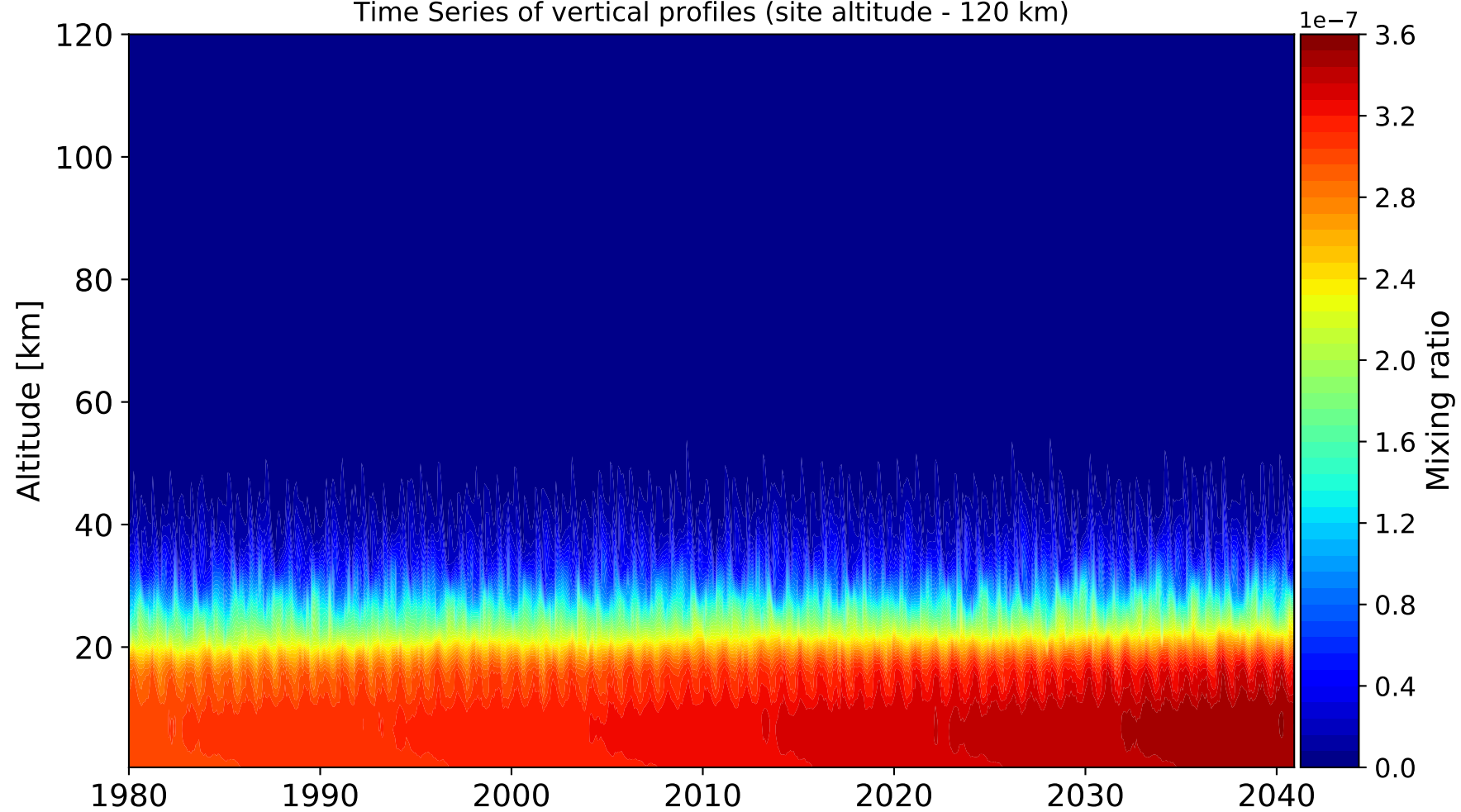
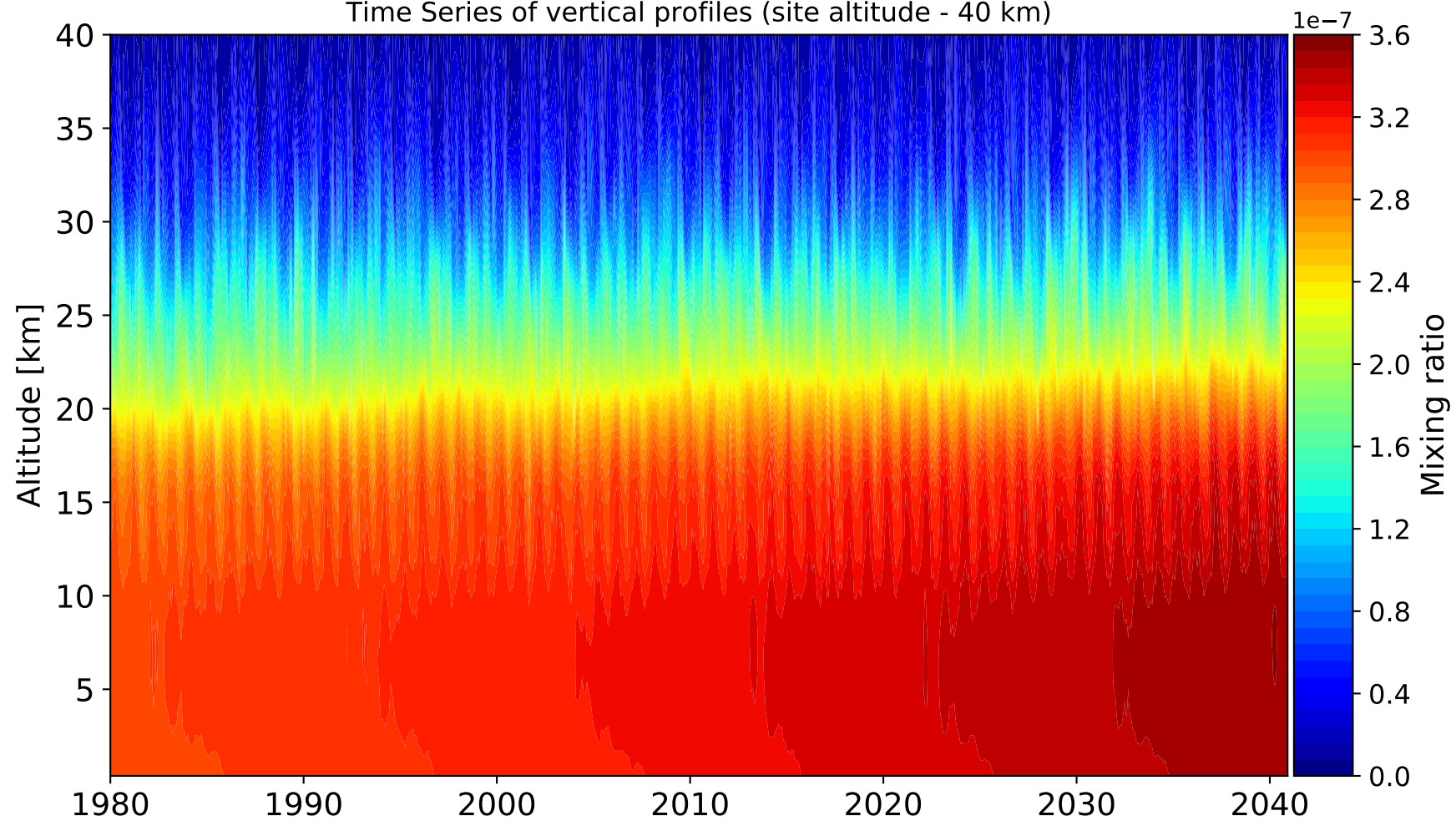


