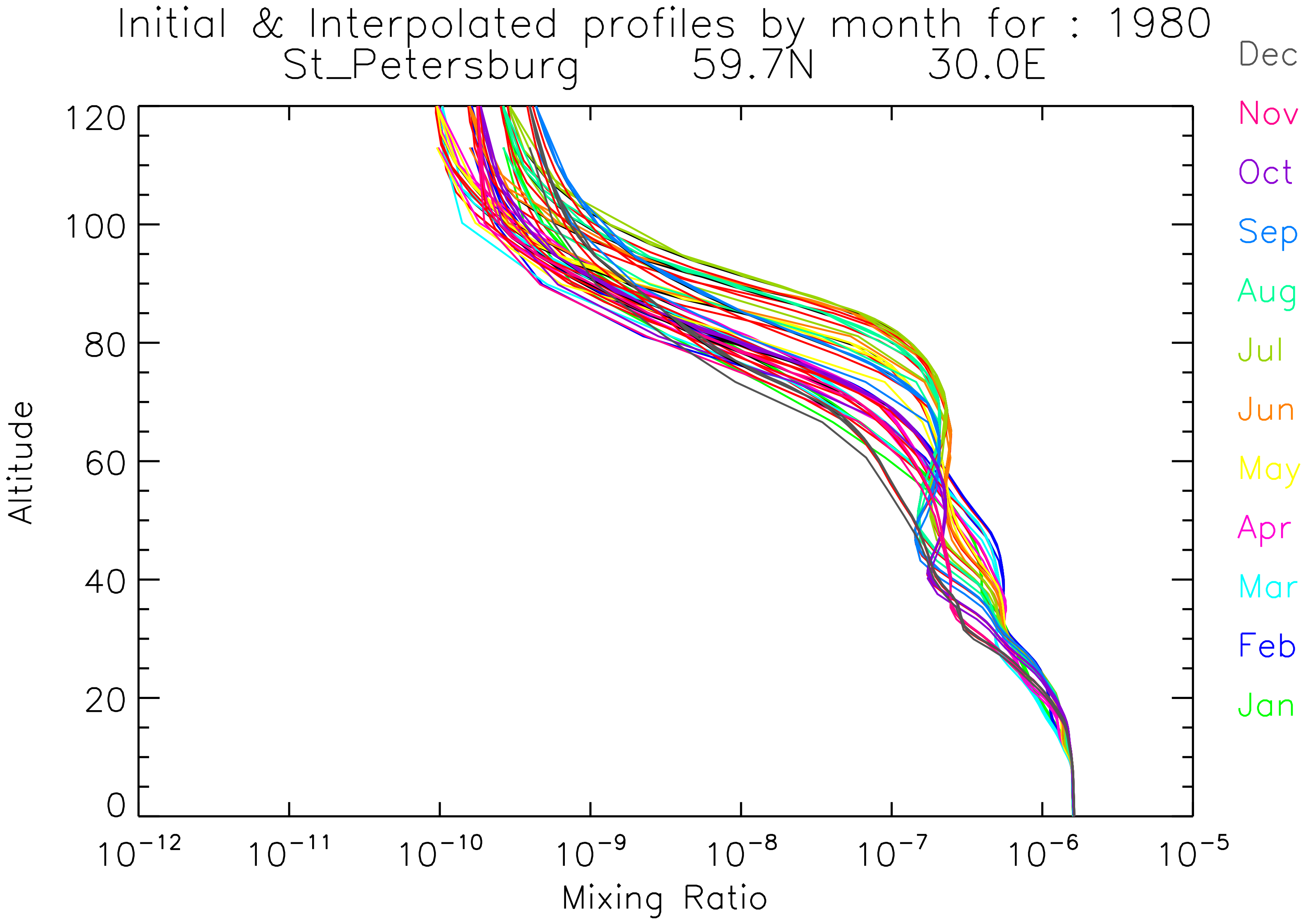
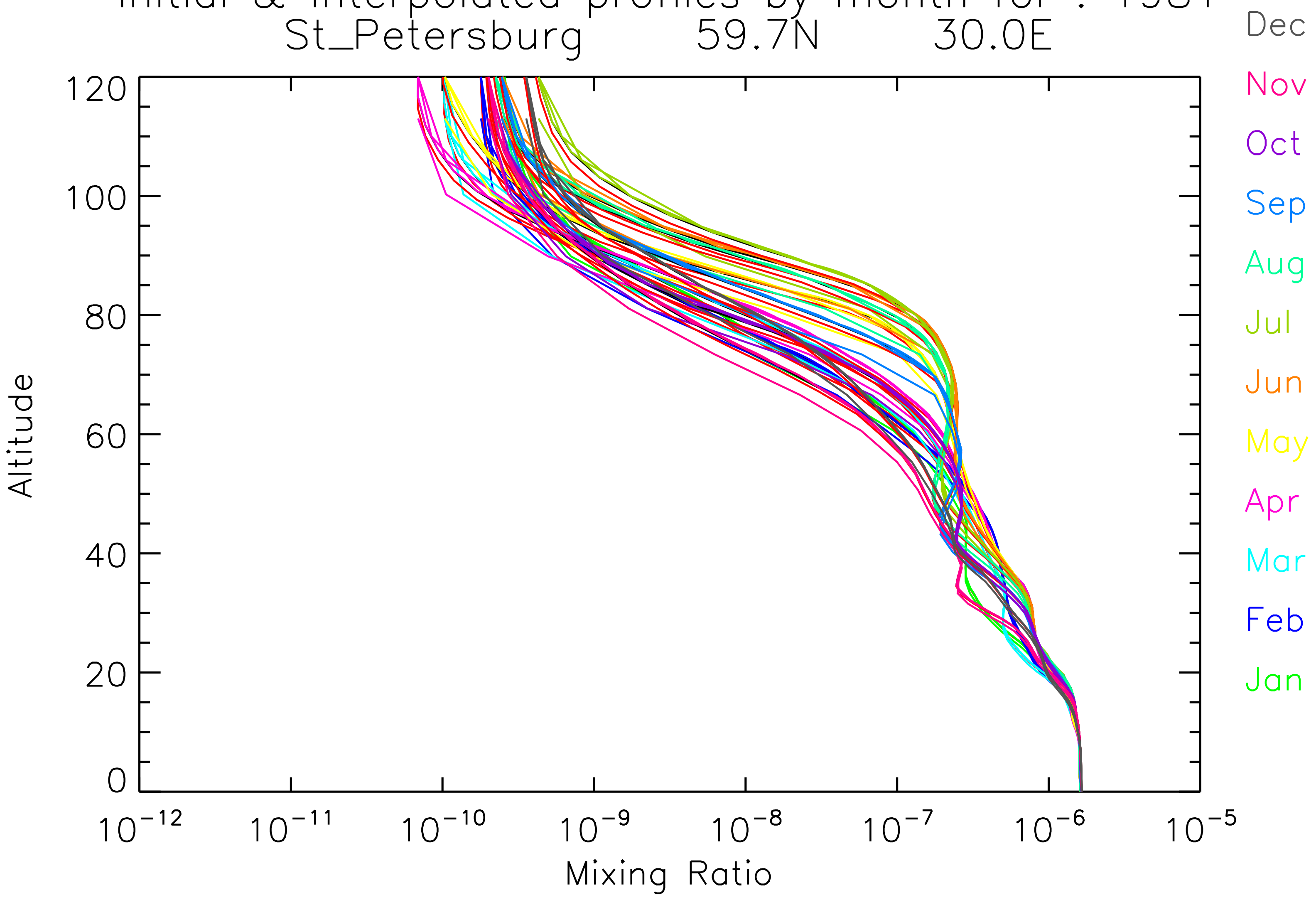
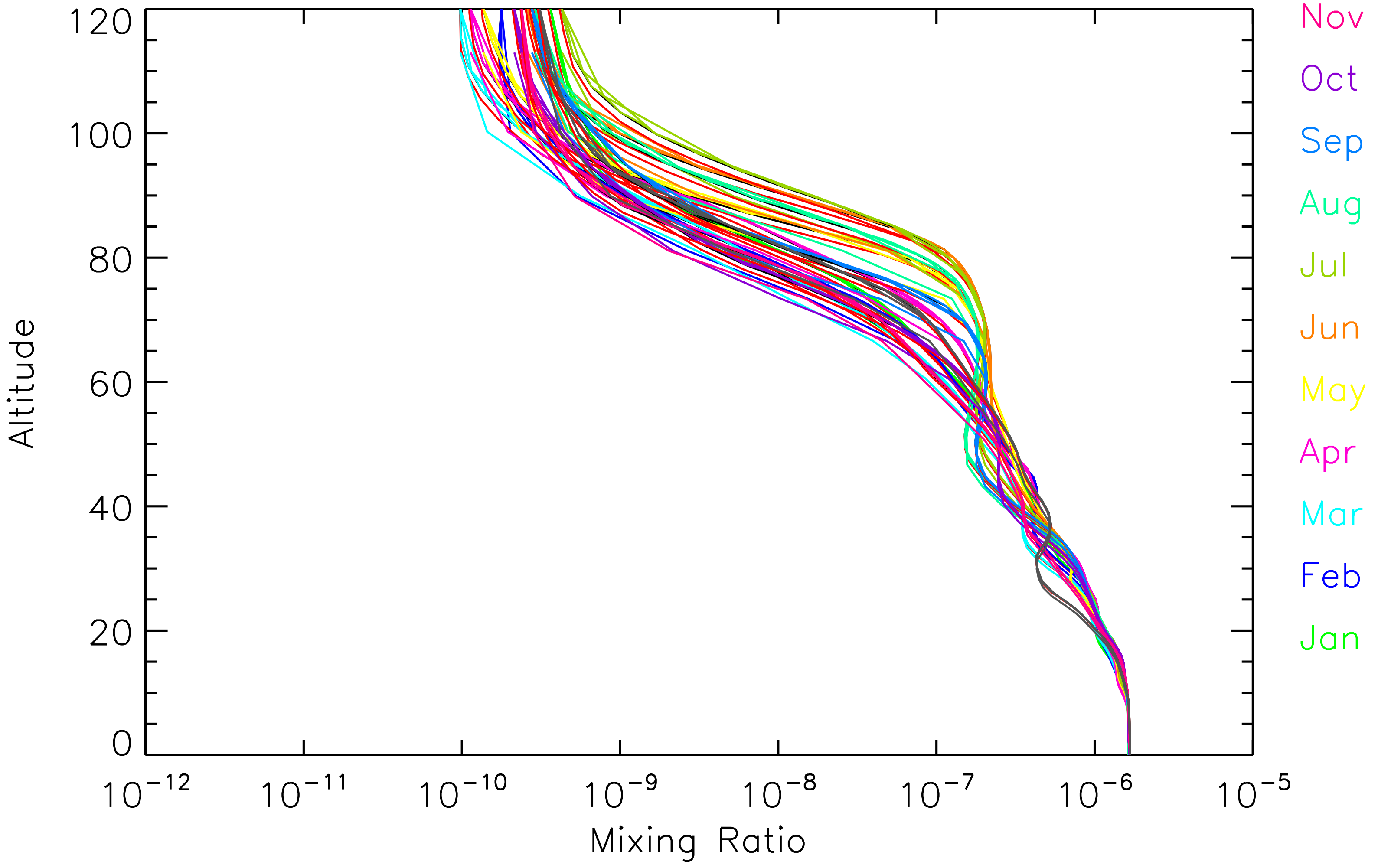


Initial & Interpolated profiles by month for : 1980
St_Petersburg 59.7N 30.0E

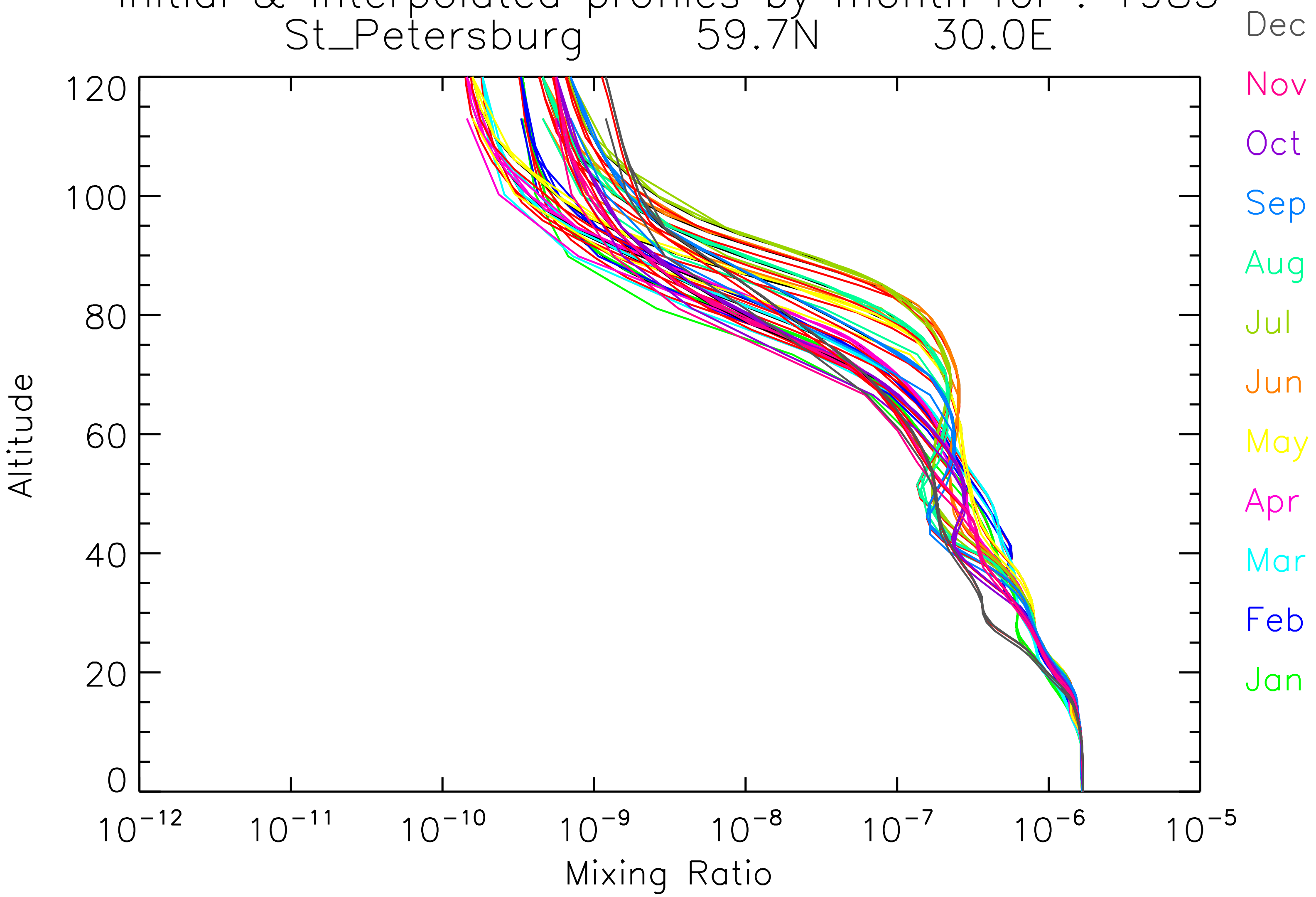
Initial & Interpolated profiles by month for : 1981
St_Petersburg 59.7N 30.0E



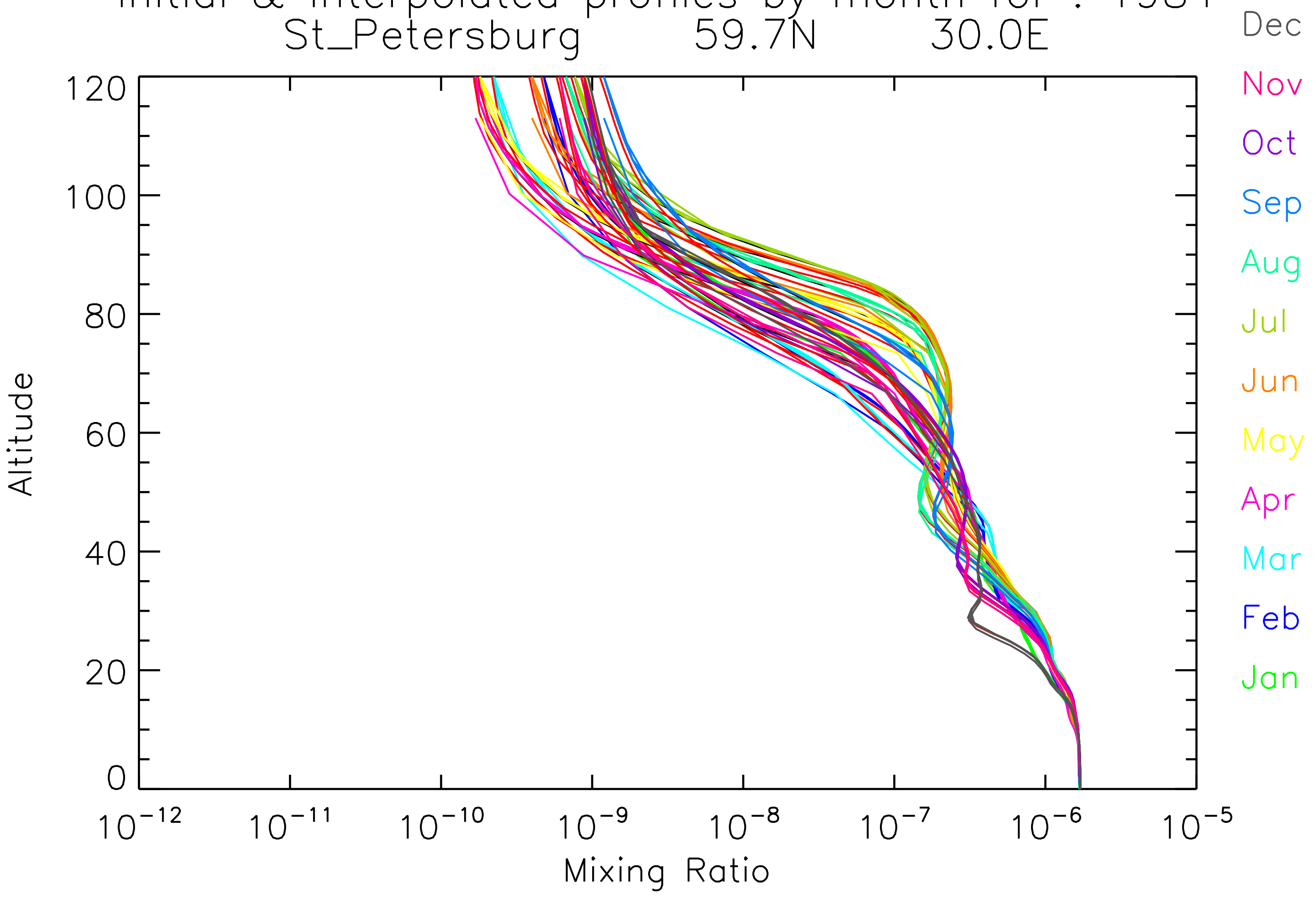


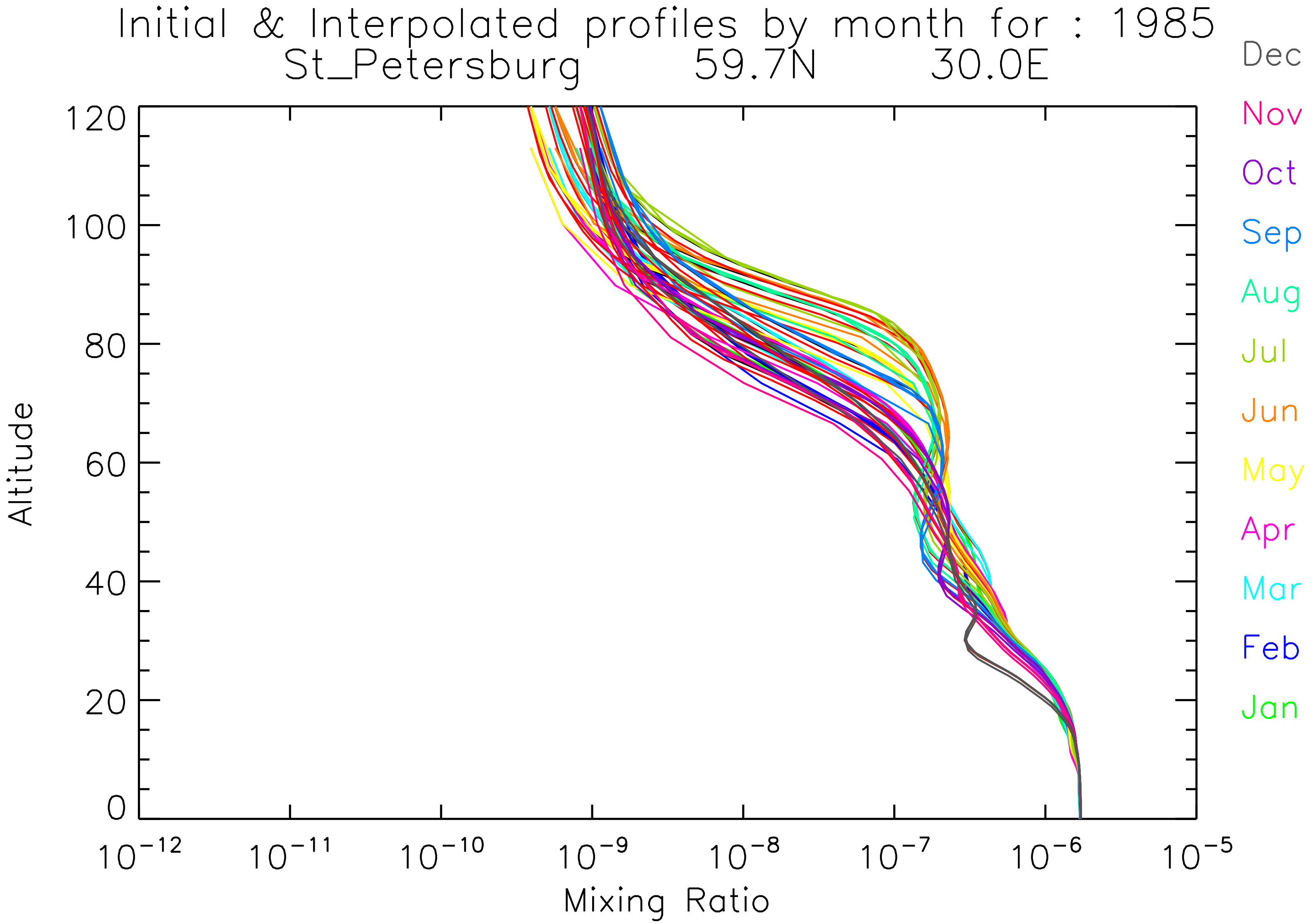
Initial & Interpolated profiles by month for : 1982
St_Petersburg 59.7N 30.0E

