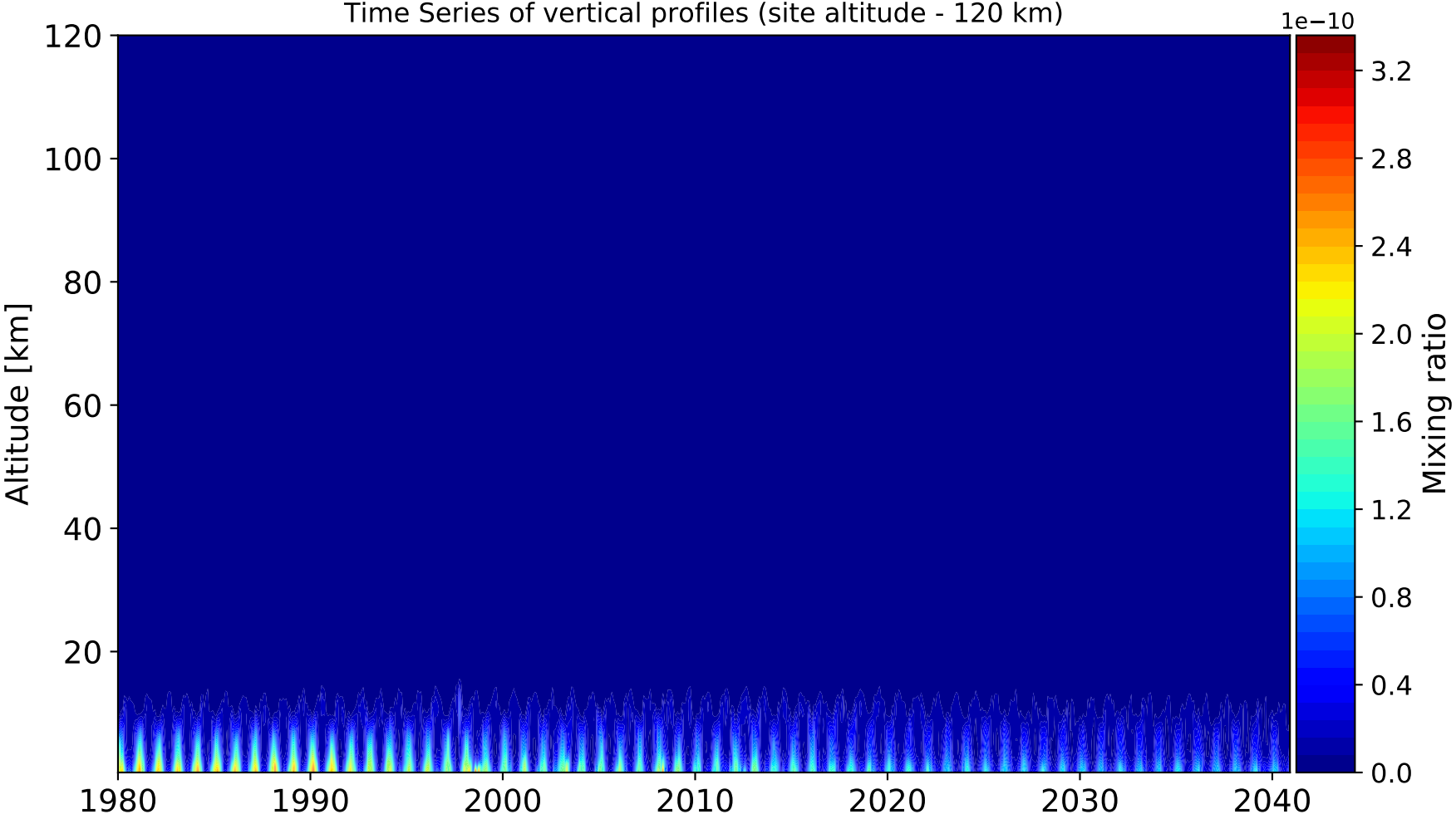
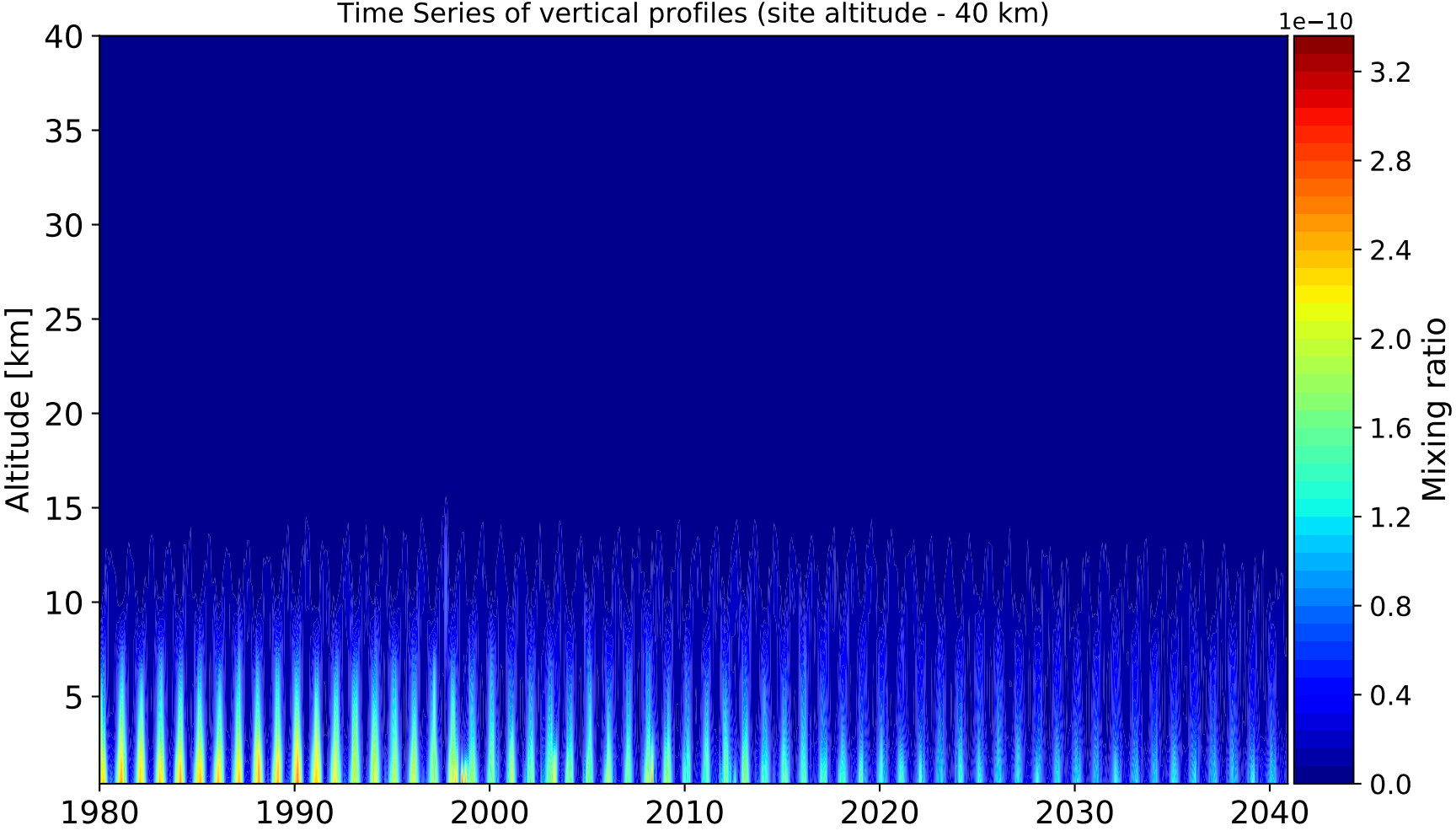
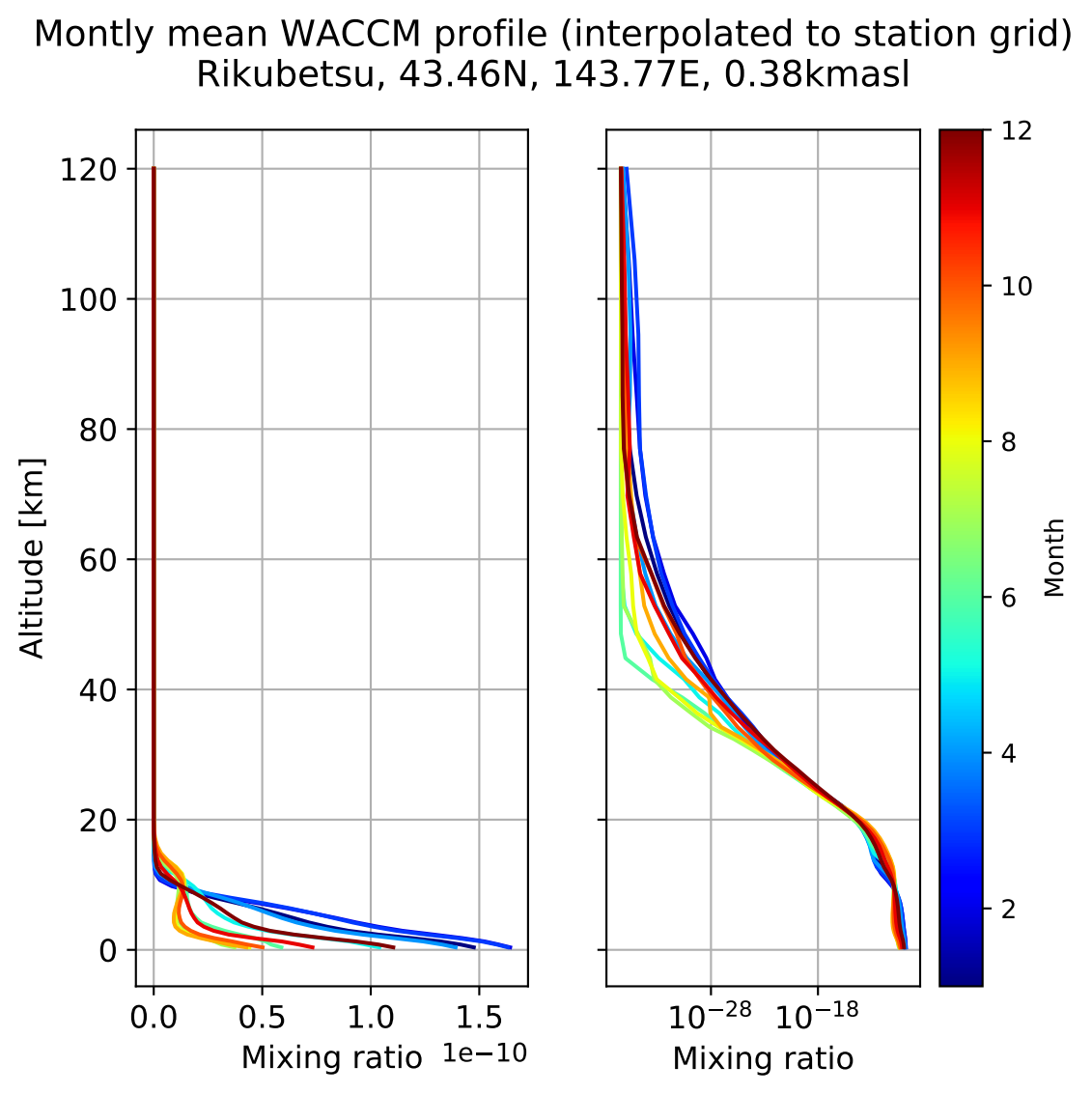
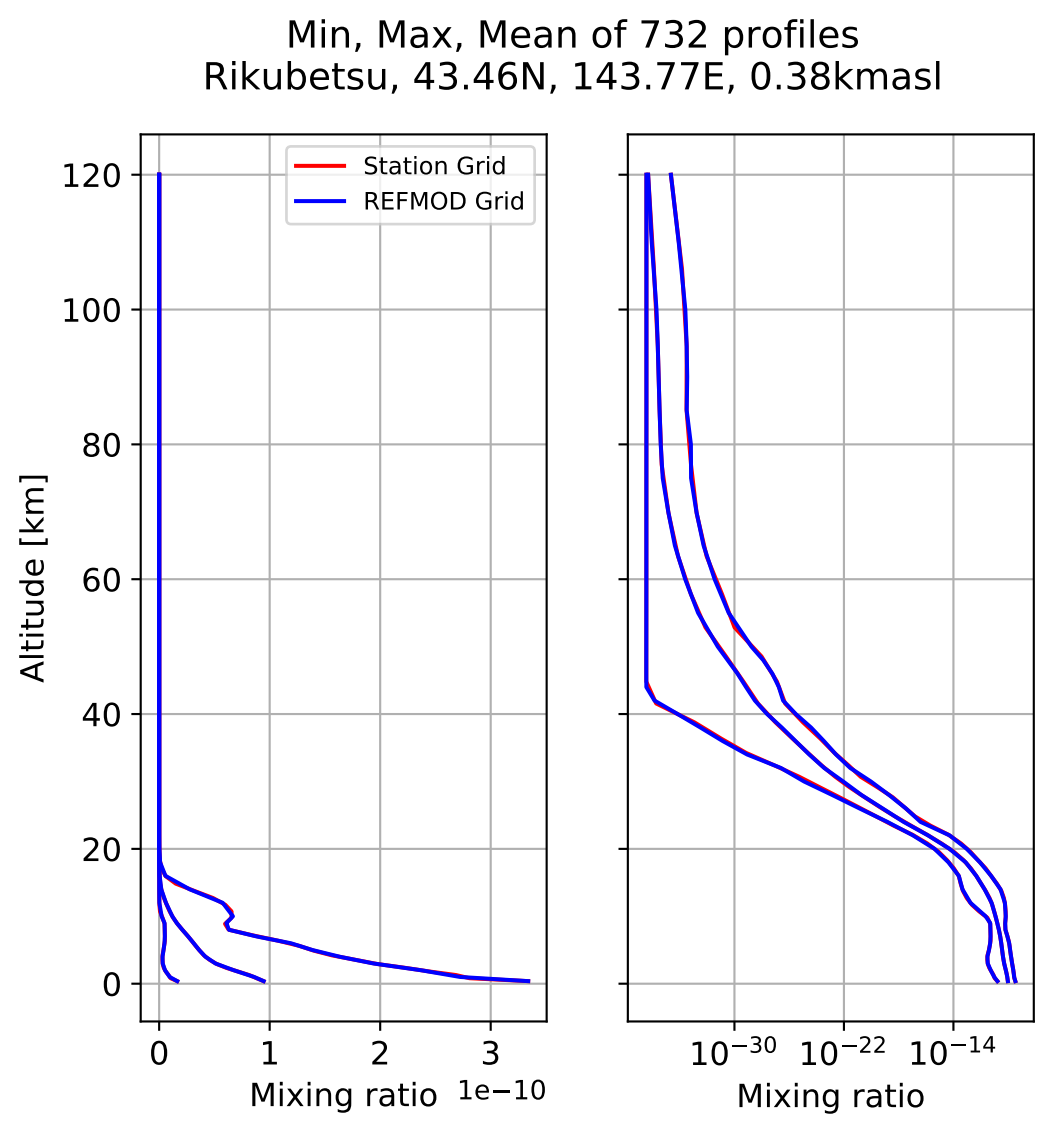
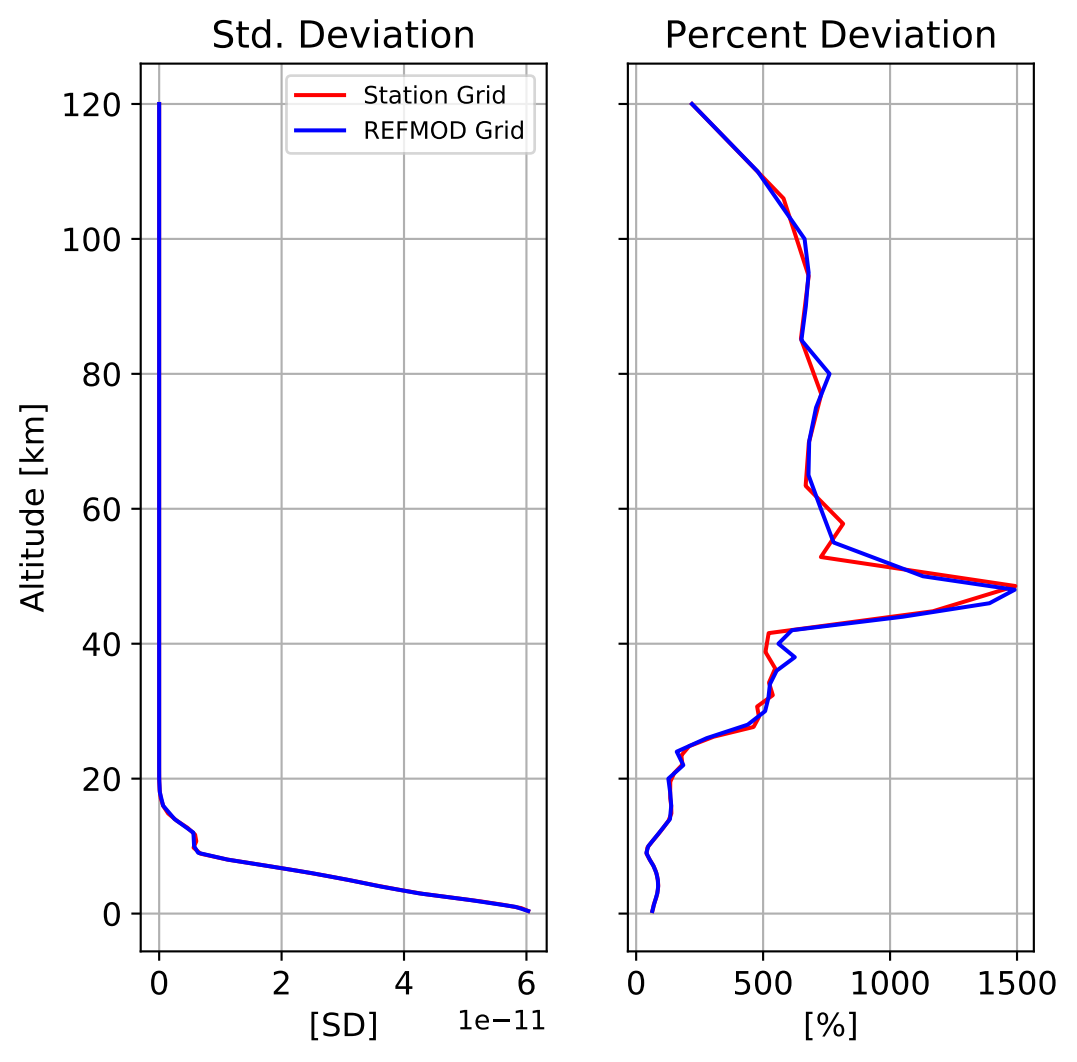
