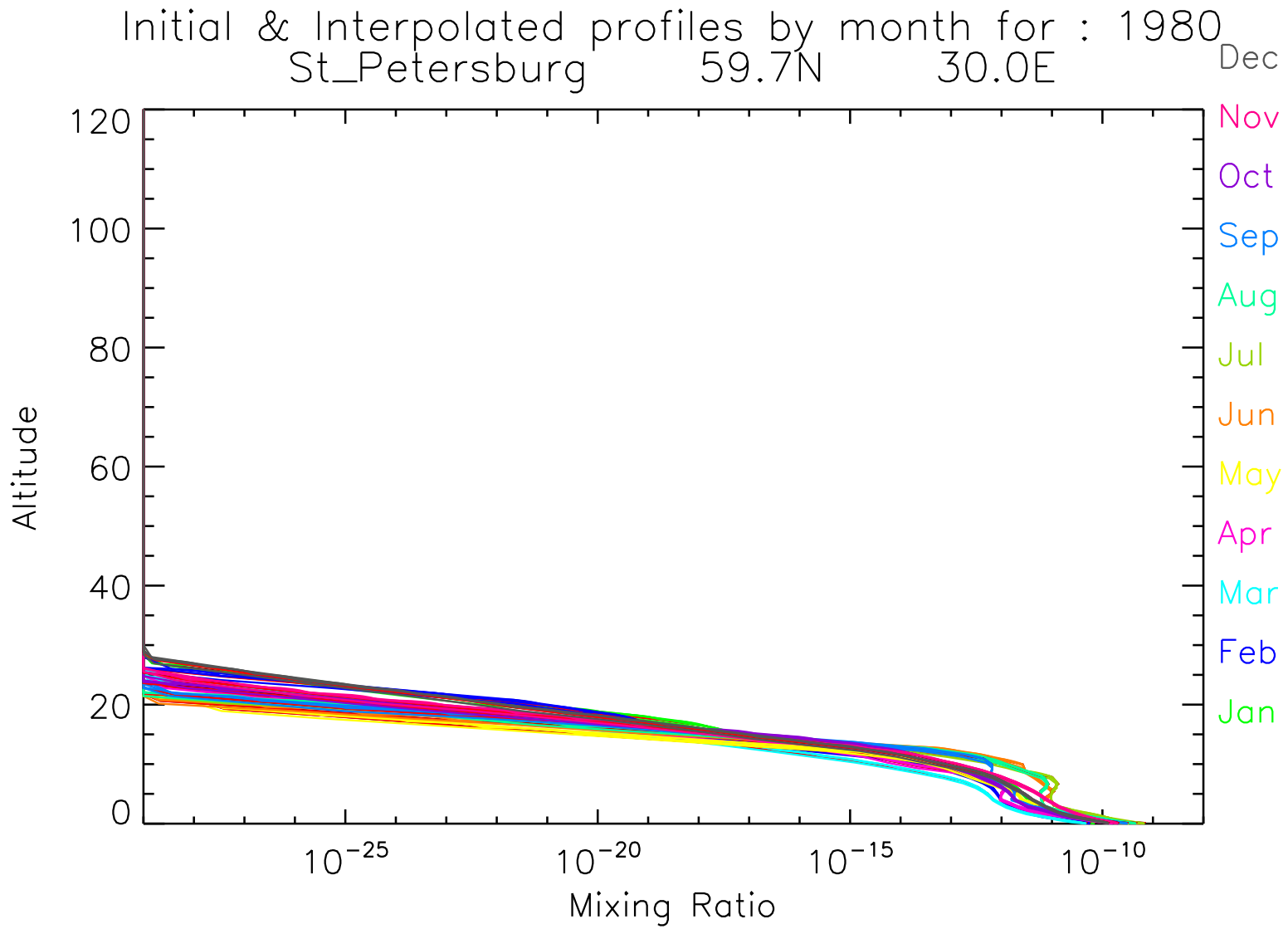
Initial & Interpolated profiles by month for : 1980
St_Petersburg 59.7N 30.0E
Dec
Nov
Oct
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120
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Altitude
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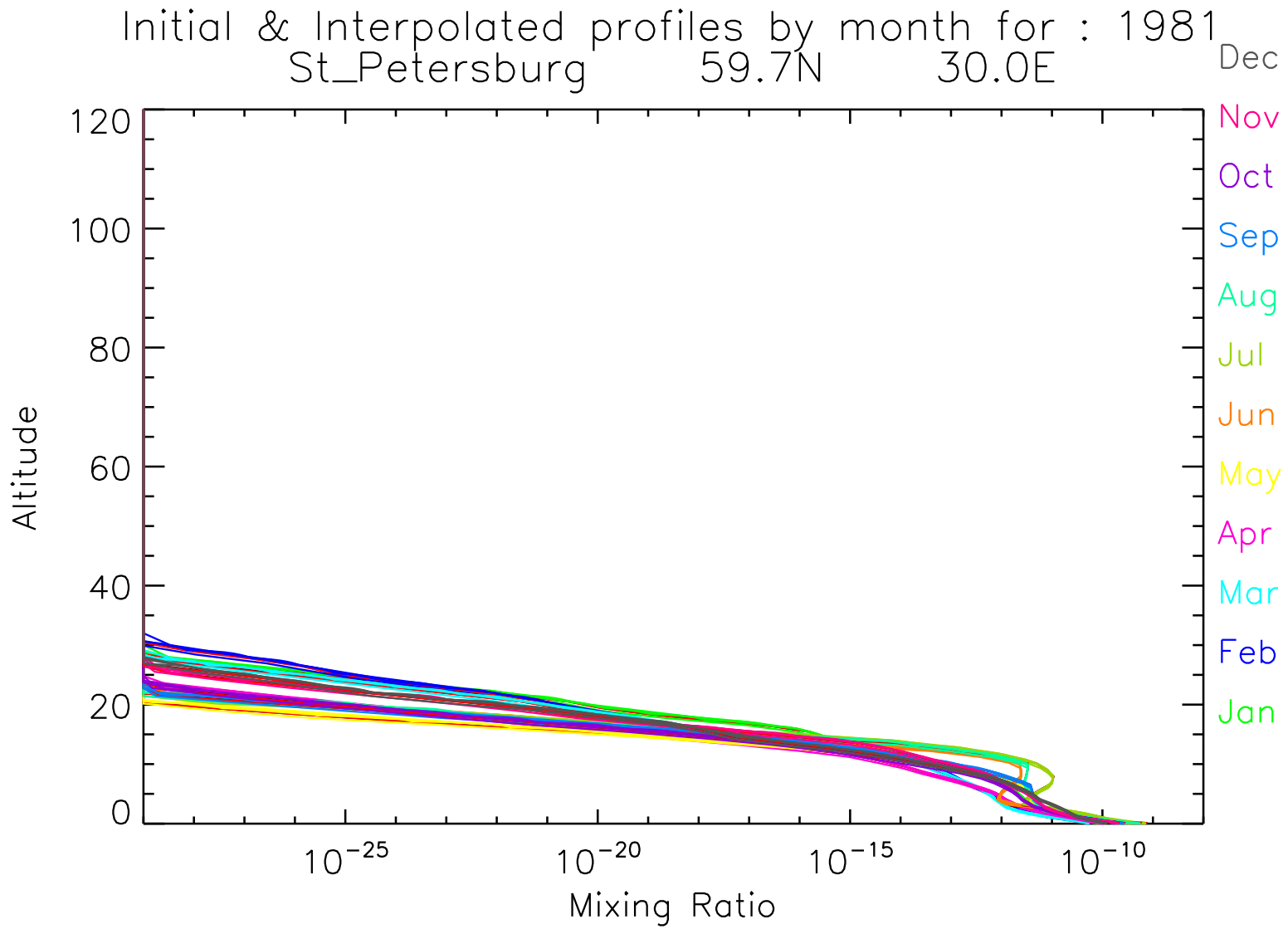
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1981
St_Petersburg 59.7N 30.0E
Dec
