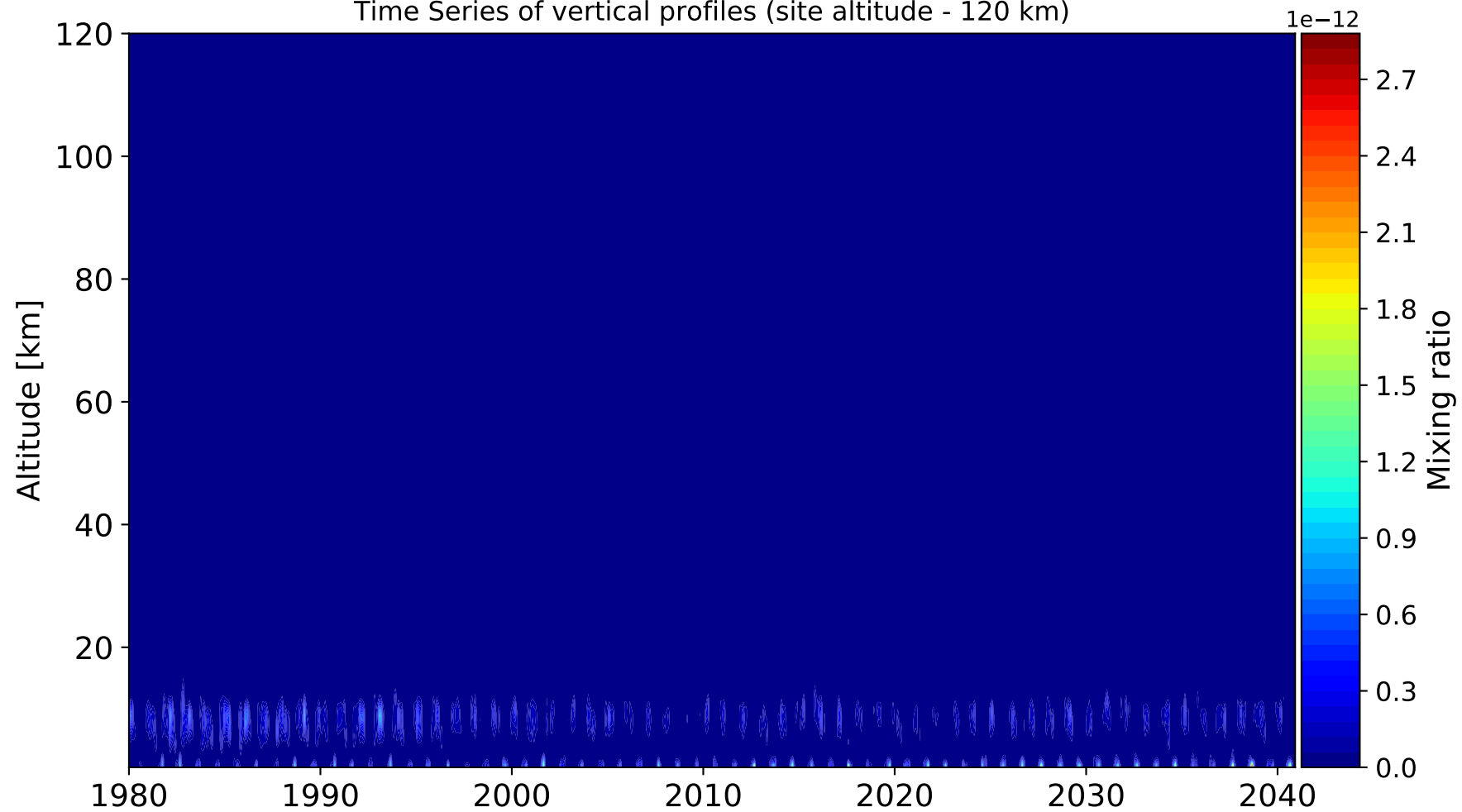


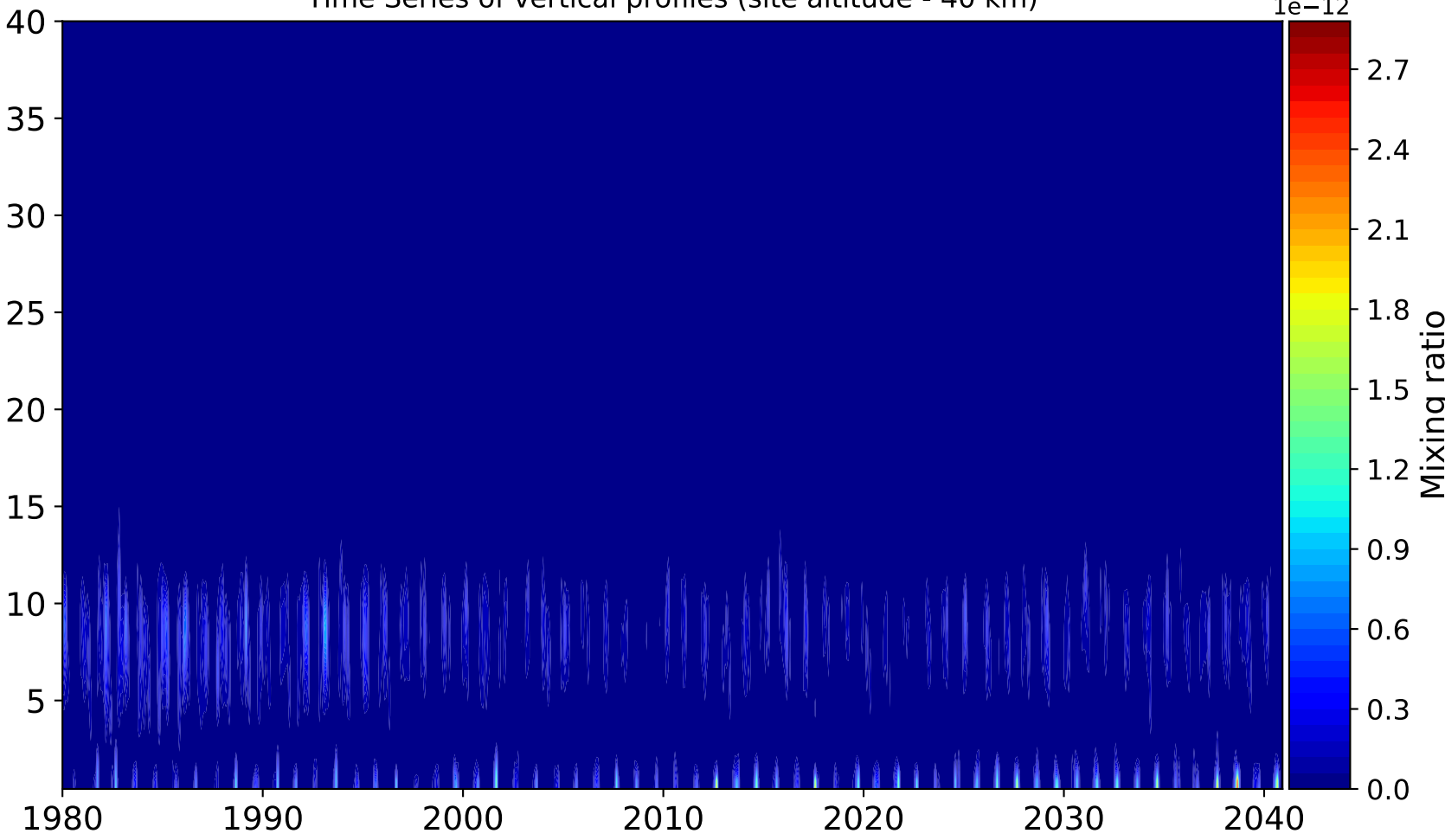
Time Series of vertical profiles (site altitude - 120 km)



