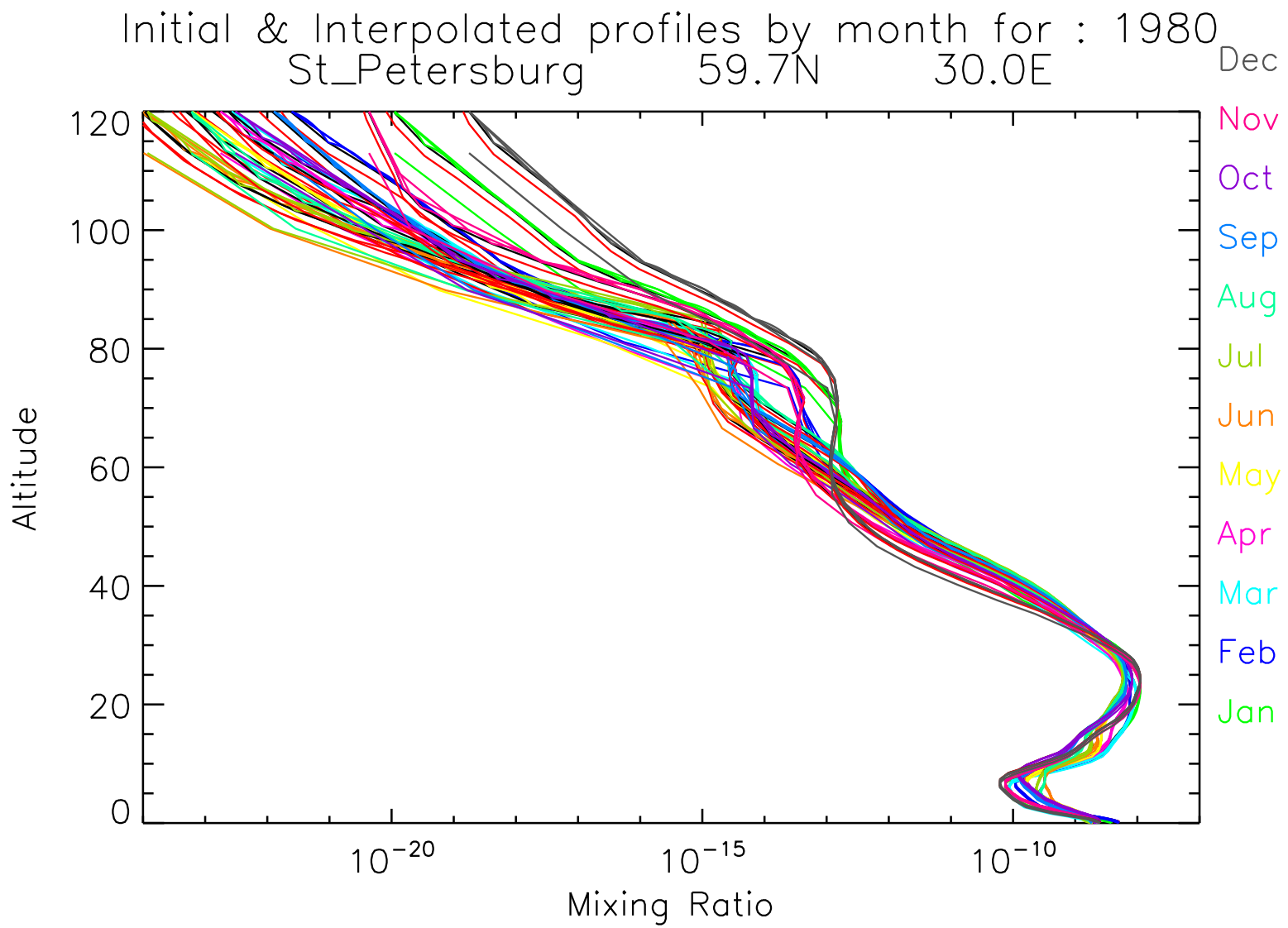
Initial & Interpolated profiles by month for : 1980
St_Petersburg 59.7N 30.0E
Dec
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120
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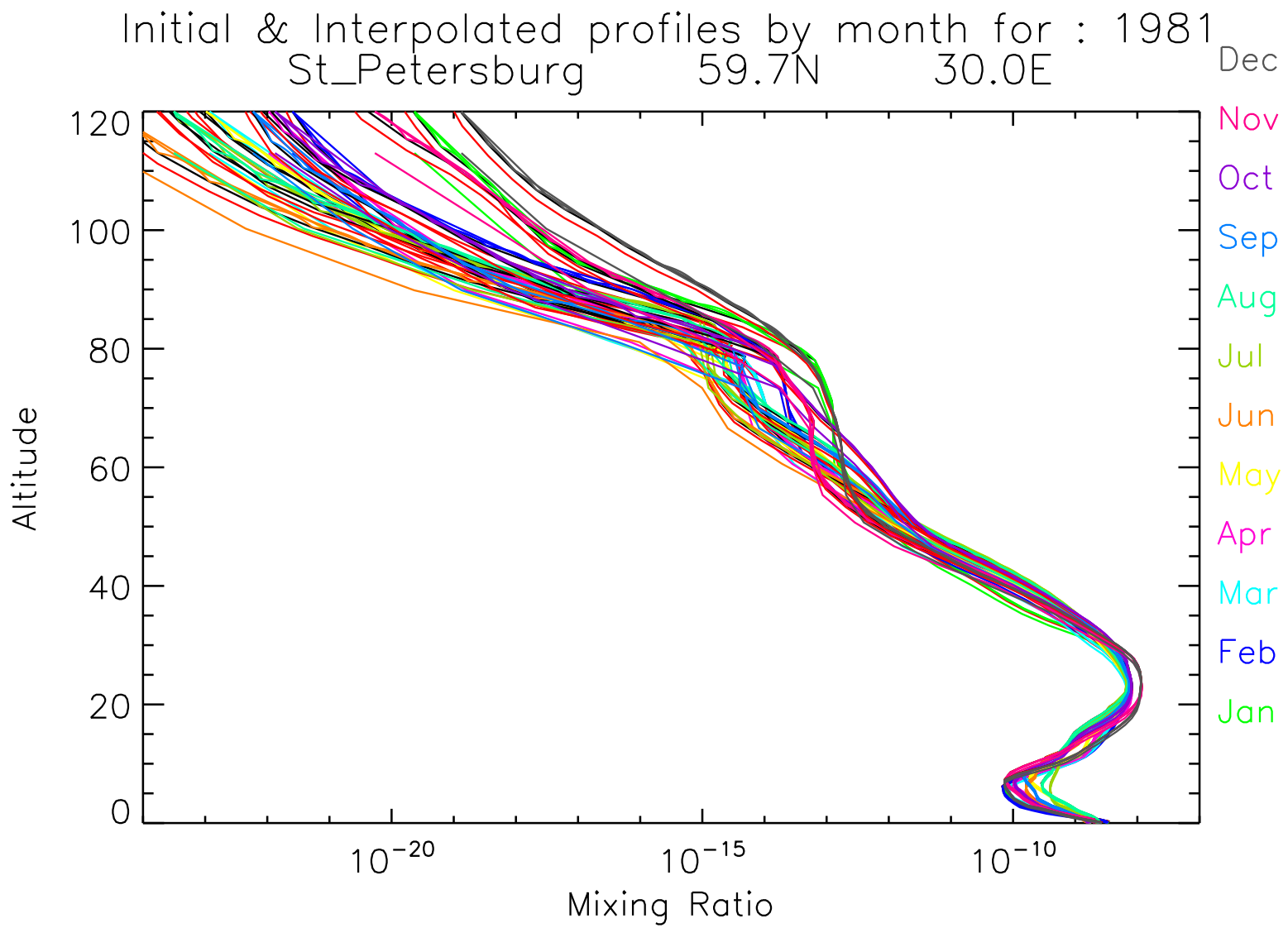
Altitude
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1981
St_Petersburg 59.7N 30.0E
Dec
Nov
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120
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Altitude
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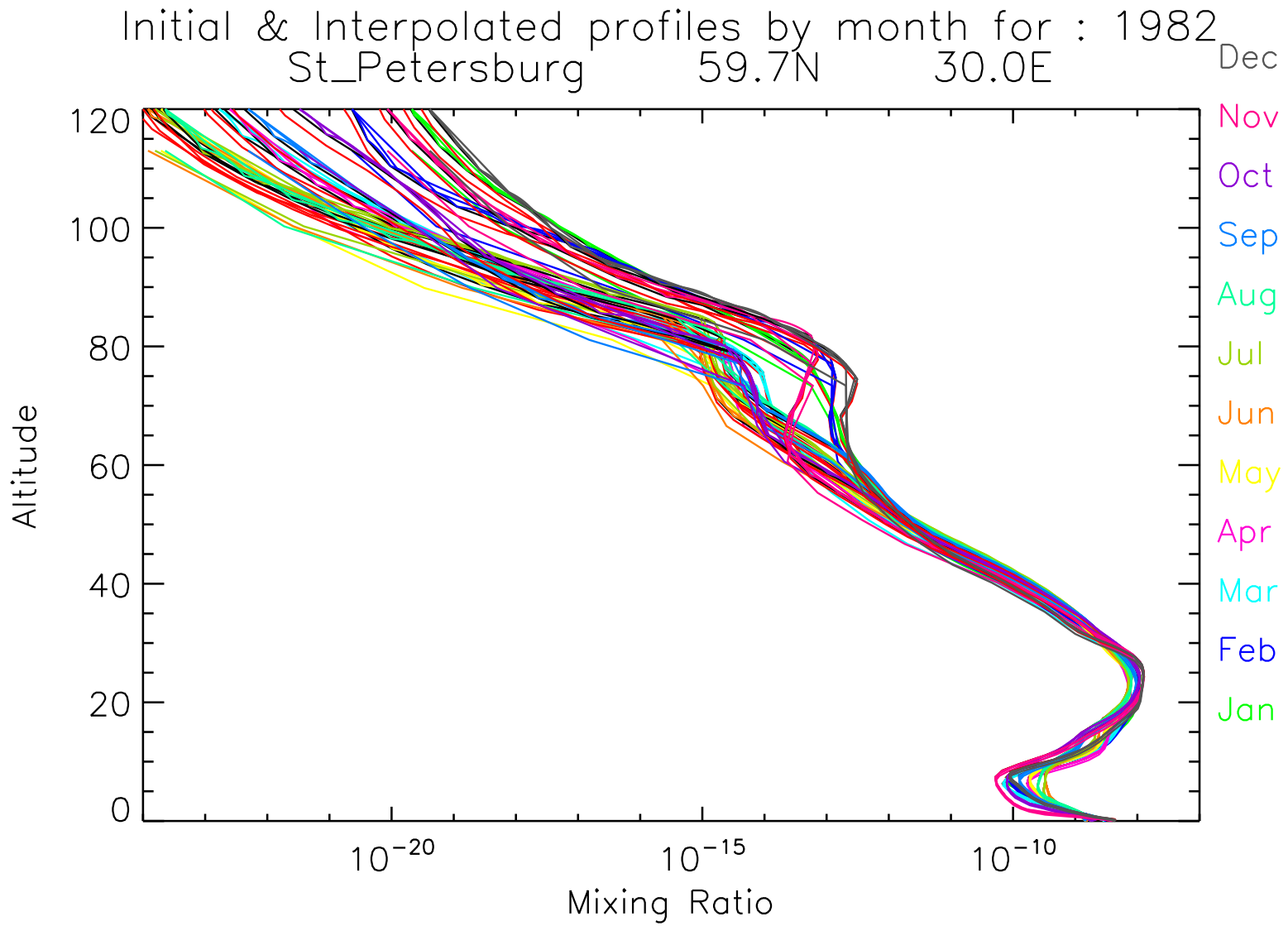
10^{-15}
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1982
St_Petersburg 59.7N 30.0E
Dec
Nov
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120
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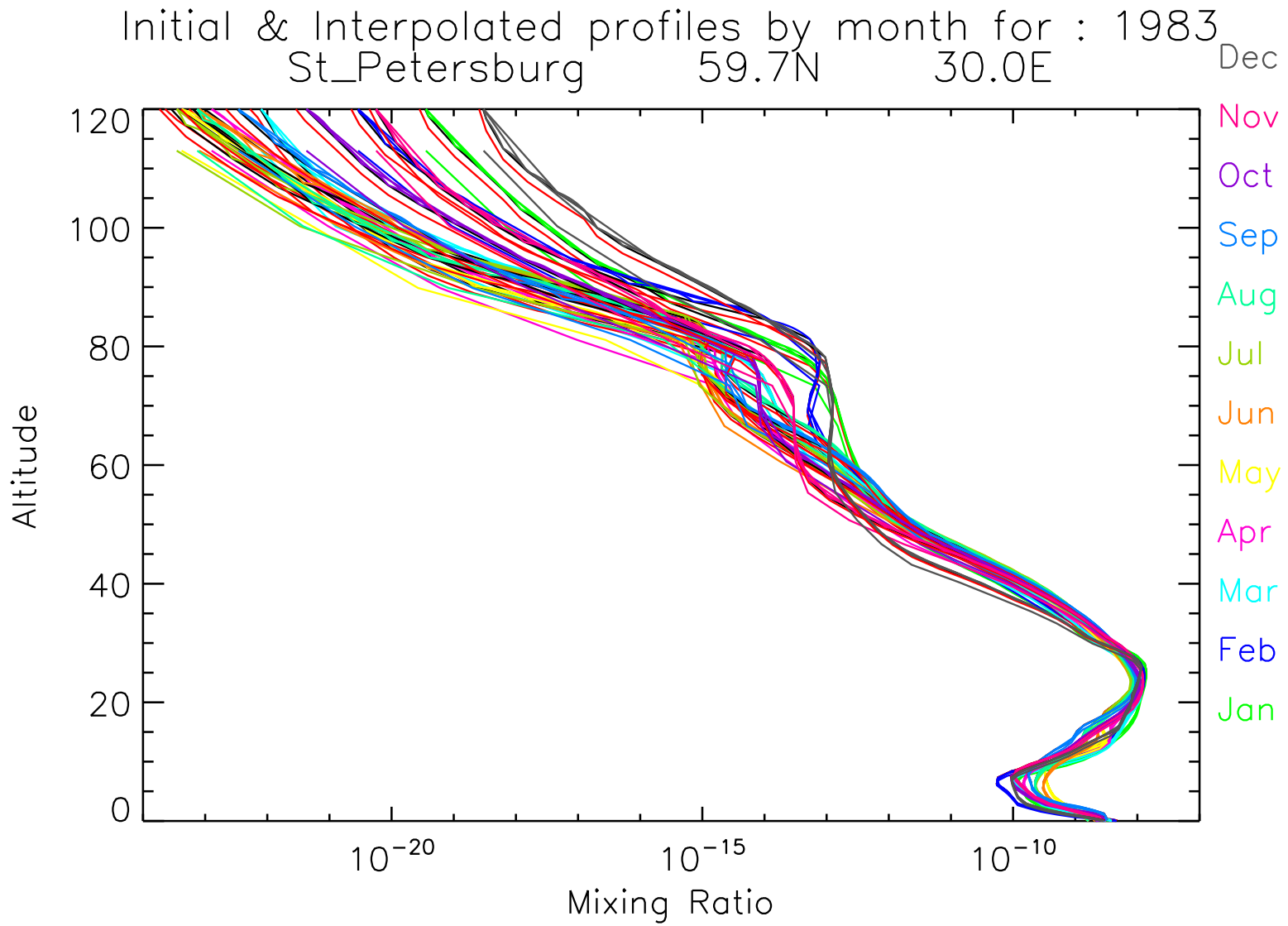
0
Altitude
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1983
St_Petersburg 59.7N 30.0E
Dec
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120
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0
Altitude
10^{-20}
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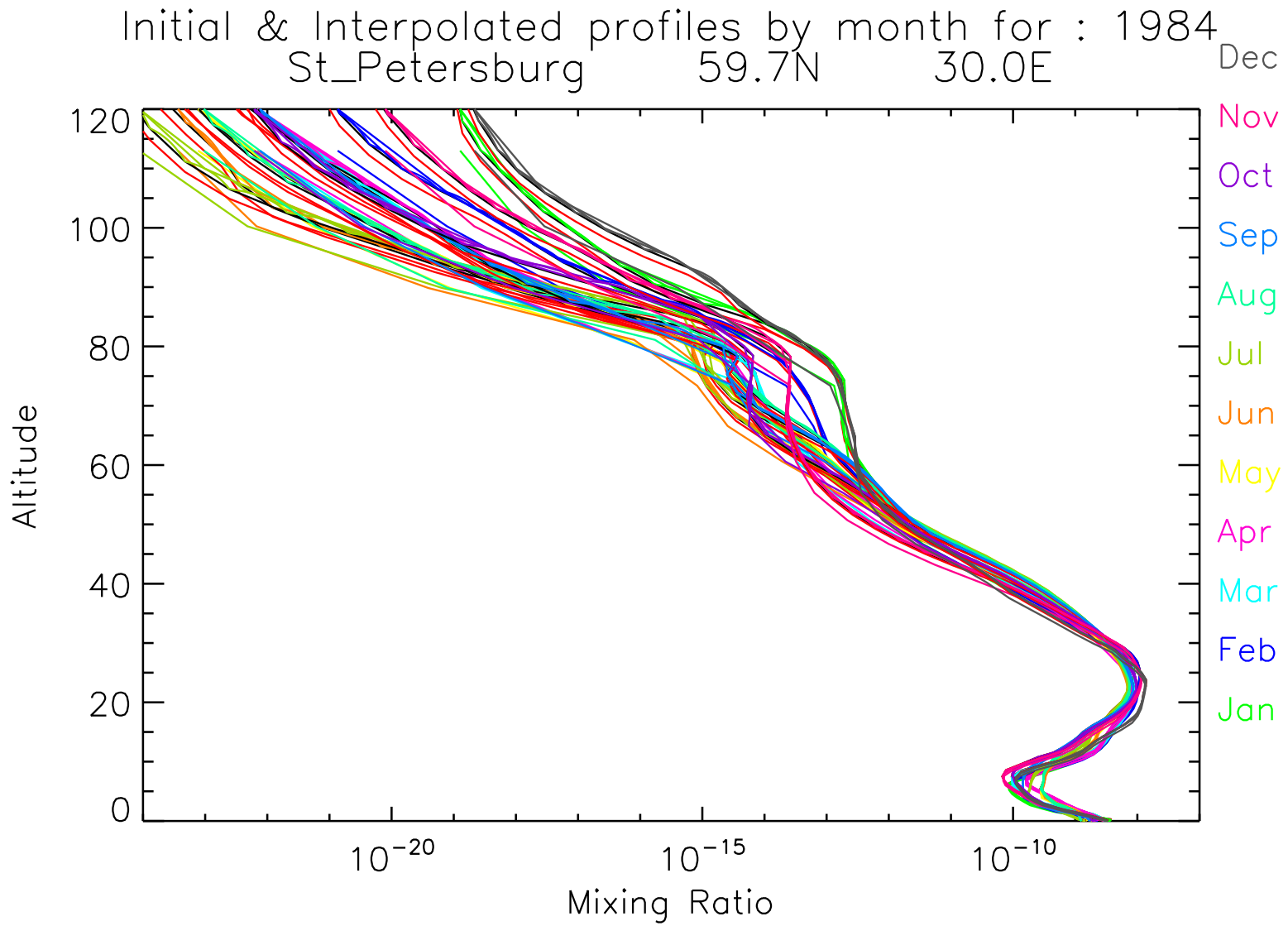
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1984
St_Petersburg 59.7N 30.0E
Dec
Nov
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Altitude
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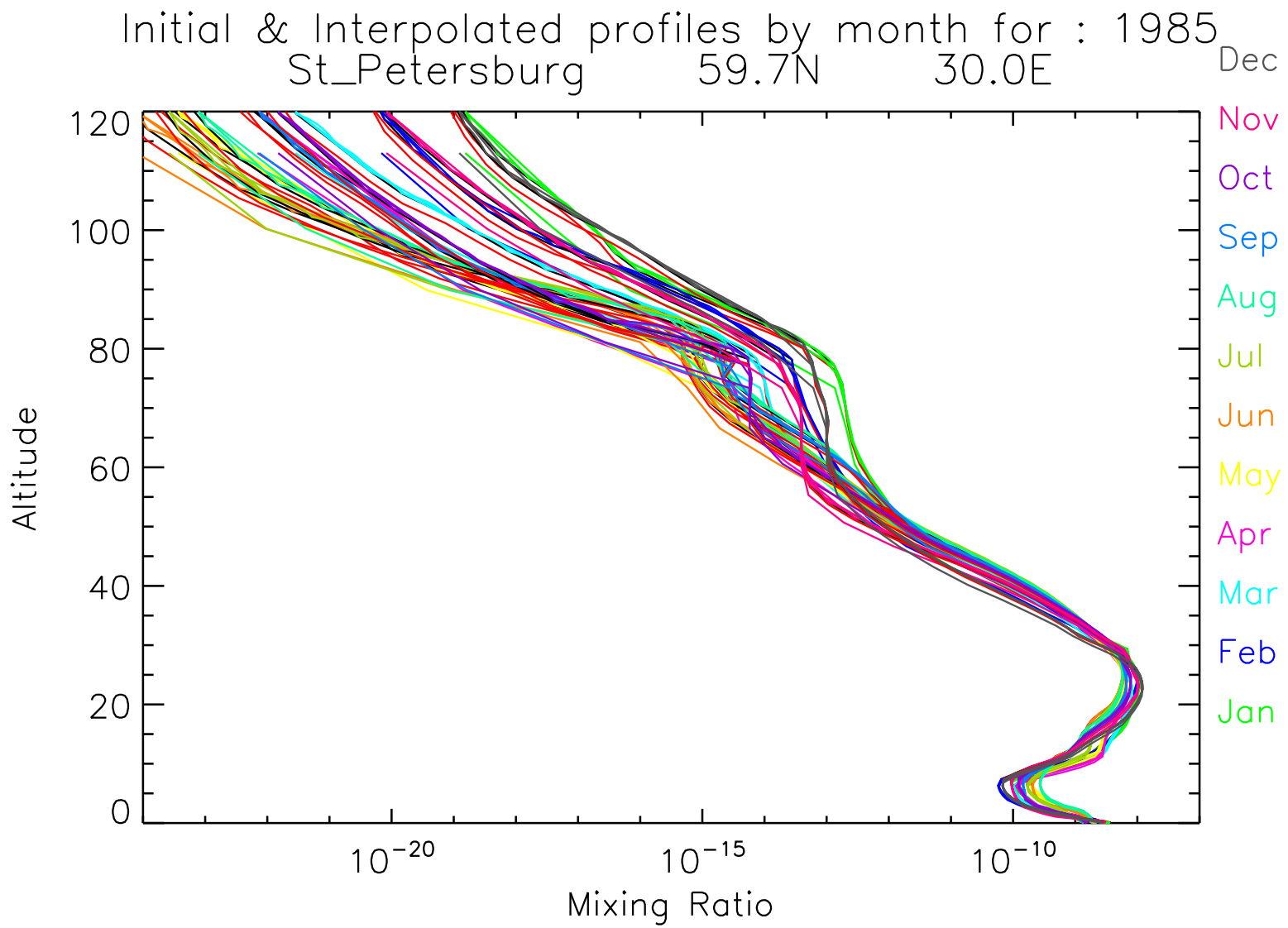
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1985
St_Petersburg 59.7N 30.0E
Dec
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Altitude
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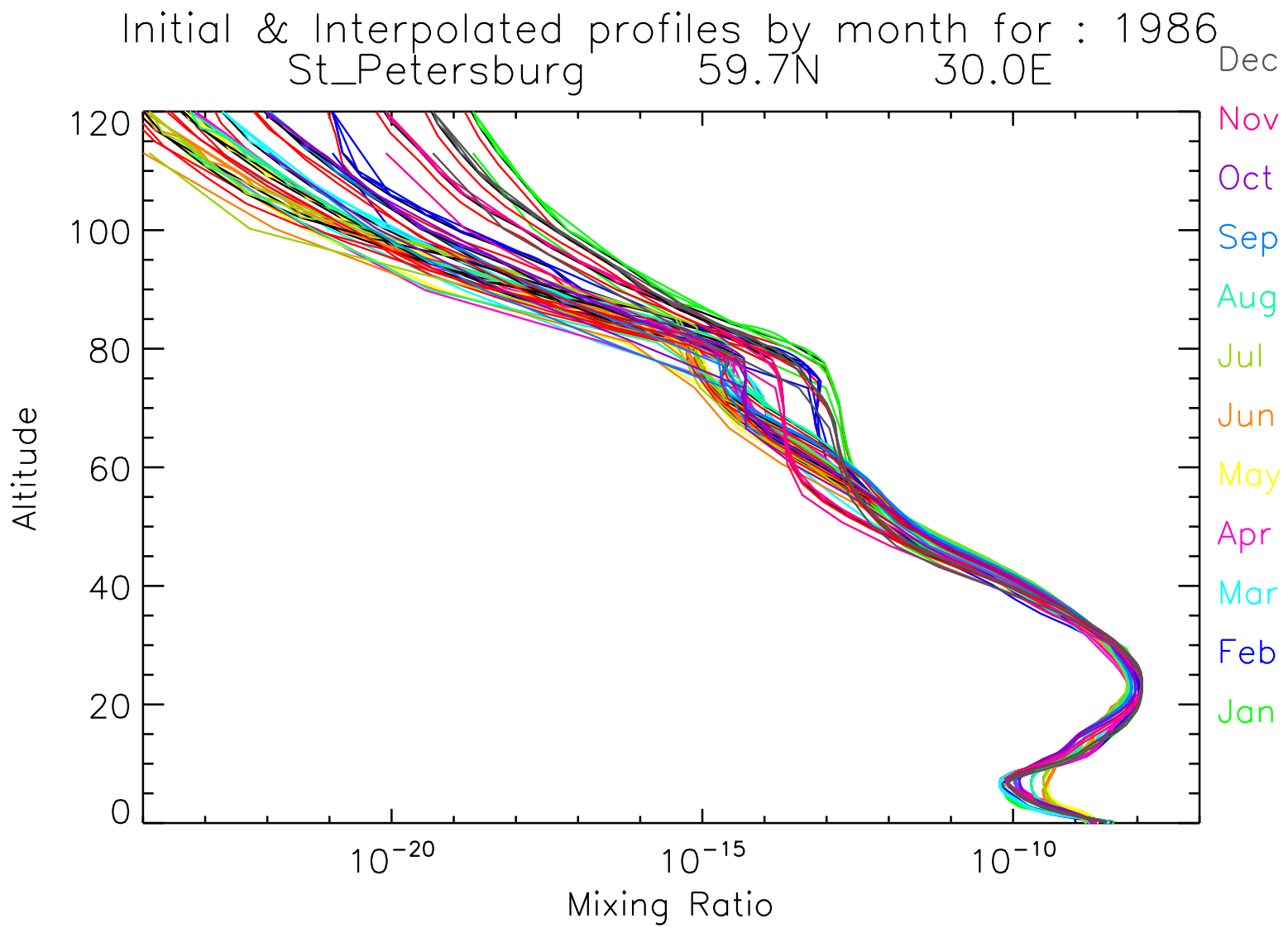
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1986
St_Petersburg 59.7N 30.0E
Dec
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120
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Altitude
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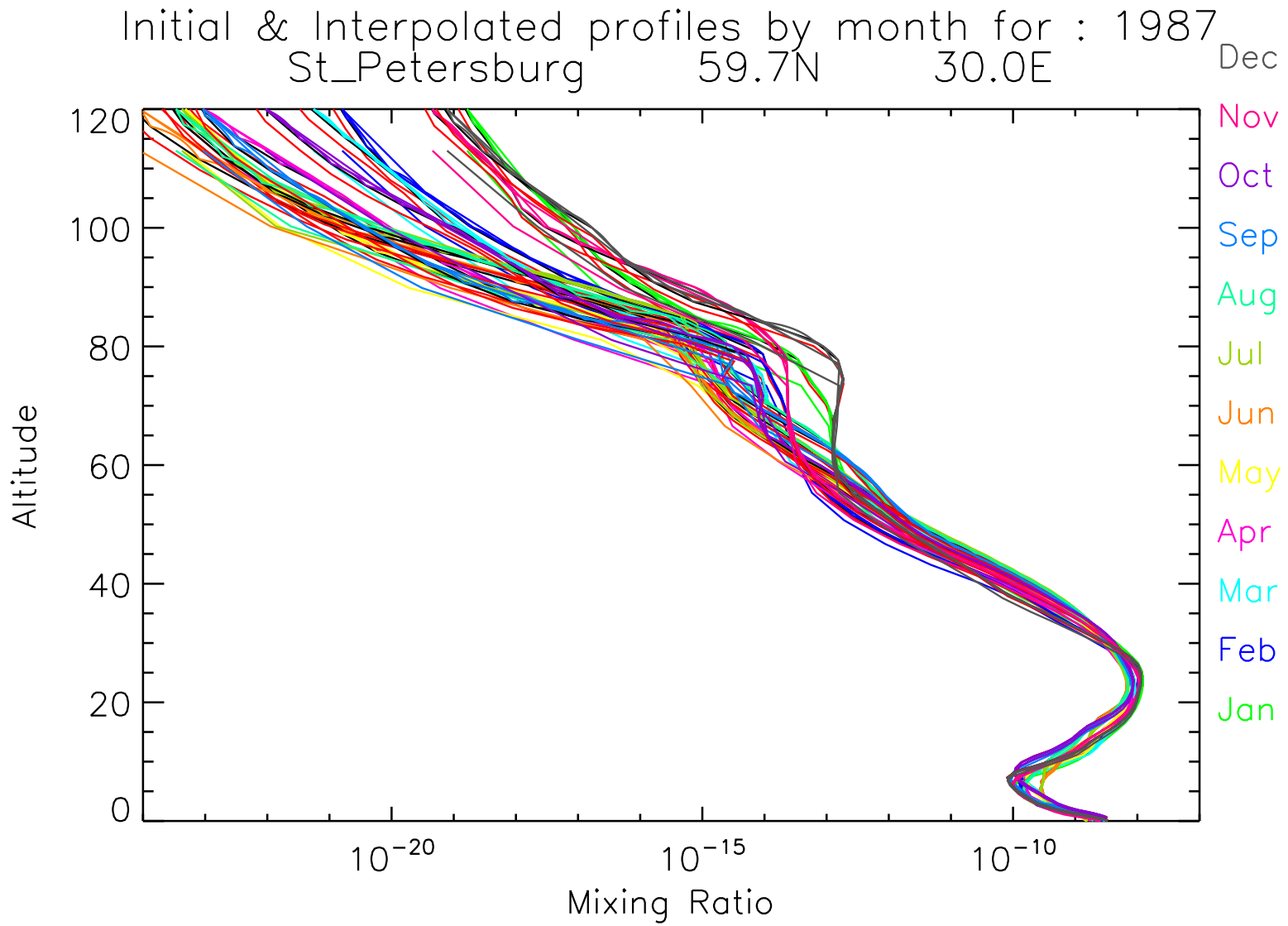
Mixing Ratio


