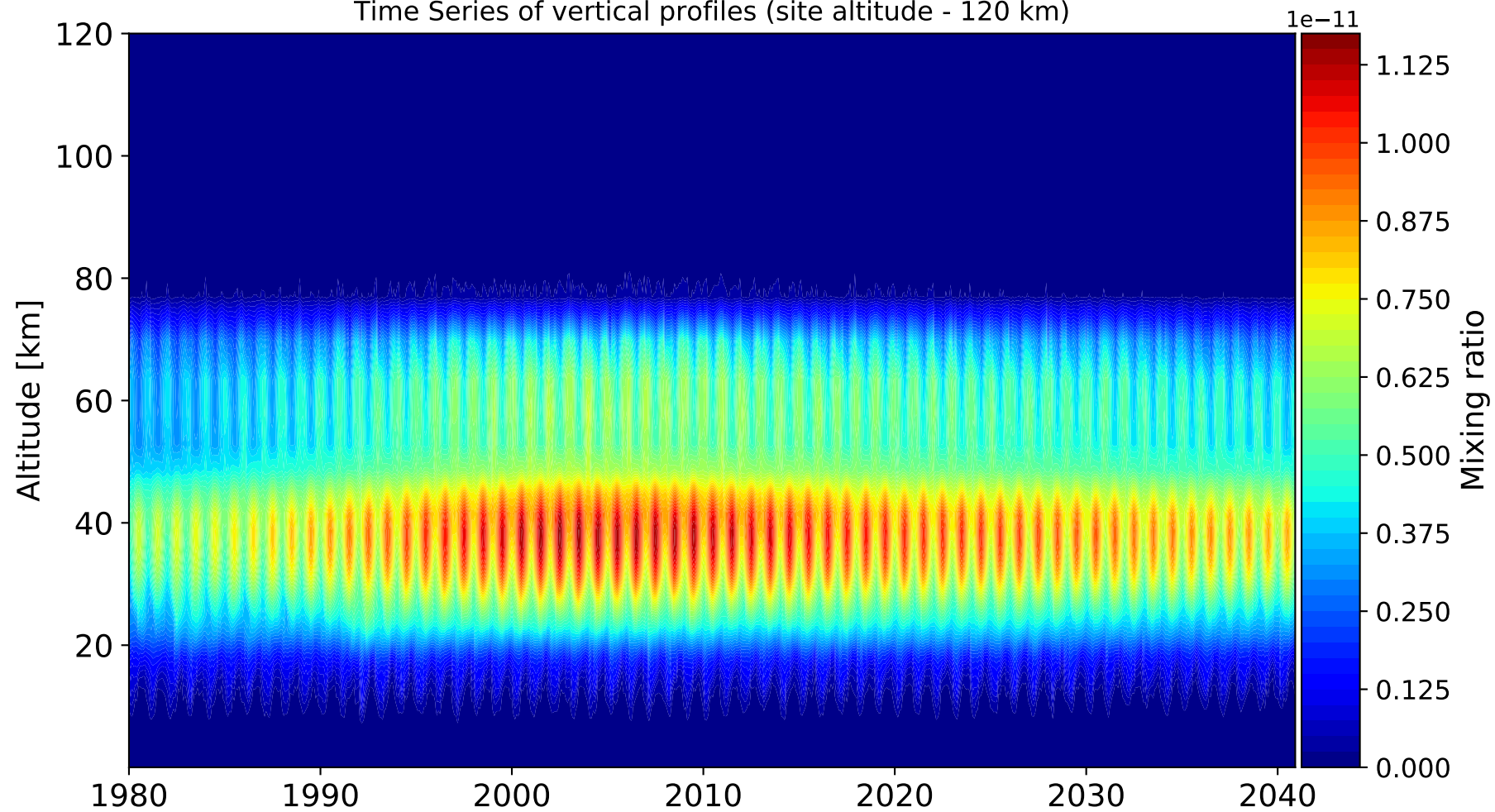
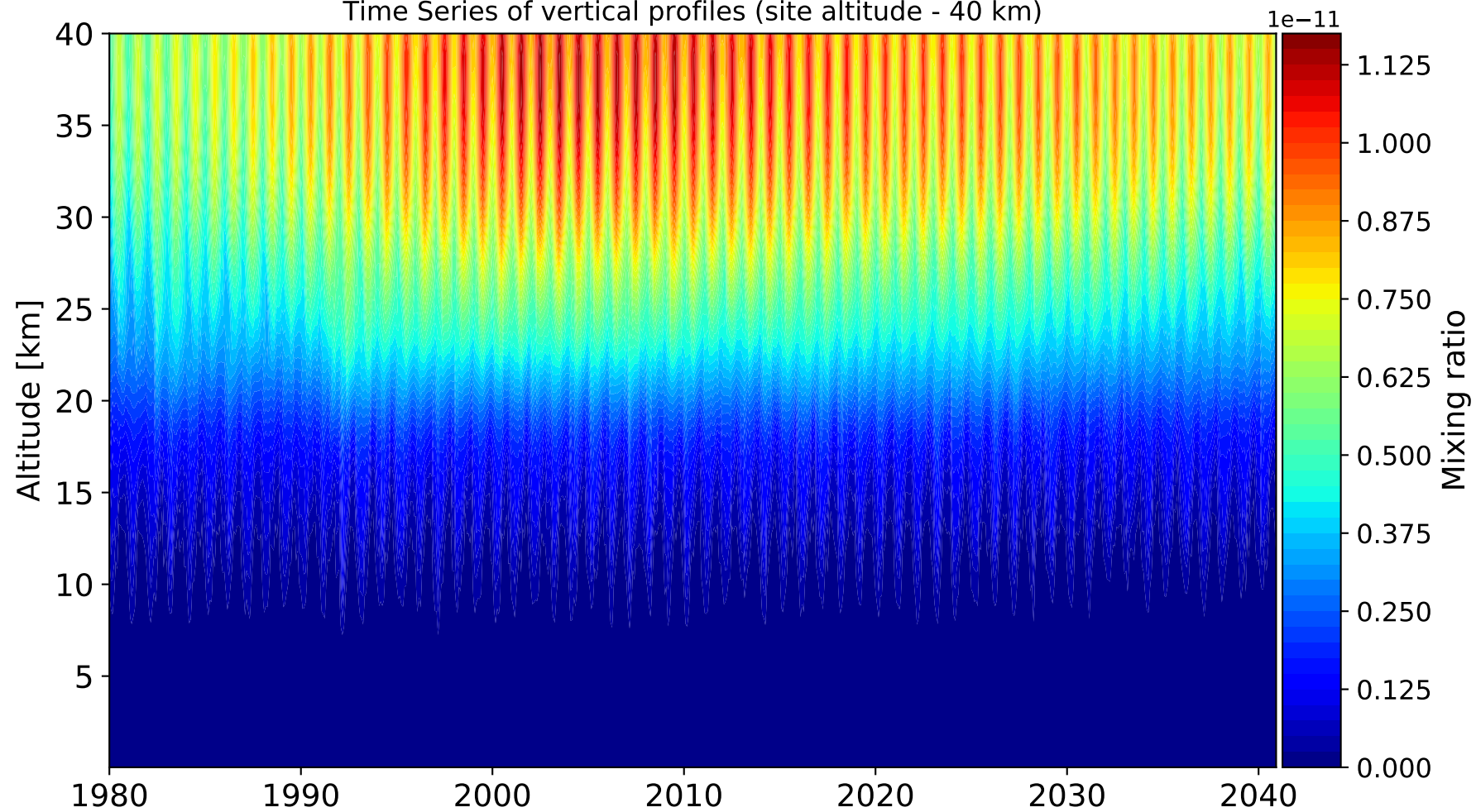


