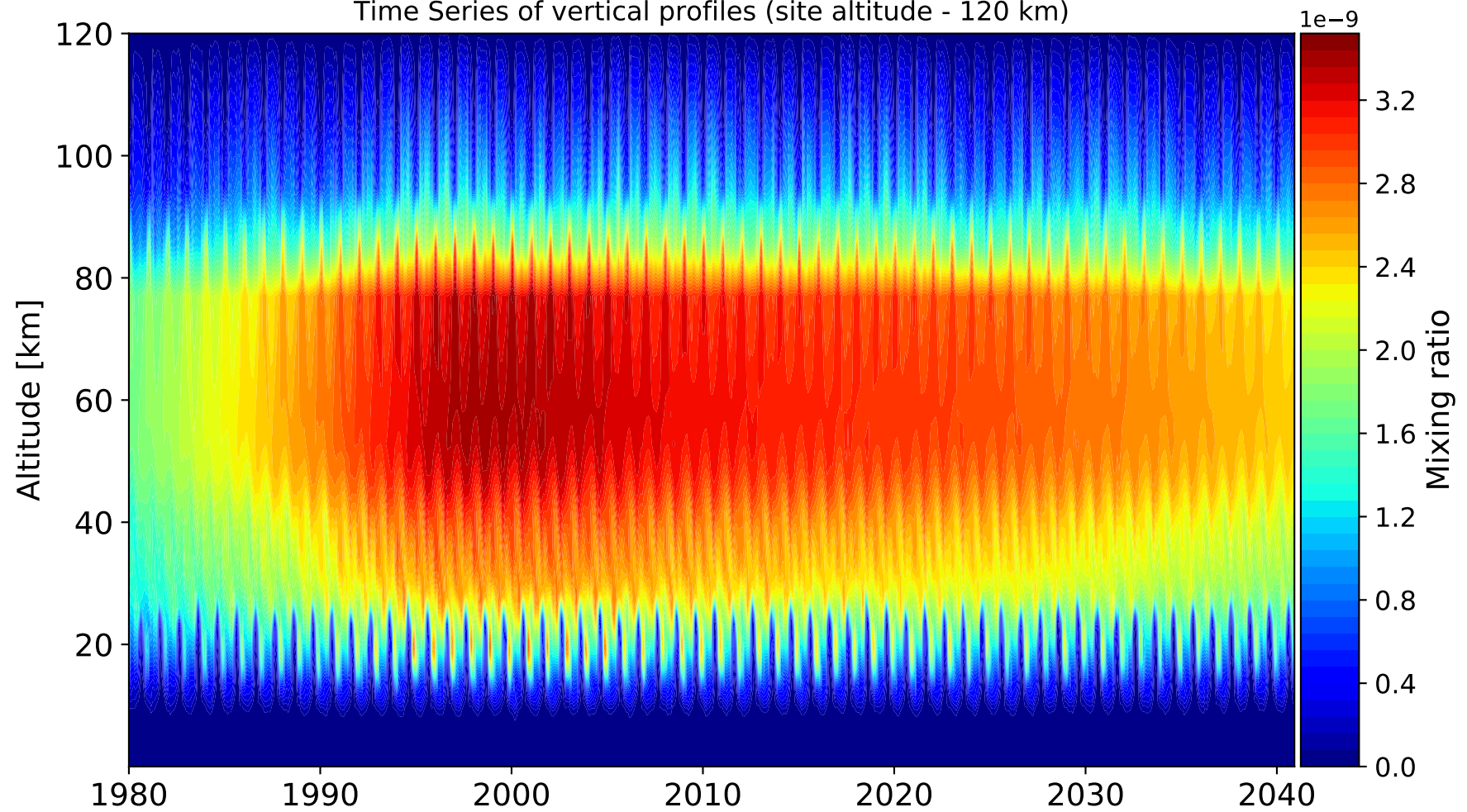
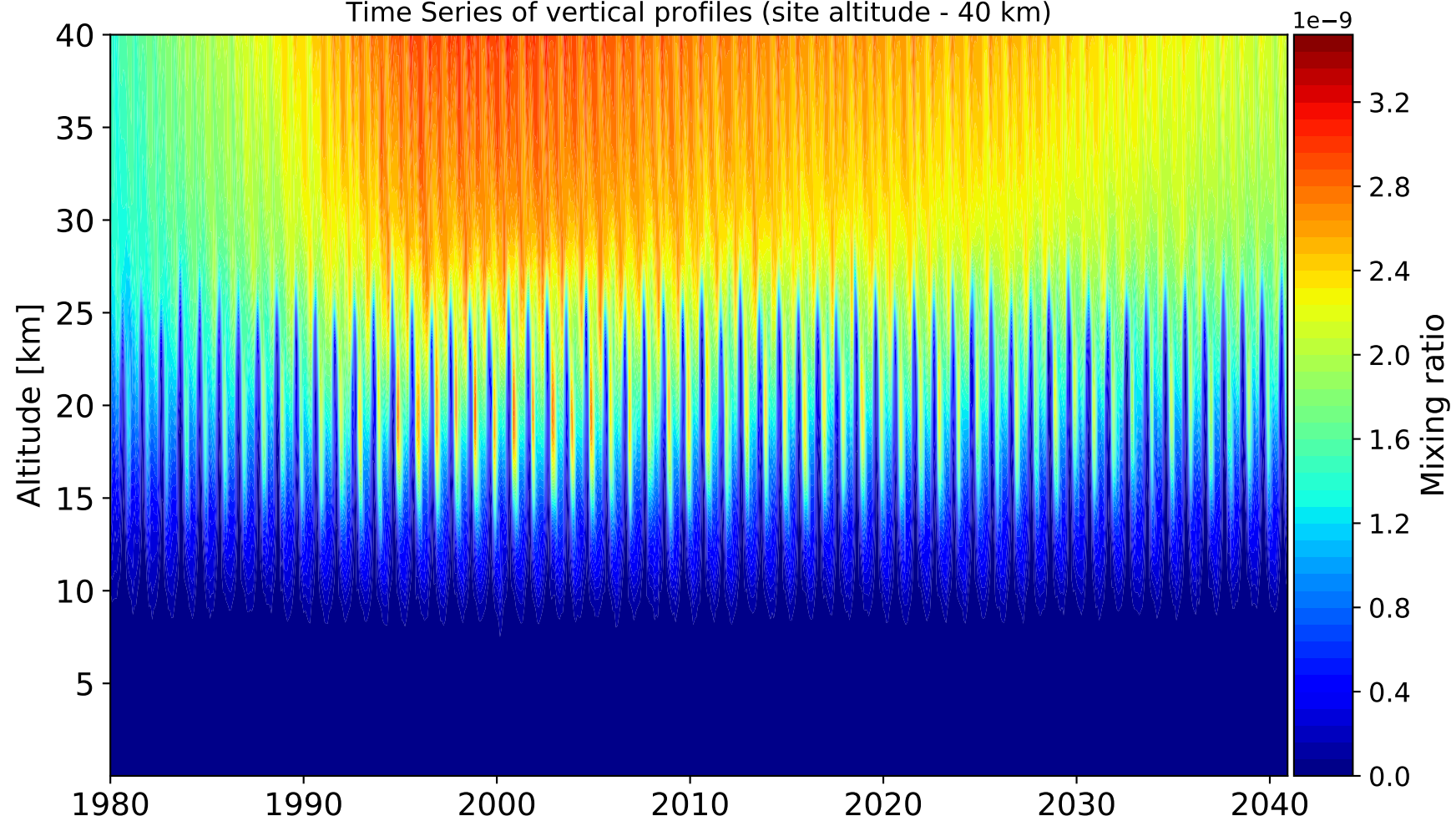