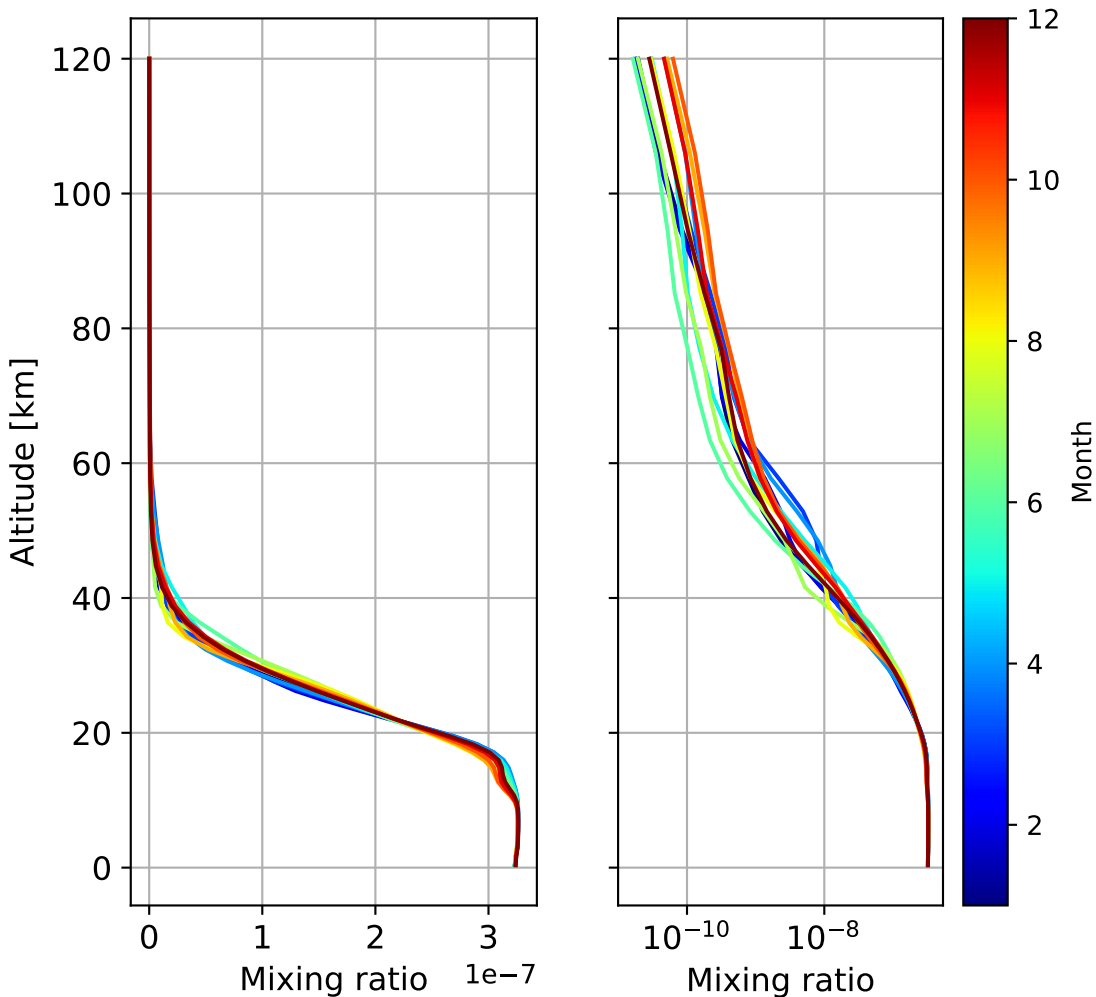
Time Series of vertical profiles (site altitude - 120 km)



