PRECIP Daily Science Report
0000 UTC 6 Aug 2022 - 0000 UTC 7 Aug 2022
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Summary:

Storms were observed to the SSW of S-Pol again in the afternoon LT. The rest of the day was really dry. S-Pol did some RHIs over the convection, and 6-hourly sondes were launched. Not a very exciting day…but potentially interesting to compare with days that are more active storm-wise.

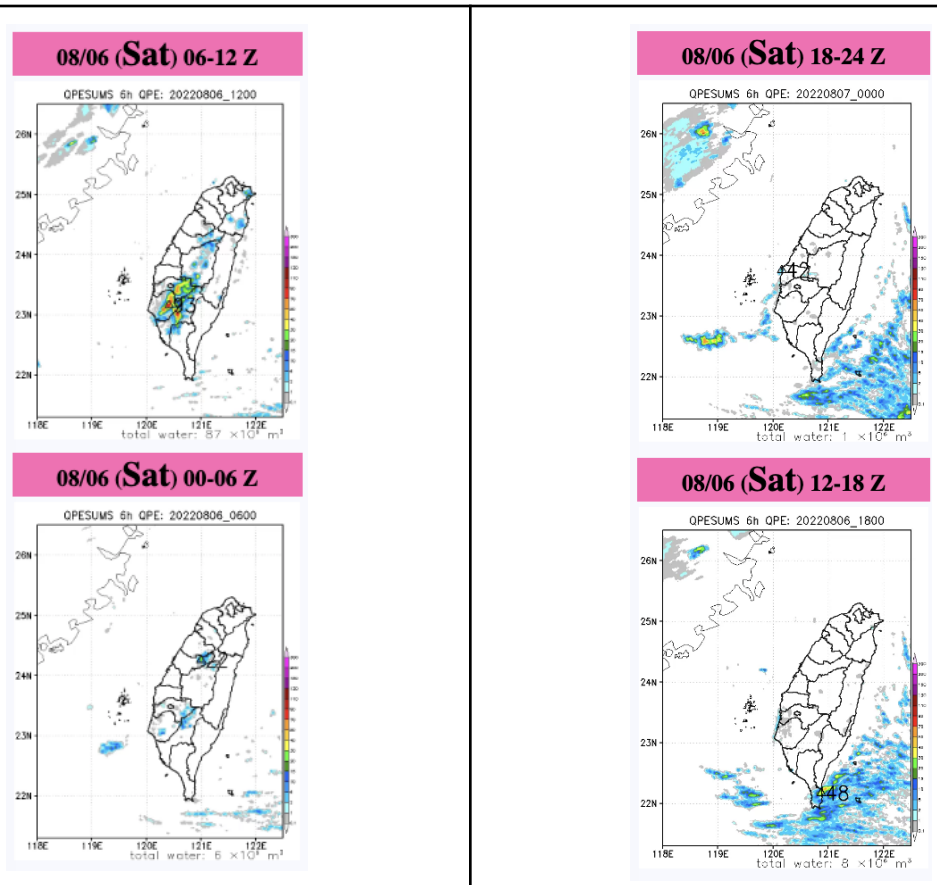


Figure 1: 6-hourly rainfall on 8/6.

Day Zero Forecast (0-24 h; 00 UTC 6 Aug - 00 UTC 7 Aug)

Today is forecasted to be a relatively dry day. There is a bump in mountain showers in the afternoon from daytime heating, but no significant accumulation is expected. A monsoonal depression is developing to the south of Taiwan, but it isn't expected to strongly impact rainfall in the short-term.

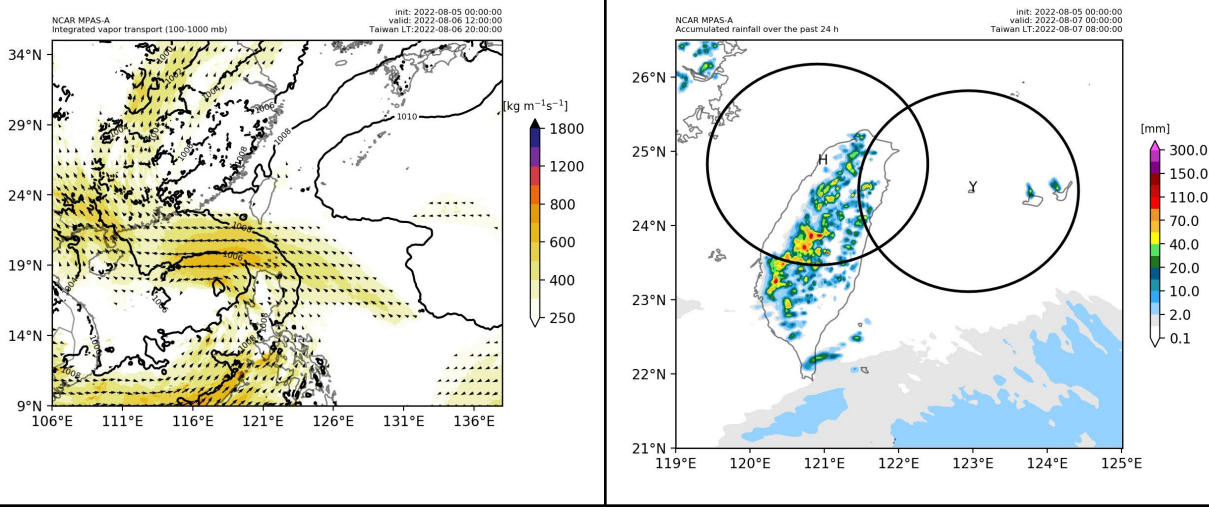


Figure 2: MPAS initialized 0z Aug 5 showing 24-hr accumulated rainfall at the end of Day 0, and IVT at 12z.

