

Quality Control and Analysis of Belgian C-band Dual-Polarimetric Radar Moments

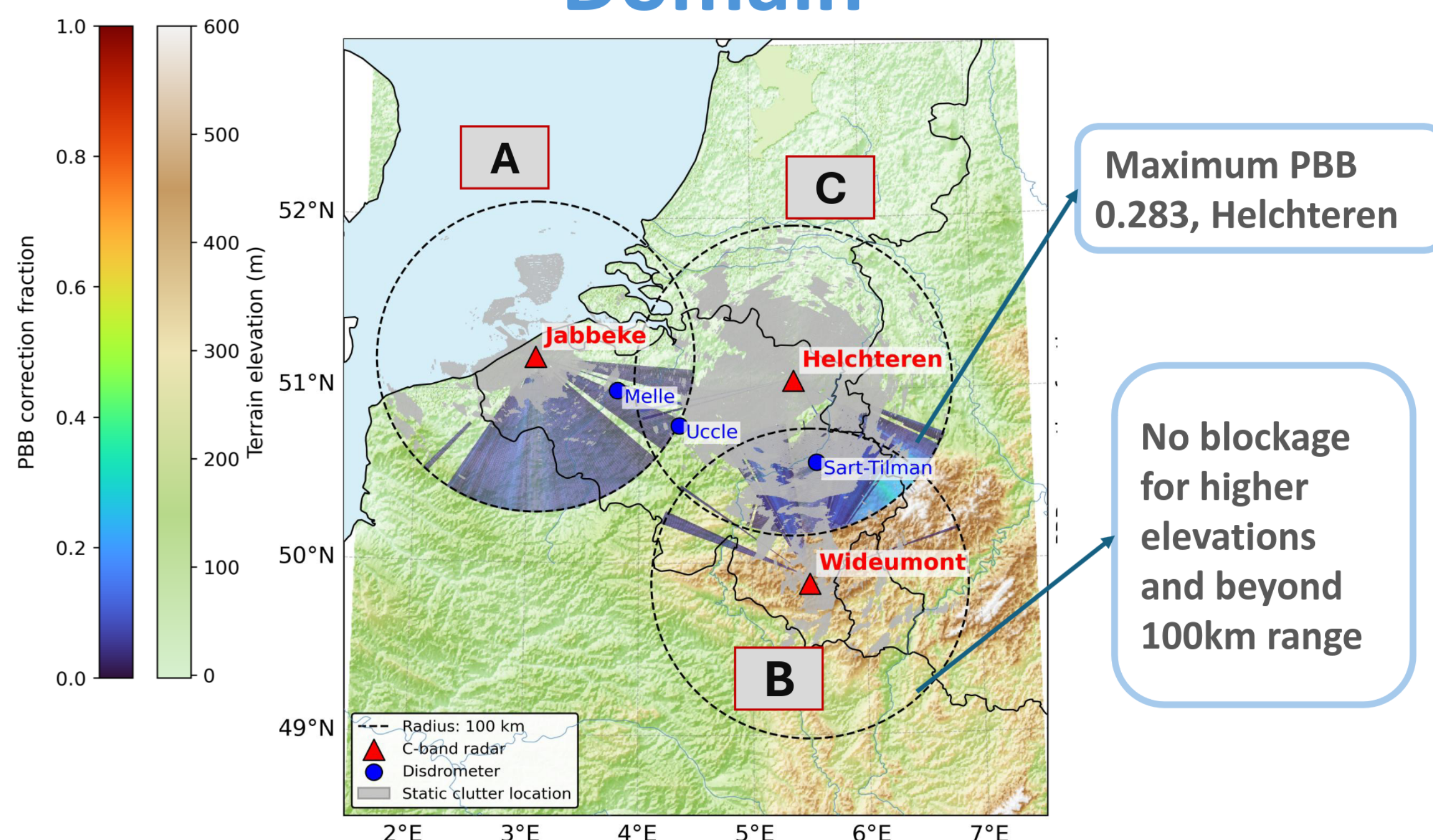