Nov
Oct
Sep
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May
Apr
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Feb
Jan
120
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Altitude
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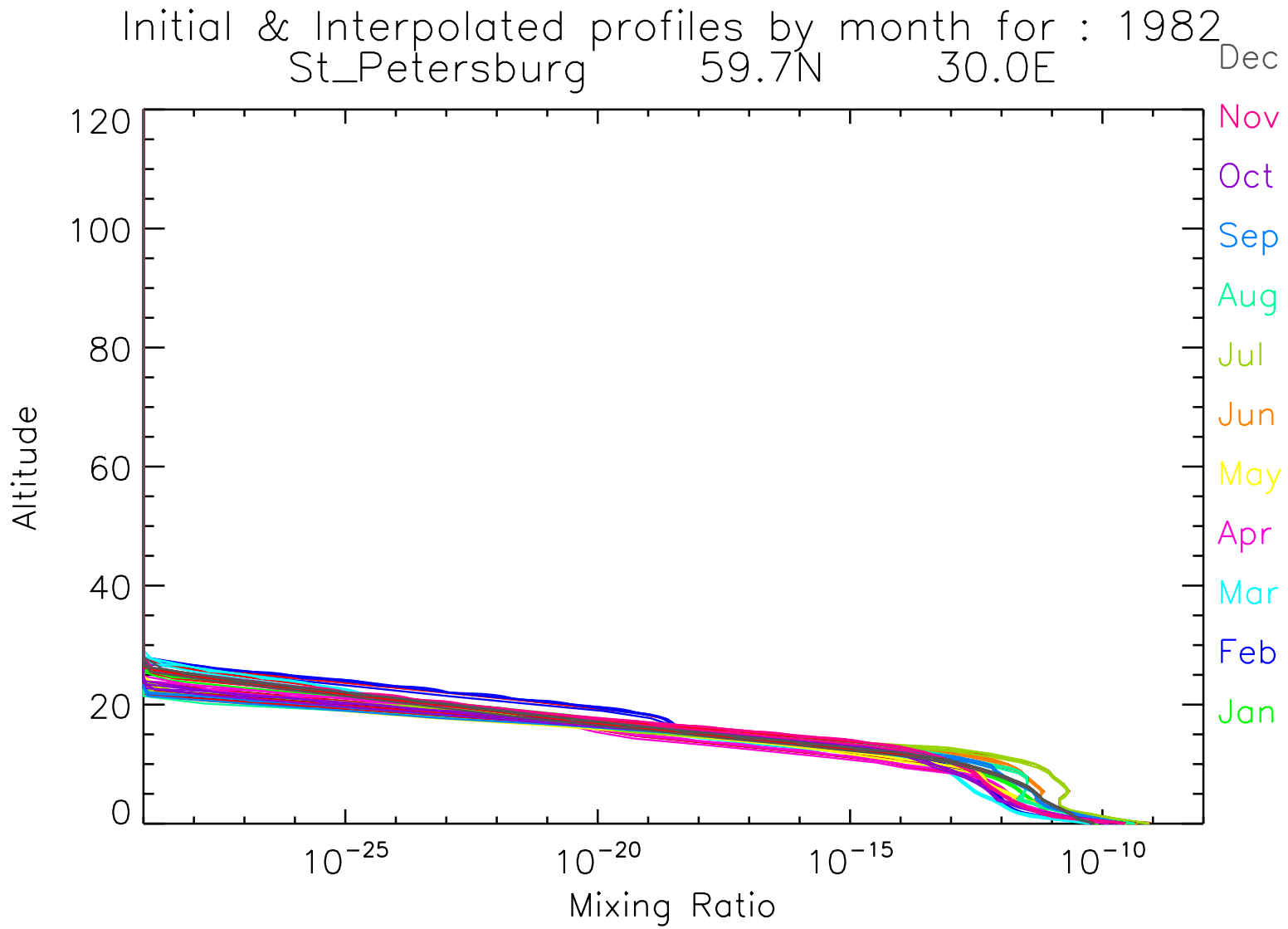
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


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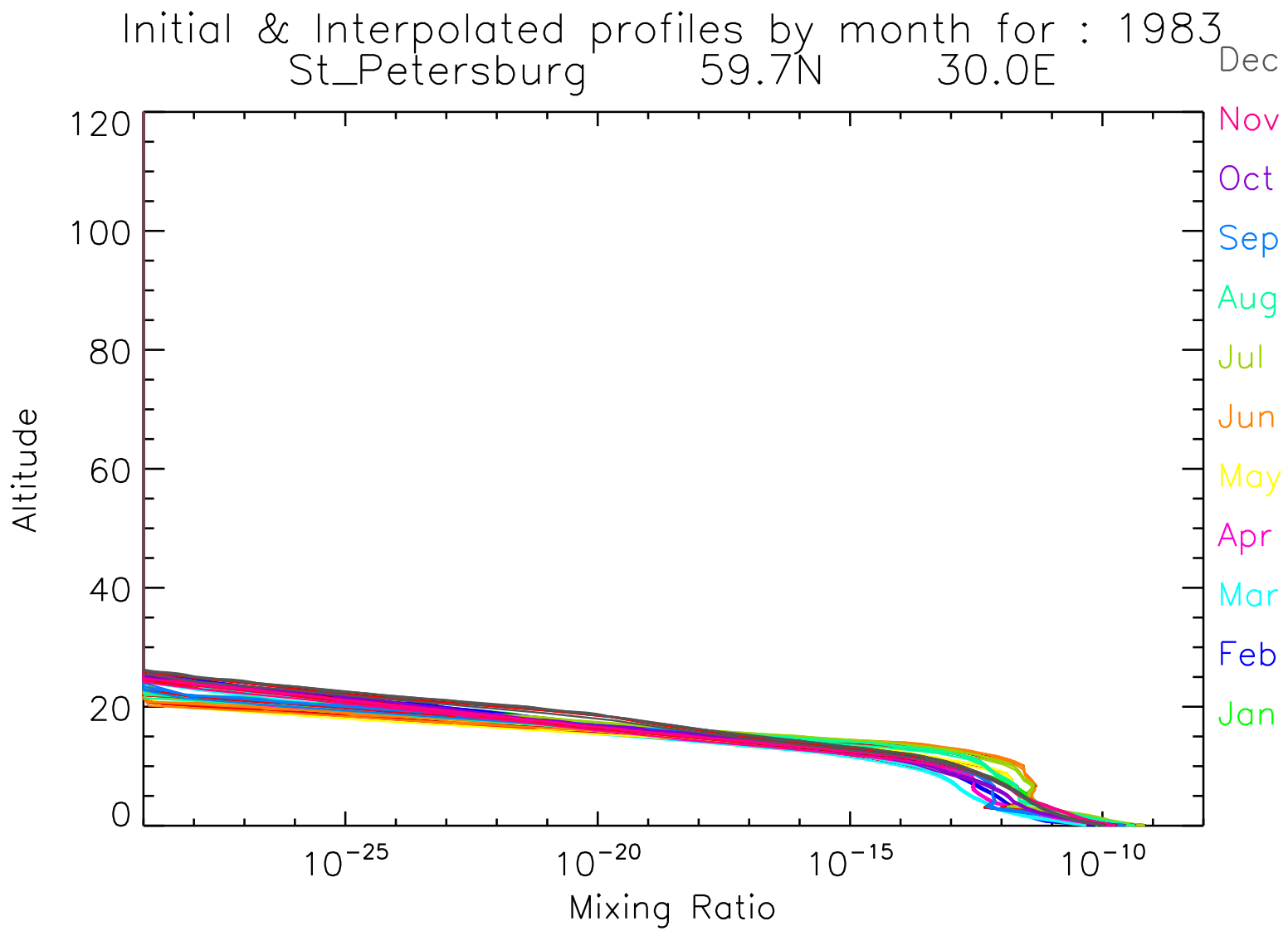
