Comment on amt-2021-324
Anonymous Referee #1

Referee comment on "Improvement in algorithms for quality control of weather radar data (RADVOL-QC system)" by Katarzyna Ośródka and Jan Szturc, Atmos. Meas. Tech. Discuss., https://doi.org/10.5194/amt-2021-324-RC1, 2021

The manuscript "Improvement in algorithms for quality control of weather radar data (RADVOL-QC system)" written by K. Ośródka and J. Szturc describes new version of a quality control algorithm designed for radar data of the Polish weather radar network POLRAD. The manuscript in details describes improvements of the current version of RADVOL-QC system in comparison with previous version published in 2014.

The manuscript describes in more detail new algorithms that focus on solving problems mainly due to the influence of wind turbines and RLAN signals, which increasingly negatively affect radar data. In addition to the description of individual algorithms, the manuscript also verifies the efficiency of the described algorithms. This verification is primarily visual. The article would benefit if the verification were performed in some "objective" way, but I am aware that it is not easy and I do not insist on this verification.

The algorithms are described but their parameter values are shown only in one case. It would be nice for readers and potential users of described algorithms to know specific values of thresholds used by the authors.

The article is well structured and is written clearly. It is obvious and well known that the authors have been interested in the given topic for a long time and they are experts in this field. I appreciate that the article is based on and solves real operational problems associated with the preparation of radar data. The topic is suitable for the selected journal and will be interesting for people using meteorological radars as they propose new tested algorithms.

I recommend improving the language of the text.

I recommend accepting the manuscript after minor revision.

Specific comments:

Line 71 – Please, reformulate “is assigned a single measurement”.

Line 74 – “,” should be after RADVOL QC.
Line 78 – I recommend explaining why data should be extrapolated to the Earth.

Line 117-118 – Could you describe in more detail “this in fact …algorithm”.

Line 141 – I do not consider “event” as an appropriate word in this context. Convective weather?

Line 204 – “significantly” is not suitable word in this context.

Line 232 – Could you clarify your statement about the threshold value?

Line 299-301 – Do you say that after this sentence the modified algorithms are described? It is not obvious to me.

Line 334 – When you speak about echo here and also in other parts of the text do you mean non zero reflectivity or reflectivity exceeding some threshold?

Line 399 – Please reformulate the sentence “If a …”.

Line 410-412 – I am not sure that I understand the meaning of the sentence. What is the first condition and when is the procedure stopped?

Line 420 – interpolated instead of interpolates.