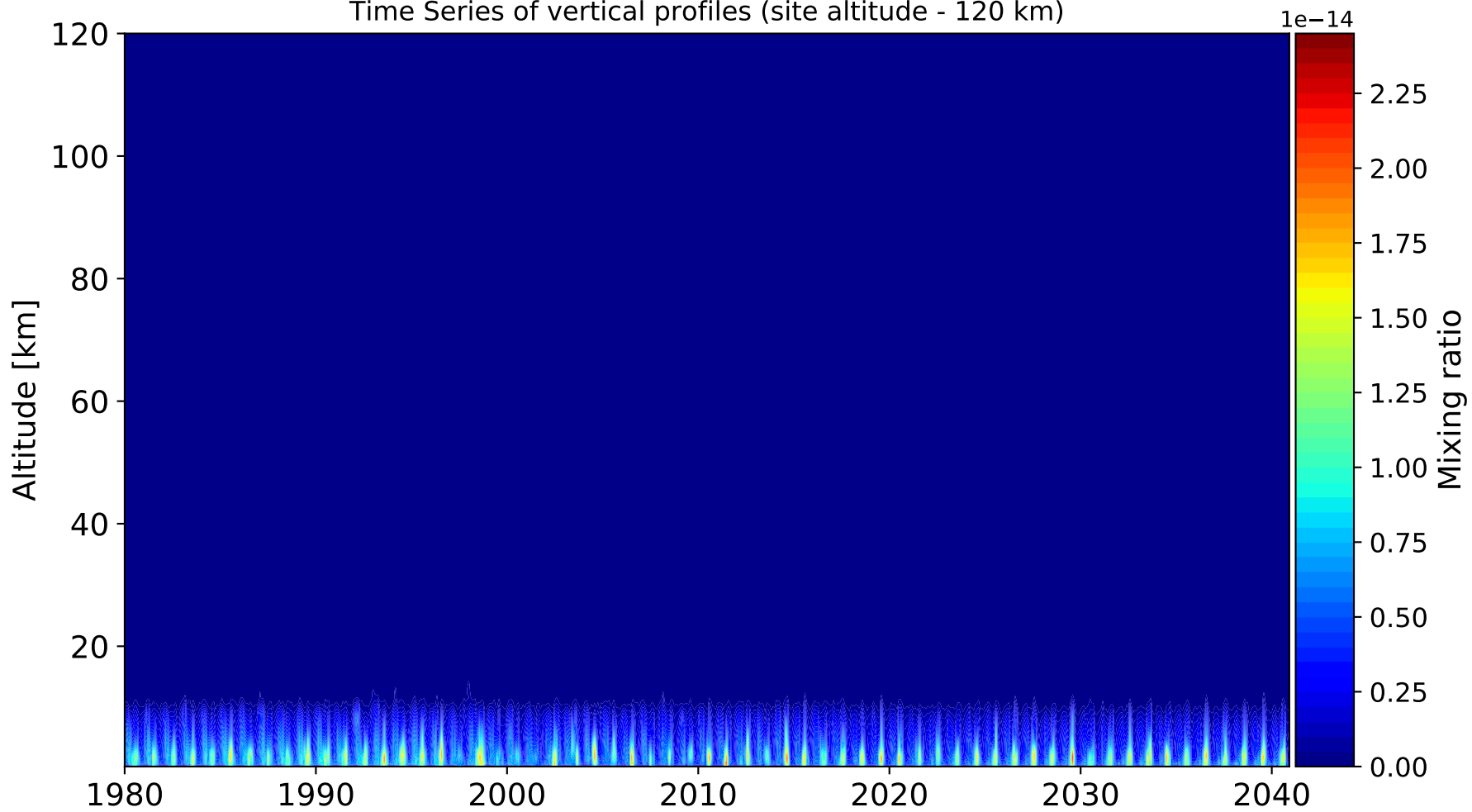
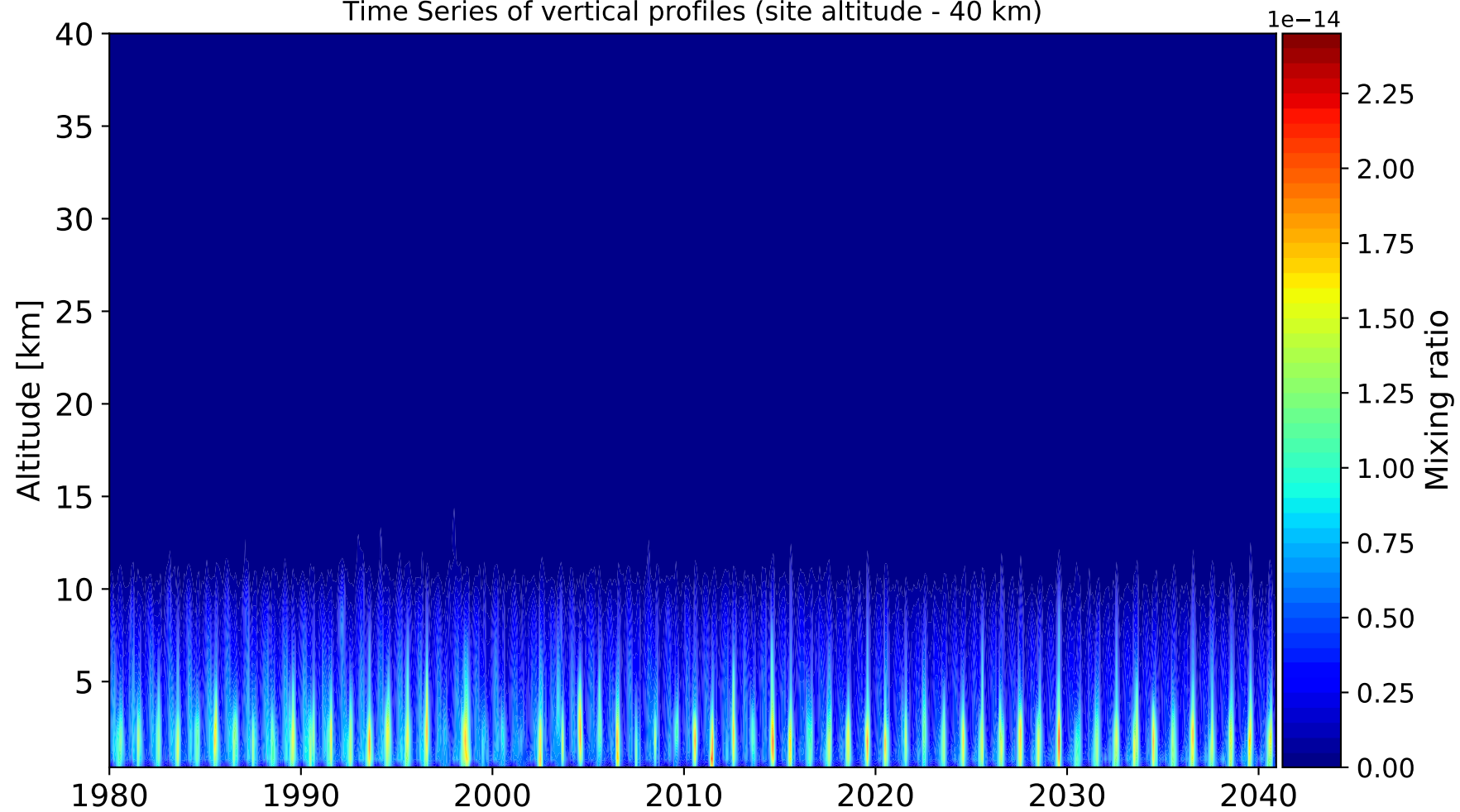


