Supplementary Information: Identifying Better Indicators of Aerosol Wet Scavenging During Long-Range Transport

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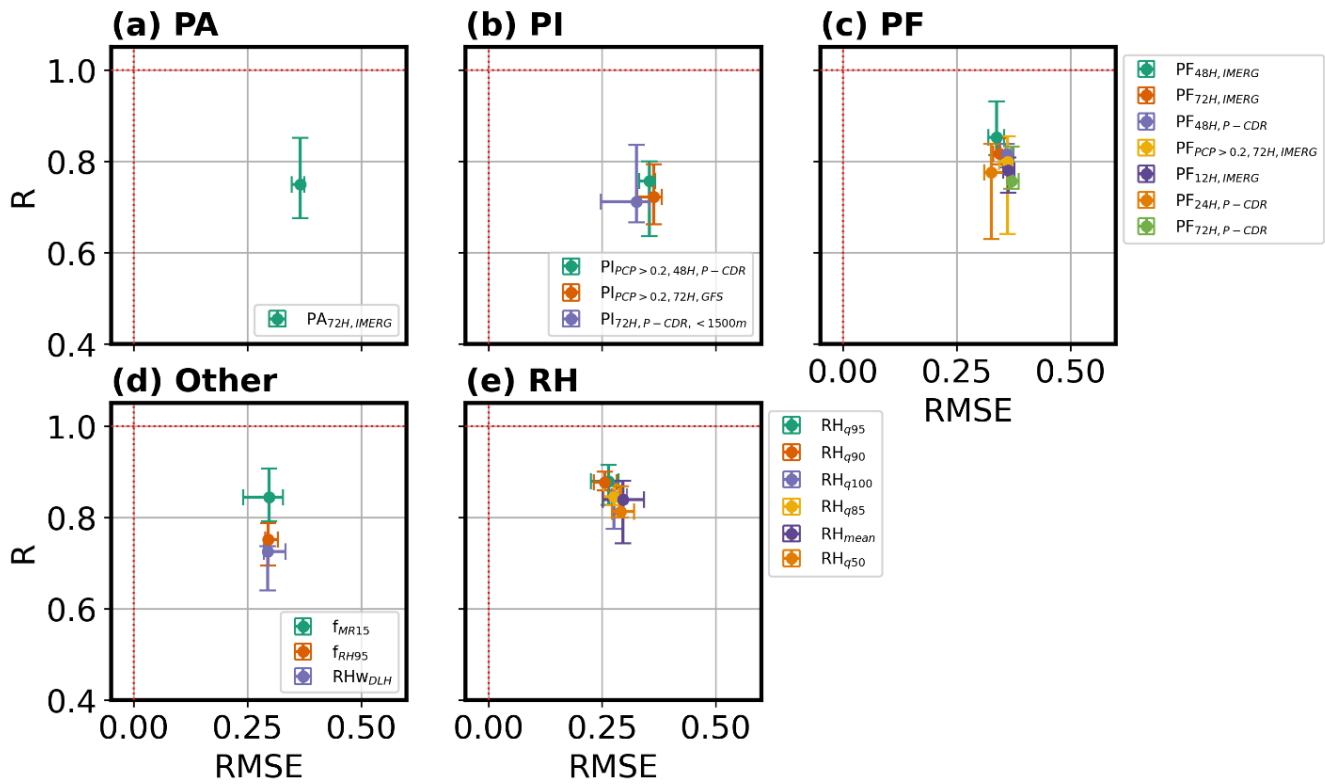
Figure S1: Root mean squared error (RMSE) and Pearson R derived from linear regressions of observed (x) and predicted (y) ΔBC/ΔCO with error bars representing the 25th and 75th percentile values derived from k-fold cross validation (k=10). Ideal values are denoted by the red dashed lines such that a better predictor would fall closer to the intersection of the two lines. Only predictors with median R > 0.71 are shown. Note that PERSIANN-CDR has been abbreviated to P-CDR (b-c). Panels share the same X- and Y-axis limits.

