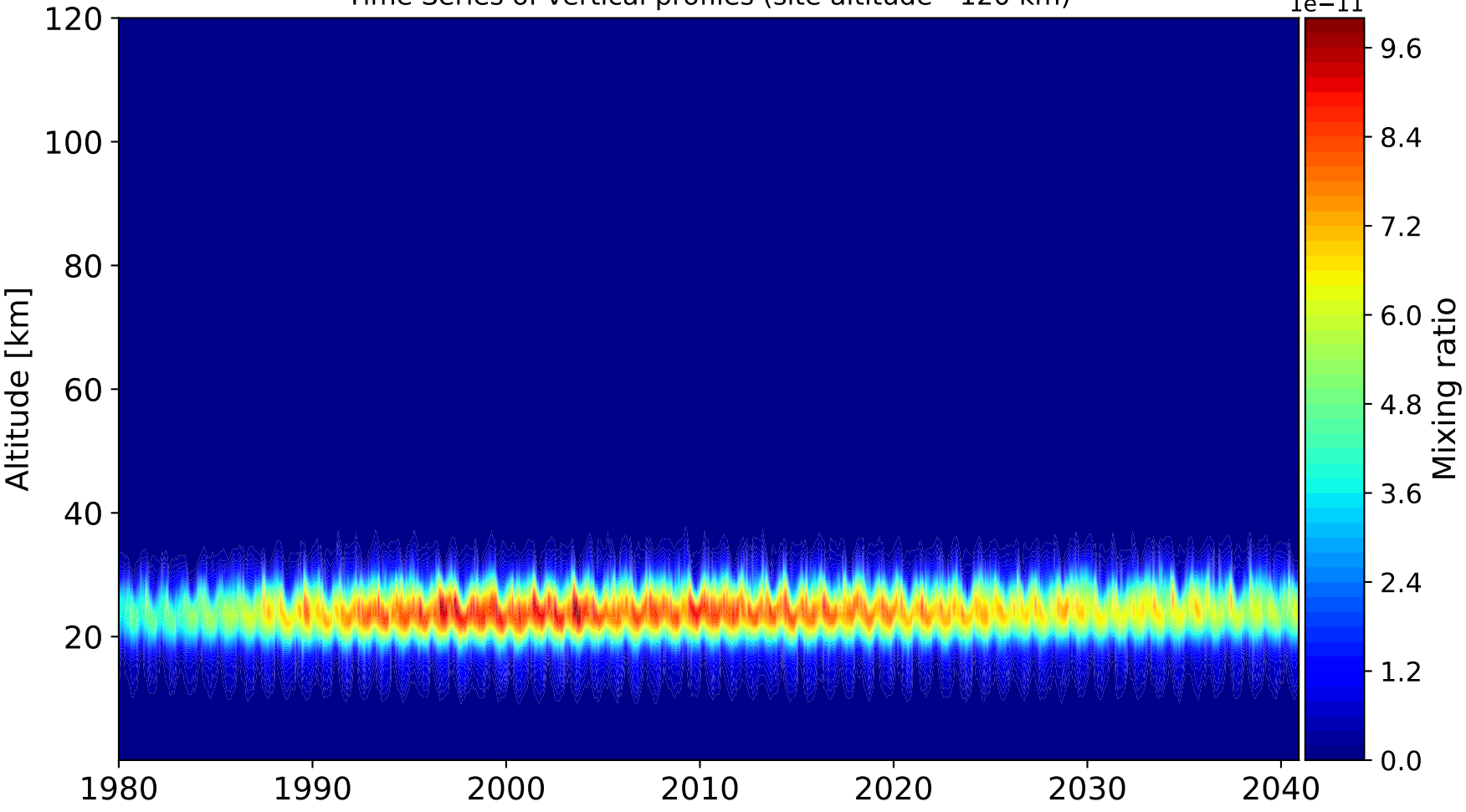
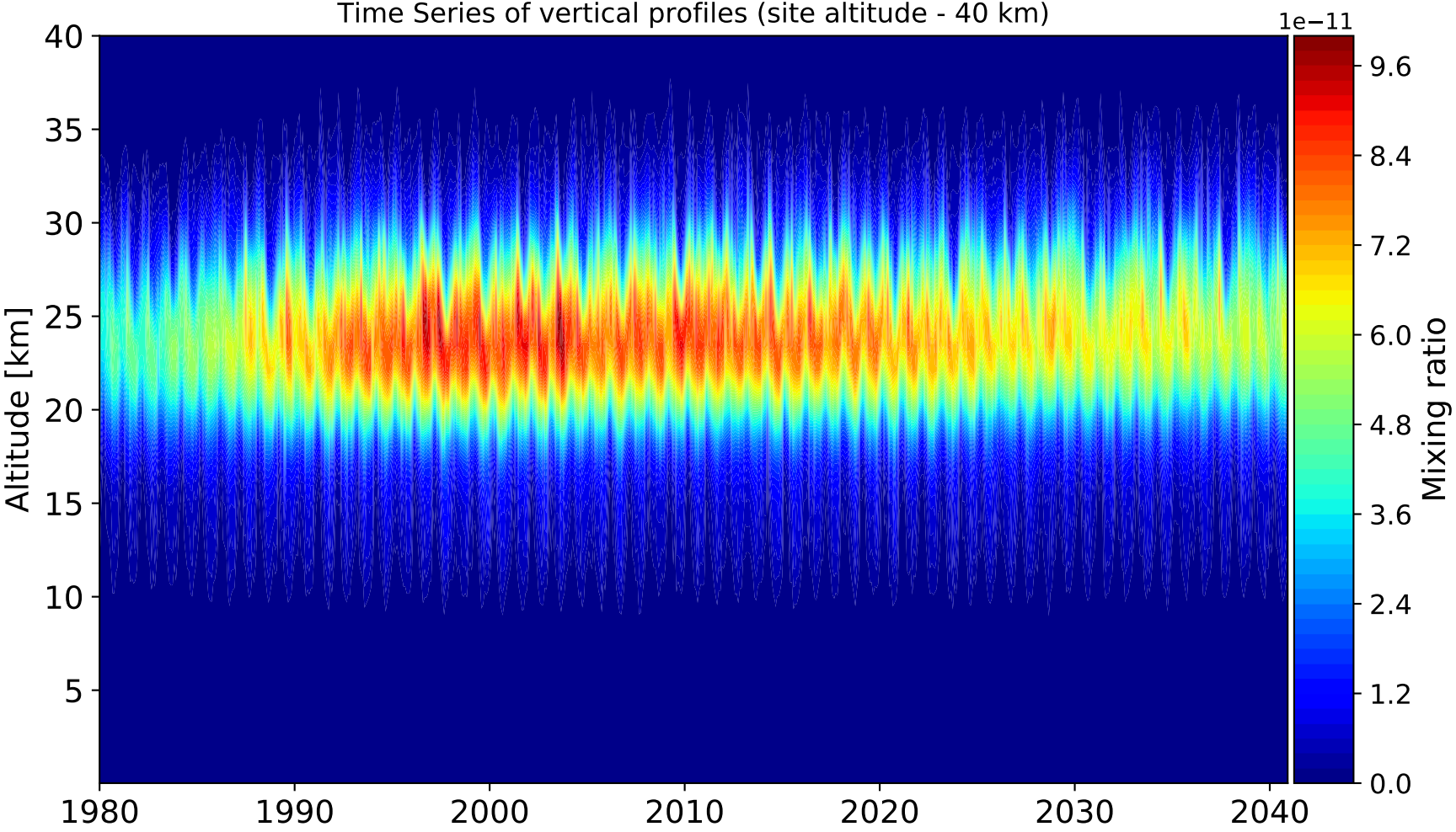
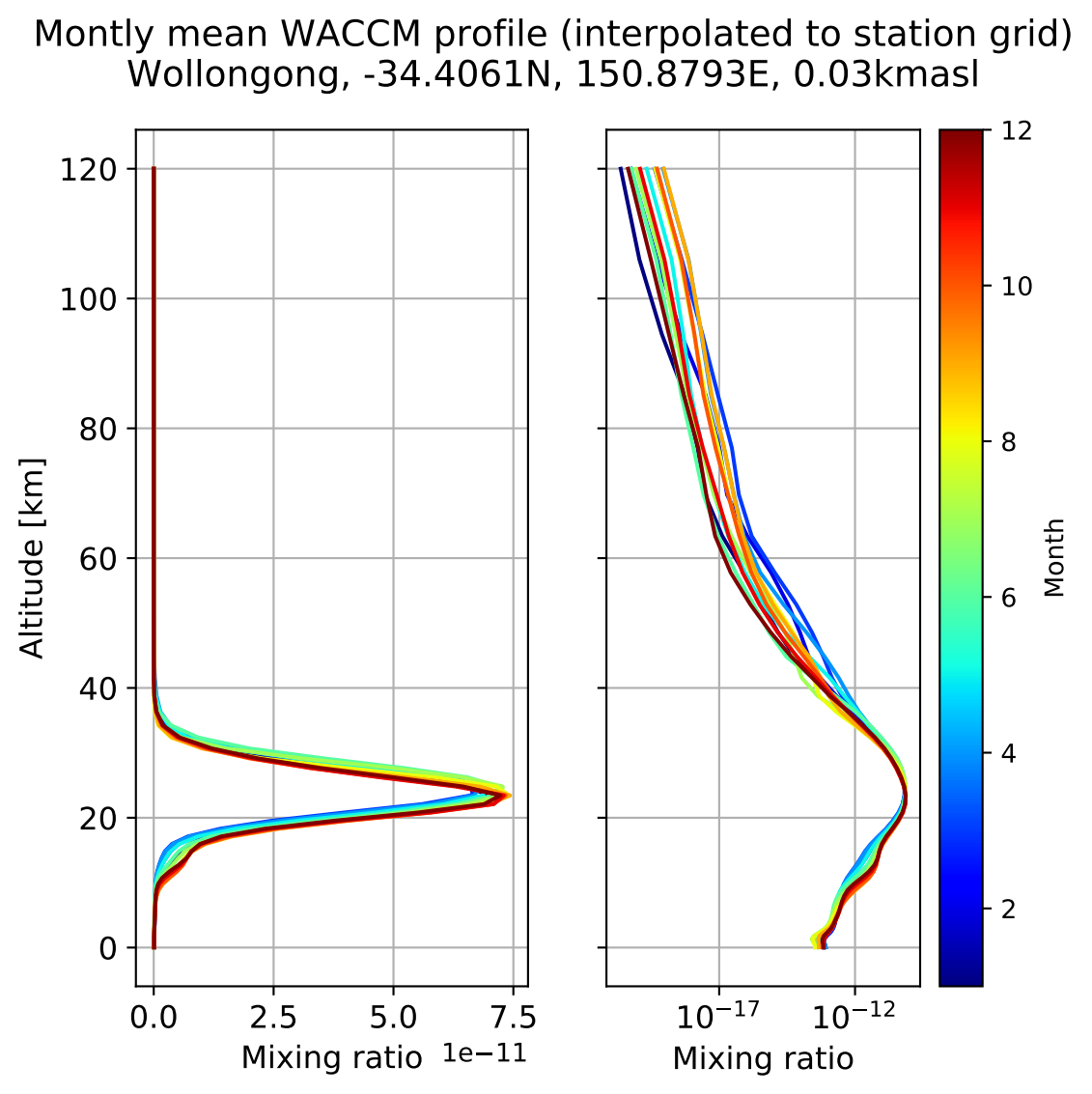
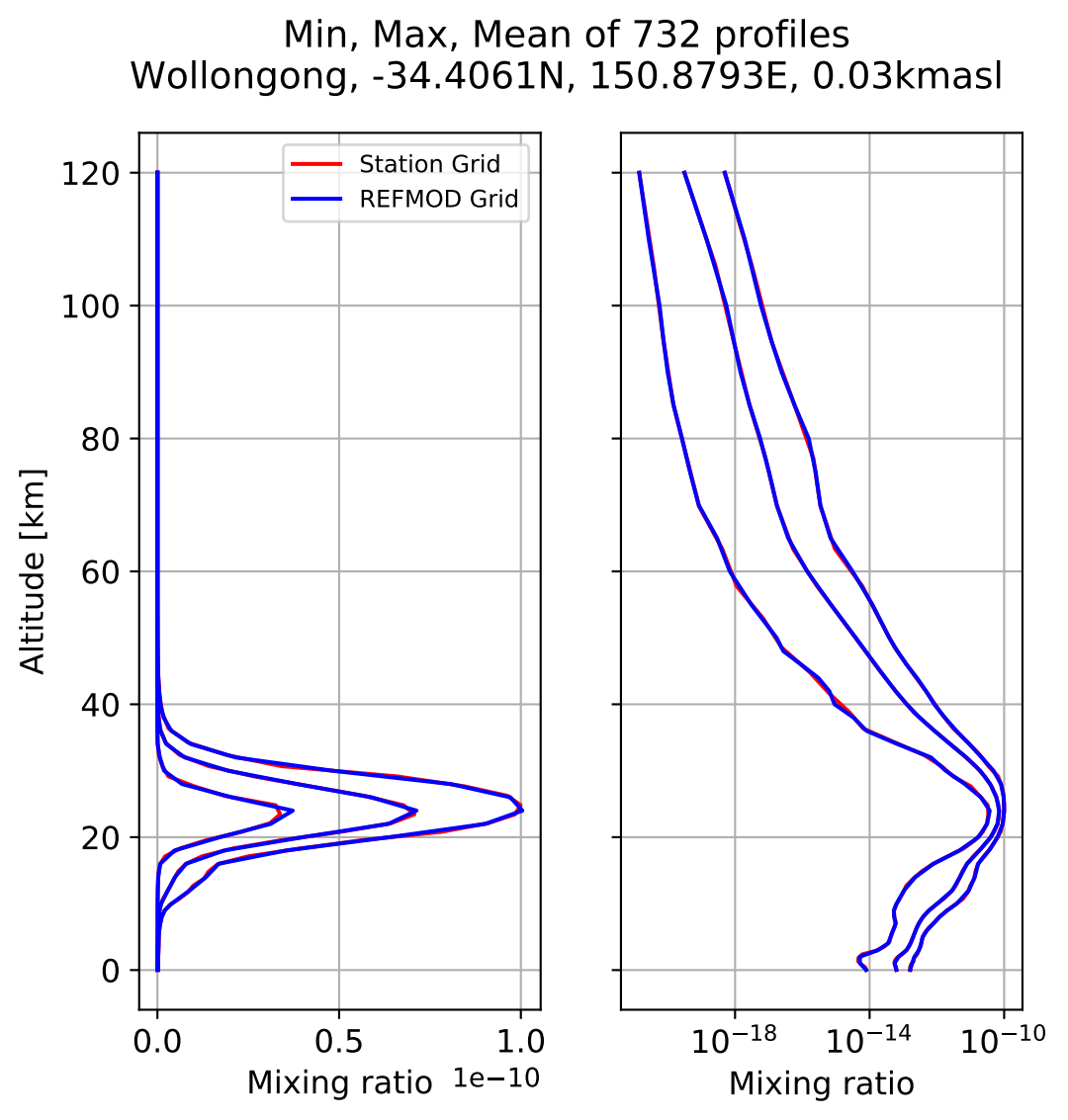
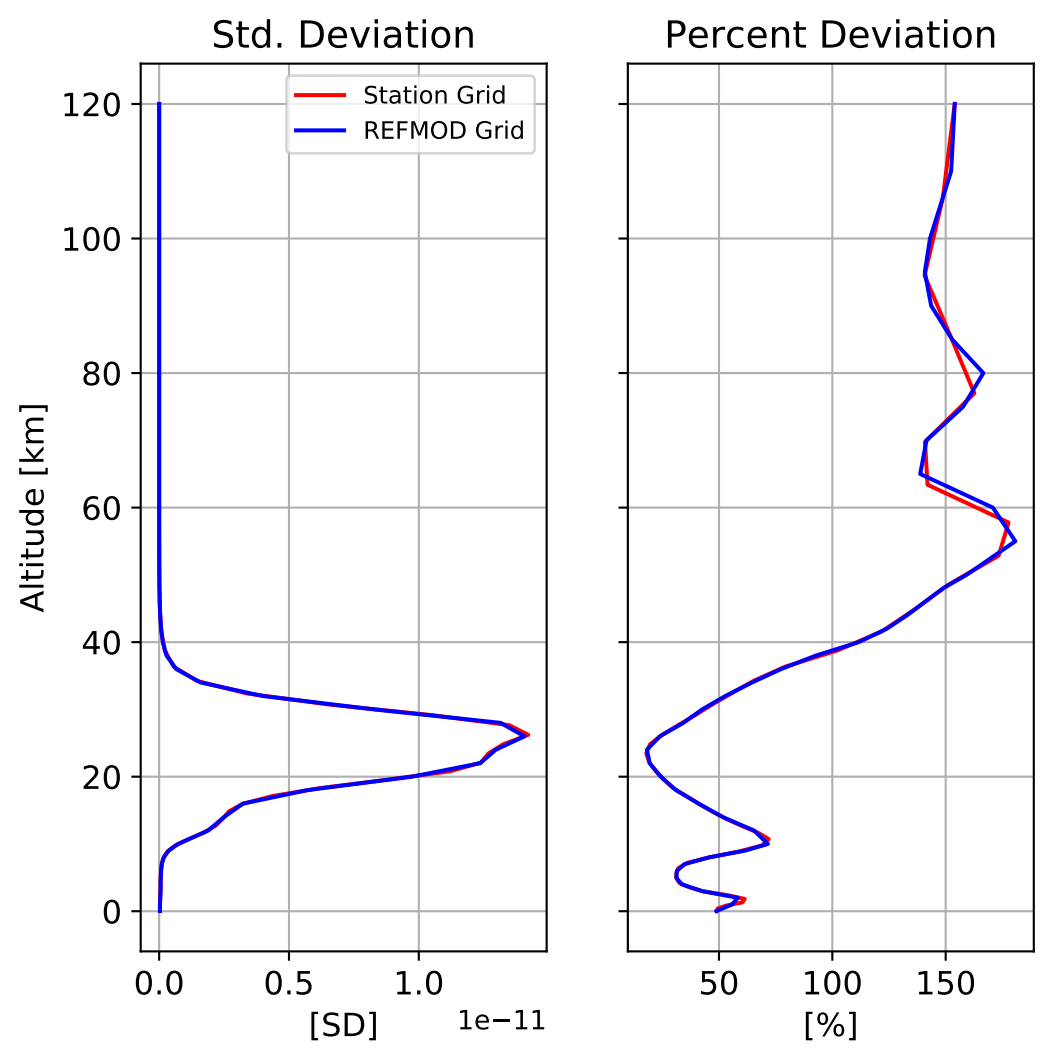