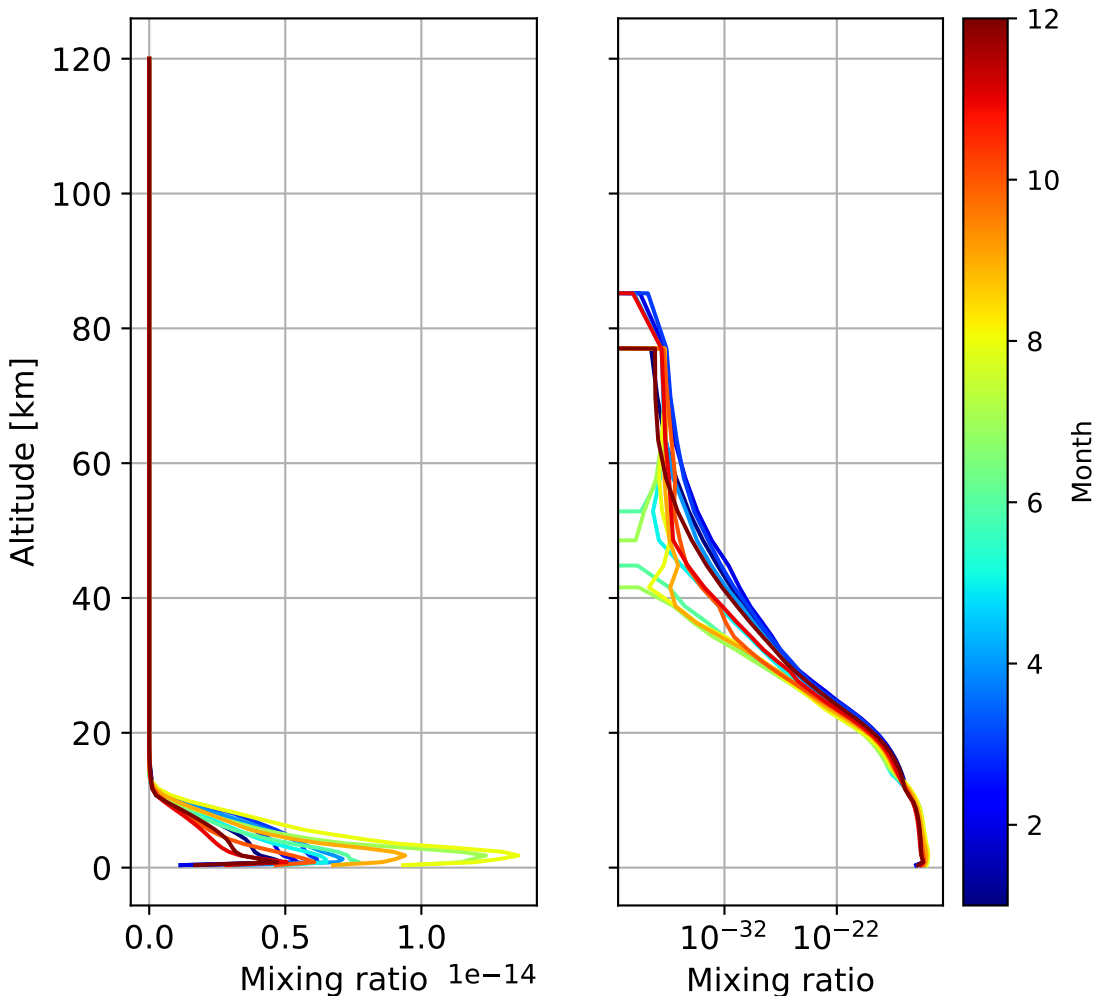
Time Series of vertical profiles (site altitude - 120 km)



