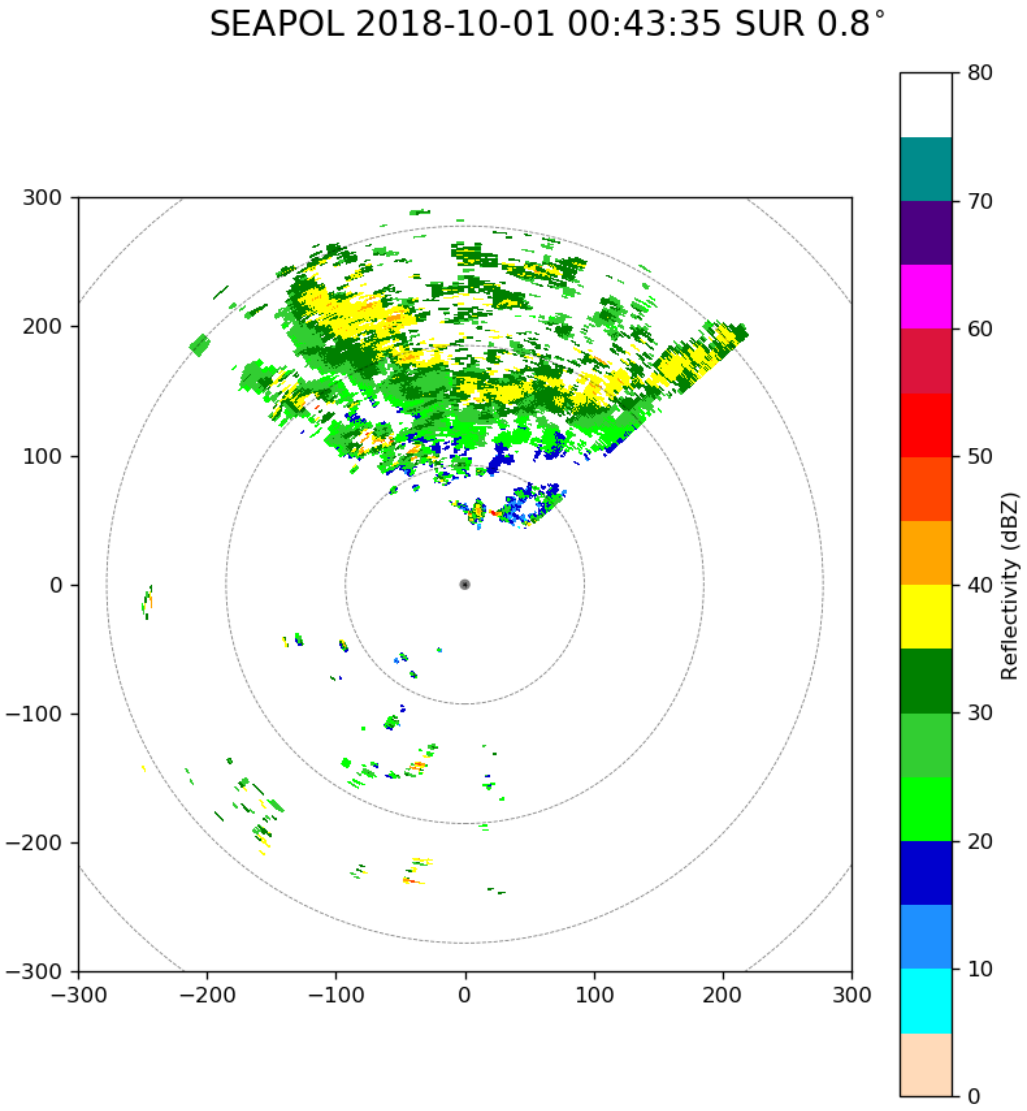
**20180930**
**Morning Shift (9A-1P L)**
**Ben Trabing**

0100 – Continue FAR PPI scans with intermittent surveillance scan. Rainband from earlier dissipated but surveillance indicates additional convective bands outside of the radar domain.