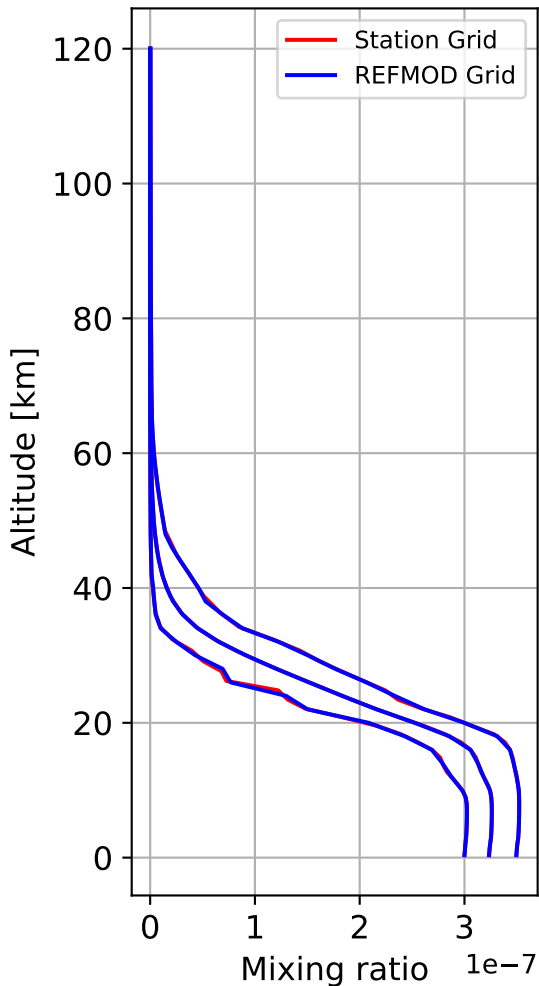
Time Series of vertical profiles (site altitude - 40 km)



