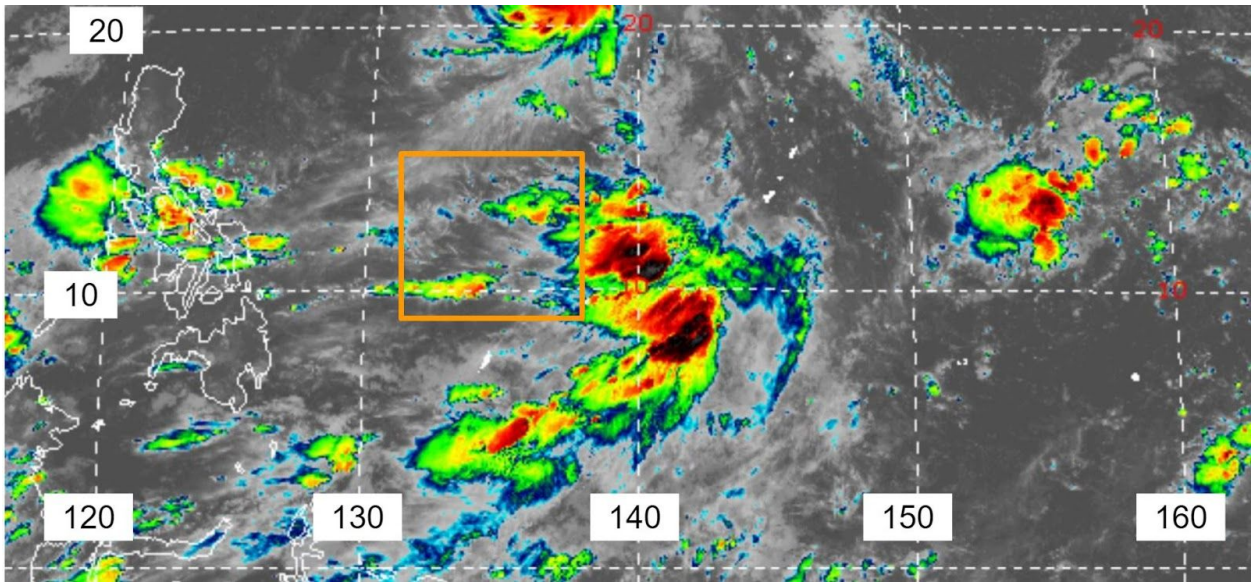

Fig. 1. Himawari IR image at 1740 UTC on 20180901 [1]

