

20180824  
Day Shift (4a-4p L)  
Timothy Lang

0033 – Still quiet on main scope. Occasional isolated cells pop up, so maintaining PISTON\_LOW. Ship will steam toward 12.7, 136.5. This will provide 67-, 40-, and 50-km baselines from Mirai during 24-28 August.

0103 – Trying RHIs centered on 120. There is a small cell near max range there.

0109 – RHIs got some hits on that storm. It's nothing special (10-km tops max), and is translating quickly to the SW as we steam NE. Rotating RHIs clockwise to compensate.

0130 – Long-range scan shows a few more cells to the NE. Canceling RHIs this round as all targets in range right now are pretty marginal.

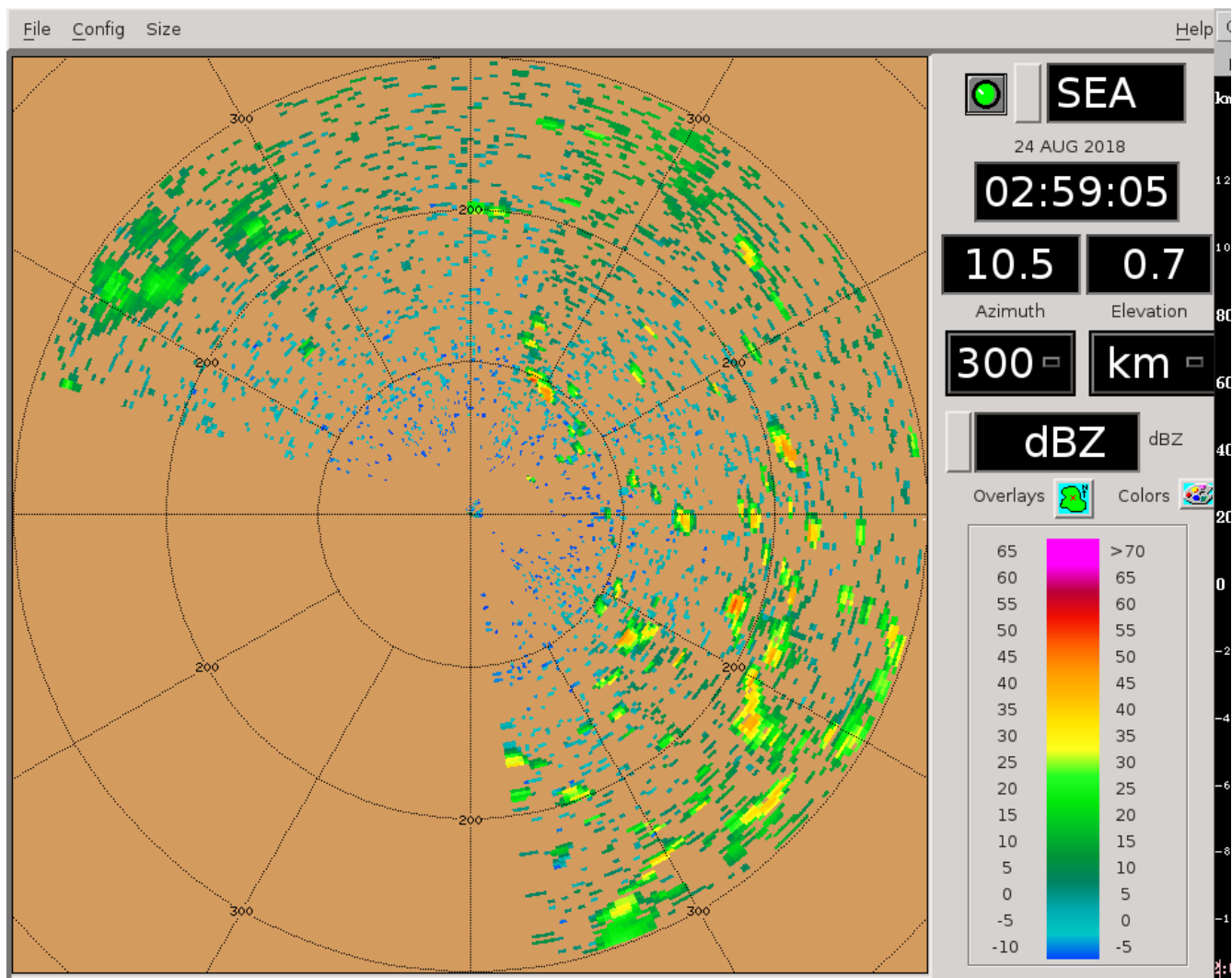
0141 – Running surveillance twice as I forgot to zoom out the RTD.

