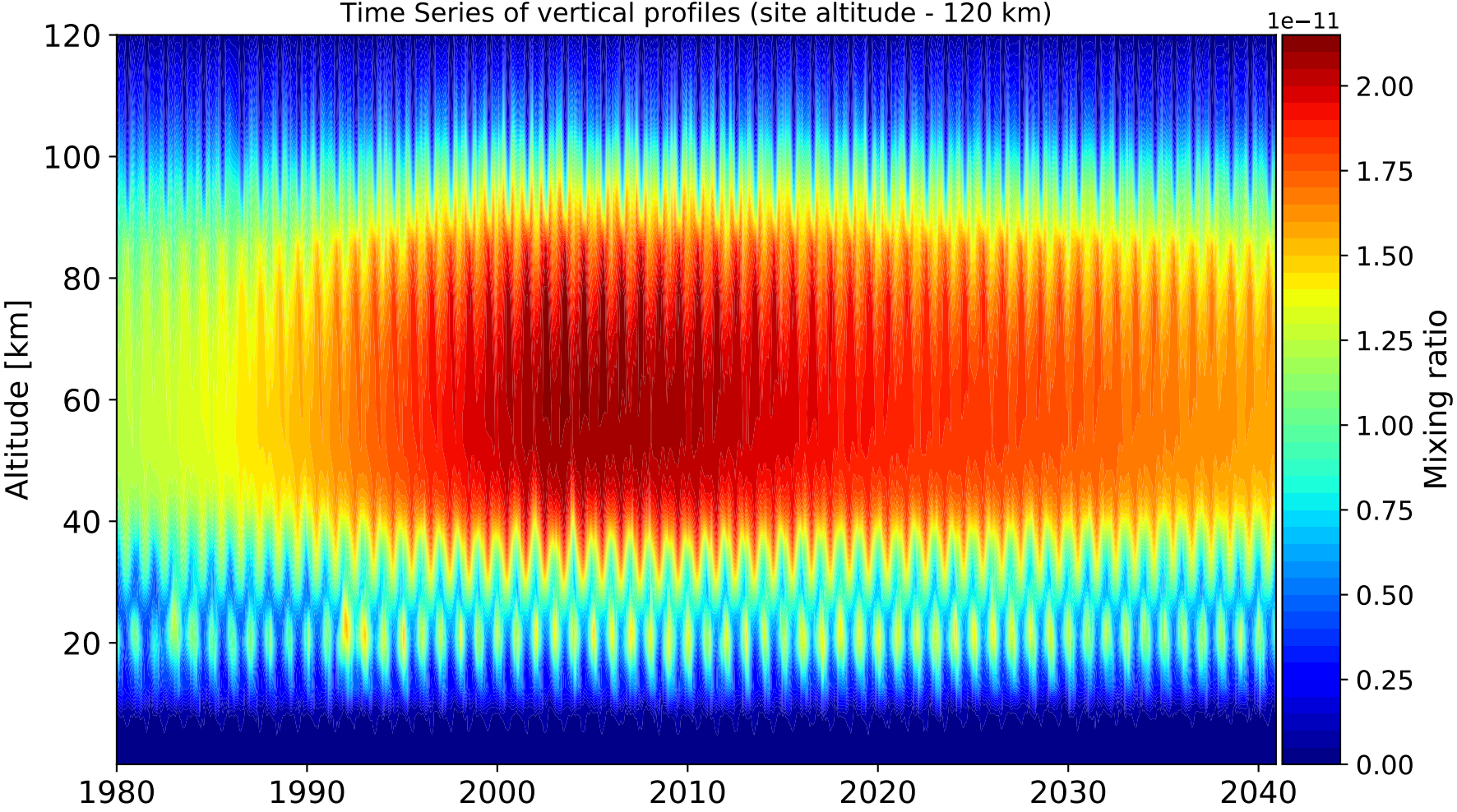
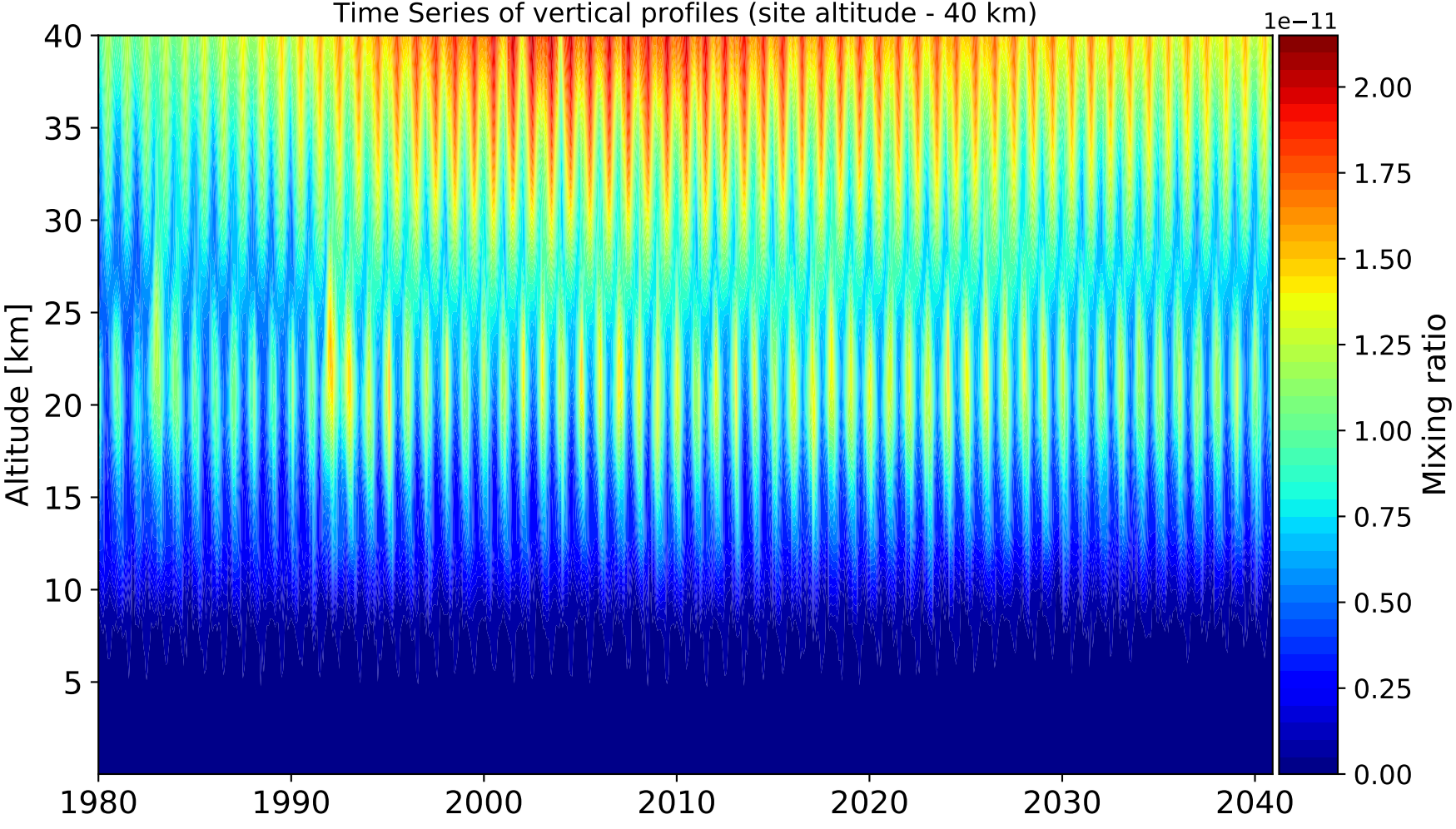
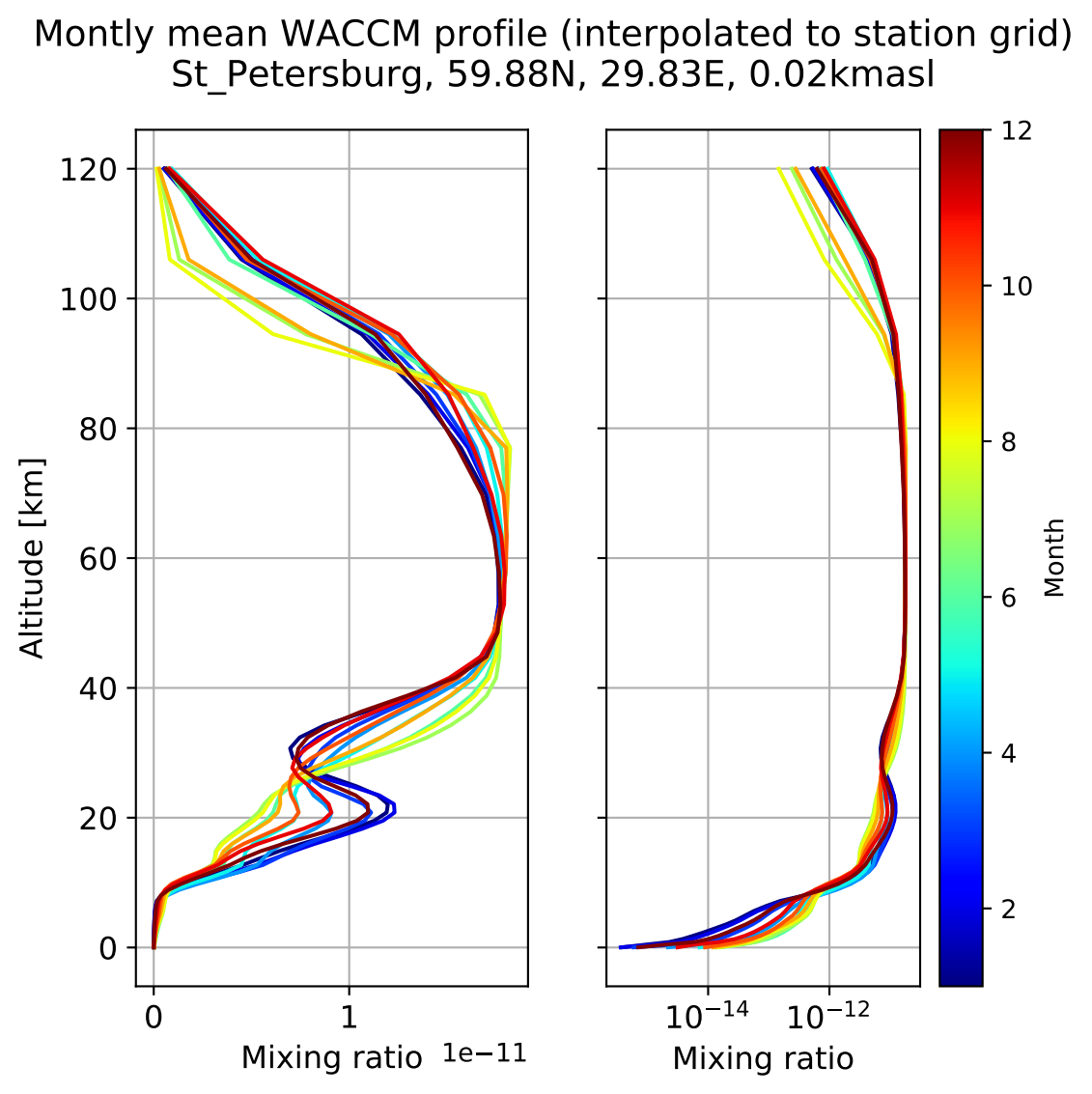
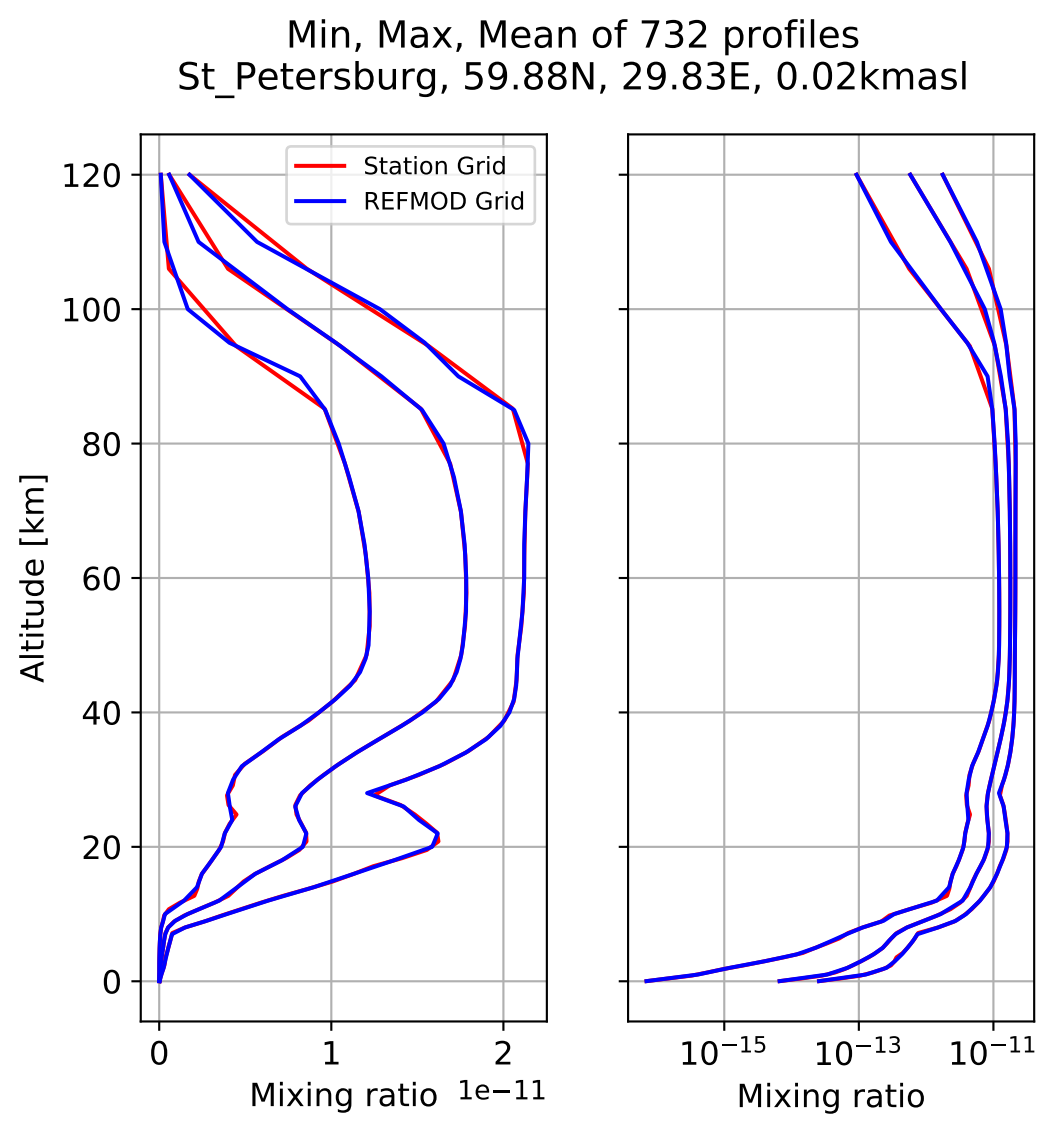
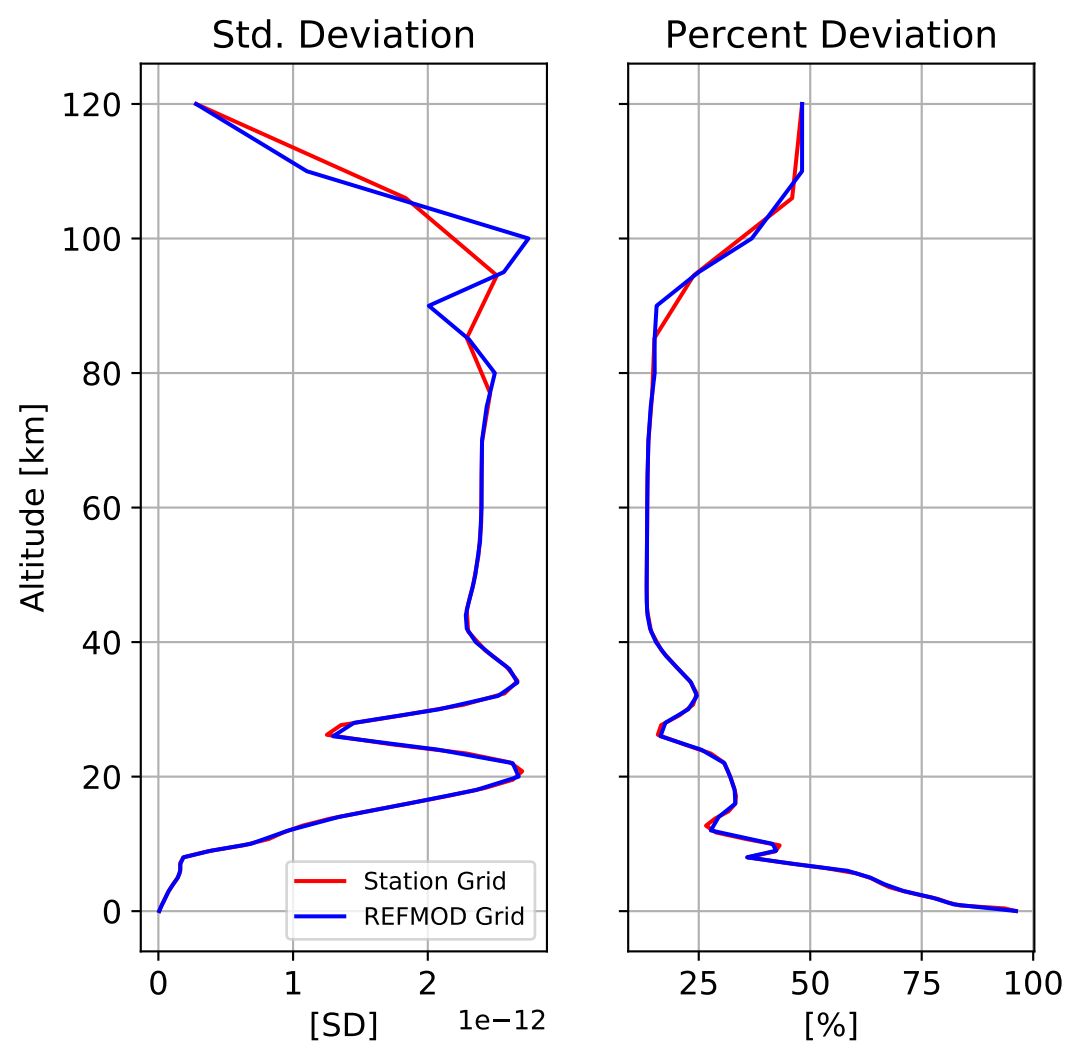