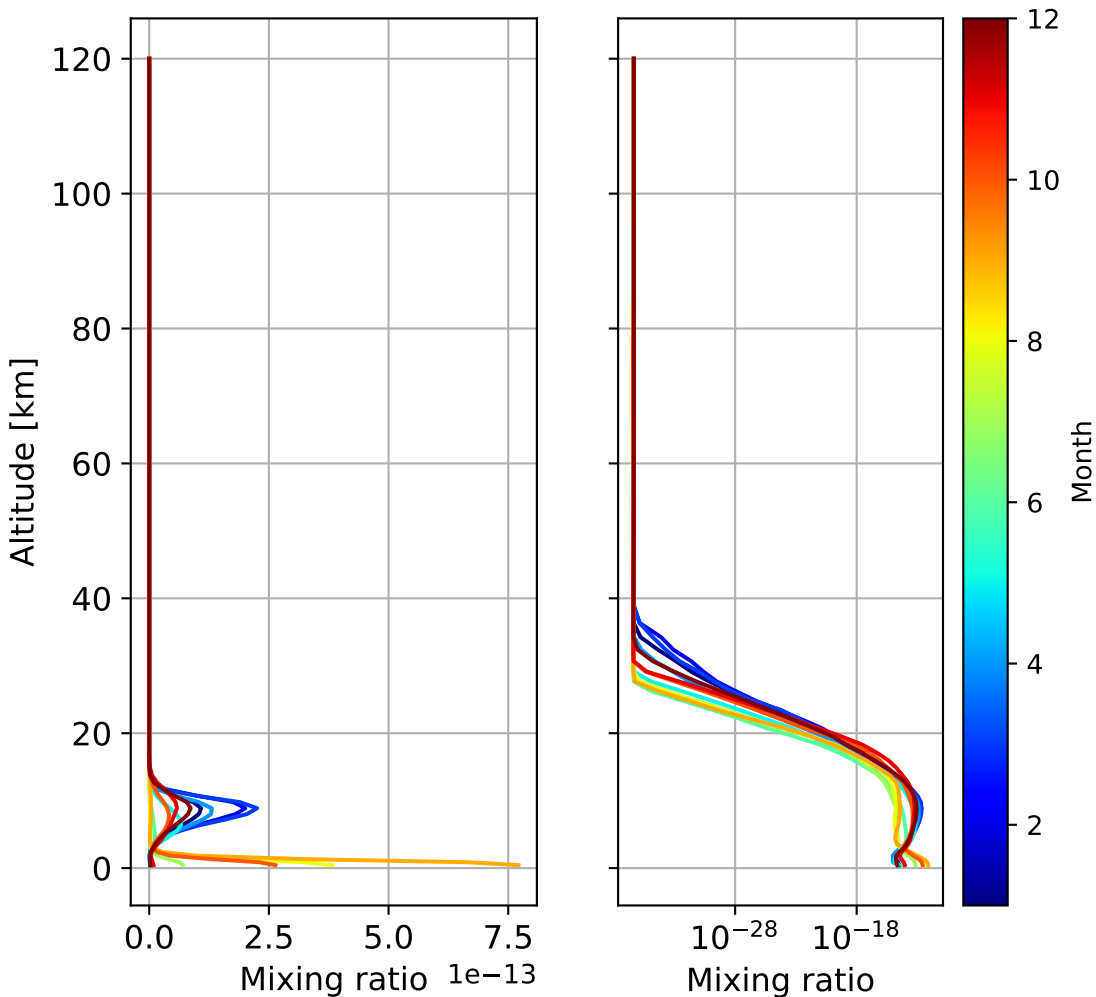
Time Series of vertical profiles (site altitude - 40 km)

$1e-12$

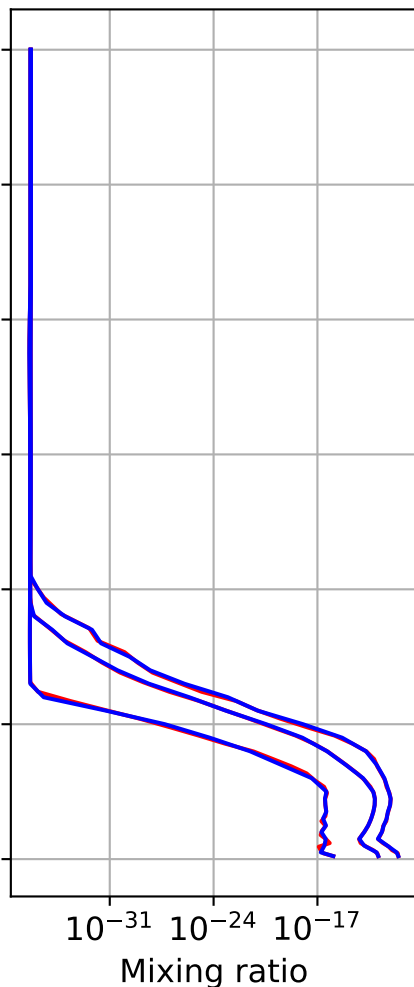
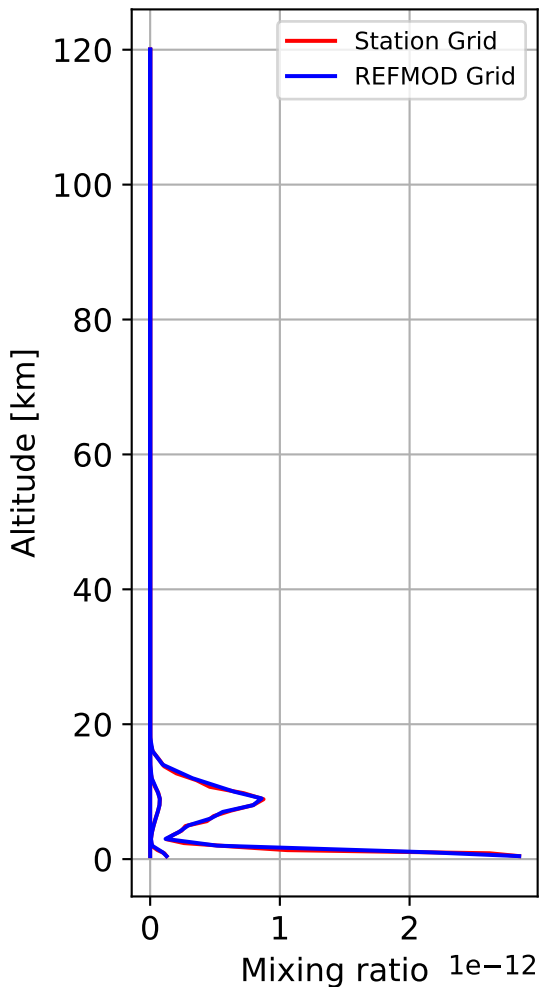
Altitude [km]