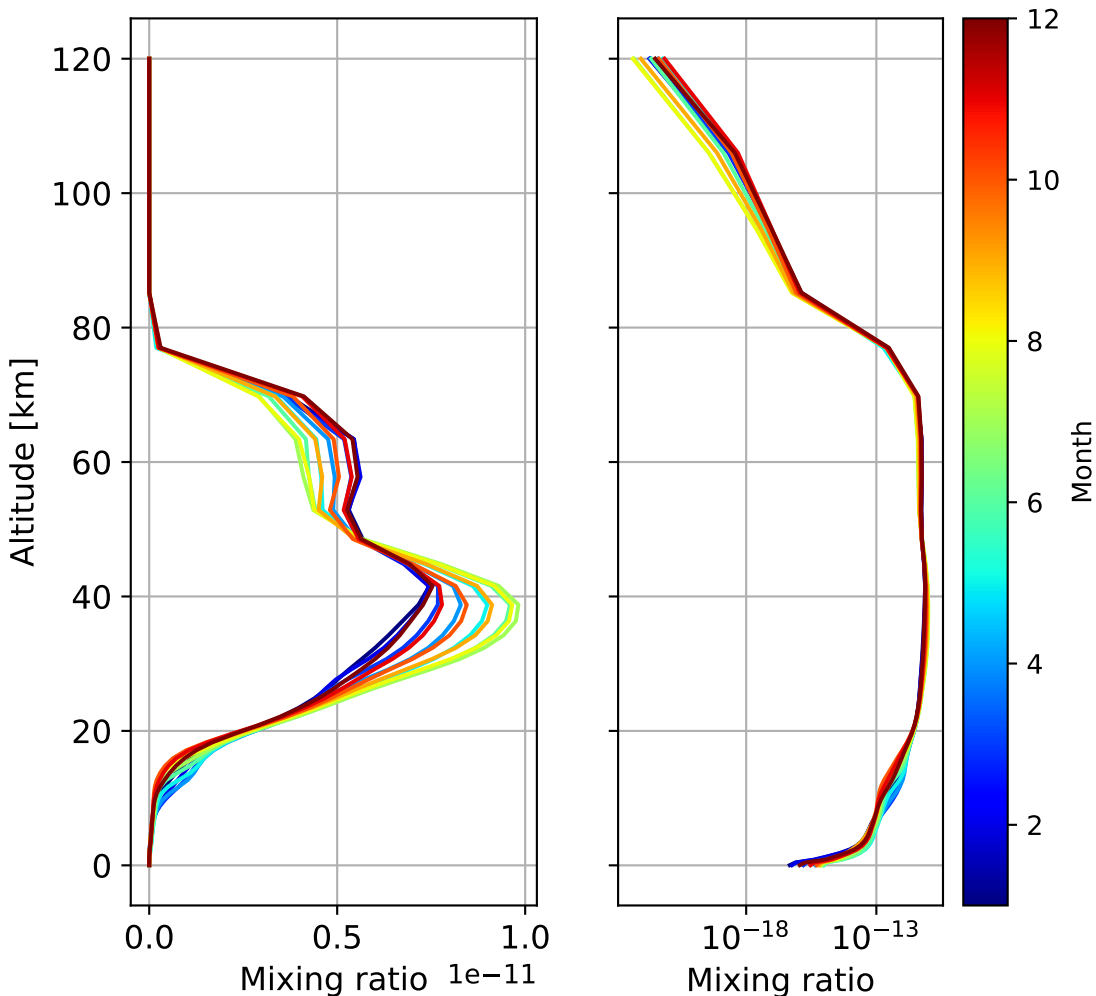
Time Series of vertical profiles (site altitude - 120 km)



