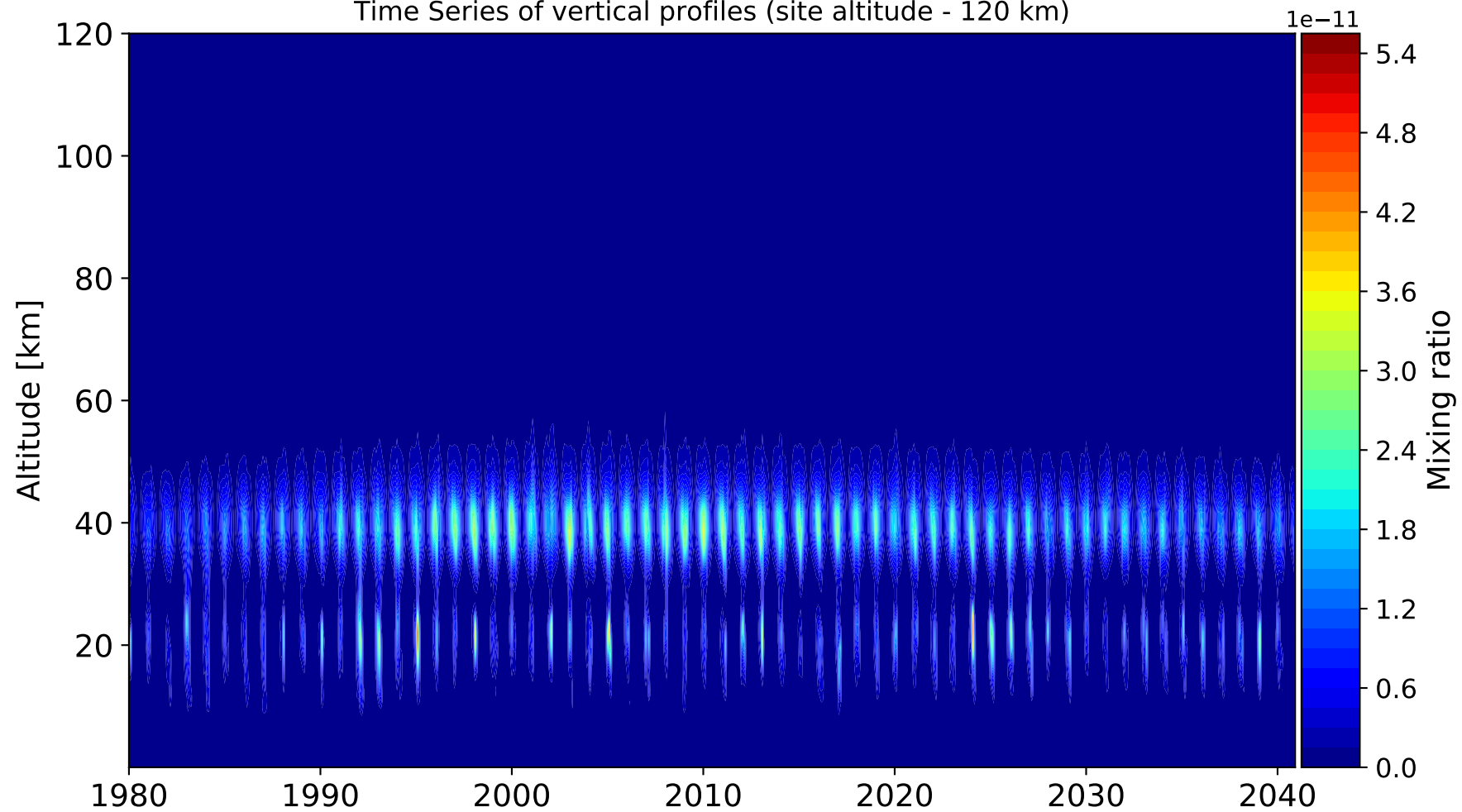
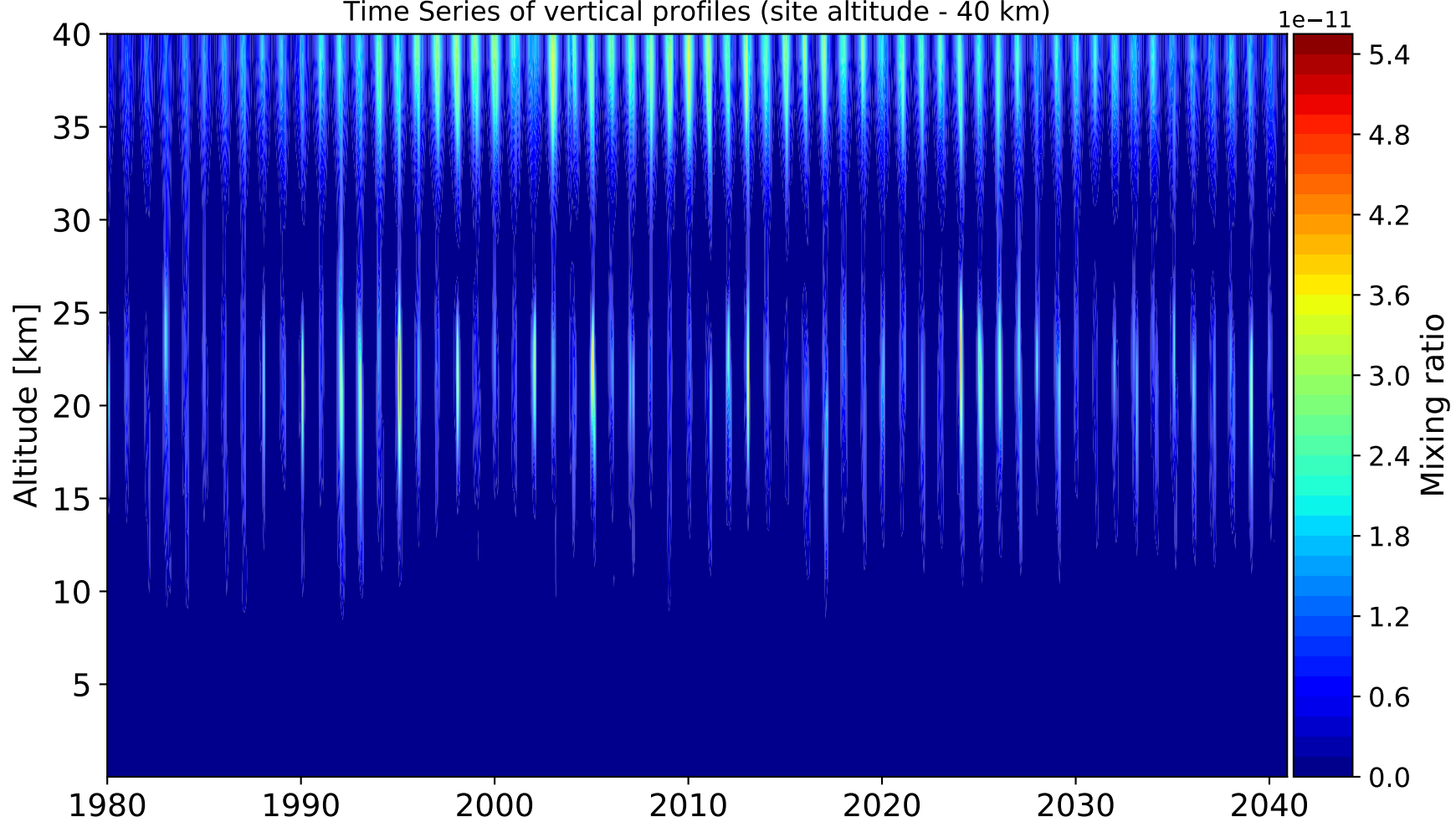