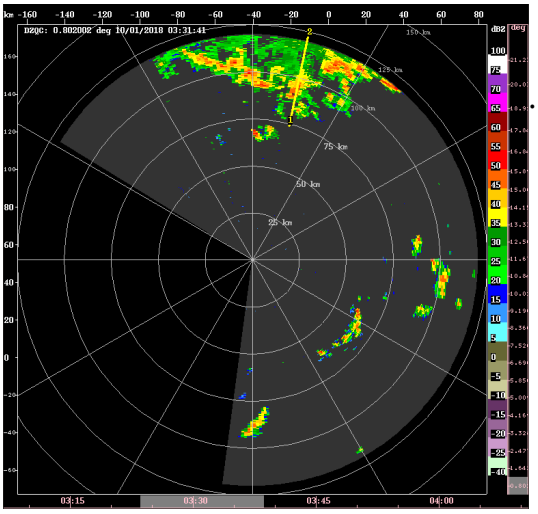


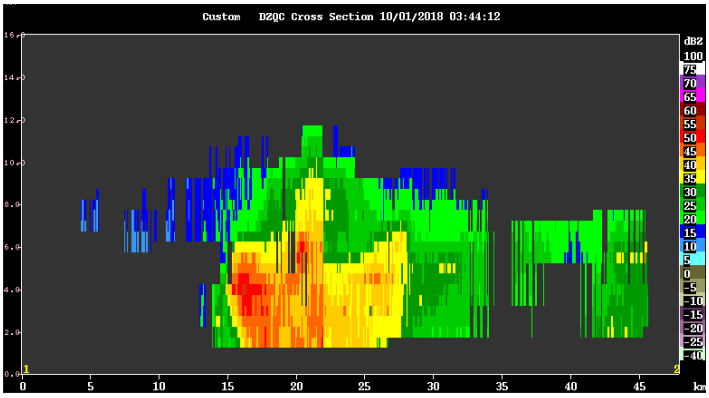
0200 – The ship has turned and now any convection to the north is blocked. There are only a few isolated cells to our south and east.

0345 – The ship has turned northwest and now the surveillance is showing some areas of stronger precipitation to the north as the rainbands are continually wrapping around Kong-Rey but dissipating once they get closer to the ship.

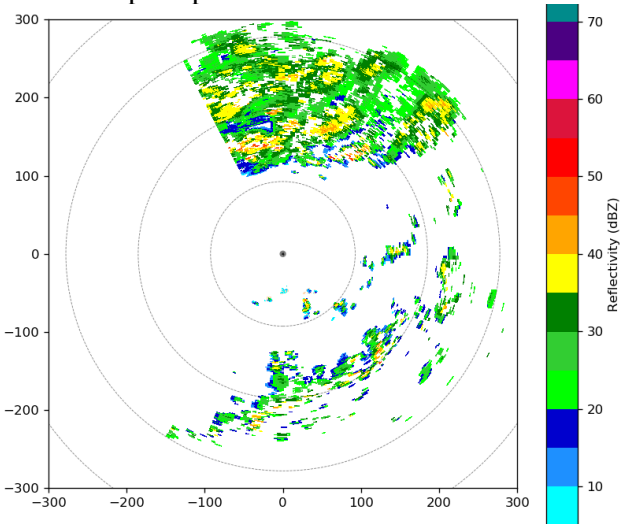
Afternoon Shift (1P-9P L)
Weixin Xu

0400 – Running in the FAR PPI scans. Newer convection leading by a convective line moves into the closer radar ranger (100km). Some of the convective cores are actually quite intense with 35dBZ extending up to 8 km.