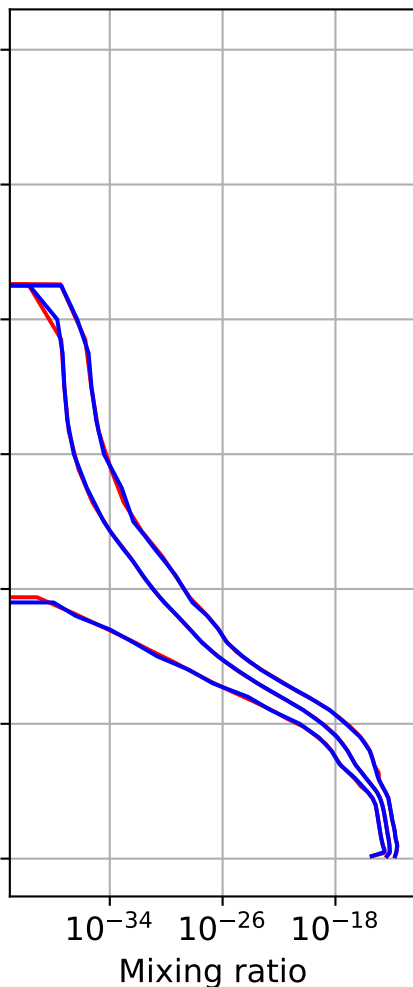
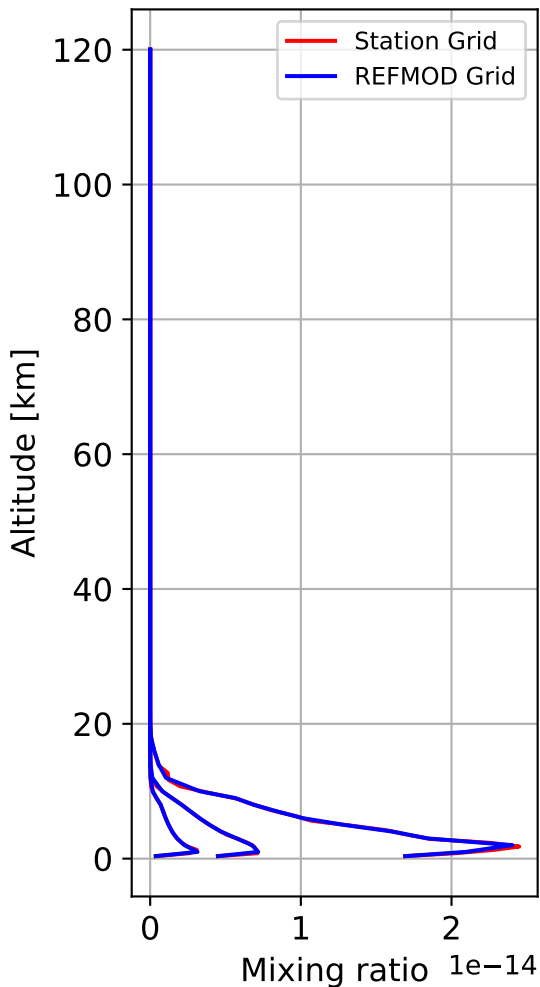
Time Series of vertical profiles (site altitude - 40 km)



