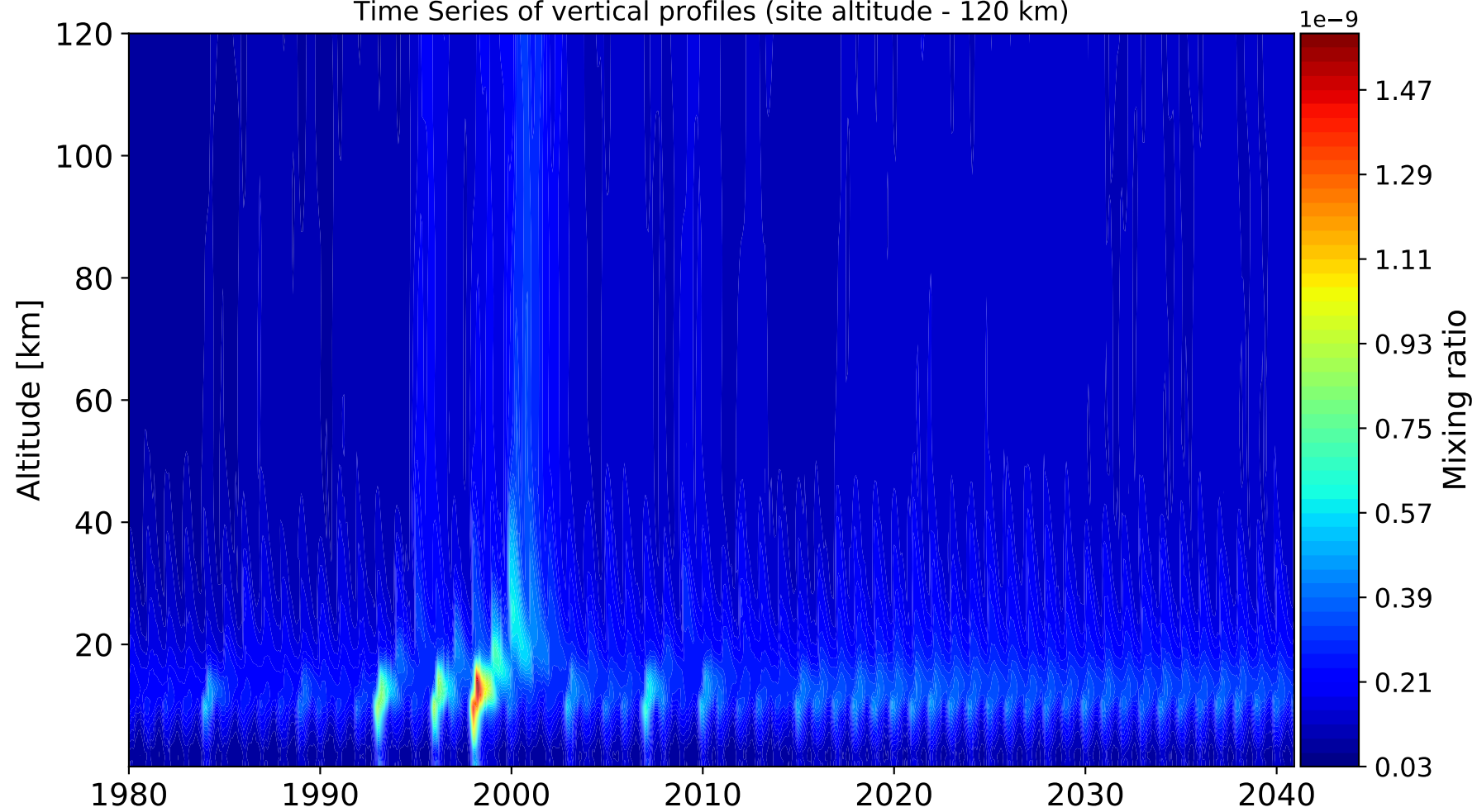
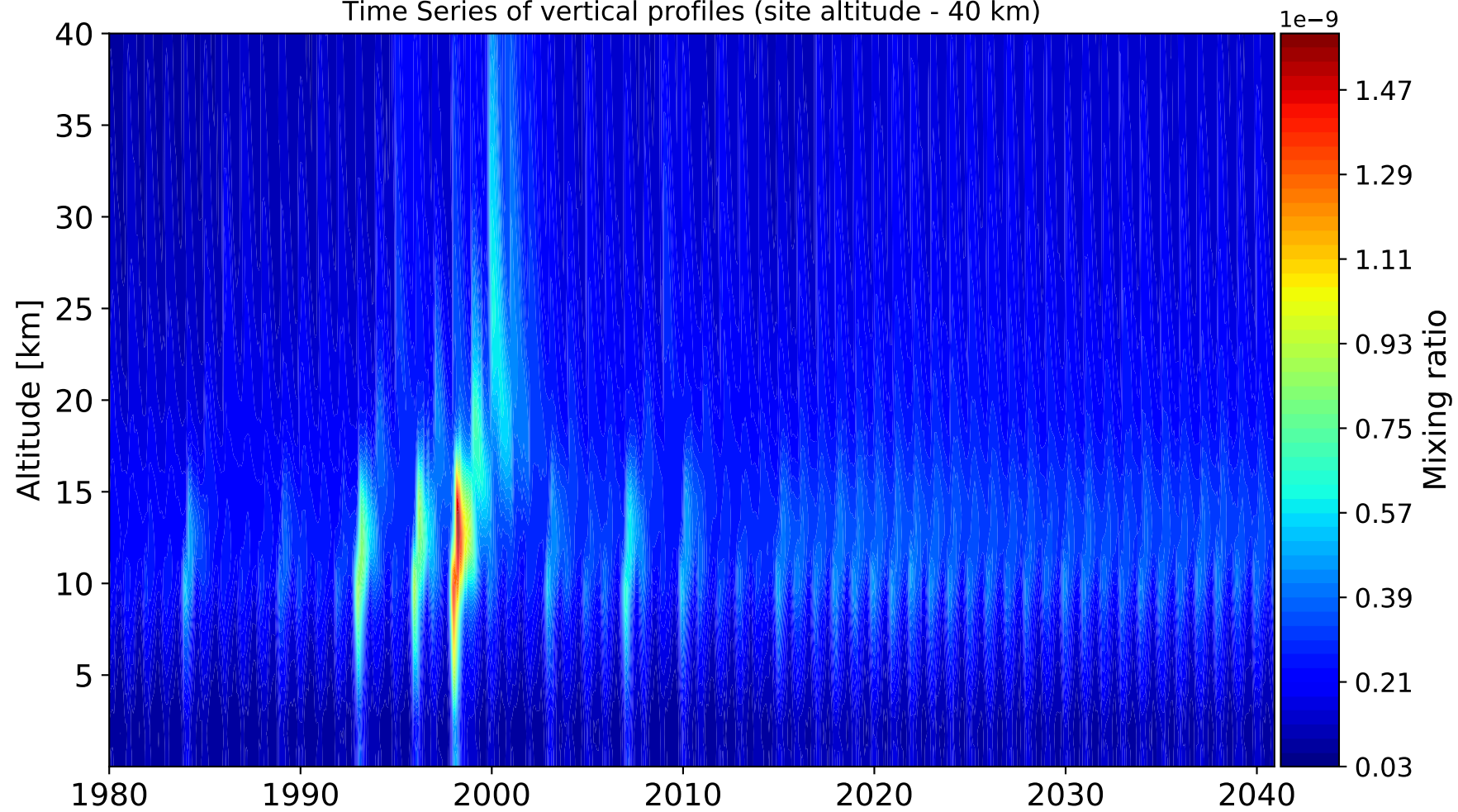