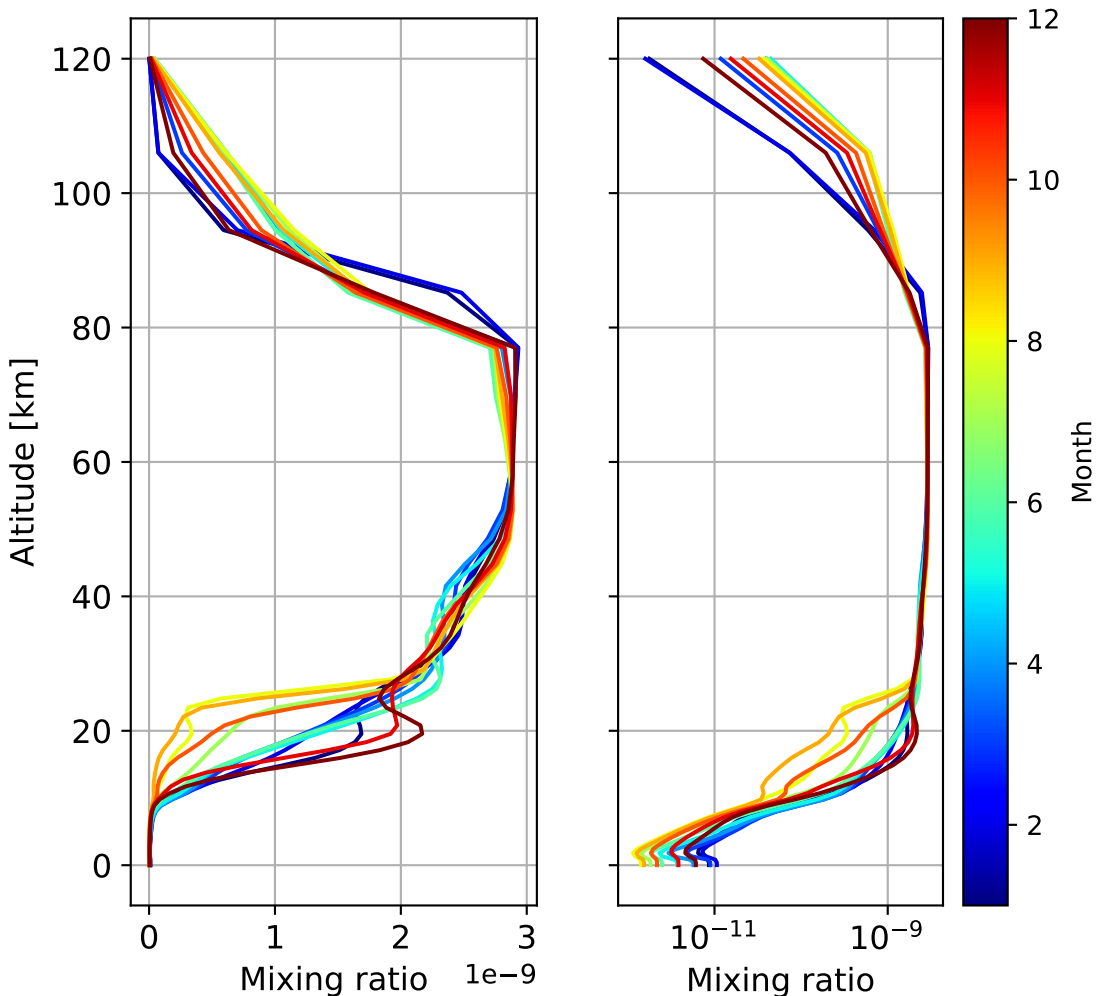
Time Series of vertical profiles (site altitude - 120 km)