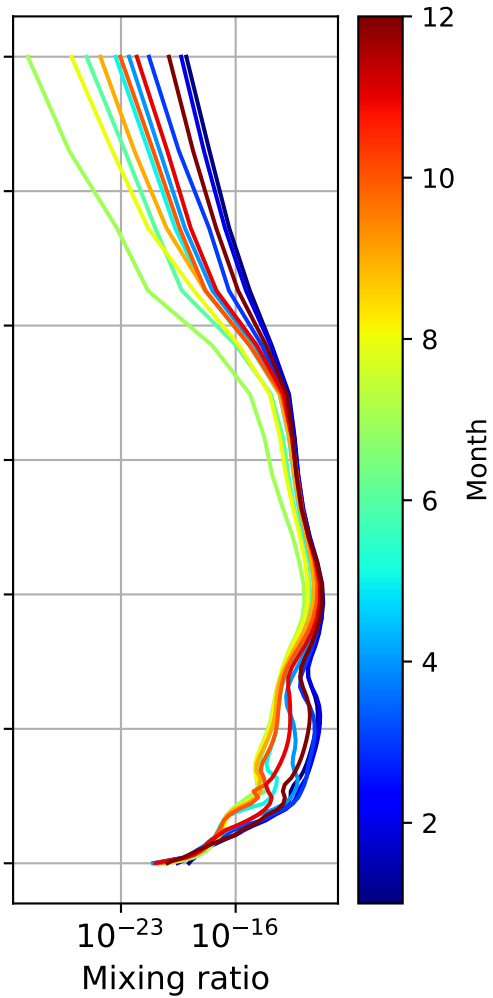
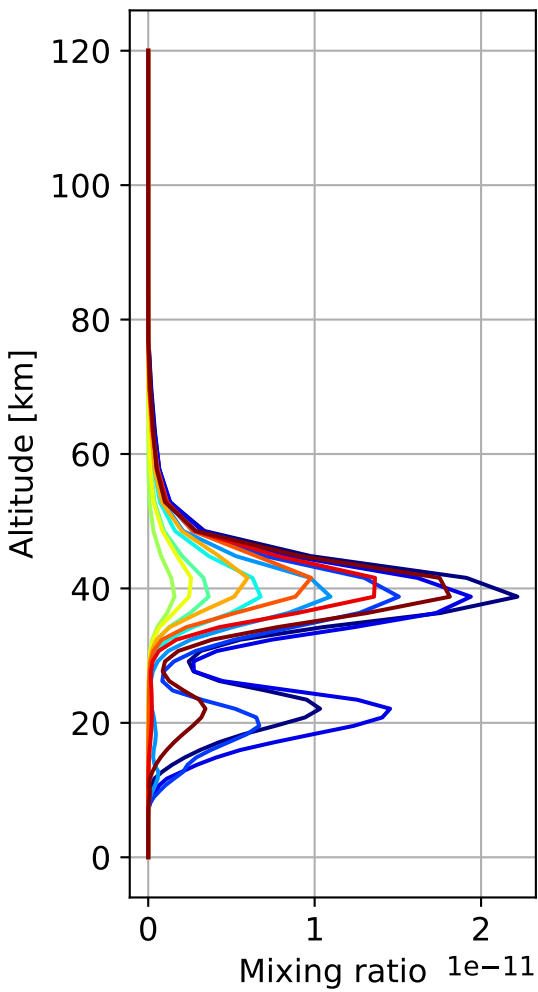
Time Series of vertical profiles (site altitude - 120 km)