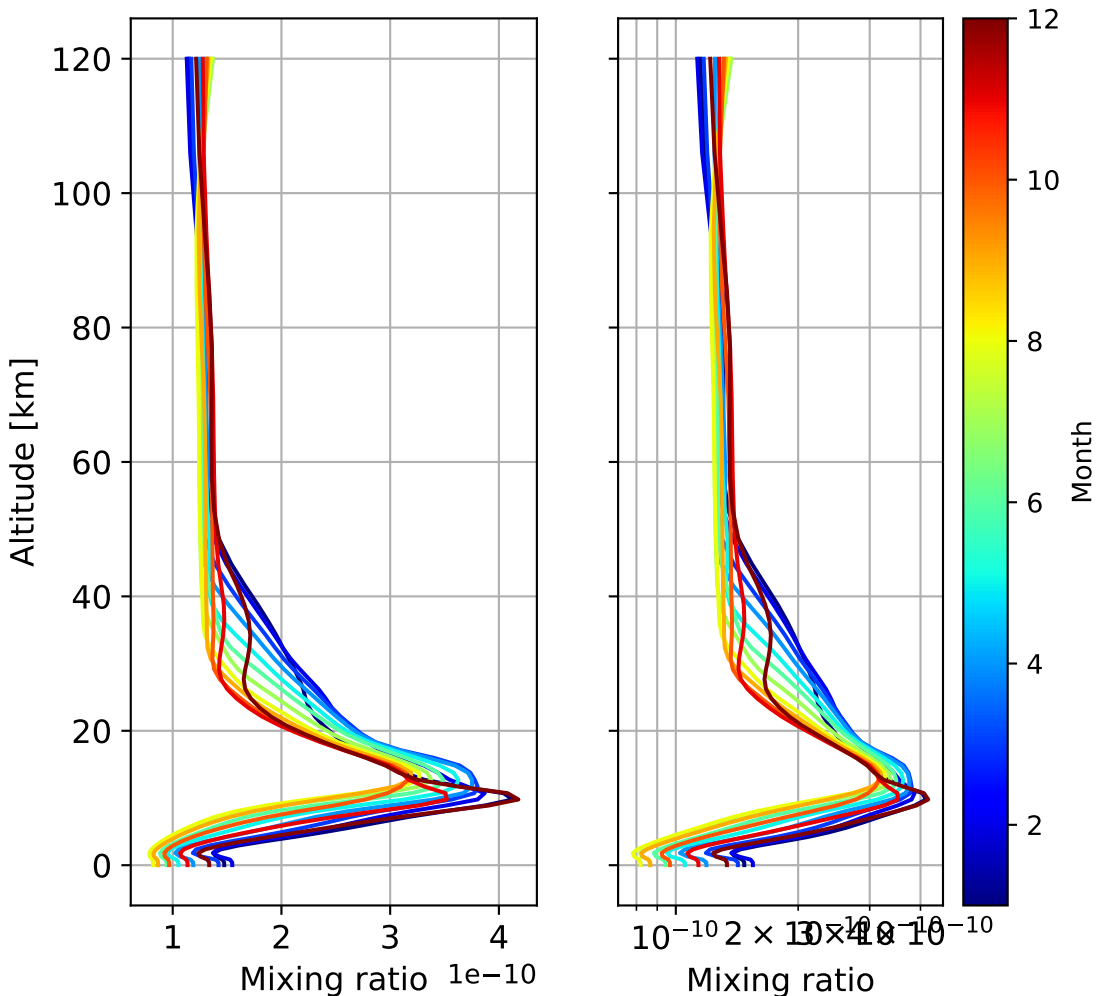
Time Series of vertical profiles (site altitude - 120 km)