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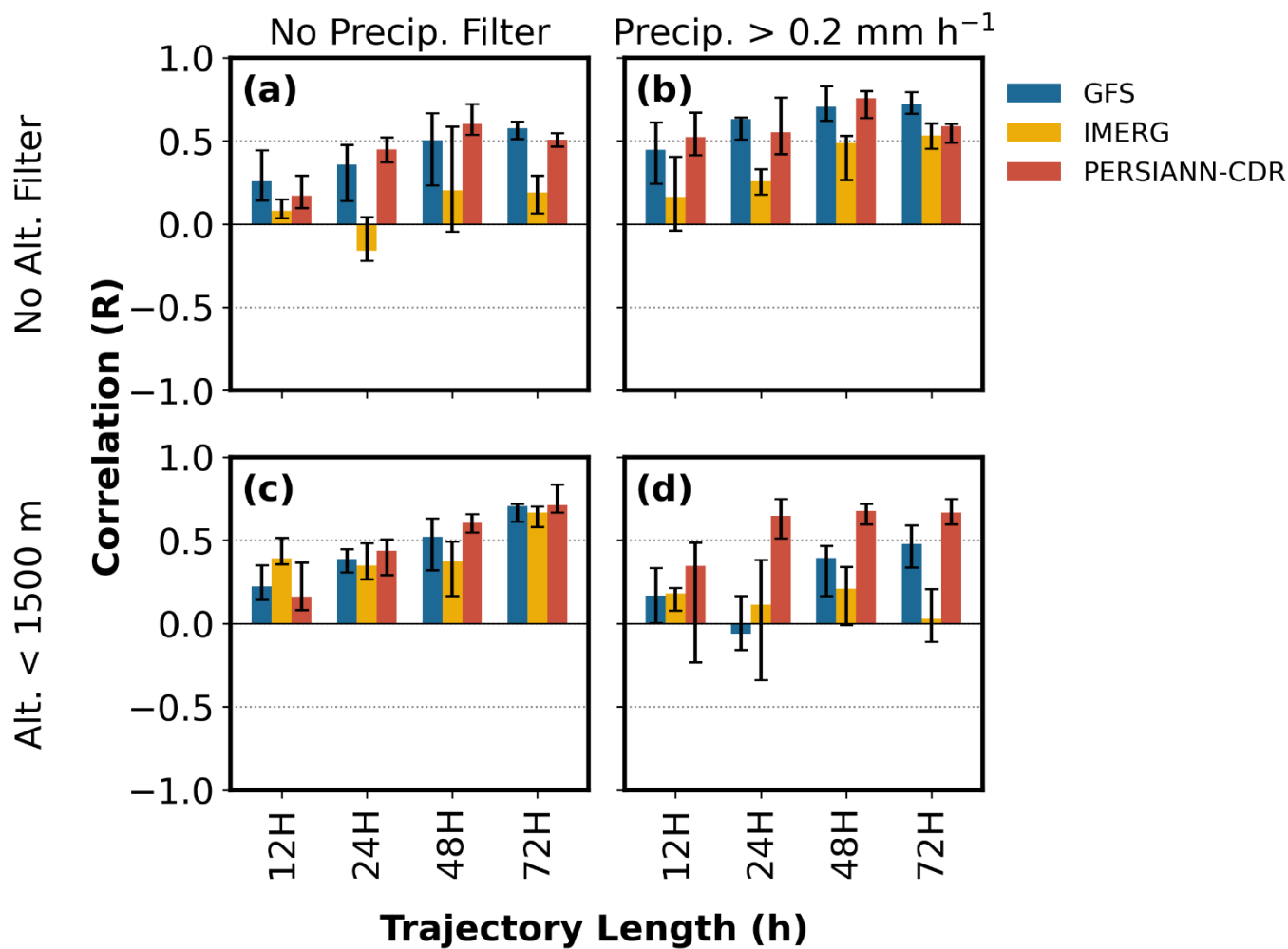
Figure S2: Pearson correlations (R) between observed ΔBC/ΔCO and ΔBC/ΔCO predicted by precipitation intensity (PI) for different trajectory lengths and precipitation data products. Each panel refers to a combination of altitude and precipitation intensity filters. Panels share the same X- and Y-axis limits.