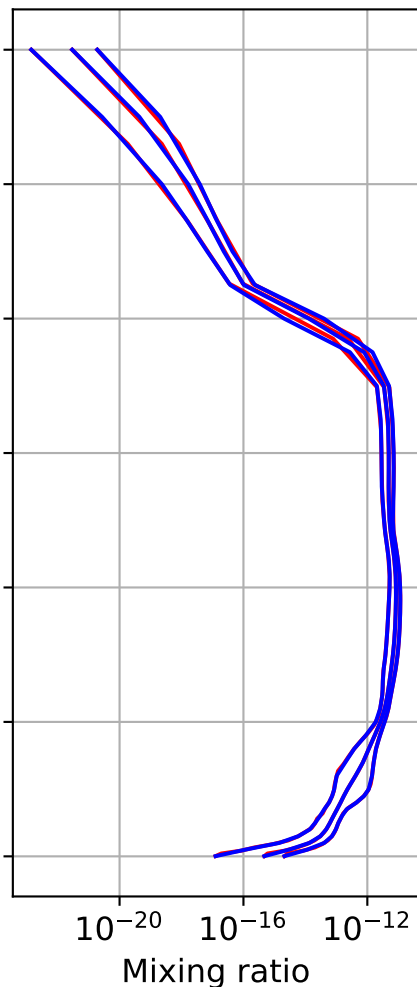
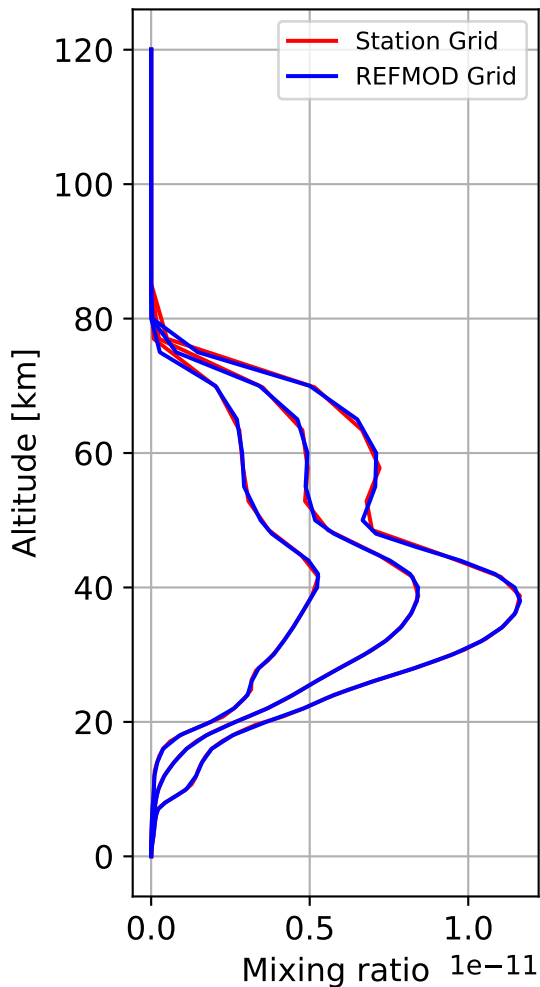
Time Series of vertical profiles (site altitude - 40 km)