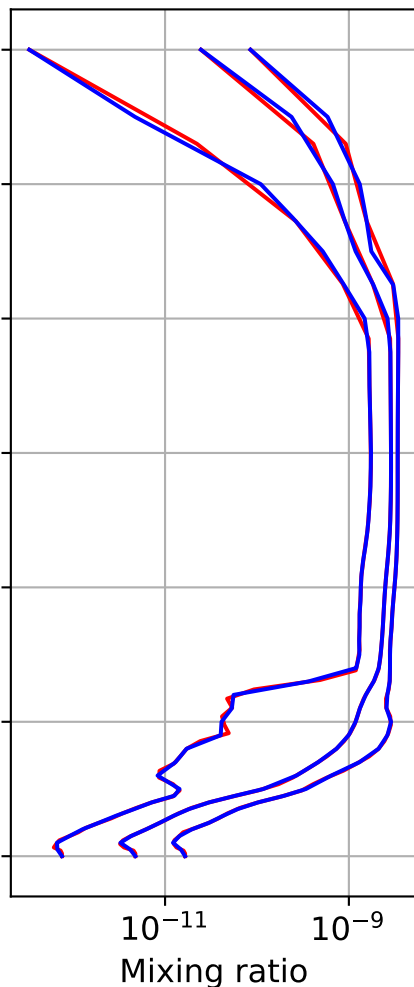
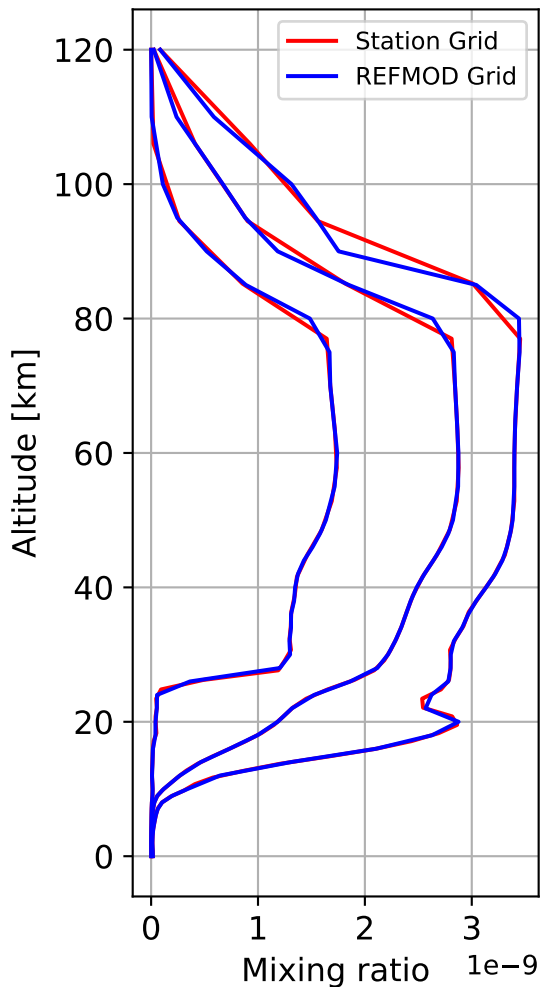
Time Series of vertical profiles (site altitude - 40 km)