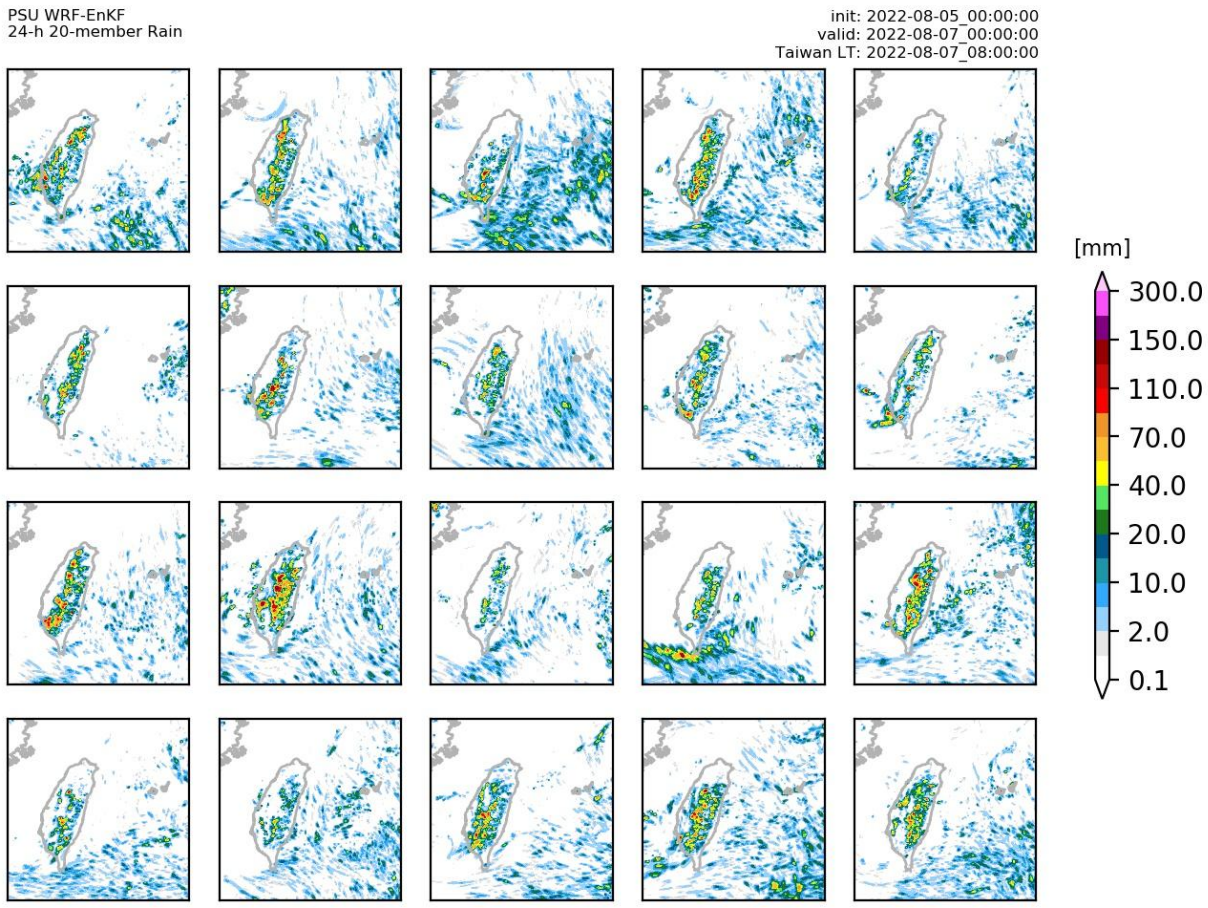


Figure 3: PSU WRF ensemble initialized 0z Aug 5, valid at the end of Day 0 at 0z Aug 7.

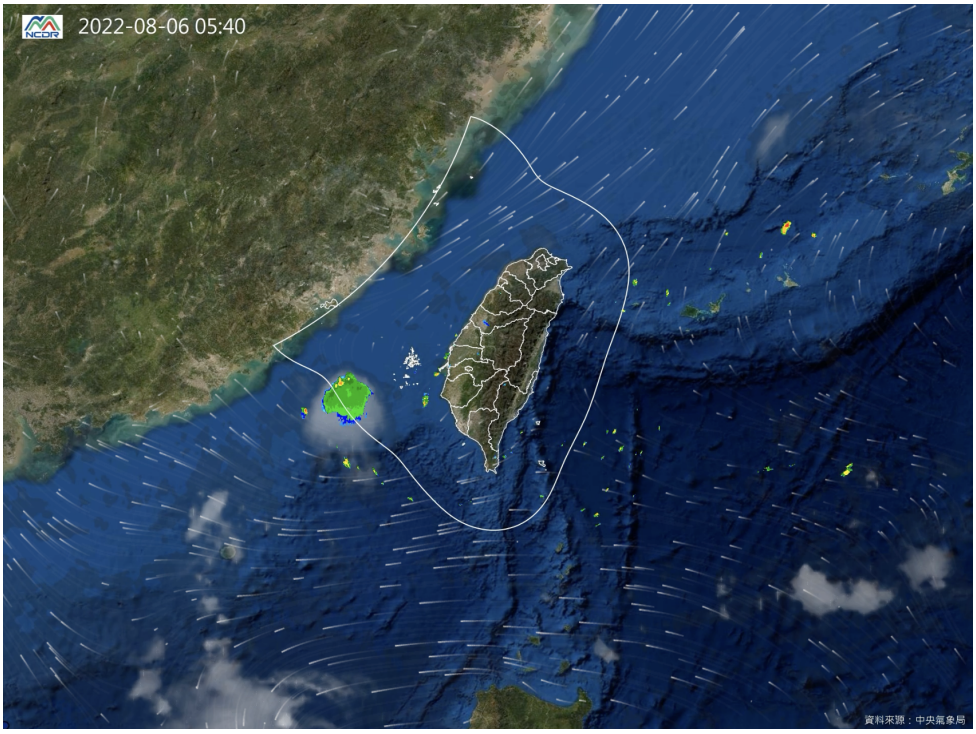


Figure 4: Satellite and radar image from 5:40 am LT on Aug 6.