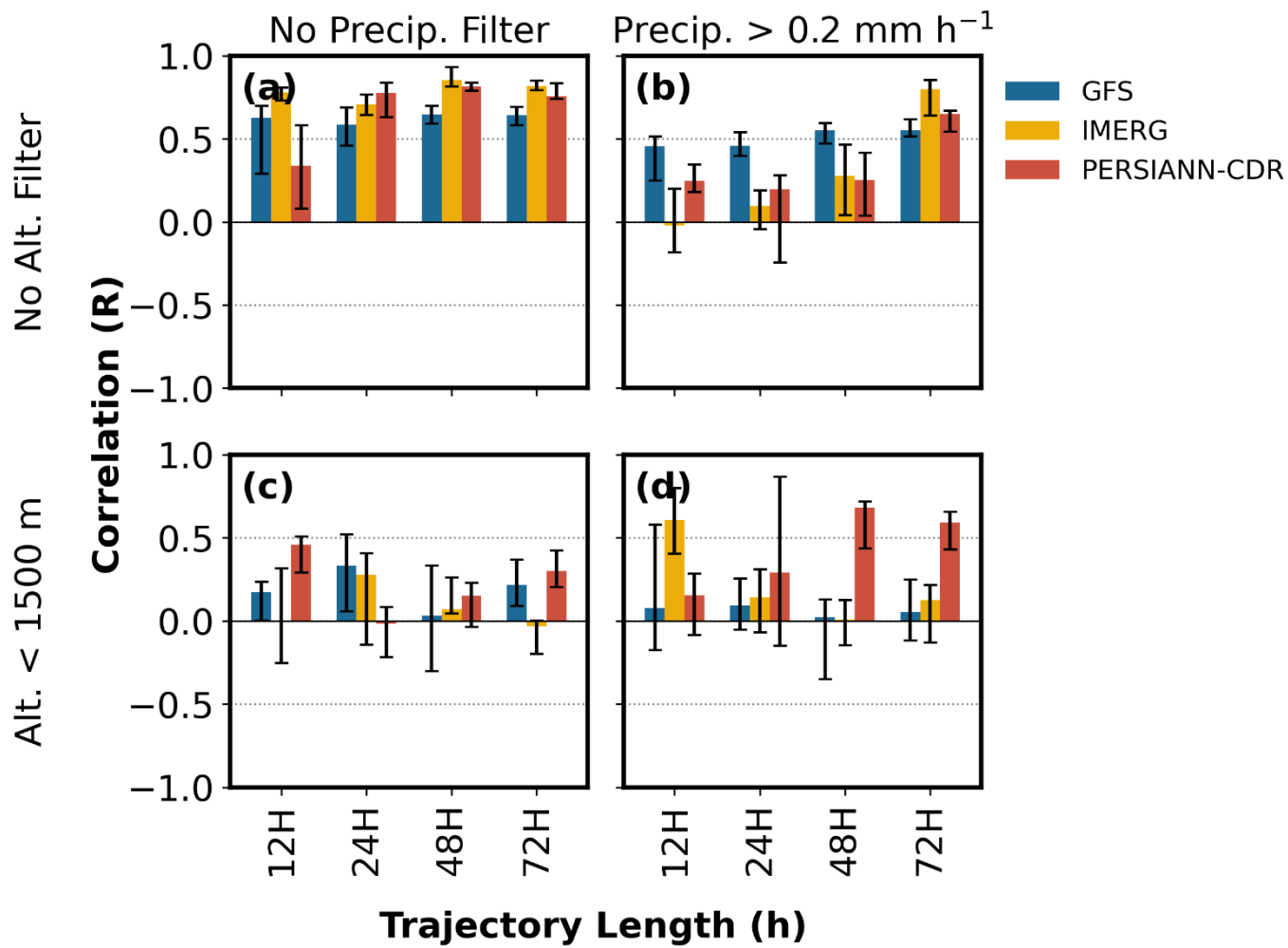
Figure S3: Same as Fig. S2 but for precipitation frequency (PF).
