Review of Vaccareno et al.: An integrated approach to monitor the calibration stability of operational dual-polarization radars

The paper presents an original and logic combination of existing methods (Sun monitoring, Self-consistency, Inter-calibration (or inter-radar comparison), and ground clutter returns) to monitor the calibration stability for operational dual-polarization radars. The method is well detailed and clear, with good examples to show the performance of such method. I believe that such methodology will (and it should!) become the standard to monitor radar networks. It is already the case for some radar networks but this approach is much clearer.

My suggestion is to do some modifications:

General comments:

In the abstract and the introduction you should mention the calibration using rain gauges, because as far as I know it's one of the most used methods for the calibration (quantitatively).

In the paper, there are a lot of repetitions:

- In the abstract L5-6 and L16-17
- Page 6, L5-7
- Page 8, L26-30
- Page 10, L25-26

The inter-calibration technique: it is not a new development; it was already developed in France and in Canada, please refers to:

- Zlatko Vukovic, Environment Canada, Canada, and M.C. Jim Young, Norman Donaldson: Inter-radar comparison accounting for partially overlapping volumes, Erad 2014, Garmish Partenkirchen Germany.
- Ribaud, J.-F., Bousquet, O., Coquillat, S., Al-Sakka, H., Lambert, D., Ducrocq, V. and Fontaine, E. (2015), Evaluation and application of hydrometeor classification algorithm outputs inferred from multi-frequency dual-polarimetric radar observations collected during HyMeX. Q.J.R. Meteorol. Soc. doi: 10.1002/qj.2589

  These references have the same method, perhaps it is not 100% similar, but for me it is enough similar and they should be mentioned!

Specific comments: (P: page, L: line)

P2, L29: why only the first and the last day?

P2, L29: What is "proper meteorological conditions" means, can the authors specify the characterizations.

Pa 3, L5: Please add (asl) so you can use it correctly later, i.e L16 of the same page.

P3, L11: ZH and ZDR are already defined.

P3, L12: 50 pulses for H and V or 50 pulses for each?

P5, L14: "same frequency": just as remark, I believe that such method is much more valuable when you use 2 different wavelengths to better study the PIA, PIDA and for microphysics!

P5, L15: theoretical model: what you mean by that, normal propagation?

P5, L16: sufficient met echoes, how much?

P5, L19: I understand that the radar cells should have similar size, but what is your percentage of tolerance.

P6, L11: 10^5 is by time step comparison (every 10 min)?

P6, L21: perhaps you should mention here the abnormal propagation (anaprop)?

P7, L1: here the authors are talking about all the ground clutter or the nearest one? Is there any threshold on ZH?

P7, L10: and 3d, a space is missing.

P9, L3: this part is tricky, the authors are using a product to evaluate a moment, BUT this moment is used to calculate the product!

P9, L6: why this interval for ZH?

P10, L7: -0.49 basing on the figure and not -0.5

P10, L21: please remove s from models; I guess the authors are using one NWP model.

P10, L25: Are you taking a ring around the radar or some specific points.