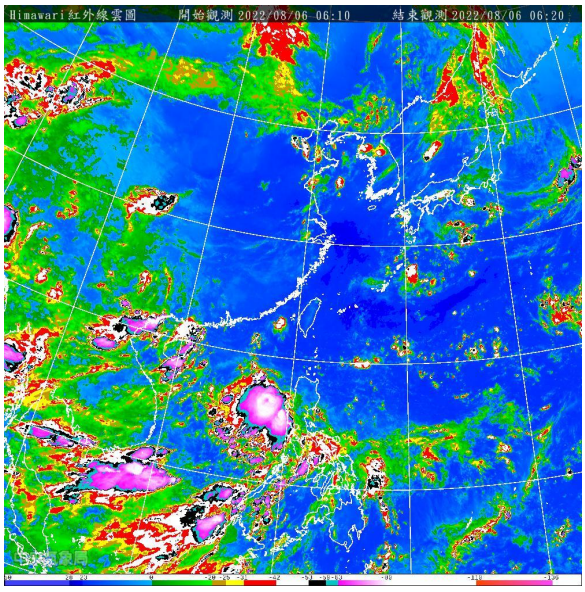
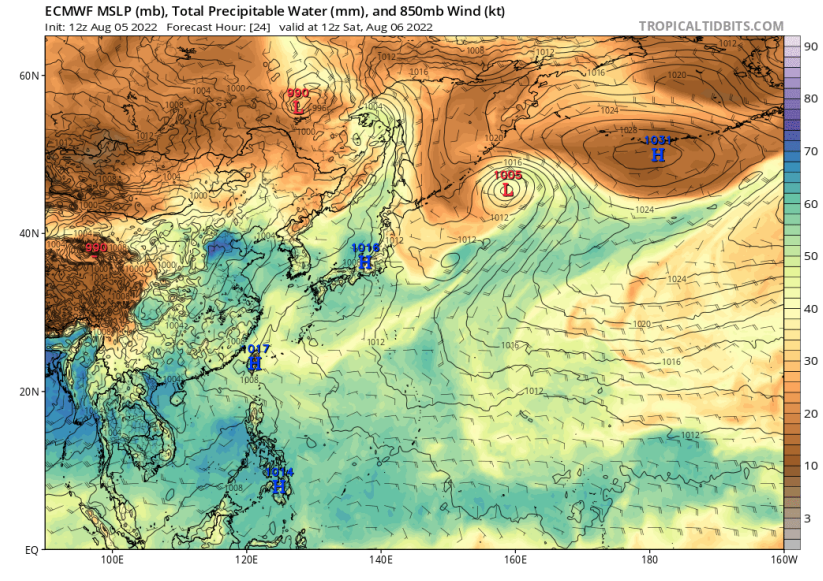


Figure 5: Himawari satellite Color IR image from 6:20am LT on Aug 5.



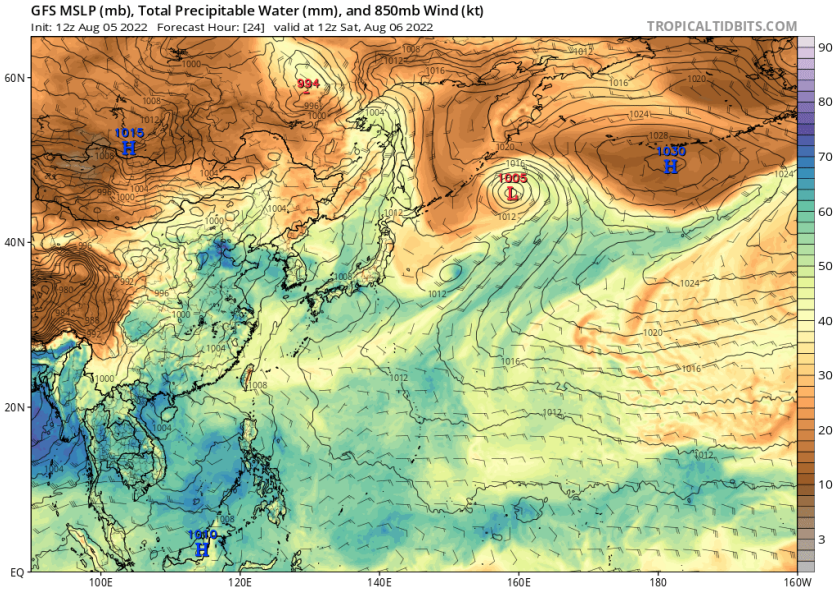


Figure 6: EC & GFS, initialized 12z Aug 5, showing PWAT and 850 mb Wind for the whole Pacific at 12z Aug 6.

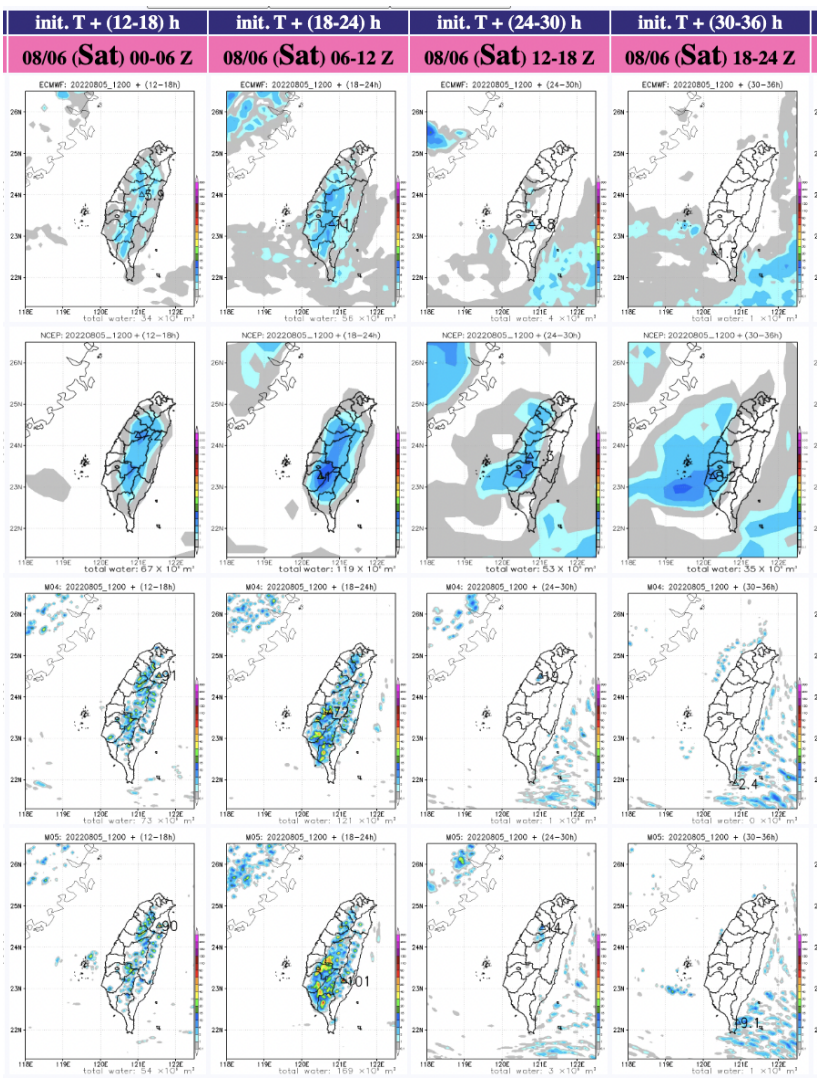


Figure 7: 6-hourly QPF on Day 0 from (top to bottom) EC, NCEP, WRFD and TWRF initialized 12z August 5th.

