Supplemental of:

Tropospheric and lower stratospheric water vapor profiles obtained with FTIR: comparison with balloon-borne frost point hygrometers and influence on trace gas retrievals

I. Ortega et al.
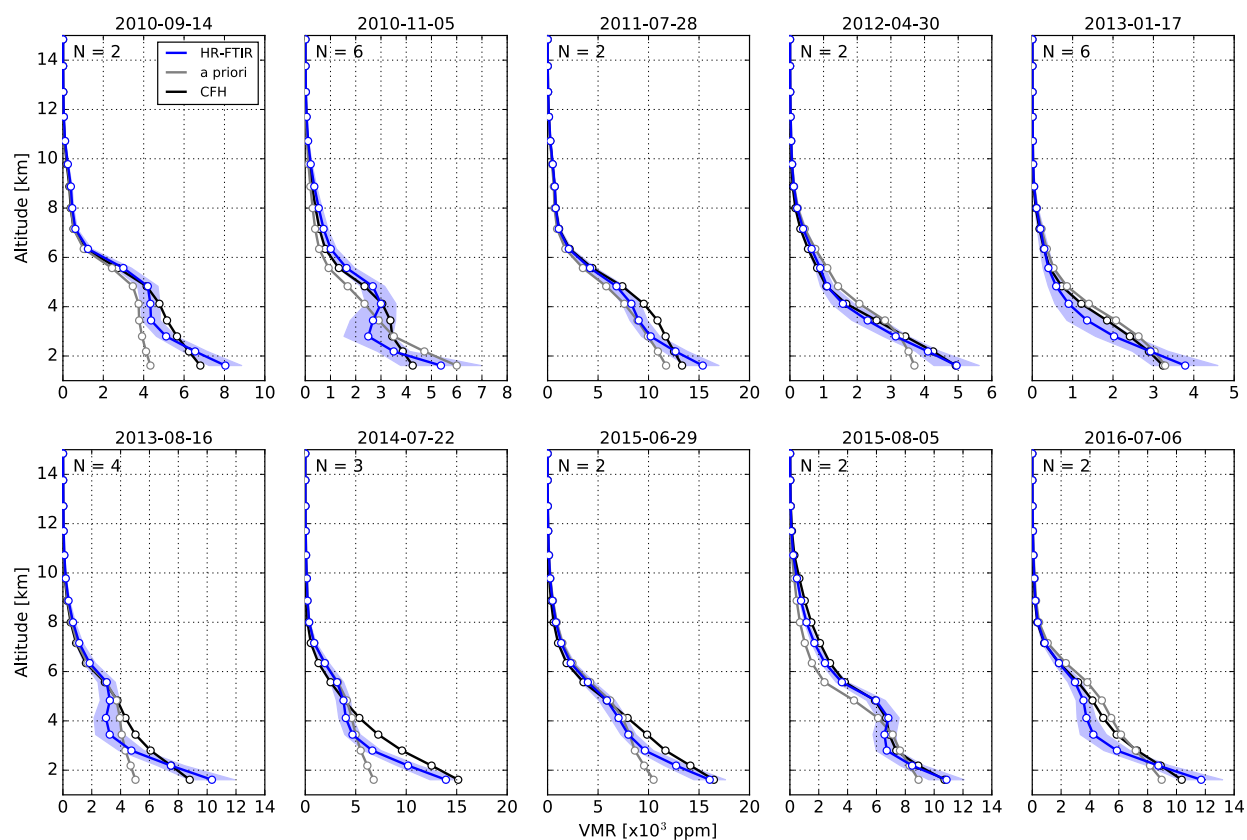
Figure S1. Same as Fig.4 in the main text but smoothing the FPH profiles using the FTIR averaging kernel and a priori profiles.