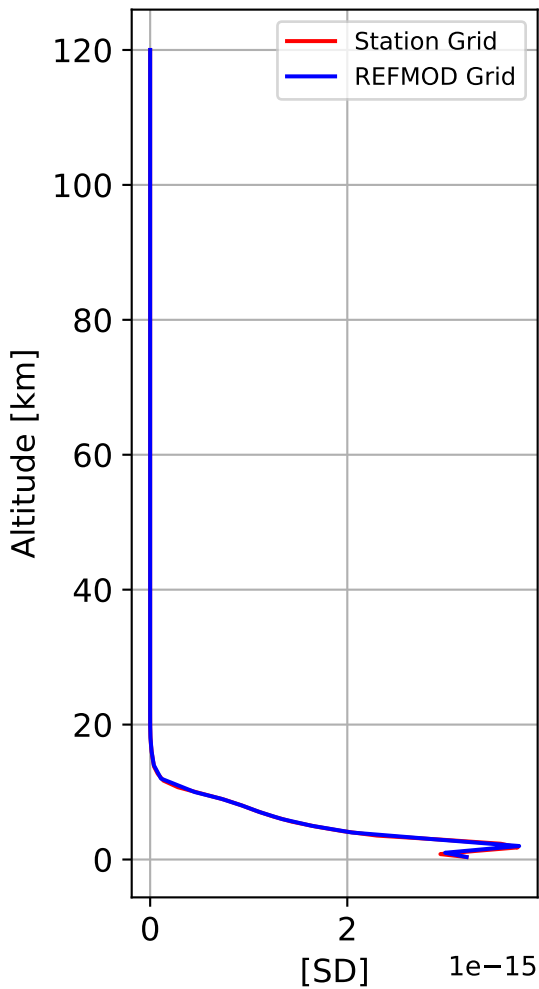
Monthly mean WACCM profile (interpolated to station grid)  
Fort\_McMurray, 56.65N, 248.78E, 0.369kmasl



