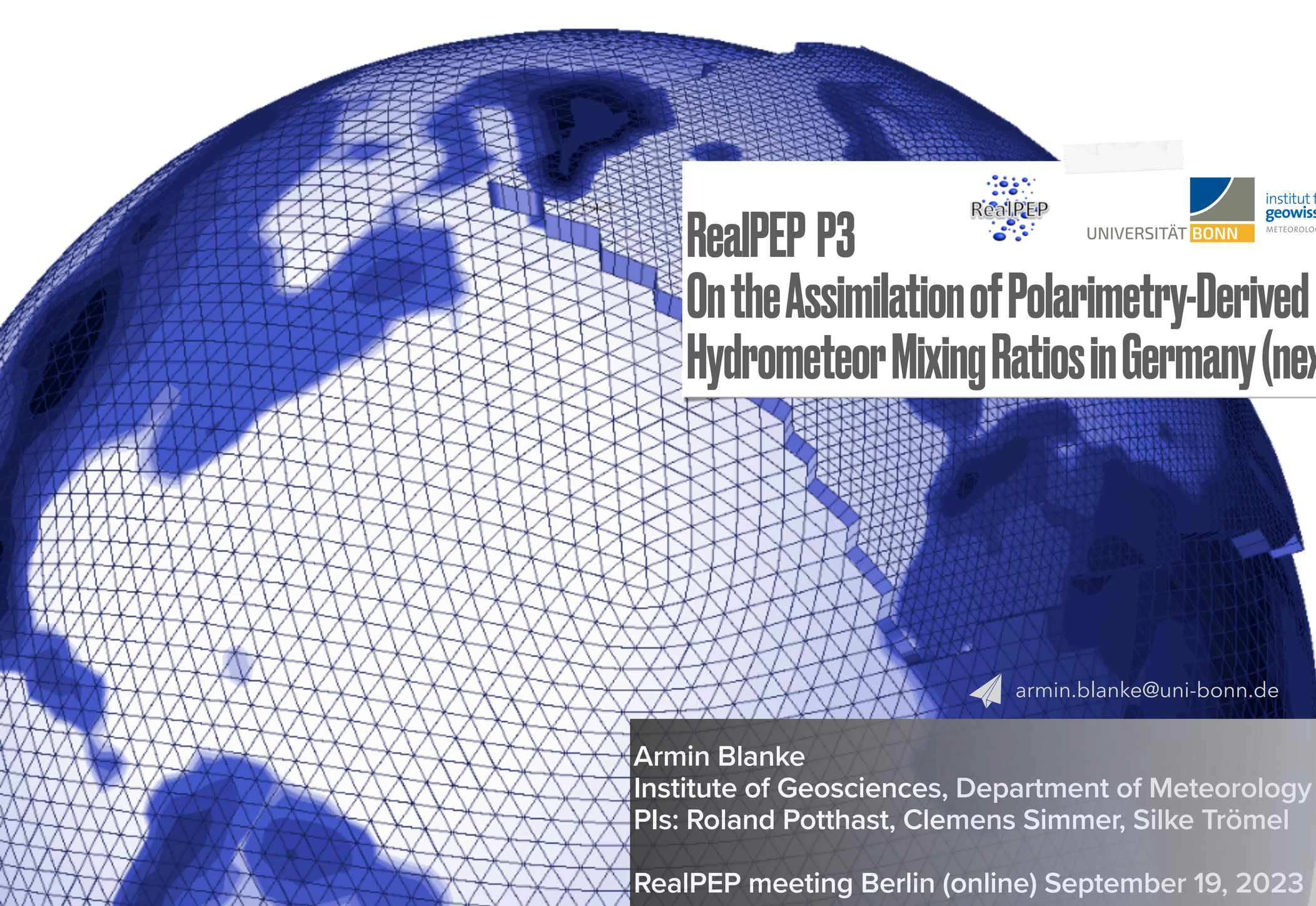

RealPEP P3

On the Assimilation of Polarimetry-Derived Hydrometeor Mixing Ratios in Germany (next steps)

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RealPEP meeting Berlin (online) September 19, 2023