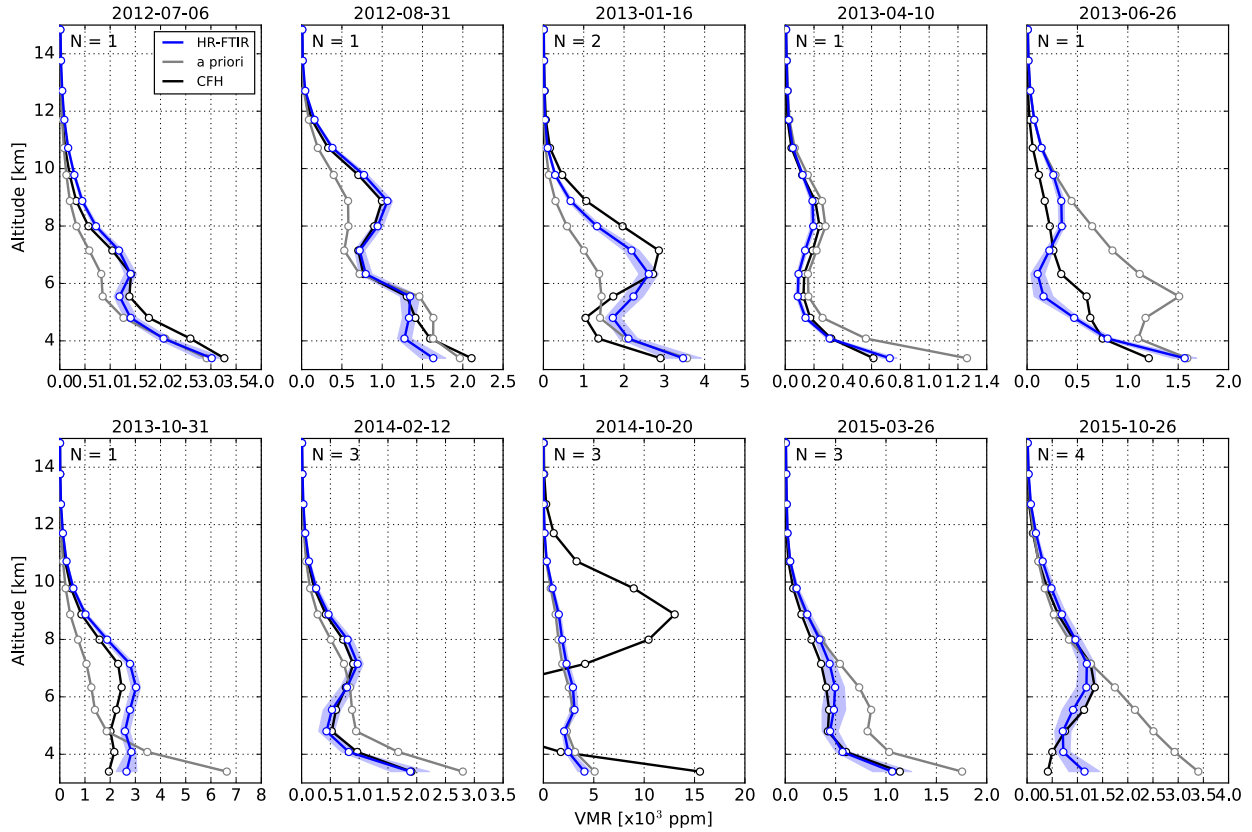
Figure S2. Same as Fig.5 in the main text but smoothing the FPH profiles using the FTIR averaging kernel and a priori profiles.
