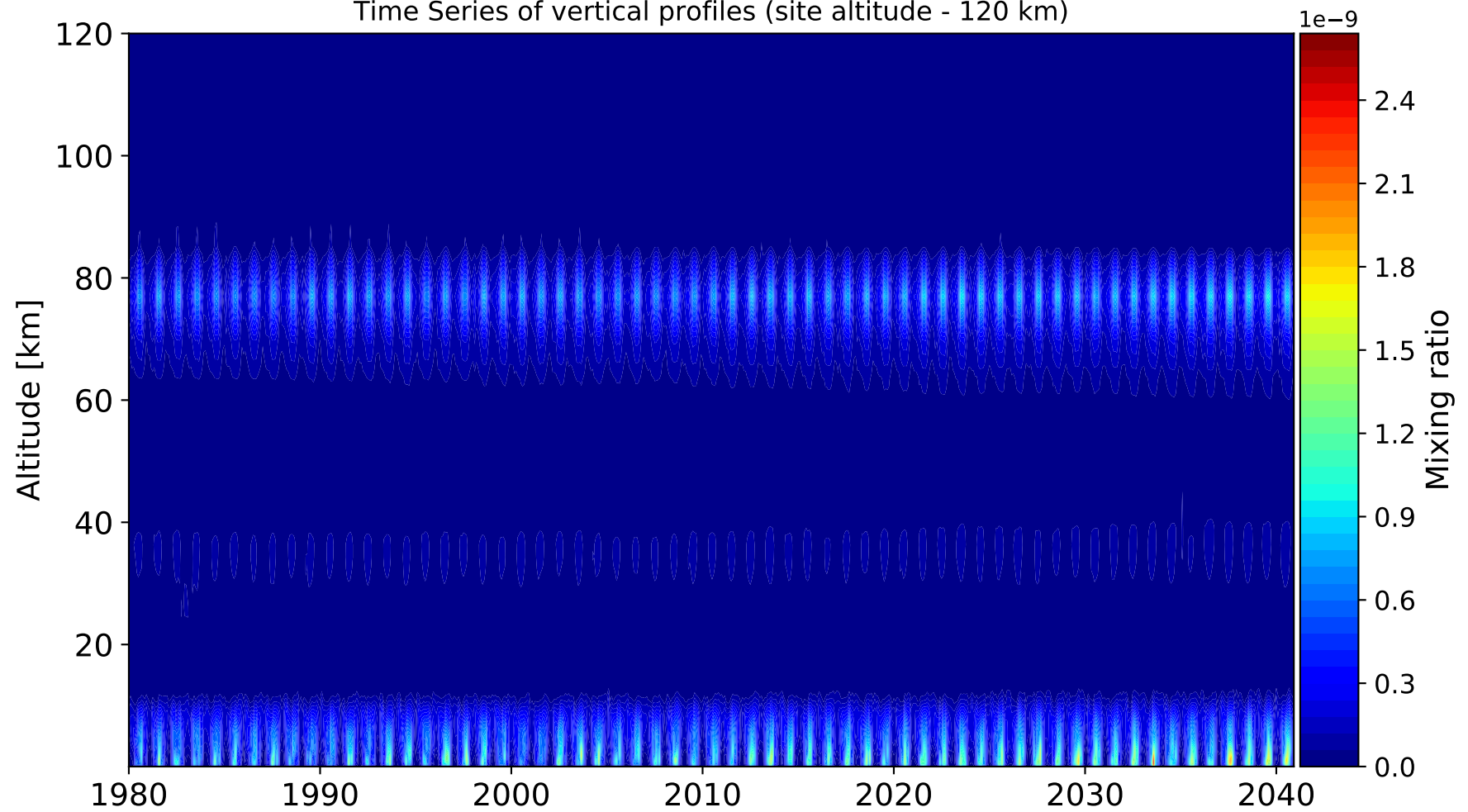
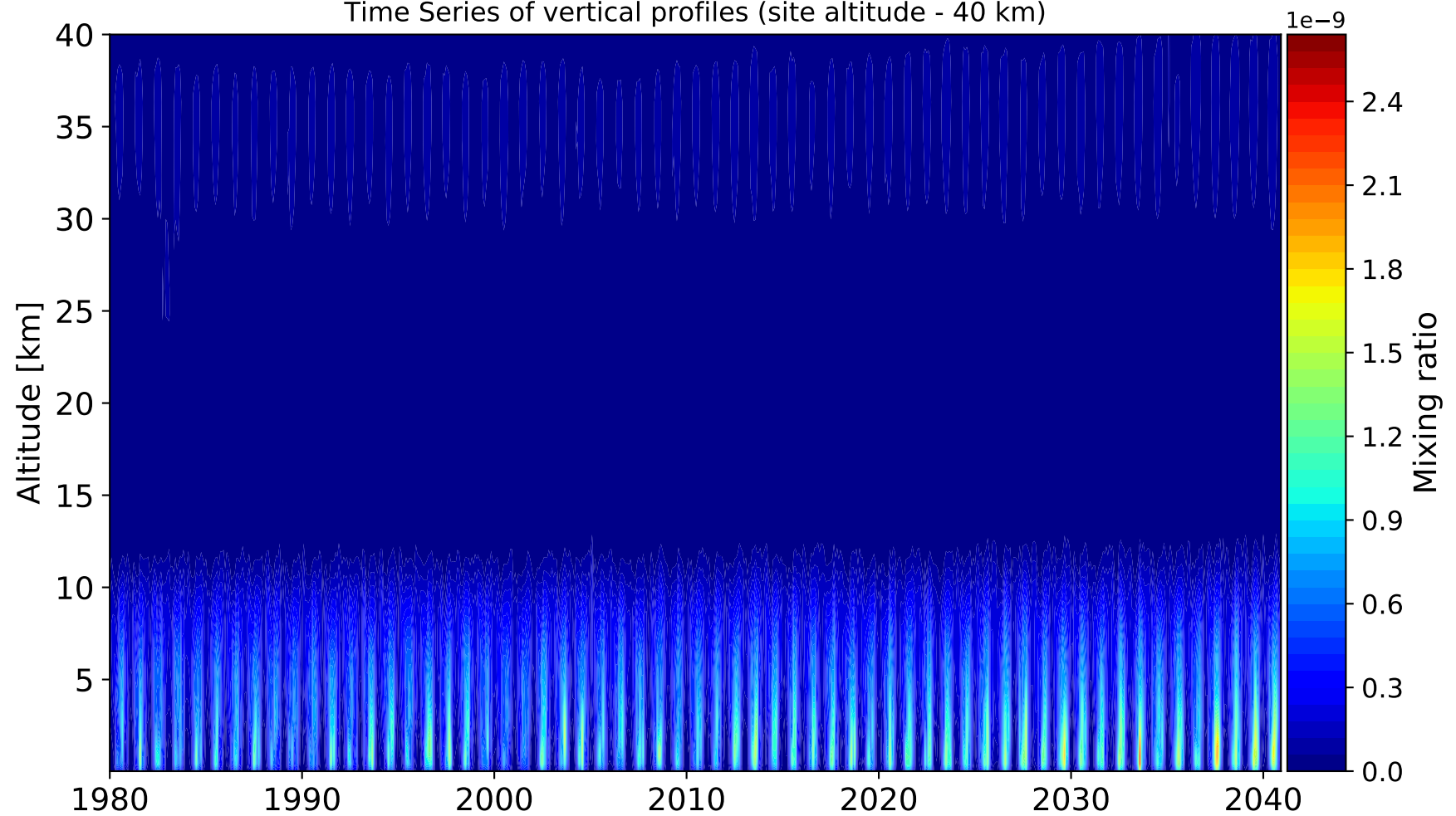