Discussion

Some of the scan strategies used today are shown below, along with a satellite image and a few sources of radar contamination. Not a very exciting day weather-wise.

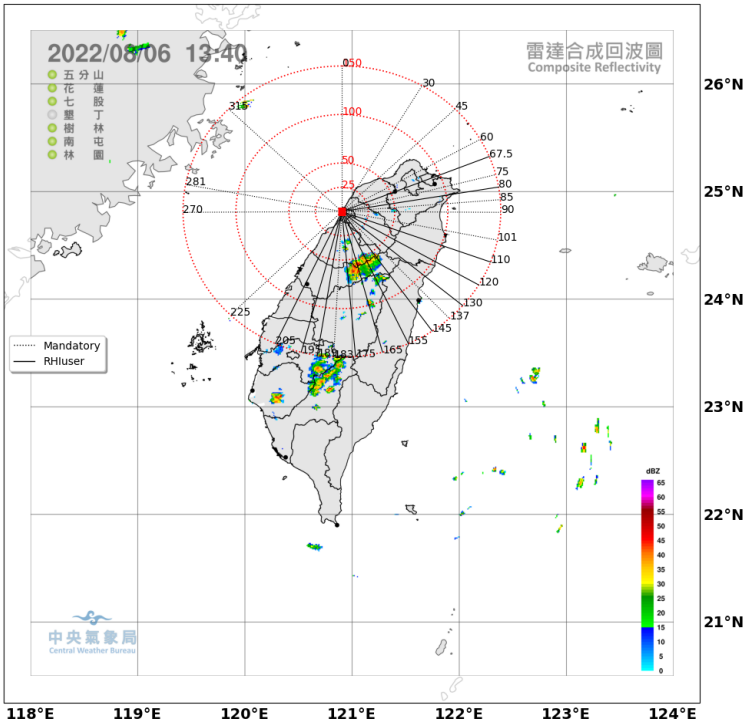


Fig. 8: Showers developed today over a similar location as yesterday—over Nantou and Chiayi counties. We initiated user-defined RHIs at 0612 UTC (2:12 PM LT). We used the same angles that we started with on August 4 & 5.

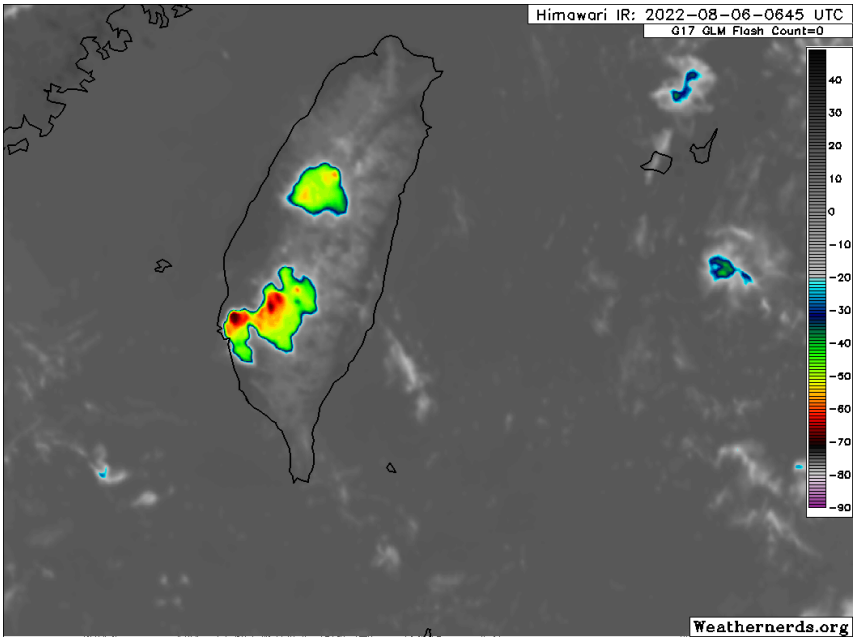


Fig. 9: Storms formed and continued to deepen, almost predictably, near the same location as in the past two days.