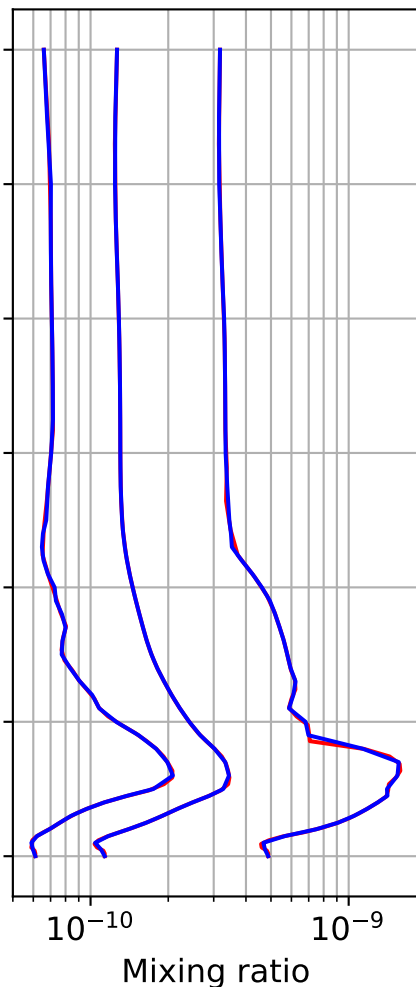
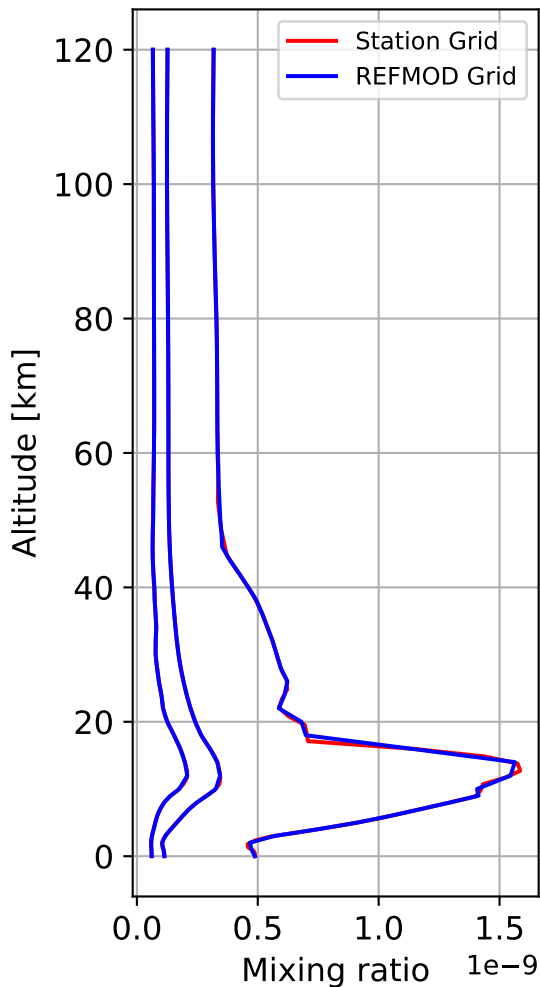
Time Series of vertical profiles (site altitude - 40 km)