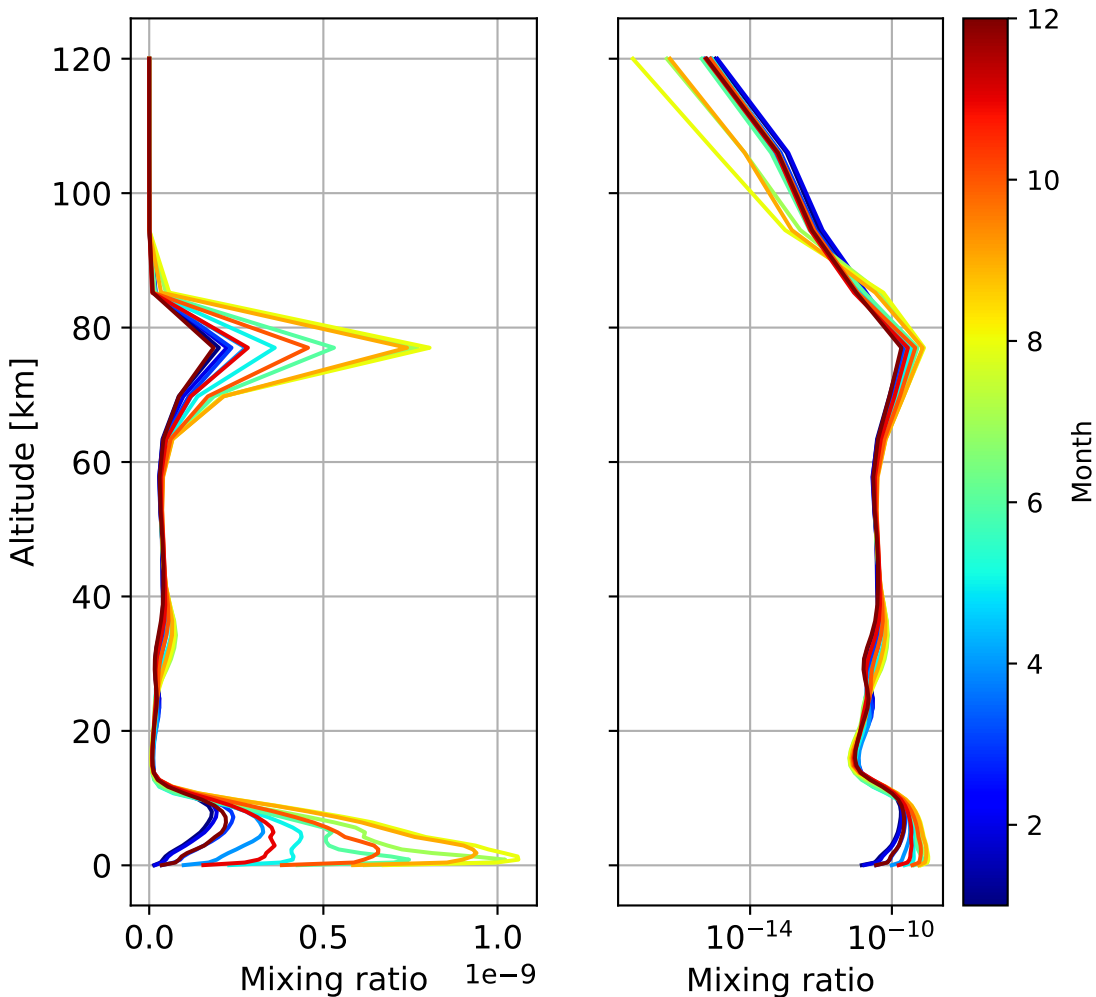
Time Series of vertical profiles (site altitude - 120 km)



