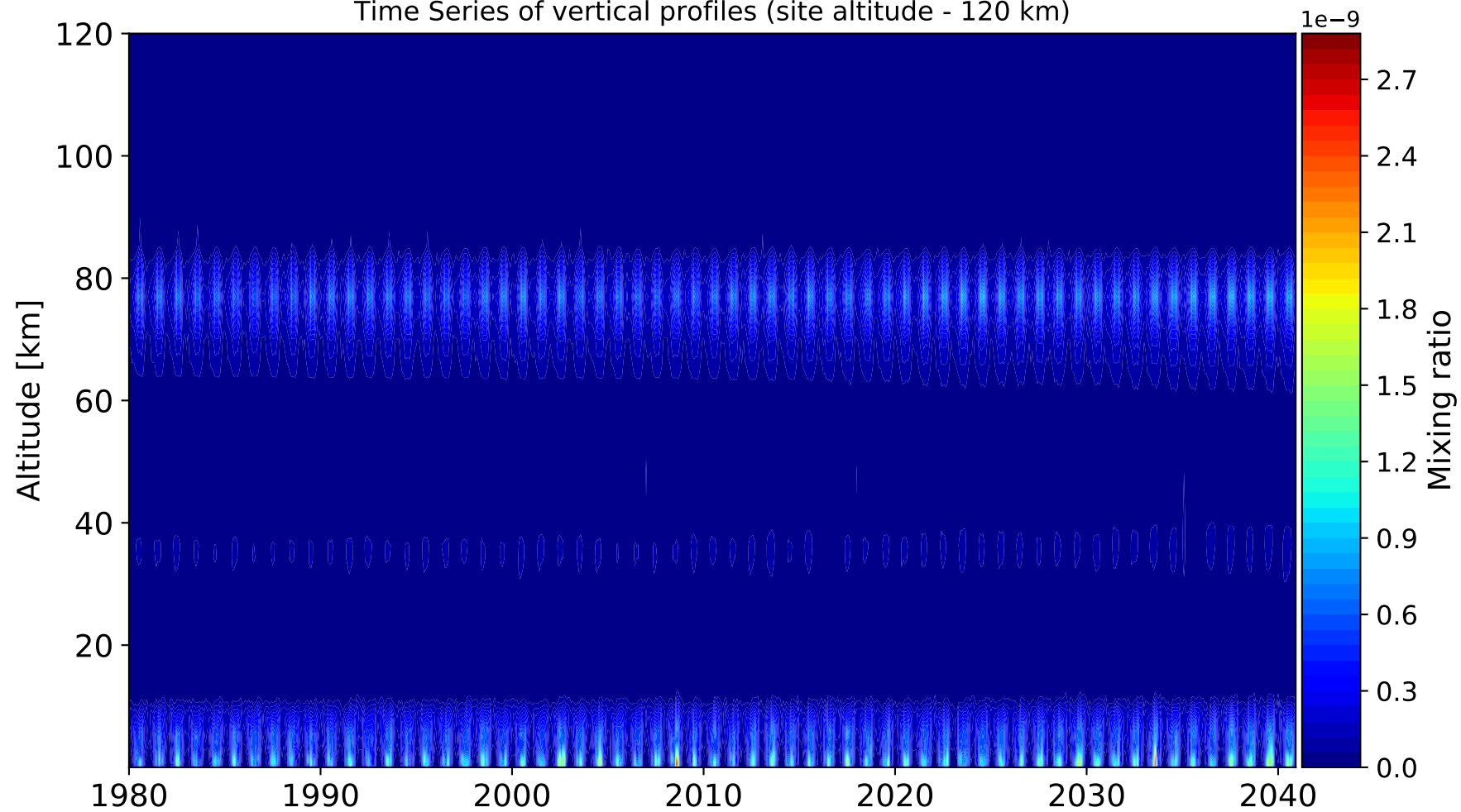
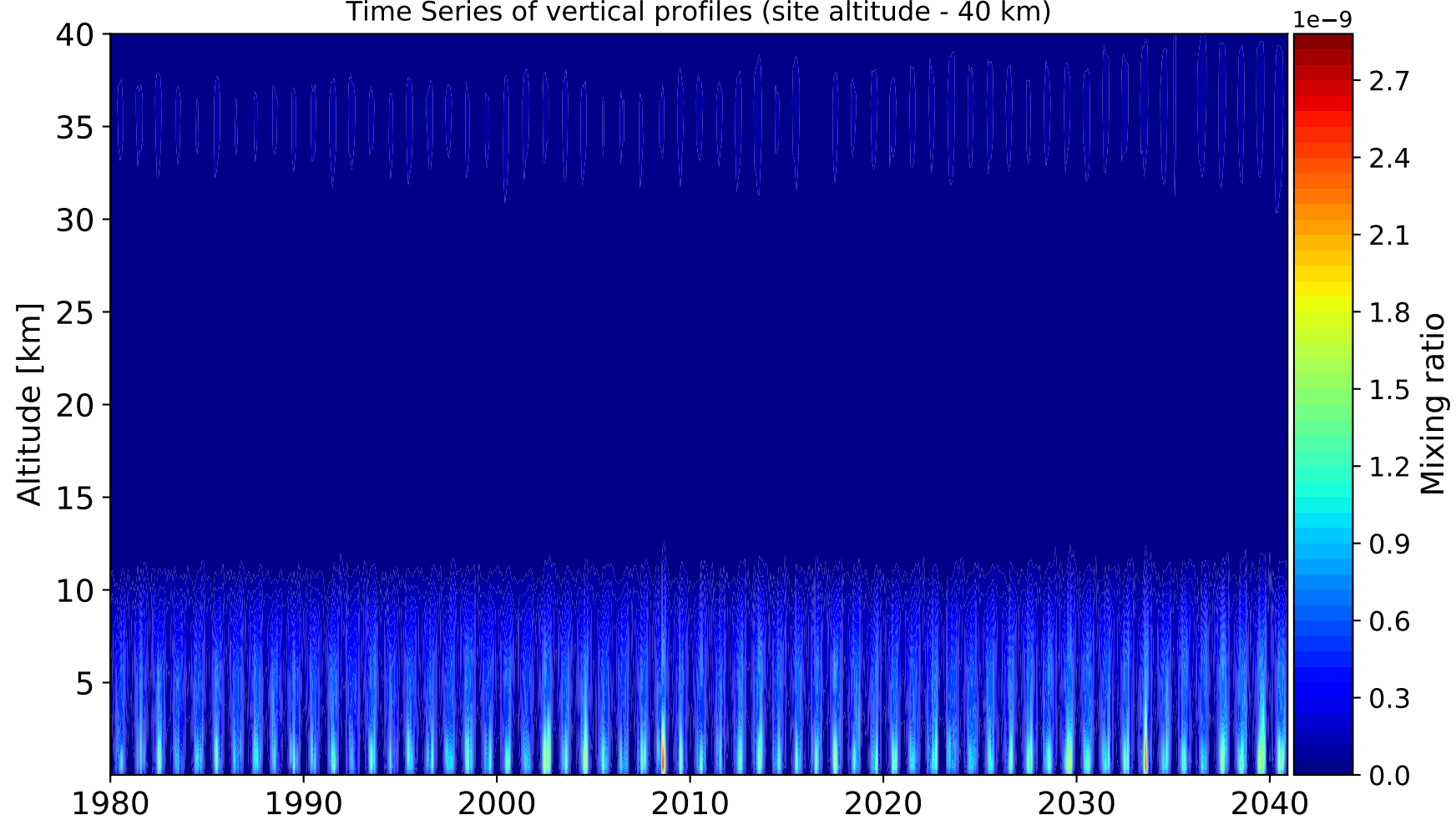


