I believe the manuscript is much improved. I have a handful of comments. Most are small but one or two may require effort to address.

Collocation case study:
I appreciate the author's finding a new case study that does not suffer from the previous day issue described in the first review. It is worth noting that this issue can impact both the beginning and ending of a day, so the authors would need to exclude swaths for the first and last couple of hours of each day to be sure they removed the issue. The updated text starting at line 273 suggests they only excluded data after 22:00 UTC.

Section 3.2
I have concerns about the Level 2 collocated data. Typically a comparison of an imager and lidar would best be done for simultaneous nadir overpasses (SNO), the 'nadir' being an important part of that. In this case there is no mention of sensor zenith angle criteria being applied for the collocations. I don't believe they could be, because to get collocations close to nadir they would need to be farther poleward than the Southern Ocean. This creates a challenge, as imagers viewing clouds at oblique angles can impact cloud height, fraction, and optical depth retrievals, when compared to nadir observations of the same clouds. I think a section describing this challenge and how it could impact the results is warranted.

Figures 7 and 9:
Labels still reads PATMOS instead of PATMOS-x

Figure 8:
The caption says MODIS is the top row and CMSAF is the middle row. I think this should be switched. I'm also having trouble reconciling numbers in Figure 8 and Table 6 with the conclusions and abstract of the article:

"*In the case of the CTH analysis, a mean absolute bias of 0.65 km (AVHRR CMSAF), 1.02 km (MODIS), and 1.28 km (AVHRR PATMOS-x) was observed for single-layer cloud scenes cases. This mean bias increased to 1.85 km (AVHRR CMSAF), 3.23 km (MODIS), and 3.30 km (AVHRR PATMOS-x) for multilayered cloud scenes. Hence, we can conclude that the passive sensor MAE against the active sensor for multilayer cases is 3 to 4 times the corresponding MAE for single-layer cases and 2 times MAE for the overall year. The bias can also be attributed to the retrieval algorithm differences, COD of the layers, and sensitivity of sensors to the cloud.*"

This (and text beginning at line 737) suggests CMSAF performed significantly better for single- and multi-layer cases than PATMOS-x or MODIS, but the stats in Figure 8 show CMSAF has noticeably larger MBE and RMSE than the other two for multi-layer cases. Rereading the description, it seems the conclusions are based on comparisons with no COD threshold, but Figure 8 applies a COD threshold of 0.5. This makes more sense, but I am curious why the threshold of 0.5 was chosen, and why are the conclusions based on no threshold? Looking at Figure 8, one could reasonably conclude that MODIS performed best for single-layer clouds and PATMOS-x performed best for multi-layered clouds. I've seen similar comparisons where a COD threshold of 0.1 was chosen to filter out sub-visible cloud that a lidar may detect but an imager

would not. Using 0.5 would filter out some pretty thick clouds. Is this based on a previous study?