Initial & Interpolated profiles by month for : 1987
St_Petersburg 59.7N 30.0E
Dec
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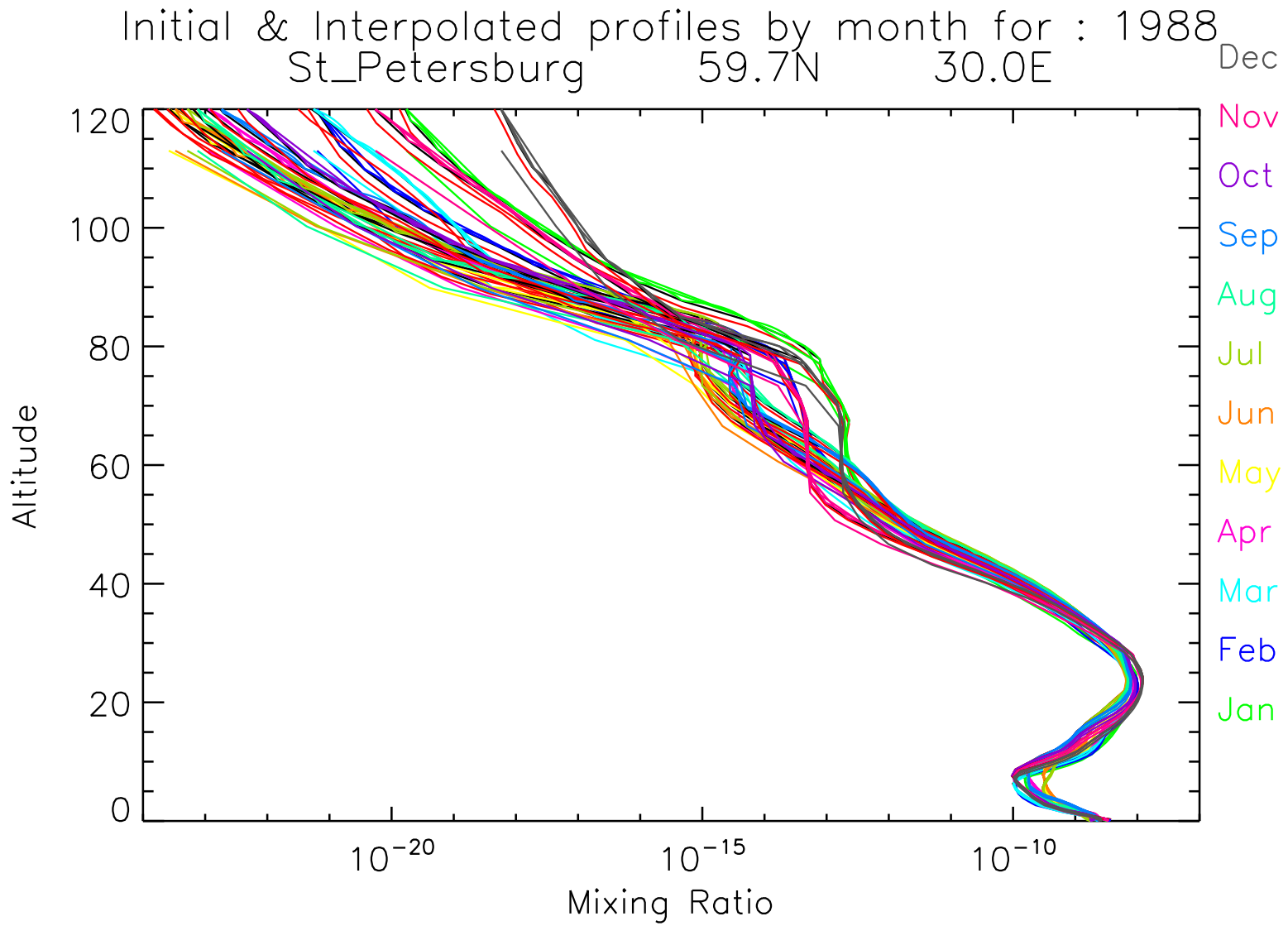
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1988
St_Petersburg 59.7N 30.0E
Dec
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Altitude
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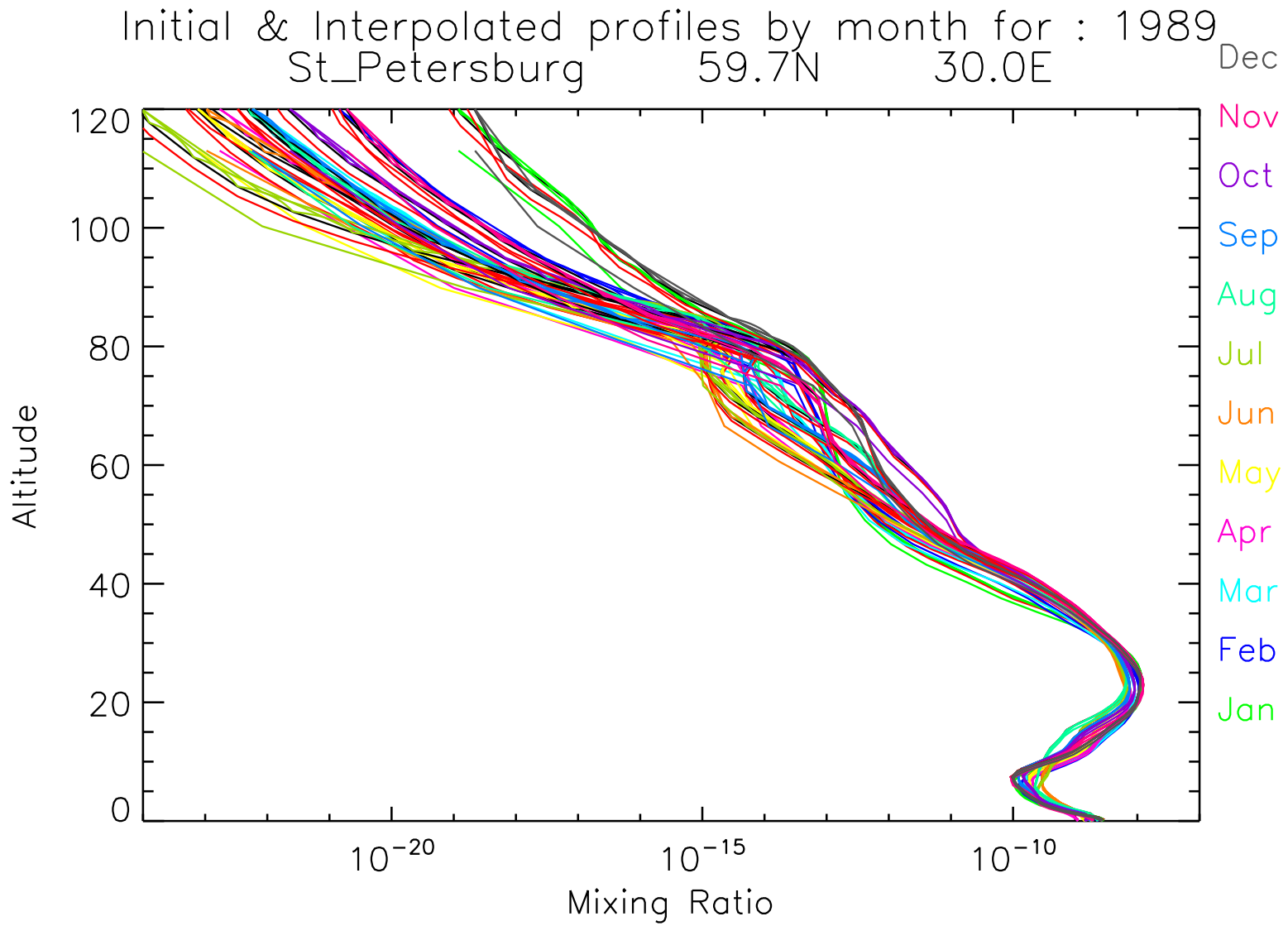
Mixing Ratio


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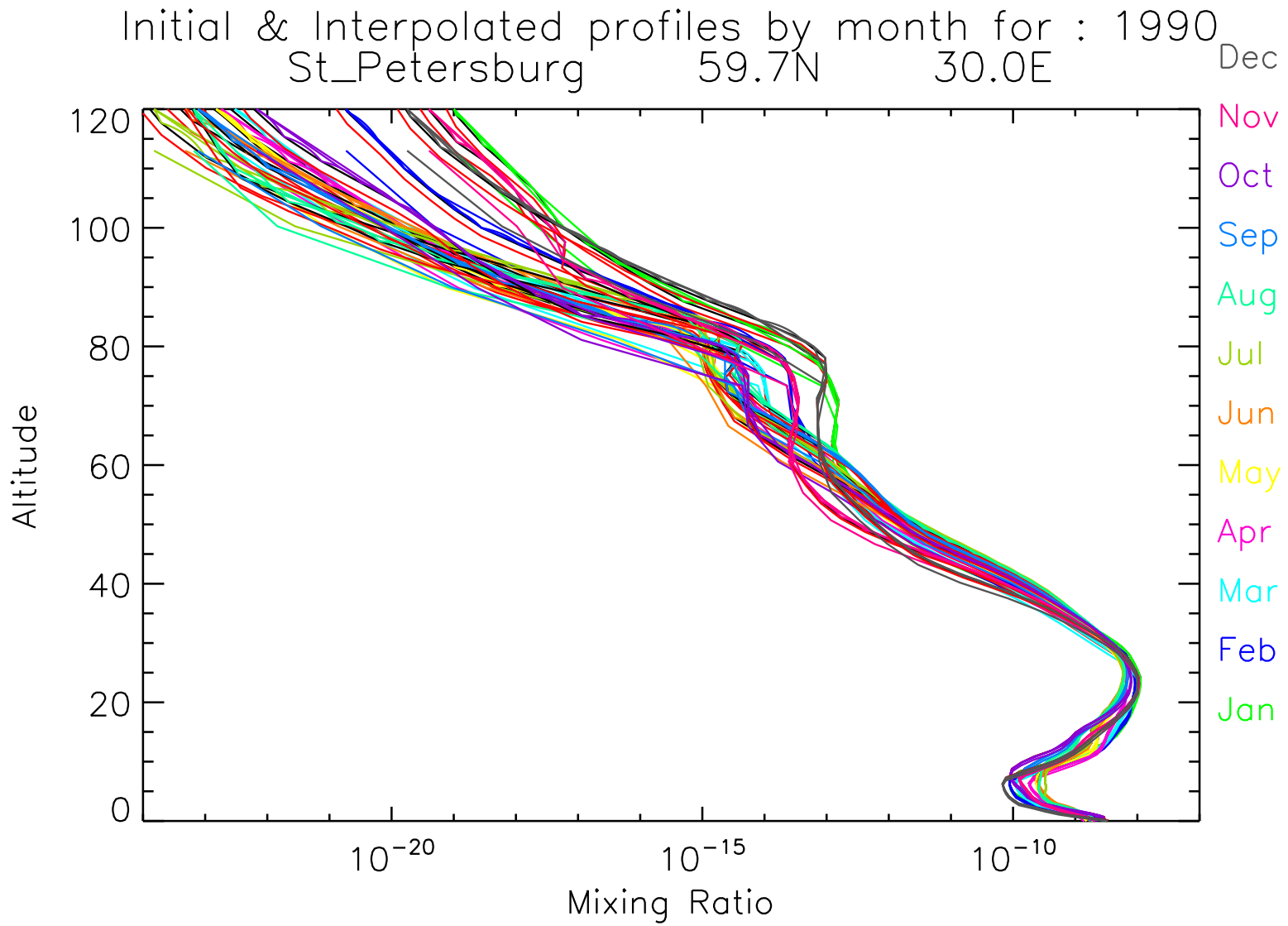
Mixing Ratio


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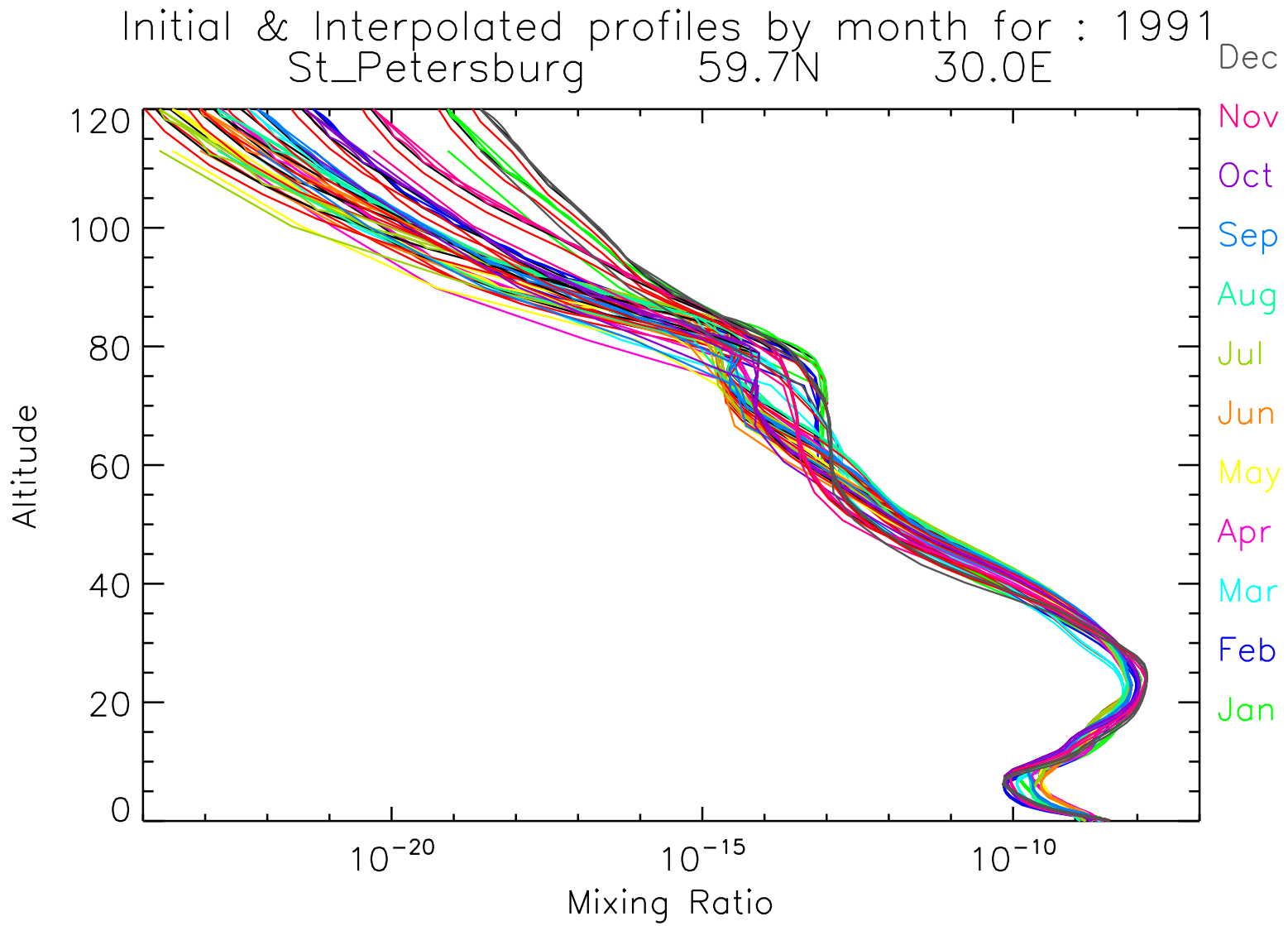
Mixing Ratio