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1983
St_Petersburg 59.7N 30.0E
Dec
Nov
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Altitude
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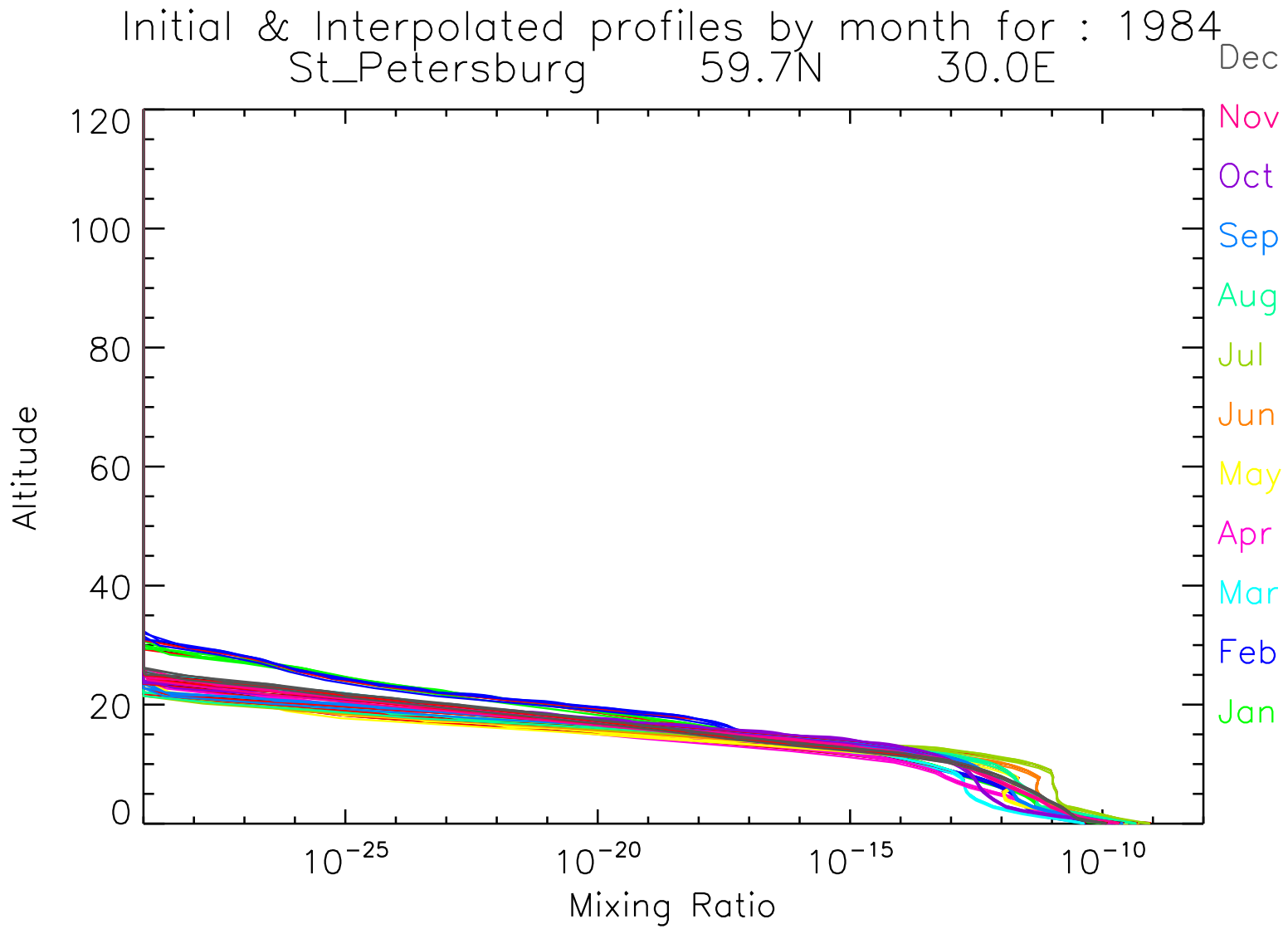
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1984
St_Petersburg 59.7N 30.0E
Dec
Nov
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Altitude