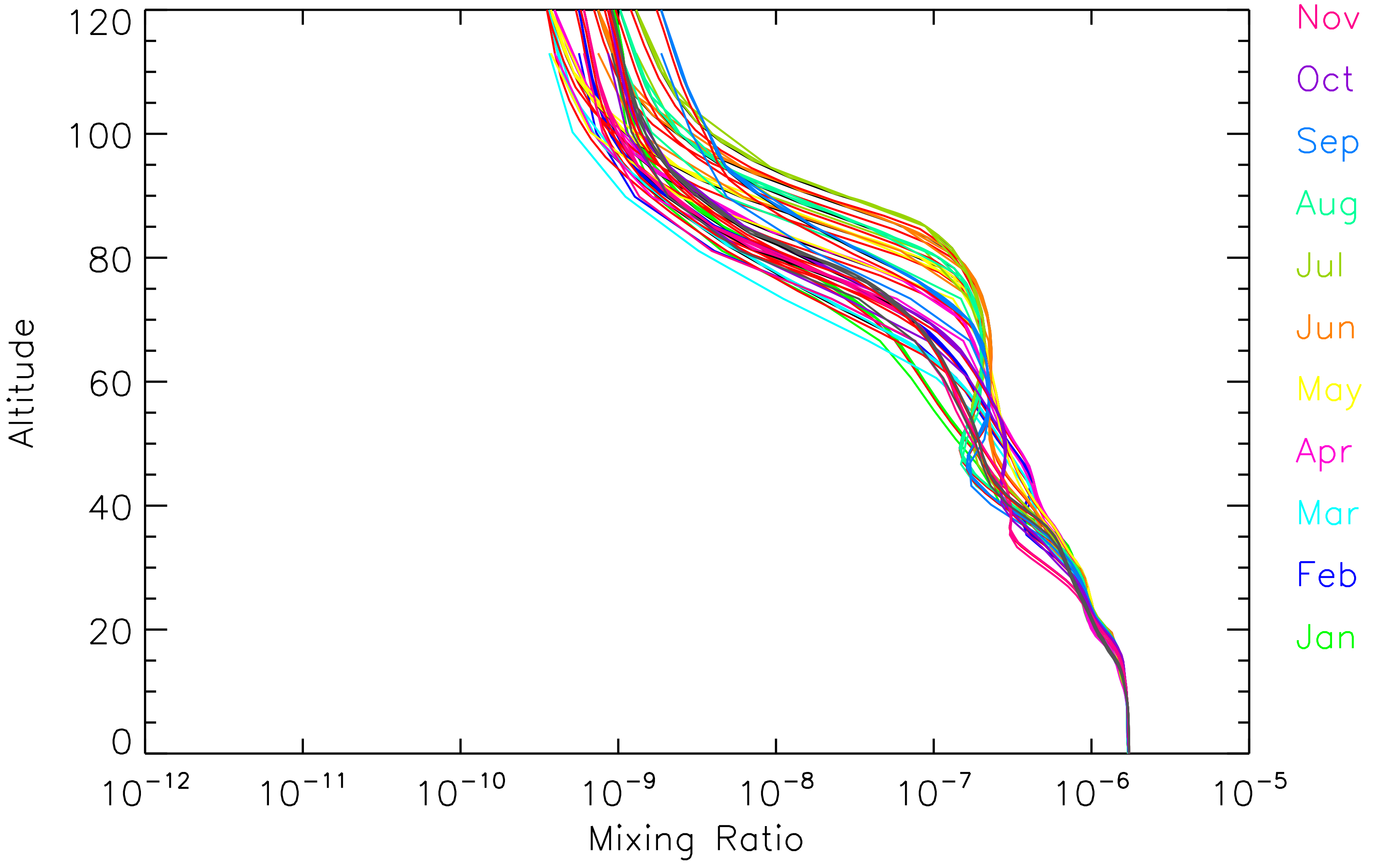
Initial & Interpolated profiles by month for : 1983
St_Petersburg 59.7N 30.0E



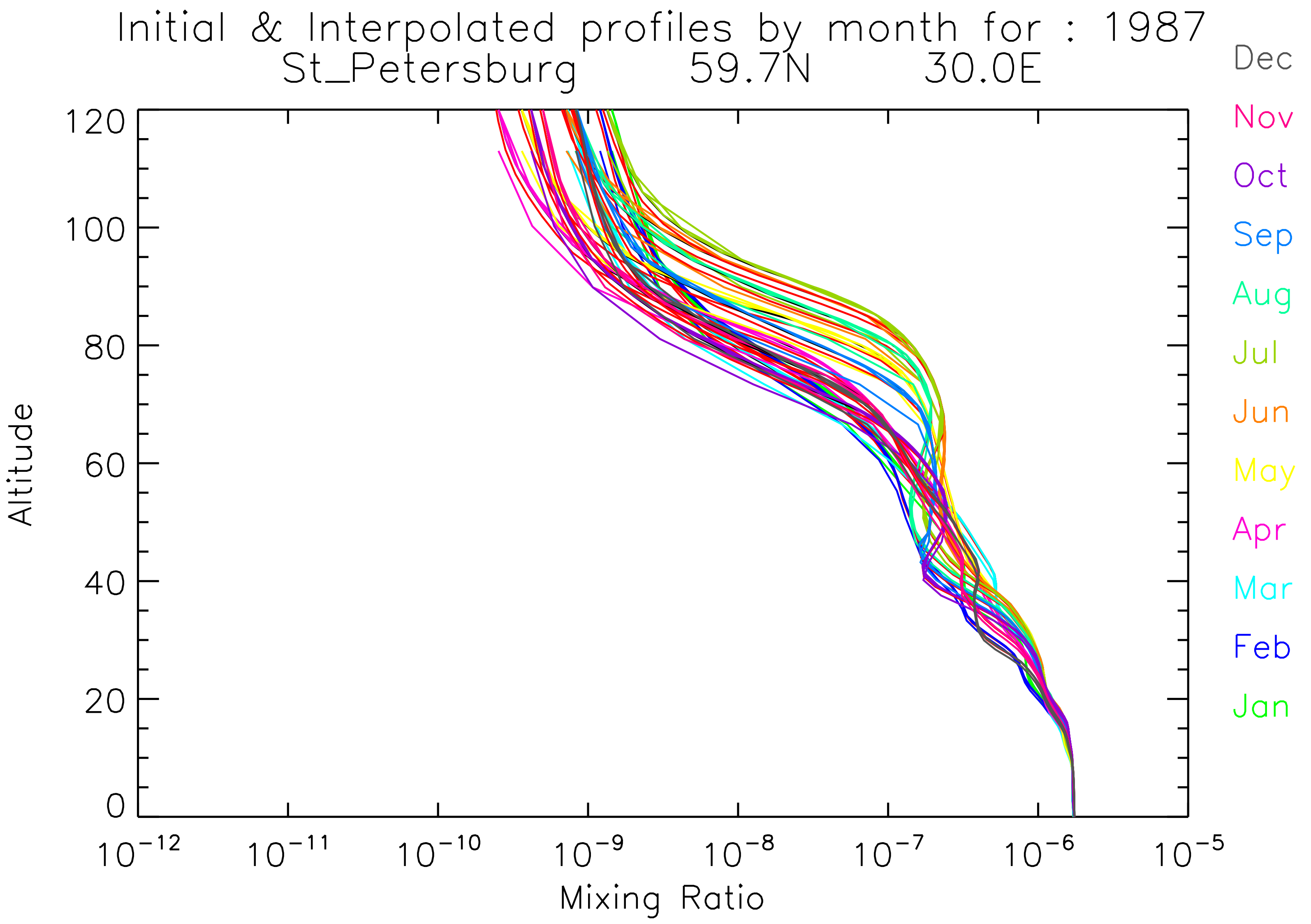
Initial & Interpolated profiles by month for : 1984
St_Petersburg 59.7N 30.0E

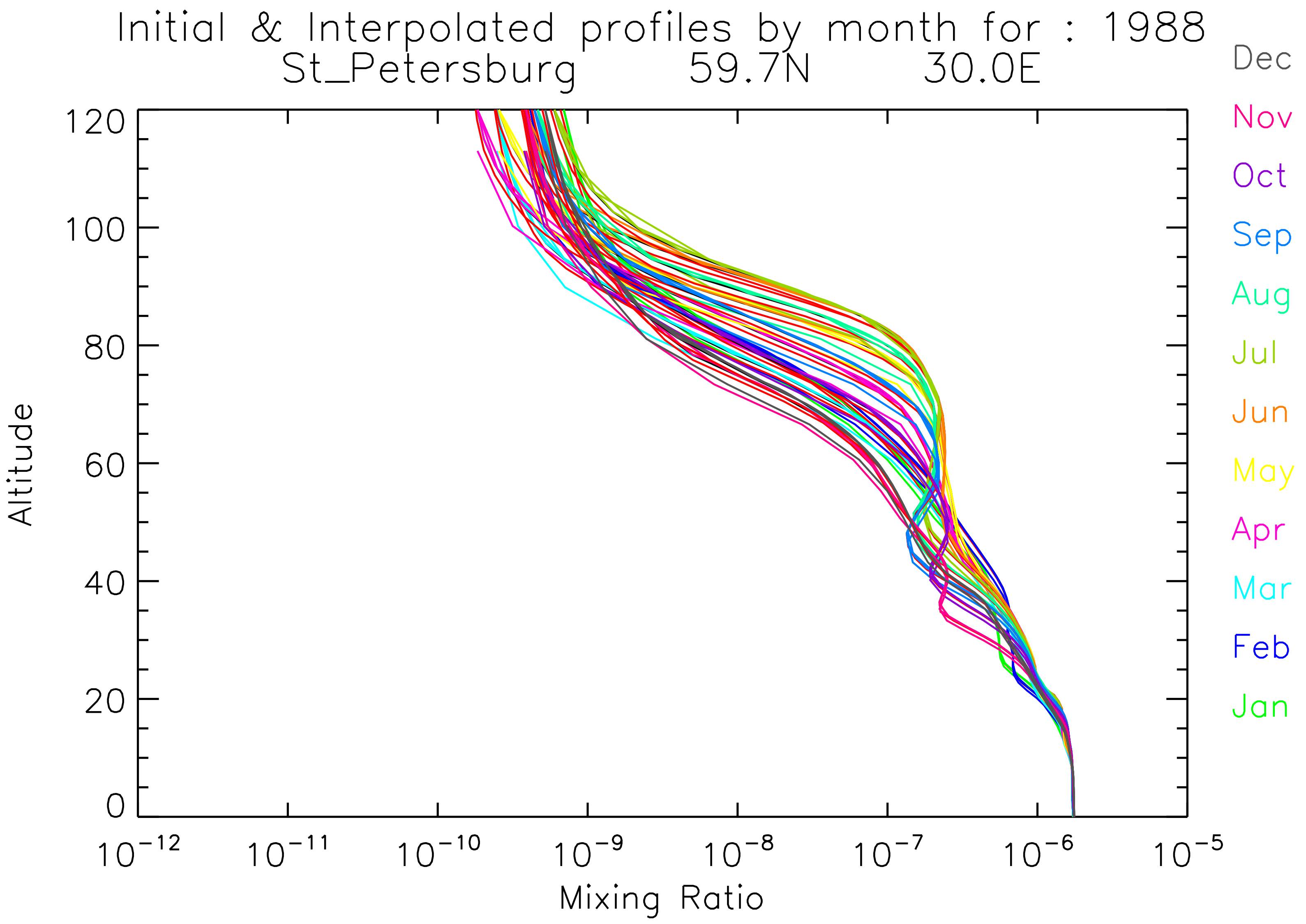



Initial & Interpolated profiles by month for : 1985
St_Petersburg 59.7N 30.0E
Altitude
0
20
40
60
80
100
120
Mixing Ratio
10^{-12}
10^{-11}
10^{-10}
10^{-9}
10^{-8}
10^{-7}
10^{-6}
10^{-5}
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan



Initial & Interpolated profiles by month for : 1986
St_Petersburg 59.7N 30.0E

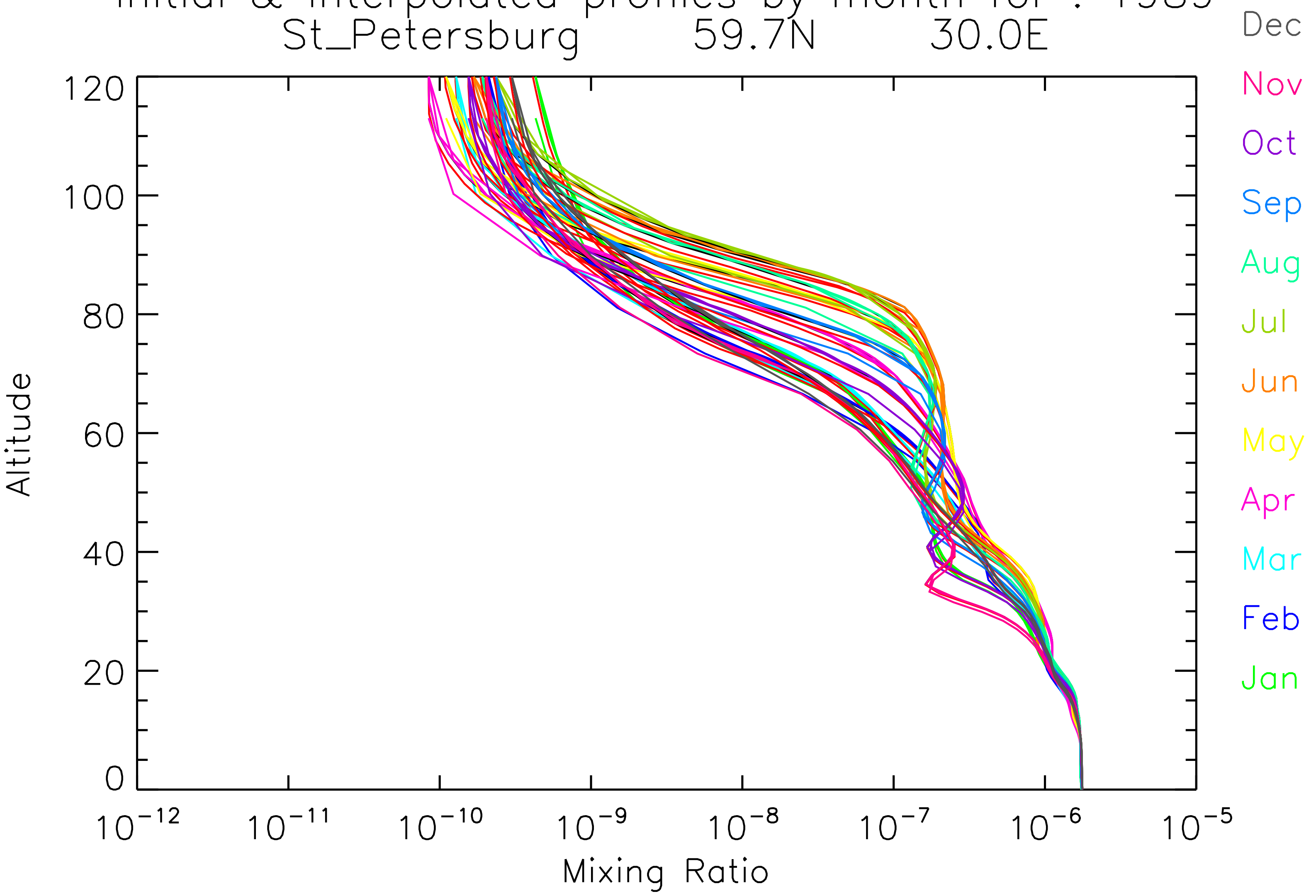

Initial & Interpolated profiles by month for : 1987
St_Petersburg 59.7N 30.0E
Altitude
0
20
40
60
80
100
120
Mixing Ratio
10^{-12}
10^{-11}
10^{-10}
10^{-9}
10^{-8}
10^{-7}
10^{-6}
10^{-5}
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan