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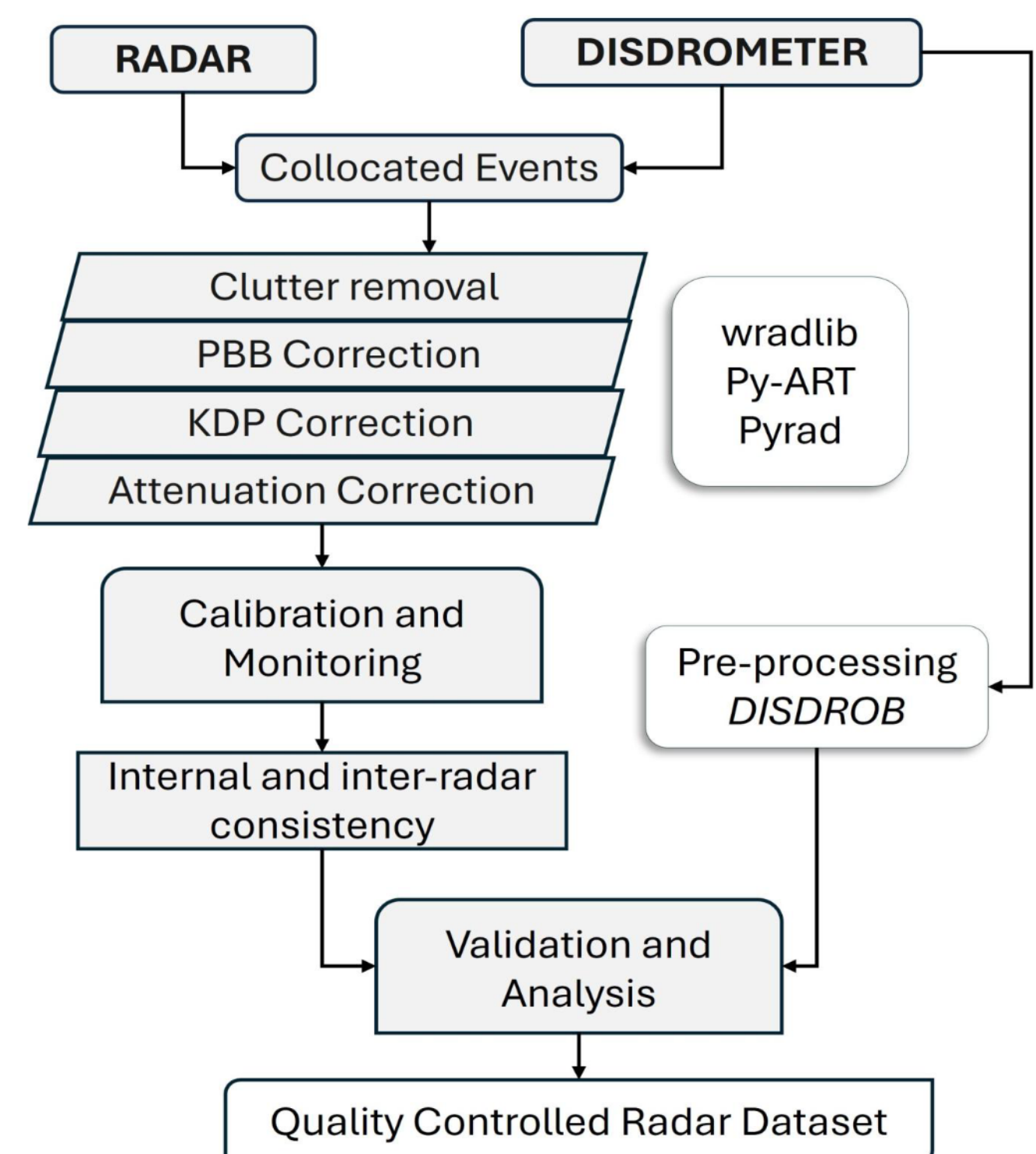
Motivation