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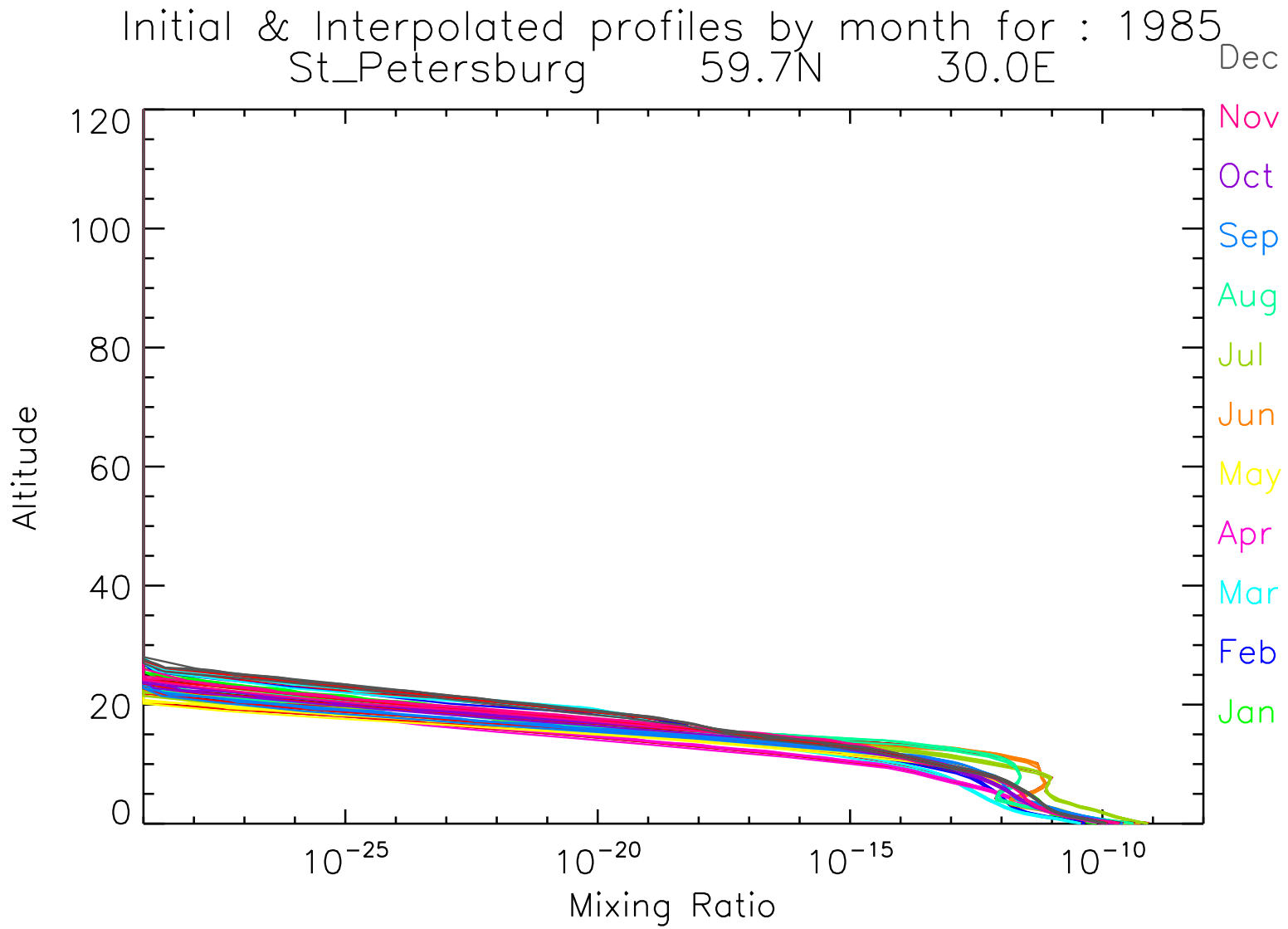
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1985
St_Petersburg 59.7N 30.0E
Dec
Nov
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Altitude
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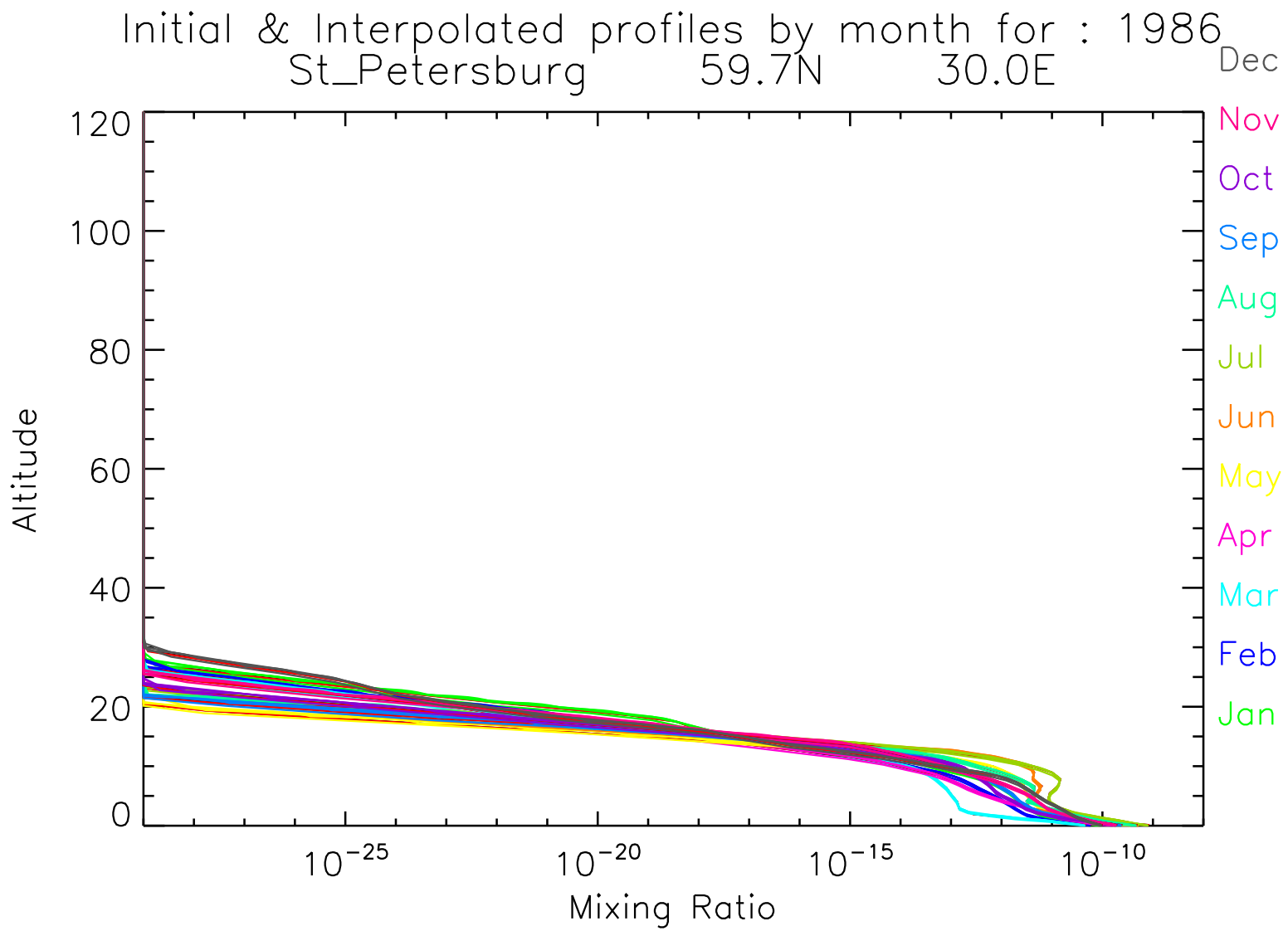
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1986
St_Petersburg 59.7N 30.0E
Dec
Nov