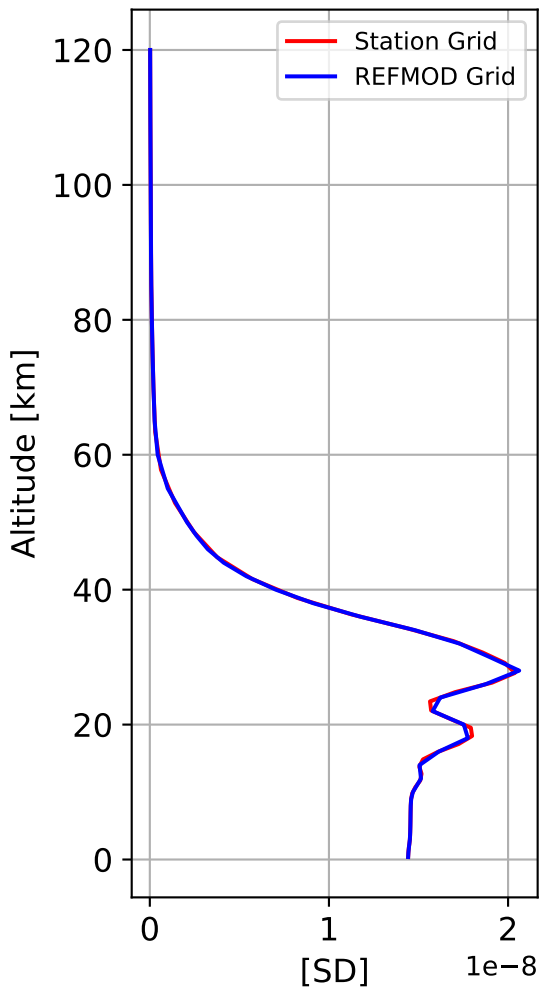
# Monthly mean WACCM profile (interpolated to station grid) Lauder, -45.05N, 169.67E, 0.37kmasl



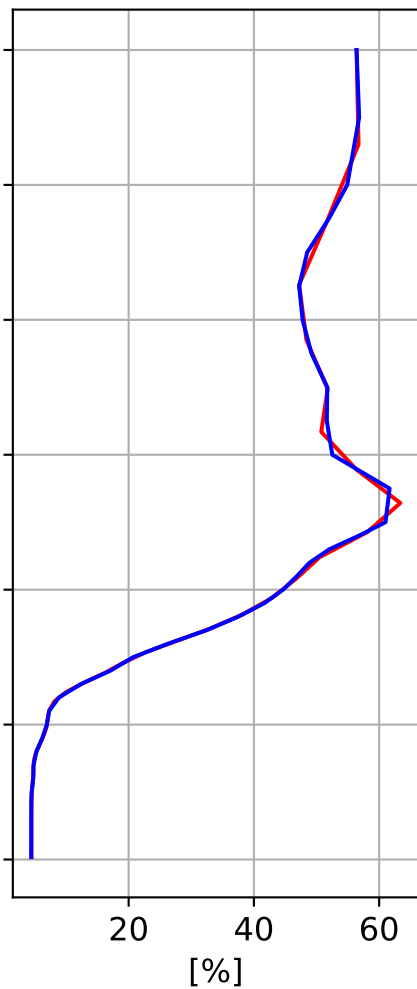
Min, Max, Mean of 732 profiles  
Lauder, -45.05N, 169.67E, 0.37kmasl



### Std. Deviation



### Percent Deviation



Level covariance matrix

1e-16

Altitude [km]

120

100

80

60

40

20

20

Altitude [km]

40

60

80

100

120

4.0

3.5

3.0

2.5

2.0

1.5

1.0

0.5

0.0

Mixing ratio[ $\sim 2$ ]