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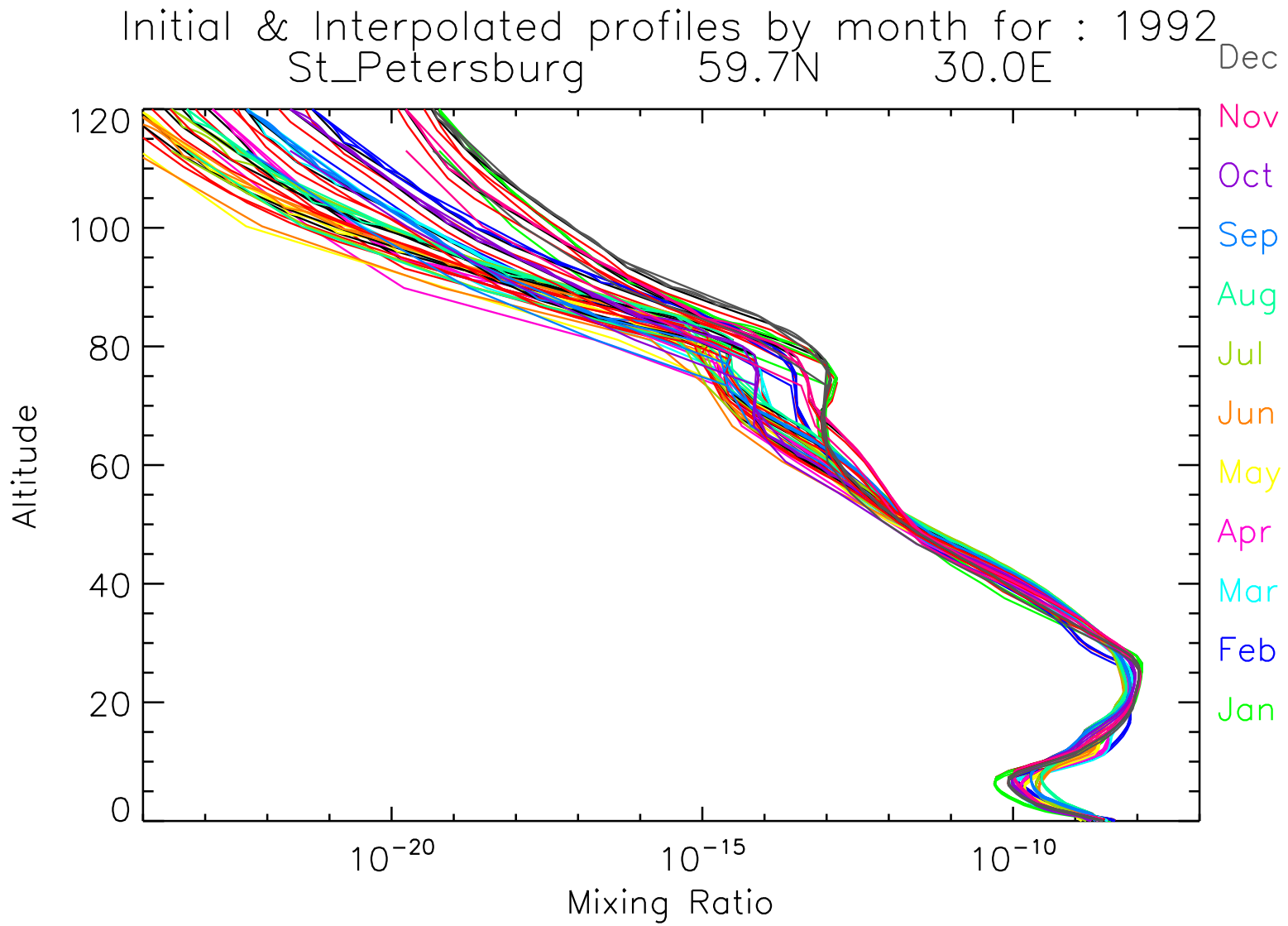
Mixing Ratio


Initial & Interpolated profiles by month for : 1992
St_Petersburg 59.7N 30.0E
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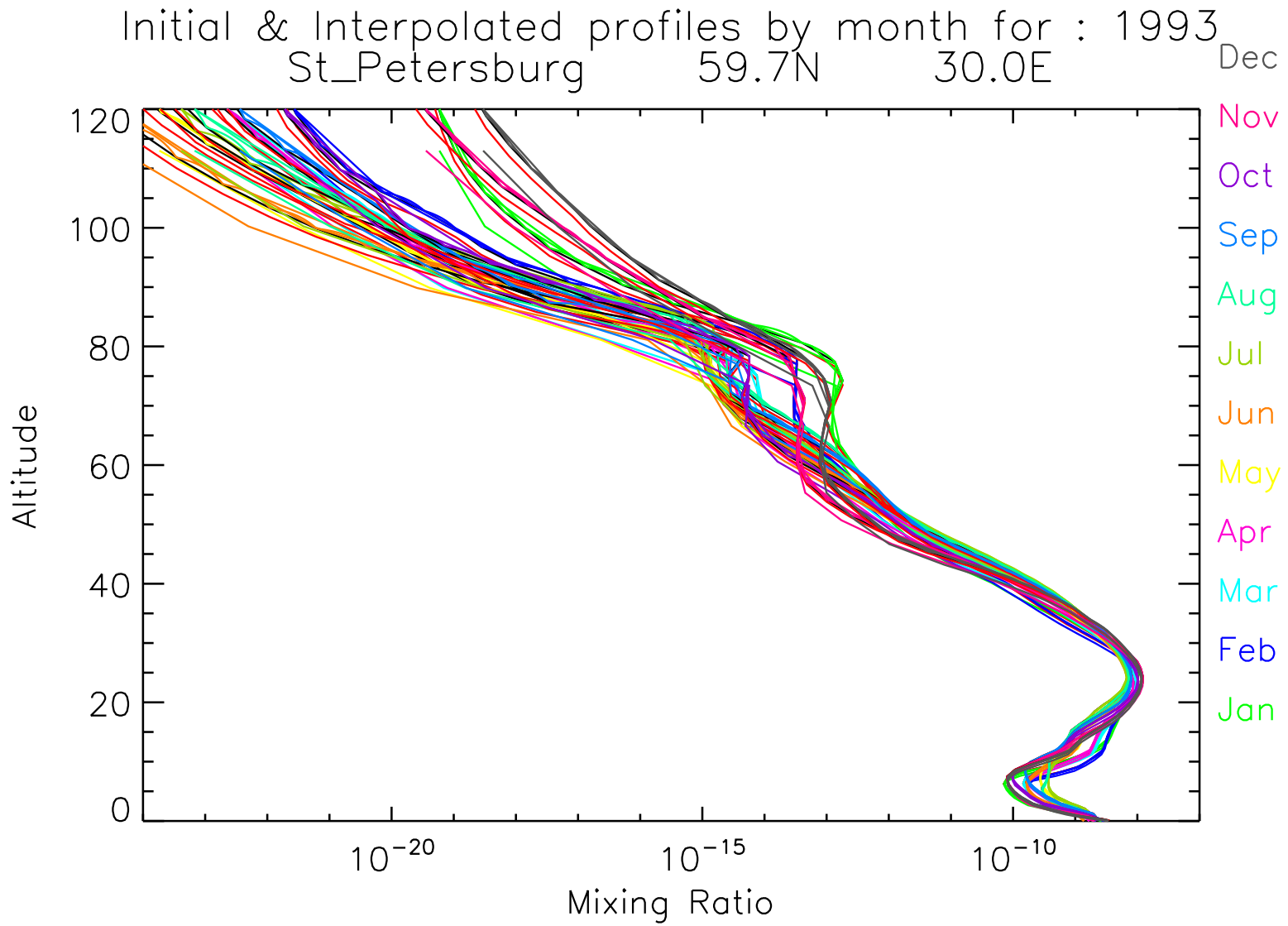
Mixing Ratio


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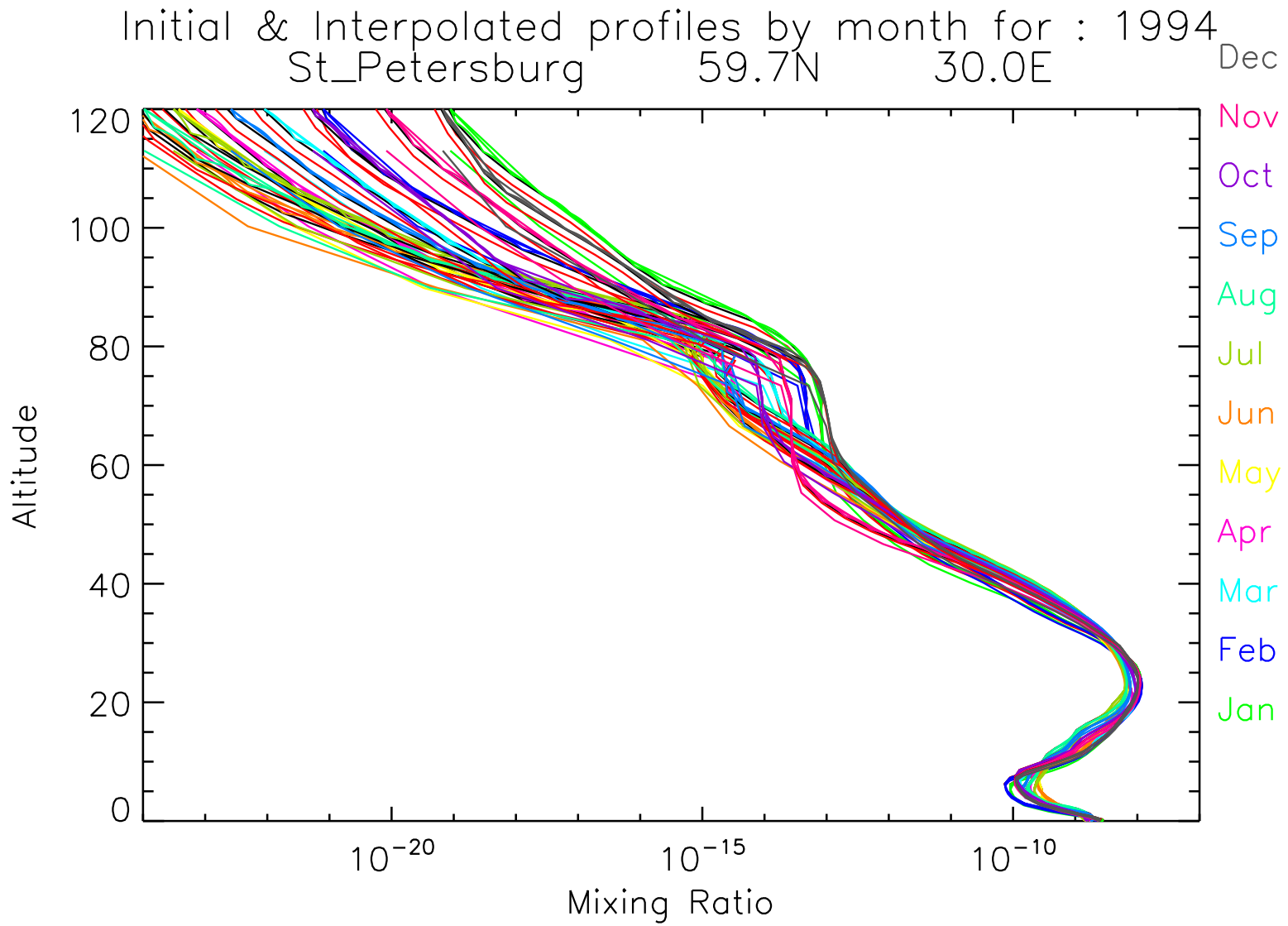
Mixing Ratio


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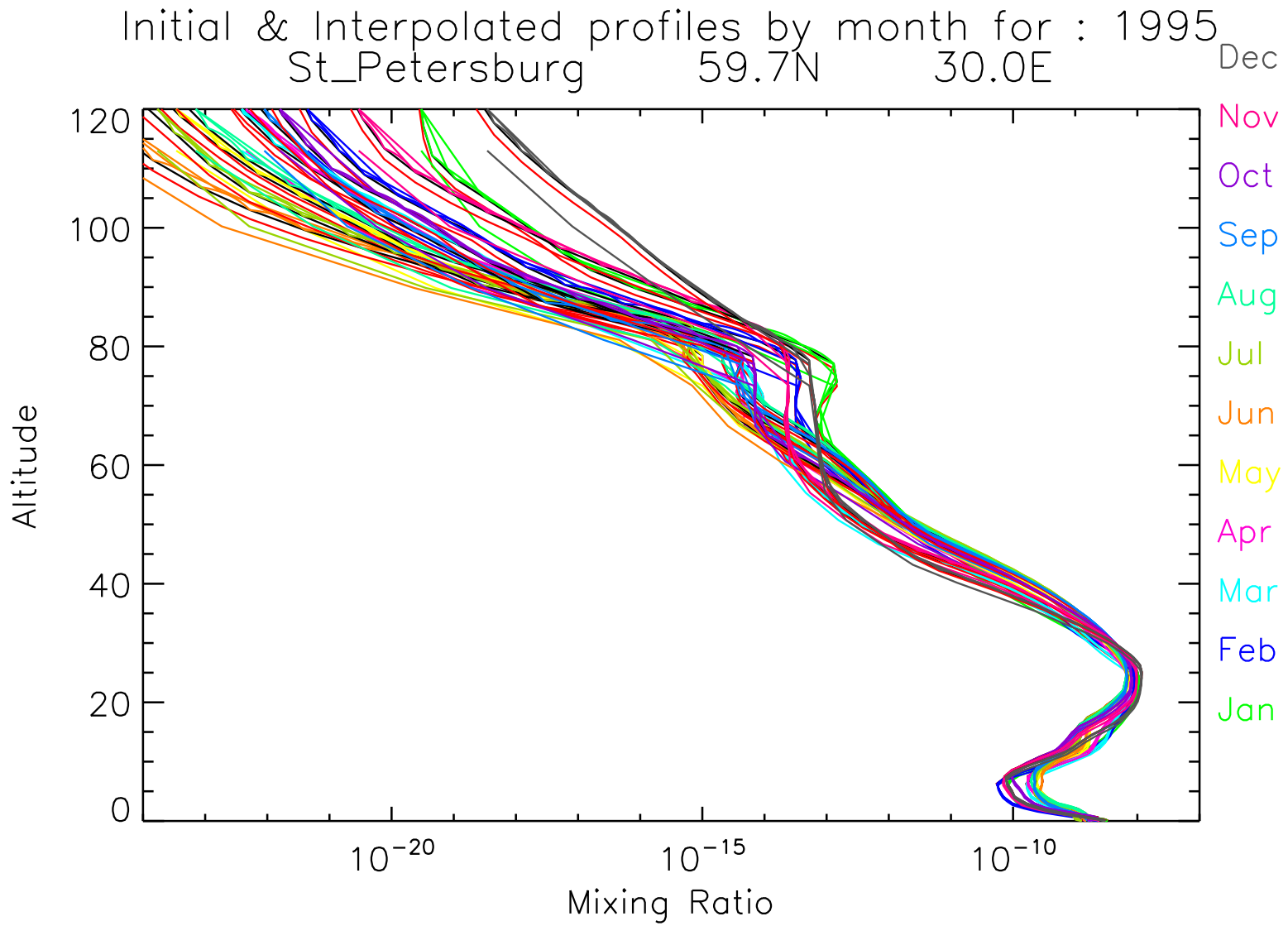
Mixing Ratio


Initial & Interpolated profiles by month for : 1995
St_Petersburg 59.7N 30.0E
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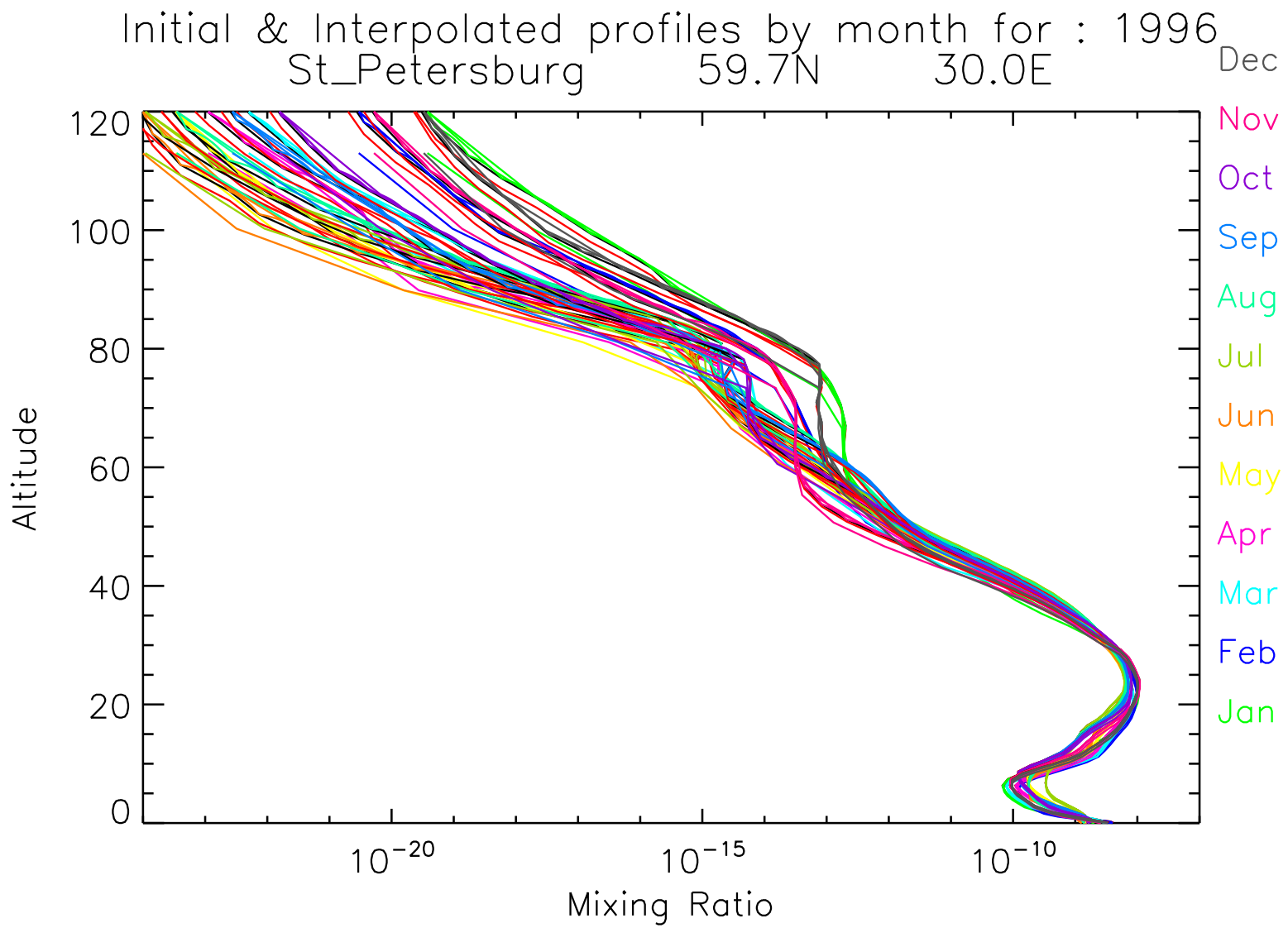
Mixing Ratio


Initial & Interpolated profiles by month for : 1996
St_Petersburg 59.7N 30.0E
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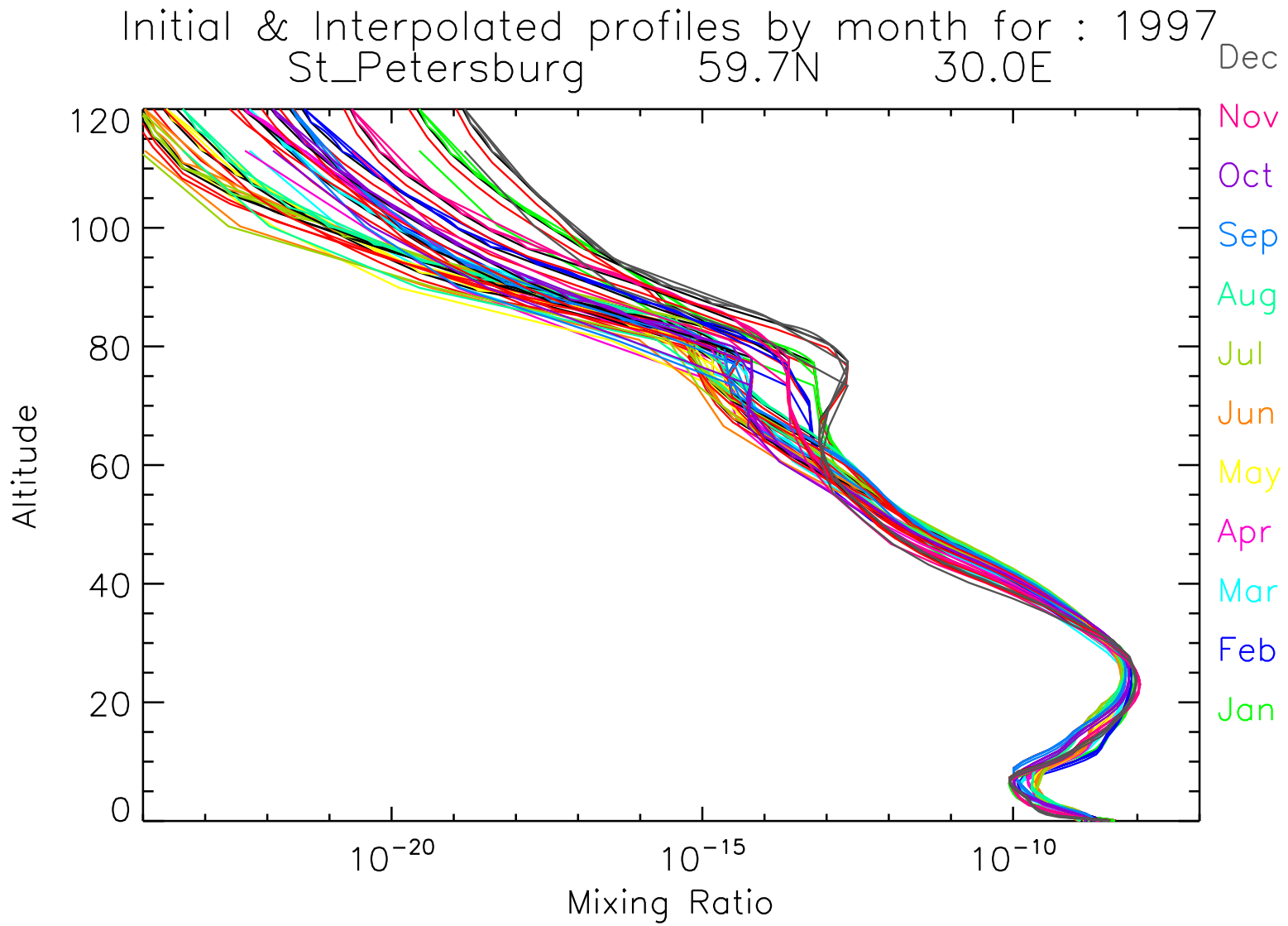
10^{-10}
Mixing Ratio


