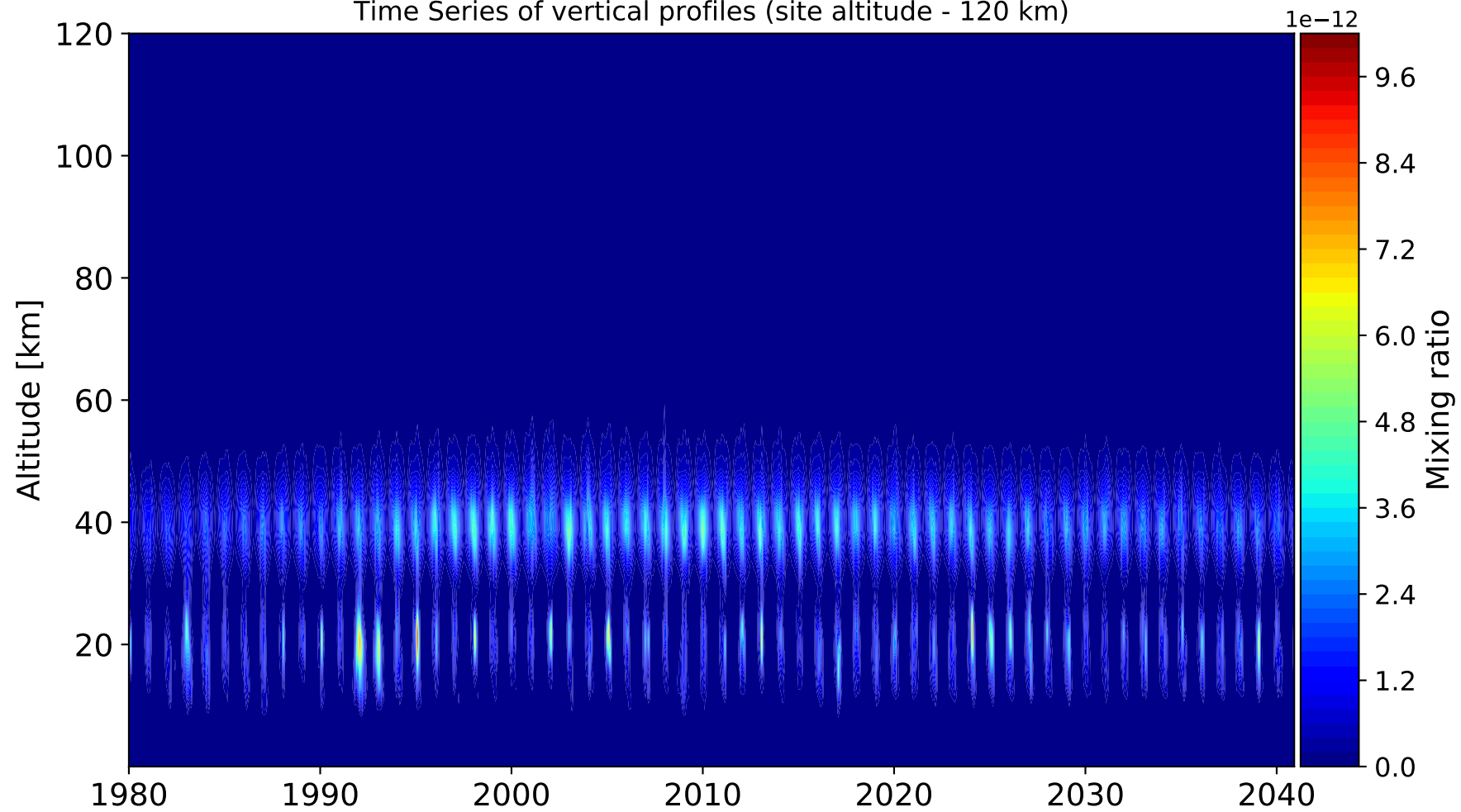