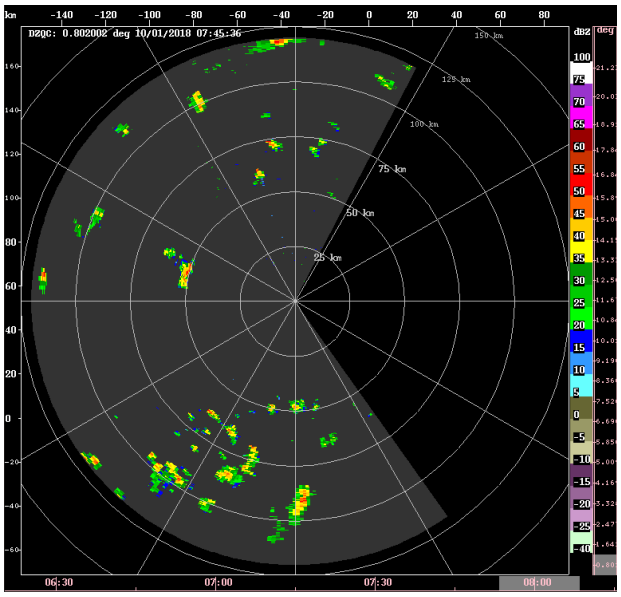



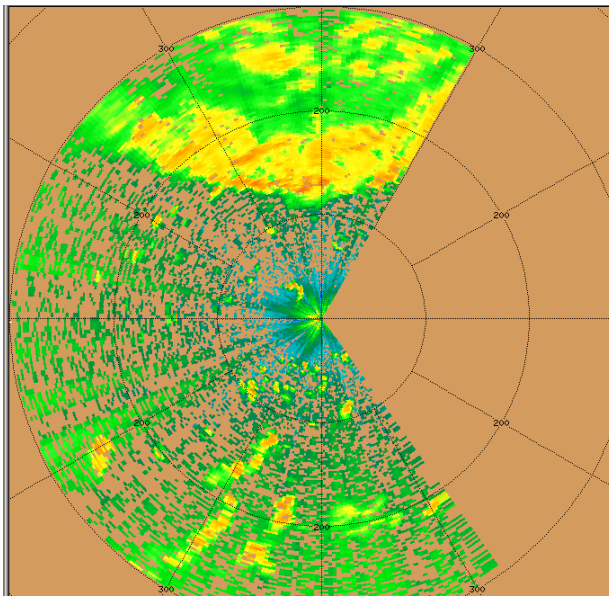

0545 – All convection decayed or moved out of the 100 km range. SURVEILLANCE is run to check convection further out the radar domain. Long-range SURVEILLANCE scan show that the rain band precipitation is now located out of the 120 km radar range.



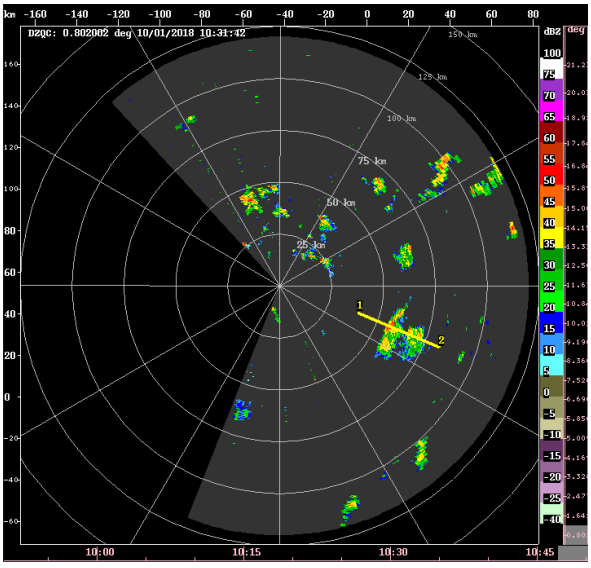
0600 – Continue running in the FAR PPIs. Only scattered convection within the 100km radar domain.

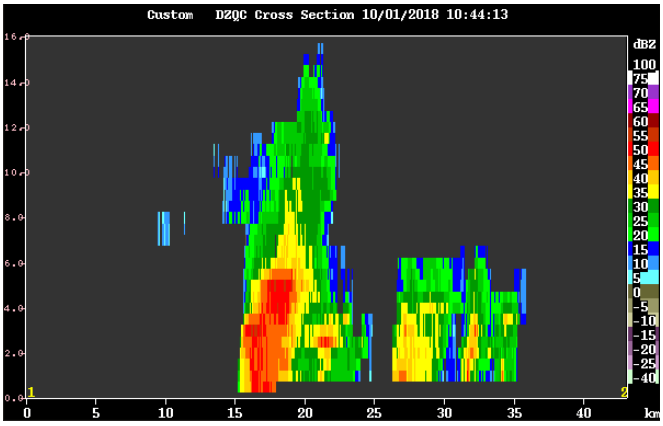
0800 – Increased population of scattered convection. Keep scanning in FAR mode. The rain band now is 150 km north from the radar based on the SURVEILLANCE scan.