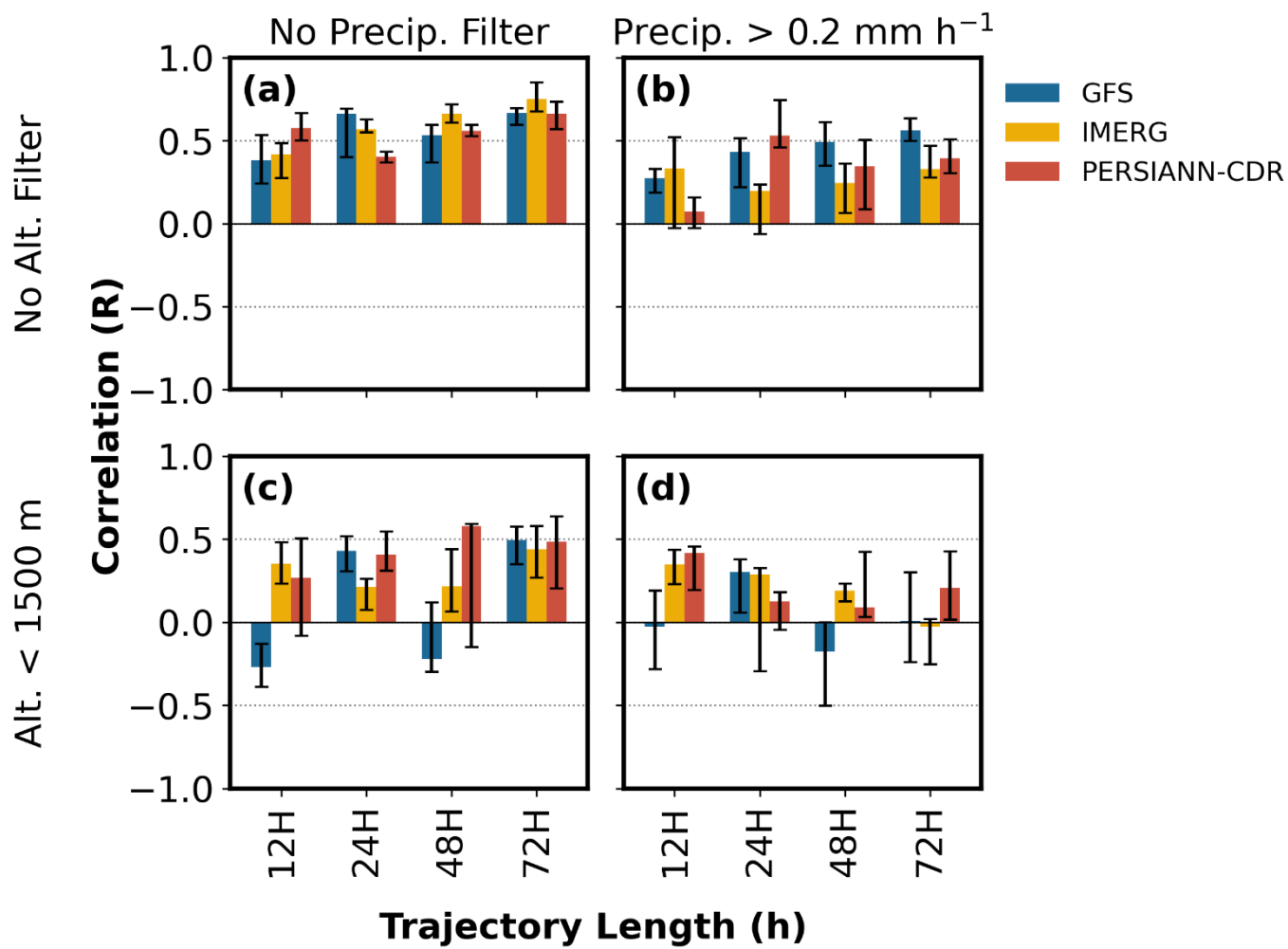
Figure S4: Same as Fig. S2 but for precipitation amount (PA).
