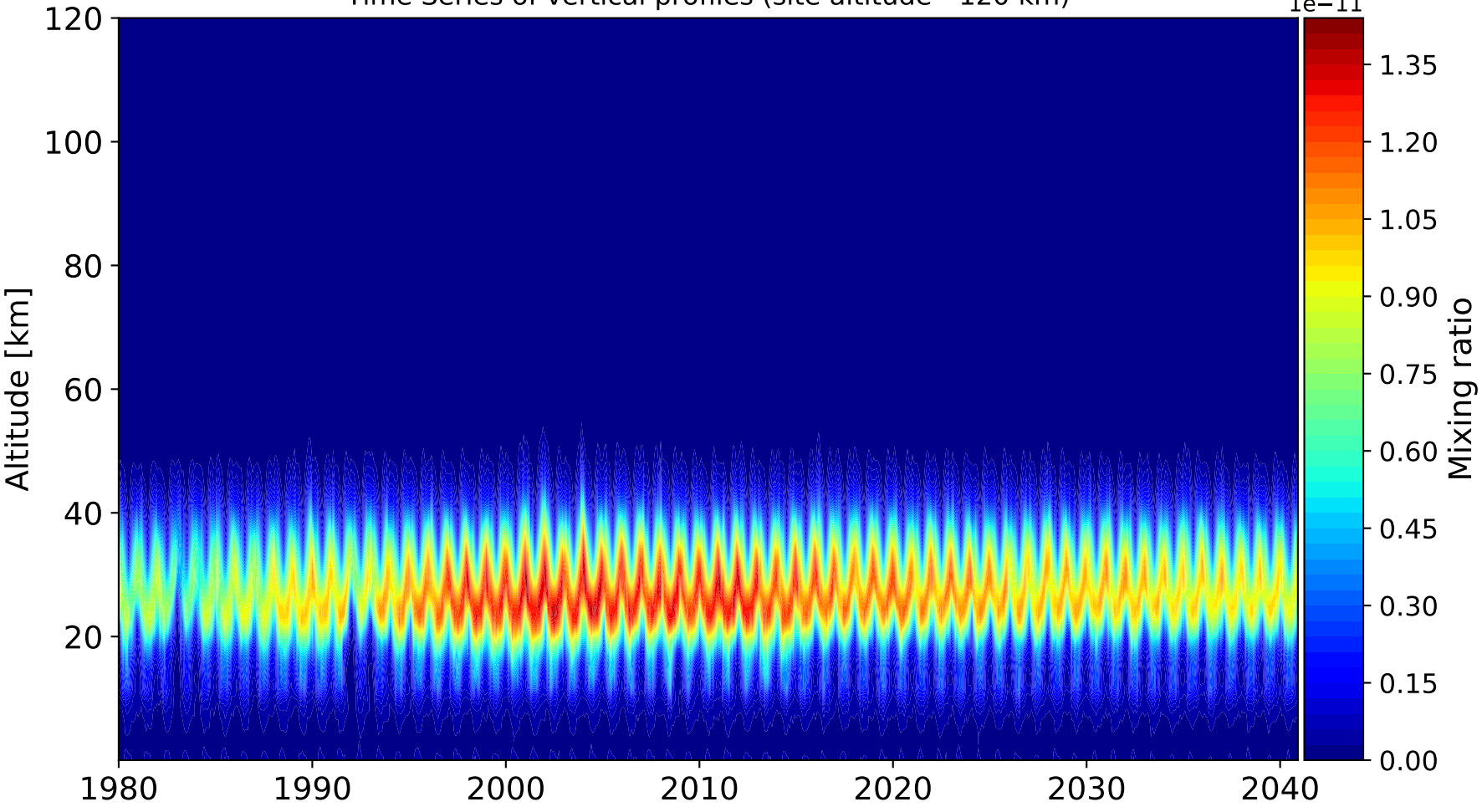
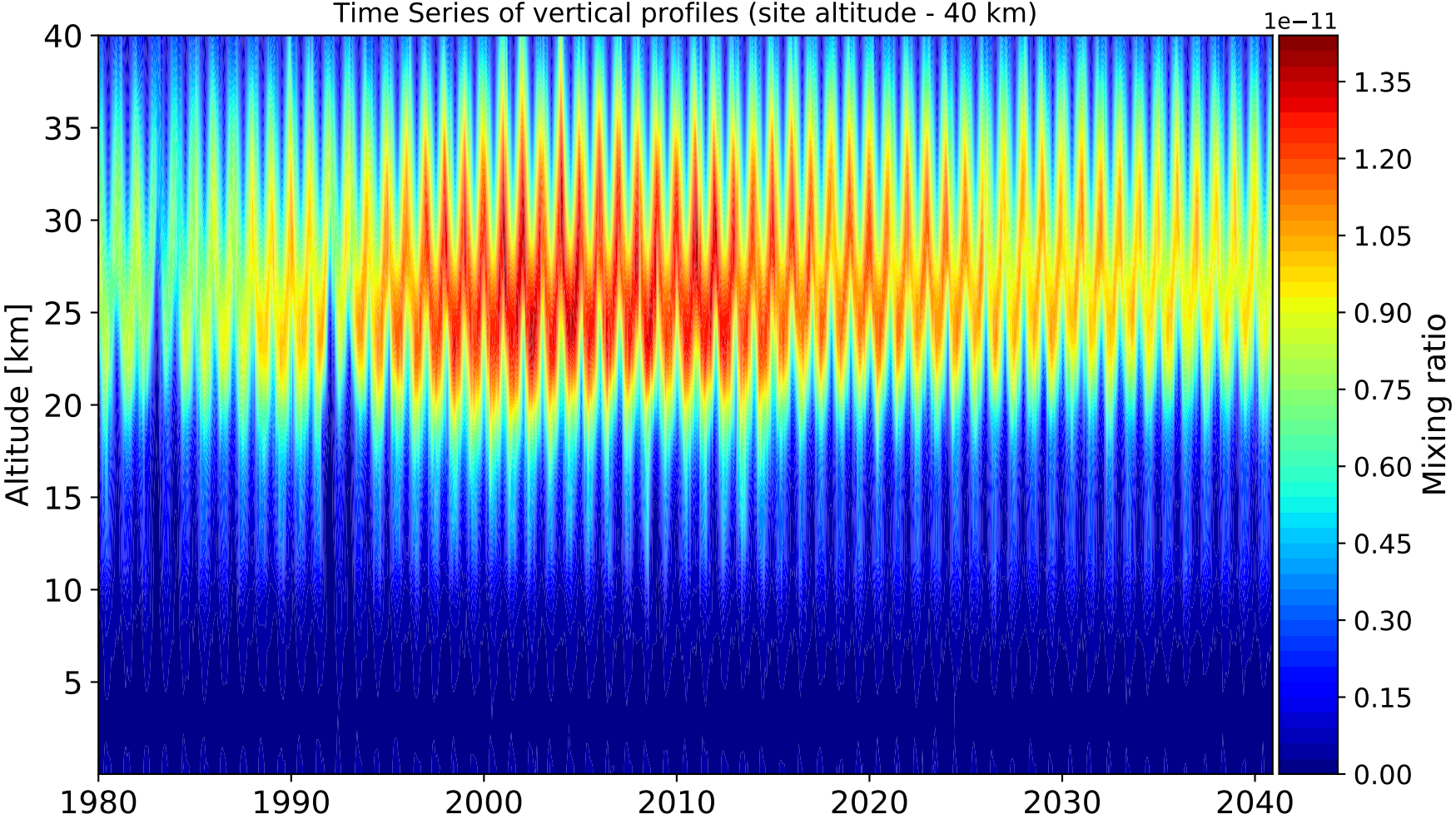
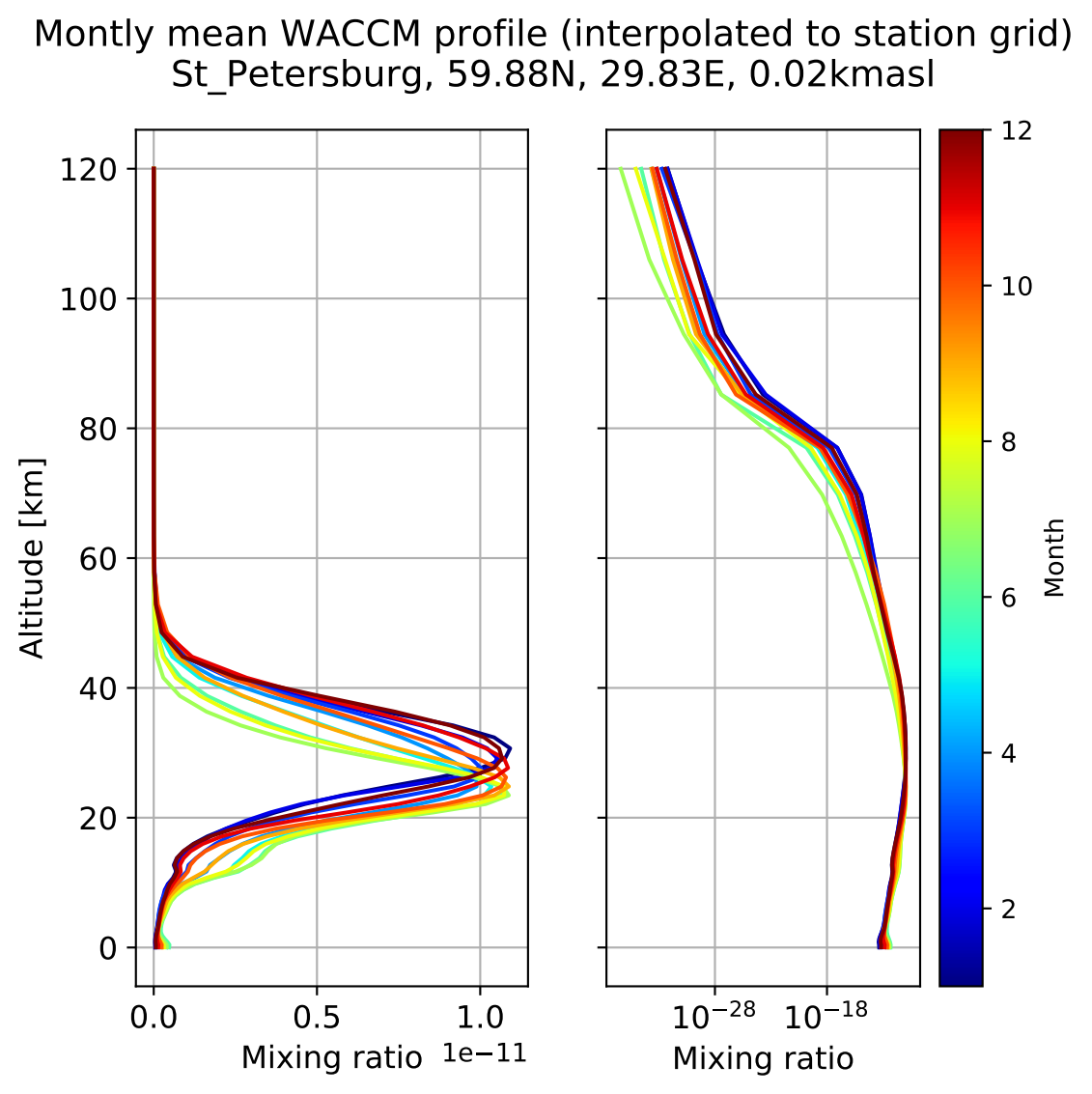
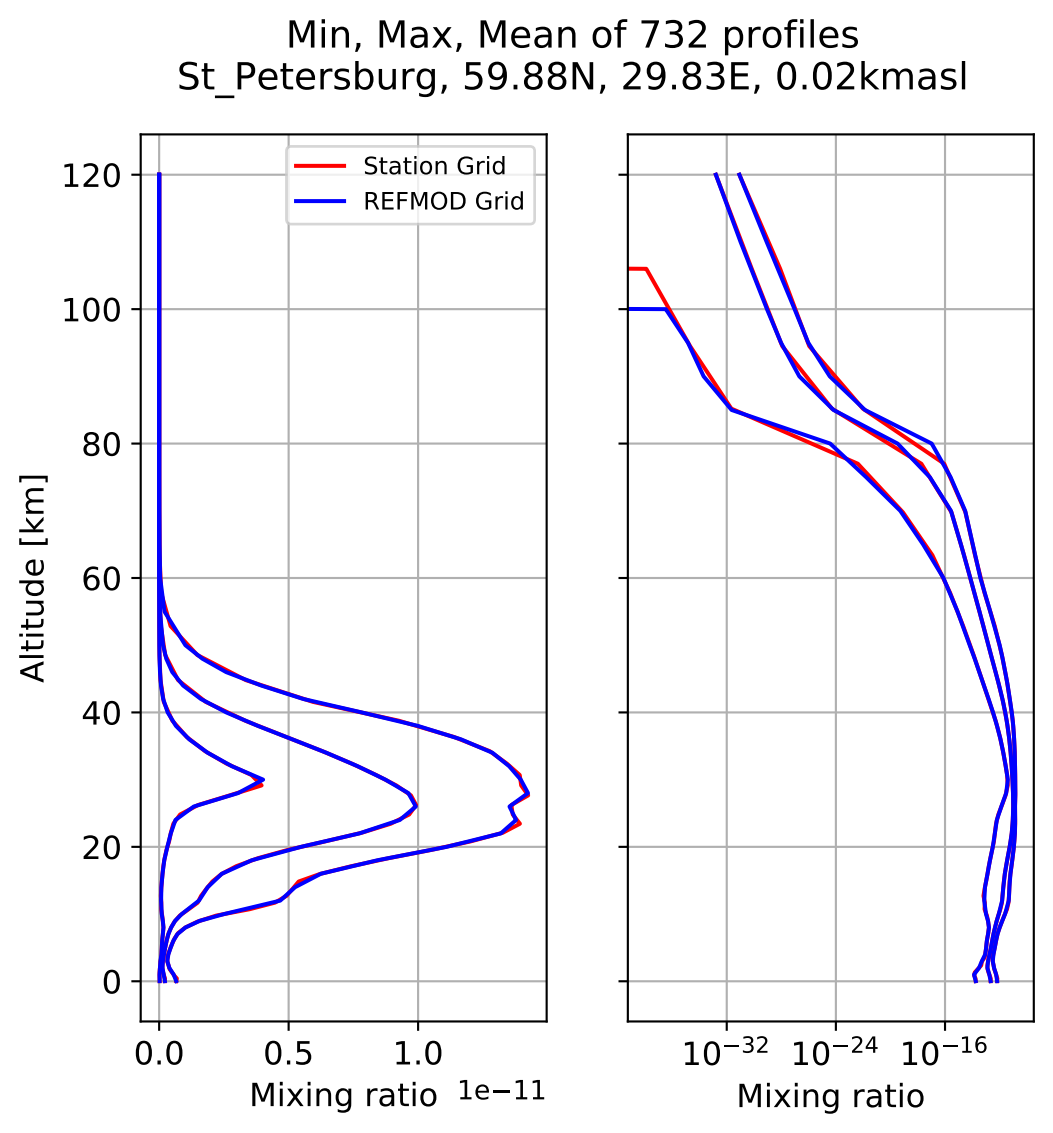