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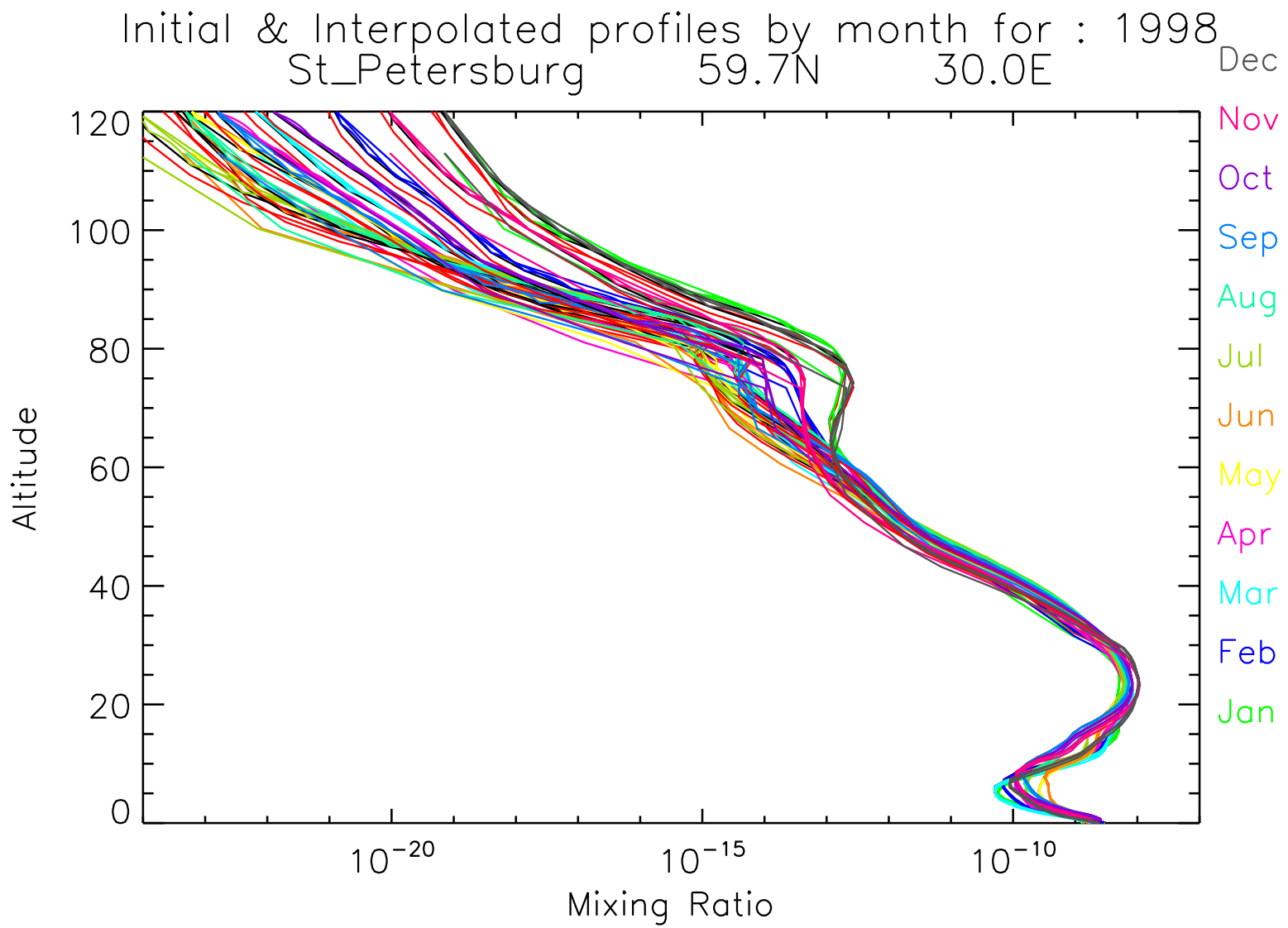
Mixing Ratio


Initial & Interpolated profiles by month for : 1998
St_Petersburg 59.7N 30.0E
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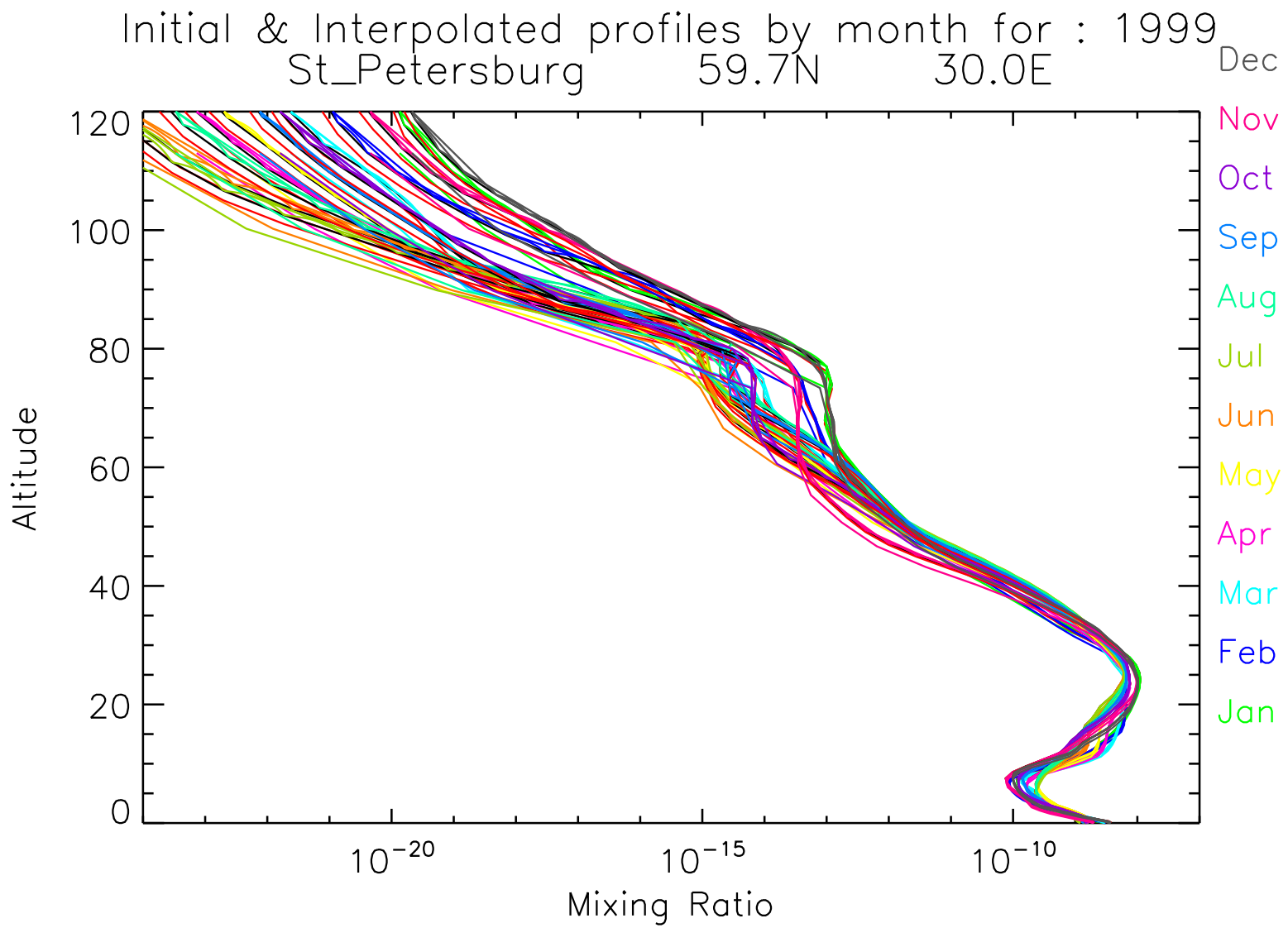
Mixing Ratio