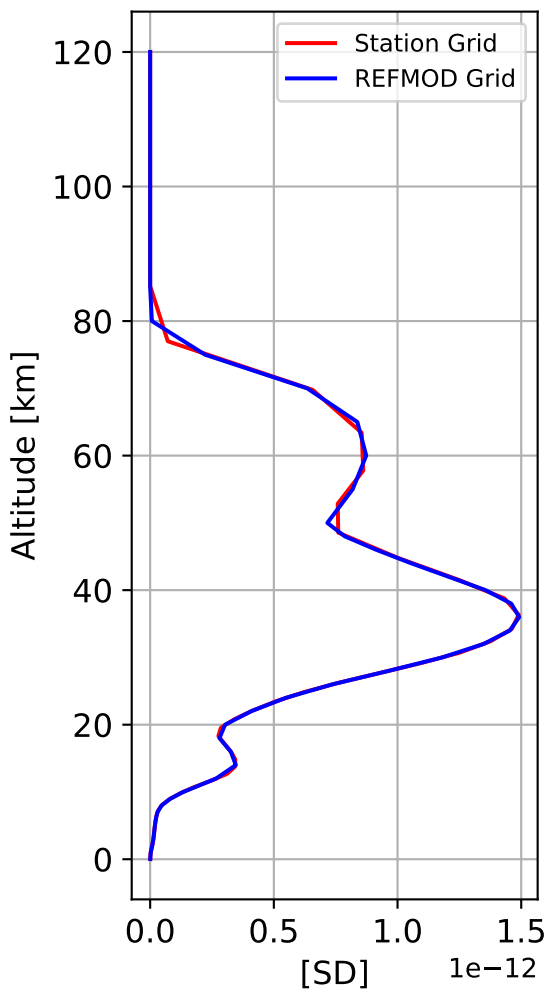
Monthly mean WACCM profile (interpolated to station grid)  
Tsukuba, 36.05N, 140.12E, 0.031km/sl