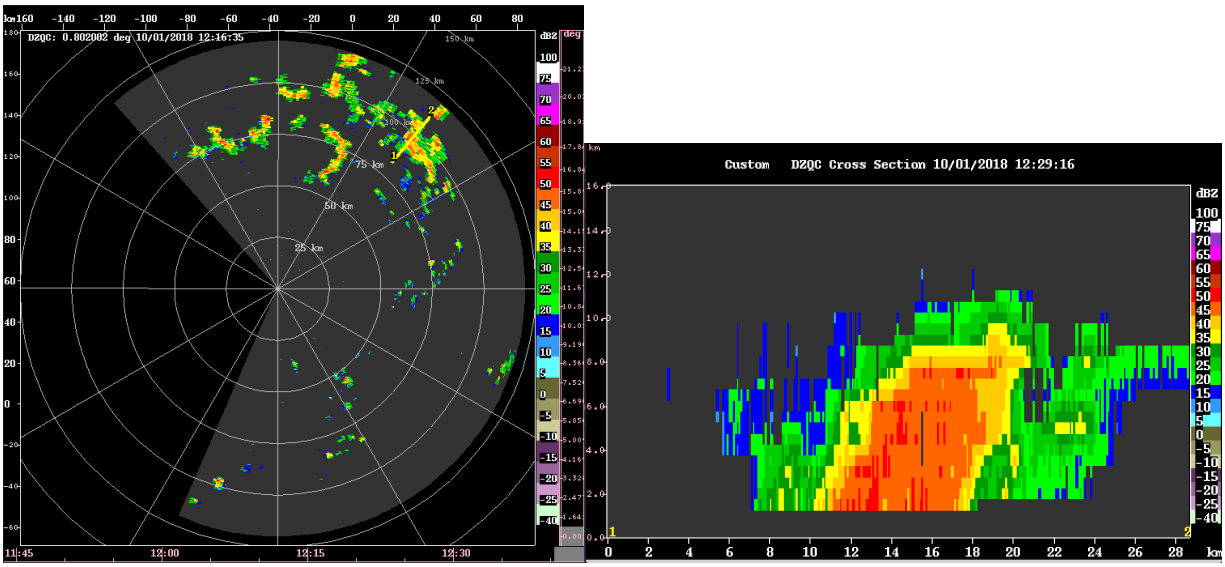
1100 – Maintain in FAR scanning. Persistent scattered convection. Some of the isolated convection grows very deep (10 dBZ echo-top up to 14-15km). The reflective core is about 45-50 dBZ, but ZDR is just moderate (2 dB) indicating normal rain drops.



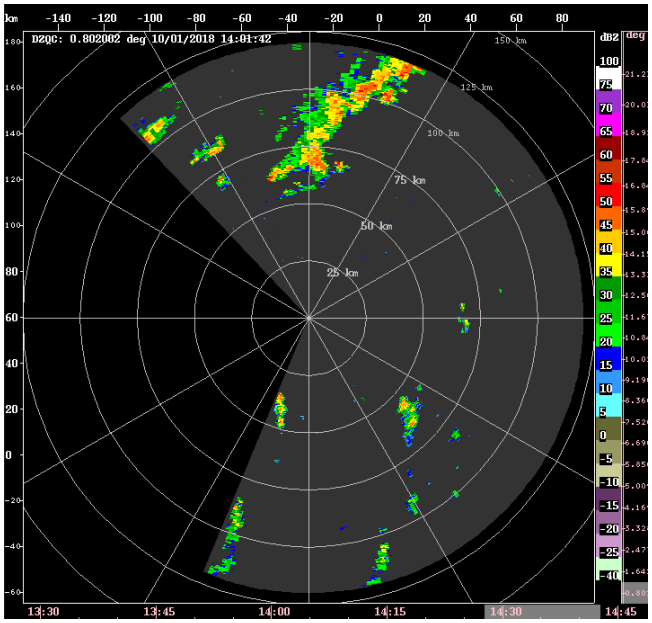



Night Shift (9P–4A L)
Naufal Razin

1230 – Scattered convection to our north, beyond 50 km. Deepest convective core seen had 35 dBZ echoes up to 10 km altitude. Keeping the PISTON_FAR scanning strategy with SURVEILLANCE strategy scheduled after every PISTON_FAR scan.