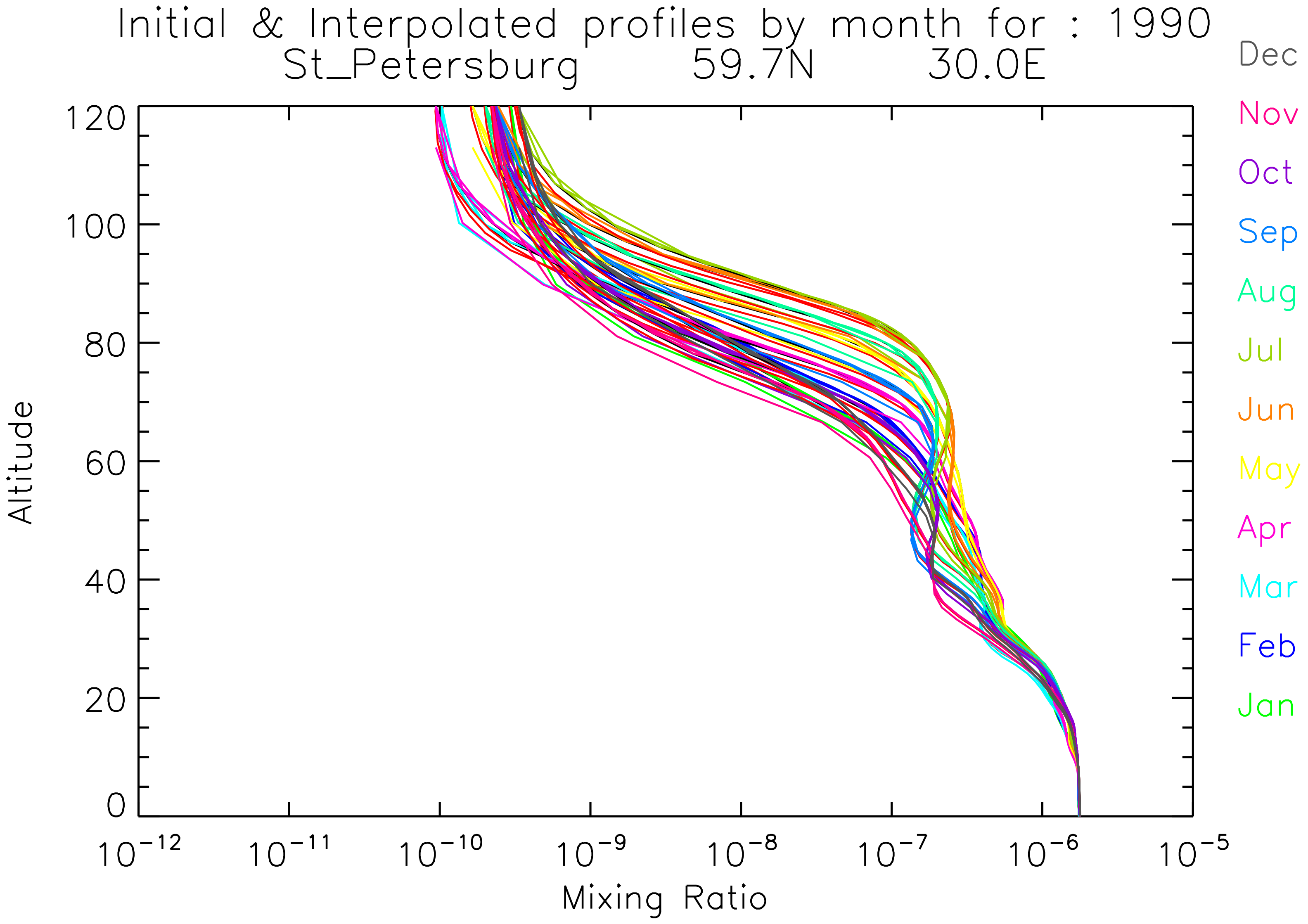


Initial & Interpolated profiles by month for : 1988

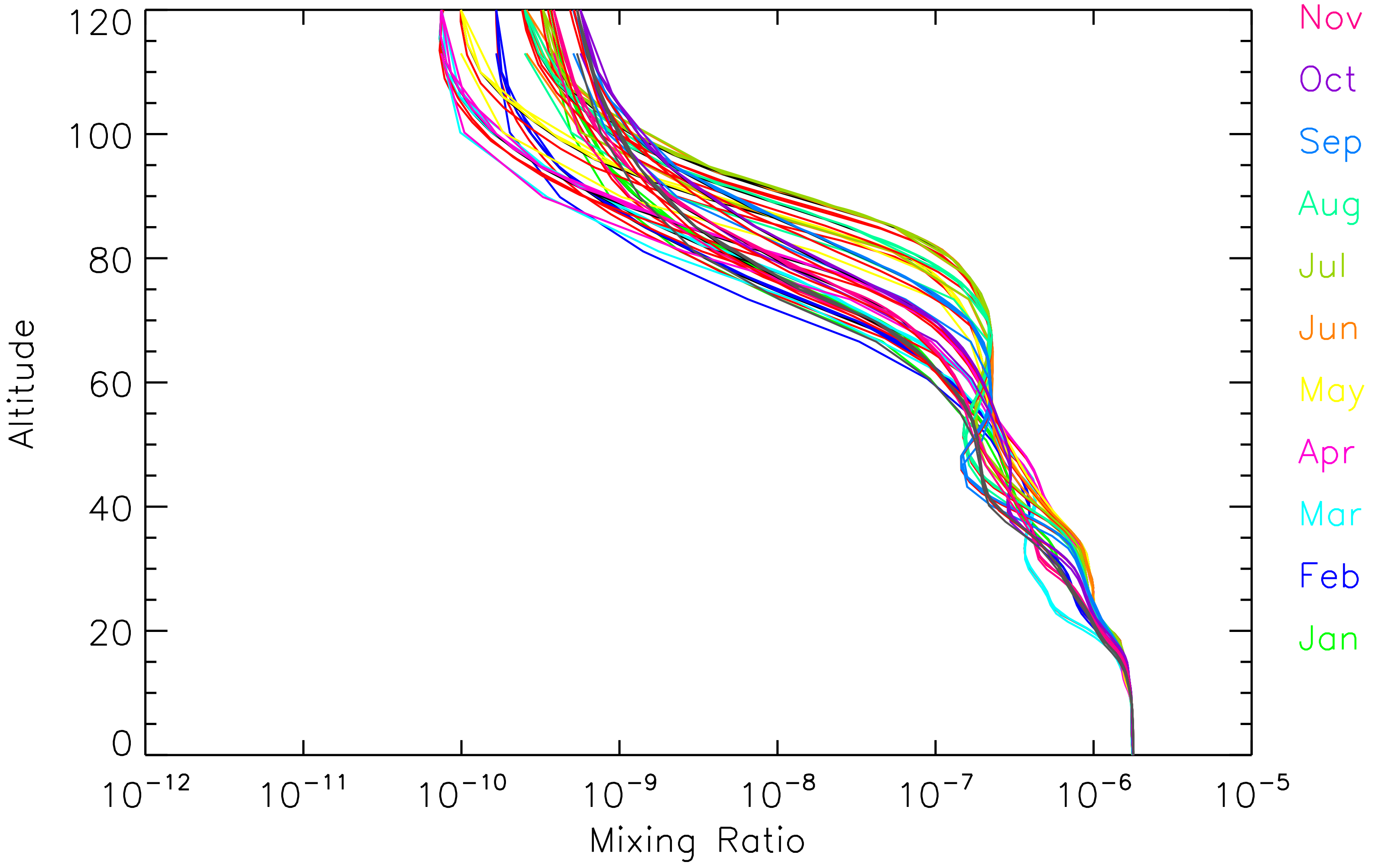
St_Petersburg 59.7N 30.0E

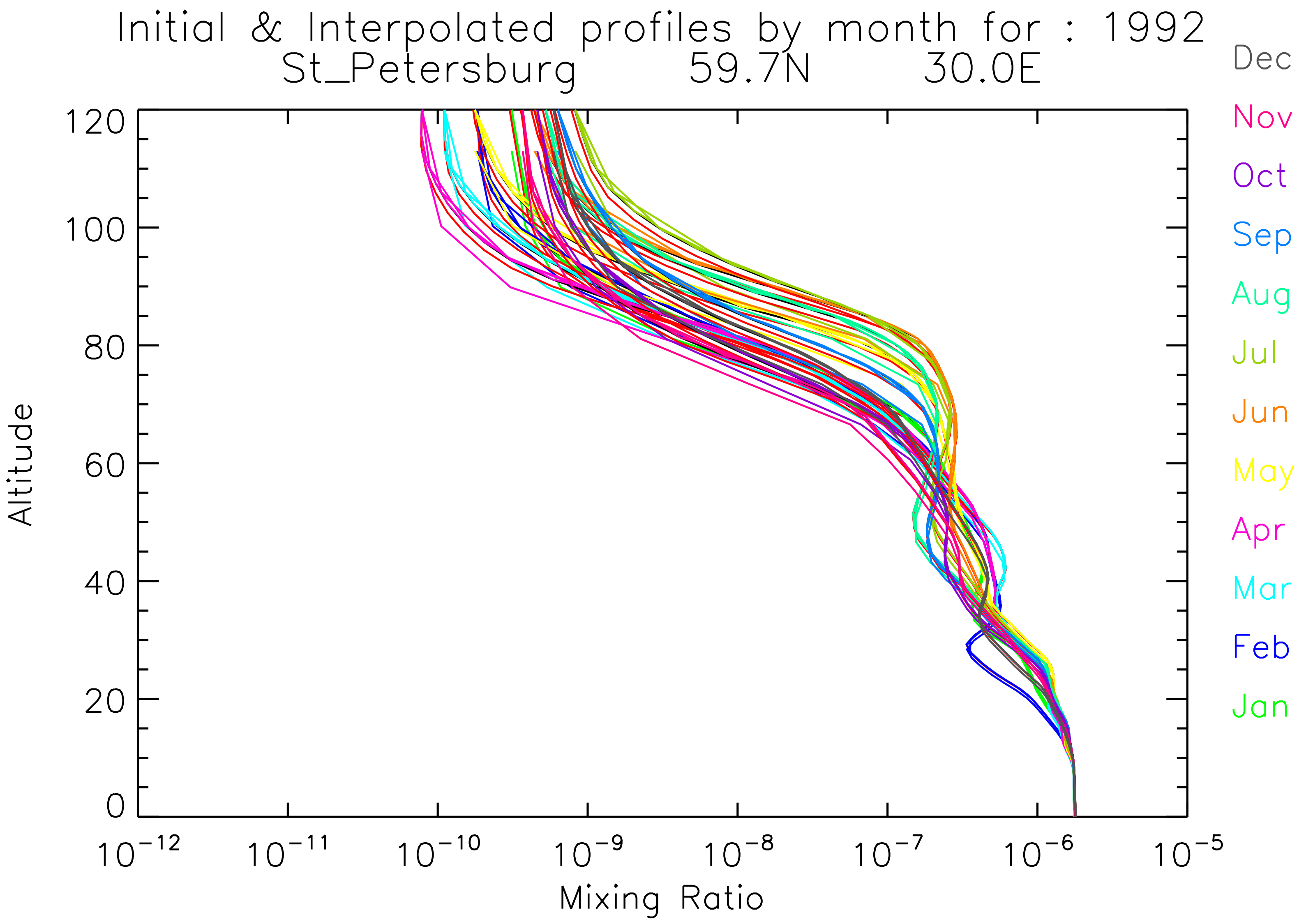
Initial & Interpolated profiles by month for : 1989
St_Petersburg 59.7N 30.0E



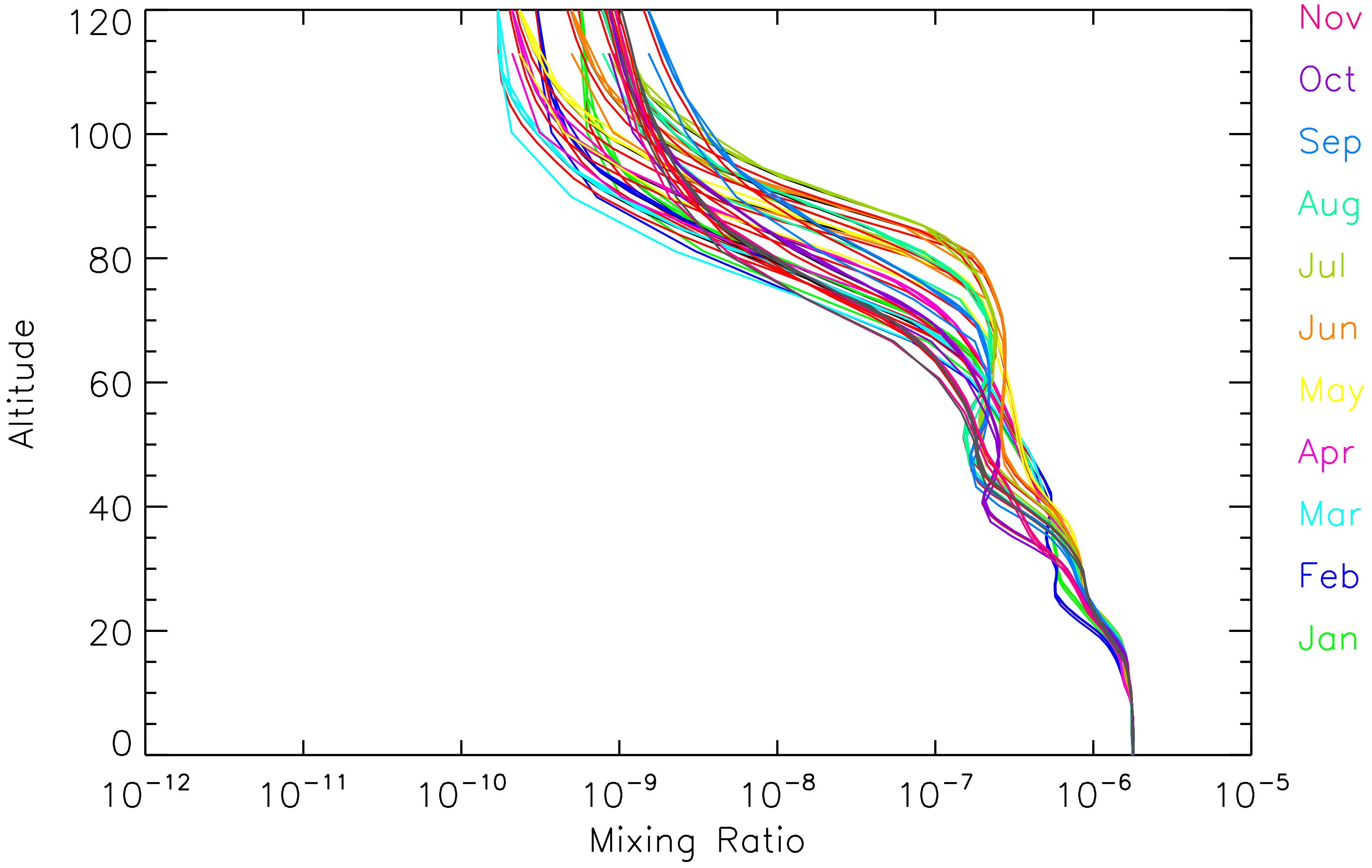


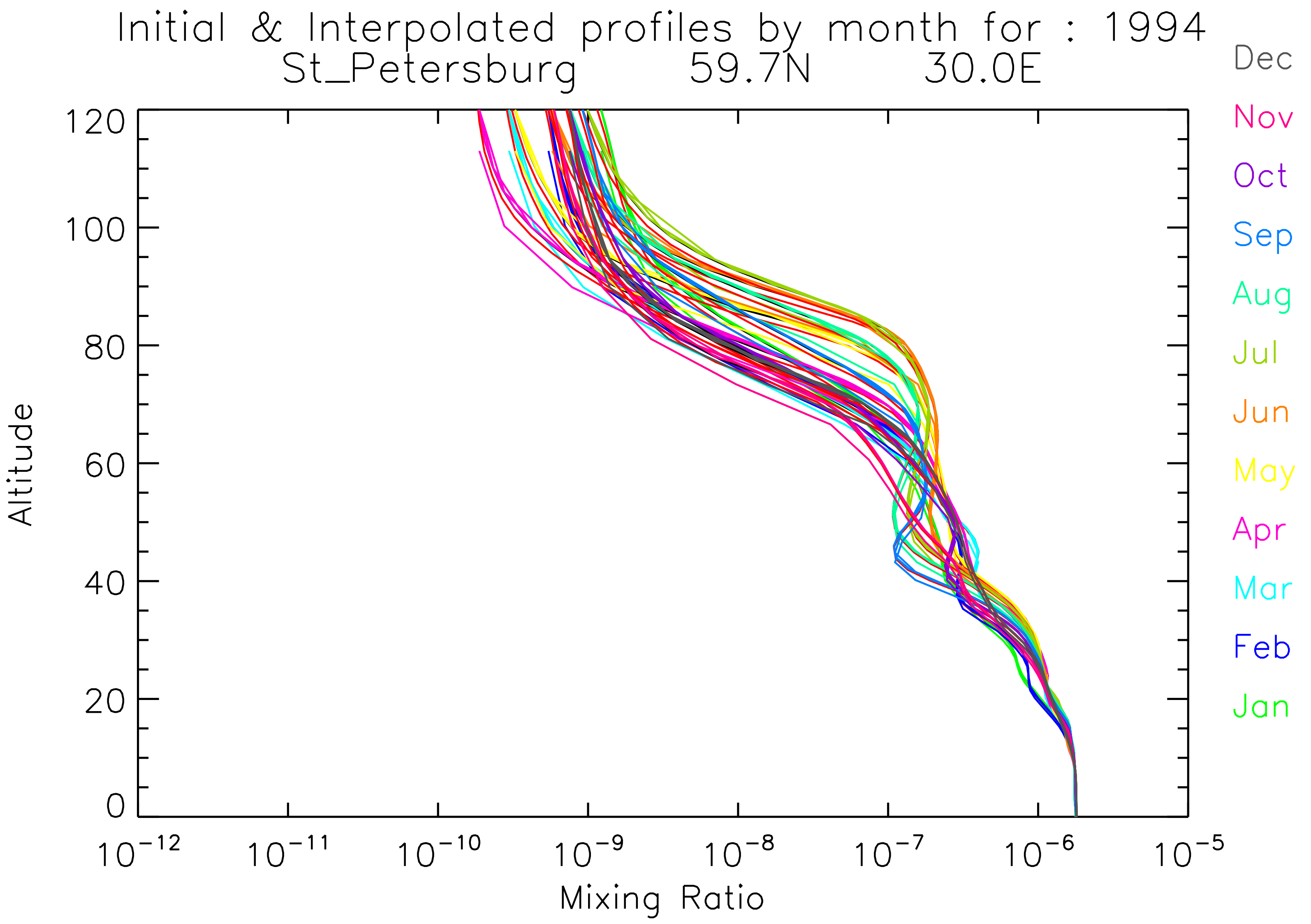
Initial & Interpolated profiles by month for : 1990
St_Petersburg 59.7N 30.0E


Initial & Interpolated profiles by month for : 1991
St_Petersburg 59.7N 30.0E

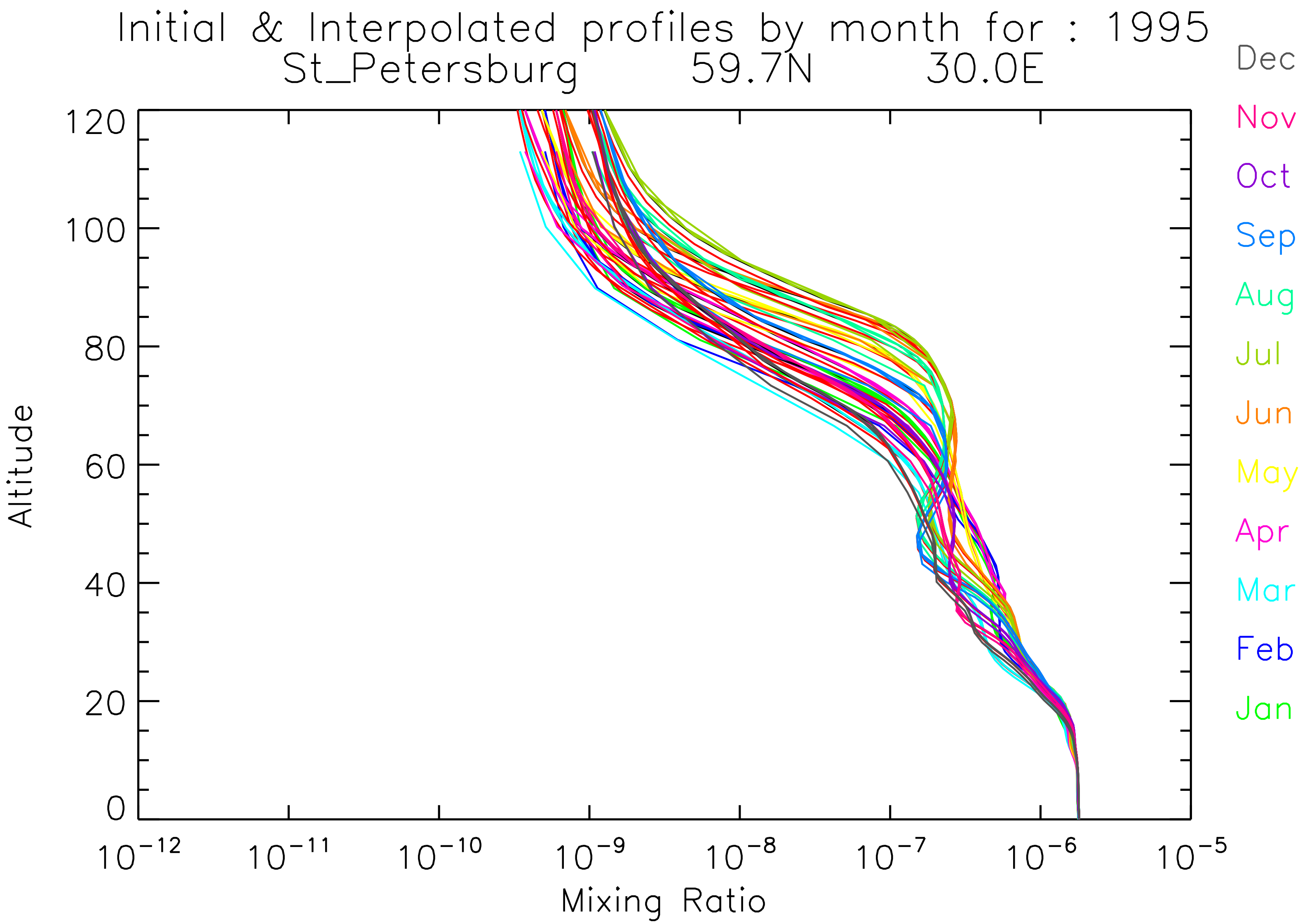

Initial & Interpolated profiles by month for : 1992
St_Petersburg 59.7N 30.0E
Altitude
0
20
40
60
80
100
120
10^{-12}
10^{-11}
10^{-10}
10^{-9}
10^{-8}
10^{-7}
10^{-6}
10^{-5}
Mixing Ratio
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan

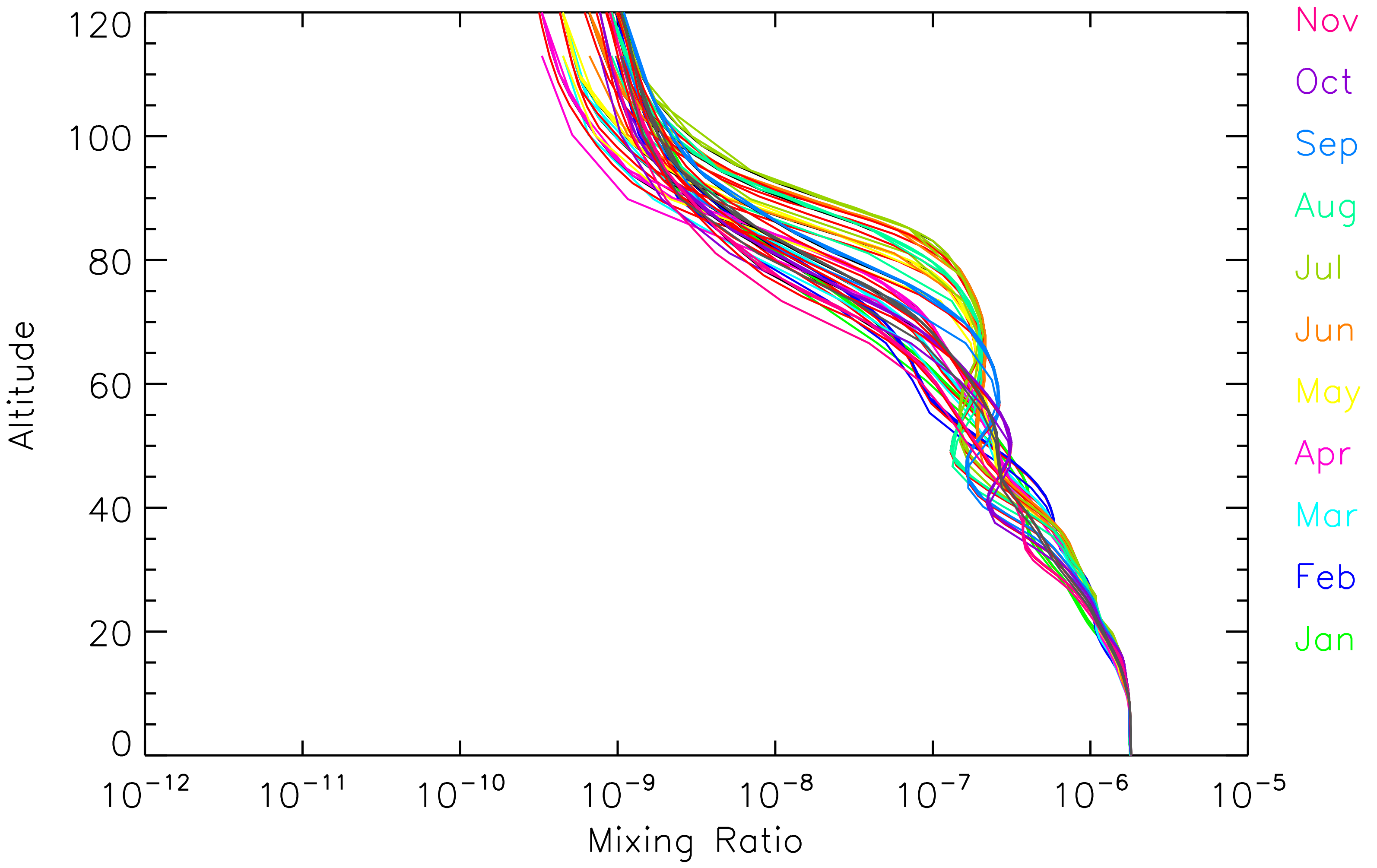
Initial & Interpolated profiles by month for : 1993
St_Petersburg 59.7N 30.0E





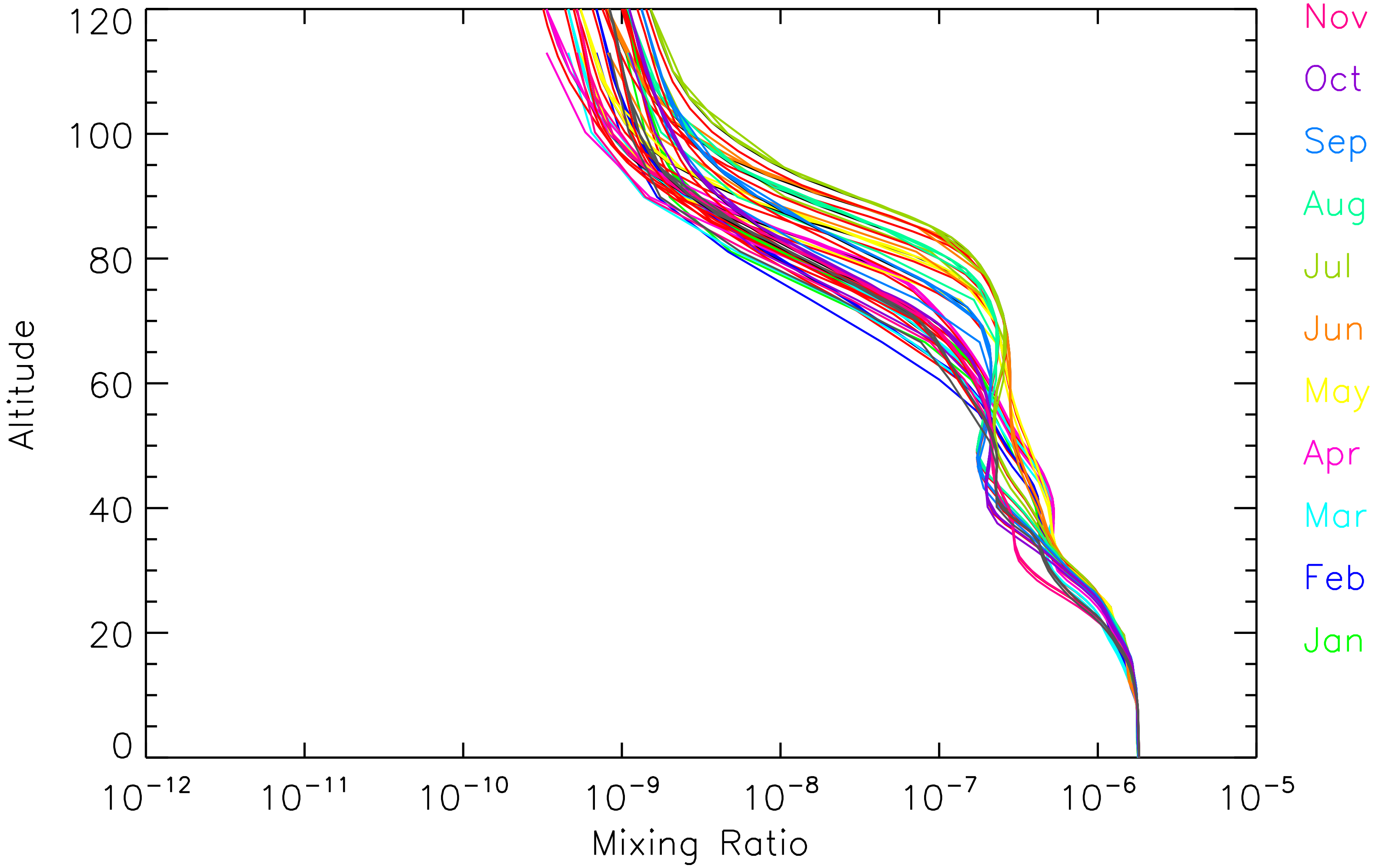
Initial & Interpolated profiles by month for : 1994
St_Petersburg 59.7N 30.0E