- Weather radar scans atmosphere in high spatial and temporal resolution
- Potential for data assimilation for nowcasting
- Major challenge is ensuring the data quality

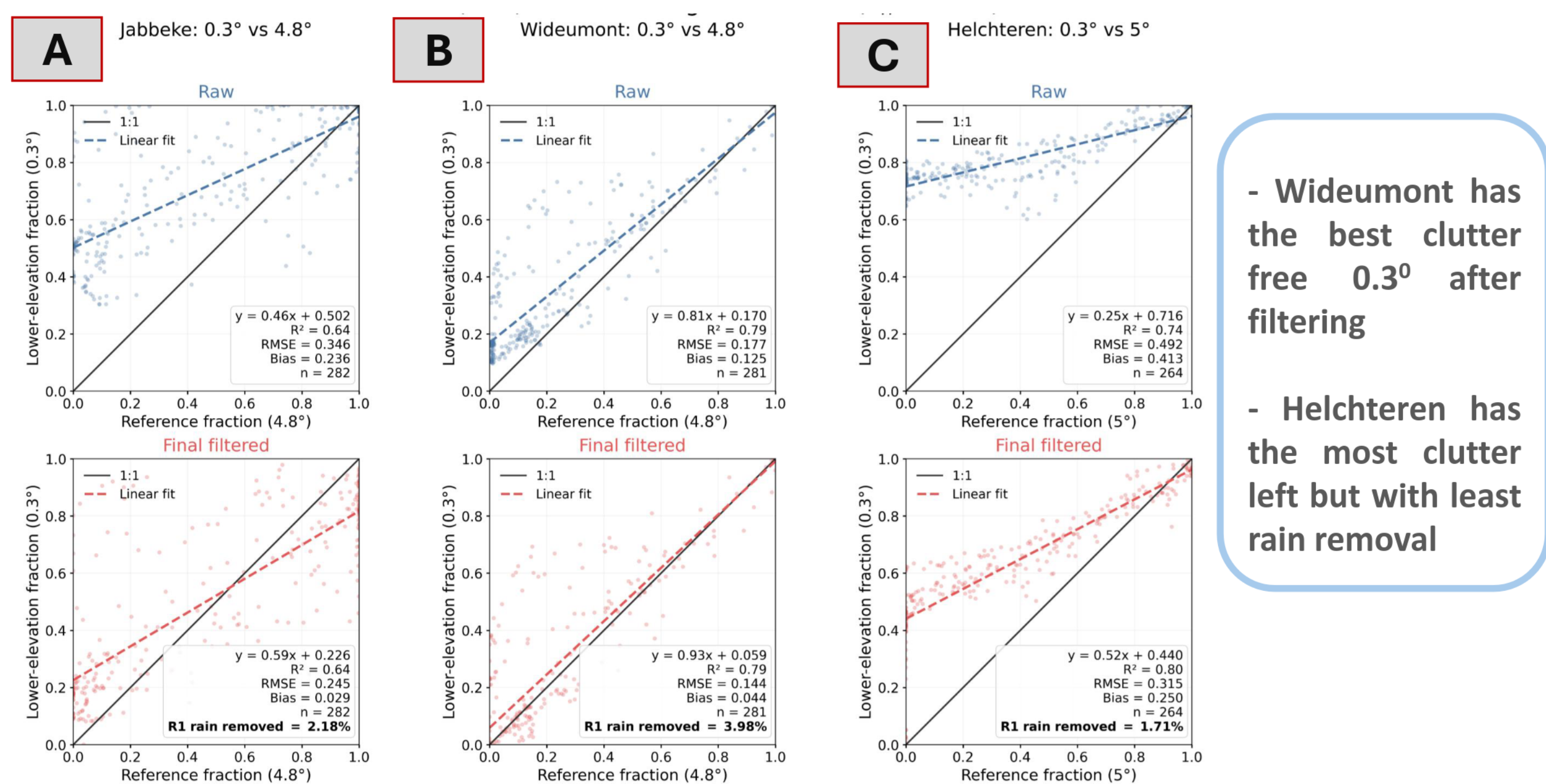
Domain



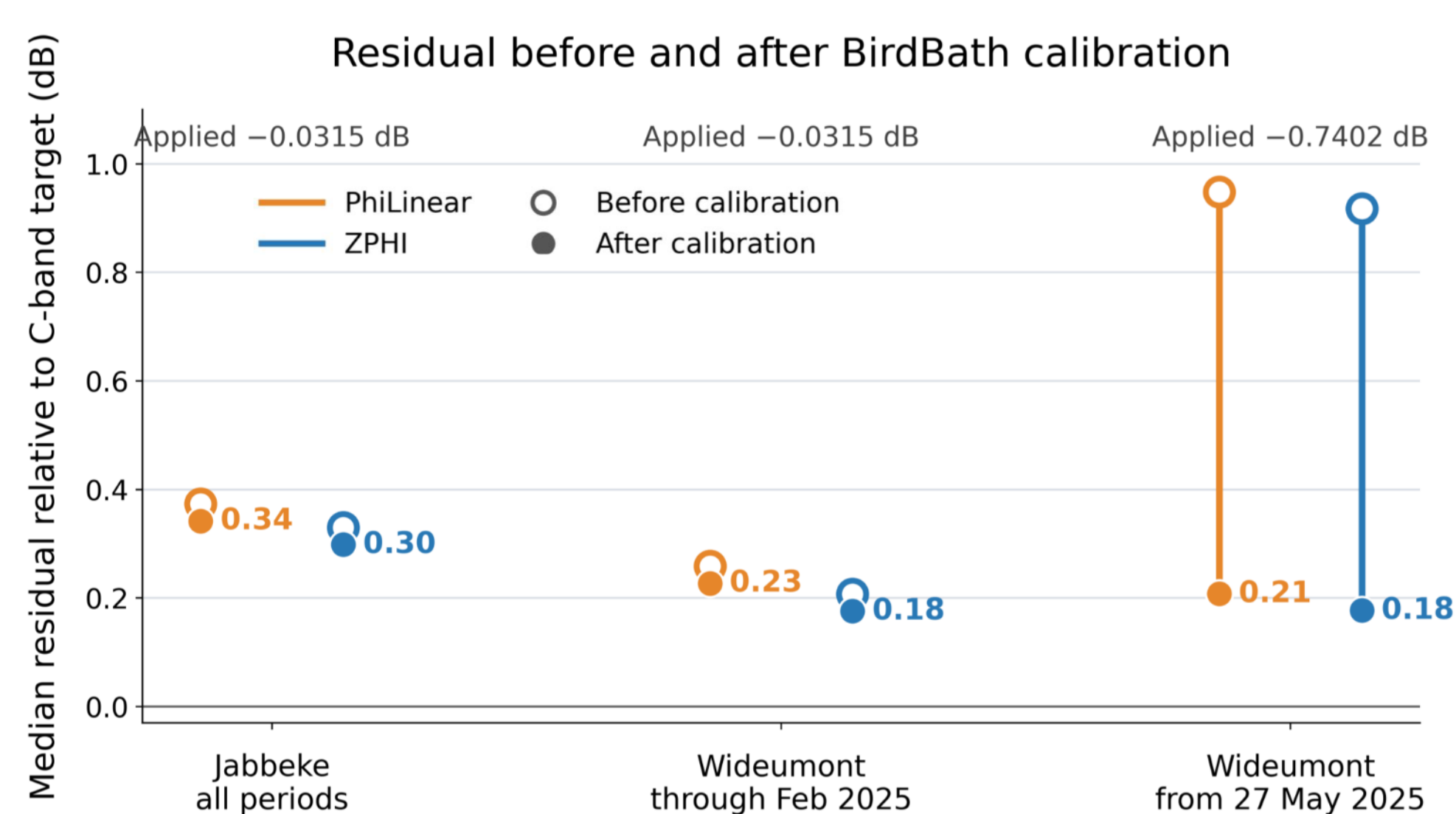