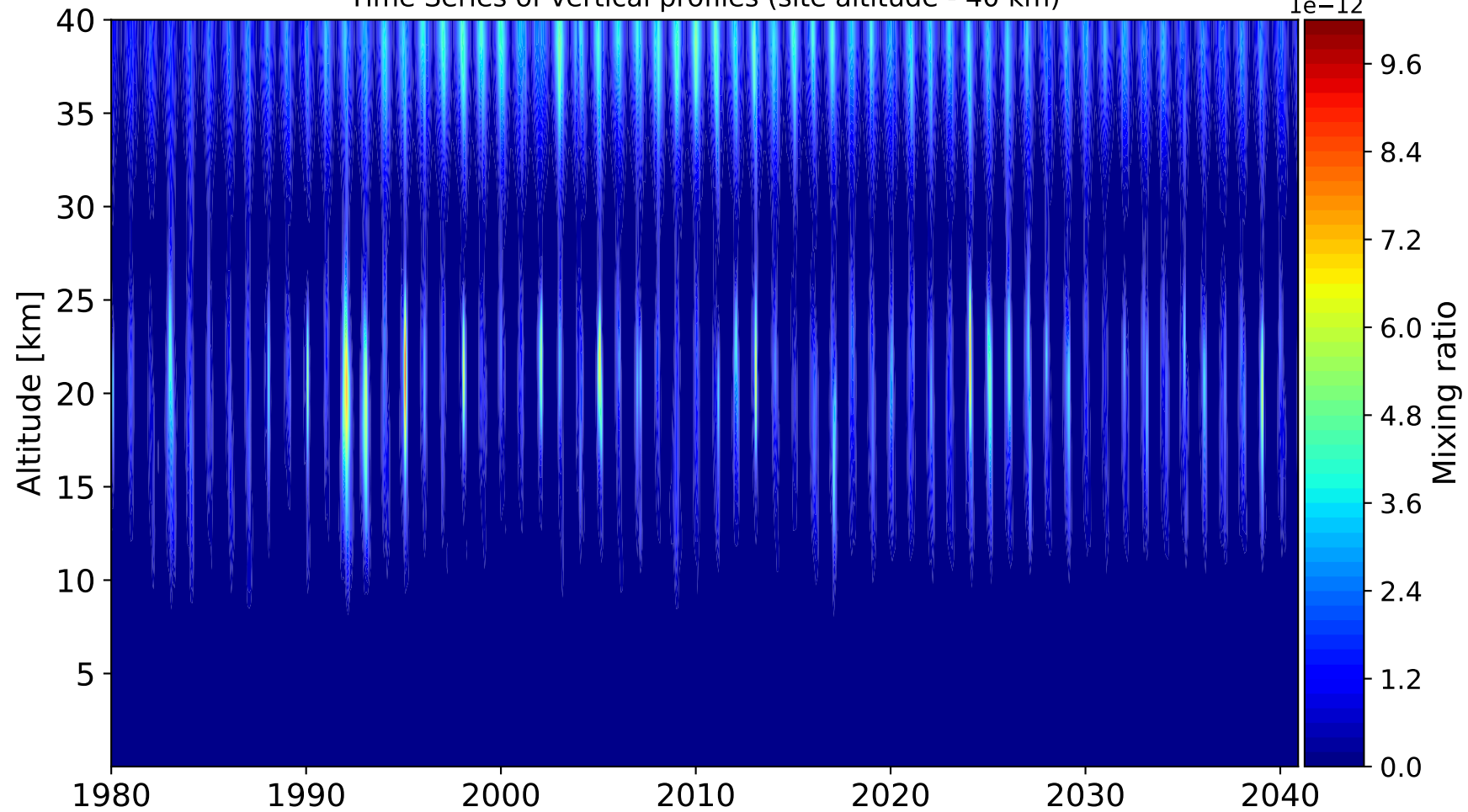