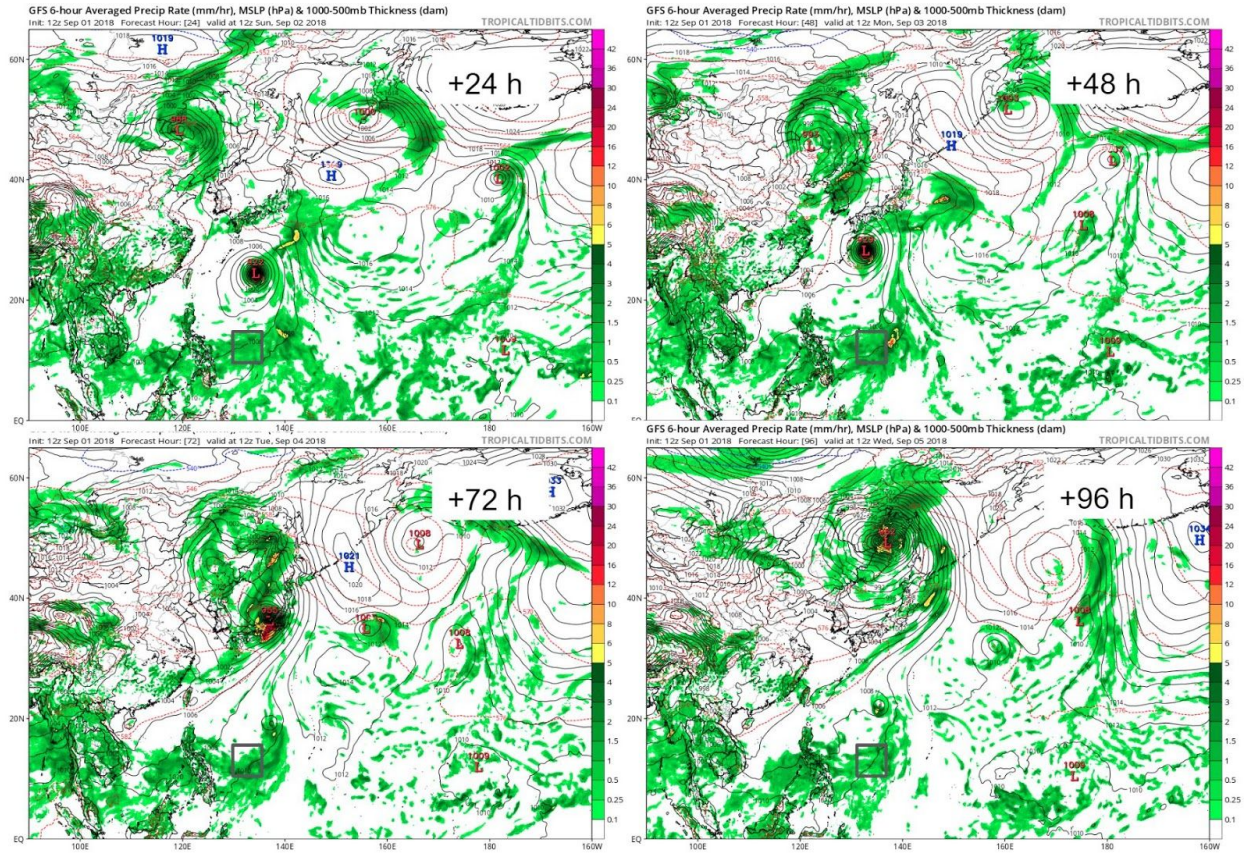

Fig. 2. GFS 20180901 12 UTC analysis of 6-hour averaged precipitation rate for forecast hours +24, +48, +72, and +96. The grey box indicated the area of operation. [2]