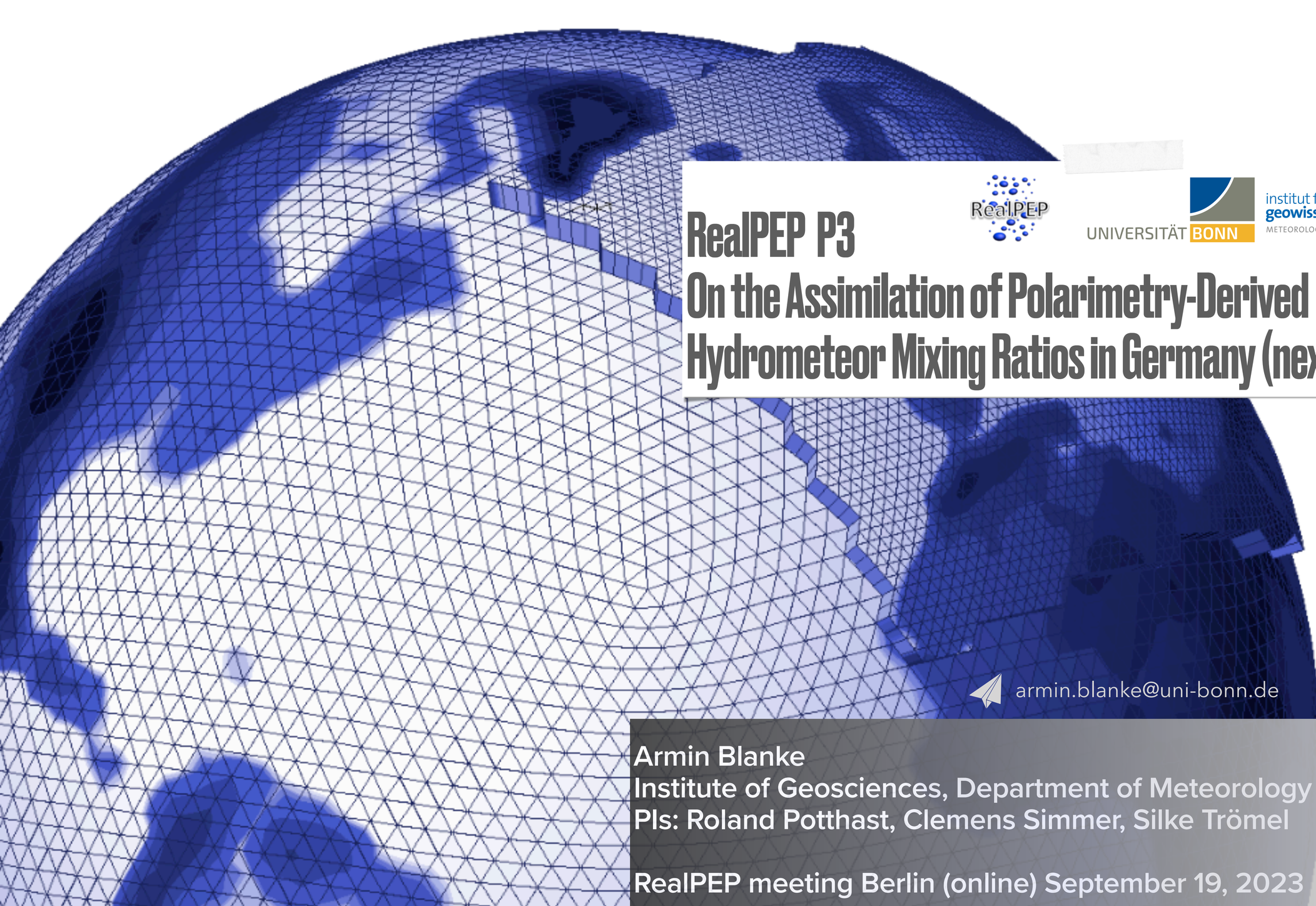
The QPF Sub-Project of RealPEP
Next steps:

- Handover from Lucas Reimann (code, notes, etc.)
- Final setup of BACY for the first runs (with the help of Klaus Vobig)

- Testing the assimilation of other 3D gridded microphysical composites in KENDA used for ICON-D2
- Direct assimilation of polarimetric moments in KENDA via radar forward operator EMVORADO-pol

Assimilation of 3D Dual-Pol Observations Hydrometeor Mixing Ratios

- Blanke et al. (2023) evaluated state-of-the-art polarimetric ice microphysical retrievals and provided the best performing set
- Reimann et al. (2023, preprint) already assimilated hybrid LWC retrieval (Reimann et al., 2021) and the hybrid IWC retrieval (Carlin et al., 2021), which is part of the best performing set of retrievals mentioned above
- We will access the remaining retrievals for D_m and N_t for the ice phase and D_0 in pure rain valid at C-band, following Bringi et al. (2009)
- Hourly QPF will be evaluated for using various configurations (e.g., CNV vs. CNV + D_m)



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