

# General comment by the authors to the Reviewer #5:

We thank the reviewer for the time and effort in reading the manuscript and for the constructive comments and suggestion which we in the following address point by point (our answers are marked with blue font color).

## Reviewer #5

### 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 inter calibrating 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.

### Detailed Comments

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

**A: On page 6 line 3, we are saying that the units of the Ze (and not DWR) is in dBZ in order to use the DWR formula.**

**"... dual wavelength ratios (DWRs) which is defined for two wavelengths  $\lambda_1$  and  $\lambda_2$  as  $DWR = Ze_{\lambda_1} - Ze_{\lambda_2}$  where  $Ze_{\lambda}$  is in dBZ."**

2) 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.

**A: We are thankful for the reviewer comment and we agree that the citation was incomplete. We included the suggested references.**

3) Page 9, lines 1 and 2: "Mie" should be replaced with "non-Rayleigh." In the data files, the units for path-integrated attenuation are listed as dBZ, but they should be dB.

**A: We replaced "Mie" by "non-Rayleigh" as suggested by the reviewer, and we also corrected the unit of the path-integrated attenuation.**

Technical Corrections:

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

**A: Corrected**

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

**A: Corrected**

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

**A: Corrected**

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

**A: Corrected**

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

**A: Corrected**

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.