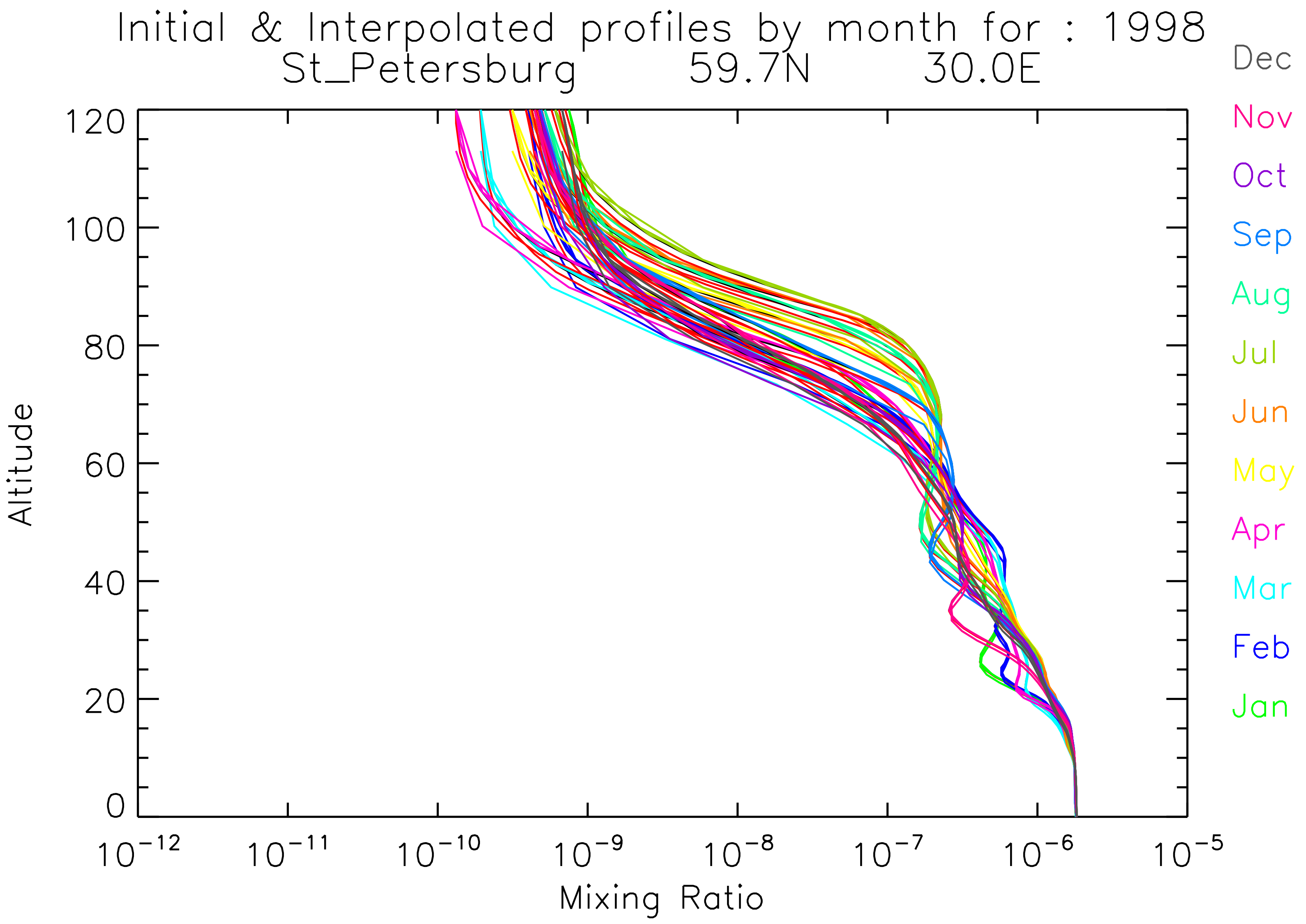
Initial & Interpolated profiles by month for : 1995
St_Petersburg 59.7N 30.0E
Altitude
0
20
40
60
80
100
120
10^{-12}
10^{-11}
10^{-10}
10^{-9}
10^{-8}
10^{-7}
10^{-6}
10^{-5}
Mixing Ratio
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan



Initial & Interpolated profiles by month for : 1996
St_Petersburg 59.7N 30.0E

Initial & Interpolated profiles by month for : 1997
St_Petersburg 59.7N 30.0E

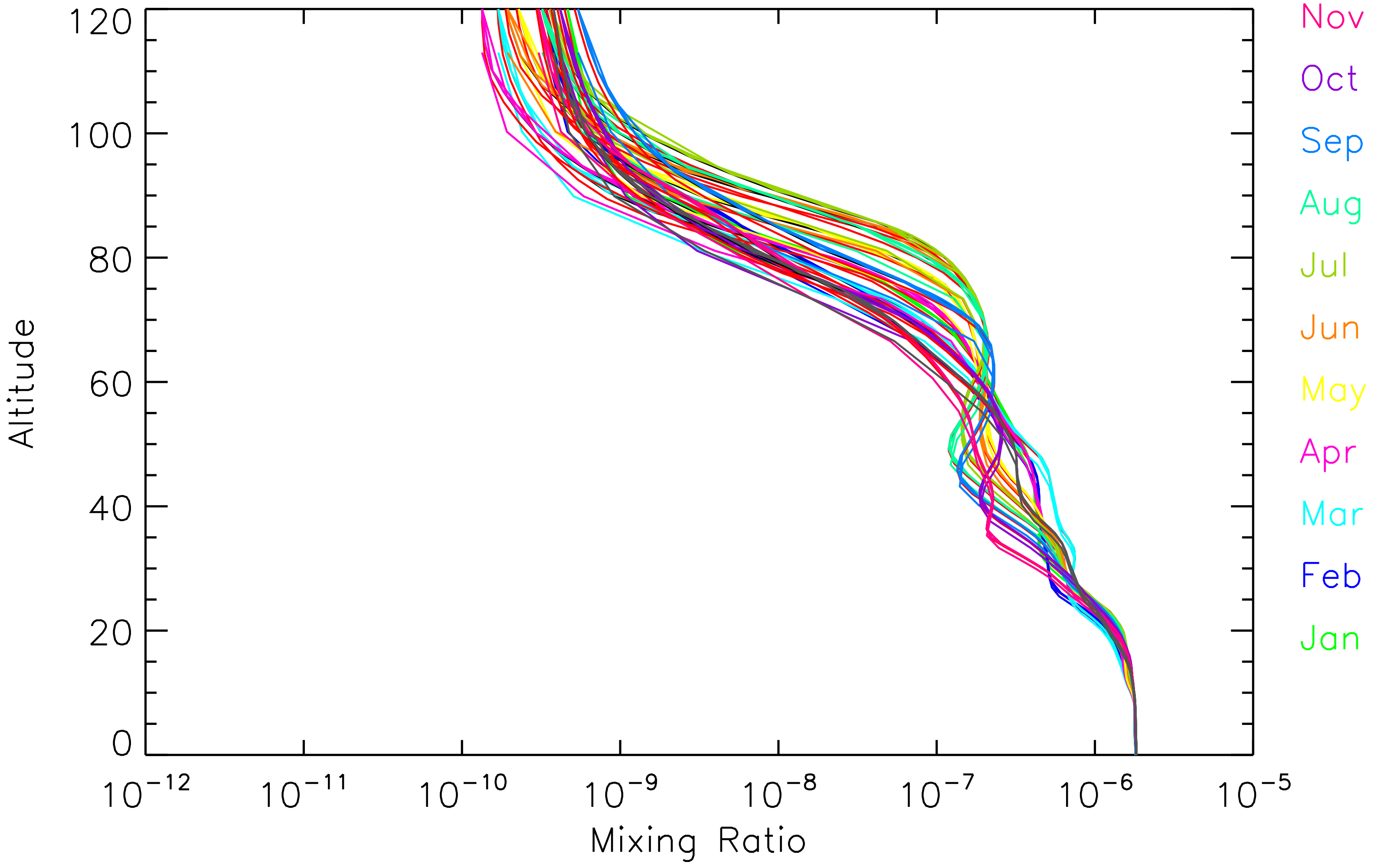




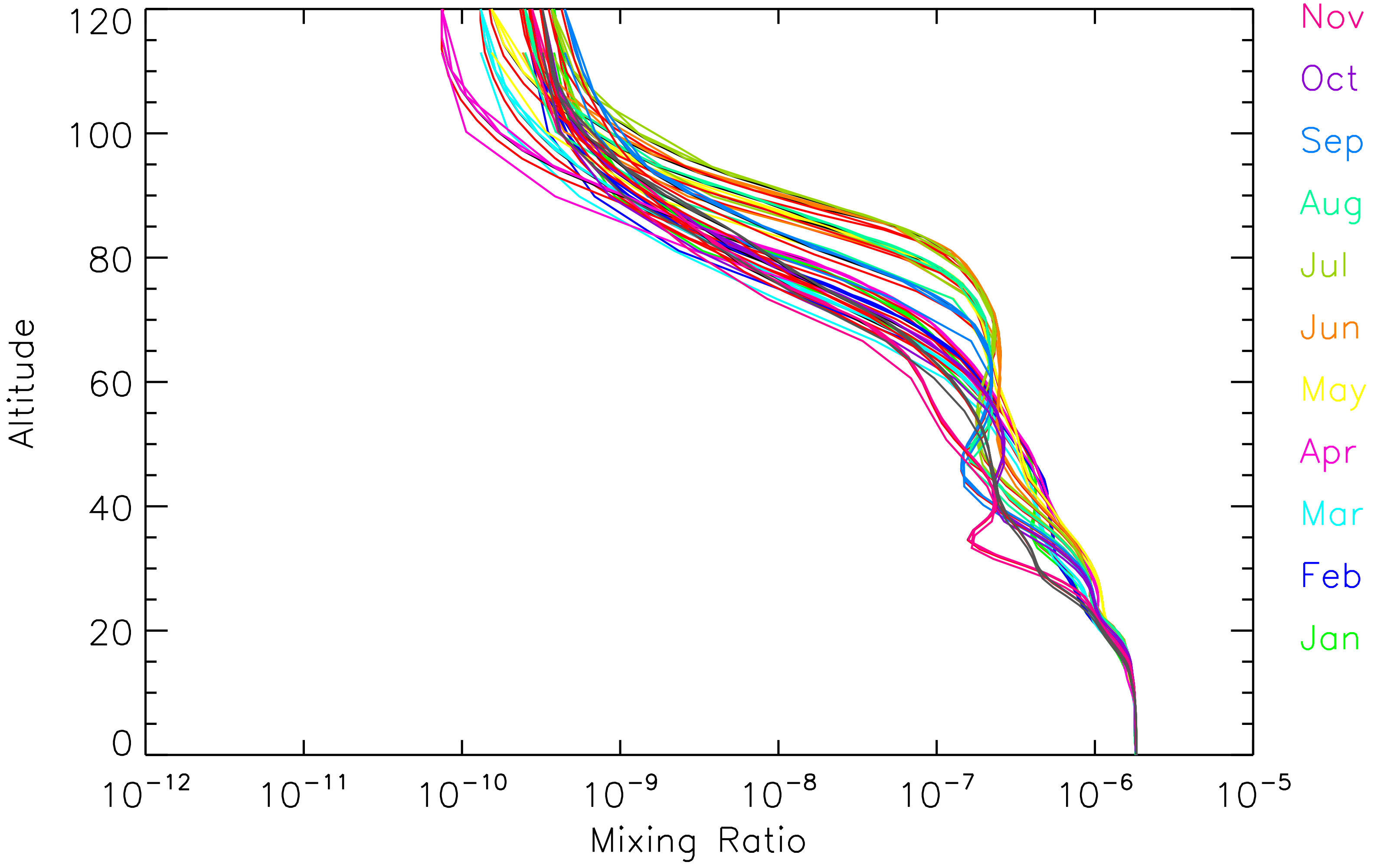
Initial & Interpolated profiles by month for : 1998

St_Petersburg 59.7N 30.0E

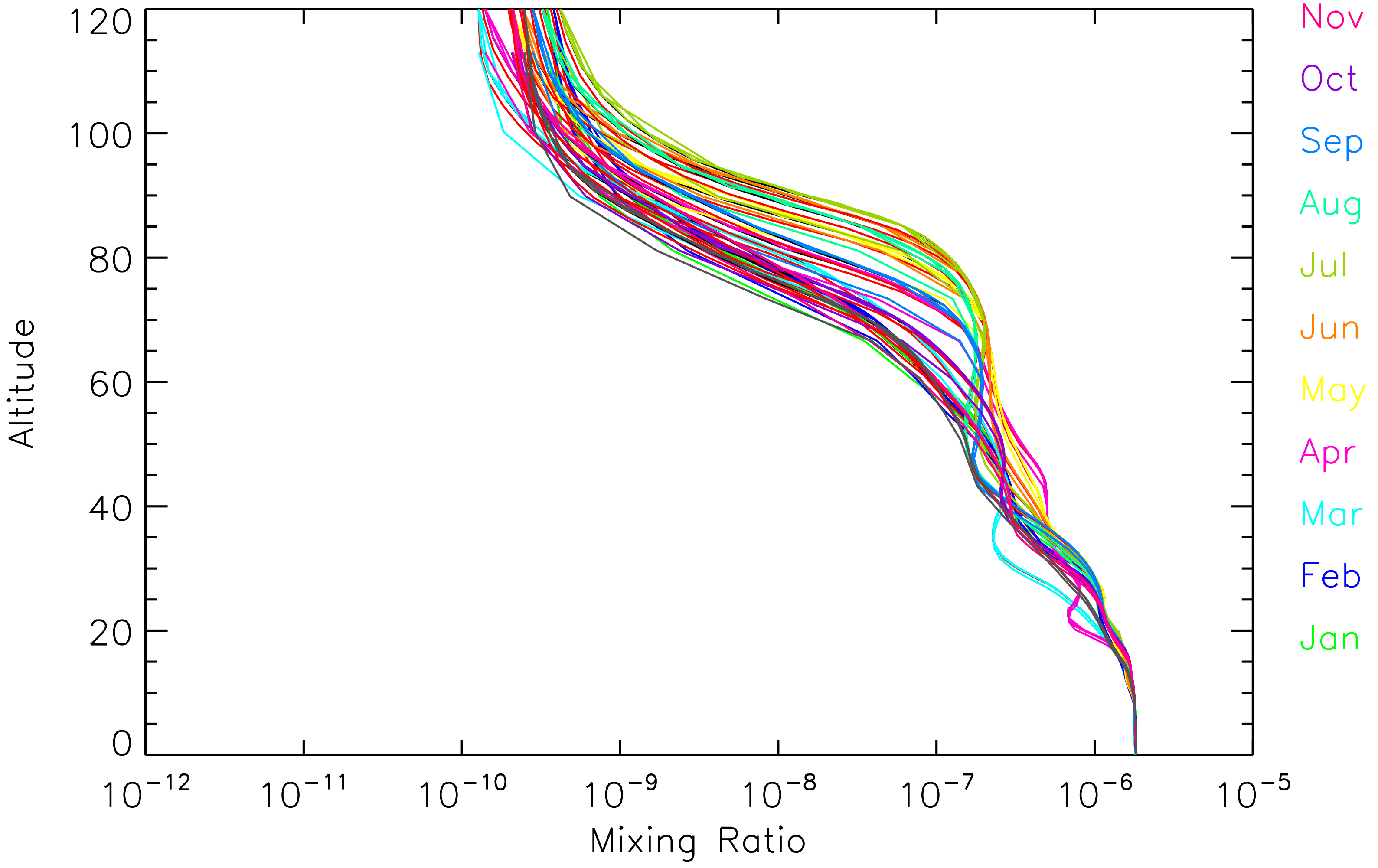
Initial & Interpolated profiles by month for : 1999
St_Petersburg 59.7N 30.0E

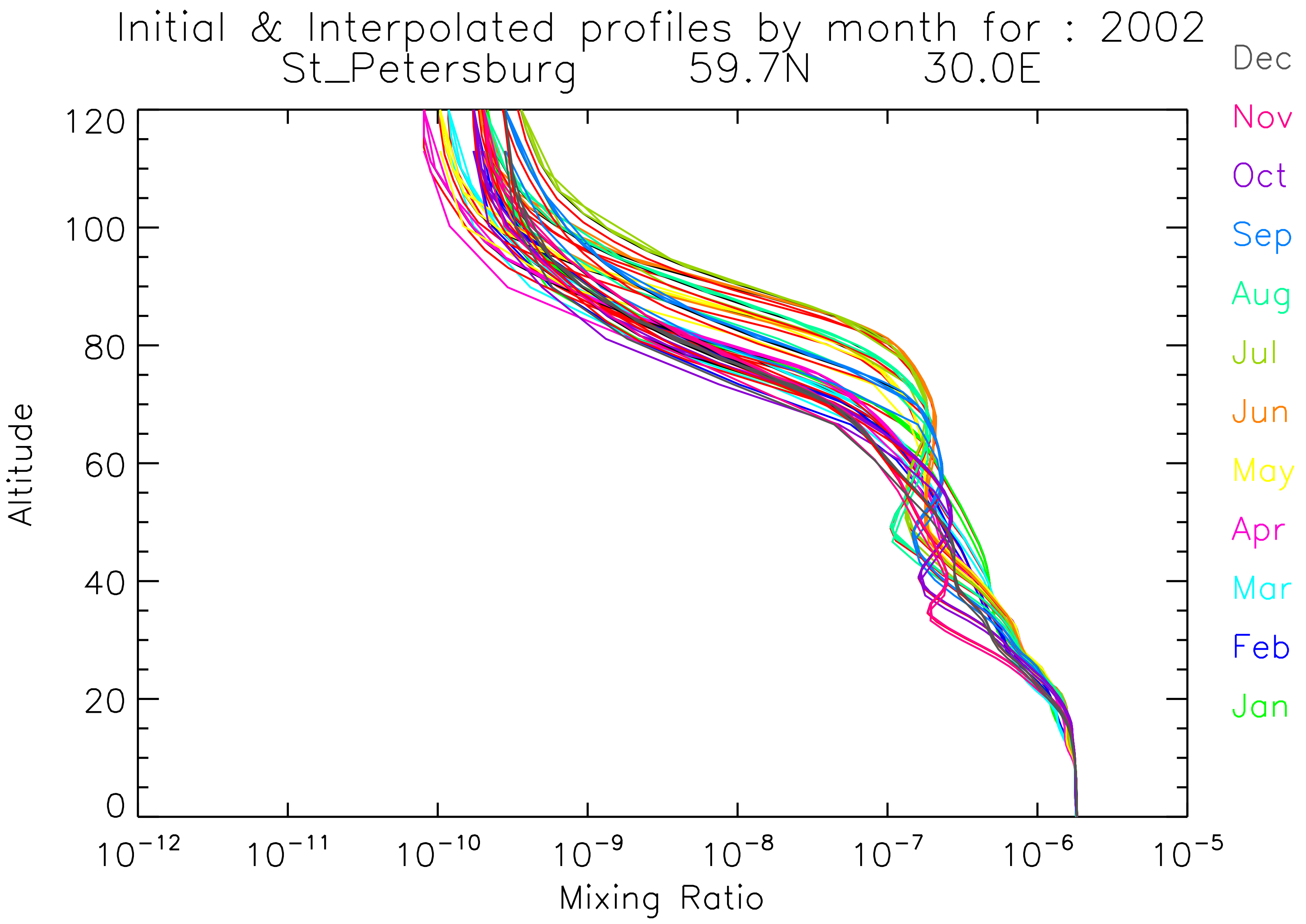


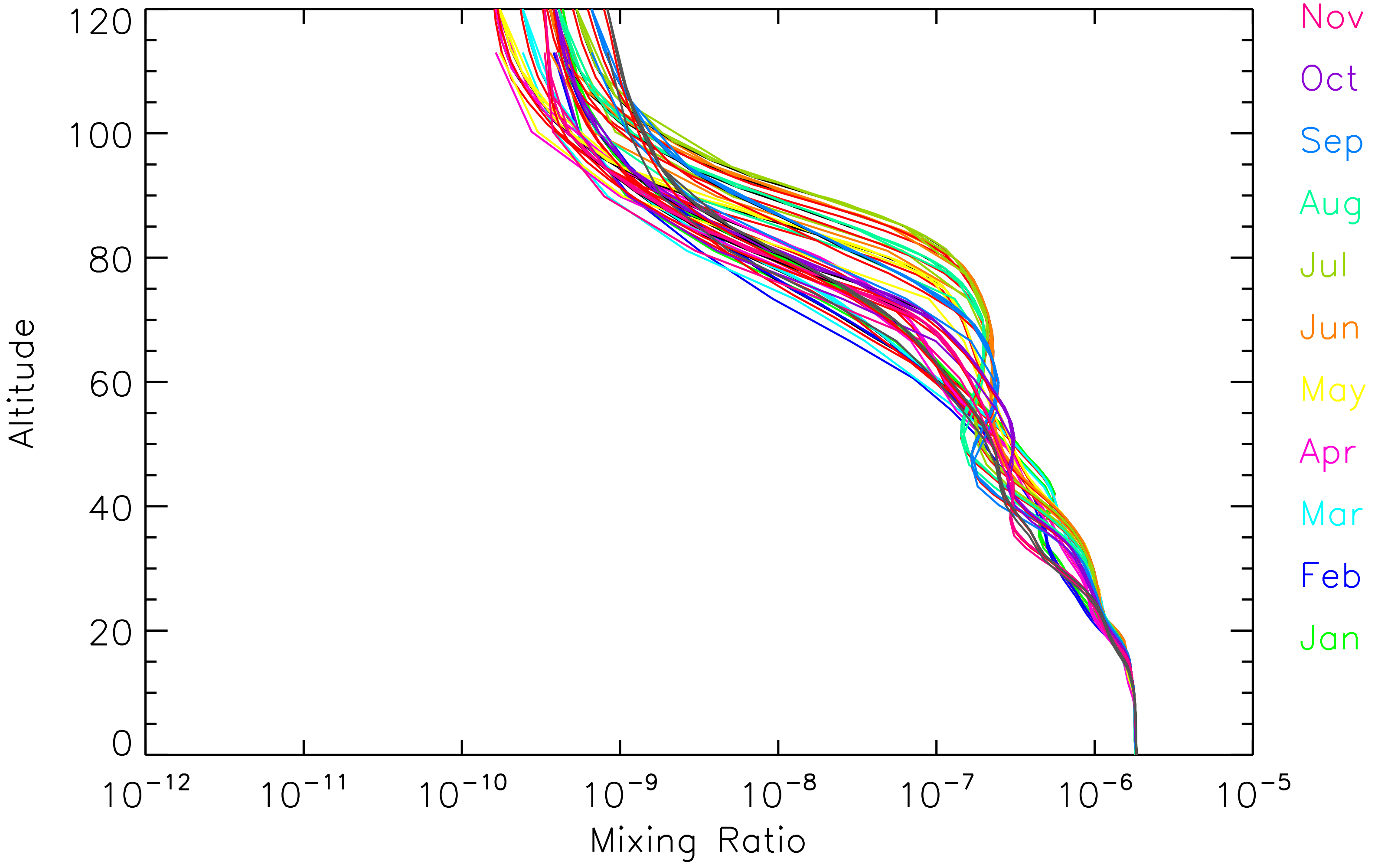
Initial & Interpolated profiles by month for : 2000
St_Petersburg 59.7N 30.0E