Methodology



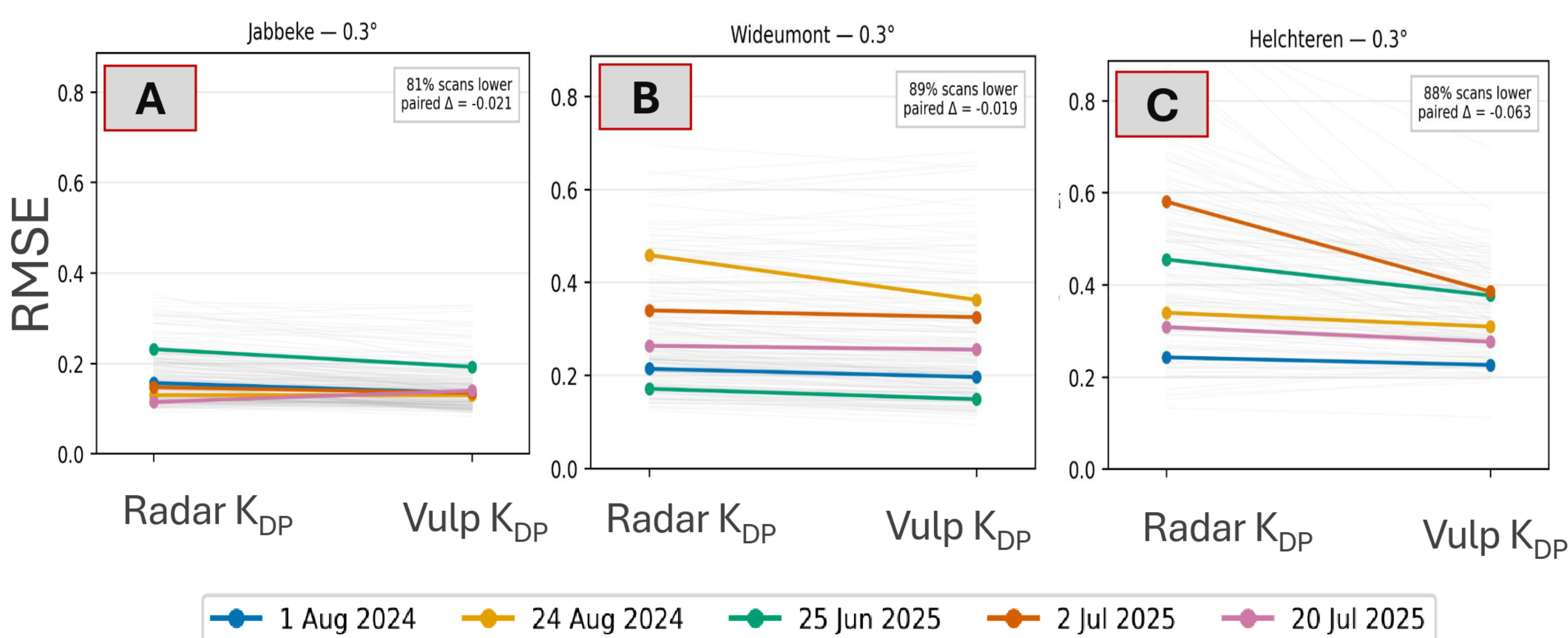
1 Removed majority of the clutter from lowest angle