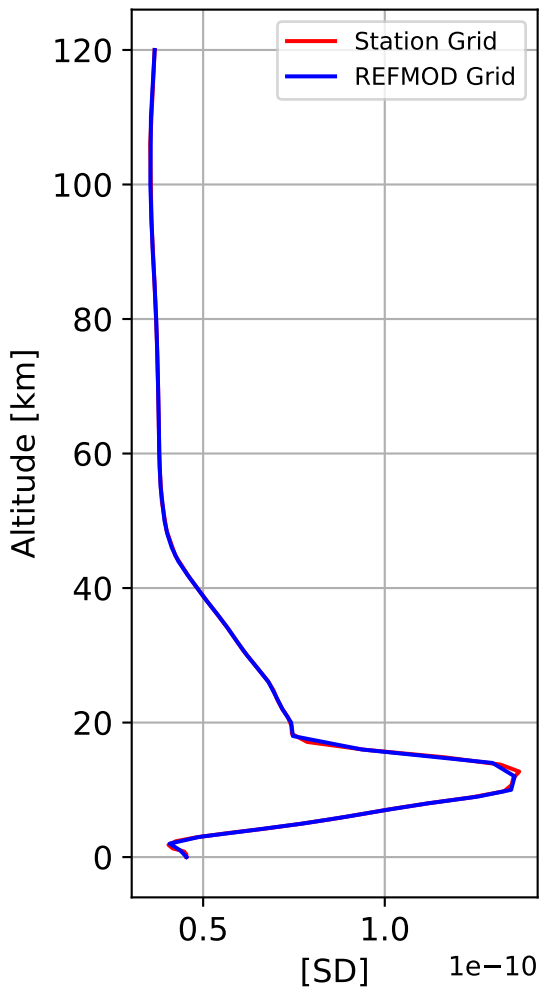
Monthly mean WACCM profile (interpolated to station grid)
Syowa_Station, -69.0N, 39.59E, 0.01kmasl



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



Std. Deviation



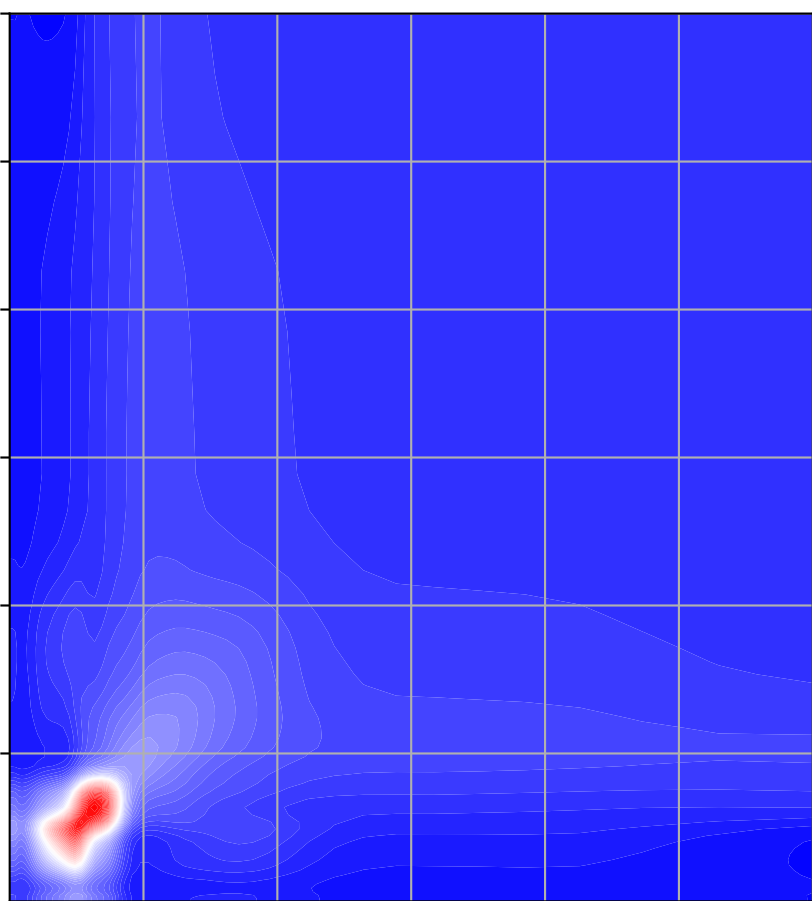
Percent Deviation



Level covariance matrix

1e-20

Altitude [km]

120
100
80
60
40
20

Altitude [km]

1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Mixing ratio[~ 2]