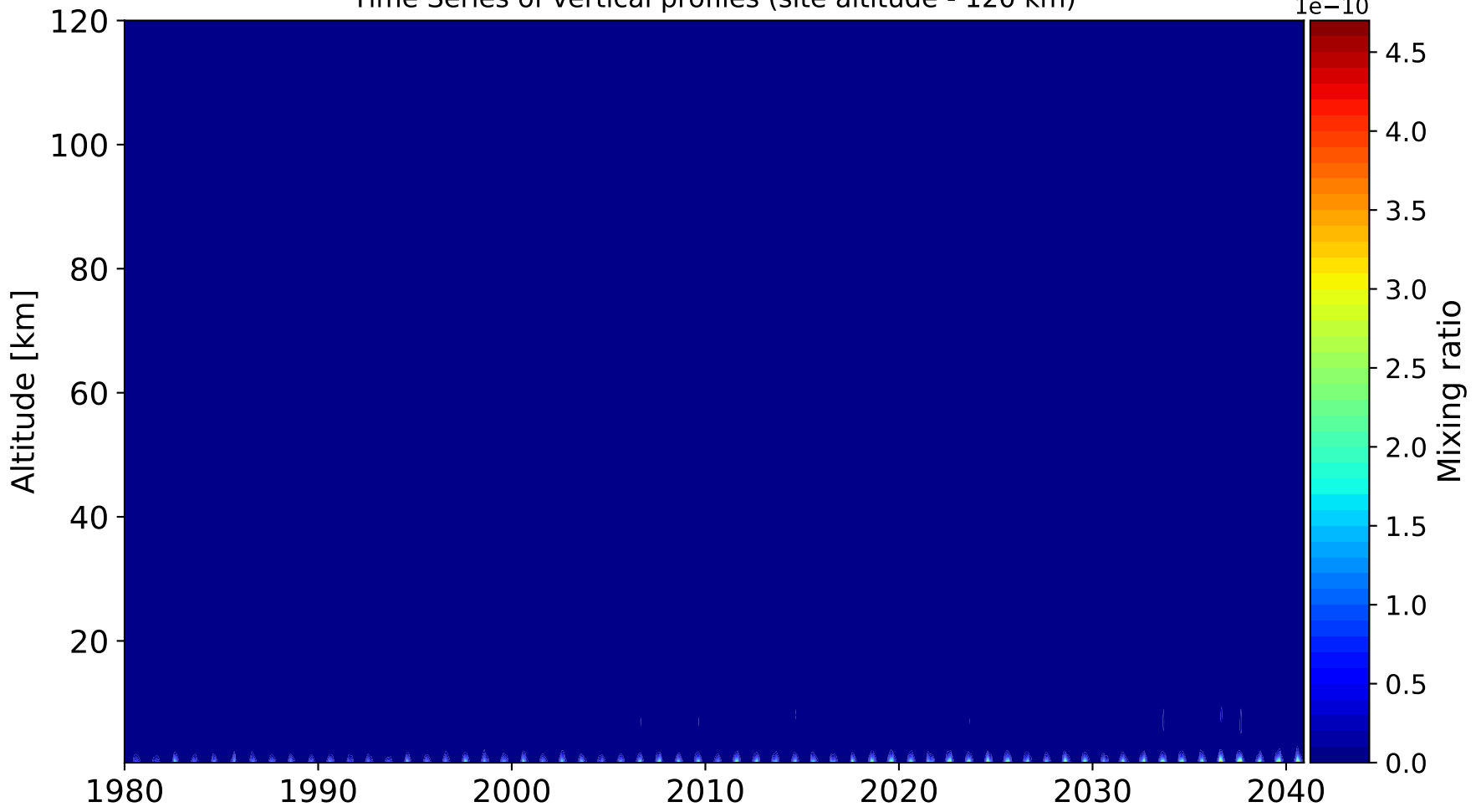


Time Series of vertical profiles (site altitude - 120 km)