0231 – RHIs to 29-40 (1 deg apart) to capture incoming small cell to NE. About 100 km away from target location for DD ops.

0248 – Rotating RHIs a bit counterclockwise to account for movement/evolution. Tops to about 10 km.

0256 – RHIs hit the cell well. Storm is elongated in the NW-SE direction, roughly 25 km long.

0259 – Long-range view. A lot of scattered convection in the eastern quadrant, with greater coverage to the SE. The NW storms look more stratified.



0301 – RHIs rotated counter-clockwise slightly.

0330 – RHIs to 6-28 az (2 deg spacing), as additional cells popping up in NE sector.

0336 – New cell within 25 km to NE. Small now, but switching to FAR next round just in case.

0401 – Trying RHI set near 5 deg, and another near 36, to see if I can capture a few different cells.

0416 – RHIs to 350-12, to capture N convection. Storms are relative shallow, 5-8 km.

0425 – Ship has stopped and pointed east. Not affecting RHIs going off now.

0430 – RHIs to cover small cell near 45 deg and 25 km.

0444 – Tops to 8 km in this cell. Nothing very tall in view, and spatially scattered at that.

0446 – Rotating RHI counter-clockwise to keep up with near cell.

0501 – No changes to RHIs.

0508 – Took a picture of cell off port bow.

0514 – Long-range view. Convection far to SE has mesoscale structure, while in range we are mostly dealing with pop-up shallow convection.

0517 – Rotating RHIs slightly counterclockwise.

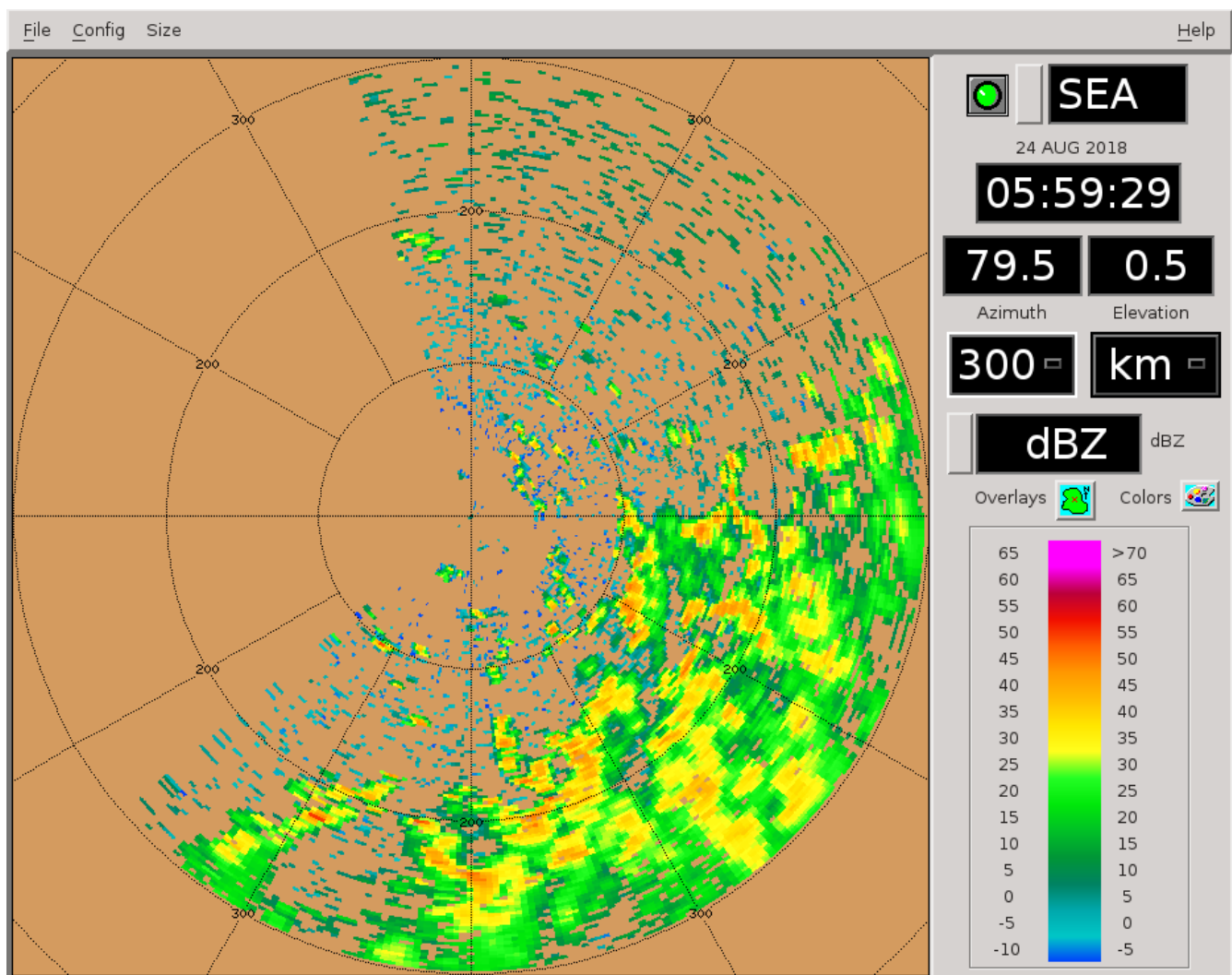
0532 – Switching to cell to SW, 30-40 km out. Really poor targets to try to nail RHIs. 0600 UTC sounding launched and then failed immediately. Will launch a replacement soon.