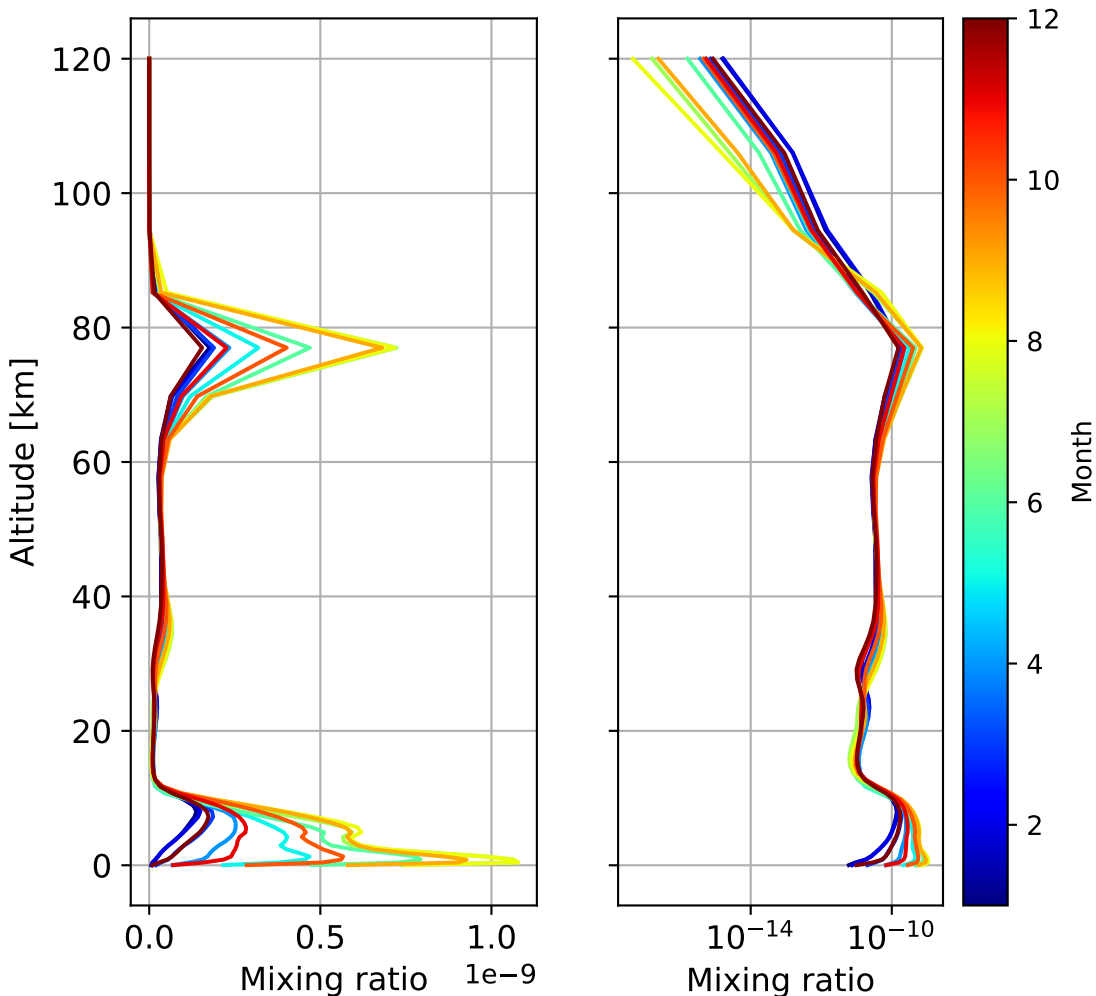
Time Series of vertical profiles (site altitude - 120 km)