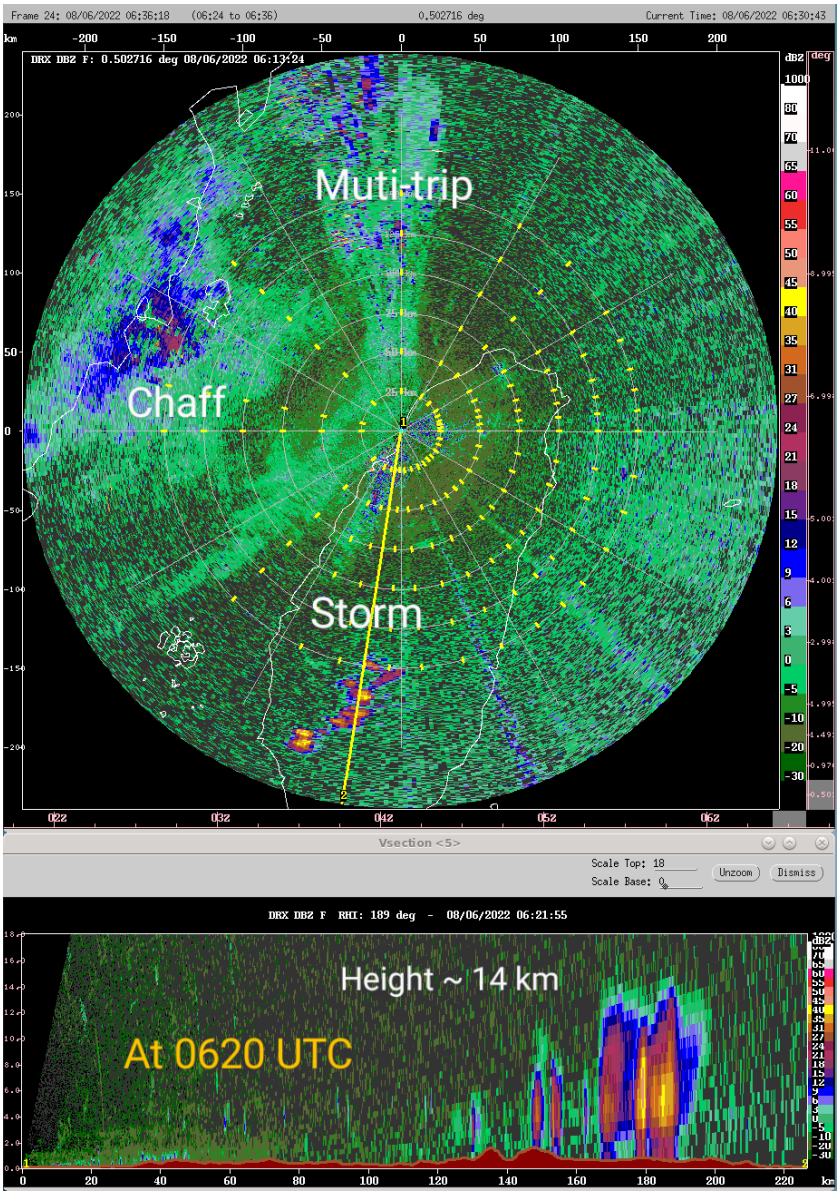


Figure 10: Image showing some of the sources of radar-contamination, including multi-trip and chaff.

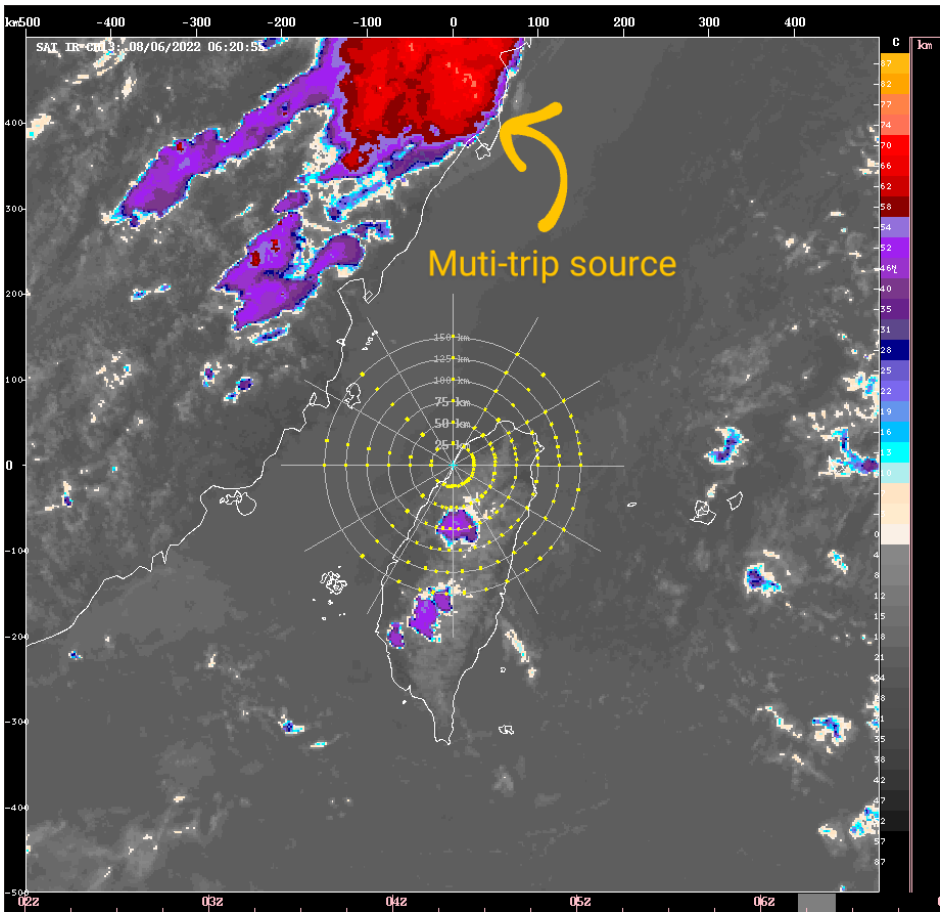
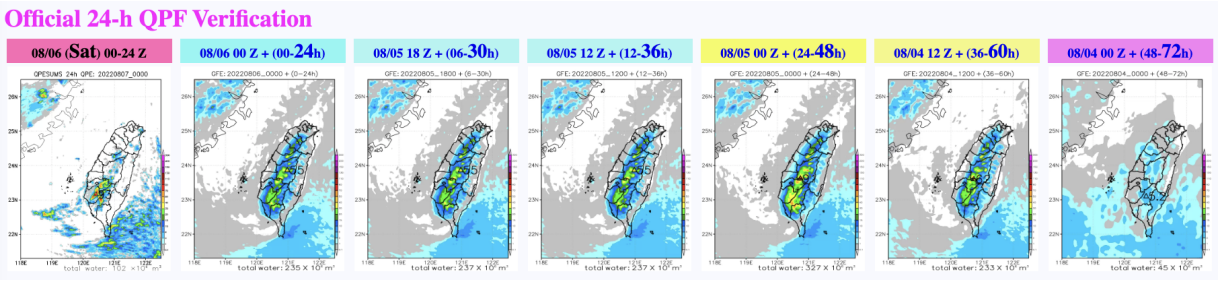


Figure 11: Image showing the multi-trip source to the North in China.

Verification (how well did the models do for this event?)



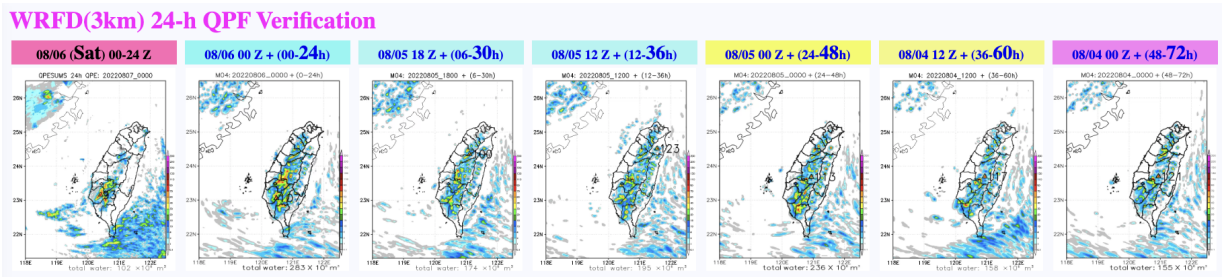


Figure 13: Official (top) and WRFD (bottom) 24-hr verification for August 6th.