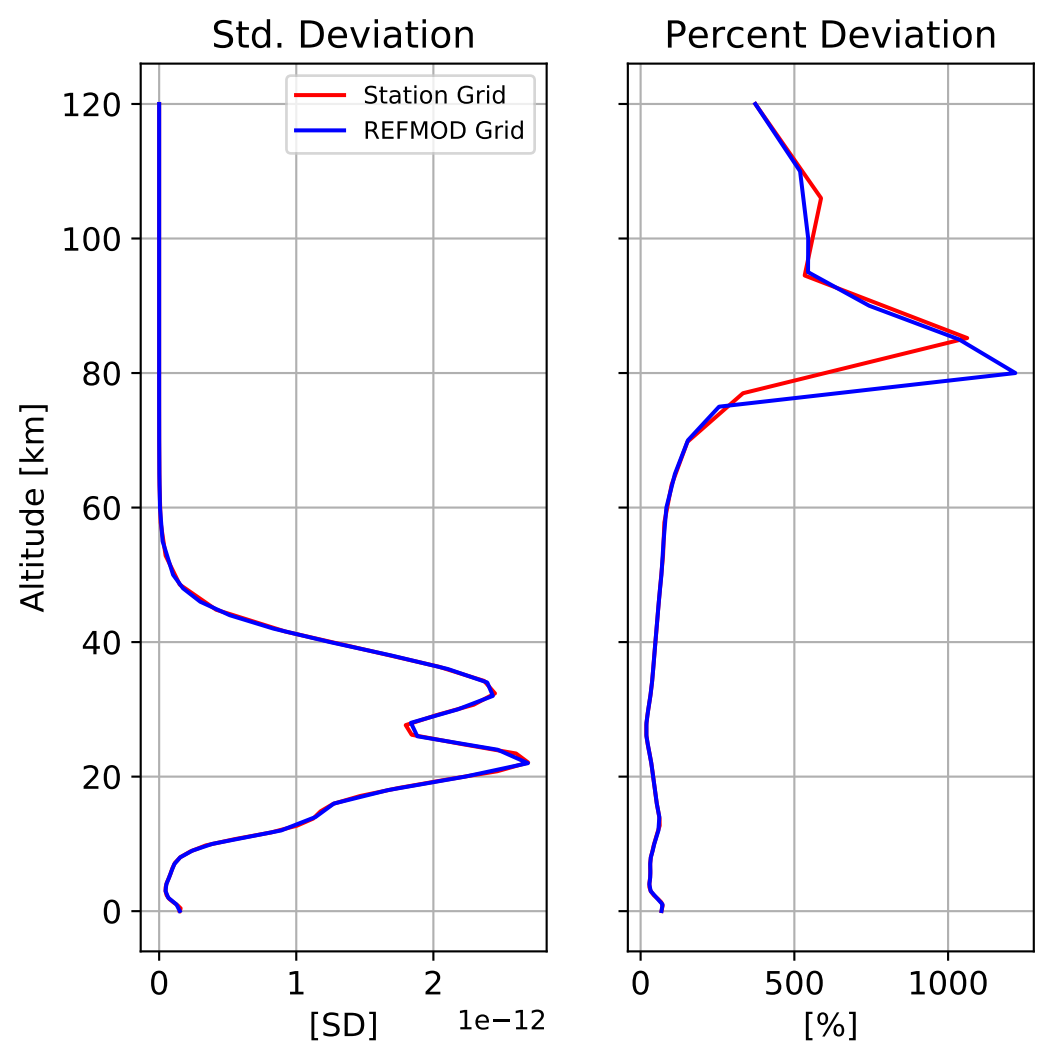
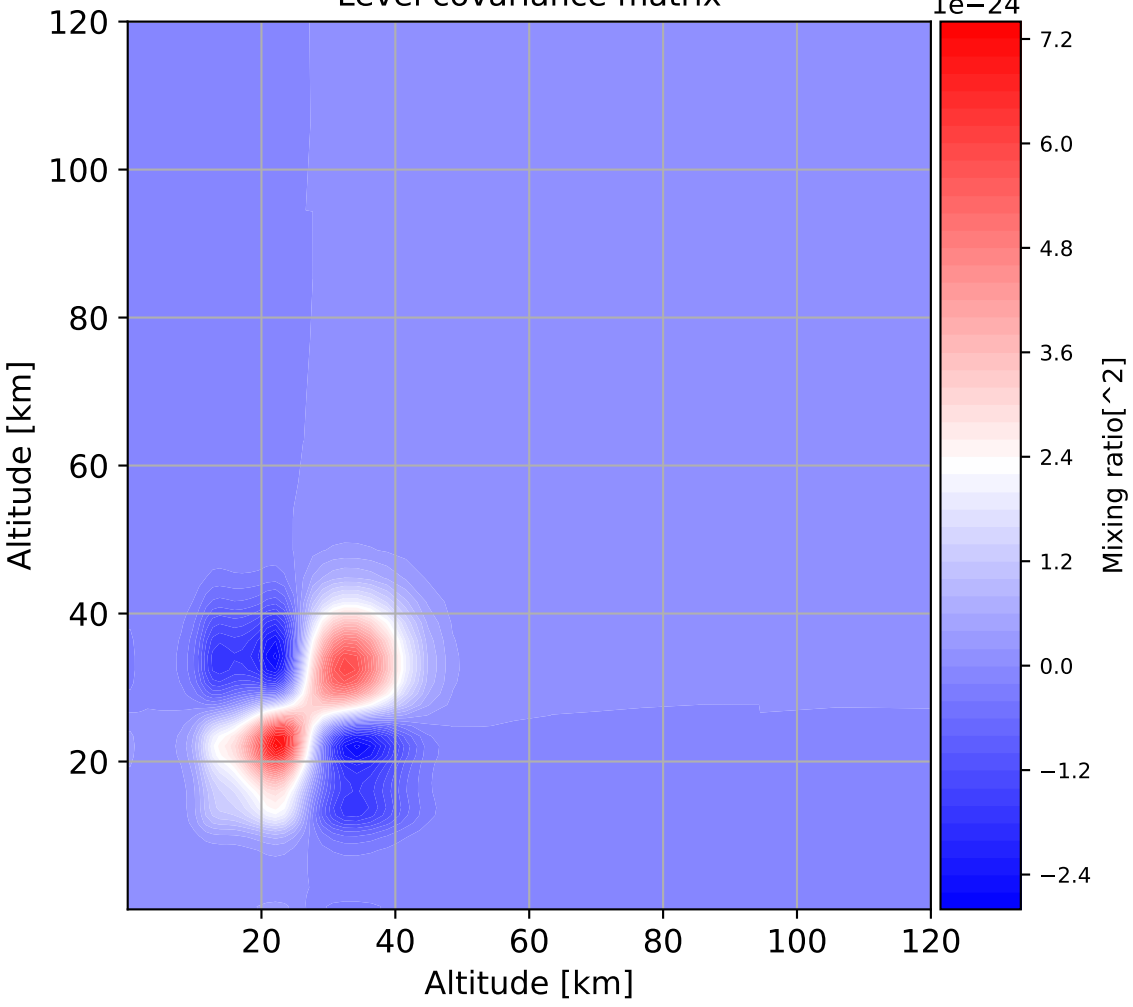

Time Series of vertical profiles (site altitude - 120 km)
Altitude [km]
120
100
80
60
40
20
1980
1990
2000
2010
2020
2030
2040
1e−11
1.35
1.20
1.05
0.90
0.75
0.60
0.45
0.30
0.15
0.00
Mixing ratio


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
1.35
1.20
1.05
0.90
0.75
0.60
0.45
0.30
0.15
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
0.0
0.5
1.0
Mixing ratio
1e−11
10^{-28}
10^{-18}
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
0.0
0.5
1.0
Mixing ratio 1e−11
10^{-32}
10^{-24}
10^{-16}
Mixing ratio


Std. Deviation
Percent Deviation
Station Grid
REFMOD Grid
Altitude [km]
120
100
80
60
40
20
0
0
1
2
[SD]
1e−12
0
500
1000
[%]


Level covariance matrix
1e−24
7.2
6.0
4.8
3.6
2.4
1.2
0.0
−1.2
−2.4
Mixing ratio[^2]
120
100
80
60
40
20
Altitude [km]
20
40
60
80
100
120
Altitude [km]