Initial & Interpolated profiles by month for : 1999
St_Petersburg 59.7N 30.0E
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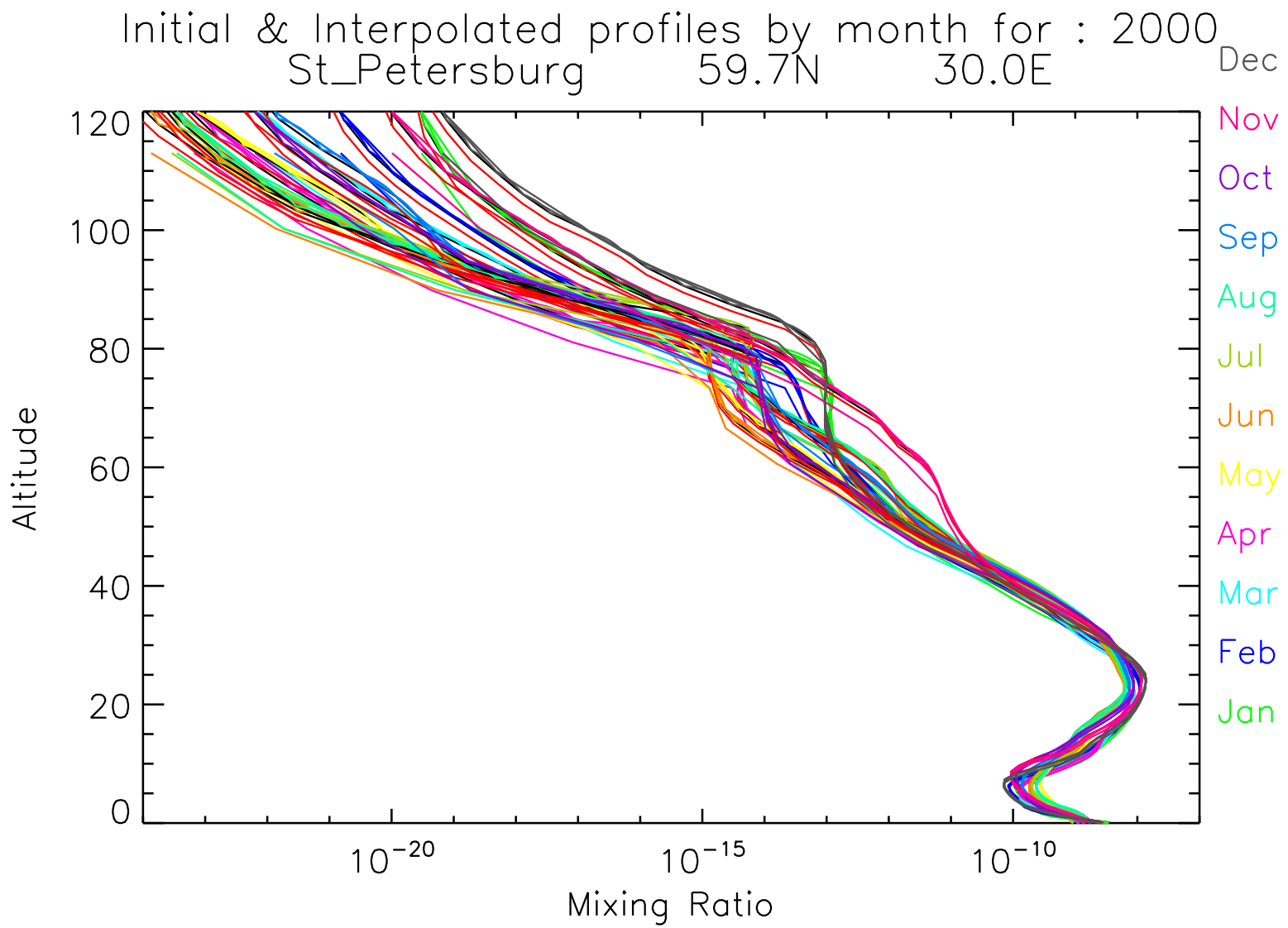
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 2000
St_Petersburg 59.7N 30.0E
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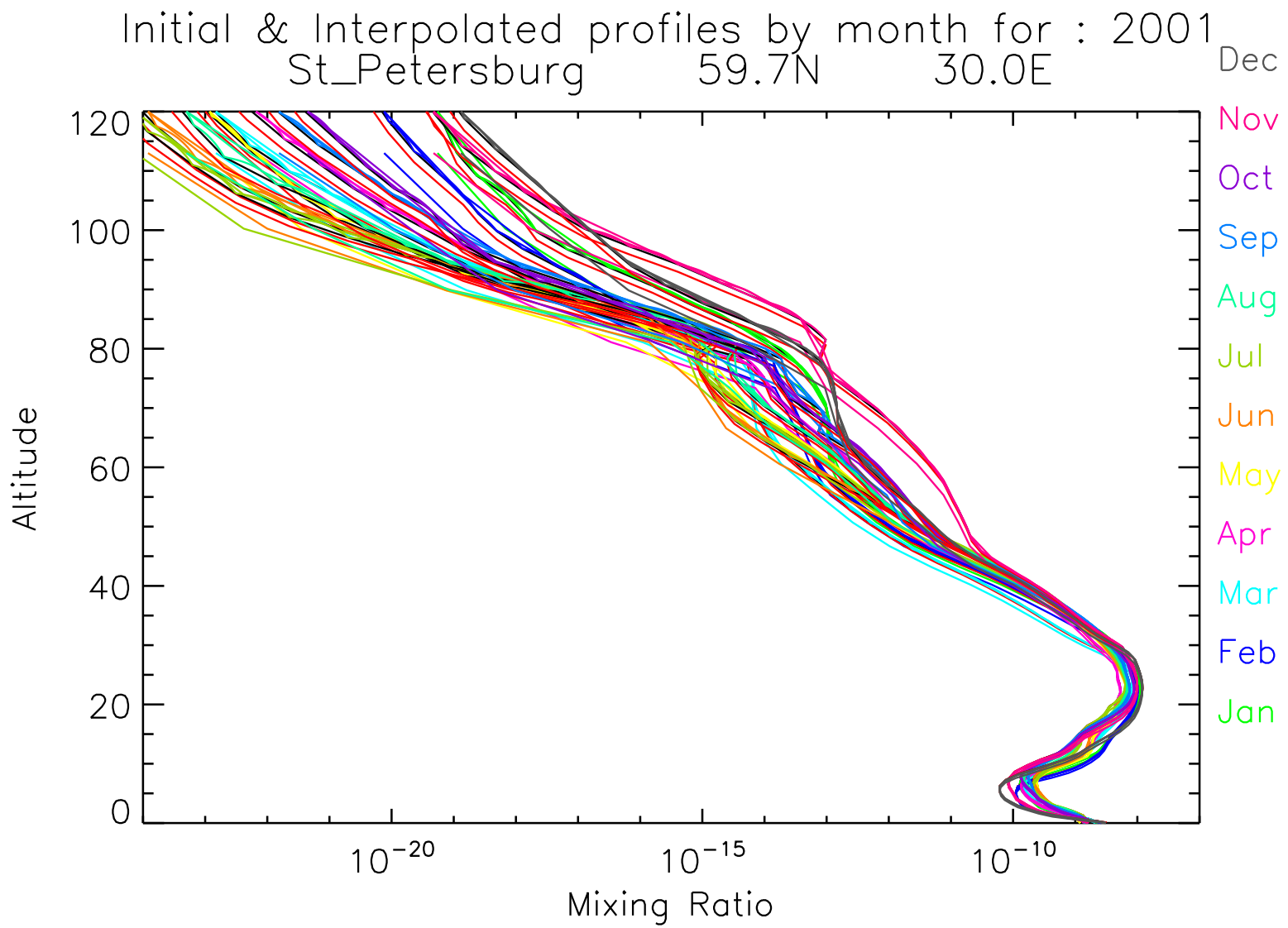
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 2001
St_Petersburg 59.7N 30.0E
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Altitude
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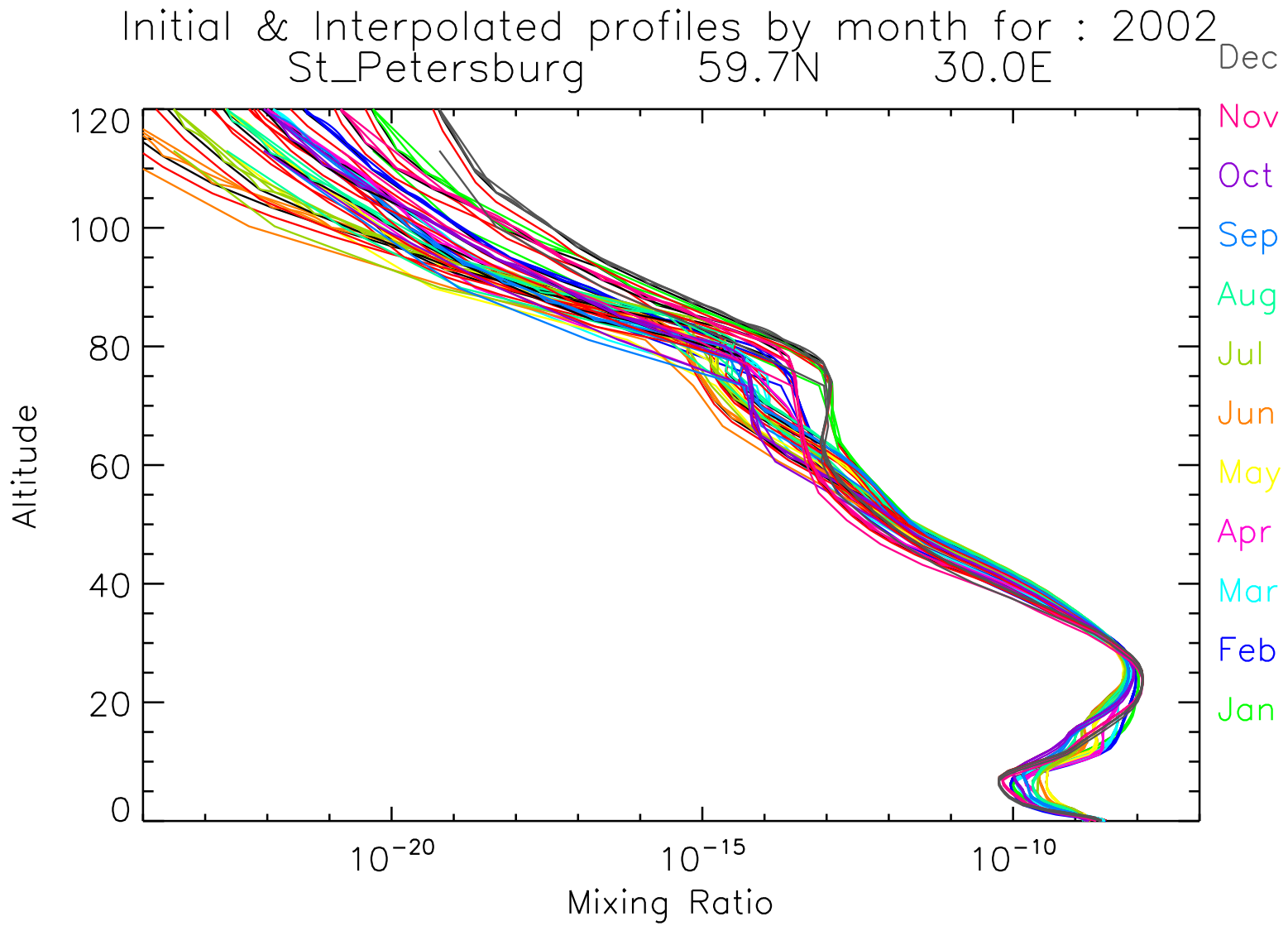
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 2002
St_Petersburg 59.7N 30.0E
Dec
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Altitude
10^{-20}
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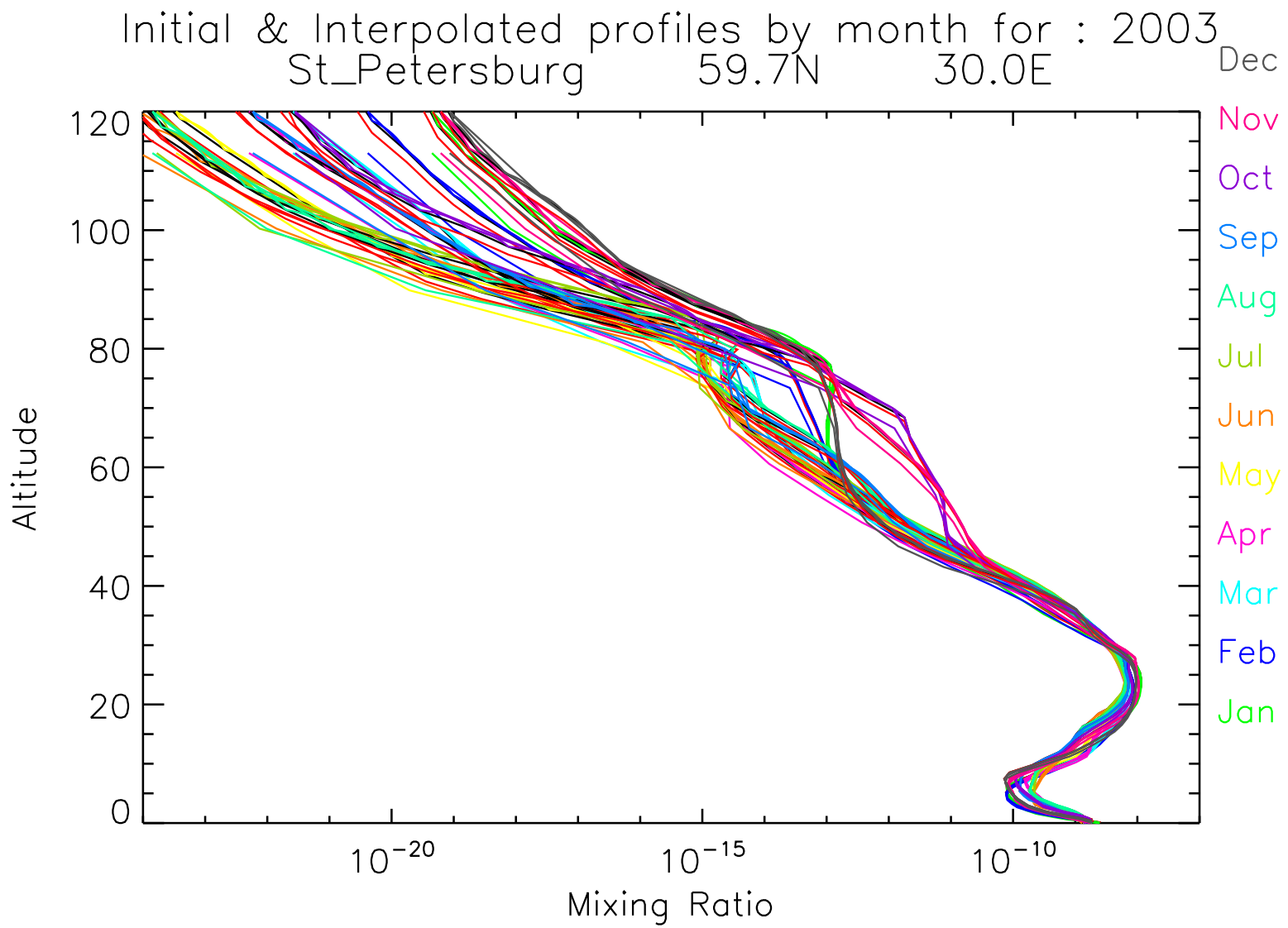
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 2003
St_Petersburg 59.7N 30.0E
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Altitude
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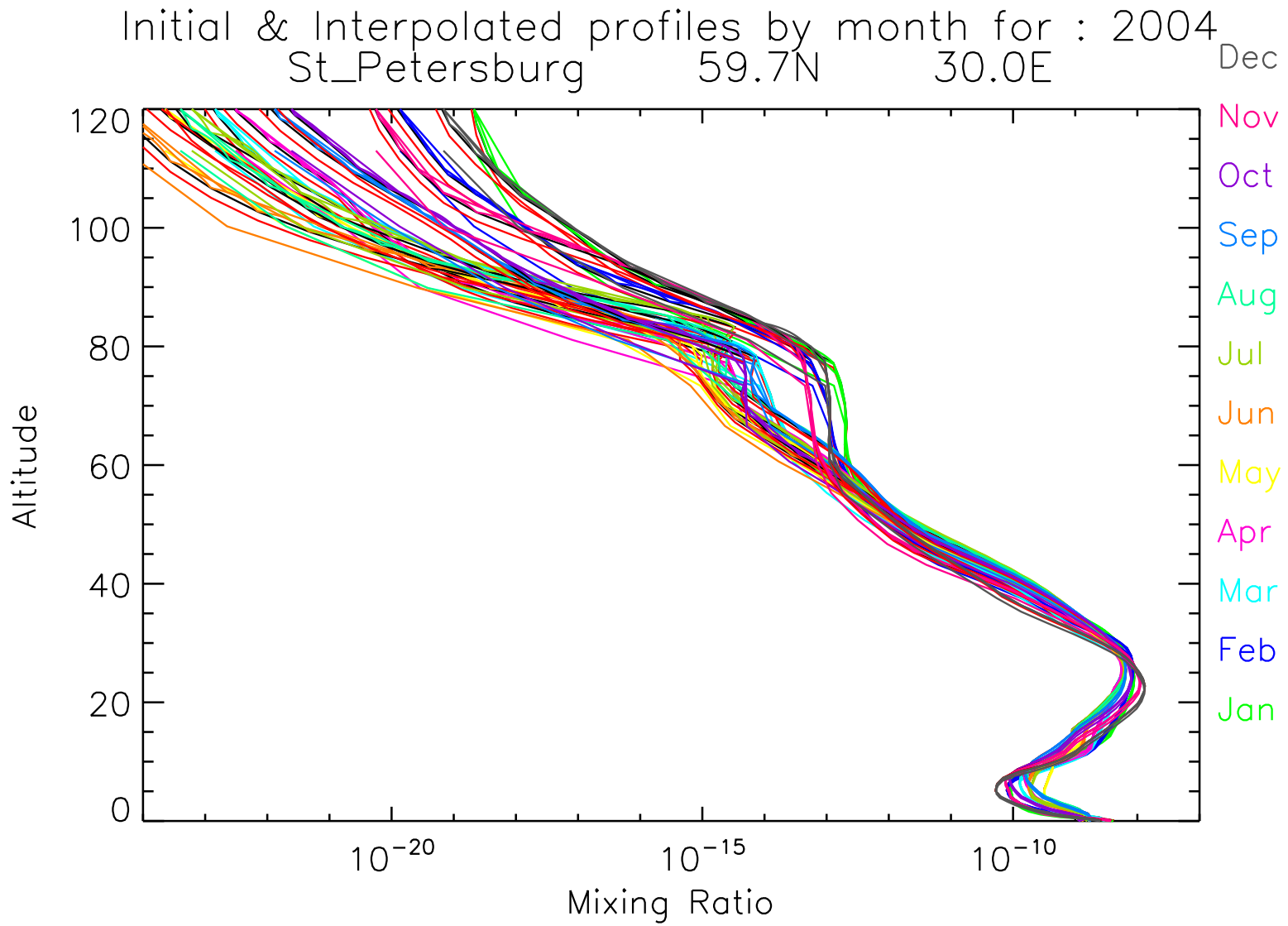
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 2004
St_Petersburg 59.7N 30.0E
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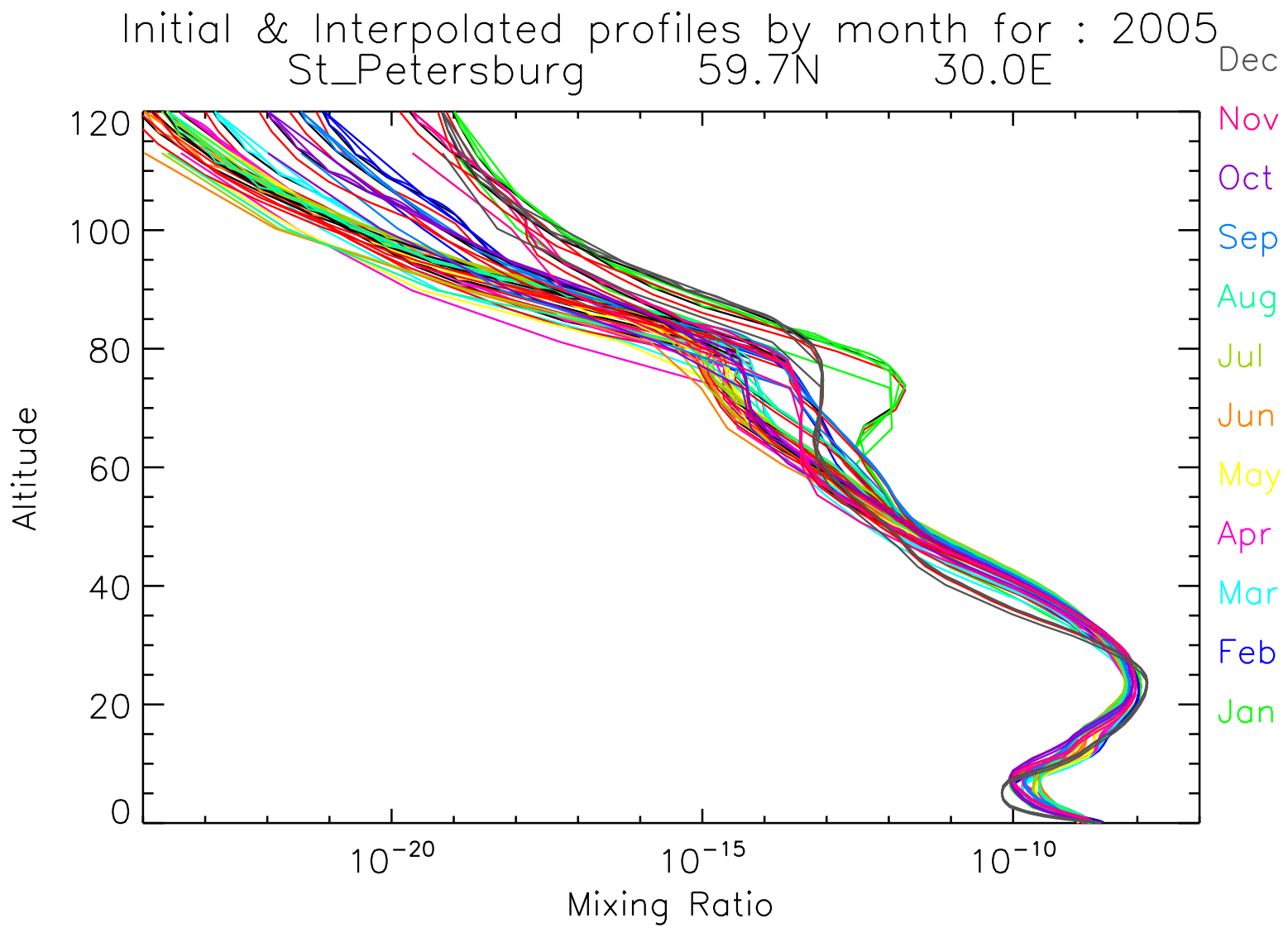
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 2005
St_Petersburg 59.7N 30.0E
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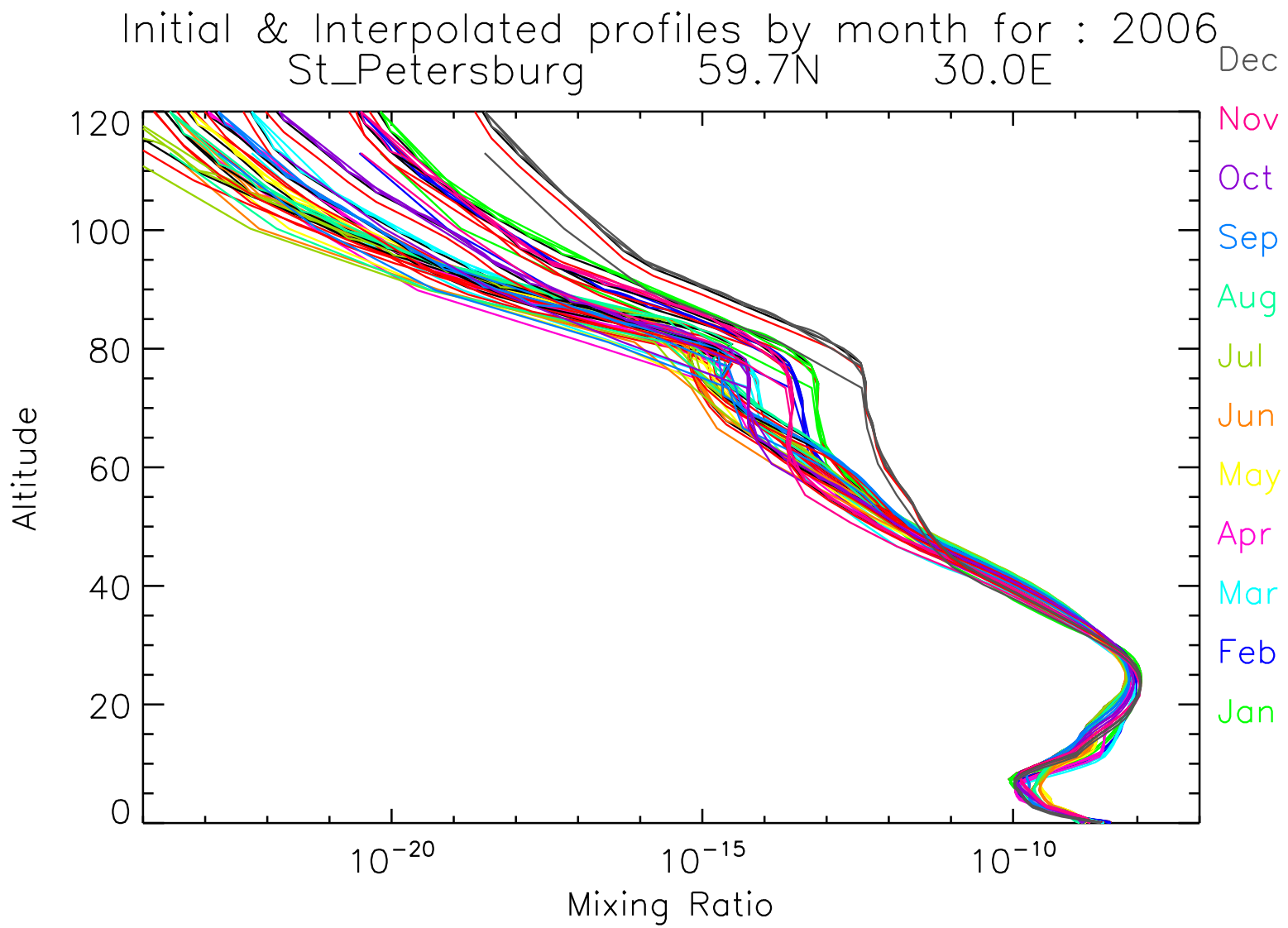
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 2006
St_Petersburg 59.7N 30.0E
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Altitude
10^{-20}
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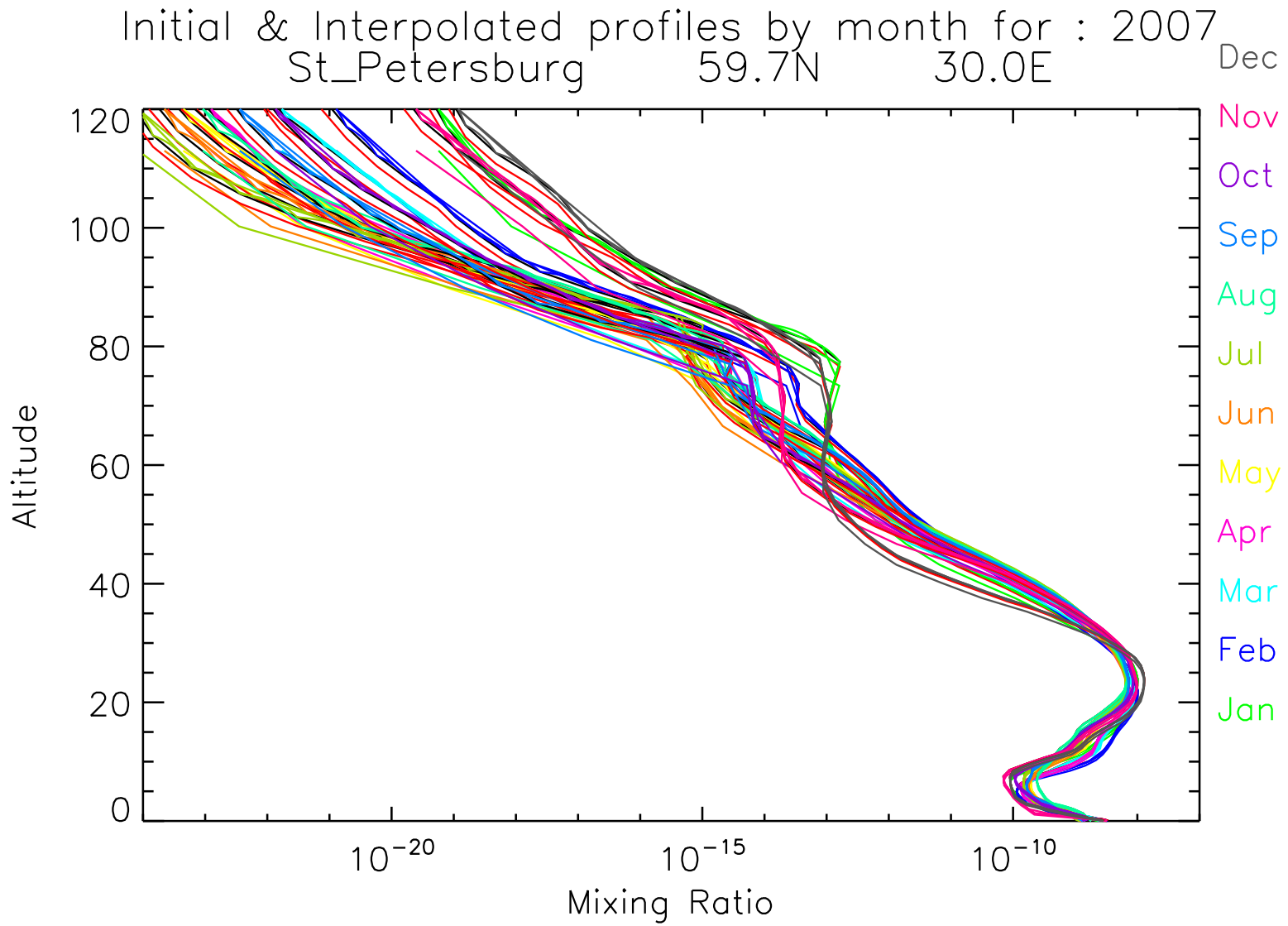
Mixing Ratio


Initial & Interpolated profiles by month for : 2007
St_Petersburg 59.7N 30.0E
Dec
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Altitude
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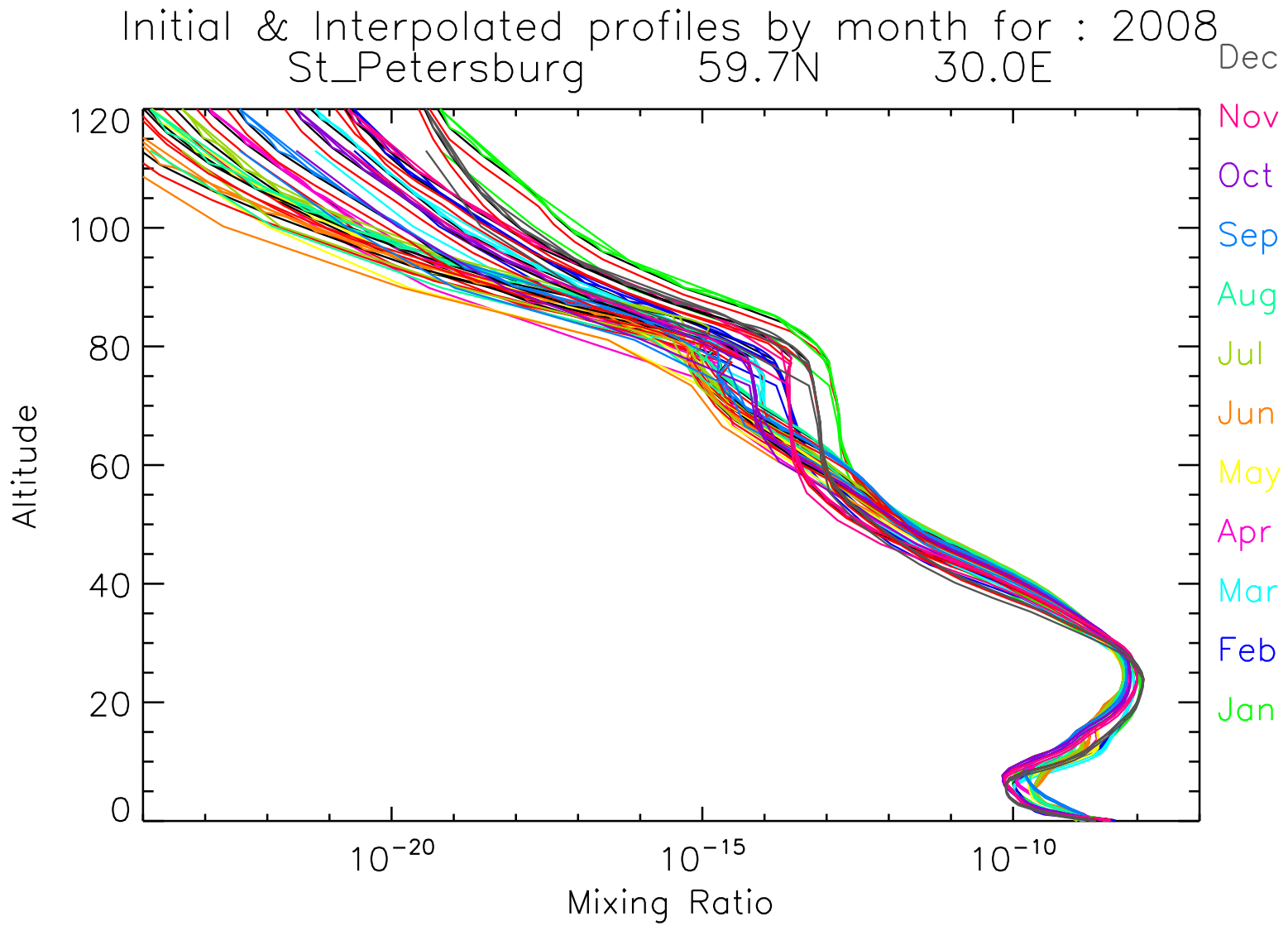
Mixing Ratio