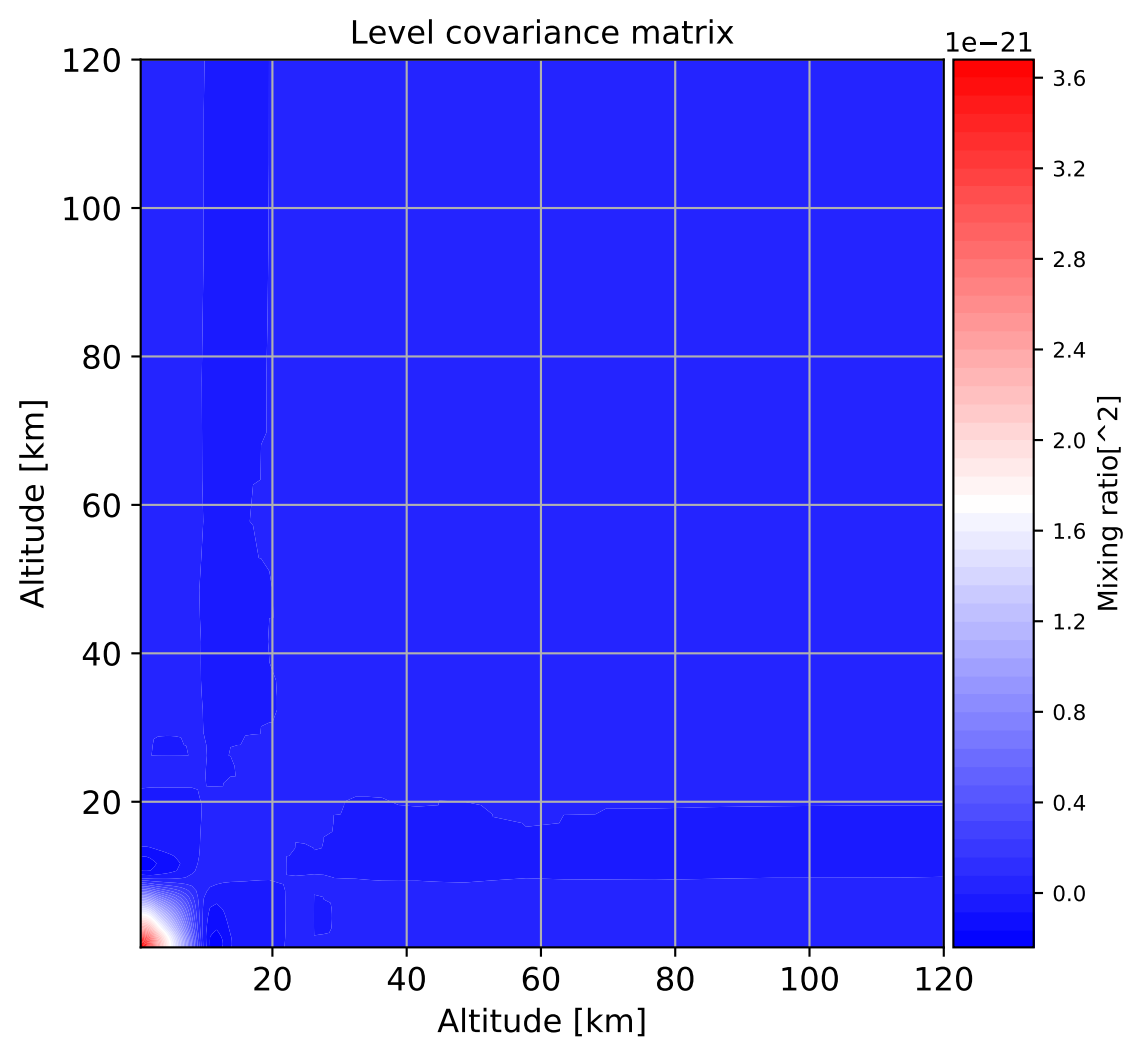

Time Series of vertical profiles (site altitude - 120 km)
Altitude [km]
120
100
80
60
40
20
1980
1990
2000
2010
2020
2030
2040
1e−10
3.2
2.8
2.4
2.0
1.6
1.2
0.8
0.4
0.0
Mixing ratio