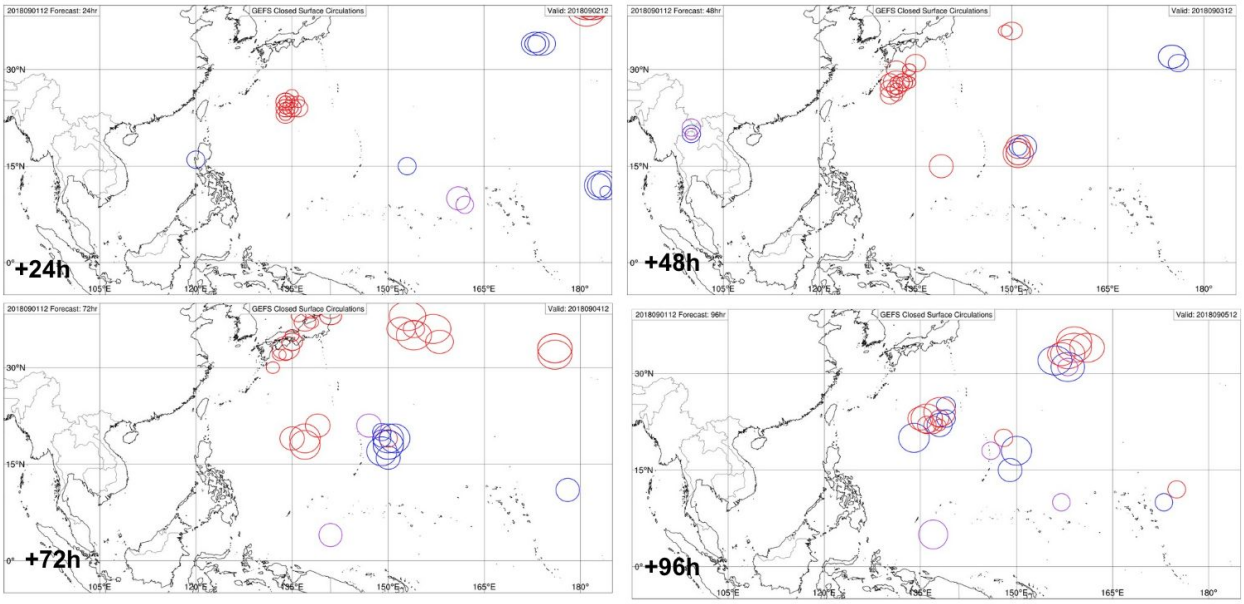

Fig 3. GEFS ensemble products for 10m circulation 24hr, 48hr, 72hr, and 96hr from 0901 12z [3]

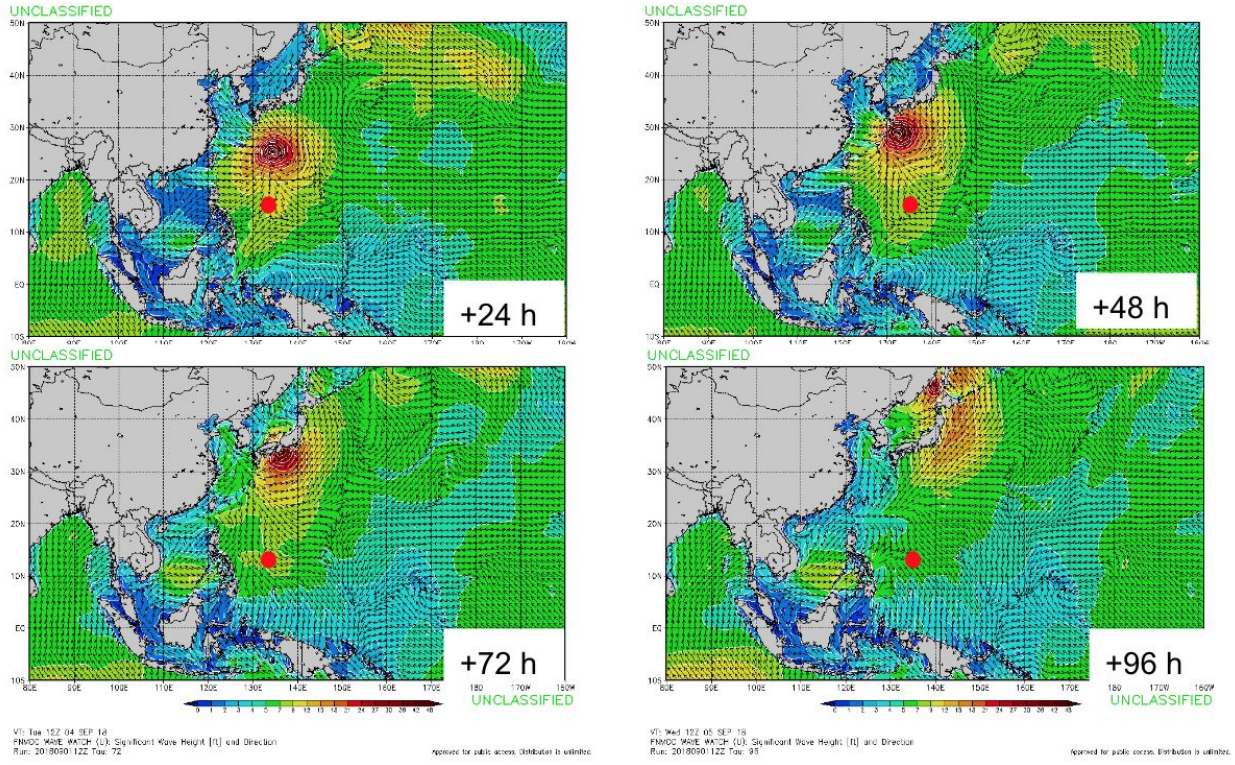

Fig. 4 Significant wave heights from FNMOC NAVGEM initiated at 12z 0901.