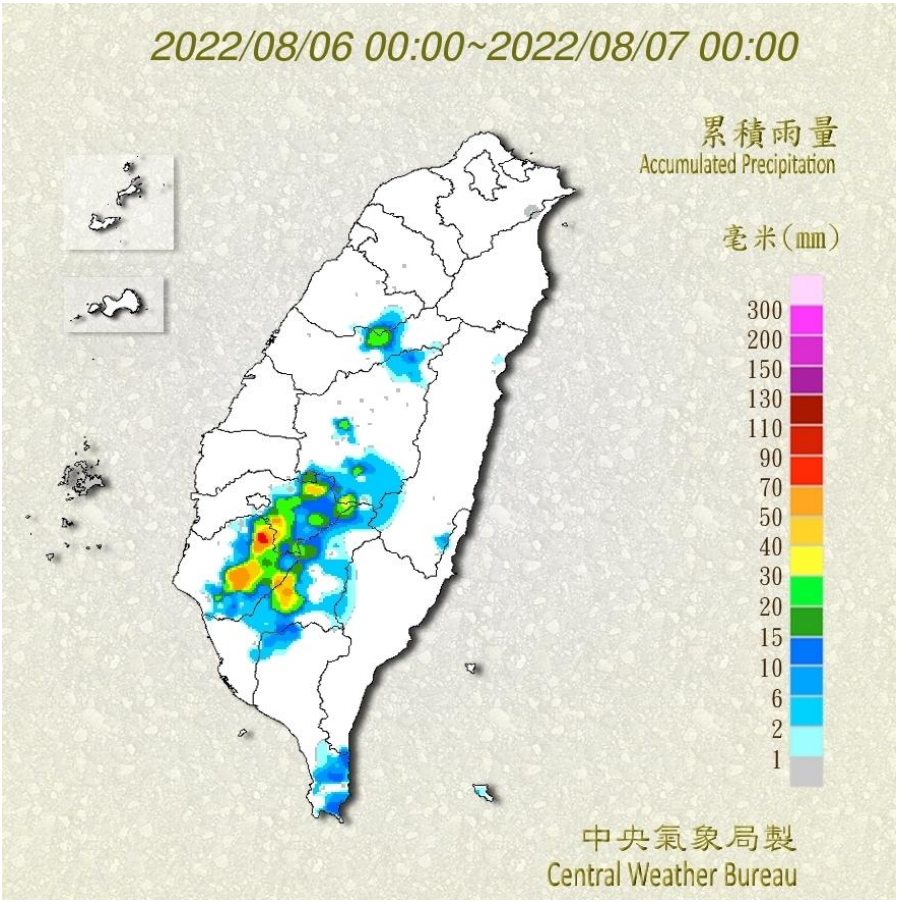


Figure 12: 24-hr rainfall accumulation from CWB. Note that this is LT.

Days One and Two Outlook (24-72 h; 00 UTC 7 Aug - 00 UTC 9 Aug)

Expecting it to be dry the next couple of days. Notice the development of the monsoon depression to the south.

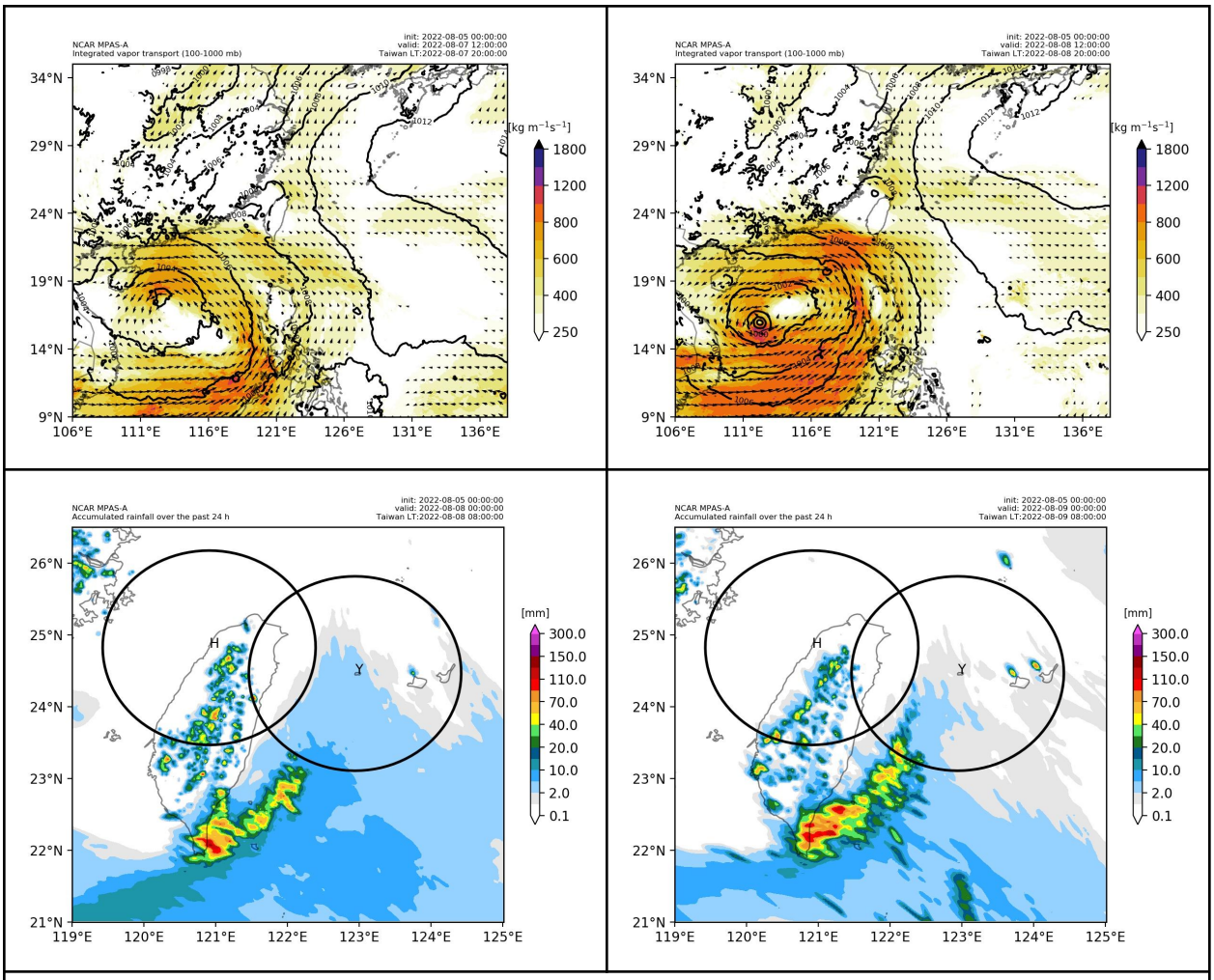


Figure 14: MPAS run initialized 0z on 5 Aug. Left is Day 1, right Day 2. (top) is IVT at the halfway point of the day (12z 7 Aug and 8 Aug) and (bottom) is 24-hr accumulated precipitation at the end of the day (0z 8 and 9 Aug).

