

Sincere thanks to both community members for their comments on this work. The comment is in normal color, while the [answer is in blue](#).

Community comment 1

This comment refers to Section 6, Figure 7 of the paper. The variations in the reflectivity bias cannot be attributed to the installation of the clutter fence, as it does not obstruct the radar beam; therefore, no attenuation caused by the fence is expected. Following consultation with the radar manufacturer, the variations in the reflectivity bias are considered to be at least partly attributable to a misalignment of the phase correction position (PCP) in the signal processing chain of the magnetron-based pulse-Doppler radar MIRA. Due to the random phase of the transmit pulses of the magnetron transmitter, the phase reference must be determined at a well-defined position within the transmitted pulse. Contrary to initial assumptions, the PCP was not automatically adjusted or tracked by the system so it had to be set manually.

If this position is not optimally configured, or if it drifts over time (e.g., due to aging of the modulator tube), the phase correction becomes suboptimal. This leads to a reduction in pulse-to-pulse coherence and consequently to a loss in effective sensitivity, which can manifest as a systematic underestimation of radar reflectivity.

Since 2019, the PCP has been regularly monitored and manually adjusted to account for such drifts, which has improved the stability of the reflectivity measurements.

[Thanks Ulrich for your nice feedback, helping us to interpret the results from this figure. We added a special mention in the acknowledgmeny for your contribution.](#)

Changes to the manuscript: [The discussion line 398-403 was changed to account of these informations. Acknowledgements changed, lines 545-546.](#)