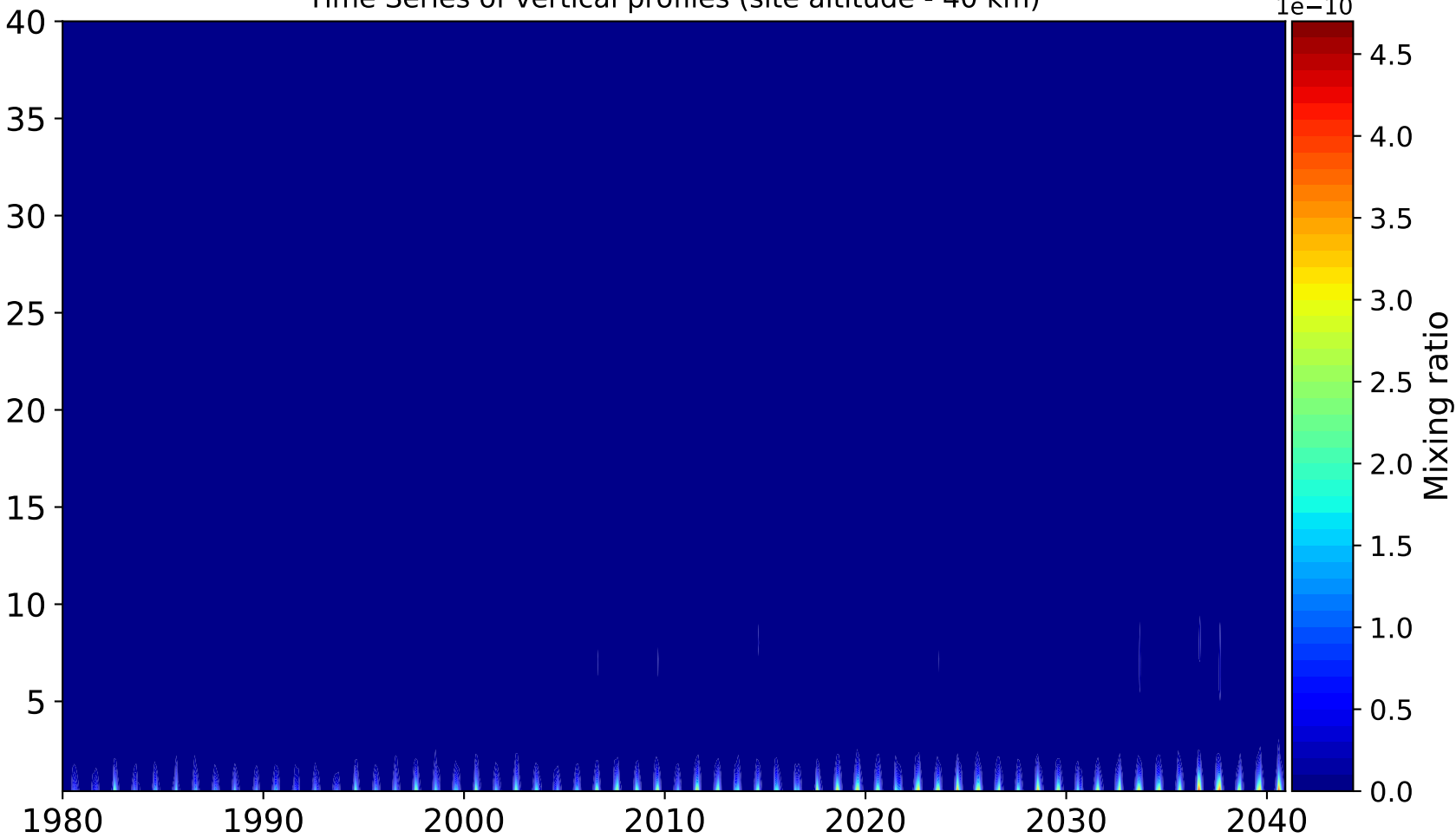
1e-10



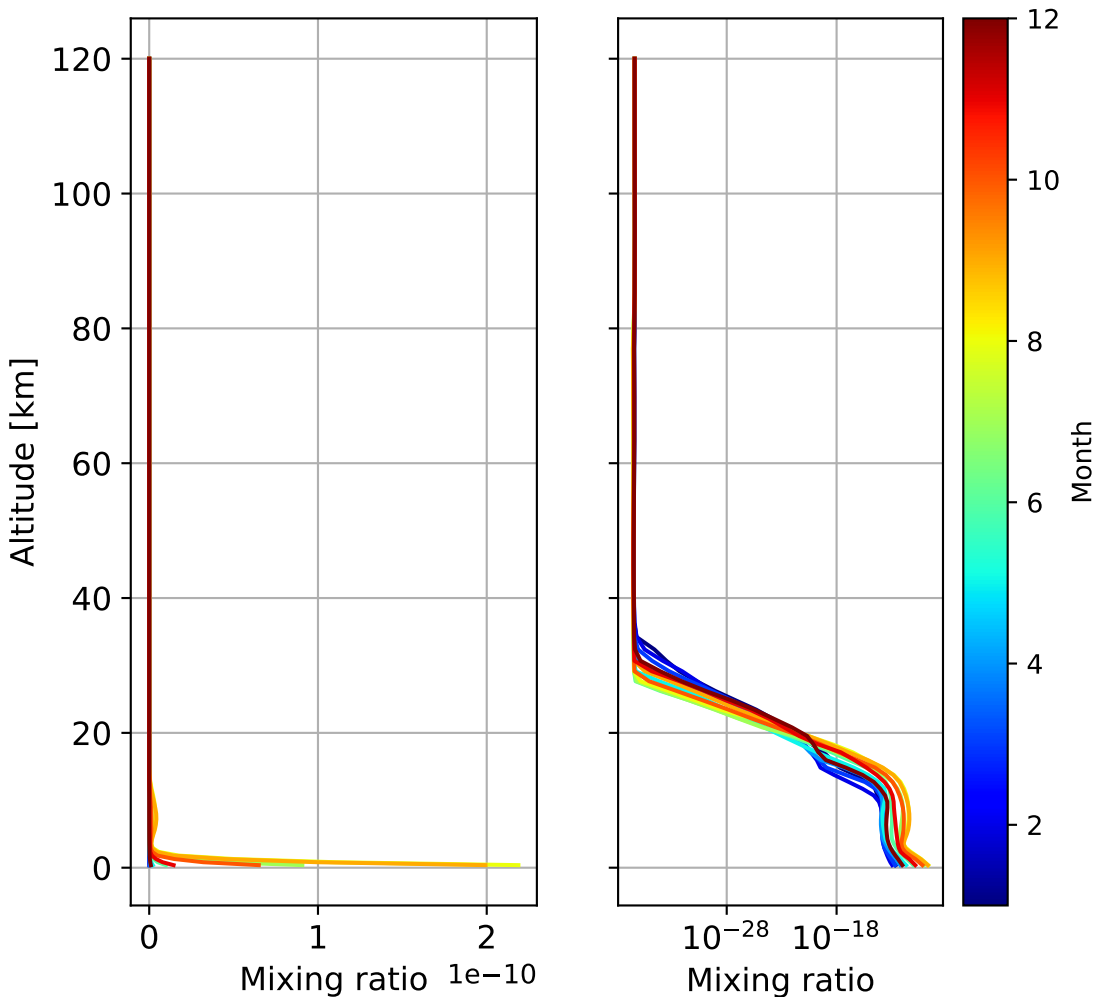
Time Series of vertical profiles (site