Initial & Interpolated profiles by month for : 2008
St_Petersburg 59.7N 30.0E
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Altitude
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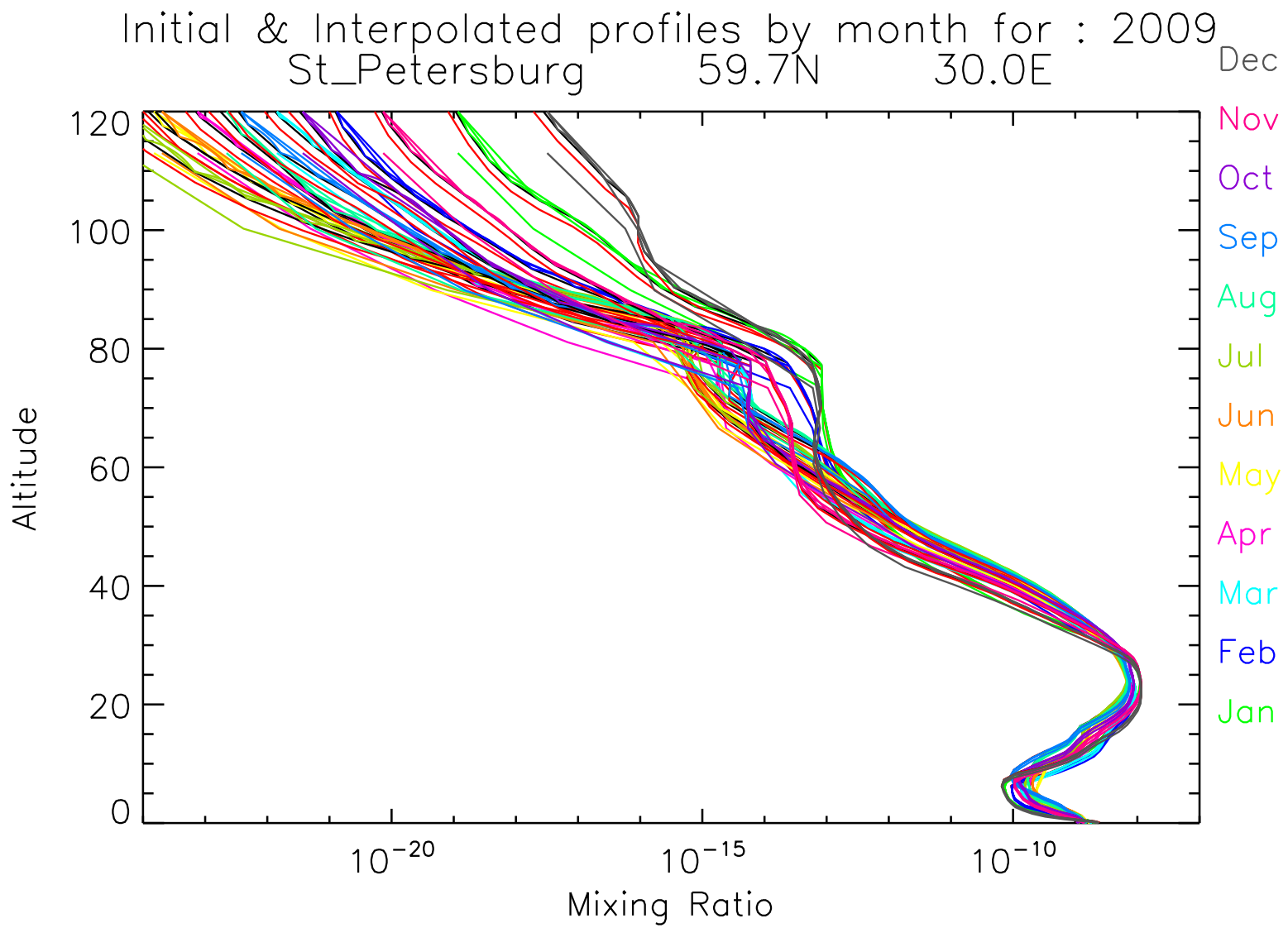
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 2009
St_Petersburg 59.7N 30.0E
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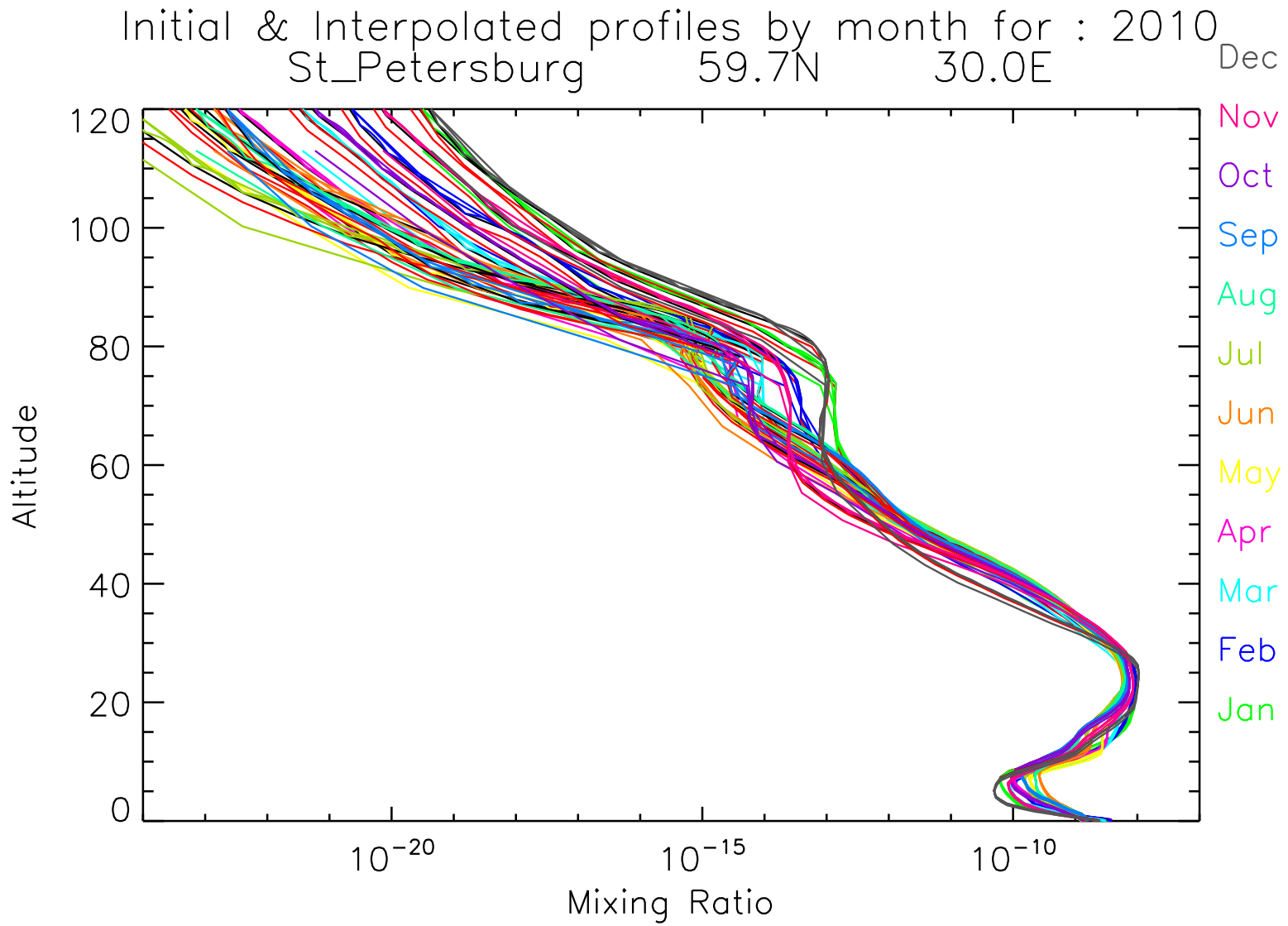
Mixing Ratio


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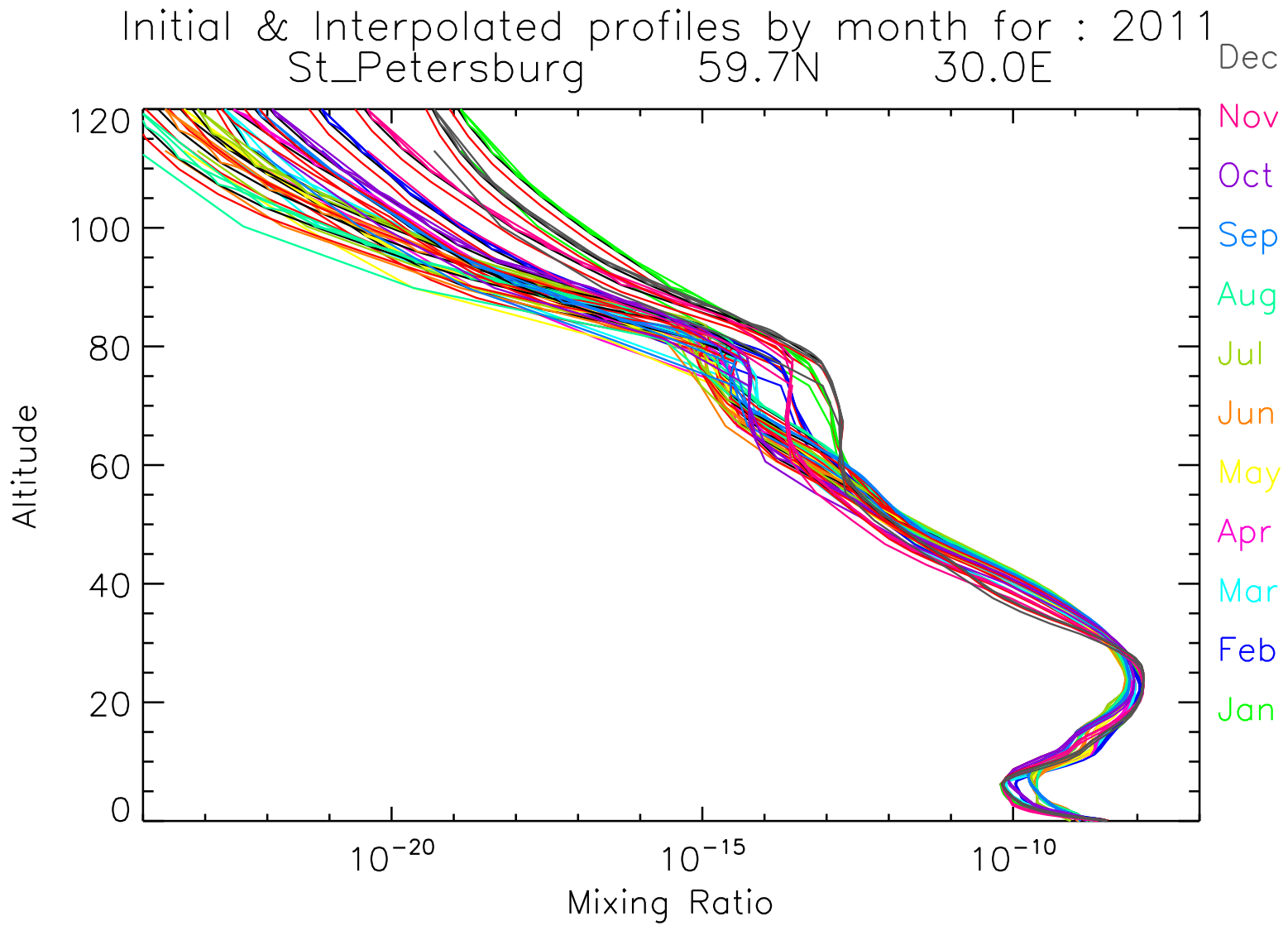
Mixing Ratio


Initial & Interpolated profiles by month for : 2011
St_Petersburg 59.7N 30.0E
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10^{-20}
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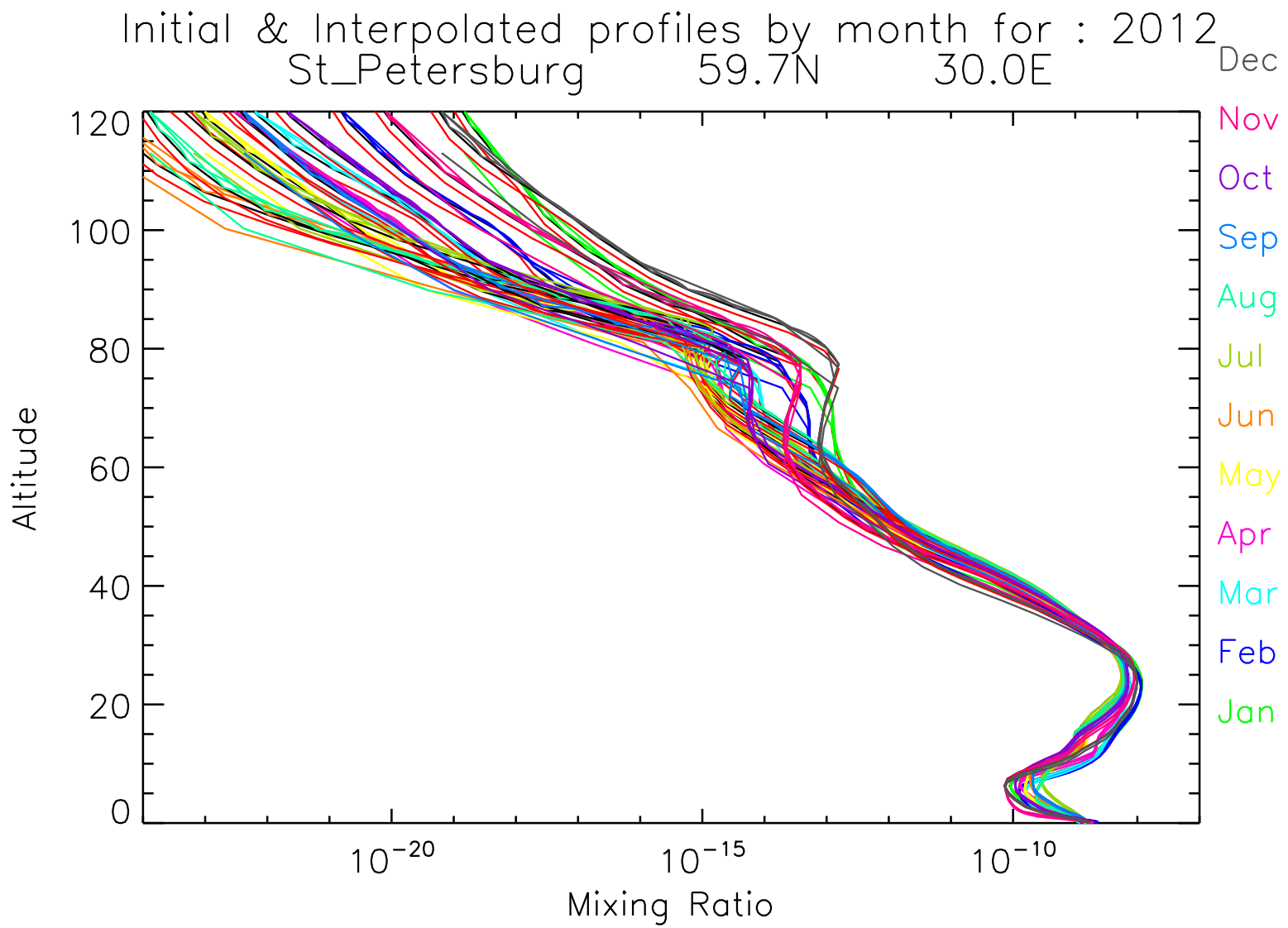
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 2012
St_Petersburg 59.7N 30.0E
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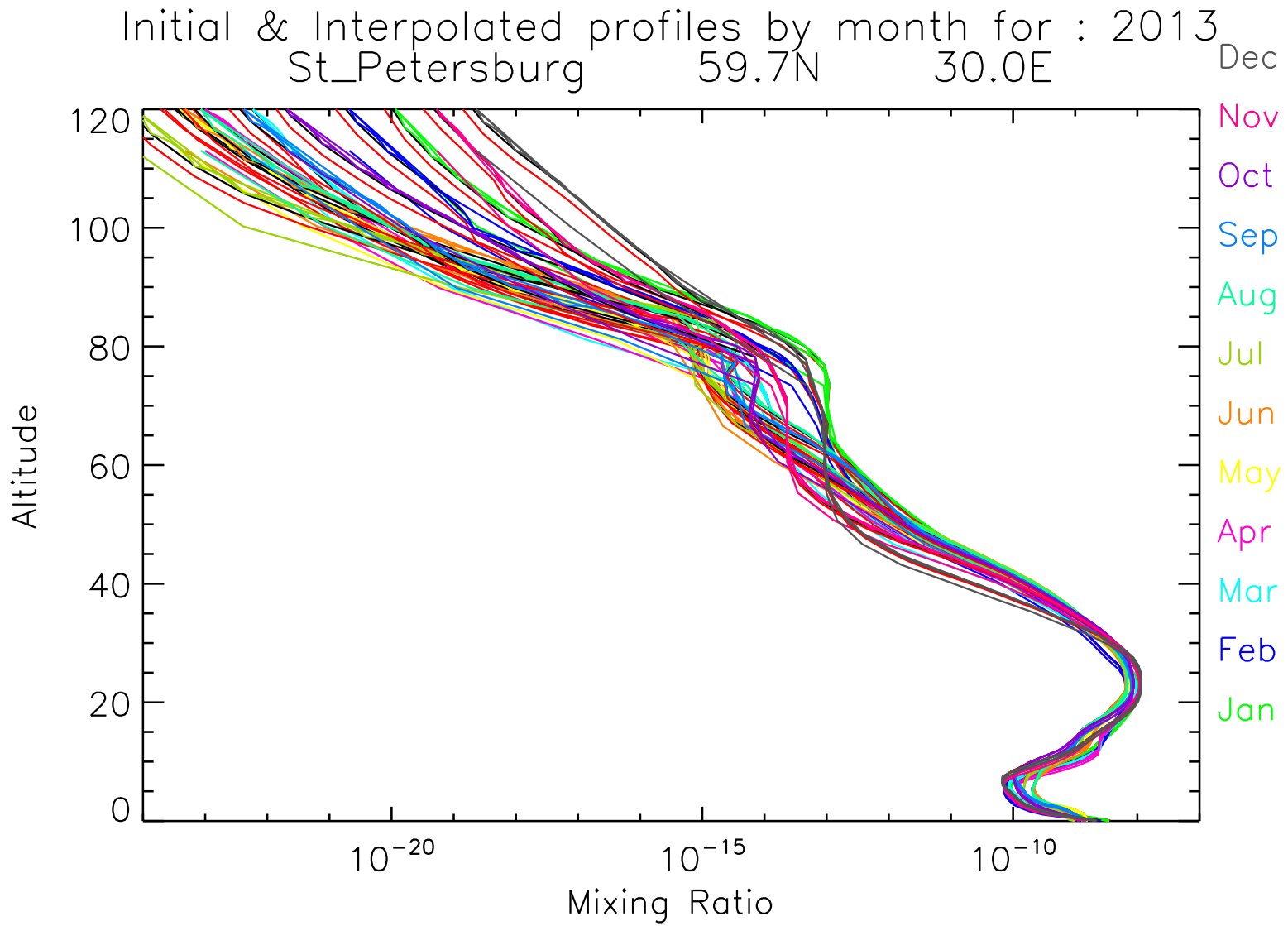
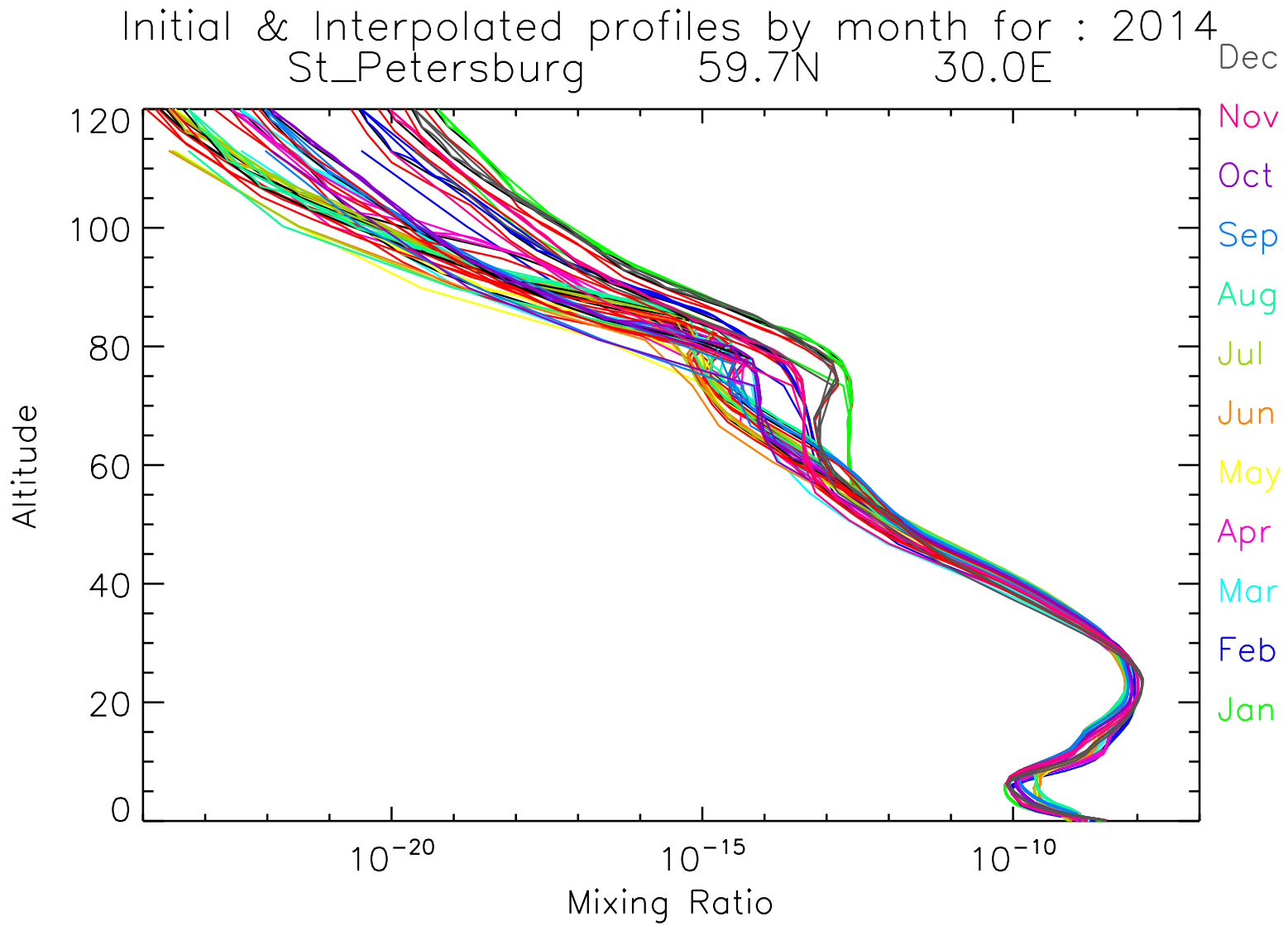
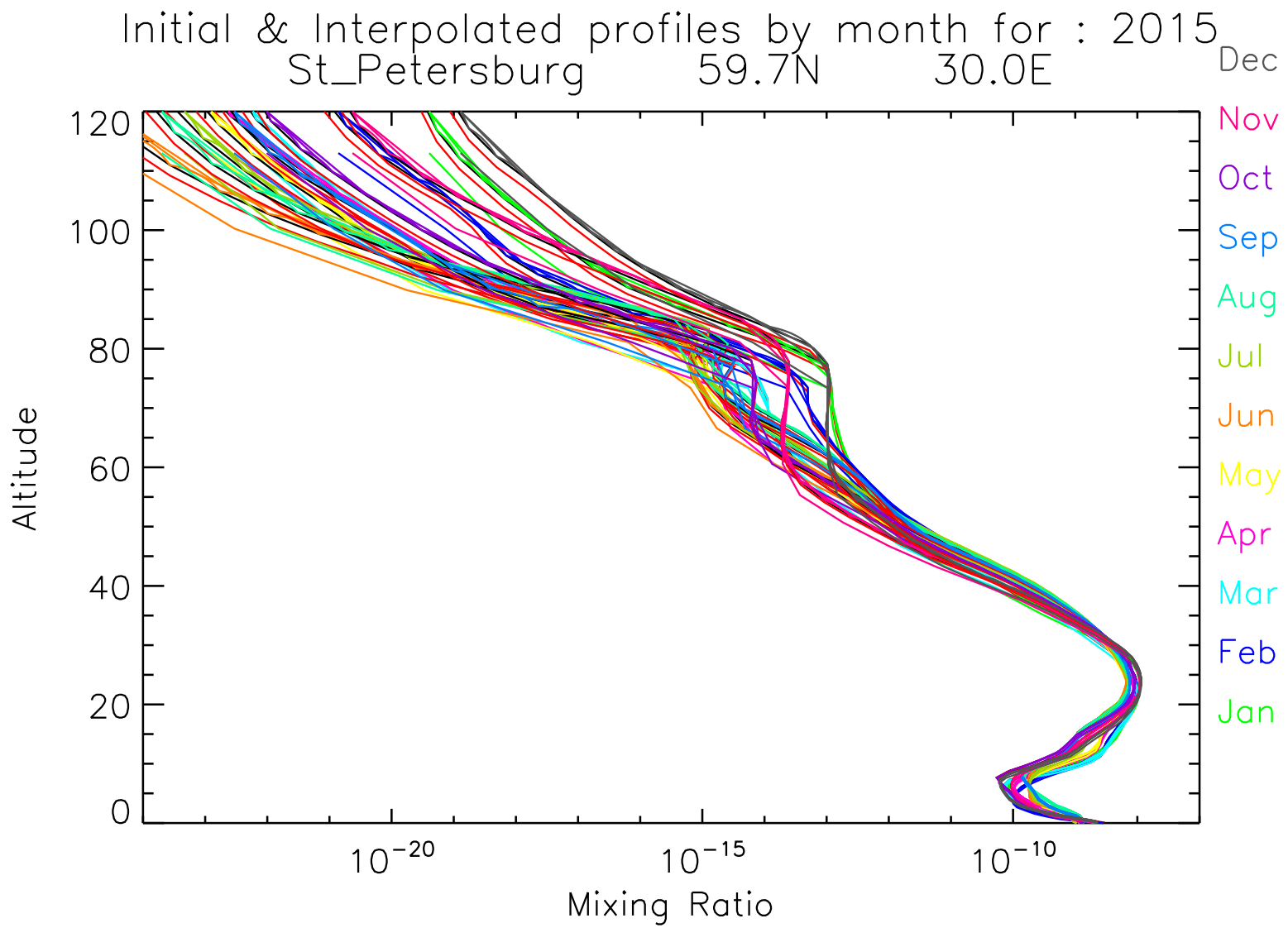
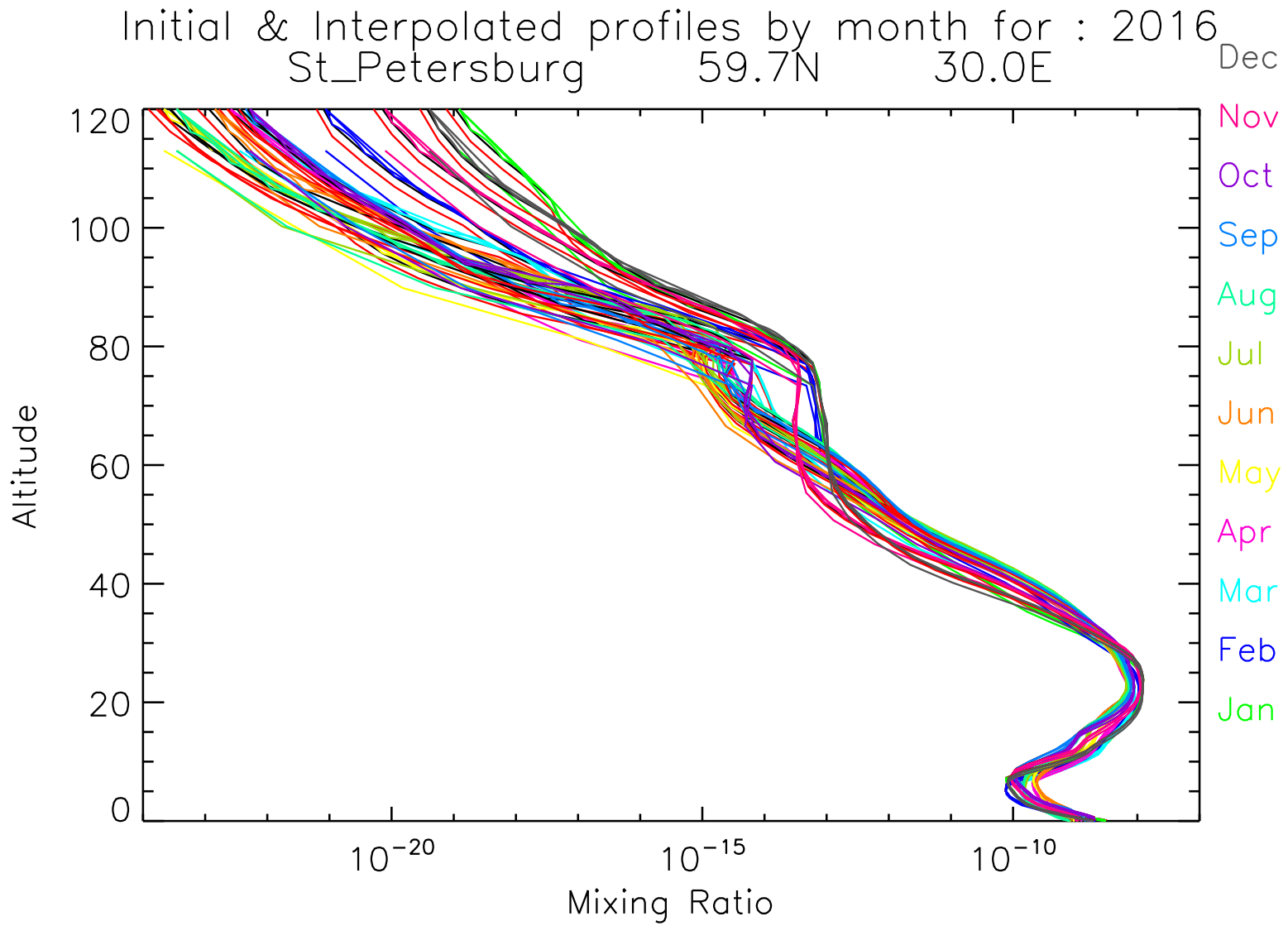
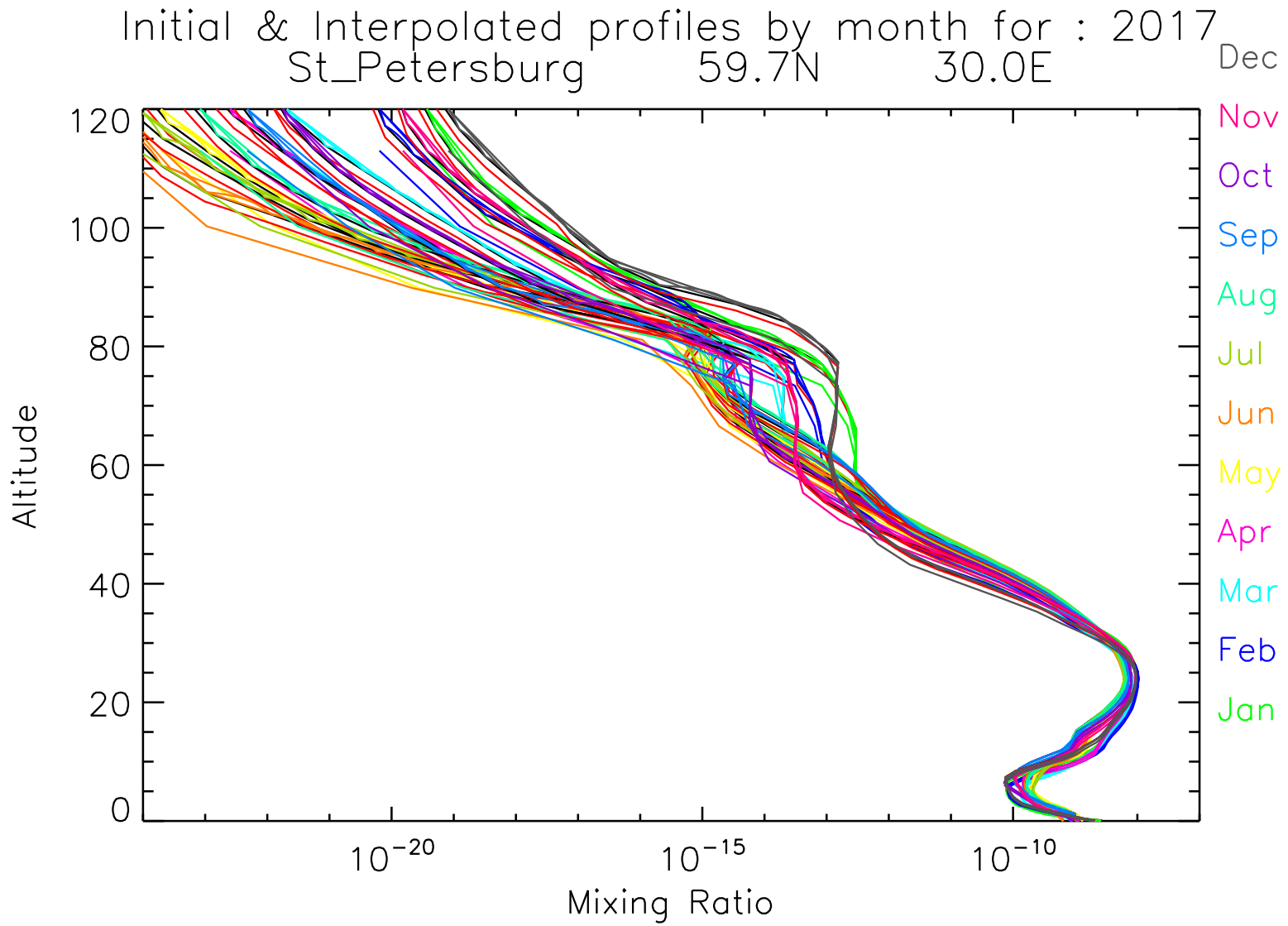
10^{-10}
Mixing Ratio