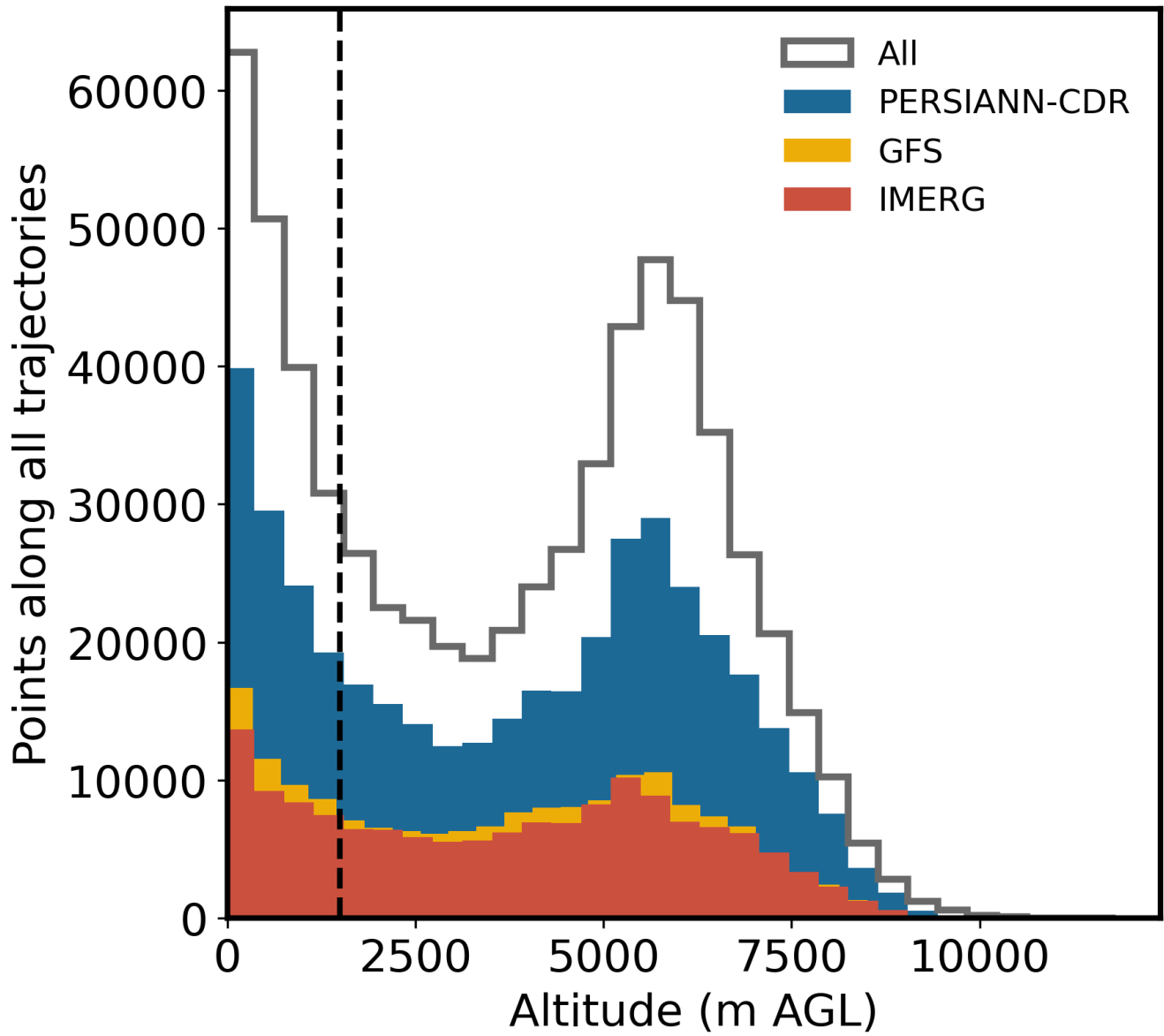
Figure S5: Histograms of trajectory altitude (m AGL) for all points along the 72-h backward trajectories (grey) and for points with non-zero precipitation based on PERSIANN-CDR (blue), GFS (yellow), and IMERG (red) (not stacked). The vertical dashed line shows the 1.5 km filter threshold used when calculating precipitation variables (Fig. 5, S2-S4).