altitude - 40 km)

1e-10

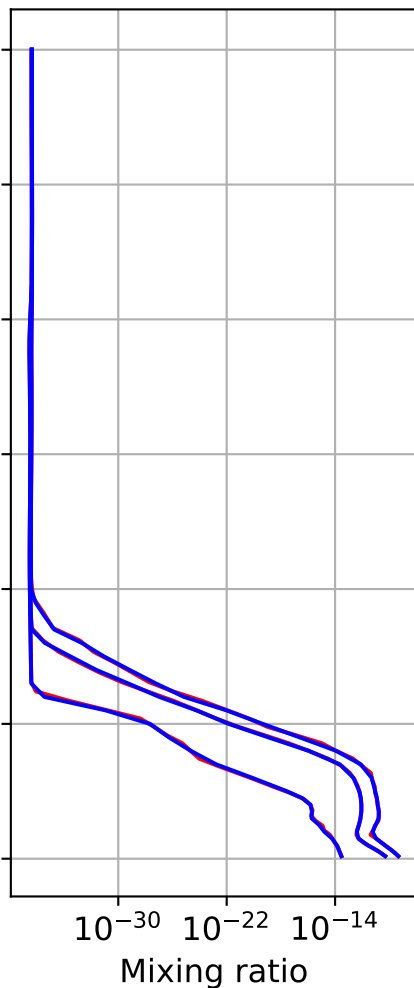
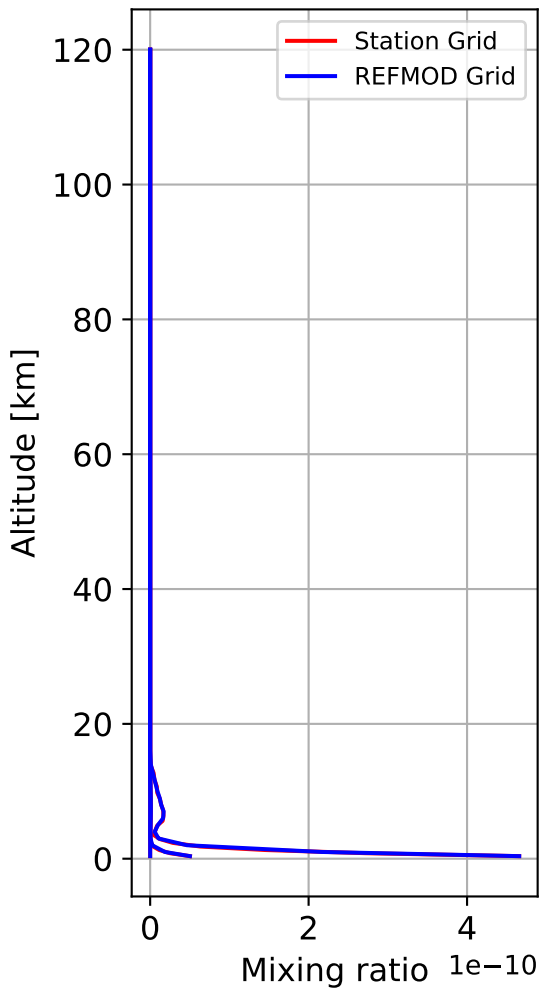
Altitude [km]