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Altitude
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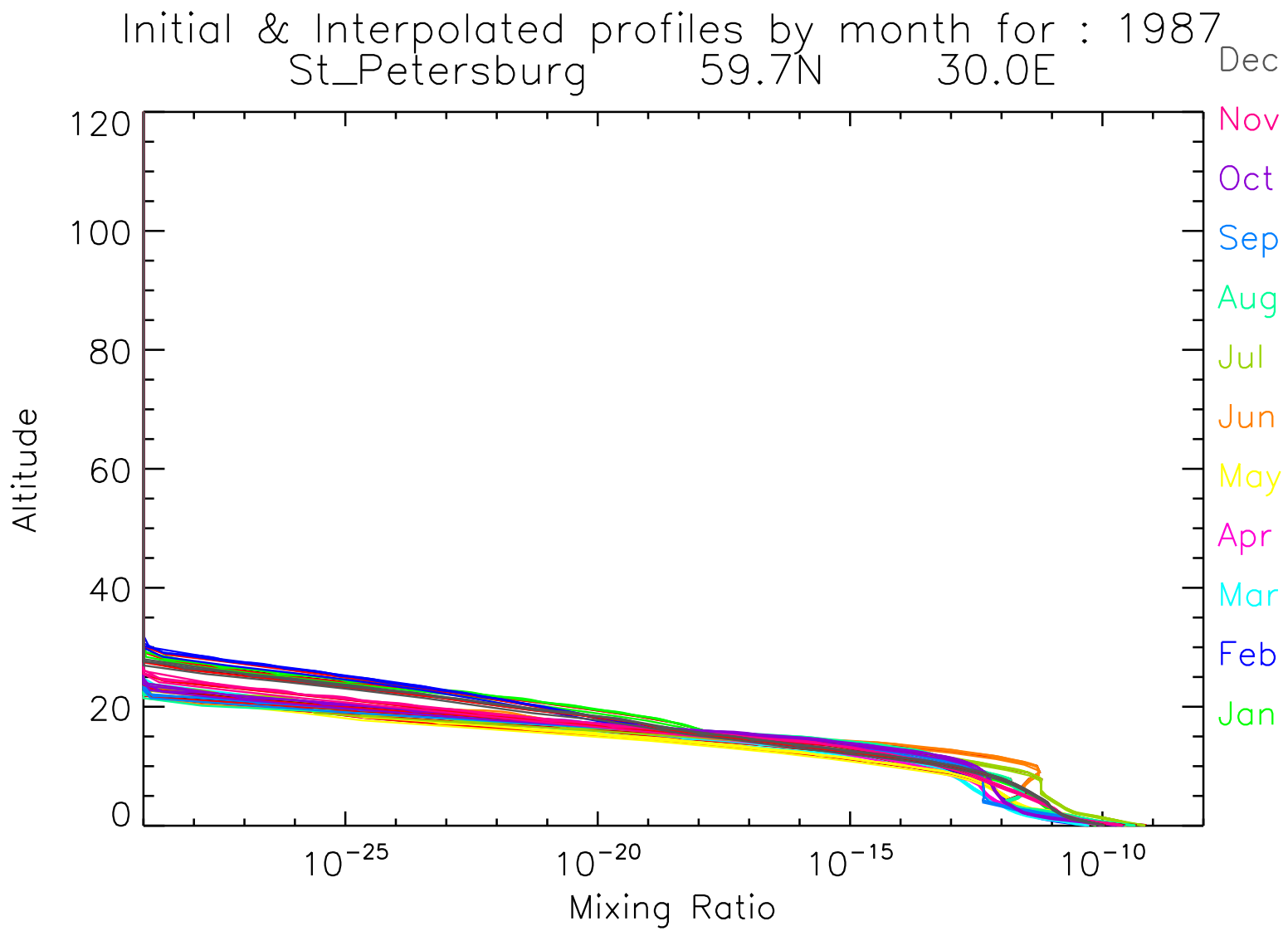
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1987
St_Petersburg 59.7N 30.0E
Dec
Nov
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Altitude
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$10^{-20}$
$10^{-15}$
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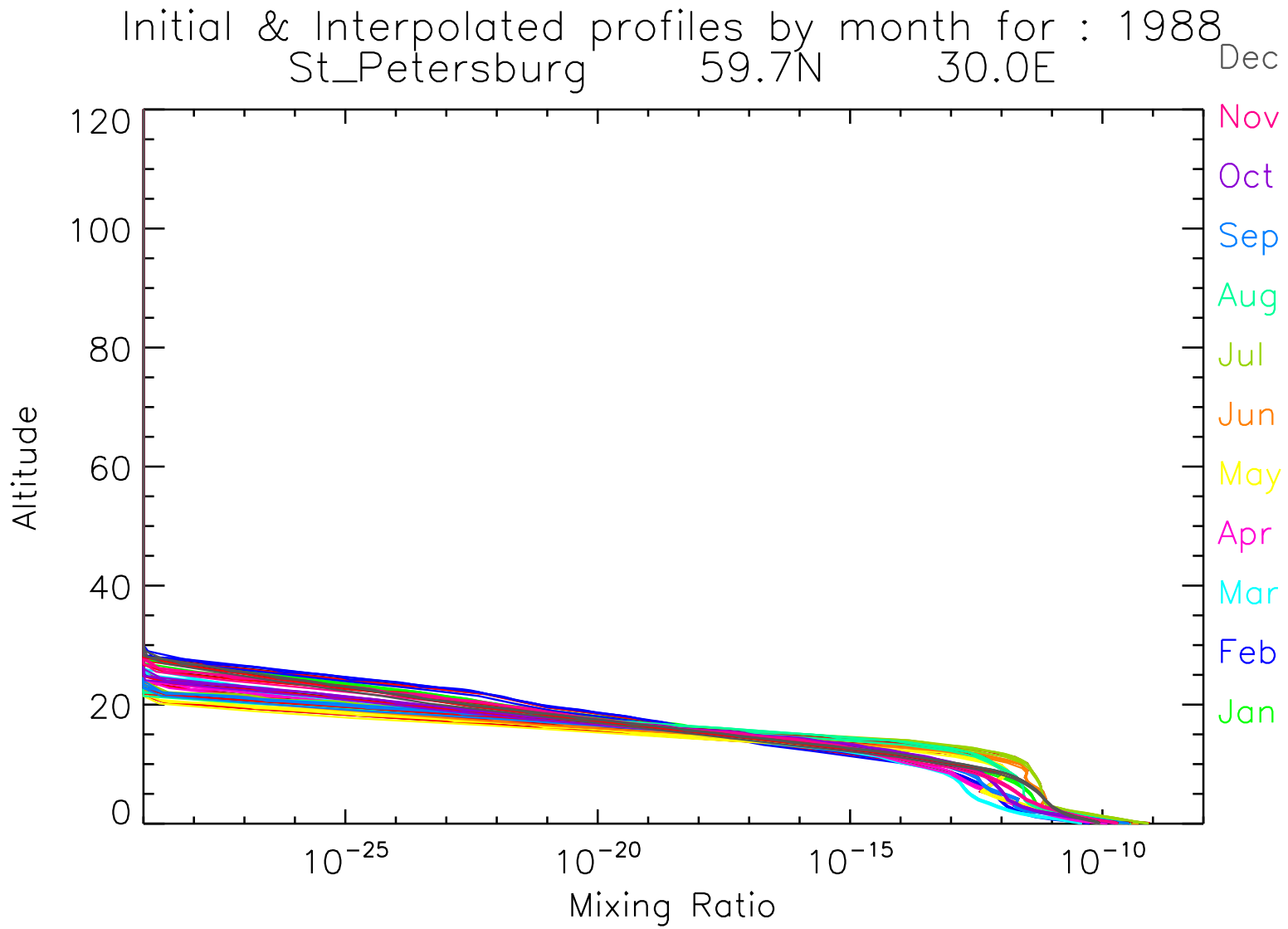