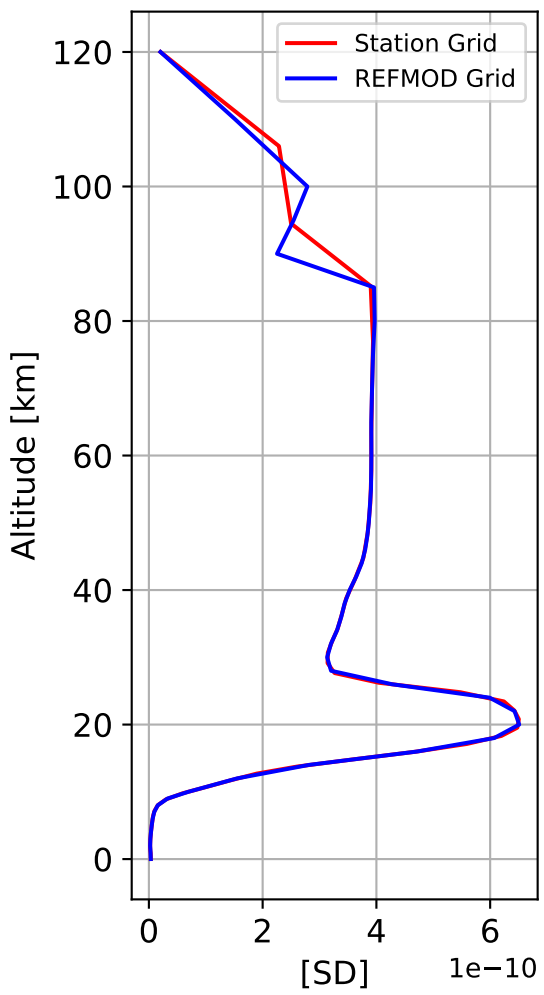
Monthly mean WACCM profile (interpolated to station grid)
Syowa_Station, -69.0N, 39.59E, 0.01kmasl