0540 – Sidelobe makes it difficult to tell, but height of RHI cell ~4-6 km.

0546 - Some of the far east convection is starting to move on scope. RHIs to ~90 az to capture one of the bigger cells we've seen today.

0554 - Sonde replacement launched.

0600 – Stopping radar for one cycle to allow quick lidar maintenance. Current long-range:



Just need that SE echo to come our way! Himawari suggest western movement of convection in this region. A lot of new scattered shallow development in main domain.

0604 – Back in PISTON\_FAR. Will skip RHIs and surv this round.

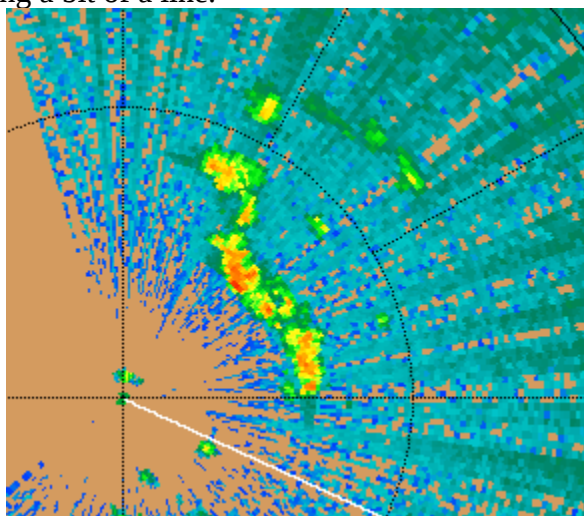
0611 – Very close small cell right off port bow, to north. Likely won't be topped but is shallow regardless. I took a photo of it.

0616 – RHIs to 20-42 az. Convection at multiple ranges, including the very close northern cell (which won't get topped by 20-deg RHI elev).

0626 – Cell at 40 km in RHIs has a height of over 10 km.

0630 – No changes to RHIs. Plenty of targets on scope now, though.