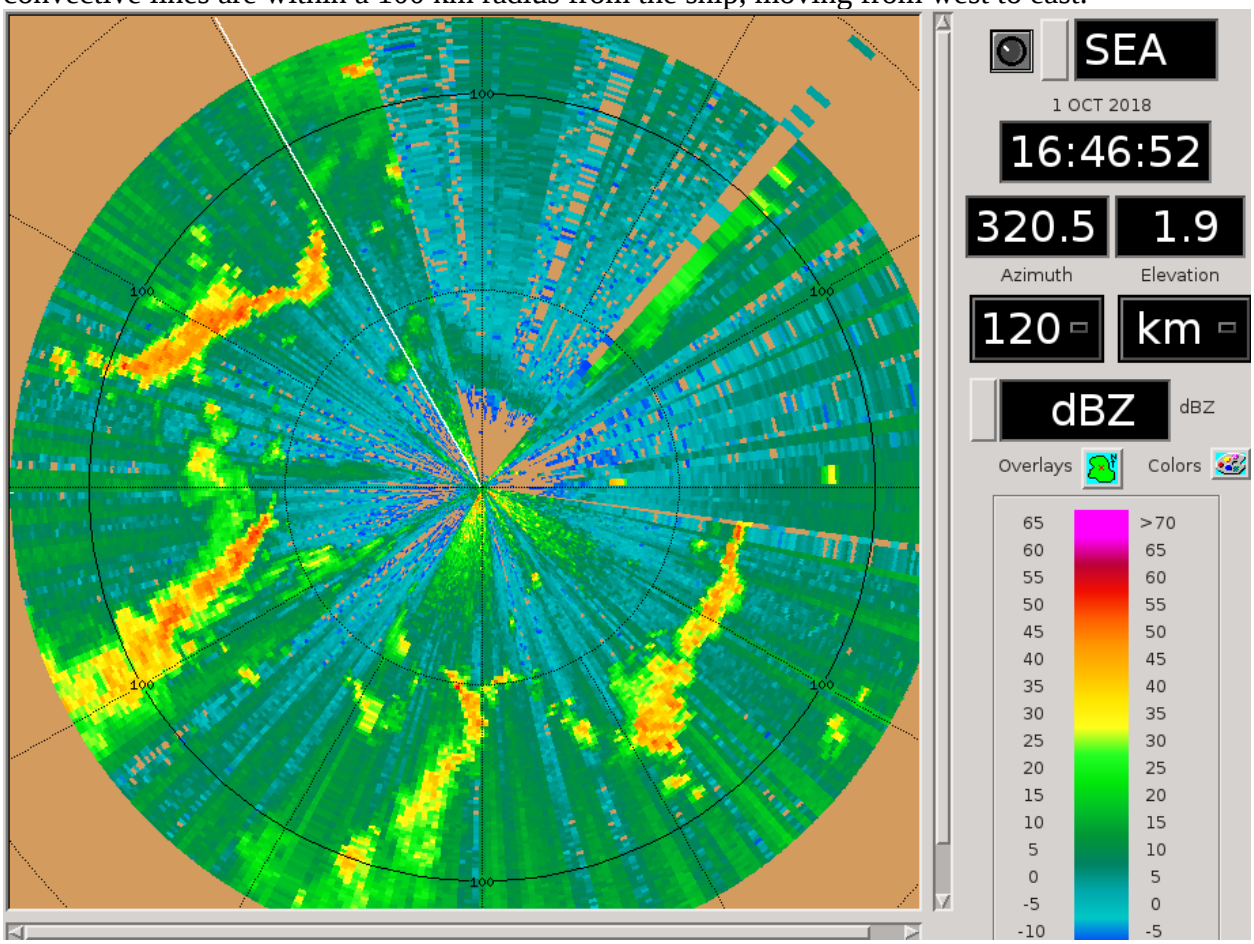

1420 – A line of convection has been persisting to our north for the past at least one hour or so. 35 dBZ reflectivity reached 8 km altitude in some of the convective cores associated with this convective line. A quick view of this convective line showed only a max of 2 dB Zdr.