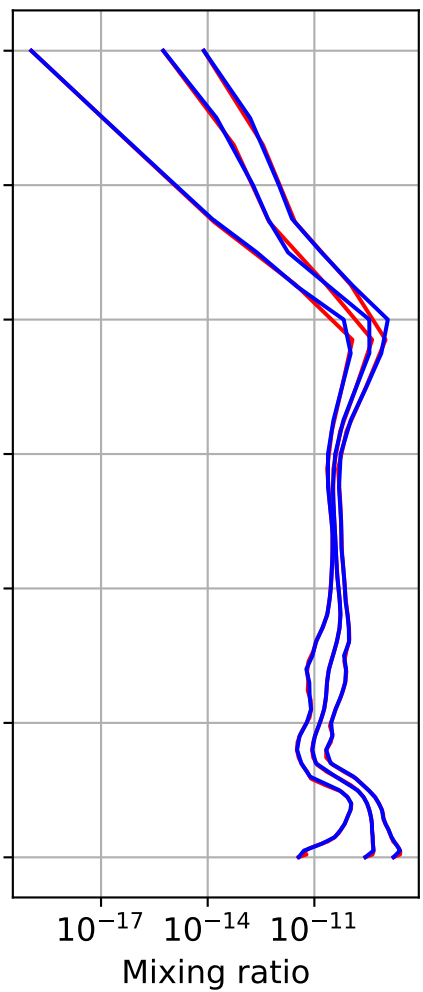
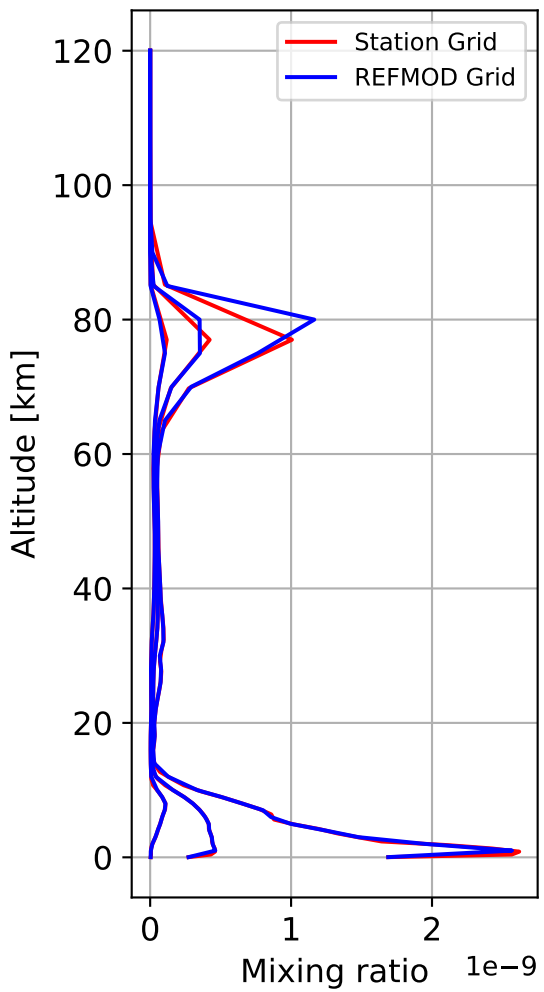
Time Series of vertical profiles (site altitude - 40 km)