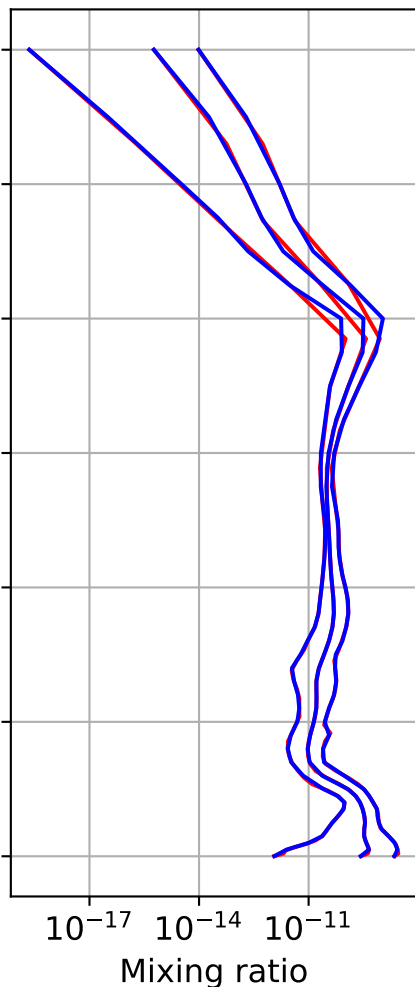
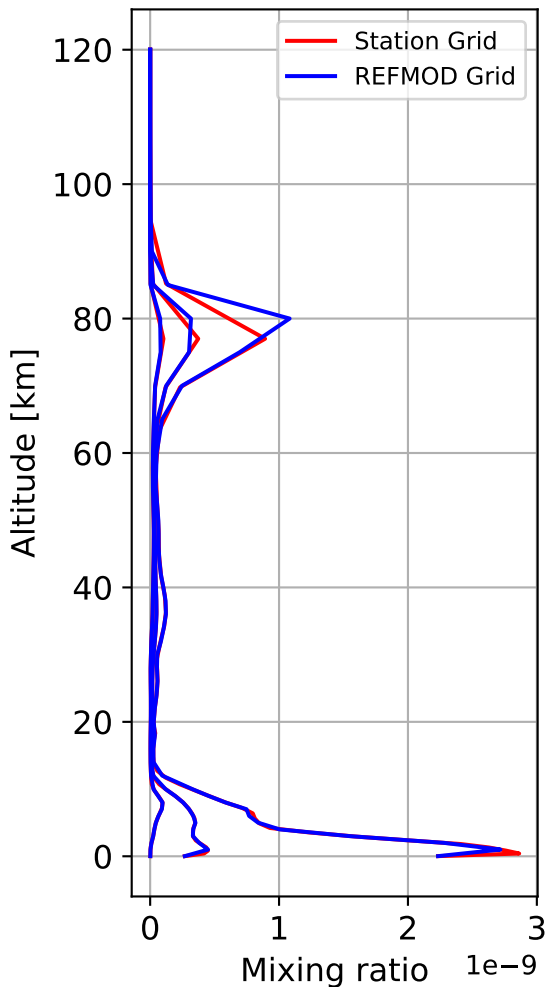
Time Series of vertical profiles (site altitude - 40 km)