Mixing Ratio


Initial & Interpolated profiles by month for : 1988
St_Petersburg 59.7N 30.0E
Dec
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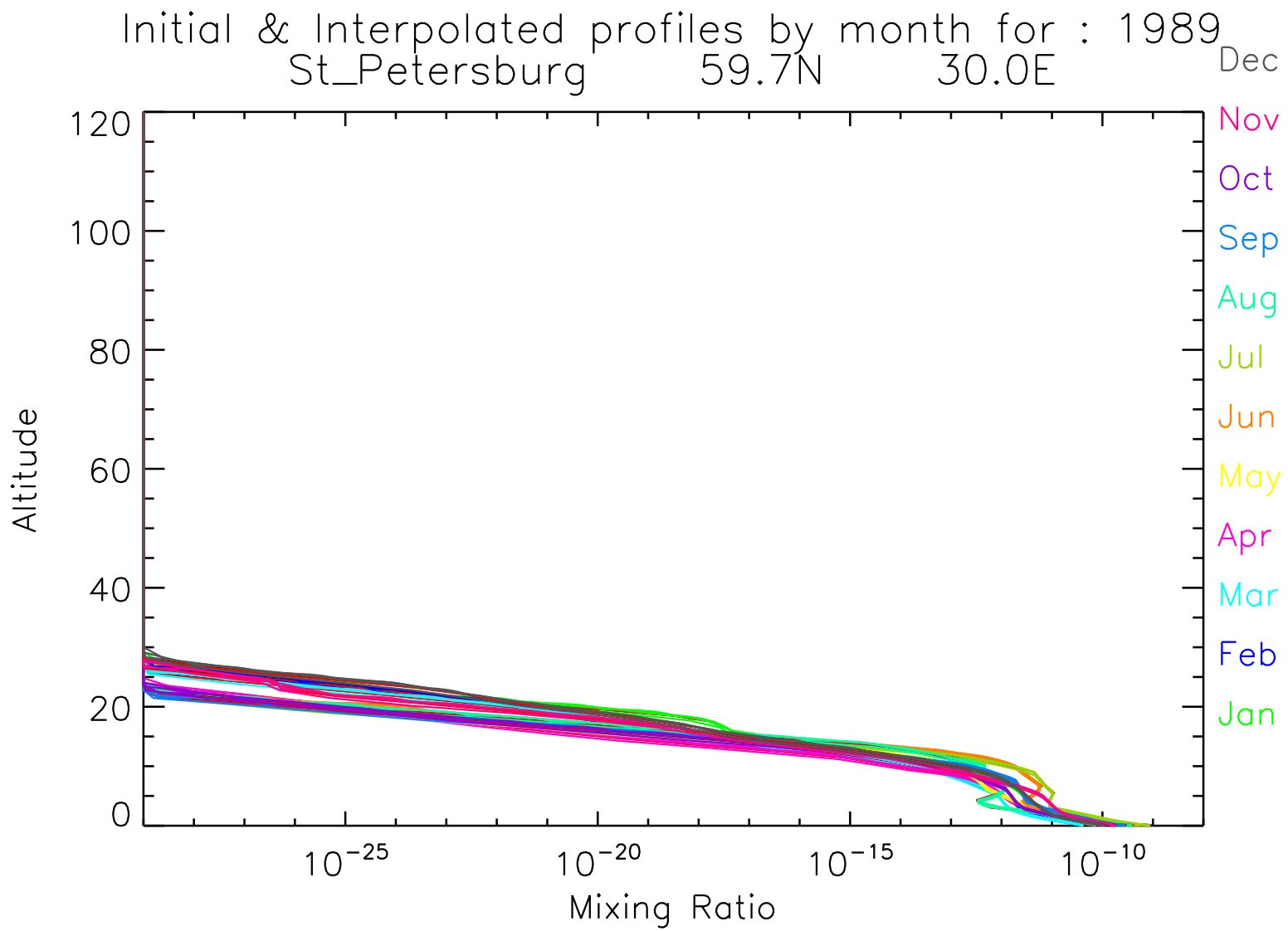
Altitude
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1989
St_Petersburg 59.7N 30.0E
Dec
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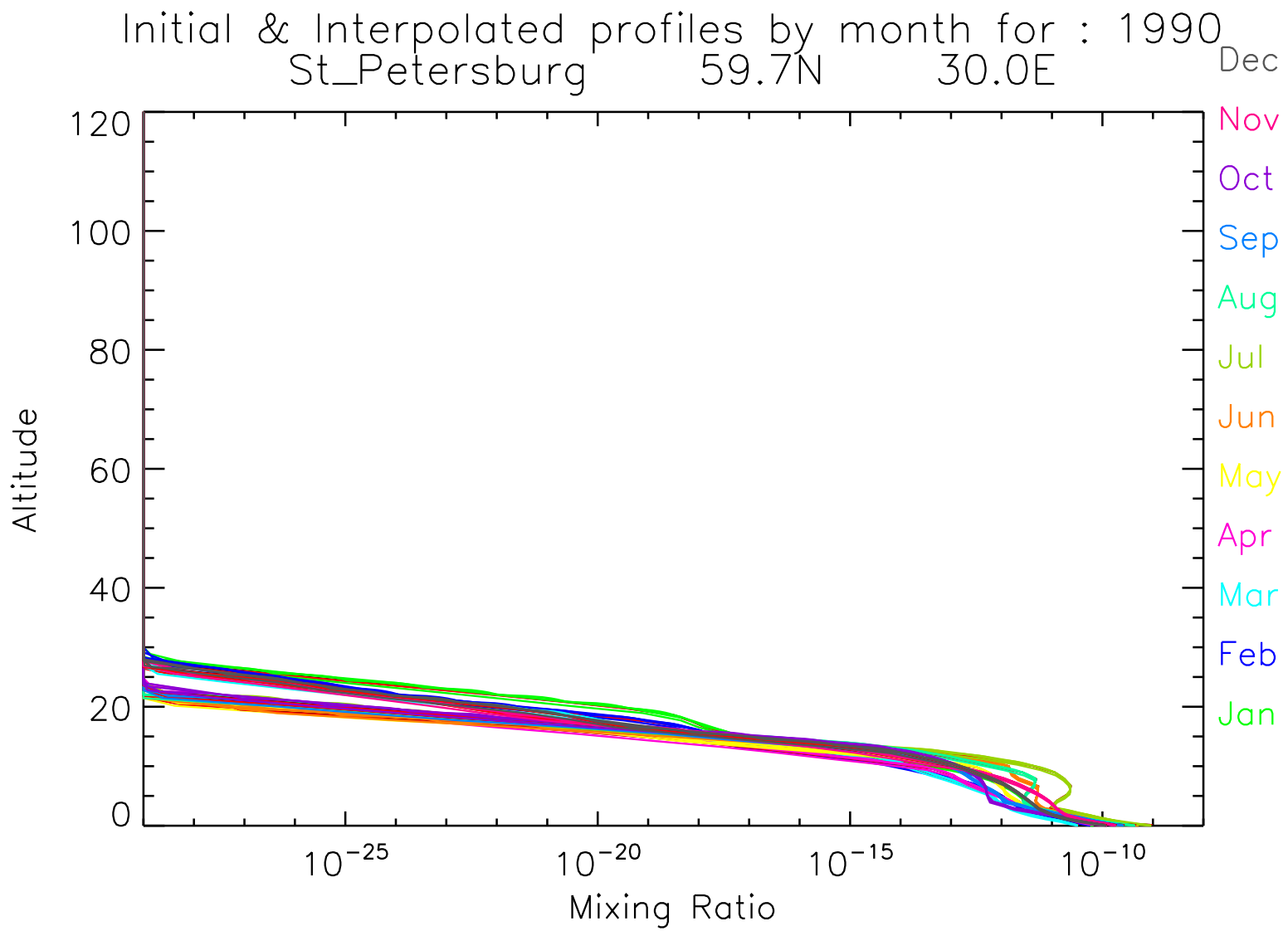
Altitude