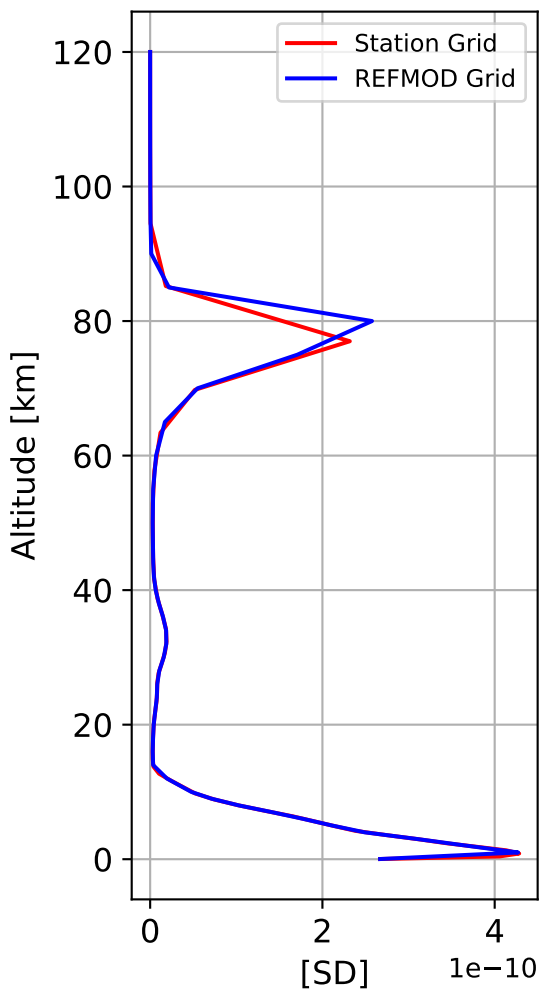
# Monthly mean WACCM profile (interpolated to station grid) Bremen, 53.1N, 8.9E, 0.027kmasl



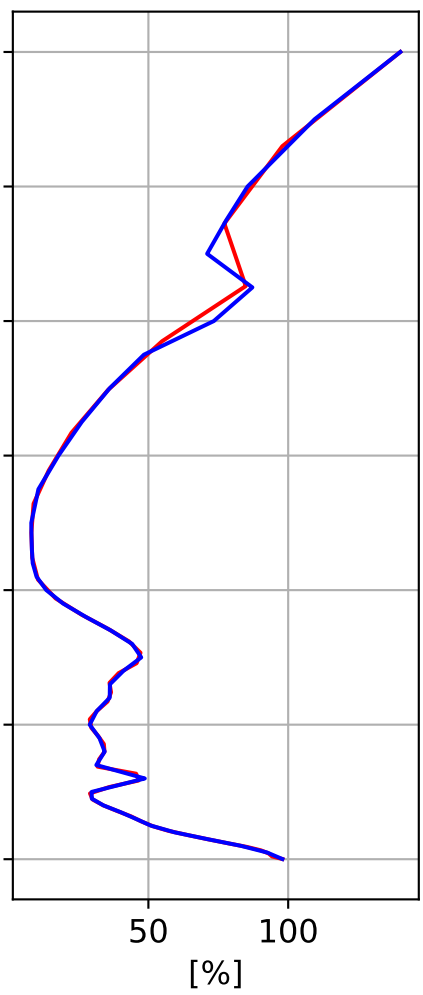
# Min, Max, Mean of 732 profiles Bremen, 53.1N, 8.9E, 0.027kmasl



### Std. Deviation



### Percent Deviation



Level covariance matrix

1e-19

Altitude [km]

120

100

80

60

40

20

20

40

60

80

100

120

Altitude [km]

Mixing ratio[<sup>2</sup>]1.8  
1.6  
1.4  
1.2  
1.0  
0.8  
0.6  
0.4  
0.2  
0.0