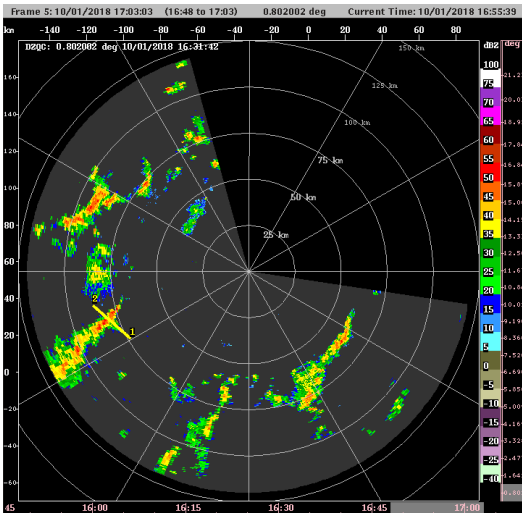

1430 – Ship moved to face southward. Convective line to the north can no longer be observed.
1553 – Scattered convection to the south and west. 1545 surveillance scan shows more of these scattered convection to the west and south. CIDD movie loop shows an eastward movement of these cells. We are also moving towards them slowly - current ship heading is 210 degrees at 1

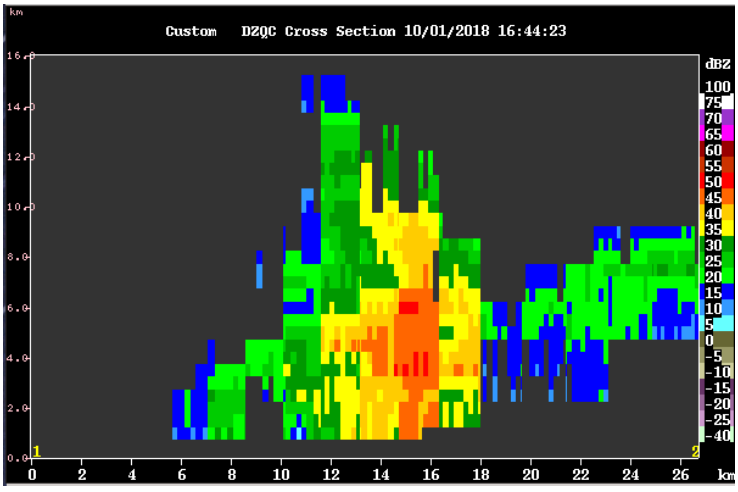
knot. Himawari-8 IR image shows colder cloud tops (between -50 amd -70 C) moving eastward and southward, associated with trailing rainbands of Kong-rey.

1647 – Four lines of convection can be seen on radar, oriented southwest to northeast. These convective lines are within a 100 km radius from the ship, moving from west to east.