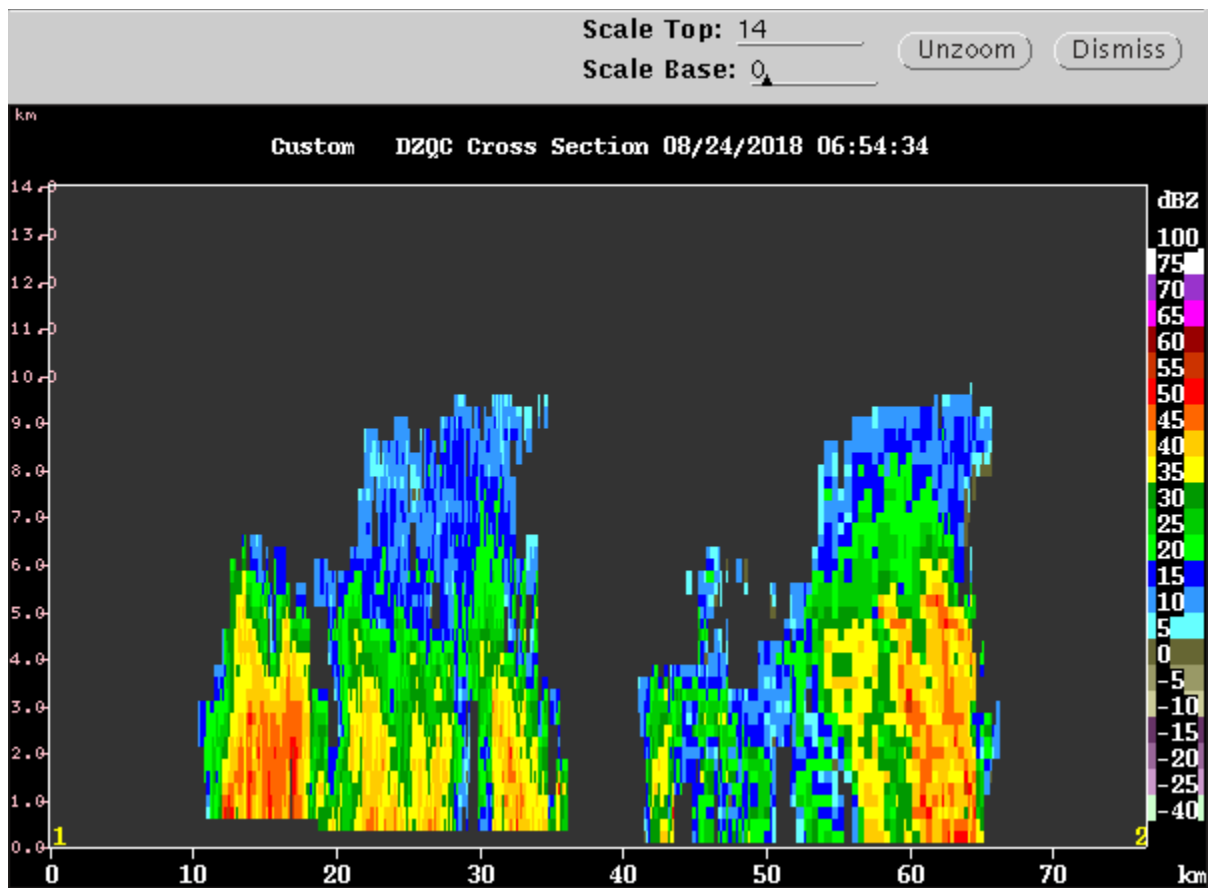
0633 – NE convection forming a bit of a line.



0643 – Convection near 30 km not topped by 20-deg elev RHIs.