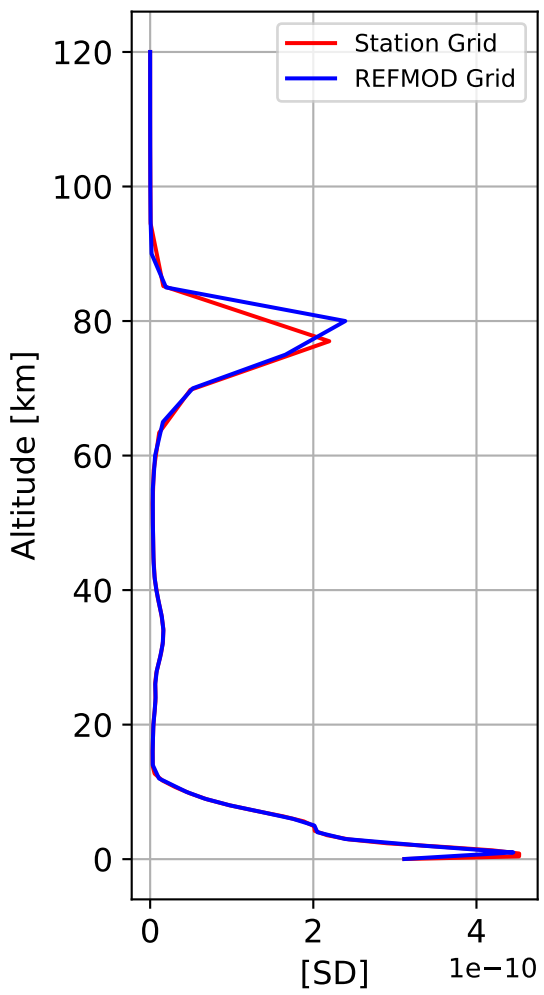
Monthly mean WACCM profile (interpolated to station grid)  
St\_Petersburg, 59.88N, 29.83E, 0.02kmasl



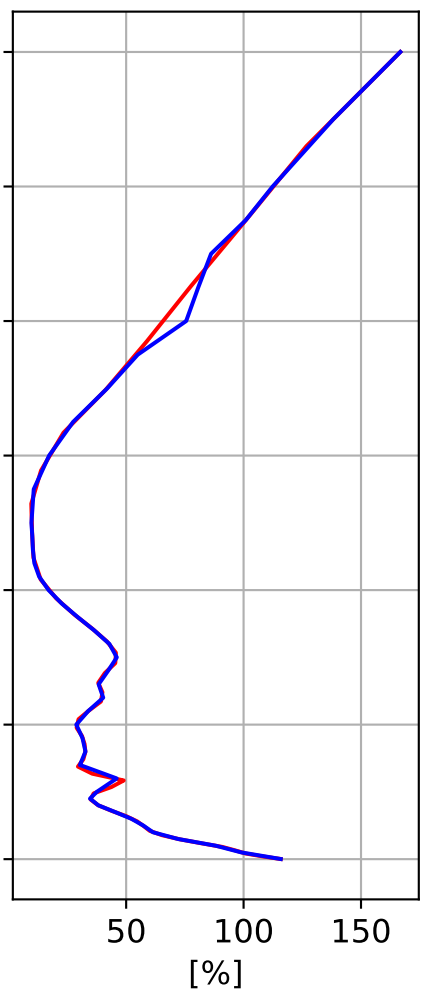
Min, Max, Mean of 732 profiles  
St\_Petersburg, 59.88N, 29.83E, 0.02kmasl



### Std. Deviation



### Percent Deviation



# Level covariance matrix

1e-19

Altitude [km]

120

100

80

60

40

20

20

Altitude [km]

40

60

80

100

120

2.00

1.75

1.50

1.25

1.00

0.75

0.50

0.25

0.00

Mixing ratio[<sup>2</sup>]