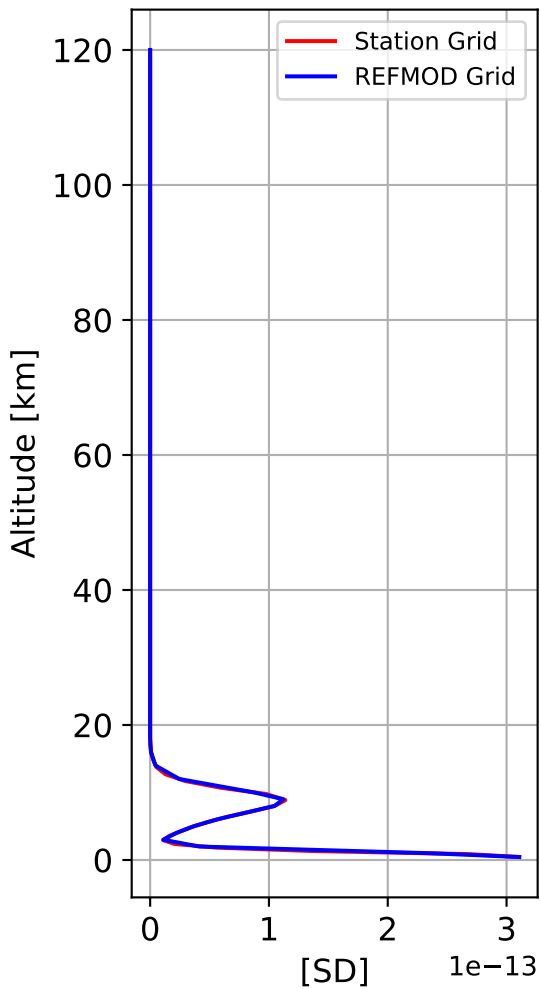
Monthly mean WACCM profile (interpolated to station grid)  
Park\_Falls, 45.945N, 269.727E, 0.442kmasl



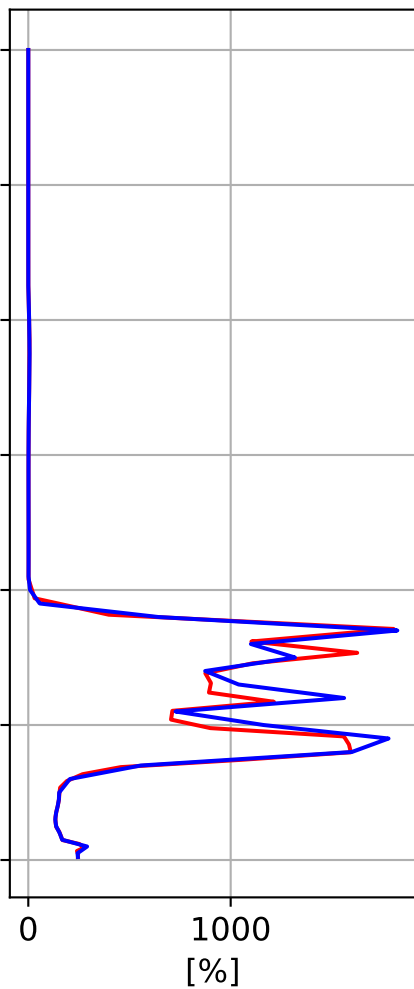
Min, Max, Mean of 732 profiles  
Park\_Falls, 45.945N, 269.727E, 0.442kmasl



### Std. Deviation



### Percent Deviation



# Level covariance matrix

$1e-26$

Altitude [km]

120  
100  
80  
60  
40  
20

Altitude [km]

20

40

60

80

100

120

8.75

7.50

6.25

5.00

3.75

2.50

1.25

0.00

Mixing ratio<sup>2</sup>]