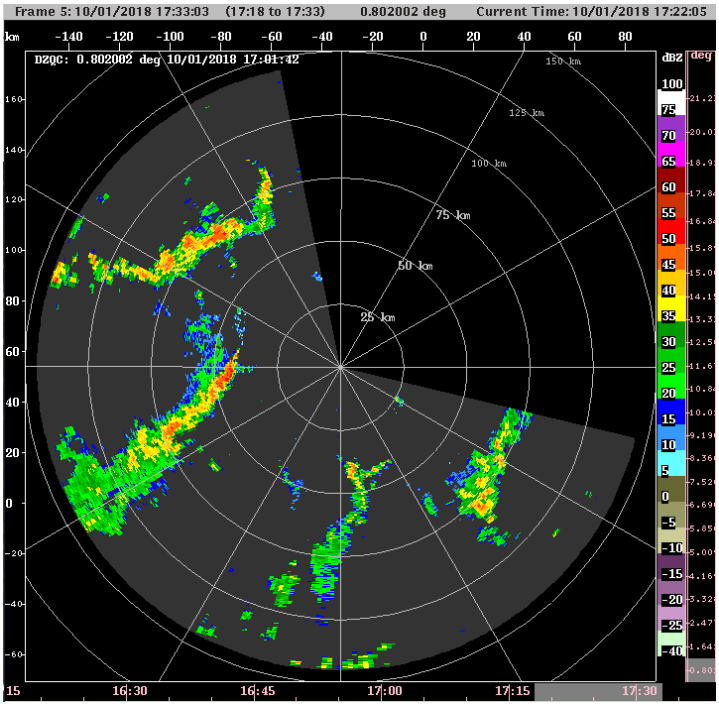



1655 – 20-dBZ echo in some of these convection reached 14 km atltitude

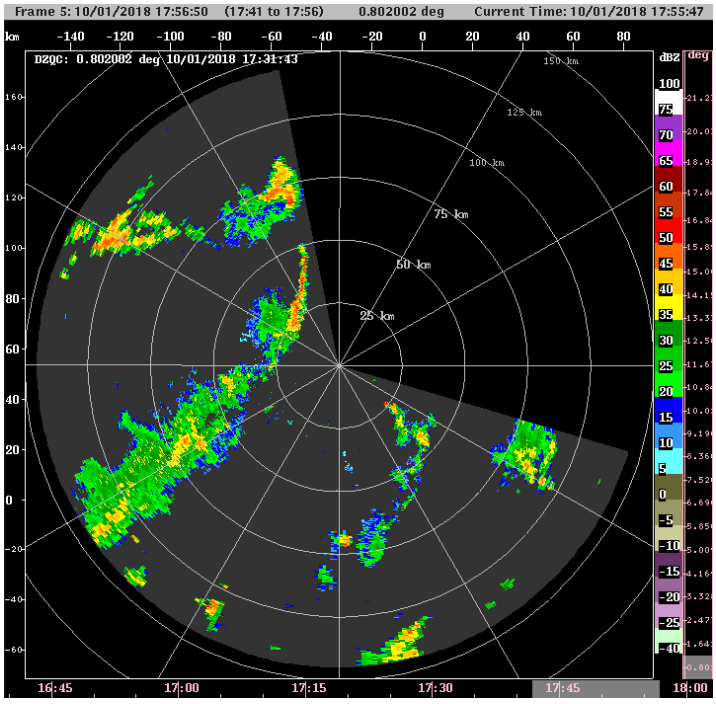




1722 – These convective lines are interesting. They're moving eastward and are separated from each other. The leading two convective lines (two on the right in the figure below) seem to be dissipating. One would think that the leading two convective lines would have depleted the instability ahead of the trailing two convective lines (two on the left in the figure below). But that doesn't seem to be the case. Maybe these convective lines are moving into unfavorable environments?