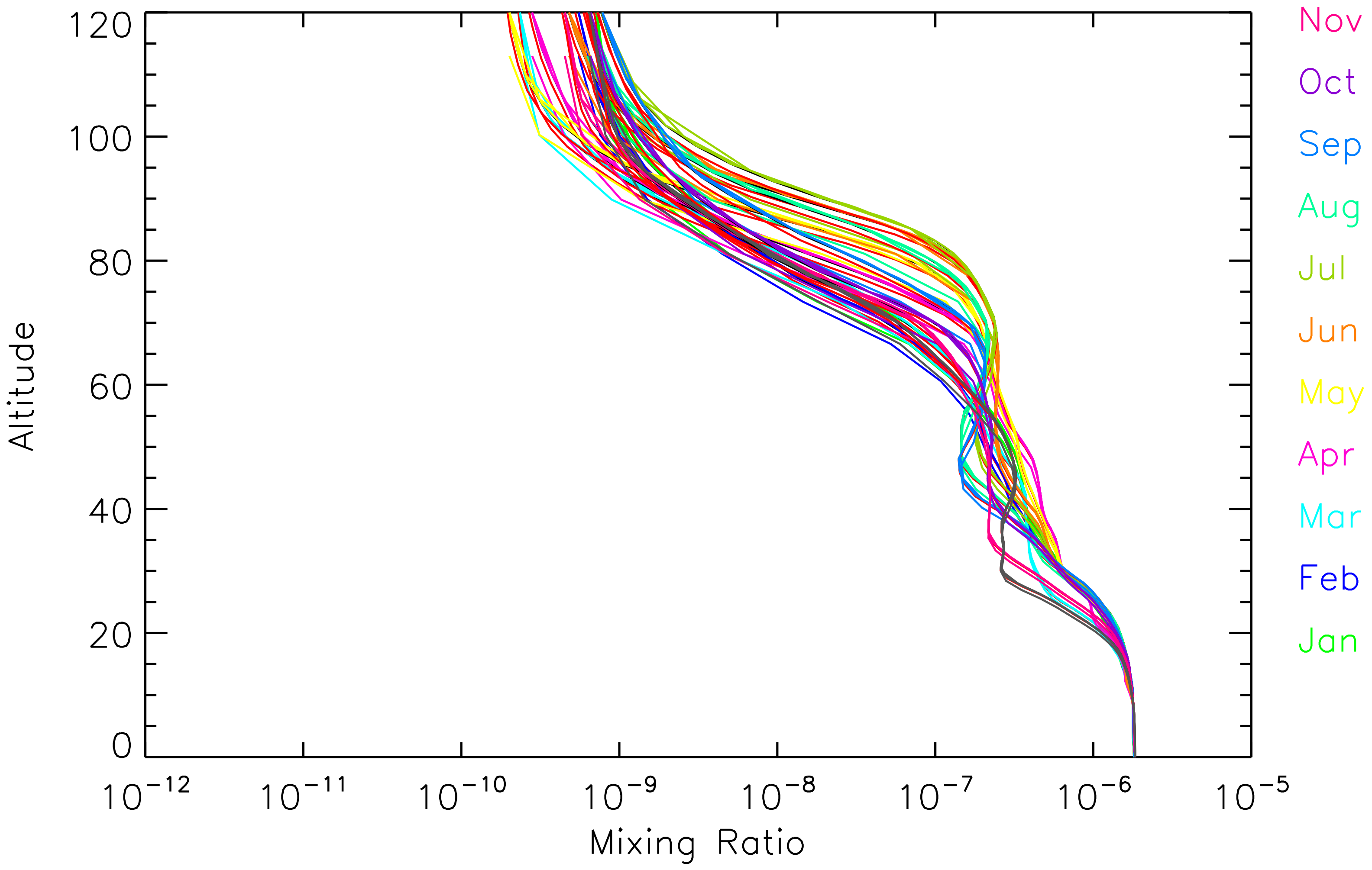


Initial & Interpolated profiles by month for : 2001
St_Petersburg 59.7N 30.0E

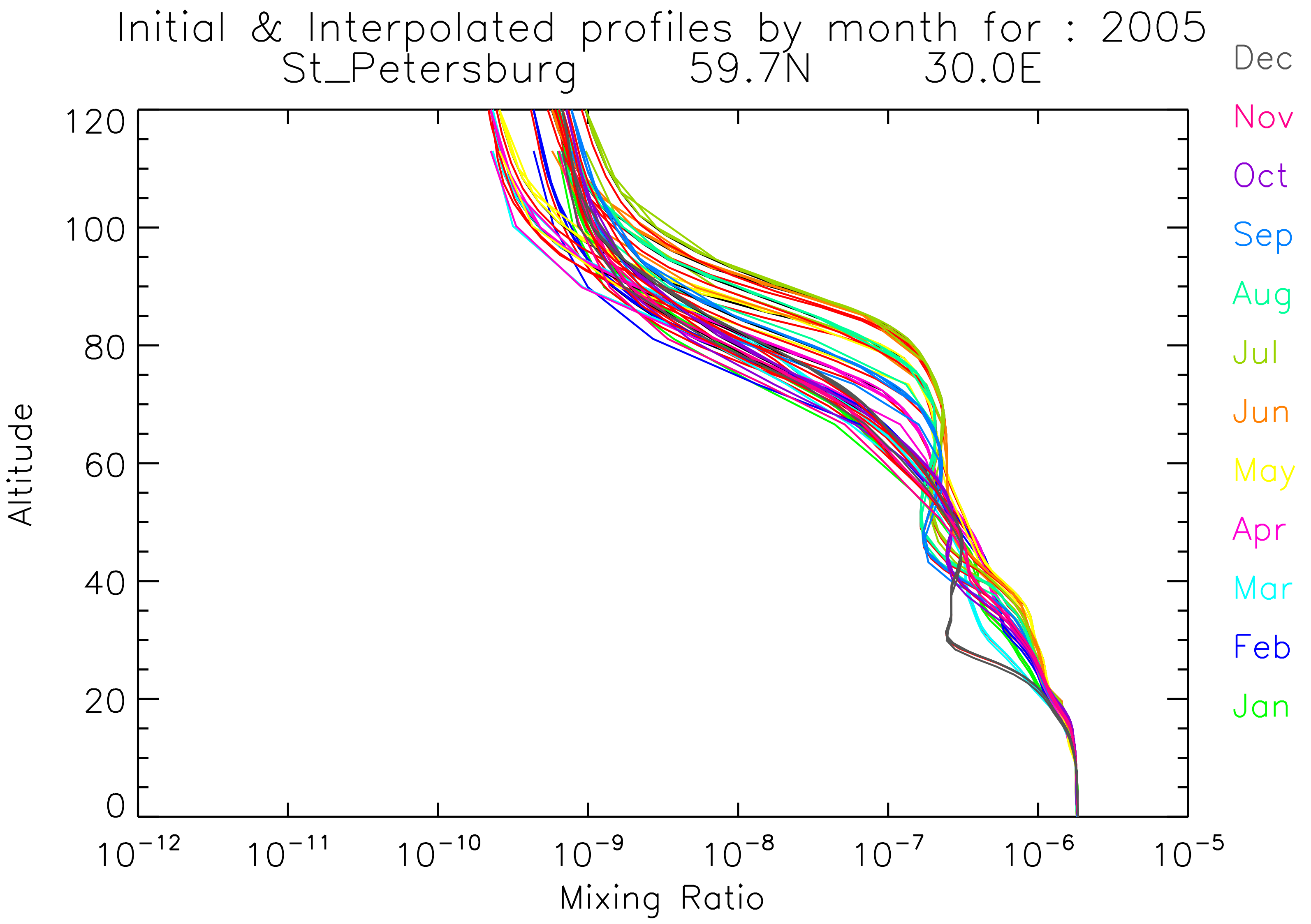



Initial & Interpolated profiles by month for : 2002
St_Petersburg 59.7N 30.0E
Altitude
120
100
80
60
40
20
0
10^{-12}
10^{-11}
10^{-10}
10^{-9}
10^{-8}
10^{-7}
10^{-6}
10^{-5}
Mixing Ratio
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan

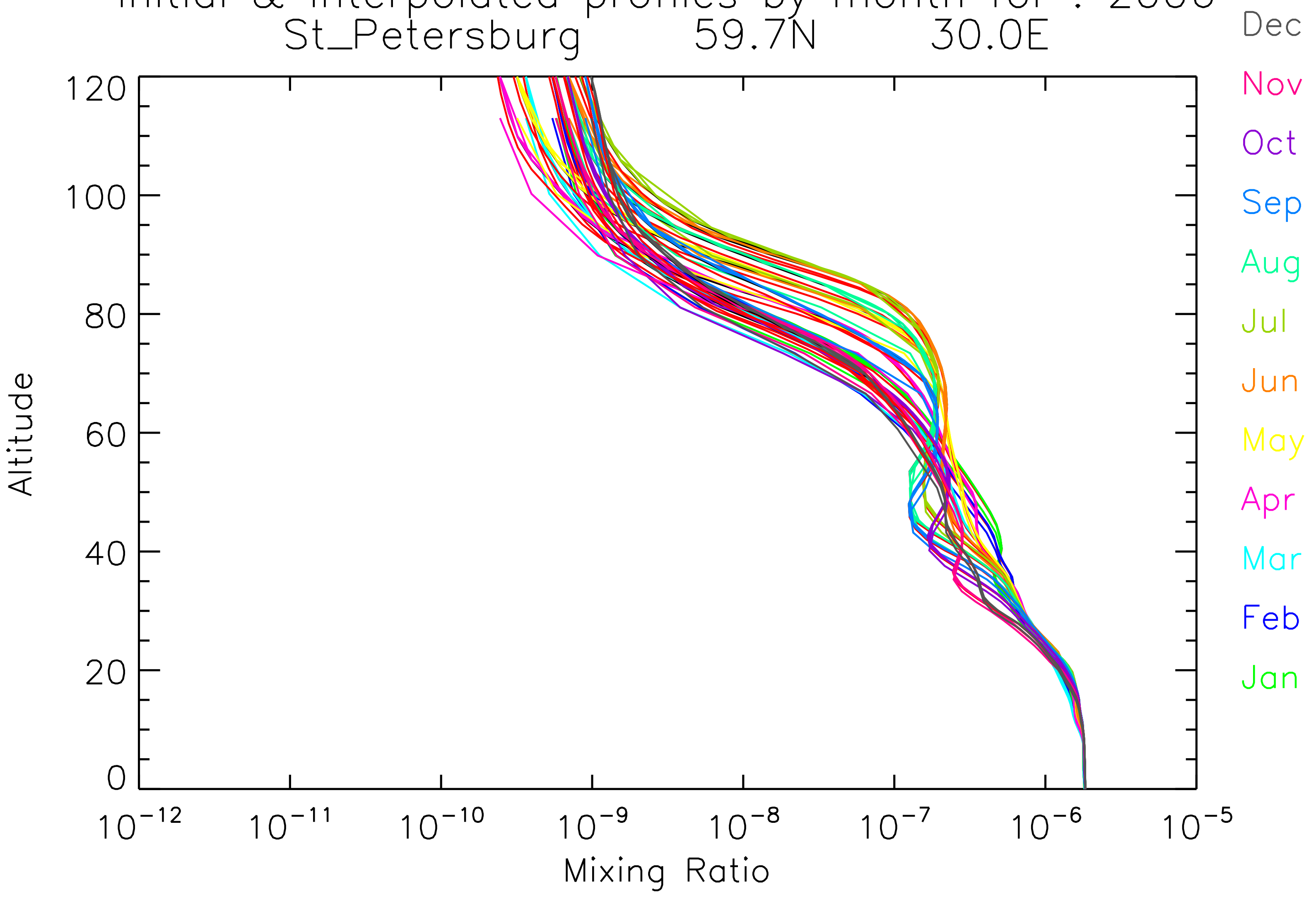

Initial & Interpolated profiles by month for : 2003
St_Petersburg 59.7N 30.0E

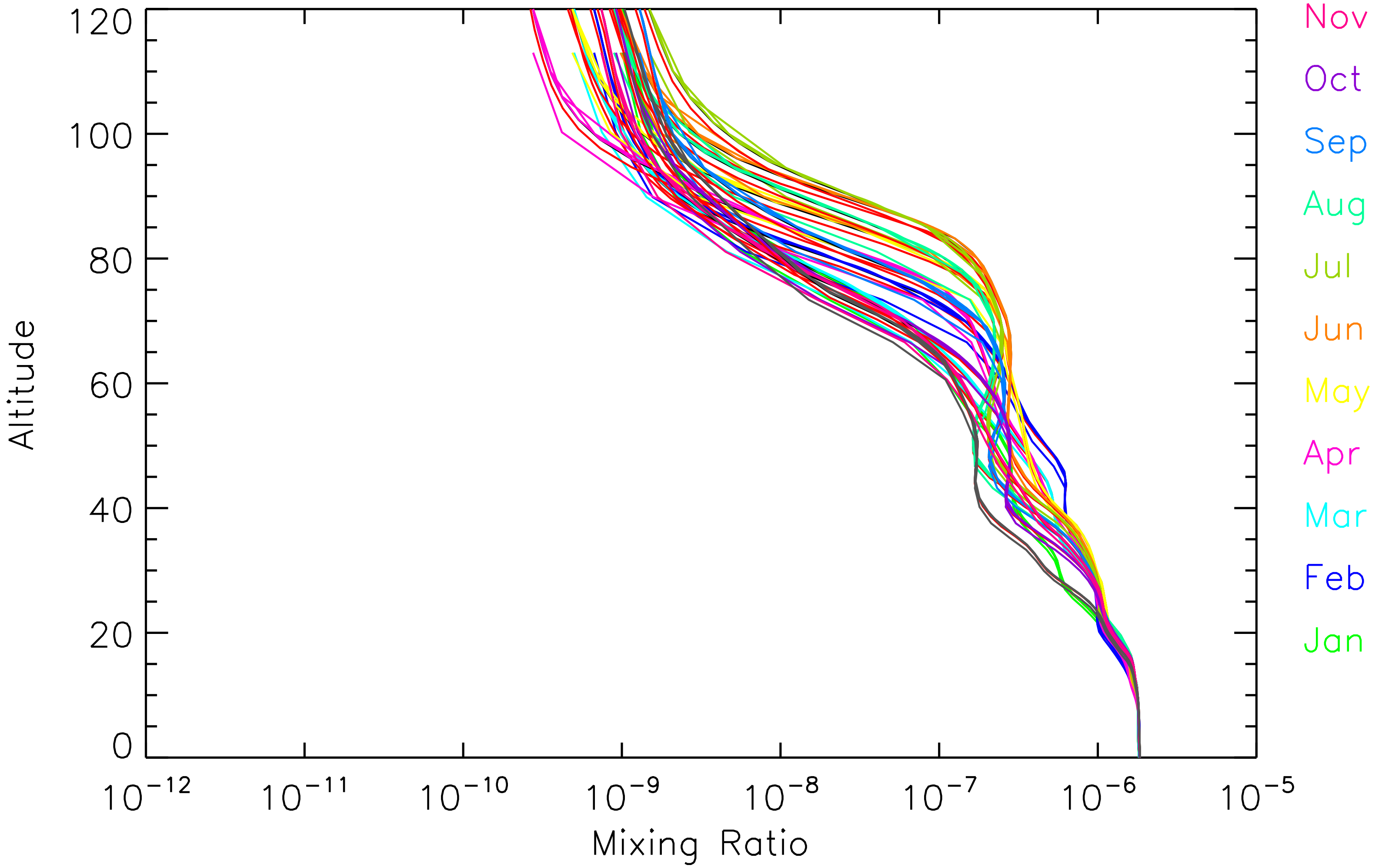


Initial & Interpolated profiles by month for : 2004
St_Petersburg 59.7N 30.0E

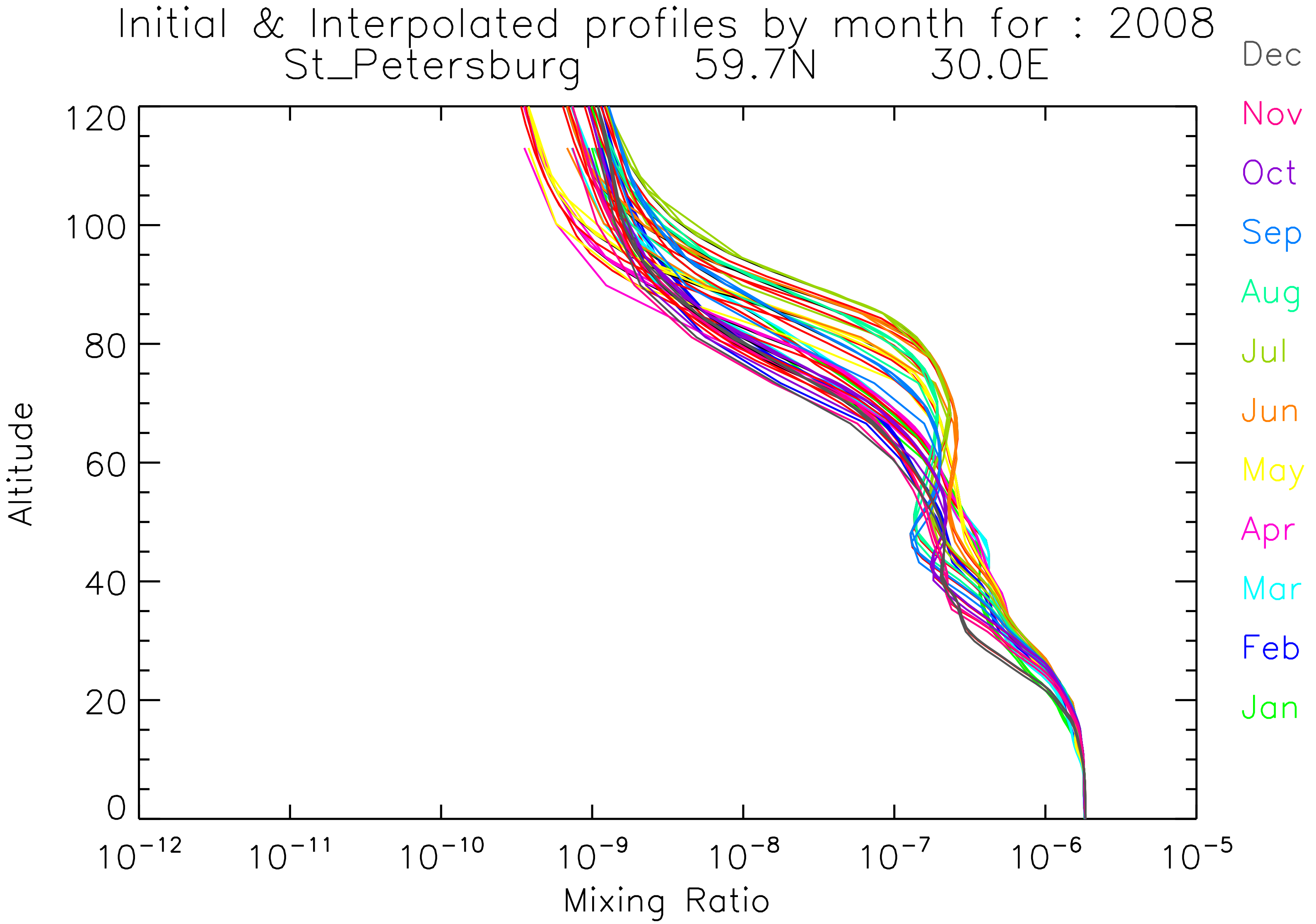

Initial & Interpolated profiles by month for : 2005
St_Petersburg 59.7N 30.0E
Altitude
0
20
40
60
80
100
120
Mixing Ratio
10^{-12}
10^{-11}
10^{-10}
10^{-9}
10^{-8}
10^{-7}
10^{-6}
10^{-5}
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan