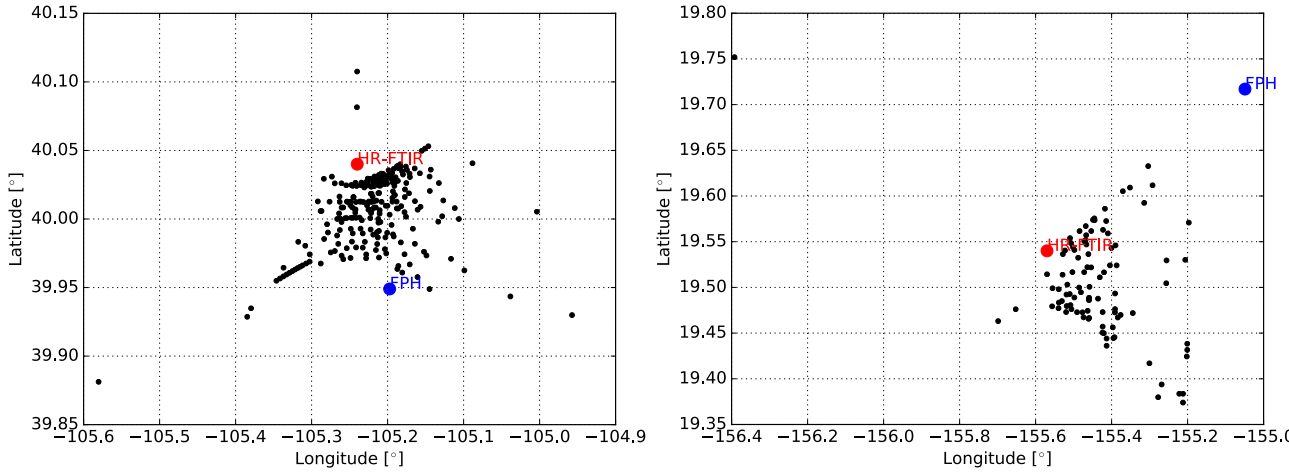
Figure S3. The HR-FTIR horizontal location (air mass sensitivity location) calculated with the water vapor center of gravity, solar zenith angle, and solar azimuth angle of all measurements (black dots) at BLD (left) and MLO (right). The HR-FTIR ground-based location is indicated with the red dots and the launch of the sonde in blue dots.
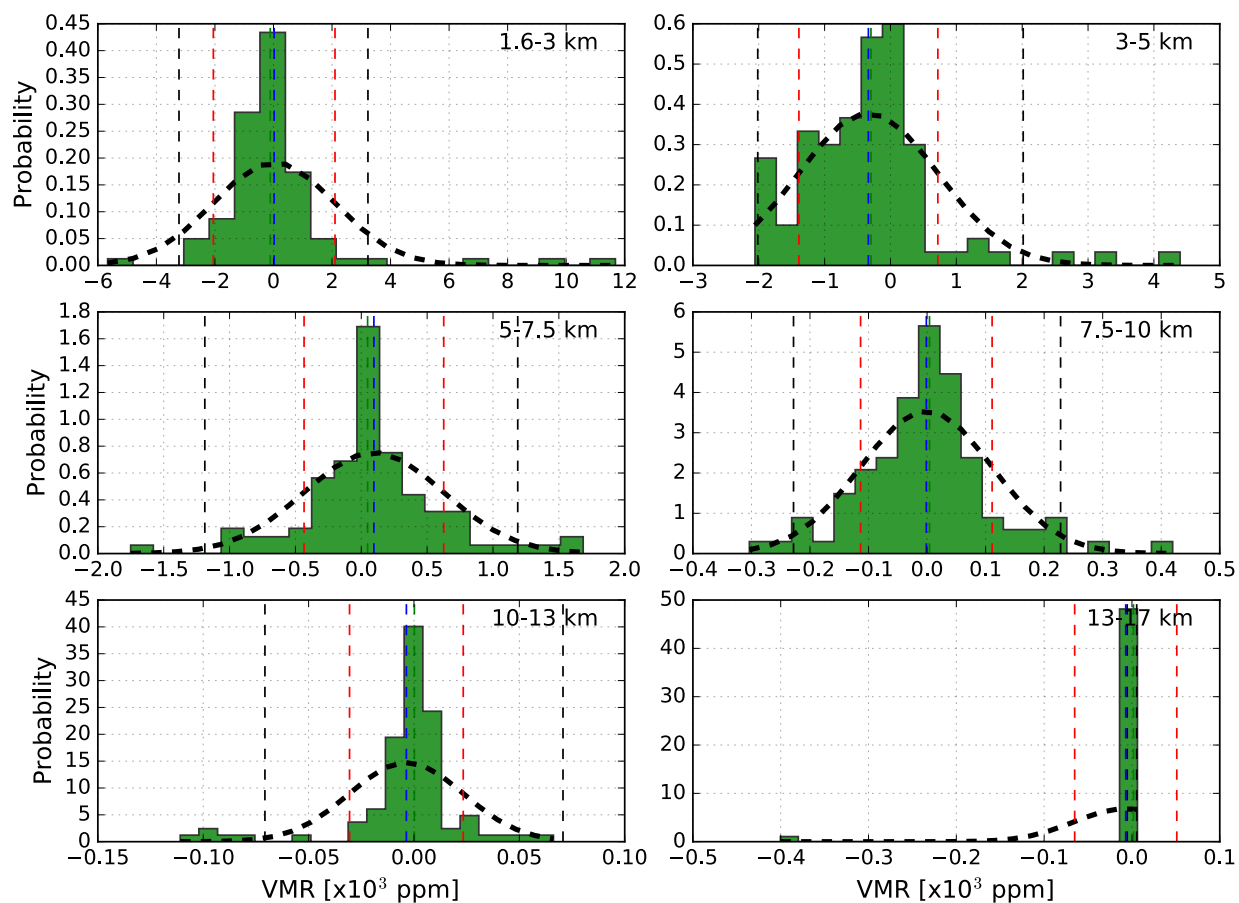