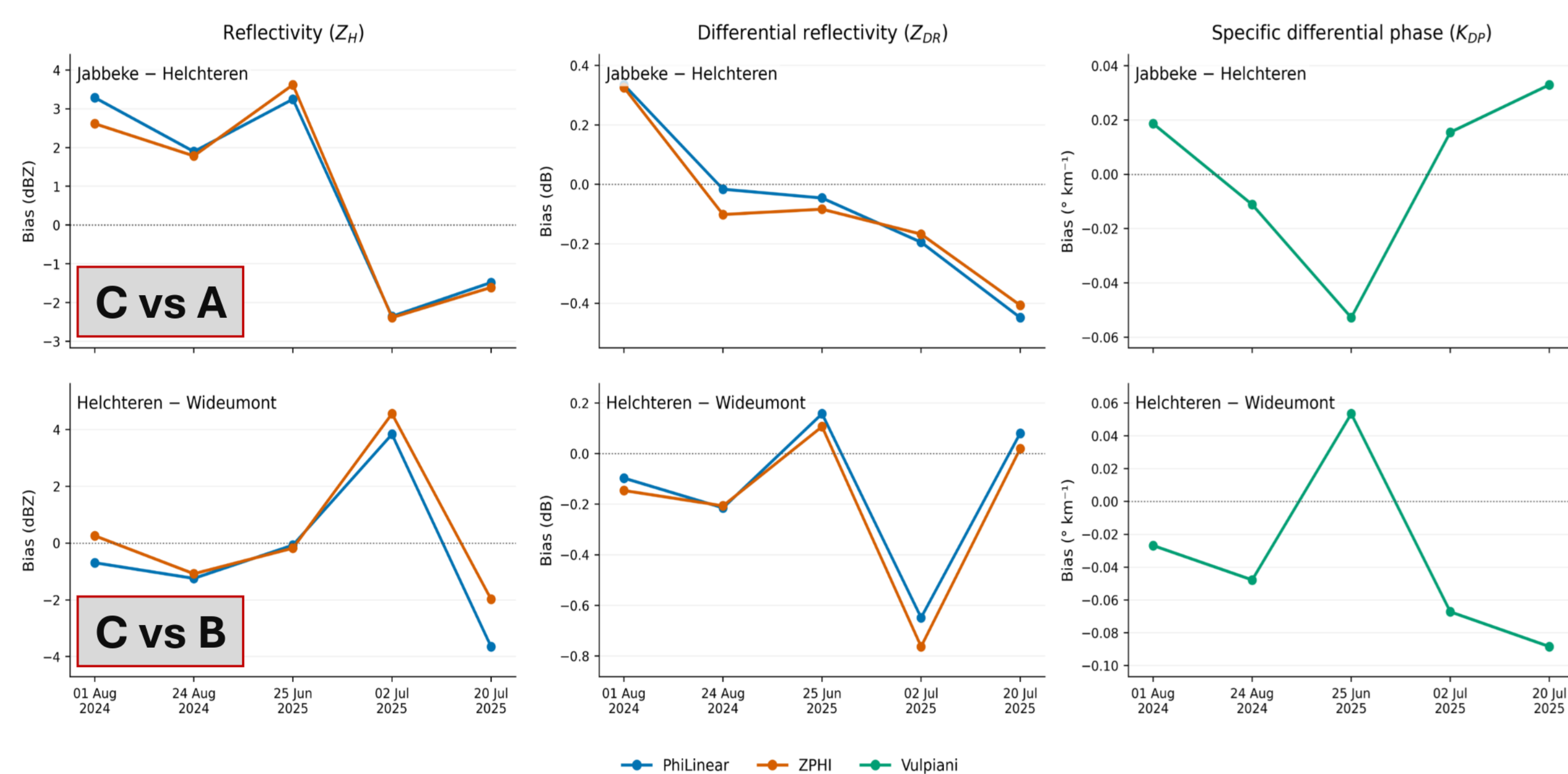
2 ZDR vertical bird bath shows small calibration error