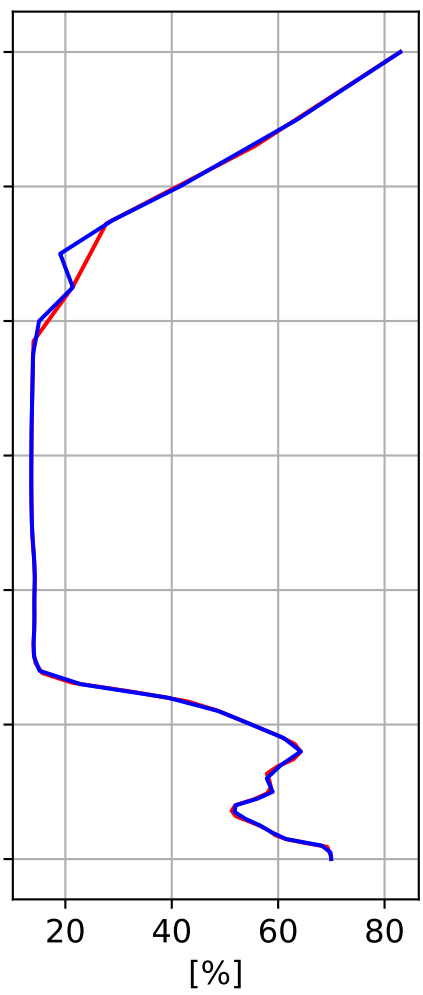
Min, Max, Mean of 732 profiles
Syowa_Station, -69.0N, 39.59E, 0.01kmasl



Std. Deviation



Percent Deviation

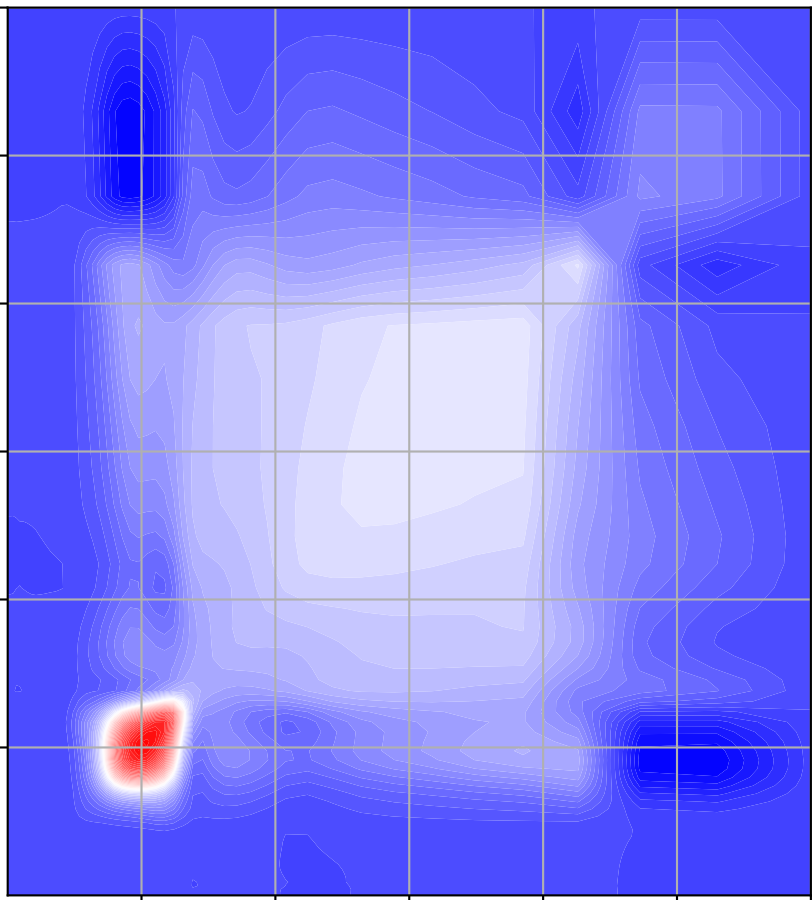


Level covariance matrix

1e-19

Altitude [km]

120
100
80
60
40
20



4.2
3.6
3.0
2.4
1.8
1.2
0.6
0.0
-0.6

Mixing ratio²

Altitude [km]