Time Series of vertical profiles (site altitude - 40 km)
Altitude [km]
40
35
30
25
20
15
10
5
1980
1990
2000
2010
2020
2030
2040
1e−10
3.2
2.8
2.4
2.0
1.6
1.2
0.8
0.4
0.0
Mixing ratio


Montly mean WACCM profile (interpolated to station grid)
Rikubetsu, 43.46N, 143.77E, 0.38kmasl
Altitude [km]
120
100
80
60
40
20
0
0.0
0.5
1.0
1.5
Mixing ratio
1e−10
10^{-28}
10^{-18}
Mixing ratio
Month
12
10
8
6
4
2


Min, Max, Mean of 732 profiles
Rikubetsu, 43.46N, 143.77E, 0.38kmasl
Station Grid
REFMOD Grid
Altitude [km]
120
100
80
60
40
20
0
0
1
2
3
Mixing ratio
1e−10
10^{-30}
10^{-22}
10^{-14}
Mixing ratio


Std. Deviation
Percent Deviation
Station Grid
REFMOD Grid
Altitude [km]
120
100
80
60
40
20
0
0
2
4
6
1e−11
[SD]
0
500
1000
1500
[%]


Level covariance matrix
1e−21
3.6
3.2
2.8
2.4
2.0
1.6
1.2
0.8
0.4
0.0
Mixing ratio[^2]
120
100
80
60
40
20
Altitude [km]
20
40
60
80
100
120
Altitude [km]