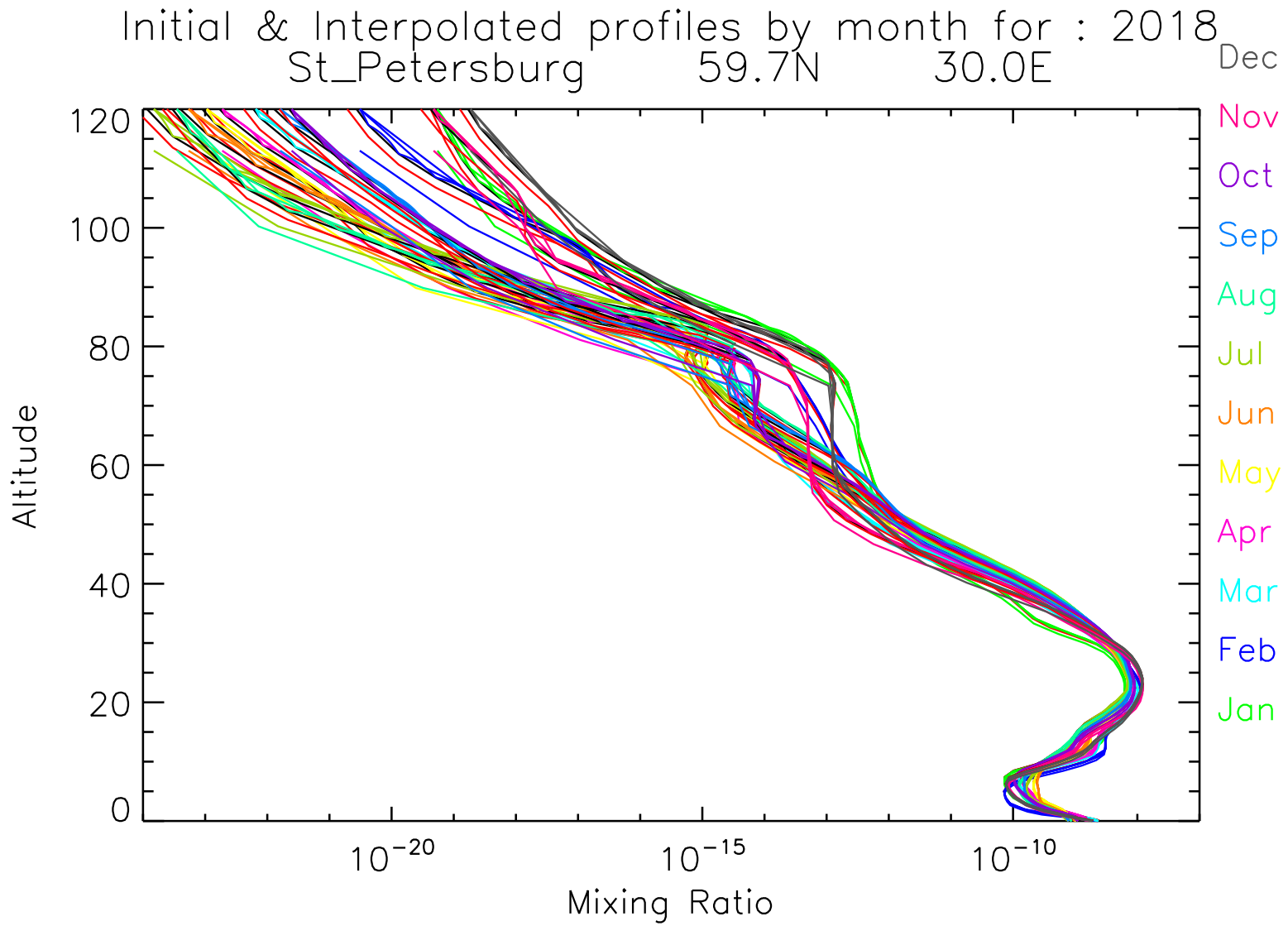

Initial & Interpolated profiles by month for : 2013
St_Petersburg 59.7N 30.0E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio

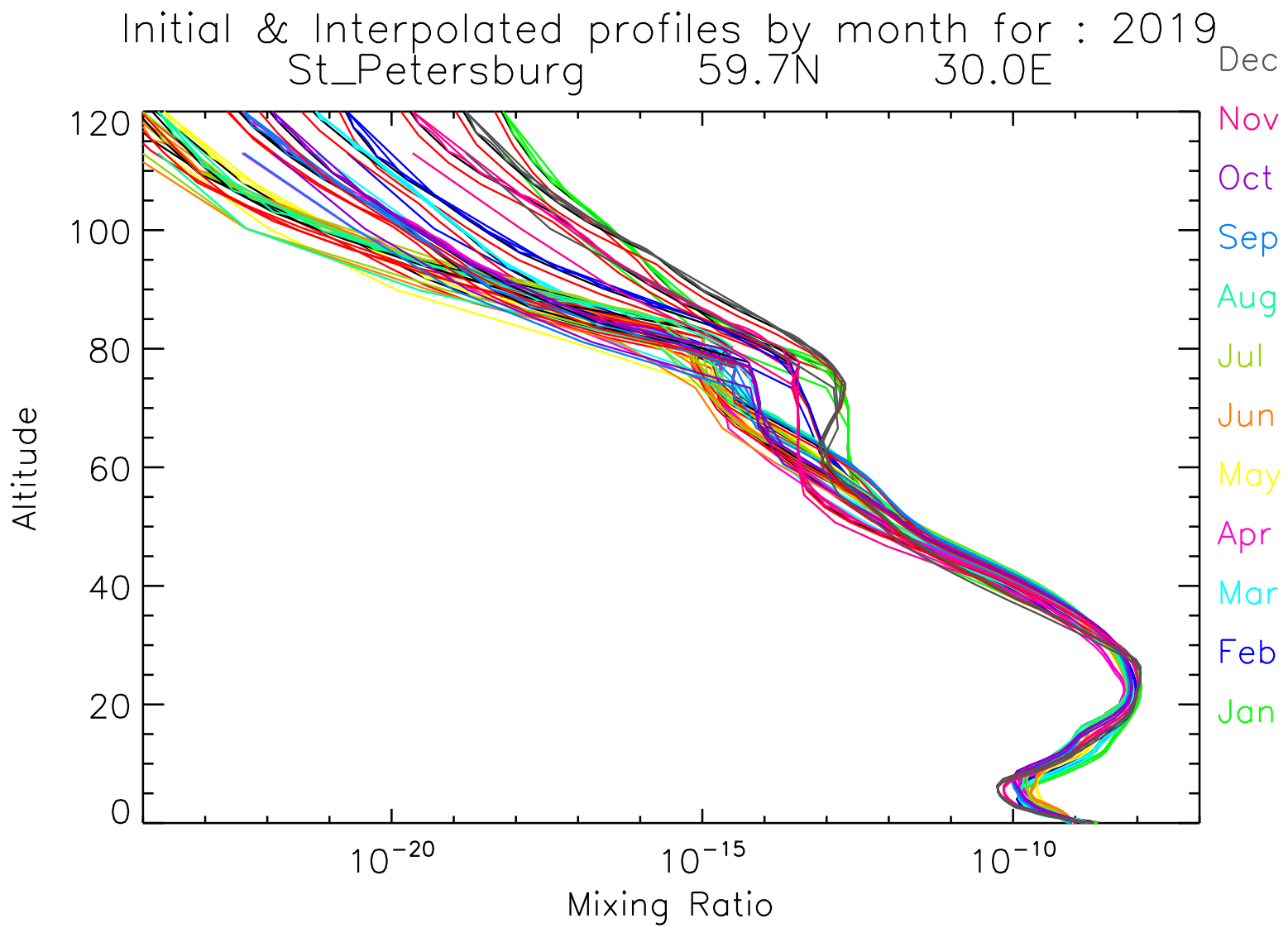

Initial & Interpolated profiles by month for : 2014
St_Petersburg 59.7N 30.0E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio

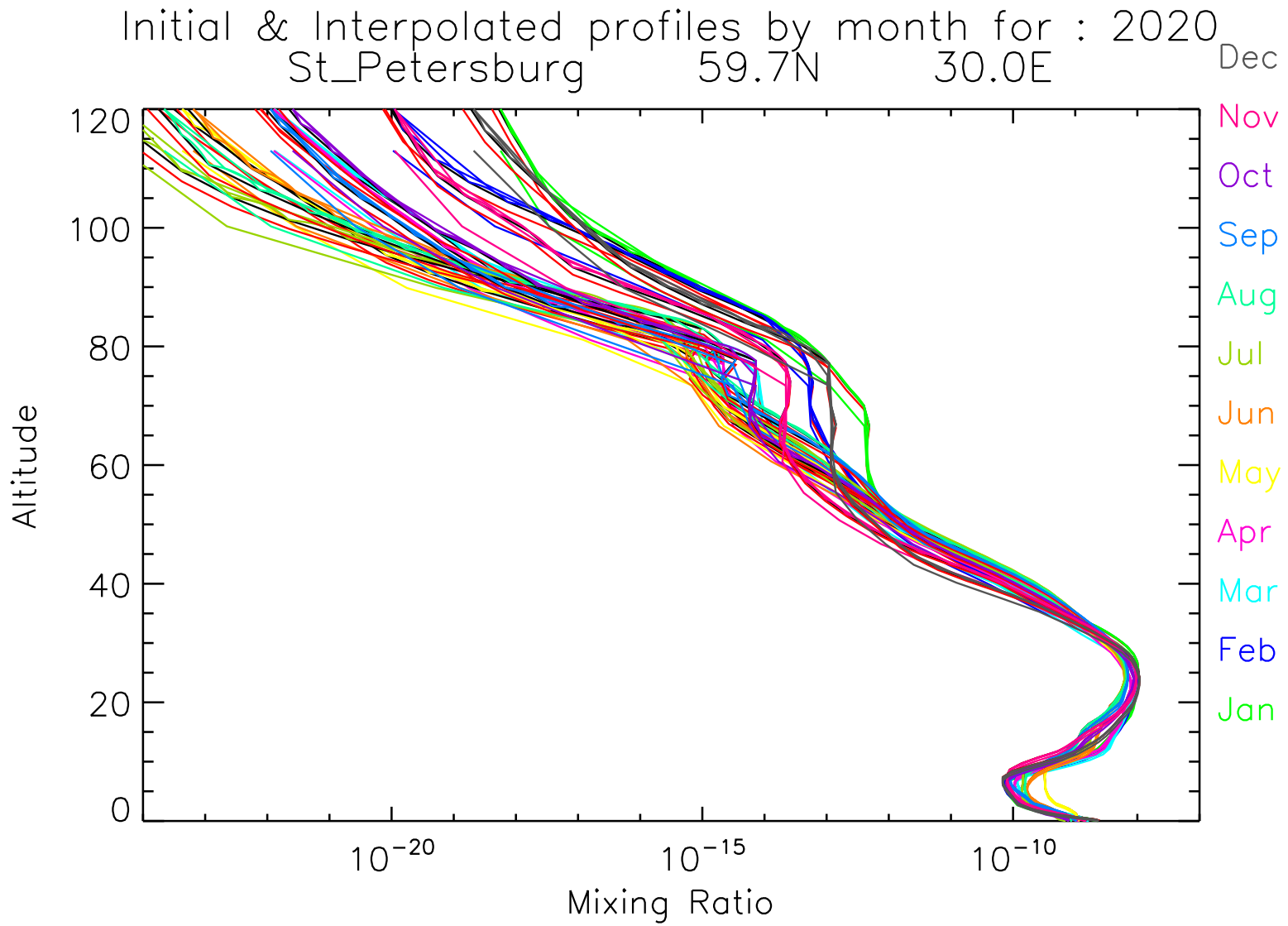

Initial & Interpolated profiles by month for : 2015
St_Petersburg 59.7N 30.0E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio