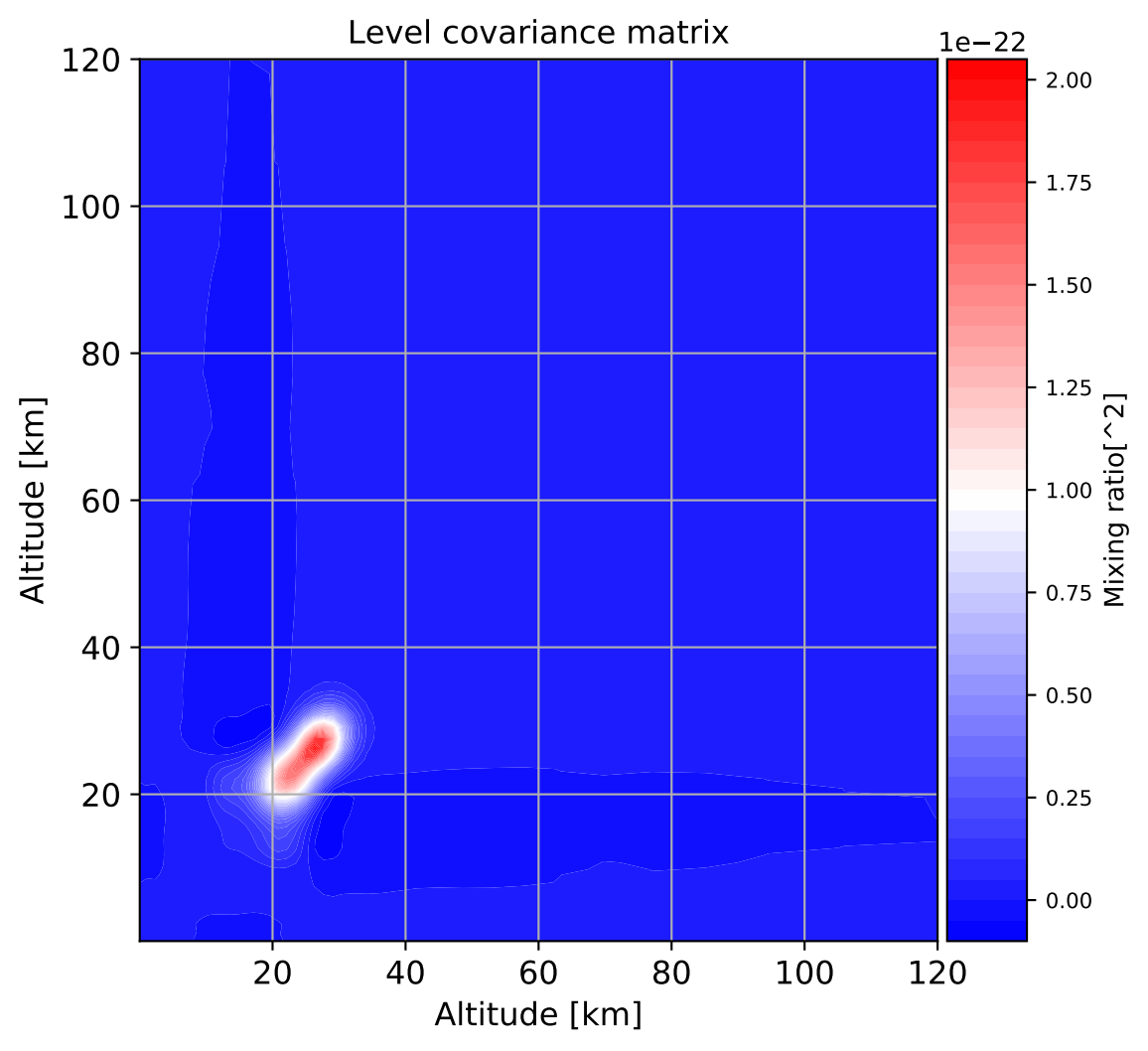

Time Series of vertical profiles (site altitude - 120 km)
Altitude [km]
120
100
80
60
40
20
1980
1990
2000
2010
2020
2030
2040
1e−11
9.6
8.4
7.2
6.0
4.8
3.6
2.4
1.2
0.0
Mixing ratio


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−11
9.6
8.4
7.2
6.0
4.8
3.6
2.4
1.2
0.0
Mixing ratio


Montly mean WACCM profile (interpolated to station grid)
Wollongong, -34.4061N, 150.8793E, 0.03kmasl
Altitude [km]
120
100
80
60
40
20
0
0.0
2.5
5.0
7.5
Mixing ratio
1e−11
10^{-17}
10^{-12}
Mixing ratio
Month
12
10
8
6
4
2


Min, Max, Mean of 732 profiles
Wollongong, -34.4061N, 150.8793E, 0.03kmasl
Station Grid
REFMOD Grid
Altitude [km]
120
100
80
60
40
20
0
0.0
0.5
1.0
Mixing ratio
1e−10
10^{-18}
10^{-14}
10^{-10}
Mixing ratio


Std. Deviation
Percent Deviation
Station Grid
REFMOD Grid
Altitude [km]
120
100
80
60
40
20
0
0.0
0.5
1.0
1e−11
[SD]
50
100
150
[%]


Level covariance matrix
1e−22
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.00
Mixing ratio[^2]
120
100
80
60
40
20
Altitude [km]
20
40
60
80
100
120
Altitude [km]