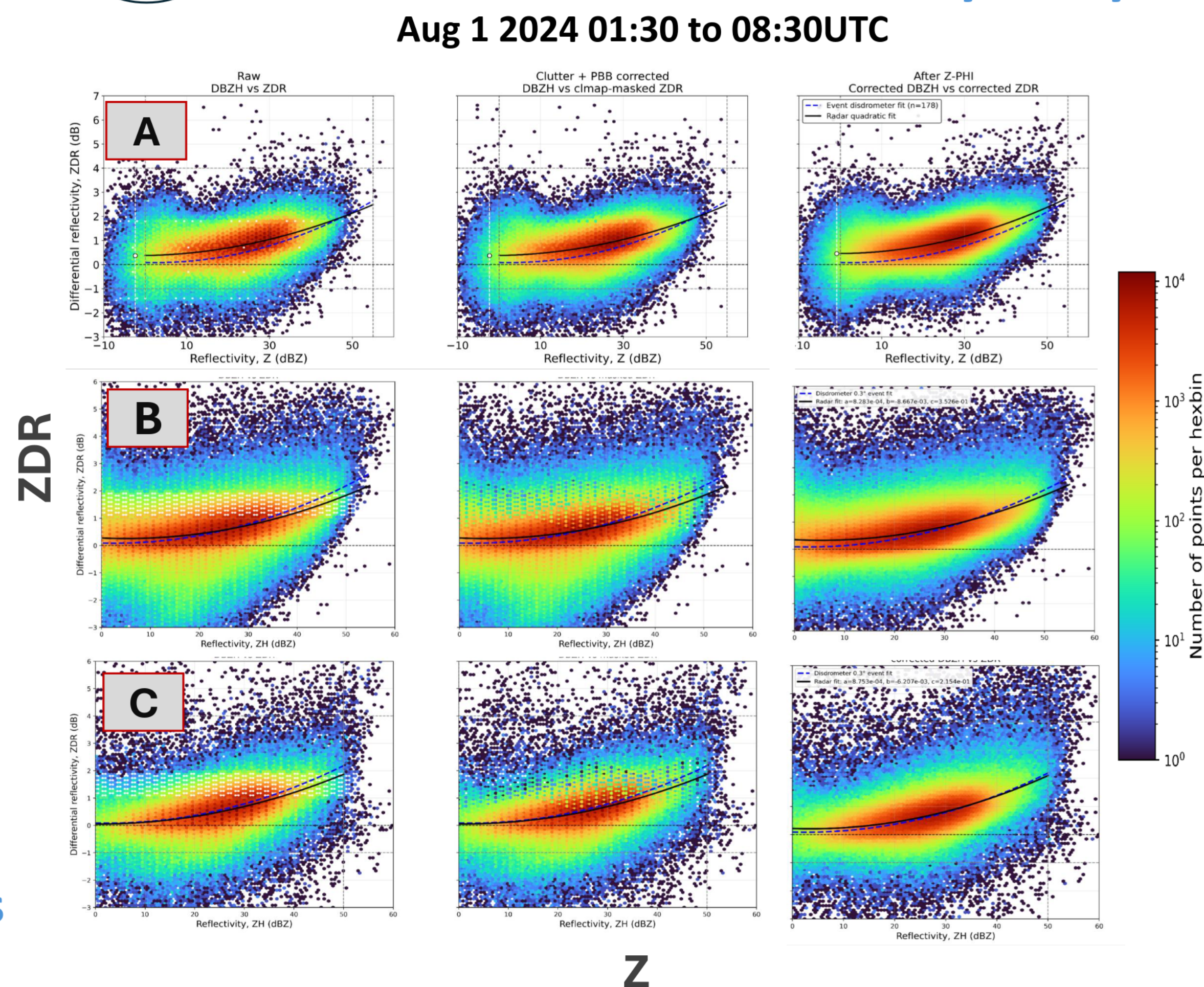
3 Vulpiani method reduced K_{DP} RMSE w.r.t disdrometer



5 Inter radar comparison at 0.3-degree elevation shows low bias



4 Attenuation correction density analysis



Conclusions

- ❑ Clutter filtering and PBB correction improved data quality.
- ❑ BirdBath calibration corrected ZDR Jabbeke and Wideumont, however small residual still left.
- ❑ Inter-radar differences were generally small.

Outlook

- ❑ Future work: add events, higher elevations analysis, KDP based attenuation correction, reflectivity calibration study and Uccle/Sart-Tilman validation for all variables.