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1990
St_Petersburg 59.7N 30.0E
Dec
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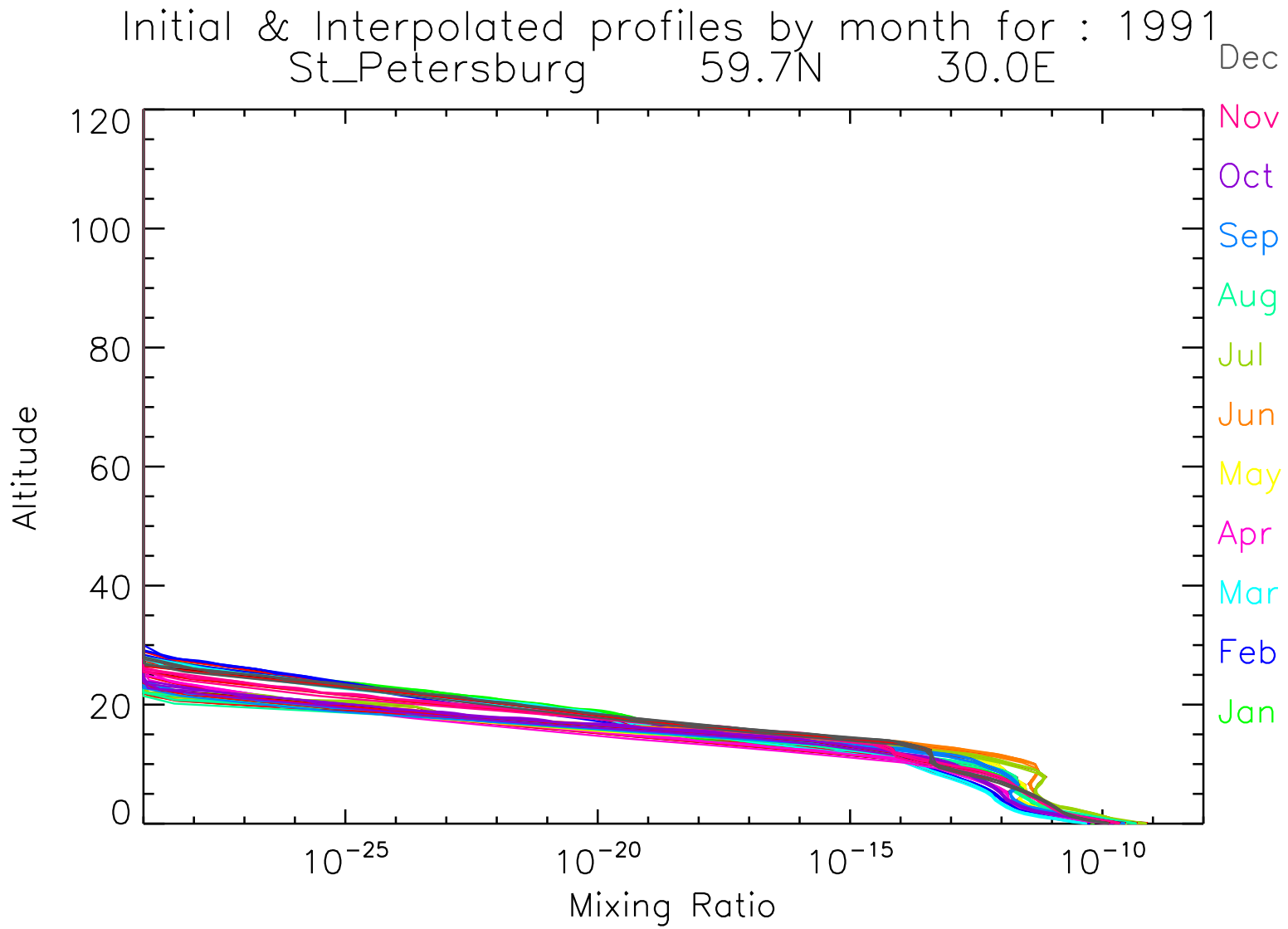
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1991
St_Petersburg 59.7N 30.0E
Dec
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Altitude
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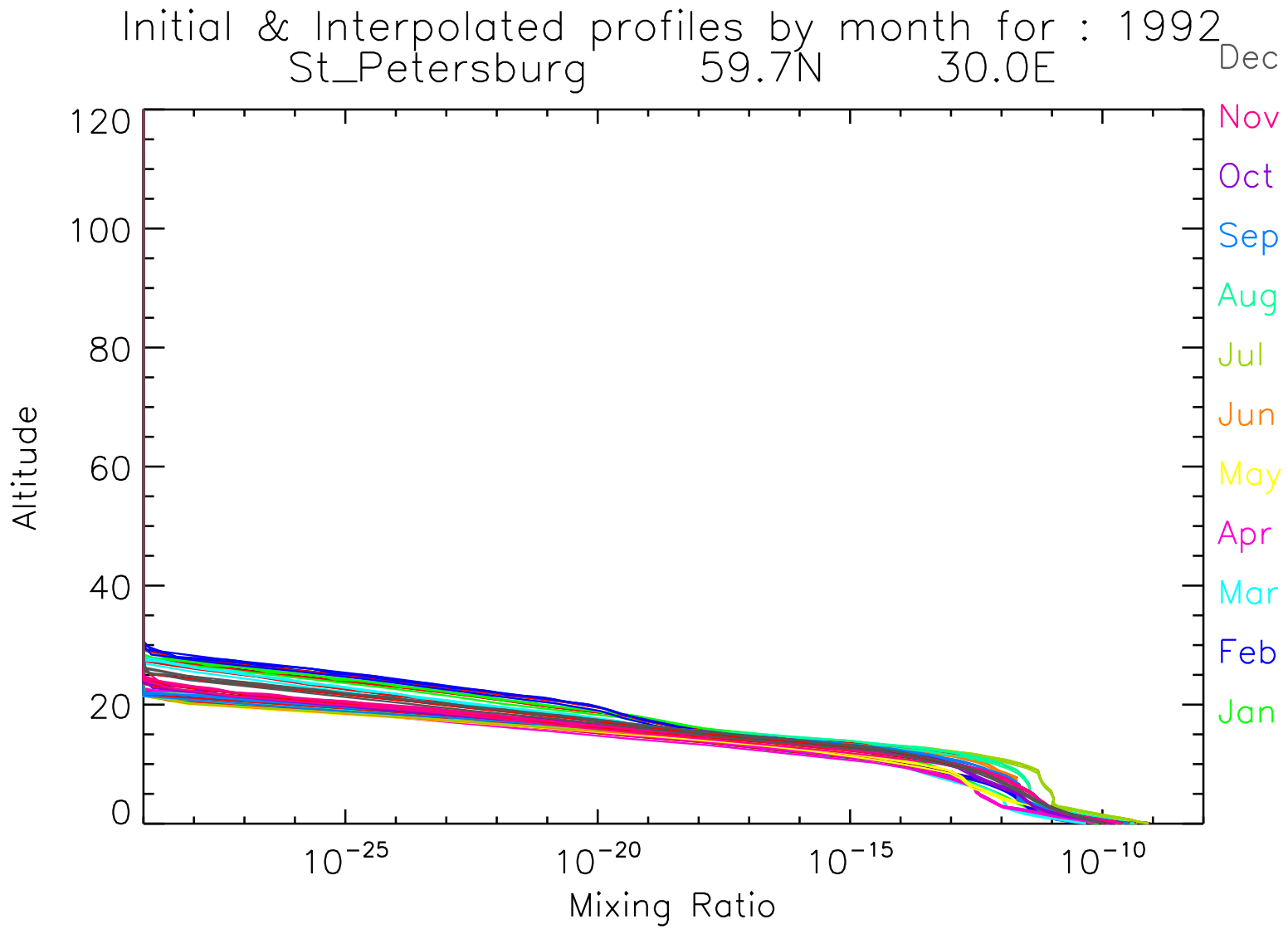