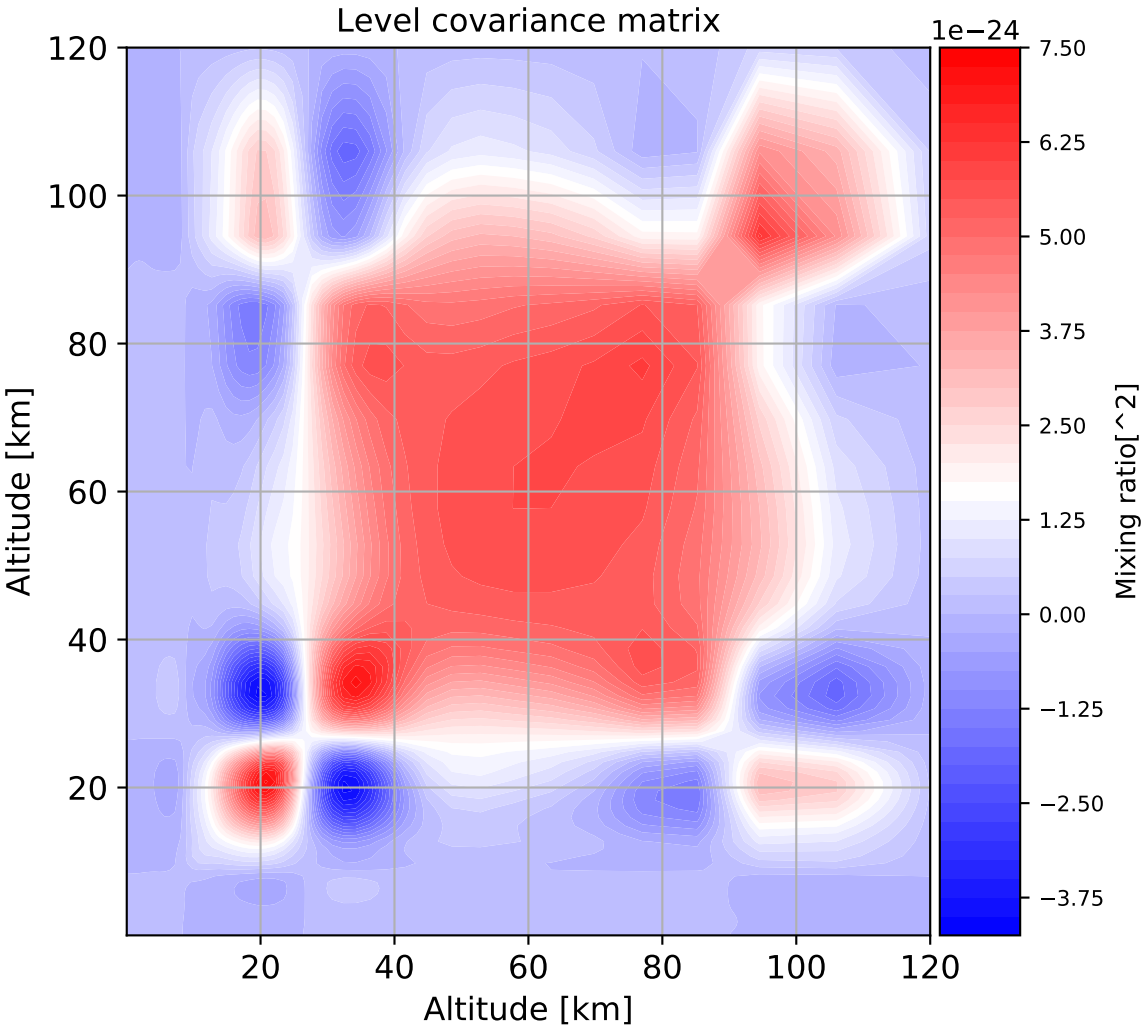

Time Series of vertical profiles (site altitude - 120 km)
Altitude [km]
120
100
80
60
40
20
1980
1990
2000
2010
2020
2030
2040
1e−11
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.00
Mixing ratio


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
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.00
Mixing ratio


Montly mean WACCM profile (interpolated to station grid)
St_Petersburg, 59.88N, 29.83E, 0.02kmasl
Altitude [km]
120
100
80
60
40
20
0
0
1
Mixing ratio 1e−11
10^{-14}
10^{-12}
Mixing ratio
Month
12
10
8
6
4
2


Min, Max, Mean of 732 profiles
St_Petersburg, 59.88N, 29.83E, 0.02kmasl
Station Grid
REFMOD Grid
Altitude [km]
120
100
80
60
40
20
0
0
1
2
Mixing ratio 1e−11
10^{-15}
10^{-13}
10^{-11}
Mixing ratio


Std. Deviation
Percent Deviation
Altitude [km]
120
100
80
60
40
20
0
Station Grid
REFMOD Grid
0
1
2
[SD]
1e−12
25
50
75
100
[%]


Level covariance matrix
1e−24
7.50
6.25
5.00
3.75
2.50
1.25
0.00
−1.25
−2.50
−3.75
Mixing ratio[^2]
120
100
80
60
40
20
Altitude [km]
20
40
60
80
100
120
Altitude [km]