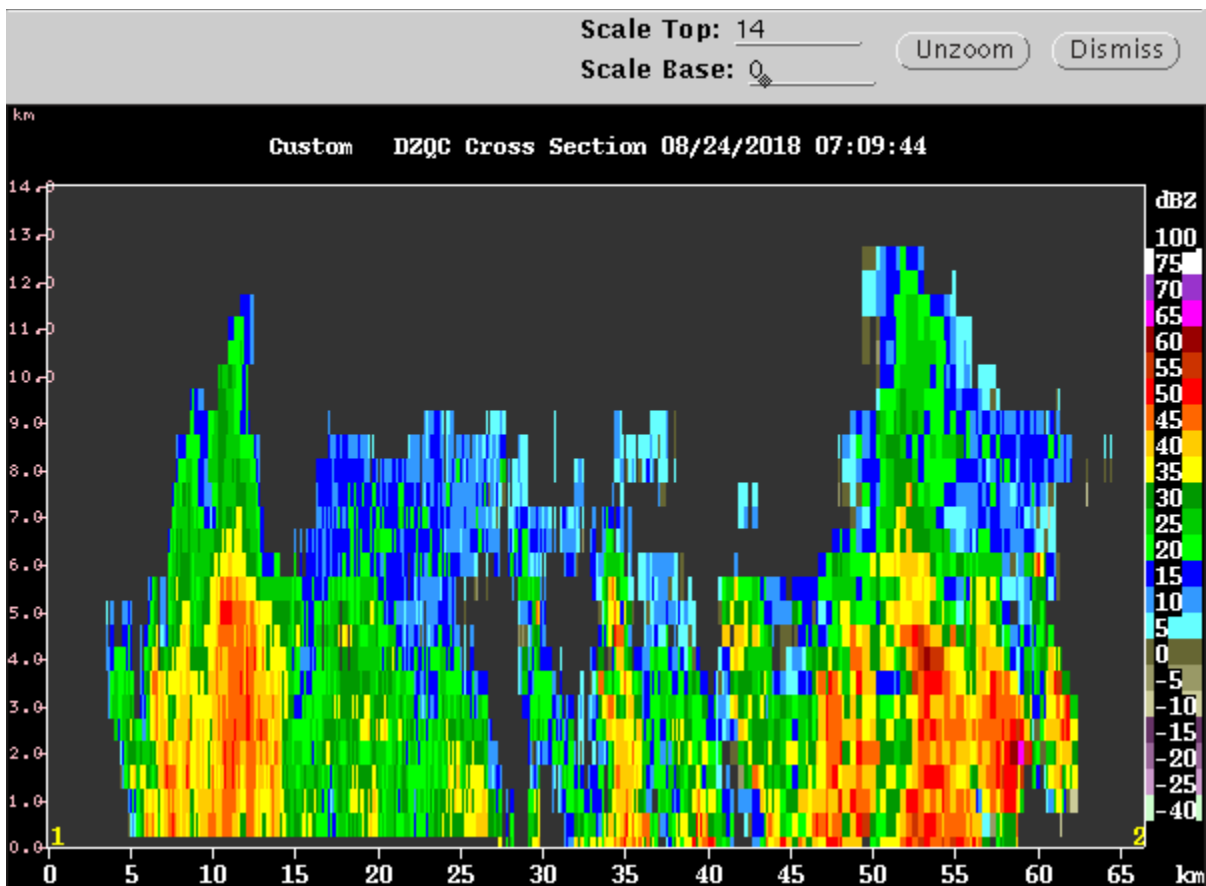
0646 – NE line fills nearly every angle in the NE quadrant. Doing 8 RHIs 31-52, separated by 3 deg. Moving to NEAR scan after this round. Upscale growth definitely helping individual cells maintain higher altitudes. Main cores in line are 10+ km tall.

0658 – Cross-section thru NE line, moving N to S. Healthy, mature convection.



0701 – Not changing RHIs. Precipitation is moving east to west, even after we stopped.

0717 – RHIs to 72-94 to cover southern portion of NE line. Tops to 13 km!



0725 – Ship back underway toward NE. Estimate arrival at DD station in a couple hours.

0729 – Ship is going to run into NE line very soon, then it will become the western line. :)

0731 – RHIs 59-81az, to capture more distant cells (beyond 50 km). Back to 12 sweeps to 20-deg elev.

0734 – Rain at ship. 22 kt gust front.

0746 – No changes to RHIs. Too many targets to choose!

### Shift Summary

Radar was off for an hour at shift start due to presence within Palau EEZ. After departing the EEZ ops recommenced. There was very little echo within the main domain, however, until the local afternoon when numerous convective cells moved into range and grew upscale. Without organization, cells had a hard time topping 8 km. But with some organization, tops up to 14 km were observed. The convection moved into our domain by consequence of the easterly flow and ship's northeastward movement toward the preferred dual-Doppler station location. The ship spent some time stationary this afternoon, during oceanographic sampling, but resumed motion about half an hour before shift end.

Night Shift (4p-4a L)

Scott Powell

Apparently my comments were not saved. Oops.