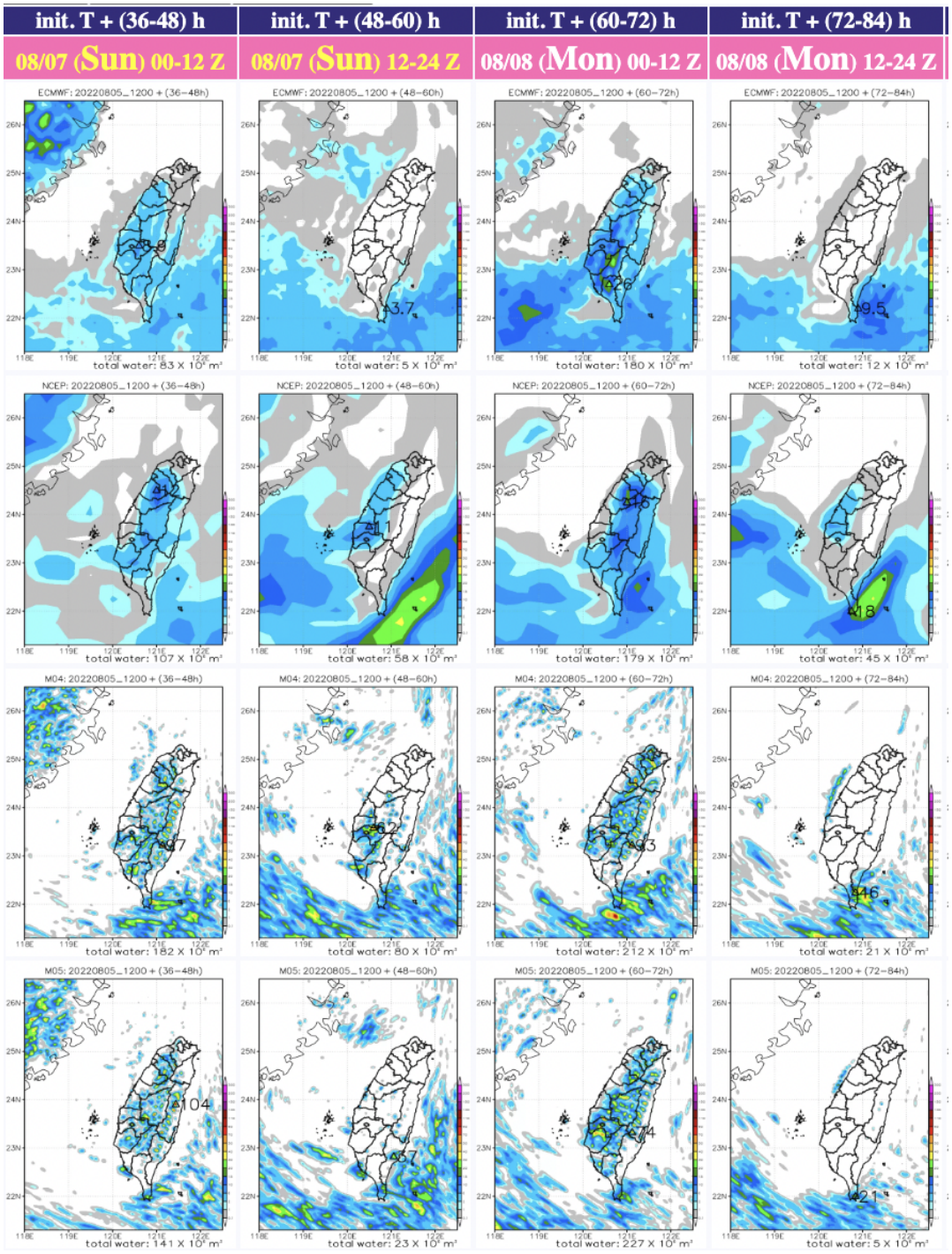


Figure 15: Initialized 12z Aug 5, for Day 1 and 2 in 12-hourly increments.

Extended Outlook (Days 3-5; 00 UTC 9 Aug - 00 UTC 12 Aug)

The latest runs have a monsoon depression forming south of Taiwan, but no TCs. :(

