This paper develops a methodology for retrieving rainfall rates using data from two vertically pointing radars and a scanning radar at the ENA site in the Azores that is operated by the DOE ARM program. Overall, I think the rainfall rate retrieval using the adaptive Z-R relationship the and is a valuable contribution to AMT. This paper could be used as a citation for the ARM instrument mentors in the development of rainfall VAD products over the ENA. I do have a few concerns with the paper though before I would say that it is fit for publication in EMT.

One major concern is that in their calibration of the XSAPR2 data they state that there is no significant bias between the GPM reflectivities and the XSAPR2 reflectivities. However, in their own scatter plot, XSAPR2 looks to be about +2 or 3 dB hotter for reflectivities greater than about 25 dBZ, but it's hard to tell without applying statistical fits and tests. I am concerned that the agreement XSAPR2 and GPM at higher reflectivities (and hence higher rain rates) may not be as clear cut as is suggested in the paper.

My other major concern is that the authors mention that "considerable differences in precipitation rate statistics estimated by XSAPR2 and KAZR2 challenge our ability to objectively estimate precipitation statistics over a domain." I do not quite agree with this statement. The authors themselves have even established that XSAPR2 will provide better statistics simply due to the greater spatial coverage of XSAPR2. I think you can easily say that XSAPR2 is the better choice for deriving rainfall statistics simply due to its spatial coverage and reduced attenuation compared to KAZR2. So, I would like the authors to further clarify how these considerable differences between the two somehow complicate rainfall retrievals, because I honestly see a clear cut choice here.

The figures are also referred to out of order. For example, Figure 9 is referred to before Figure 6, which made it confusing for me to follow the figures. I would ask the authors in the next draft to place the figures in the order that they are referred to first in the paper. Also, there are incorrect references to Figure 7. I would urge the authors in the next draft to ensure that the Figures are also referred to correctly.

Major comments:

Line 37: Are you missing a "these" here? Right now you are suggesting that observations in general cannot produce objective estimates of precipitation, which is definitely not the case for every single situation.

Line 79: Is the lack of signal in KDP, ZDR simply a consequence of a narrower DSD that would be expected during the warm rain process?

Lines 316-319: I do not agree that there is no significant bias shown in this scatter plot. Figure 4d does look like there is a high bias in XSAPR2 when Z > 25 dBZ. Is it possible that the DPR data are contaminated by attenuation? Given the short wavelength I would think this would be a possibility. I think a more careful examination of this comparison is warranted.

Line 357-360: It actually looks like a lot of precipitation reaches the surface in Figure 5b, especially after 8 UTC. Could you please clarify in what conditions there is a more active evaporation process?

Section 4.3: Why were two different tilts of KaSACR2 and XSAPR2 used here? These two radars could be showing areas scanned that are 0.5 km apart. Also, there are several incorrect figures references in this section that need to be cleaned up.

Line 413: You mention that the two-way gas attenuation of XSAPR2 is negligible. However, attenuation from liquid at X-band can be significant, especially in the isolated deep convective cells. Have you applied any corrections for attenuation to the Z values in the development of your adaptive technique? Perhaps attenuation is not a major issue for the lighter precipitation events commonly observed at ENA, but I would foresee it being an issue in the isolated deep convective cases. Therefore, I think it's necessary to factor in the potential effects of liquid attenuation in your analysis.

Line 642-647: The considerable differences that we see are simply due to the very different samples that these instruments take. KAZR2 takes a soda straw view of the convection while XSAPR2 retrieves a full 3D volume. In addition, KAZR2 will be more heavily attenuated in heavy precipiation than XSAPR2. Therefore, these two p.d.f.s do not represent the same regions within the convection, and in general I would expect KAZR2 to not be as statistically representative of the observations simple due to the much lower sample volume you're factoring in. So it's not a surprise that the statistics are so different for lower averaging intervals. Have you tried to compare the statistics where the two are scanning the same spot? For example, by comparing the statistics over a single gate of XSAPR2 that is directly over KAZR2?

Minor comments:

Abstract line 34:
I would say the domain in terms of x by y km, not in km^2. This is generally more intuitive to the reader.

Line 59: Run-on sentence here.

Line 245: Extra "-" here.

Line 301: "XSAPR2."

Line 316: Though should be "although."

Figure 1: Your figures are not quite inside the boxes. Honestly, I would just remove the boxes around the figures.