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Interactive comment on "The TRIple-frequency and Polarimetric radar Experiment for improving process observation of winter precipitation" *by* José Dias Neto et al.

Anonymous Referee #5

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General Impression

The manuscript "The TRIple-frequency and Polarimetric radar Experiment for improving process observation of winter precipitation" is a well constructed paper detailing a dataset that will be very valuable to the scientific community. The authors clearly state their methodology for intercalibrating three radars of different wavelengths, and they wrap up the manuscript with a brief analysis of the triple-frequency observations of ice clouds and snow. After some minor editing, this manuscript will be ready for publication.

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Discussion paper

Detailed Comments

Page 6: The units for DWR should be dB not dBZ. The units in the data files, however, are correct.

Page 7, line 25: The Rosenkranz citation is incomplete. This paper only deals with water vapor absorption. The other references, a corrigendum for the water vapor paper [1] and a book chapter that covers the other gasses [2], should also be included.

Page 9, lines 1 and 2: "Mie" should be be replaced with "non-Rayleigh."

In the data files, the units for path-integrated attenuation are listed as dBZ, but they should be dB.

Technical Corrections

Page 6, line 6: "...ensures to conserve..." Replace the "to" with "we."

Page 10, line 28: "...populate in areas..." Remove "in."

Page 13, line 13: "dBz" should be "dBZ."

Page 16, line 24: "...allows to estimate..." should be "...allows us to estimate..."

Page 21, line 13: "...we recommend to always apply..." should be "...we always recommend applying..."

References

[1] P W Rosenkranz, “Correction to ’water vapor microwave continuum absorption: A comparison of measurements and models’,” Radio Sci., vol. 34, pp. 1025, Apr 1999.

[2] P W Rosenkranz, “Absorption of microwaves by atmospheric gasses,” in Atmospheric Remote Sensing by Microwave Radiometry, M A Janssen, Ed., pp. 37–90. Wiley, 1993.

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