Initial & Interpolated profiles by month for : 2006
St_Petersburg 59.7N 30.0E

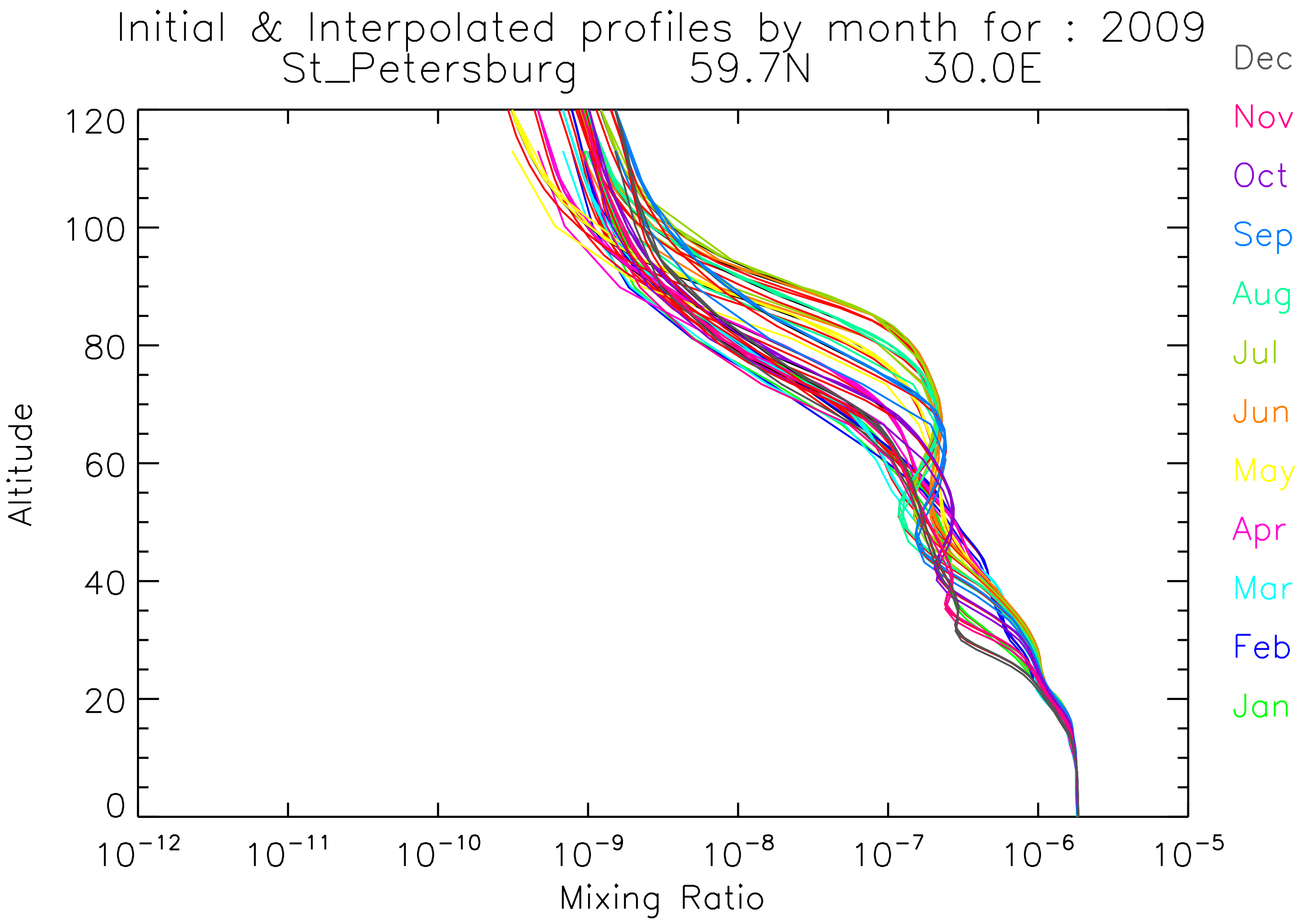




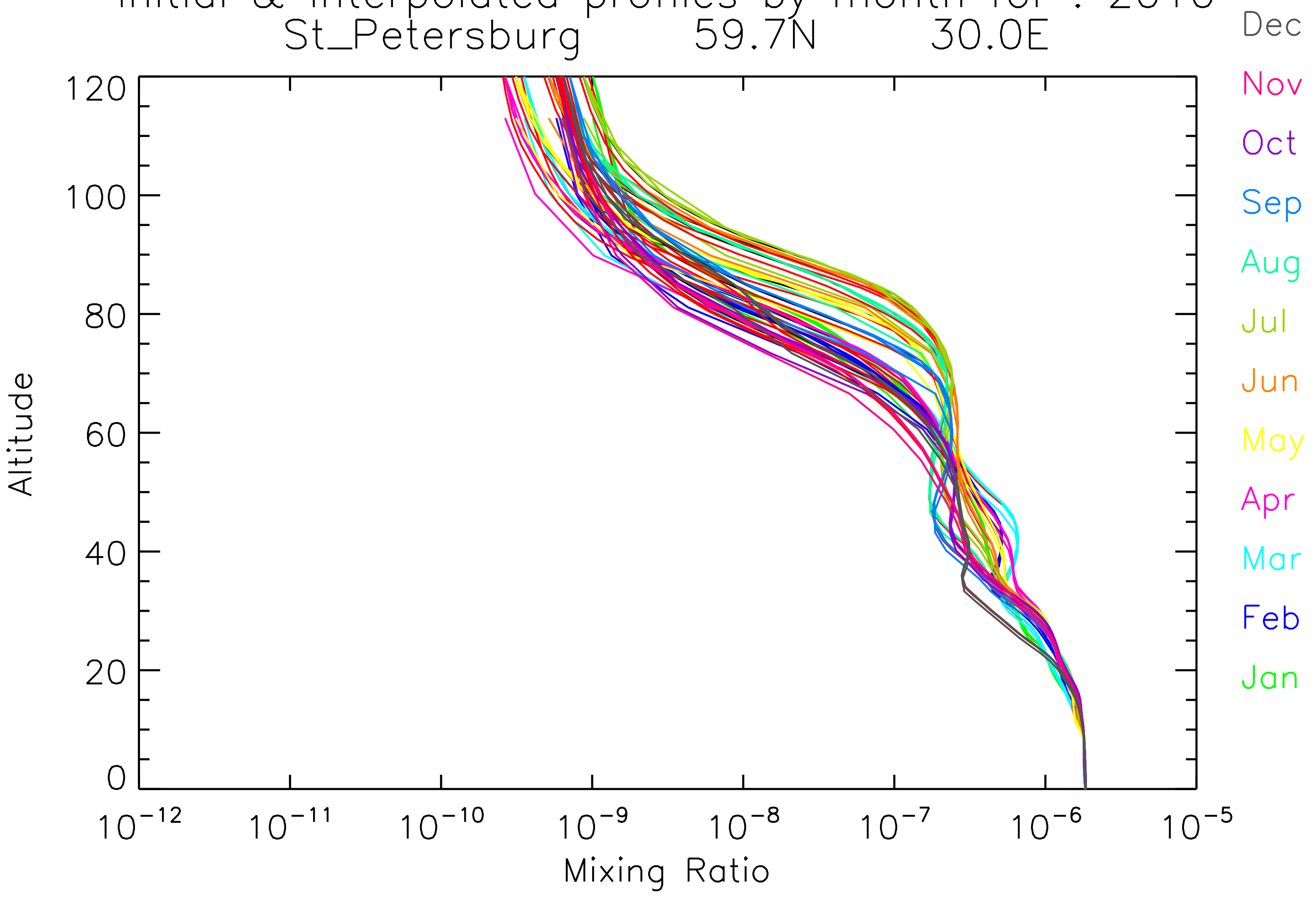
Initial & Interpolated profiles by month for : 2007
St_Petersburg 59.7N 30.0E

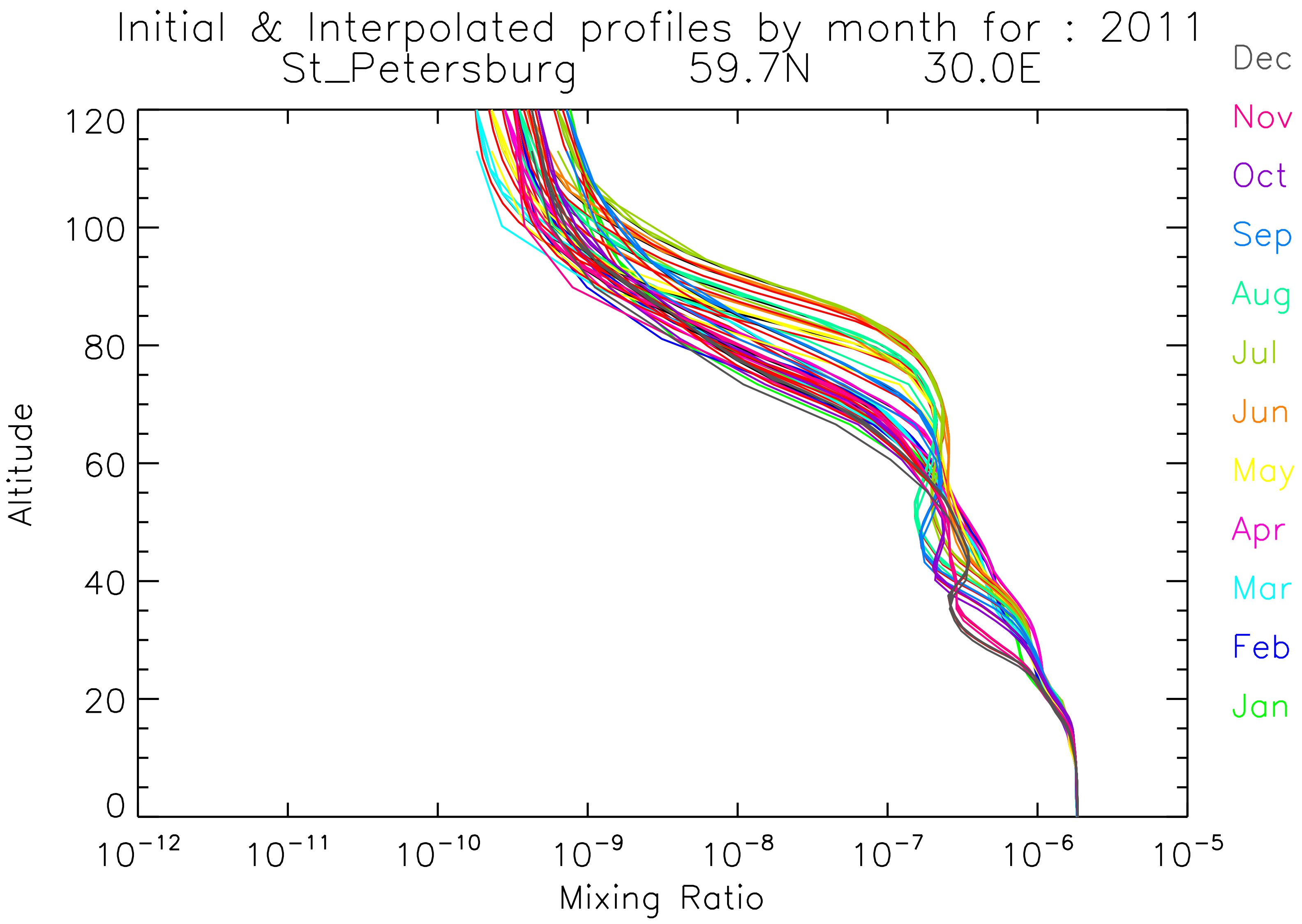


Initial & Interpolated profiles by month for : 2008
St_Petersburg 59.7N 30.0E

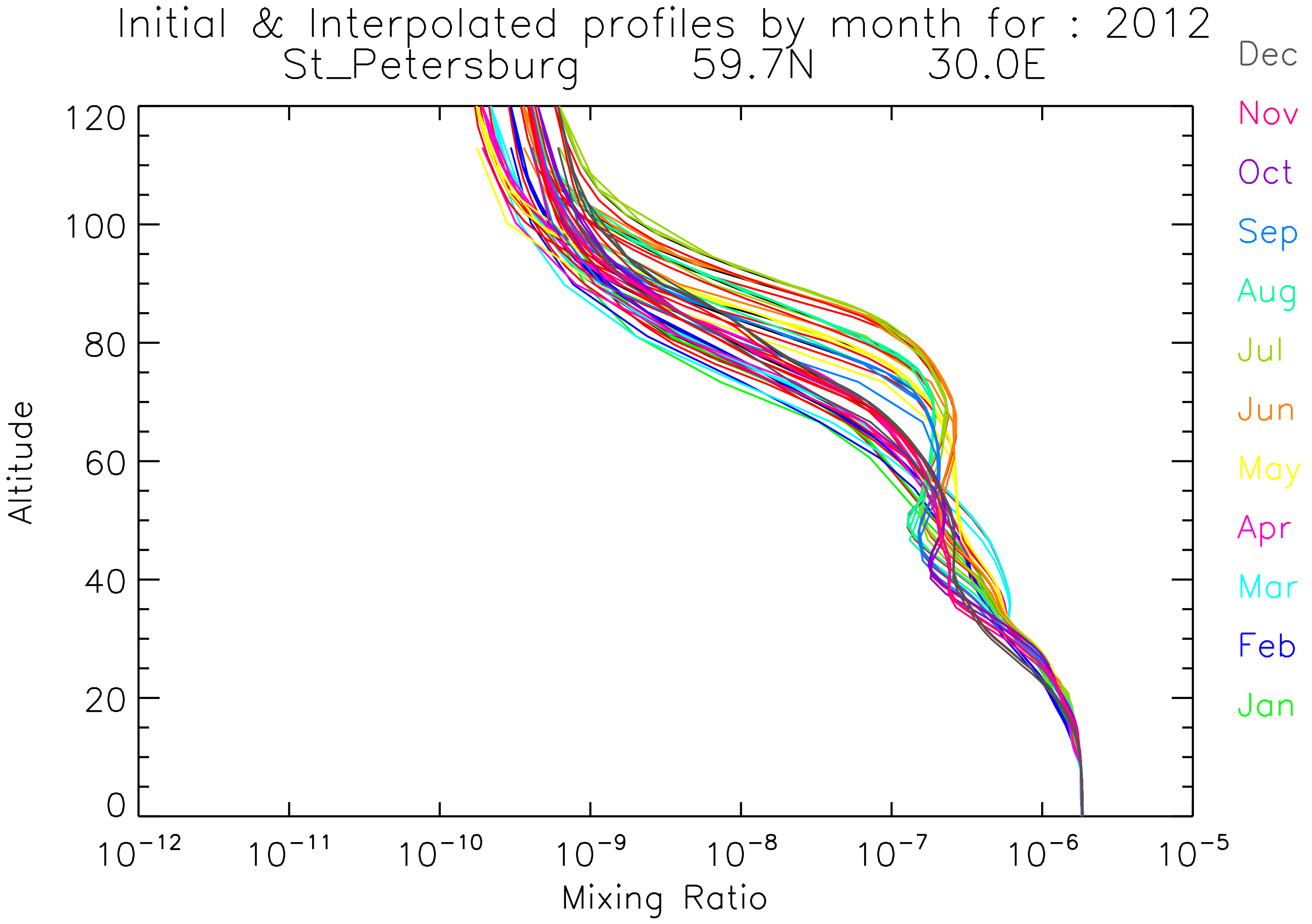

Initial & Interpolated profiles by month for : 2009
St_Petersburg 59.7N 30.0E
Altitude
0
20
40
60
80
100
120
10^{-12}
10^{-11}
10^{-10}
10^{-9}
10^{-8}
10^{-7}
10^{-6}
10^{-5}
Mixing Ratio
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan

Initial & Interpolated profiles by month for : 2010
St_Petersburg 59.7N 30.0E



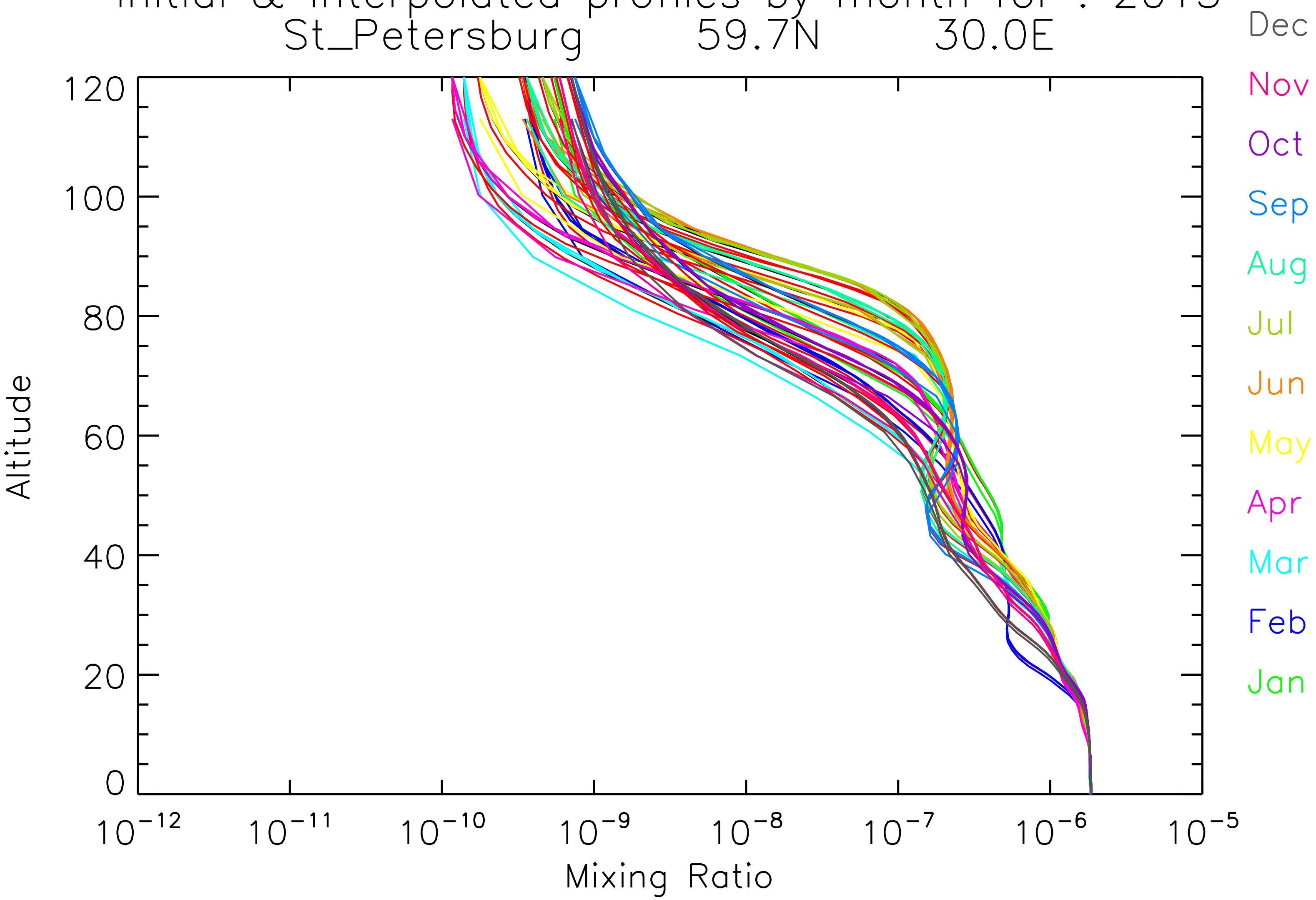


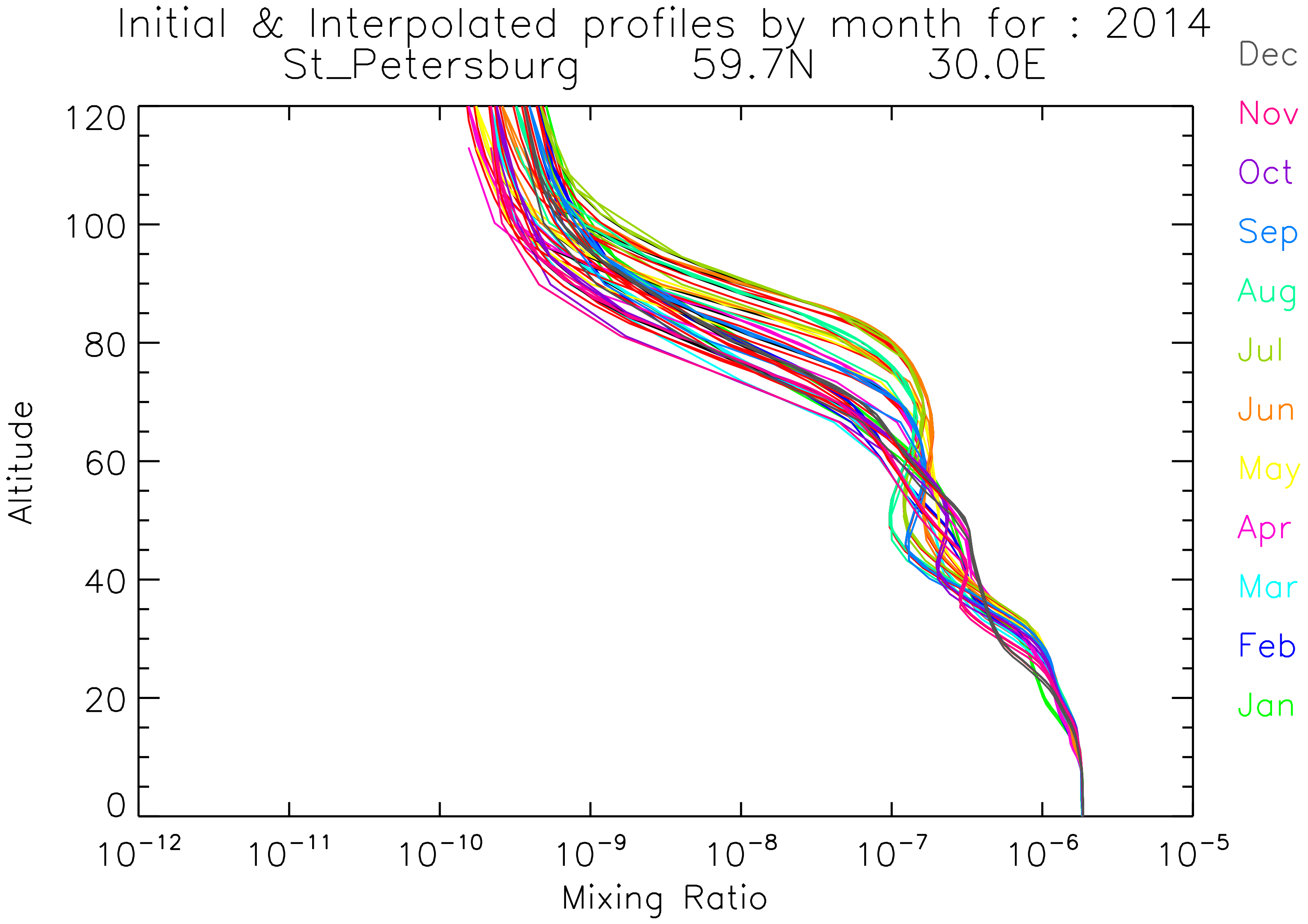
Initial & Interpolated profiles by month for : 2011
St_Petersburg 59.7N 30.0E