Time Series of vertical profiles (site altitude - 120 km)

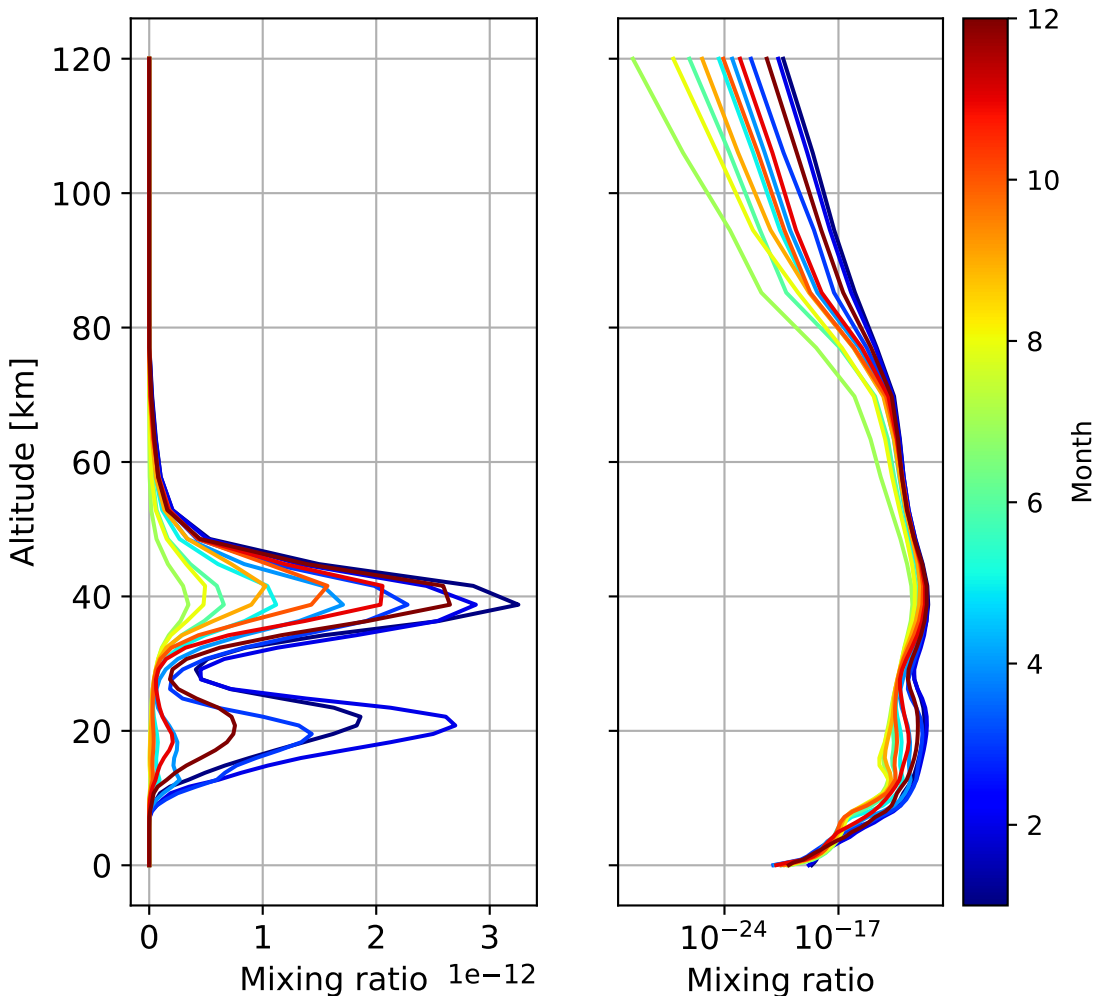


Time Series of vertical profiles (site altitude - 40 km)

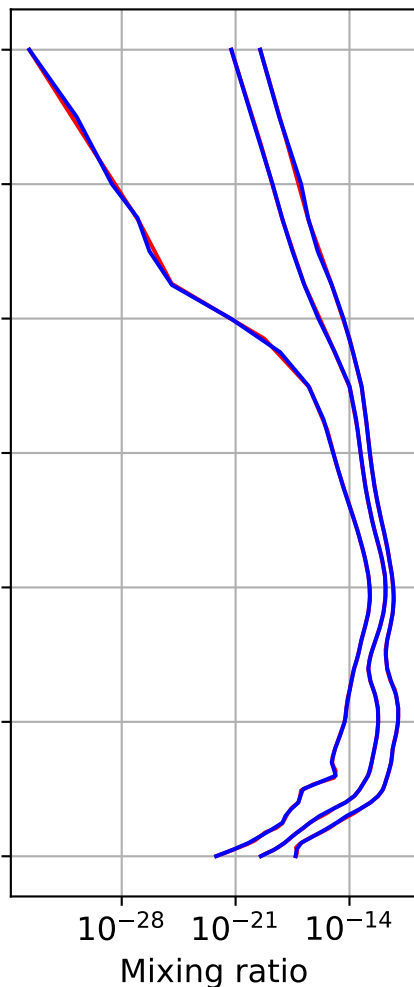
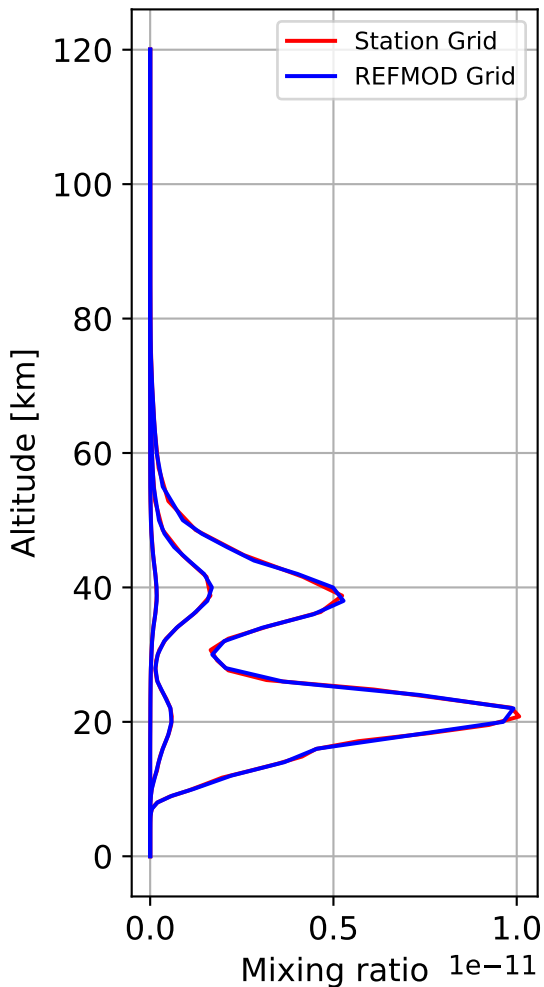
$1e-12$