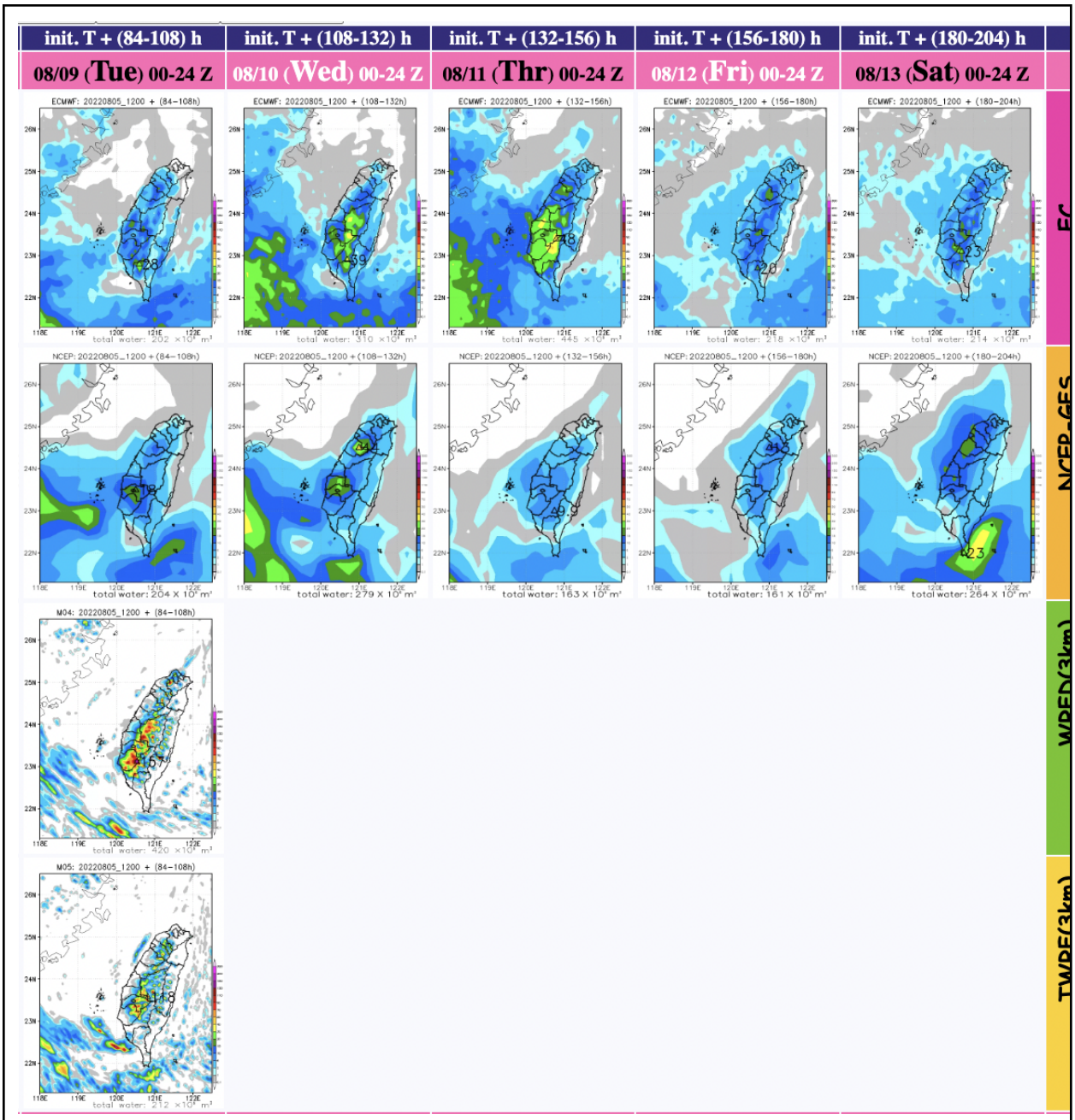


Figure 16: Aug 9 - Aug 13, 24-hr accumulated precipitation initialized 12z Aug 5.

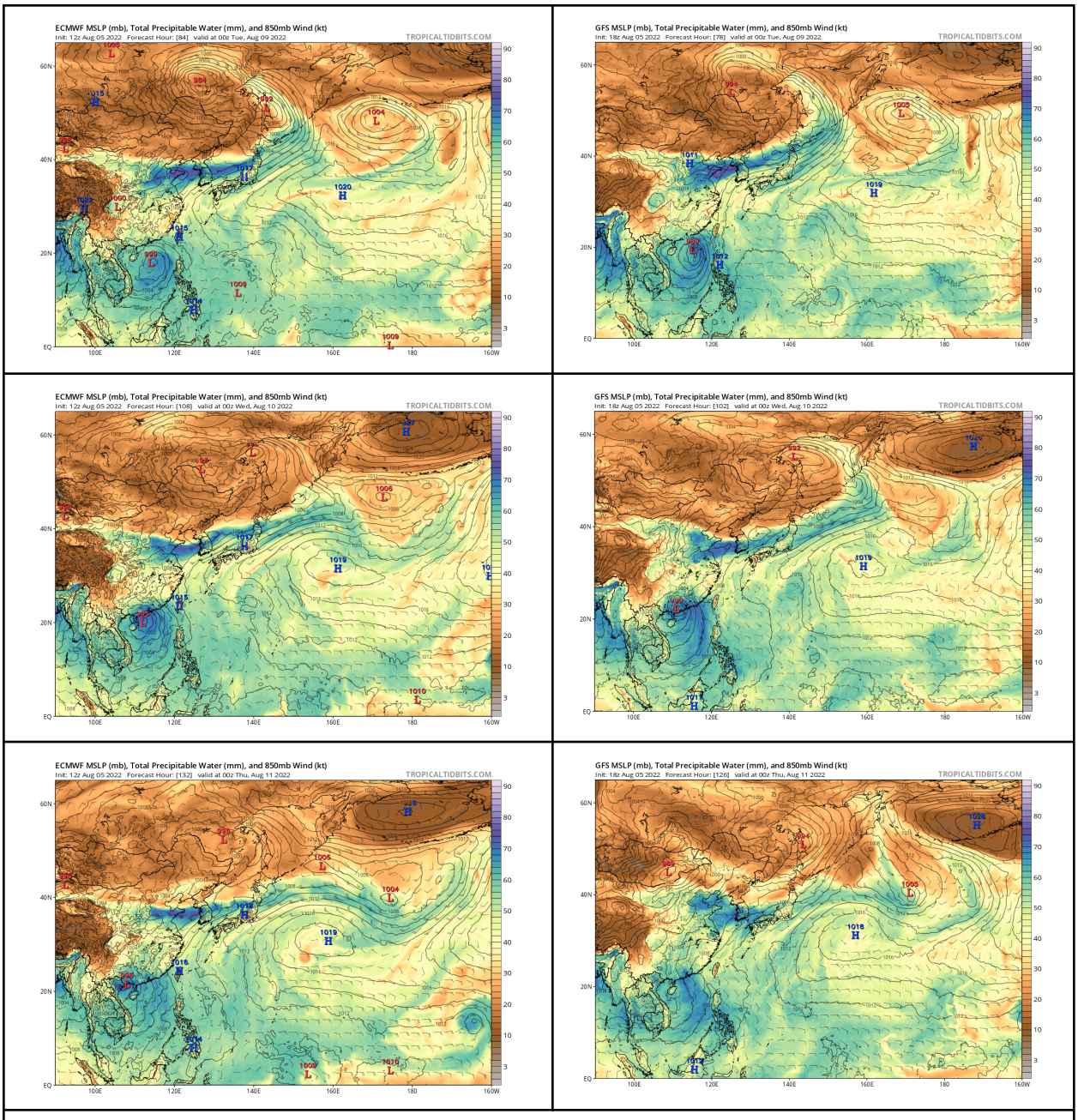


Figure 17: EC (left) and GFS (right) showing Aug 9, 10, and 11th.