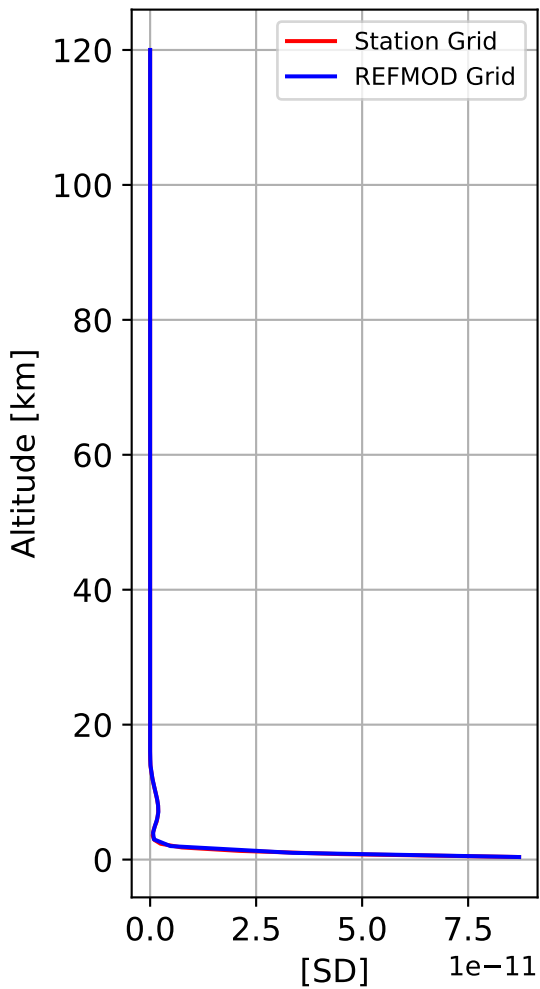
Monthly mean WACCM profile (interpolated to station grid)
Rikubetsu, 43.46N, 143.77E, 0.38kmasl



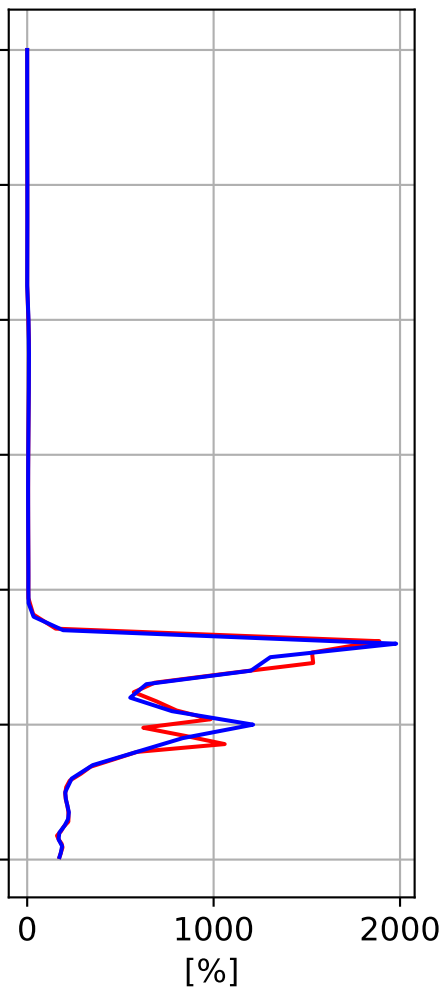
Min, Max, Mean of 732 profiles
Rikubetsu, 43.46N, 143.77E, 0.38kmasl



Std. Deviation



Percent Deviation



Level covariance matrix

 $1e-21$

Altitude [km]

120
100
80
60
40
20

Altitude [km]

7.2

6.3

5.4

4.5

3.6

2.7

1.8

0.9

0.0

Mixing ratio[~ 2]