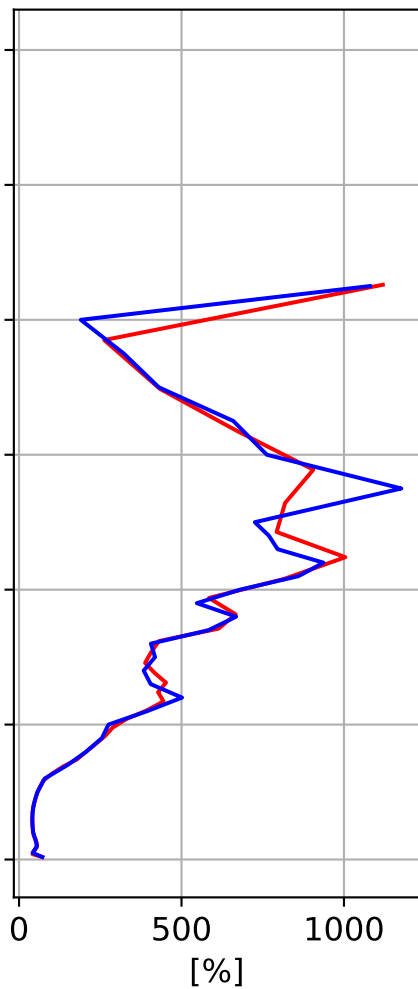
Min, Max, Mean of 732 profiles  
Fort\_McMurray, 56.65N, 248.78E, 0.369kmasl



Std. Deviation



Percent Deviation



# Level covariance matrix

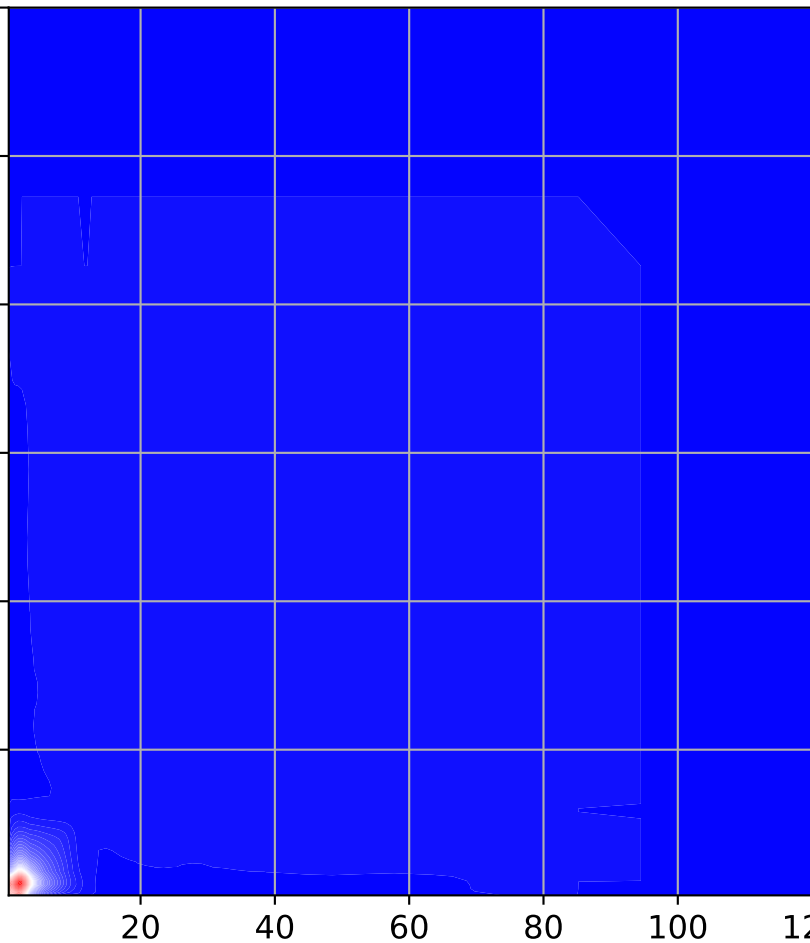
$1e-29$

Altitude [km]

120  
100  
80  
60  
40  
20

Mixing ratio[ $\sim 2$ ]

1.35  
1.20  
1.05  
0.90  
0.75  
0.60  
0.45  
0.30  
0.15  
0.00



Altitude [km]