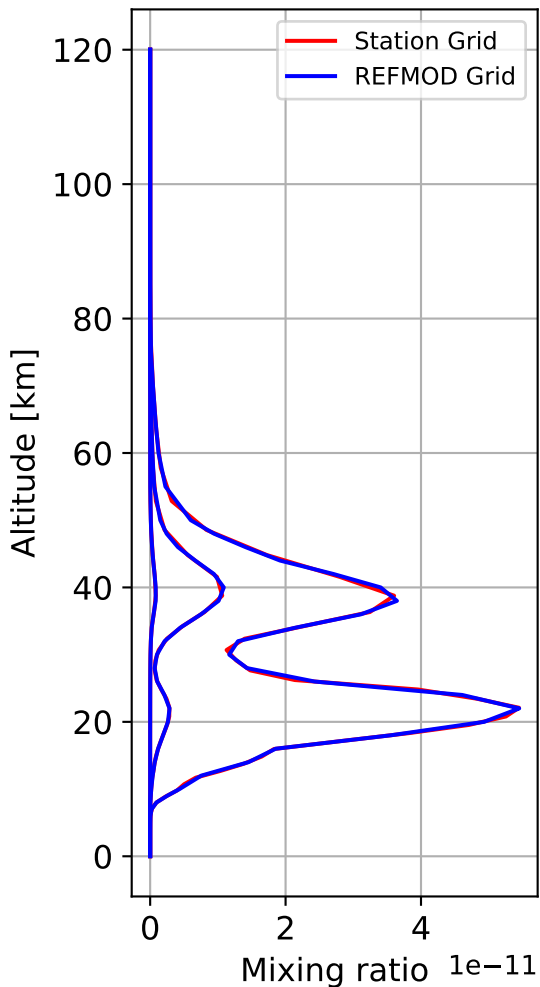
Time Series of vertical profiles (site altitude - 40 km)