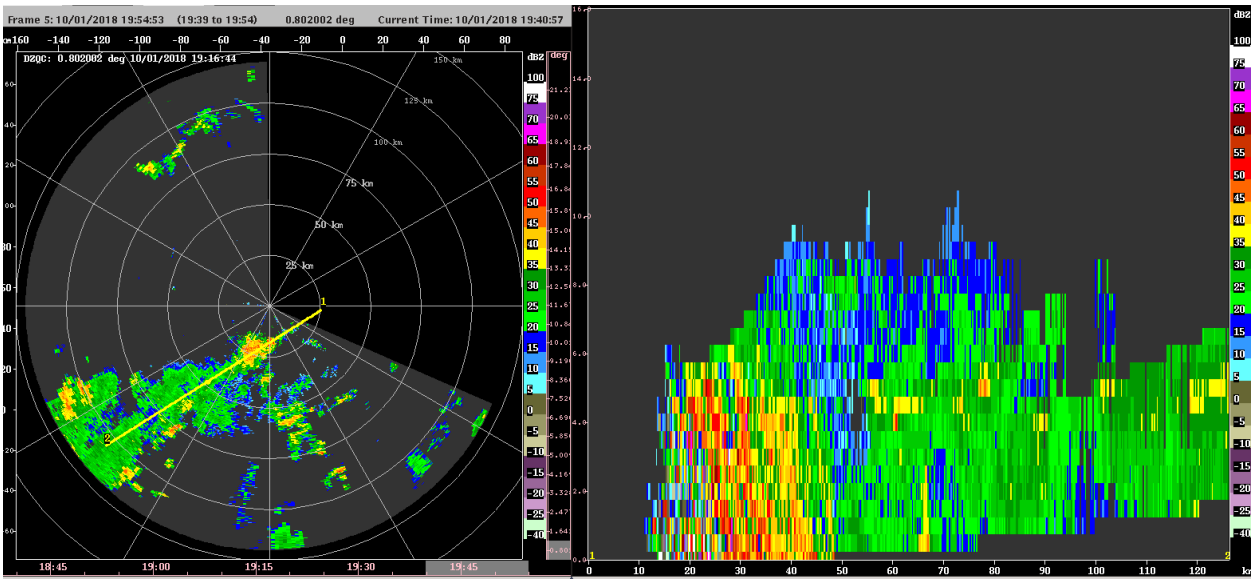

1753 – Much of the convective line has turned into stratiform precipitation. However, young convection seems to have formed on the northern edge of the convective line second from the right in the figure below.



1820 – Lightning could be seen from the back of the ship. Can't tell if it is associated with potential convection located in the blocked out area of the radar or younger convection to the northwest, about 100 km away.

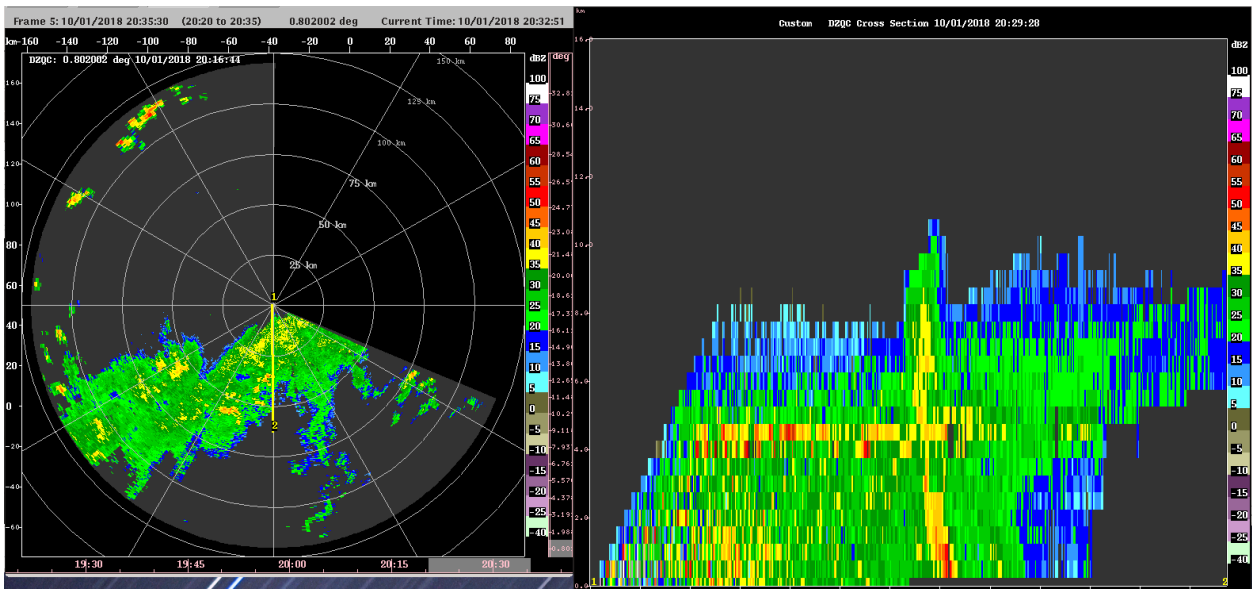
**Morning Shift (4A-9A L)**
**Ben Trabing**

1930 – Convection to the southwest of the ship is fairly deep moving from west-southwest to east-northeast. A large trailing stratiform region with a bright band is oriented behind the leading edge of convection.




1950 – Switch to NEAR since FAR is no longer topping convection just south of the radar.

2020 – Rainband is now more of a coherent stratiform feature with more localized areas of deep convection entering radar range from the northwest. It is interesting that there are still a few areas where updrafts are able to enhance reflectivities above 5 km.



2115 – Ship has turned so we can now see the stratiform precip that had moved through earlier. Some deeper convection is propagating away and near the edge of the radar domain. Continue NEAR scanning strategy to sample near stratiform band.