Figure S4. Distributions of the difference between WP retrieved and FPH at different altitude layers using ERA-d as a priori. A Gauss-type normal distribution is constructed for each panel using the bins, mean values (blue dotted vertical lines) and standard deviation (red dotted vertical lines). Dotted black vertical lines represent the percentile 95 and green dotted lines are the median.
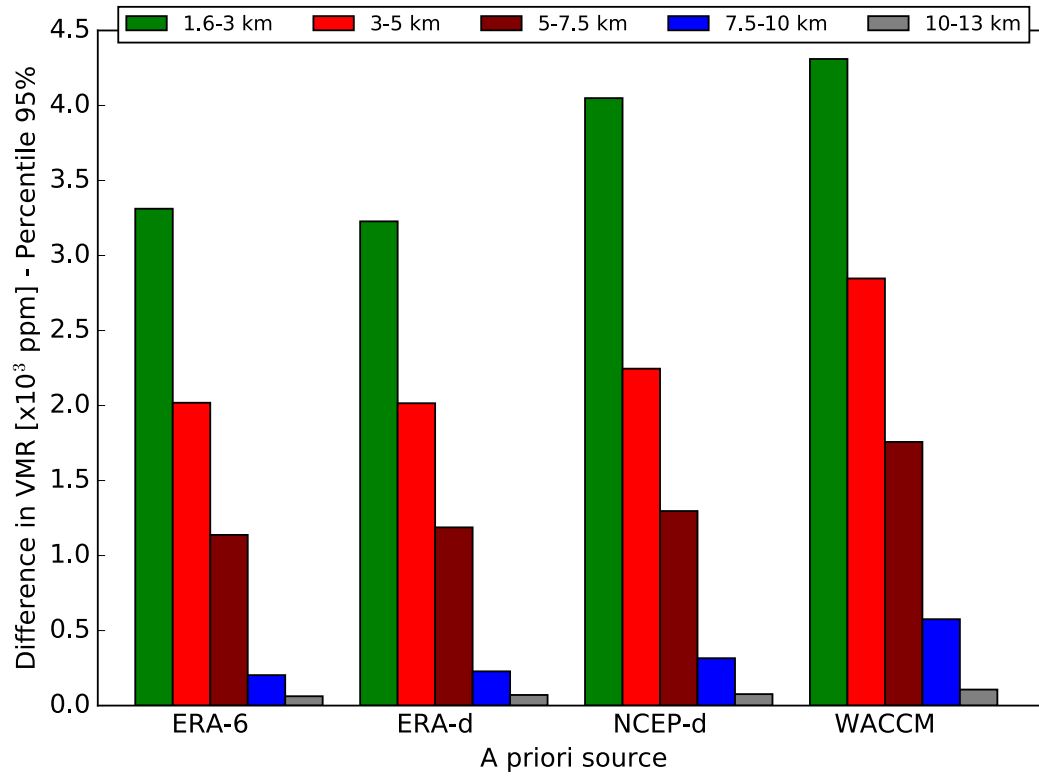
Figure S5. Percentile 95th of the difference between retrieval and sonde in VMR as a function of a priori source for different layers.