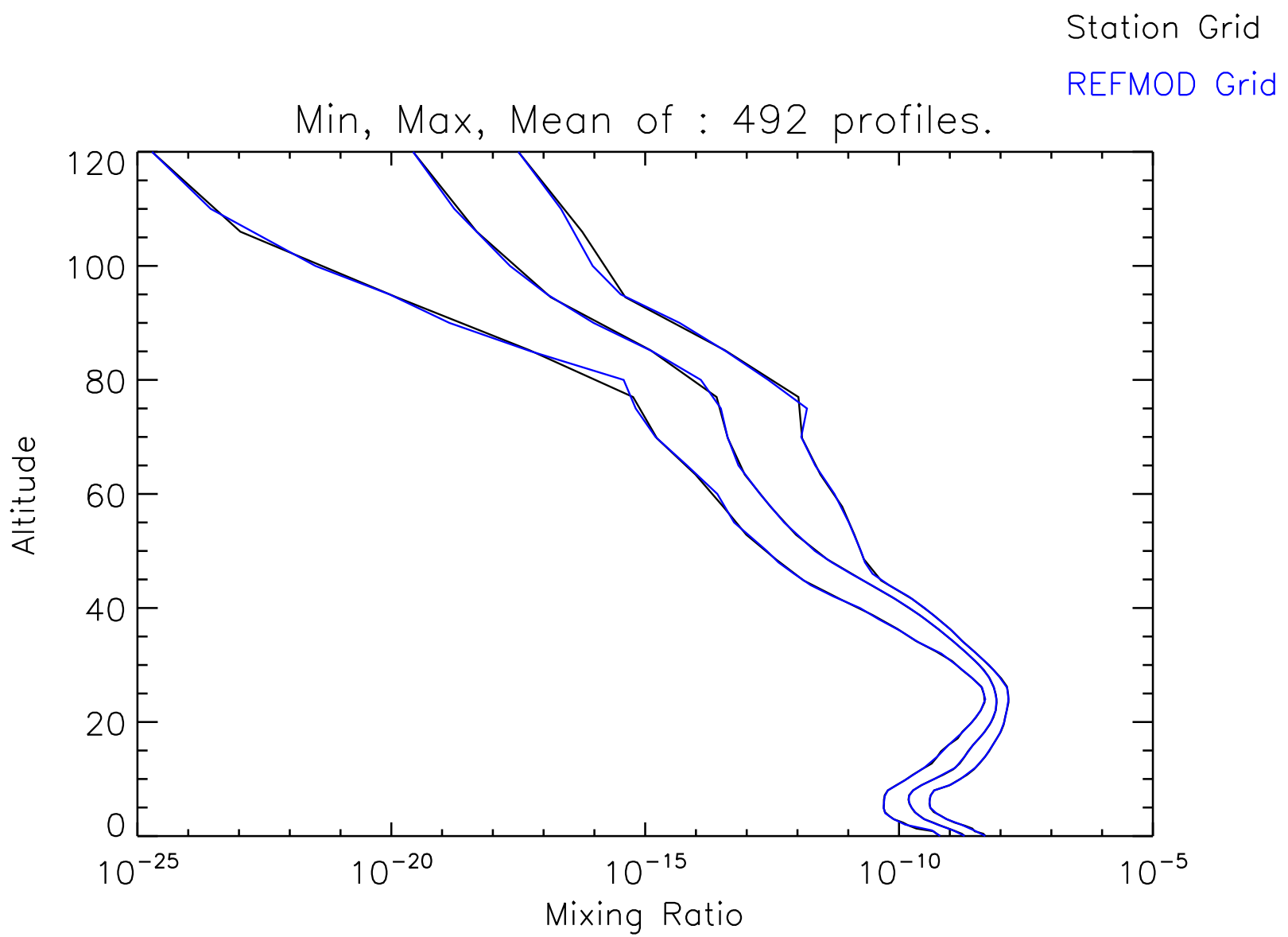

Initial & Interpolated profiles by month for : 2016
St_Petersburg 59.7N 30.0E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio

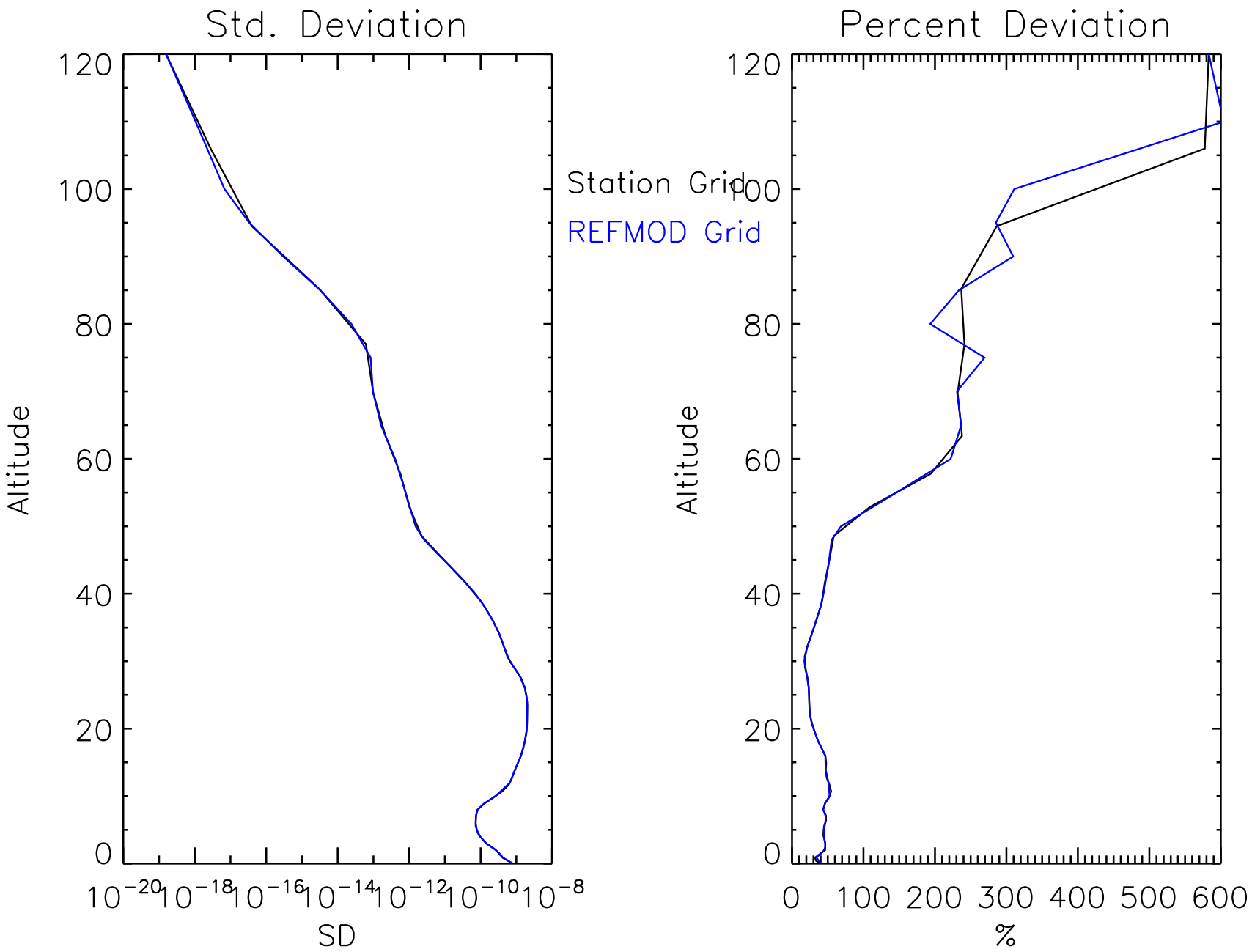

Initial & Interpolated profiles by month for : 2017
St_Petersburg 59.7N 30.0E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio

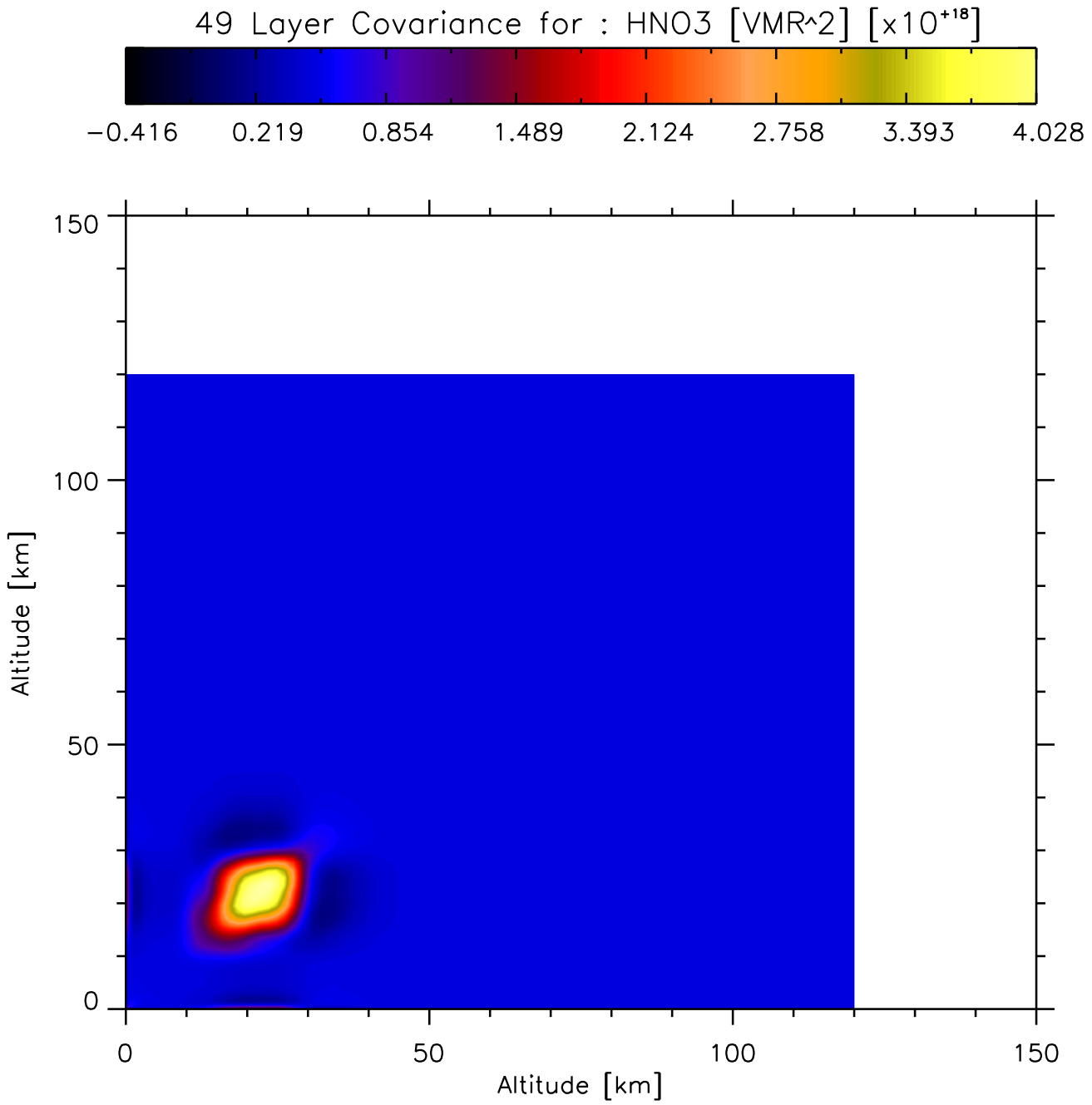

Initial & Interpolated profiles by month for : 2018
St_Petersburg 59.7N 30.0E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio

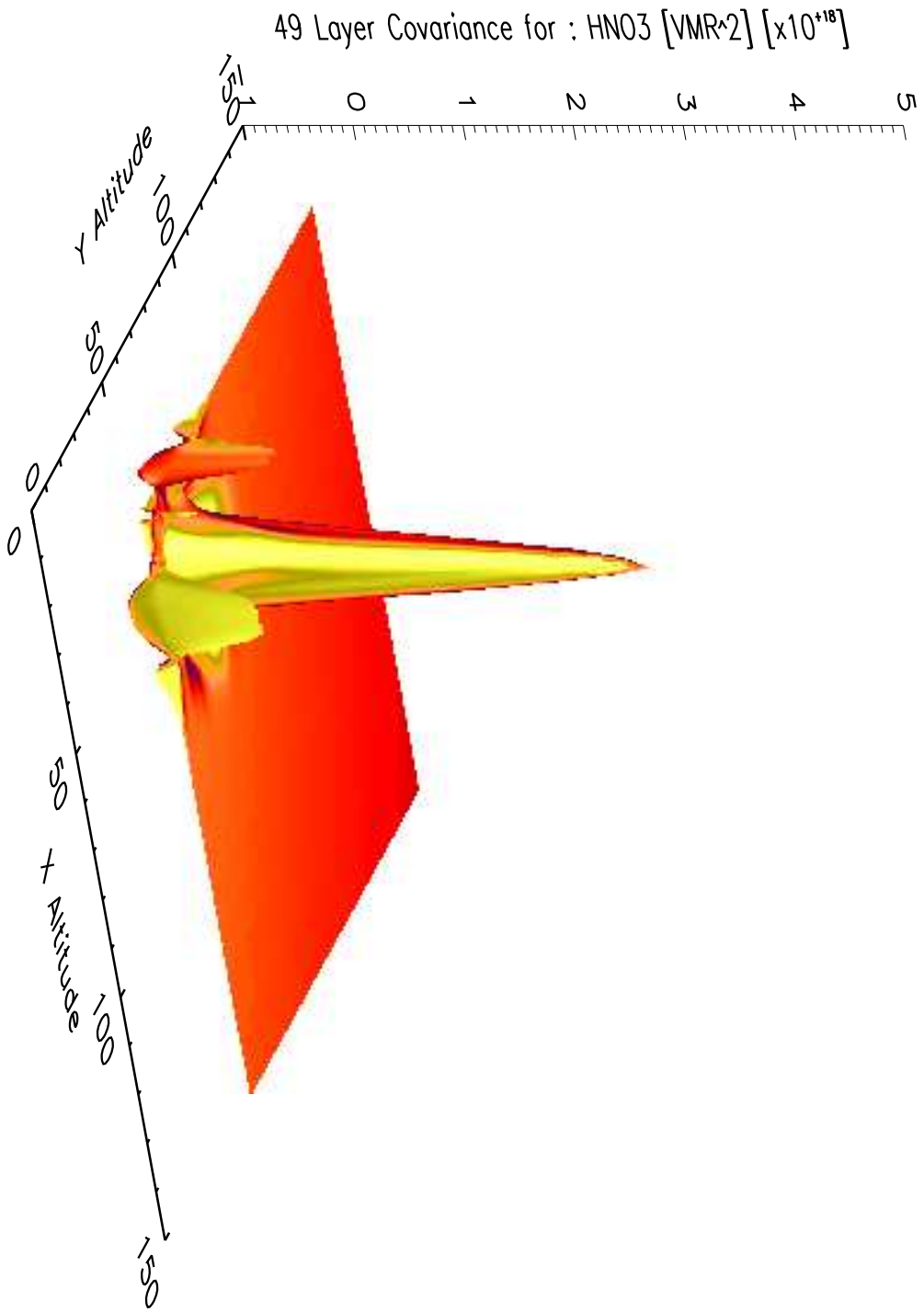

Initial & Interpolated profiles by month for : 2019
St_Petersburg 59.7N 30.0E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio

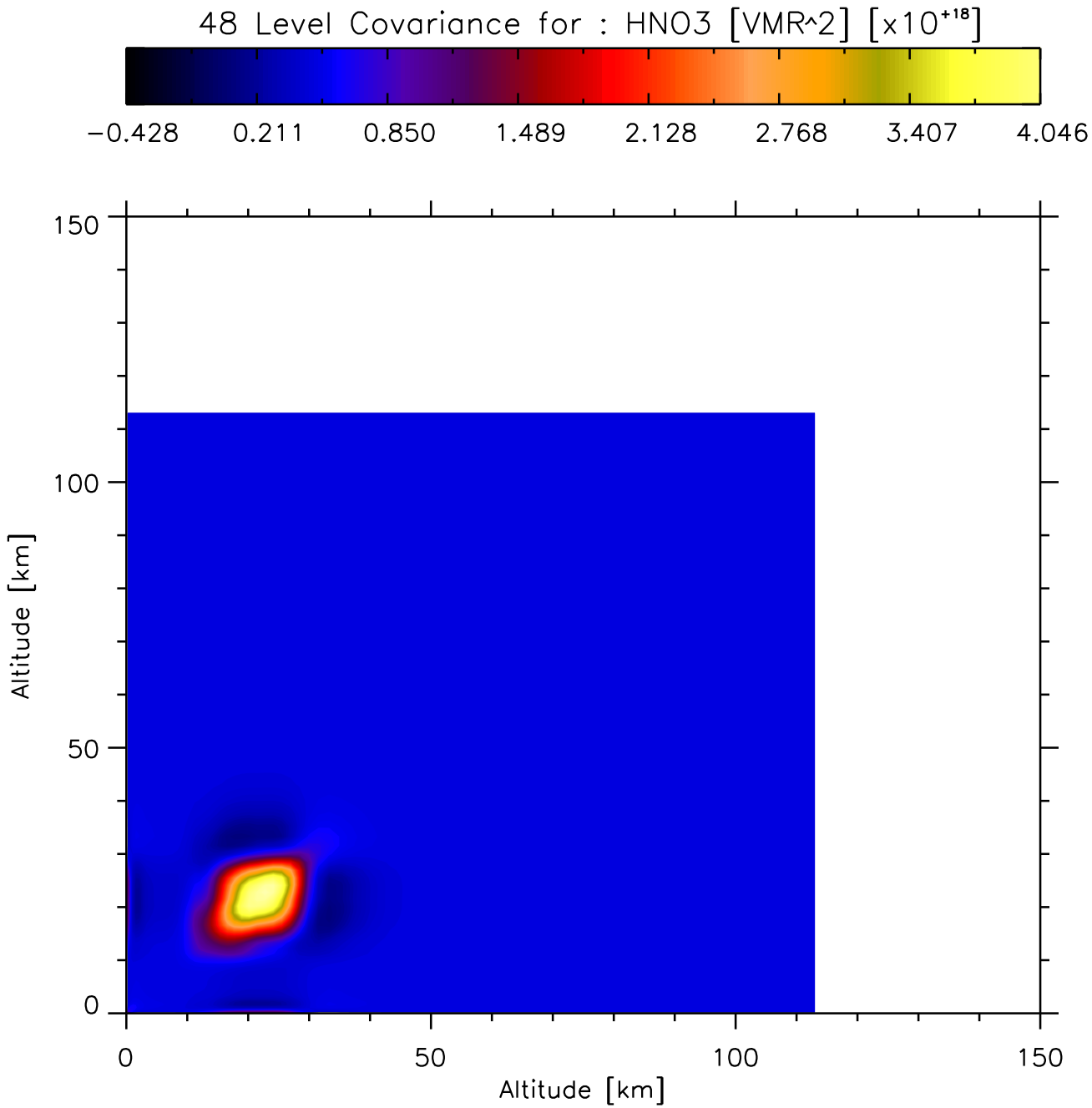

Initial & Interpolated profiles by month for : 2020
St_Petersburg 59.7N 30.0E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio

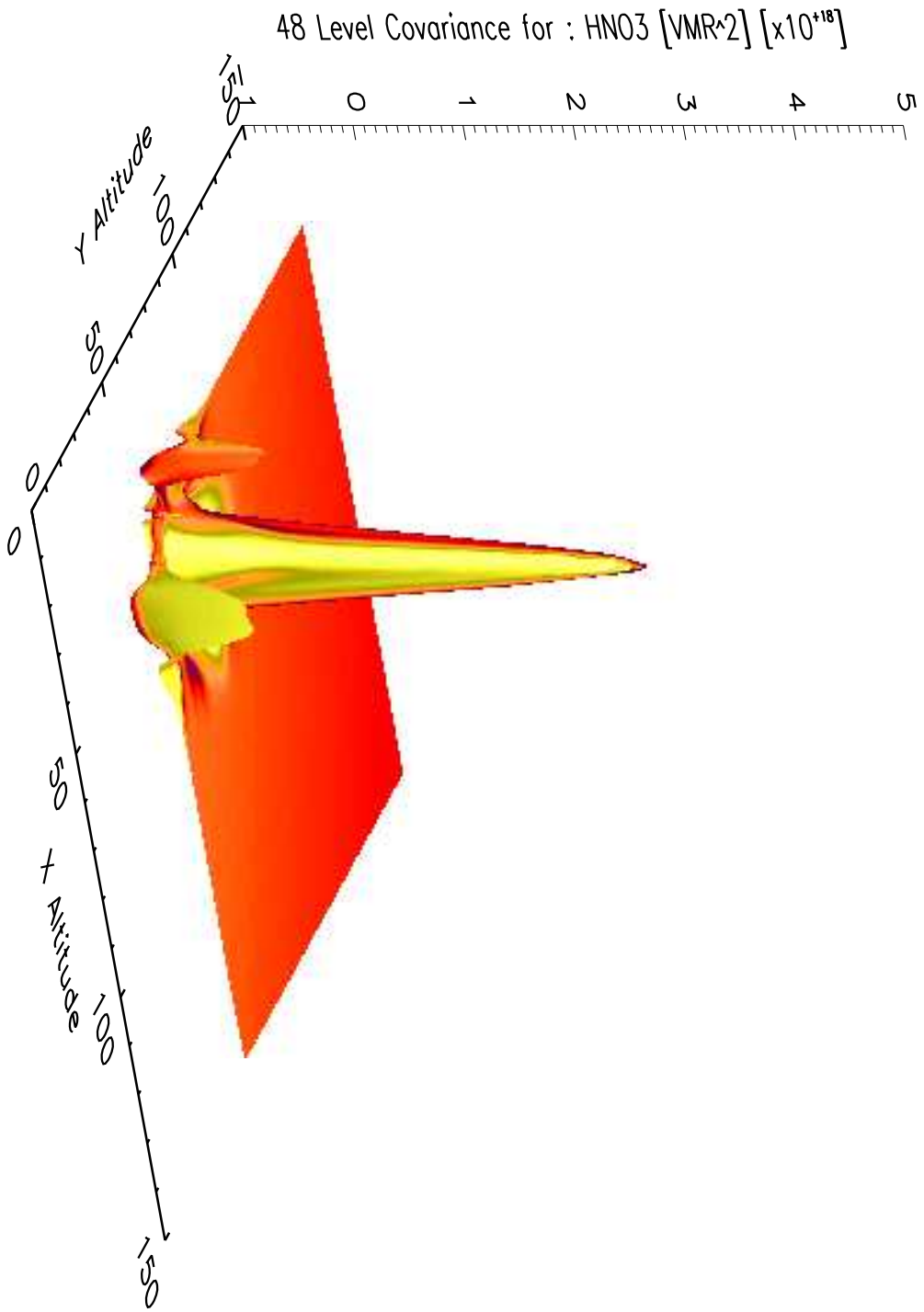

Station Grid
REFMOD Grid
Min, Max, Mean of : 492 profiles.
120
100
80
60
40
20
0
Altitude
10^{-25}
10^{-20}
10^{-15}
10^{-10}
10^{-5}
Mixing Ratio


Std. Deviation
Percent Deviation
Station Grid
REFMOD Grid
Altitude
Altitude
120
100
80
60
40
20
0
10^{-20} 10^{-18} 10^{-16} 10^{-14} 10^{-12} 10^{-10} 10^{-8}
SD
0 100 200 300 400 500 600
%


49 Layer Covariance for : HNO3 [VMR^2] [x10^+18]
−0.416
0.219
0.854
1.489
2.124
2.758
3.393
4.028
150
100
50
0
Altitude [km]
0
50
100
150
Altitude [km]


49 Layer Covariance for : HNO3 [VMR^2] [x10^+18]
0
1
2
3
4
5
Y Altitude
150
100
50
0
0
50
100
150
X Altitude


48 Level Covariance for : HNO3 [VMR^2] [x10^+18]
−0.428
0.211
0.850
1.489
2.128
2.768
3.407
4.046
150
100
50
0
Altitude [km]
0
50
100
150
Altitude [km]


48 Level Covariance for : HNO3 [VMR^2] [x10^+18]
0
1
2
3
4
5
150
100
50
0
Y Altitude
0
50
100
150
X Altitude