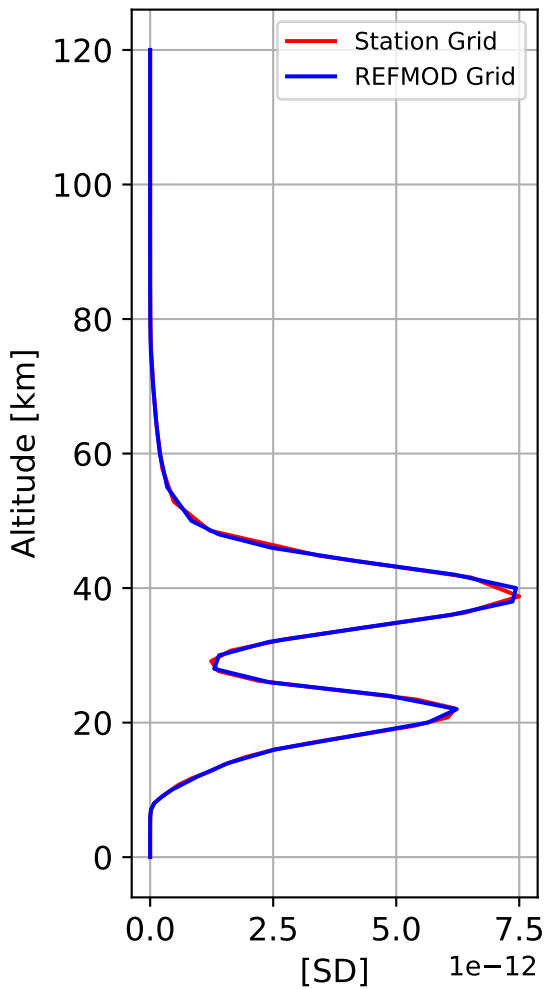
Monthly mean WACCM profile (interpolated to station grid)  
St\_Petersburg, 59.88N, 29.83E, 0.02kmasl



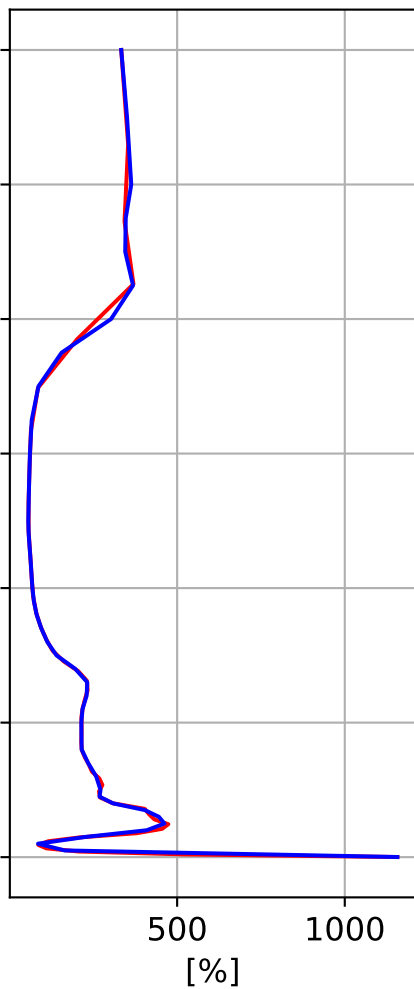
Min, Max, Mean of 732 profiles  
St\_Petersburg, 59.88N, 29.83E, 0.02kmasl



### Std. Deviation



### Percent Deviation



Level covariance matrix

1e-23

Altitude [km]

120

100

80

60

40

20

20

Altitude [km]

40

60

80

100

120

5.4

4.8

4.2

3.6

3.0

2.4

1.8

1.2

0.6

0.0

Mixing ratio[ $\sim 2$ ]