Supplementary material for:

Vertical Profiles of Aerosol Chemical Species Concentration retrieved through Synergy of Spaceborne Lidar and Polarimeter Observations

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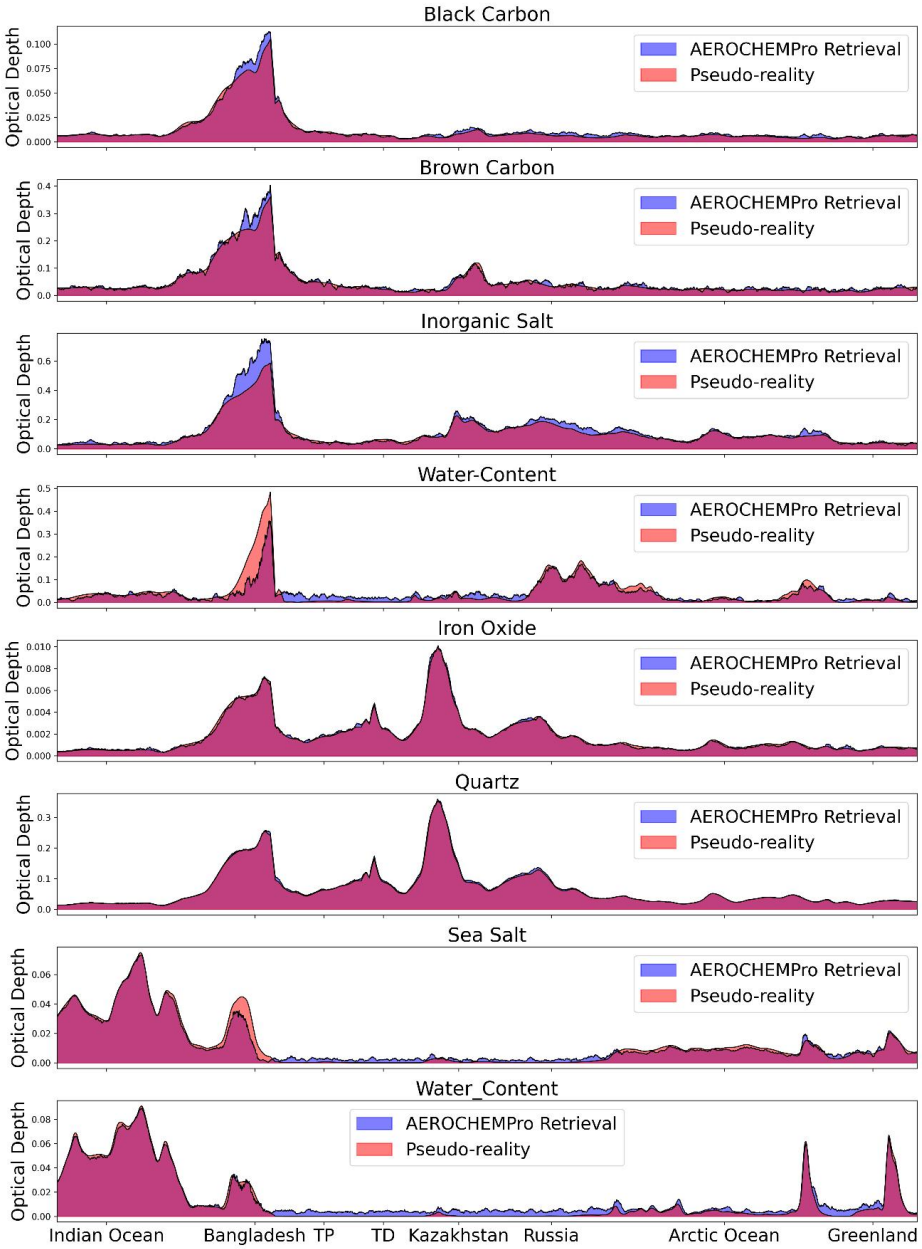

Figure S1. Aerosol optical depth at 532 nm of individual aerosol chemical species along the transect (Indian Ocean to Greenland), comparing AEROCHEMPro retrievals and Pseudo-reality simulations. Panels include: black carbon, brown carbon, inorganic salt, water content associated with fine particles, iron oxide, quartz, sea salt and water content associated with it.

Figure S1 presents an AEROCHEMPro product derived from the state-vector variables, similarly to Fig. 10. The aerosol optical depth (AOD) for each individual species derived from AEROCHEMPro retrievals and assuming vertically constant mixing ratios per mode, are calculated by multiplying the fractions ($Frac_i$) of each chemical species by the corresponding retrieved modal AOD (Fig. 9b). This derived product is indicated in the scheme of Fig. 4.