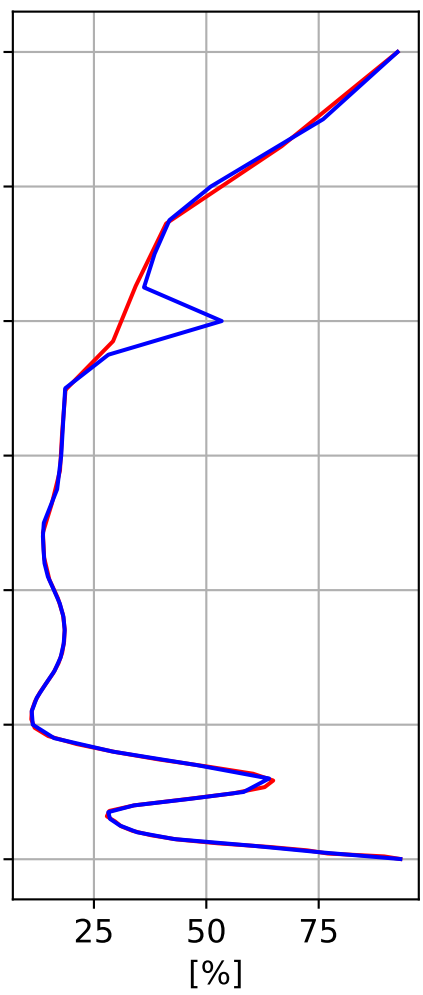
Min, Max, Mean of 732 profiles  
Tsukuba, 36.05N, 140.12E, 0.031kmasl



### Std. Deviation



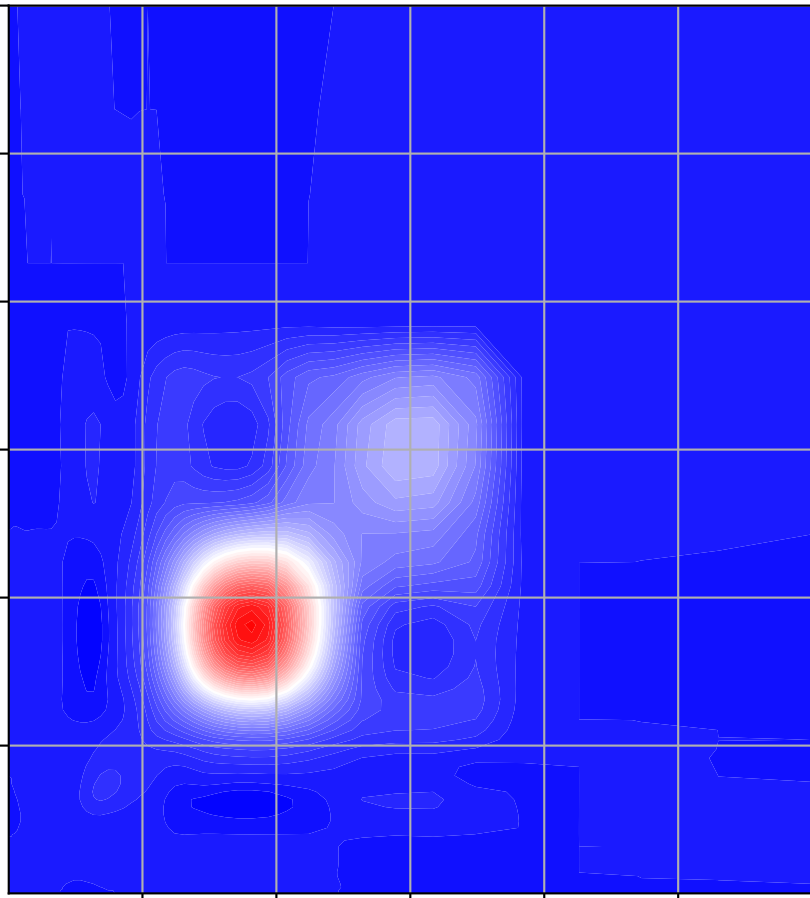
### Percent Deviation



Level covariance matrix

1e-24

Altitude [km]

120  
100  
80  
60  
40  
20

Altitude [km]

Mixing ratio[ $\sim 2$ ]2.25  
2.00  
1.75  
1.50  
1.25  
1.00  
0.75  
0.50  
0.25  
0.00