Initial & Interpolated profiles by month for : 2012
St_Petersburg 59.7N 30.0E

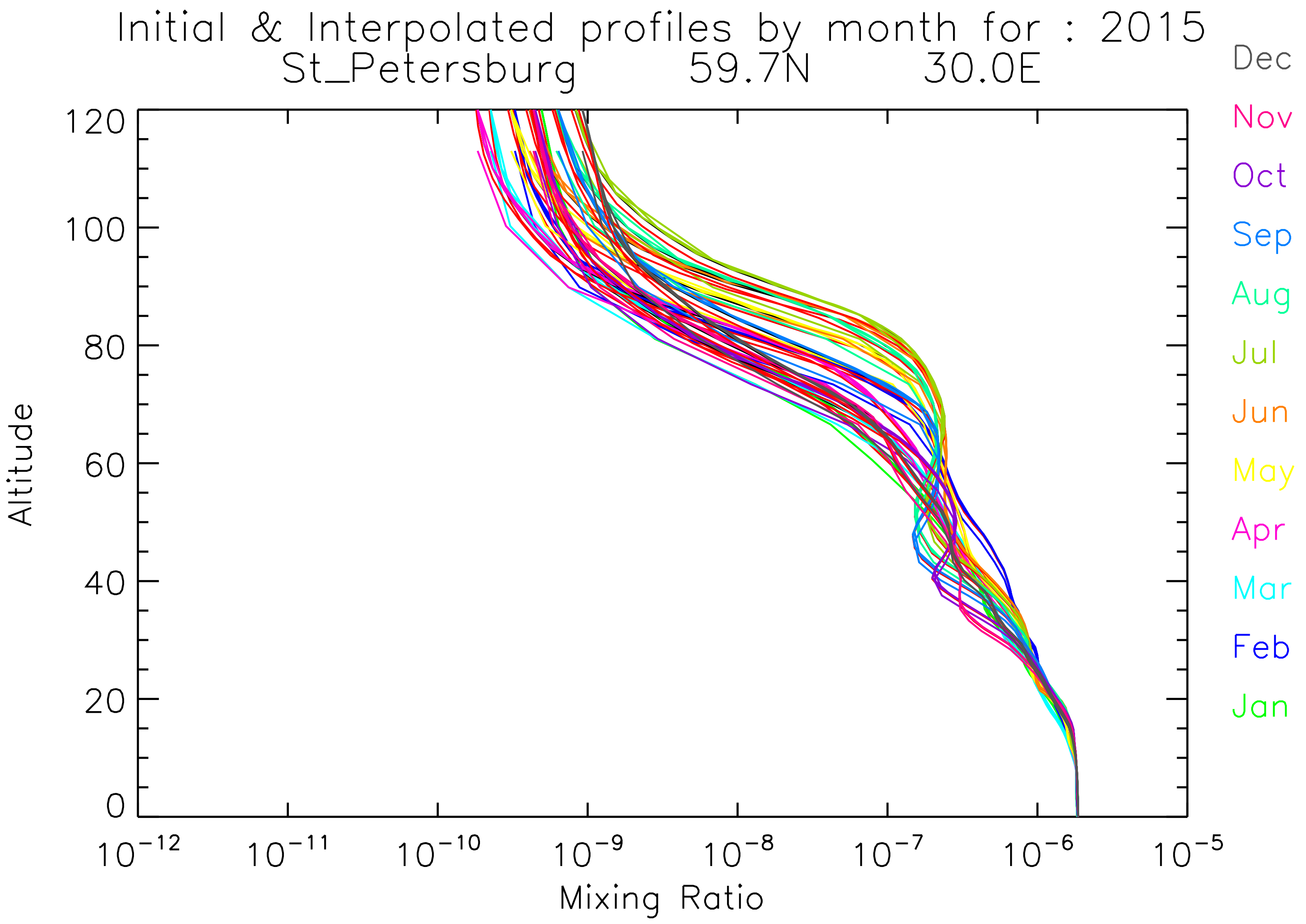
Initial & Interpolated profiles by month for : 2013
St_Petersburg 59.7N 30.0E



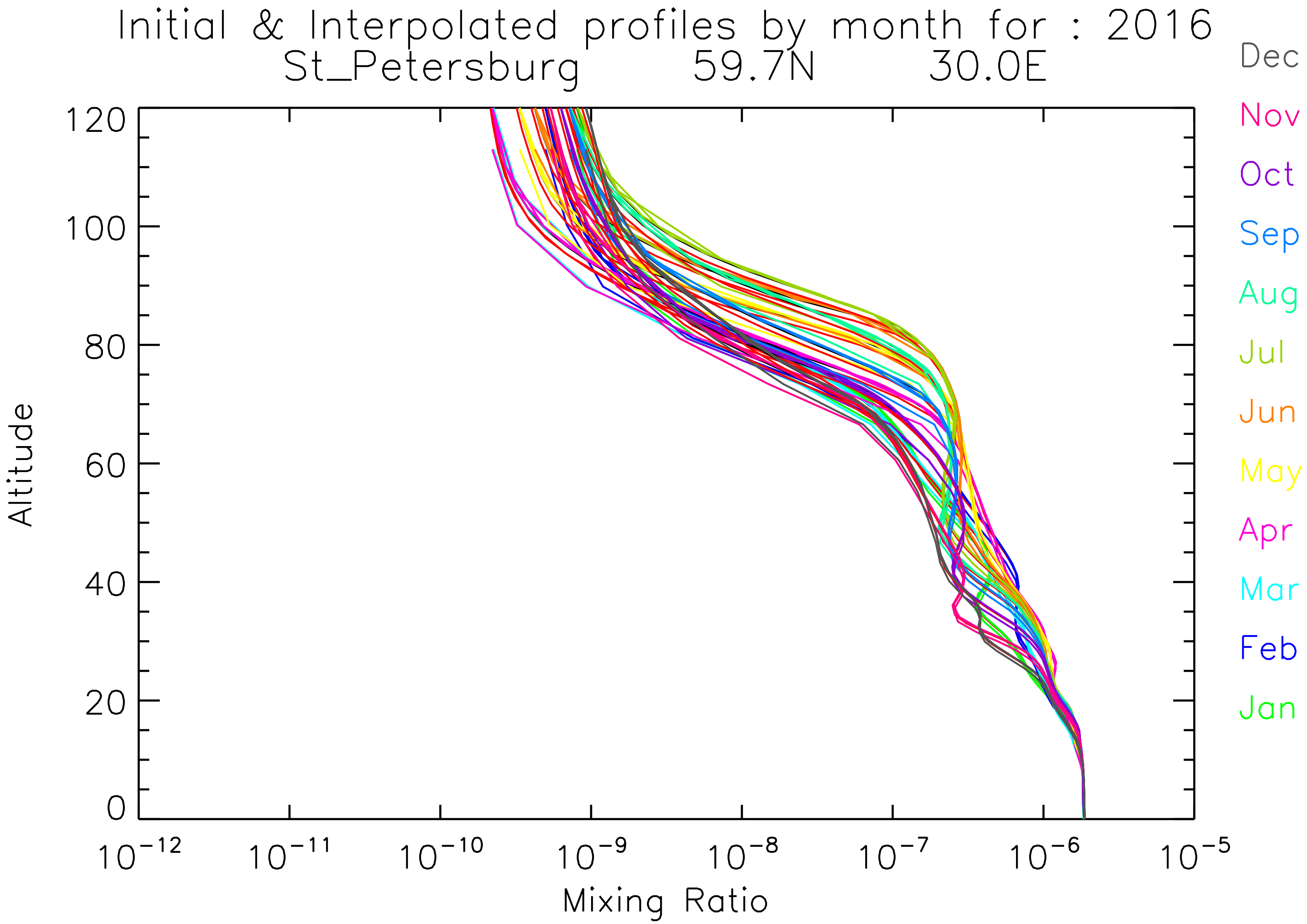


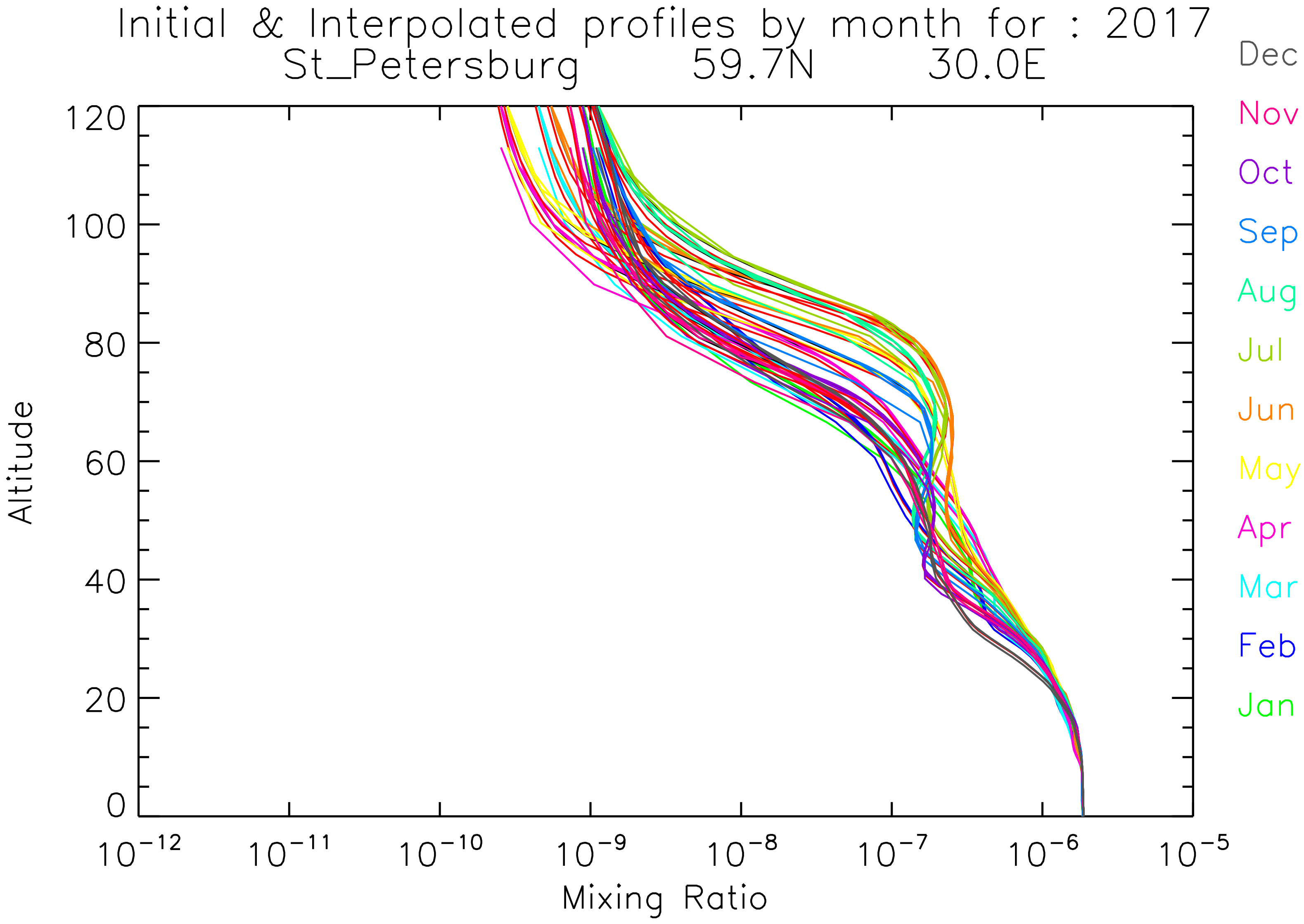
Initial & Interpolated profiles by month for : 2014

St_Petersburg 59.7N 30.0E



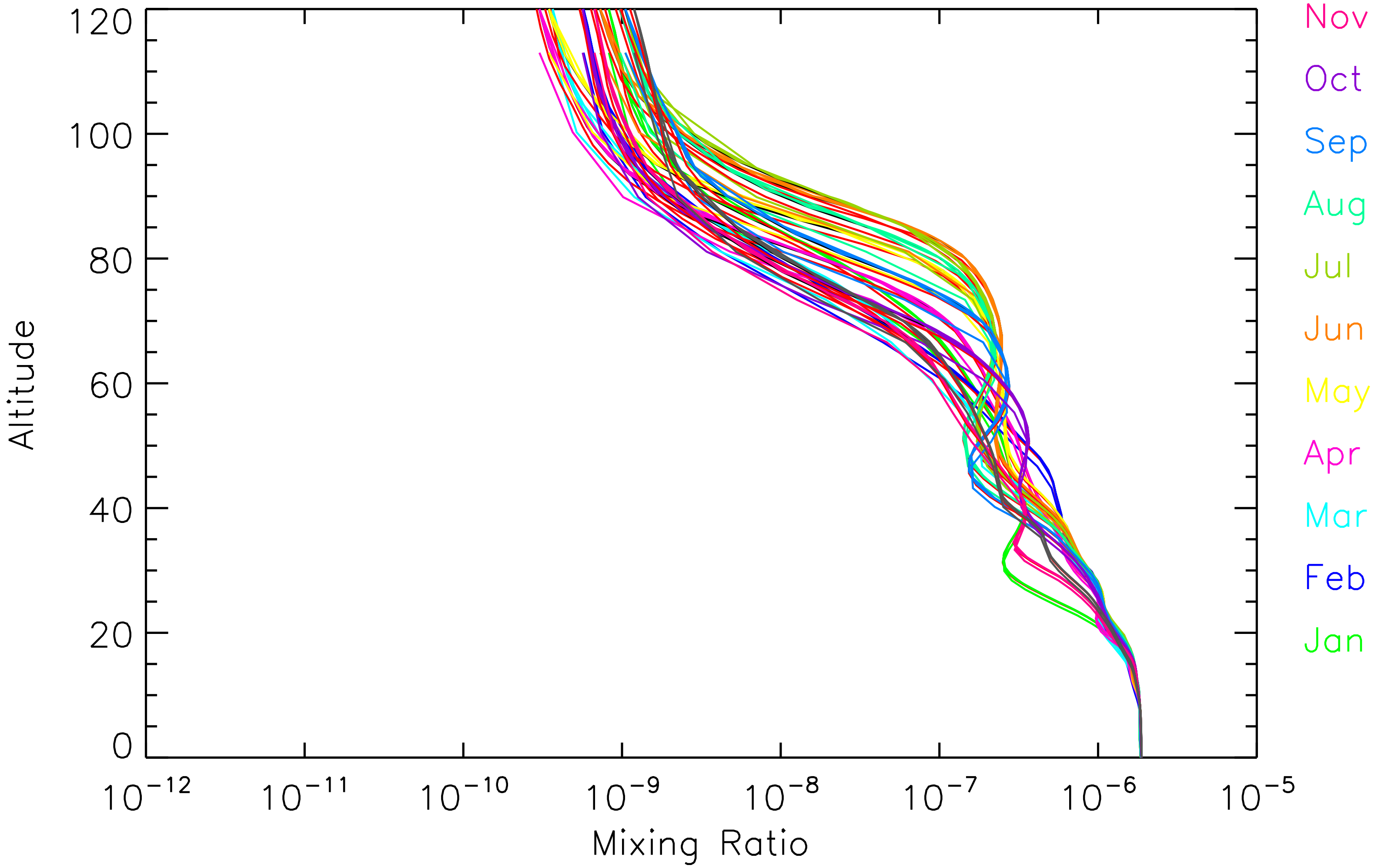
Initial & Interpolated profiles by month for : 2015
St_Petersburg 59.7N 30.0E


Initial & Interpolated profiles by month for : 2016
St_Petersburg 59.7N 30.0E
Altitude
0
20
40
60
80
100
120
Mixing Ratio
10^{-12}
10^{-11}
10^{-10}
10^{-9}
10^{-8}
10^{-7}
10^{-6}
10^{-5}
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan

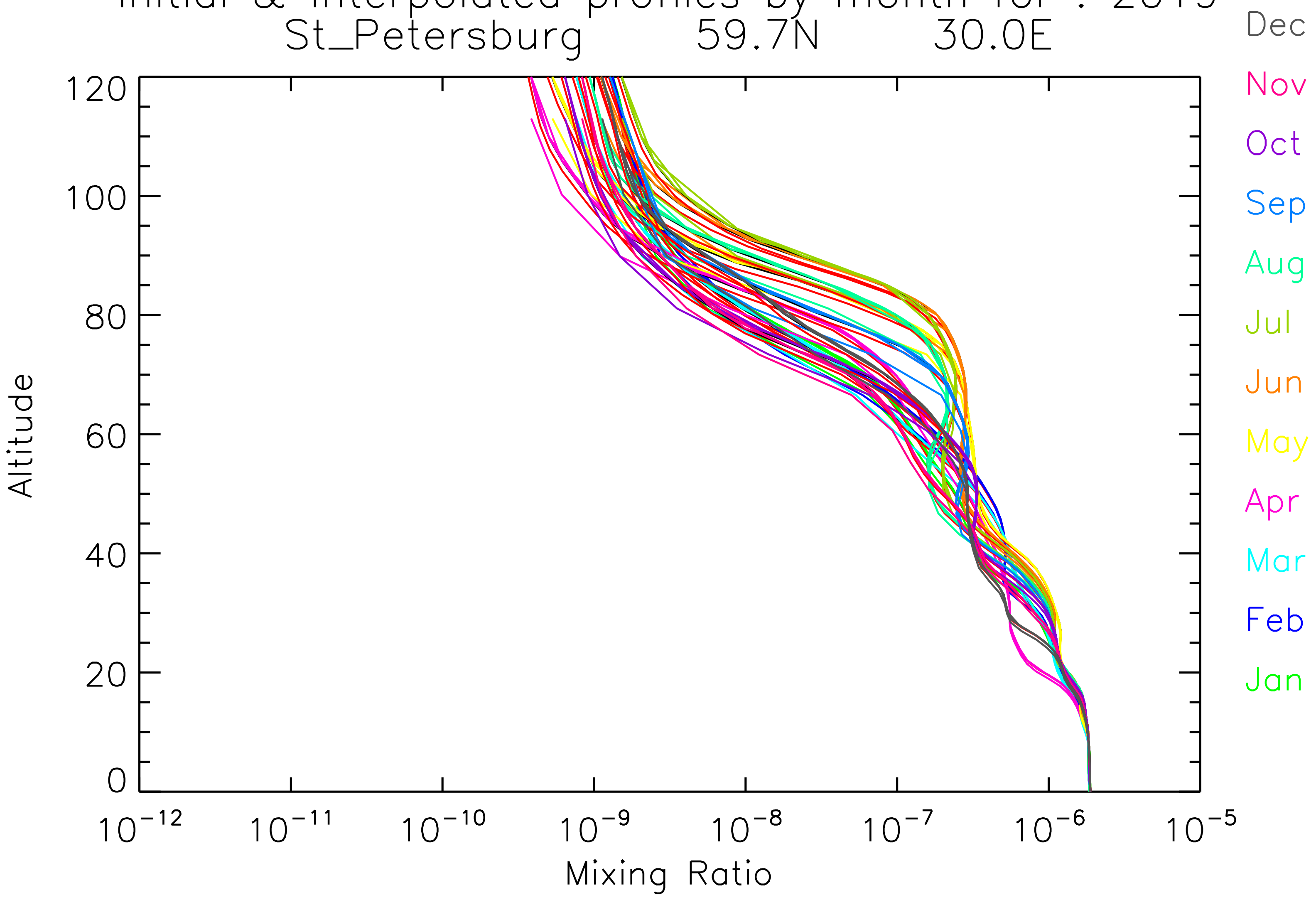


Initial & Interpolated profiles by month for : 2017
St_Petersburg 59.7N 30.0E

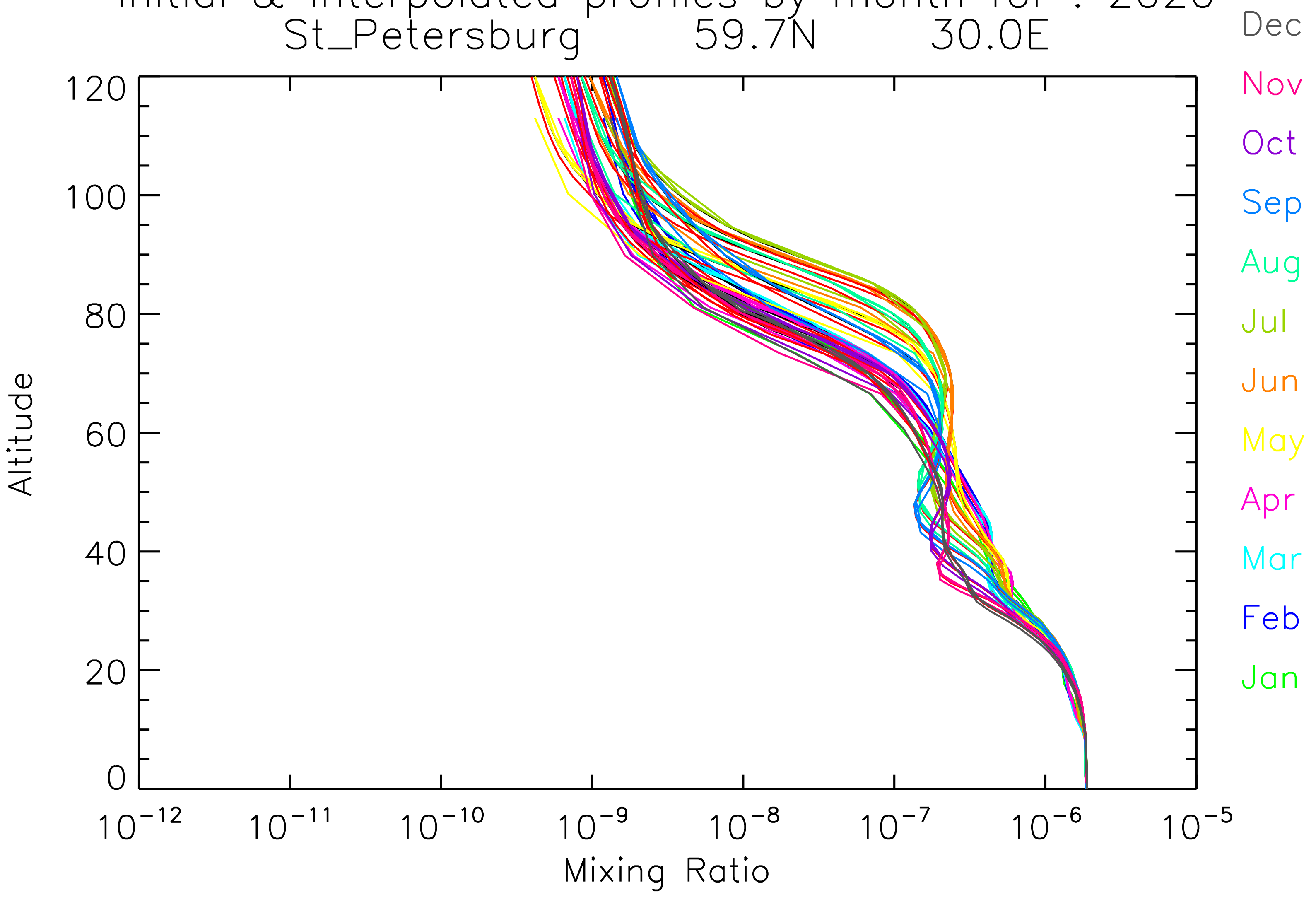
Initial & Interpolated profiles by month for : 2018
St_Petersburg 59.7N 30.0E