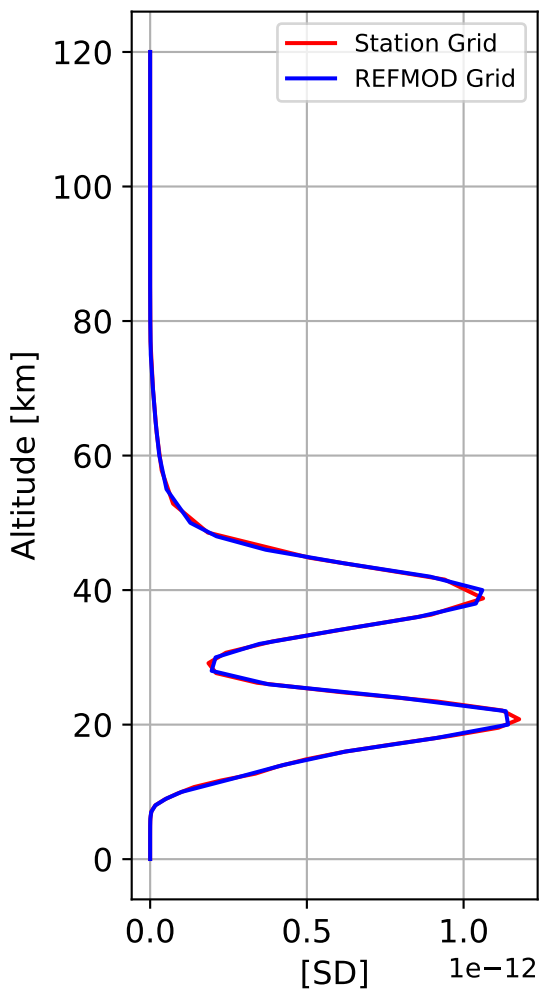
Monthly mean WACCM profile (interpolated to station grid)  
St\_Petersburg, 59.88N, 29.83E, 0.02kmasl



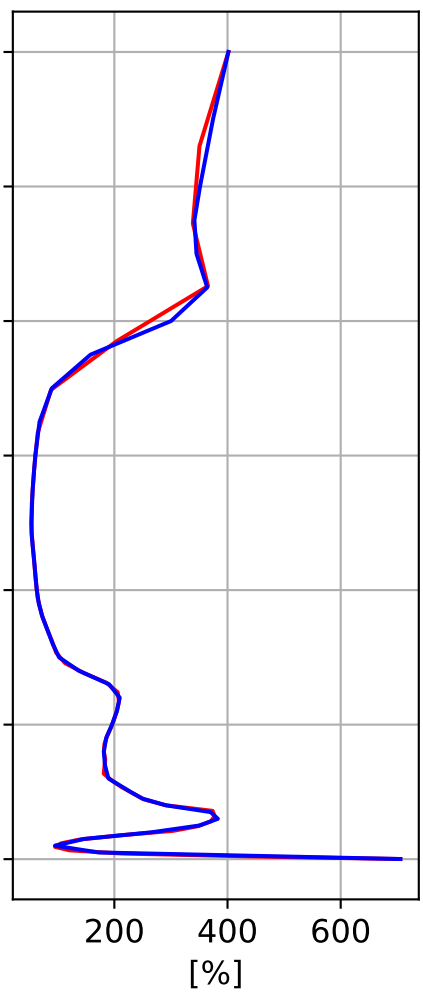
Min, Max, Mean of 732 profiles  
St\_Petersburg, 59.88N, 29.83E, 0.02kmasl



### Std. Deviation



### Percent Deviation



Level covariance matrix

1e-24

Altitude [km]

120

100

80

60

40

20

20

40

60

80

100

120

Altitude [km]

1.35

1.20

1.05

0.90

0.75

0.60

0.45

0.30

0.15

0.00

Mixing ratio[ $\sim 2$ ]