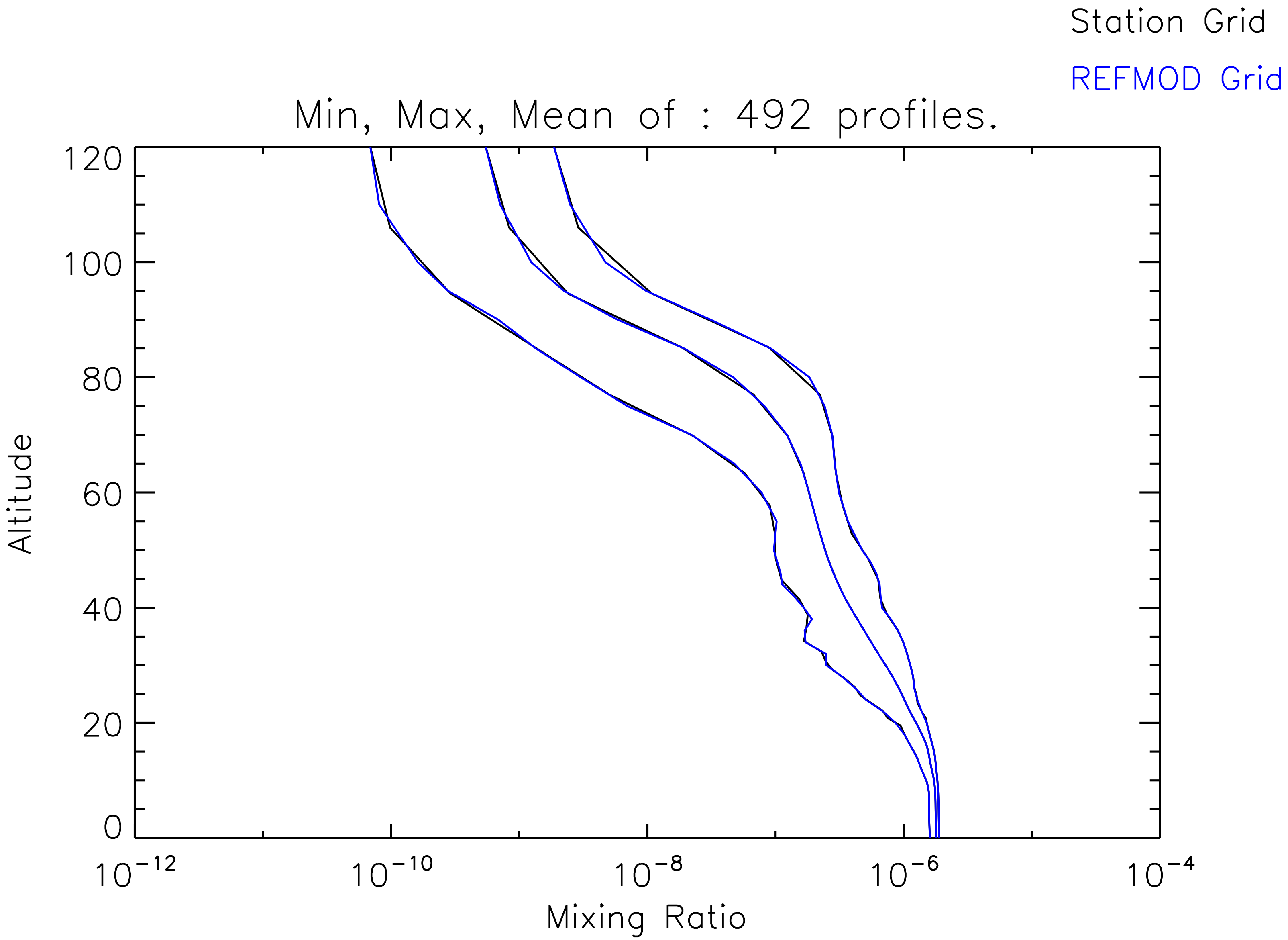


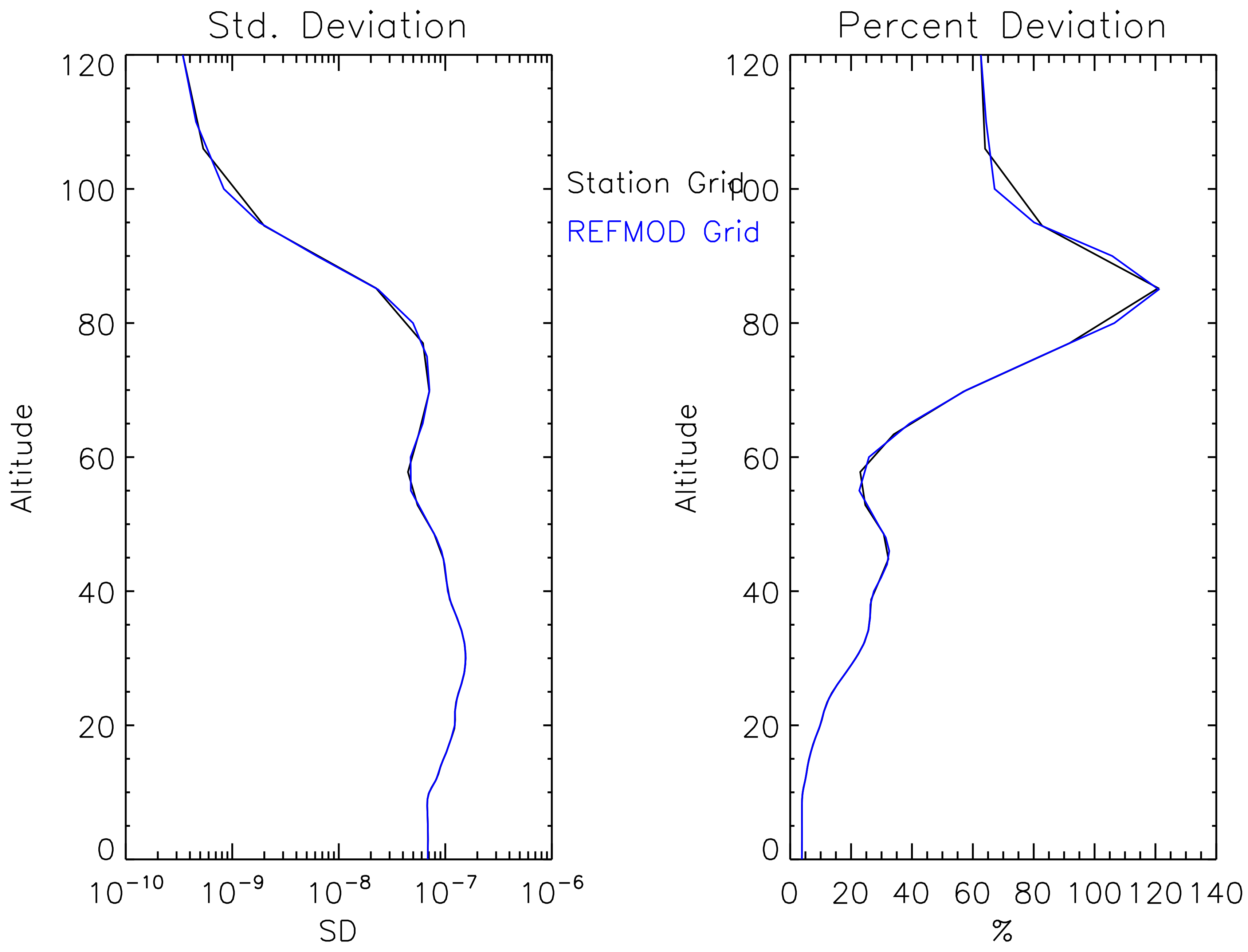
Initial & Interpolated profiles by month for : 2019
St_Petersburg 59.7N 30.0E

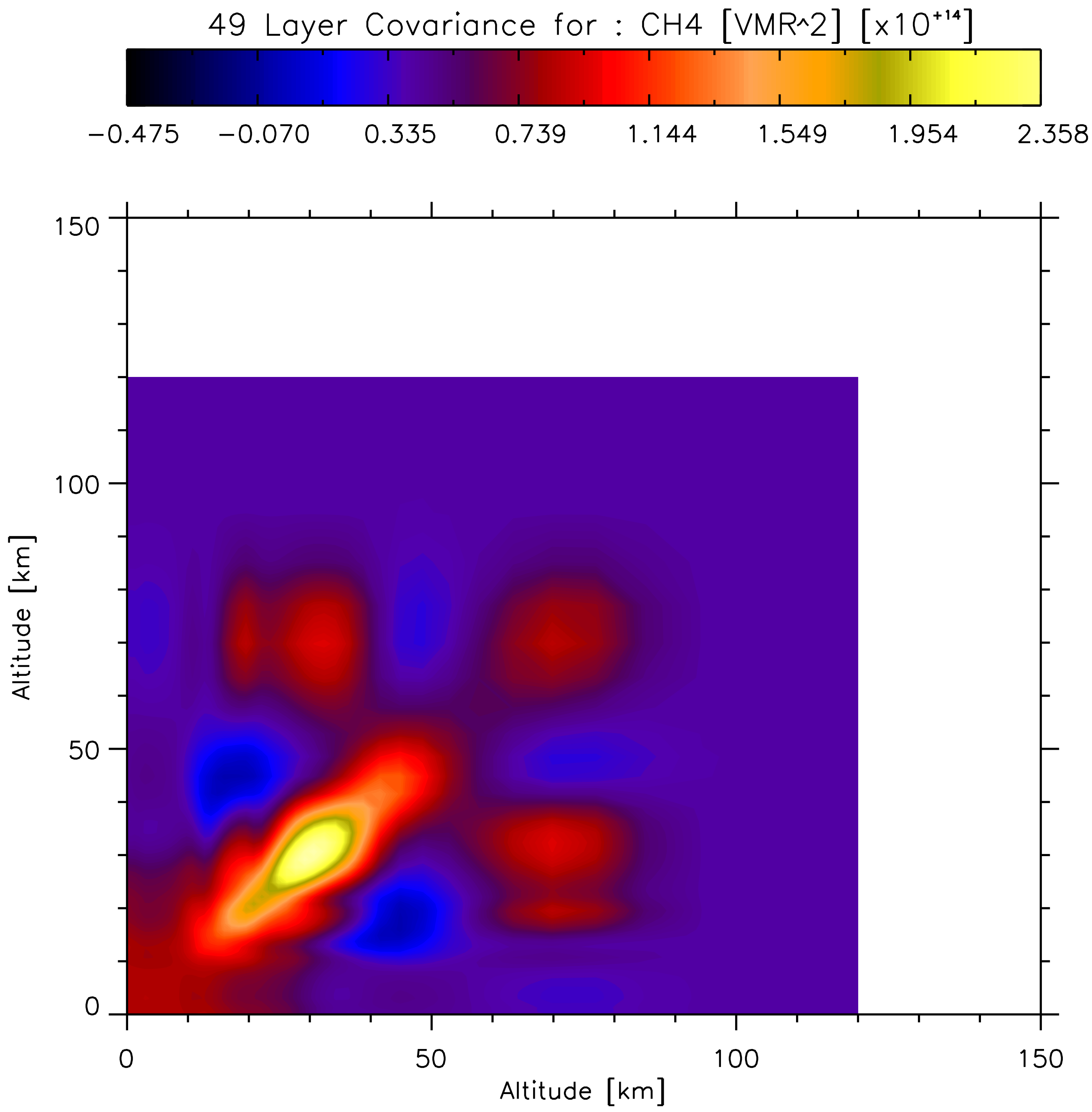


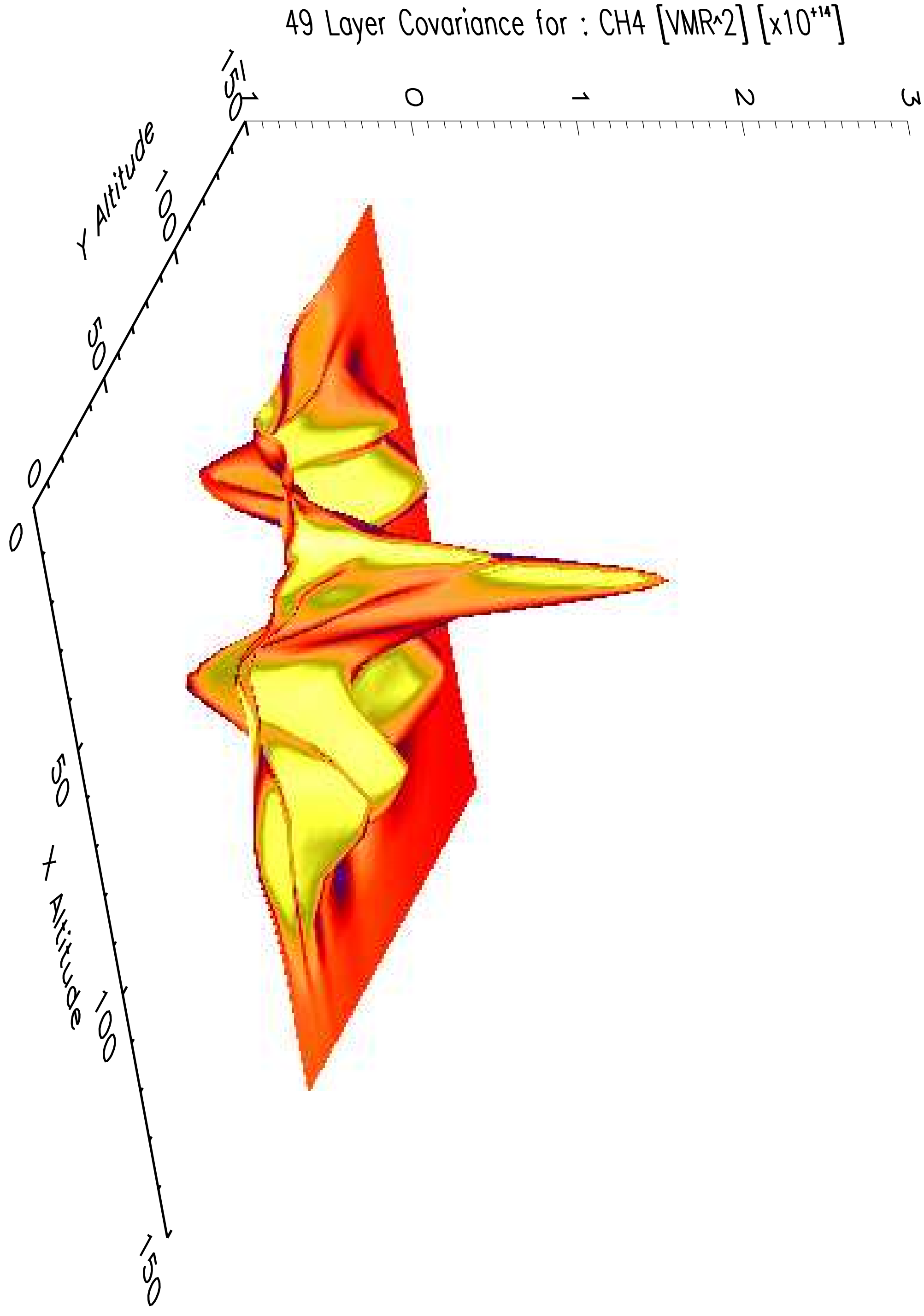
Initial & Interpolated profiles by month for : 2020
St_Petersburg 59.7N 30.0E

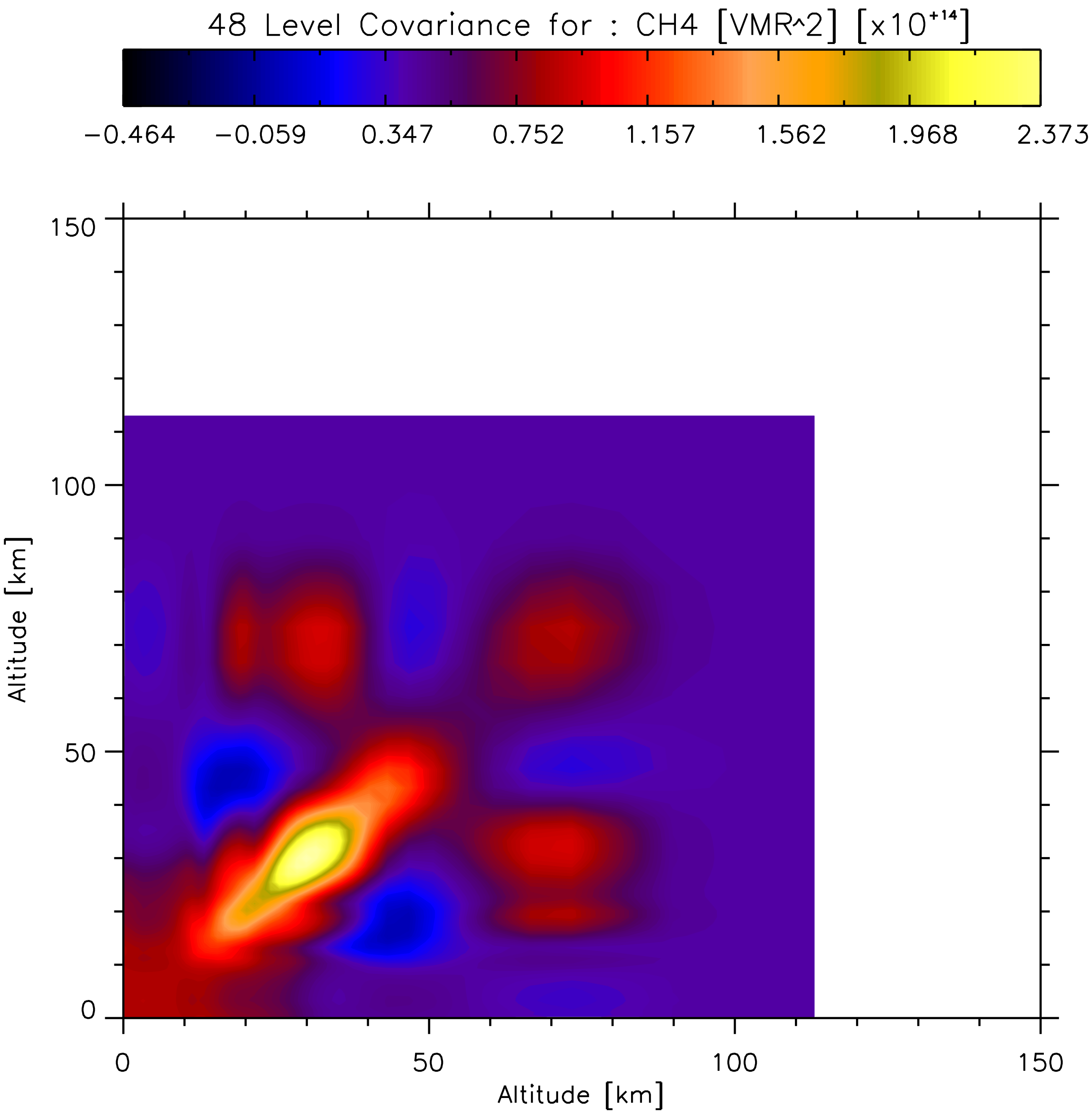


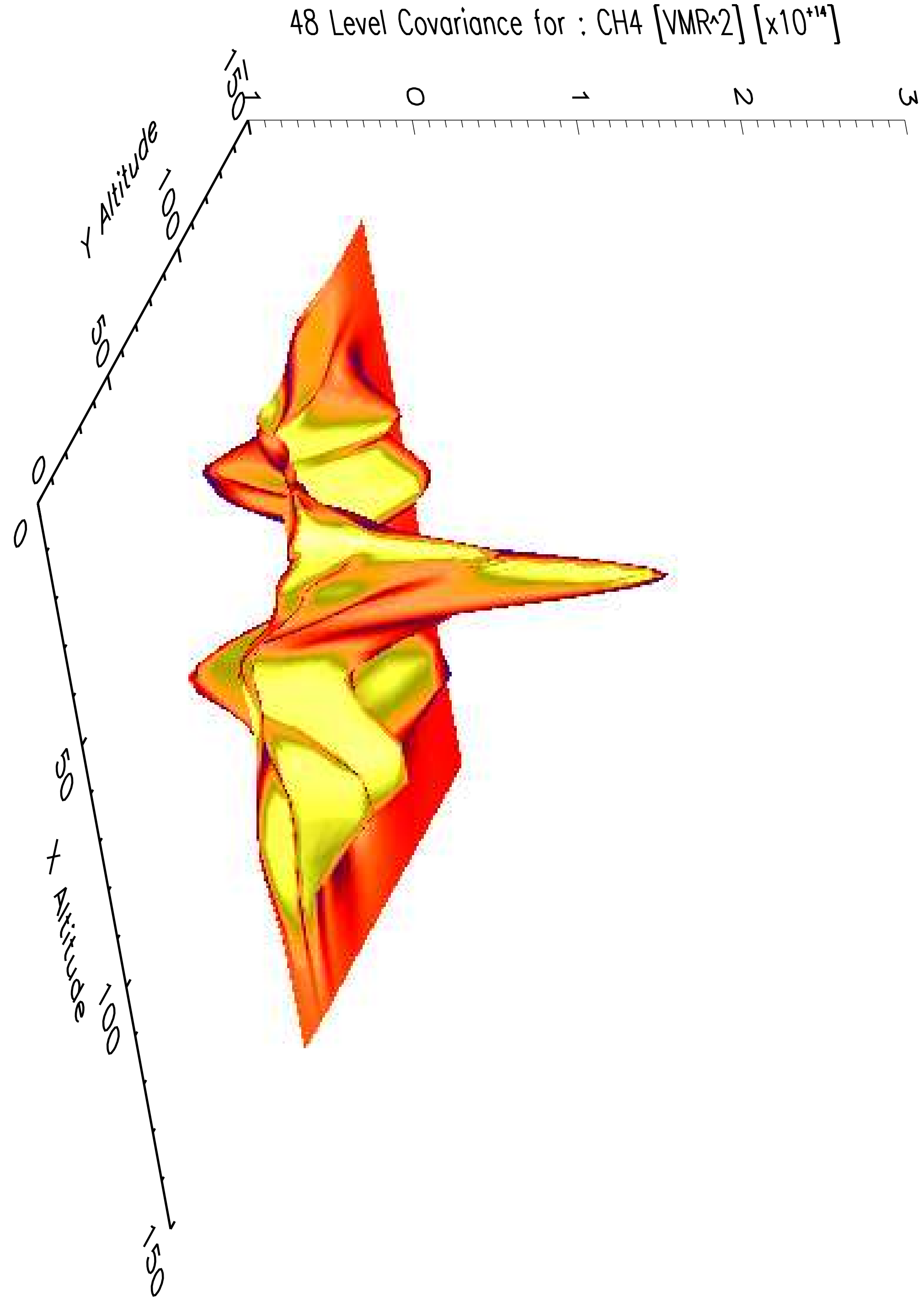

Station Grid
REFMOD Grid
Min, Max, Mean of : 492 profiles.
Altitude
120
100
80
60
40
20
0
10^{-12}
10^{-10}
10^{-8}
10^{-6}
10^{-4}
Mixing Ratio


Std. Deviation
Percent Deviation
Altitude
120
100
80
60
40
20
0
10^{-10}
10^{-9}
10^{-8}
10^{-7}
10^{-6}
SD
Station Grid
REFMOD Grid
Altitude
120
100
80
60
40
20
0
0
20
40
60
80
100
120
140
%


49 Layer Covariance for : CH4 [VMR^2] [x10^{+14}]
−0.475
−0.070
0.335
0.739
1.144
1.549
1.954
2.358
150
100
50
0
Altitude [km]
0
50
100
150
Altitude [km]


49 Layer Covariance for : CH4 [VMR^2] [x10^+14]
-1
0
1
2
3
Y Altitude
0
50
100
150
X Altitude
0
50
100
150


48 Level Covariance for : CH4 [VMR^2] [x10^{+14}]
−0.464
−0.059
0.347
0.752
1.157
1.562
1.968
2.373
0
50
100
150
Altitude [km]
0
50
100
150
Altitude [km]



48 Level Covariance for : CH4 [VMR^2] [x10^{+14}]