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1992
St_Petersburg 59.7N 30.0E
Dec
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Altitude
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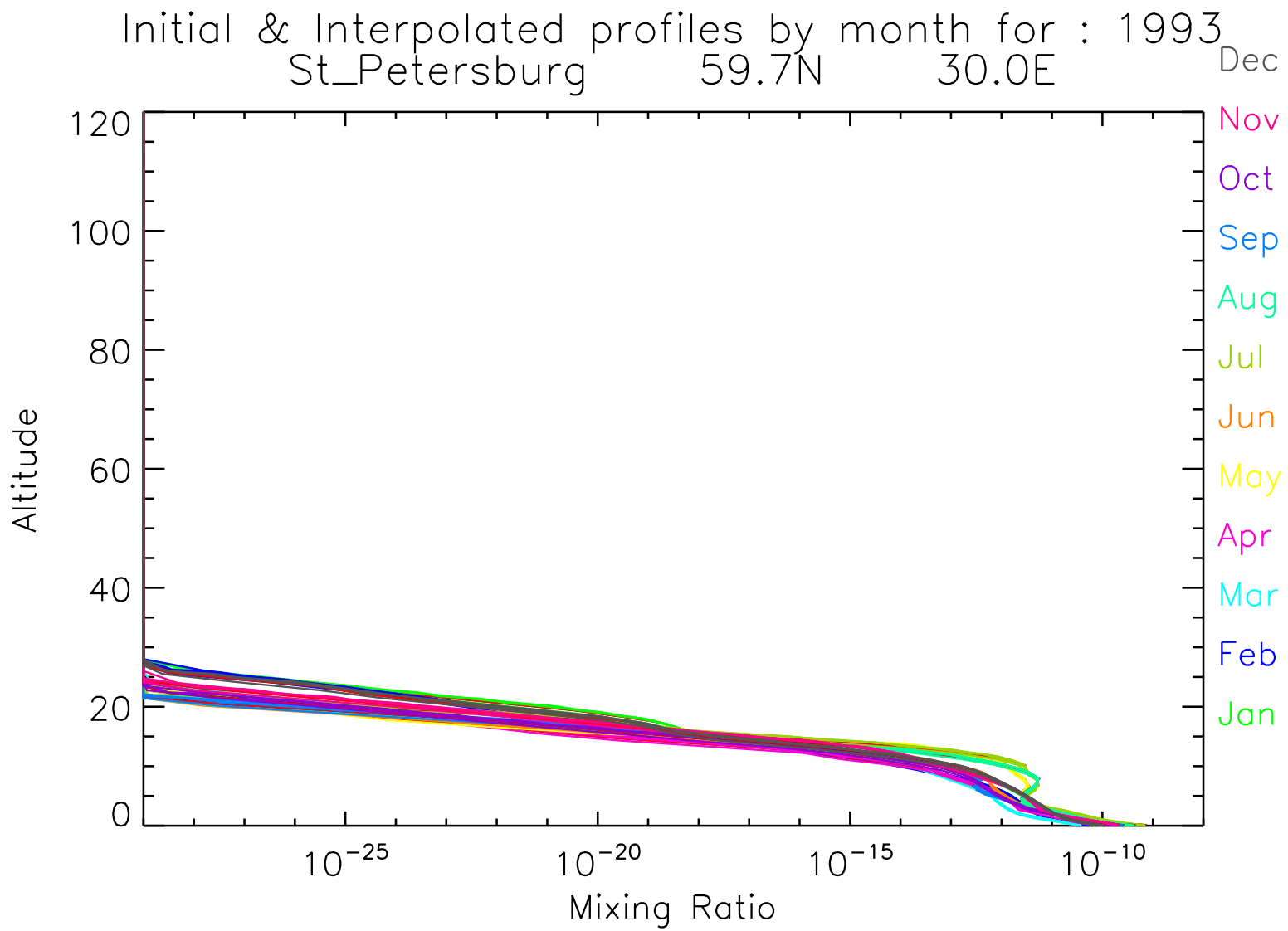
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1993
St_Petersburg 59.7N 30.0E
Dec
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Altitude
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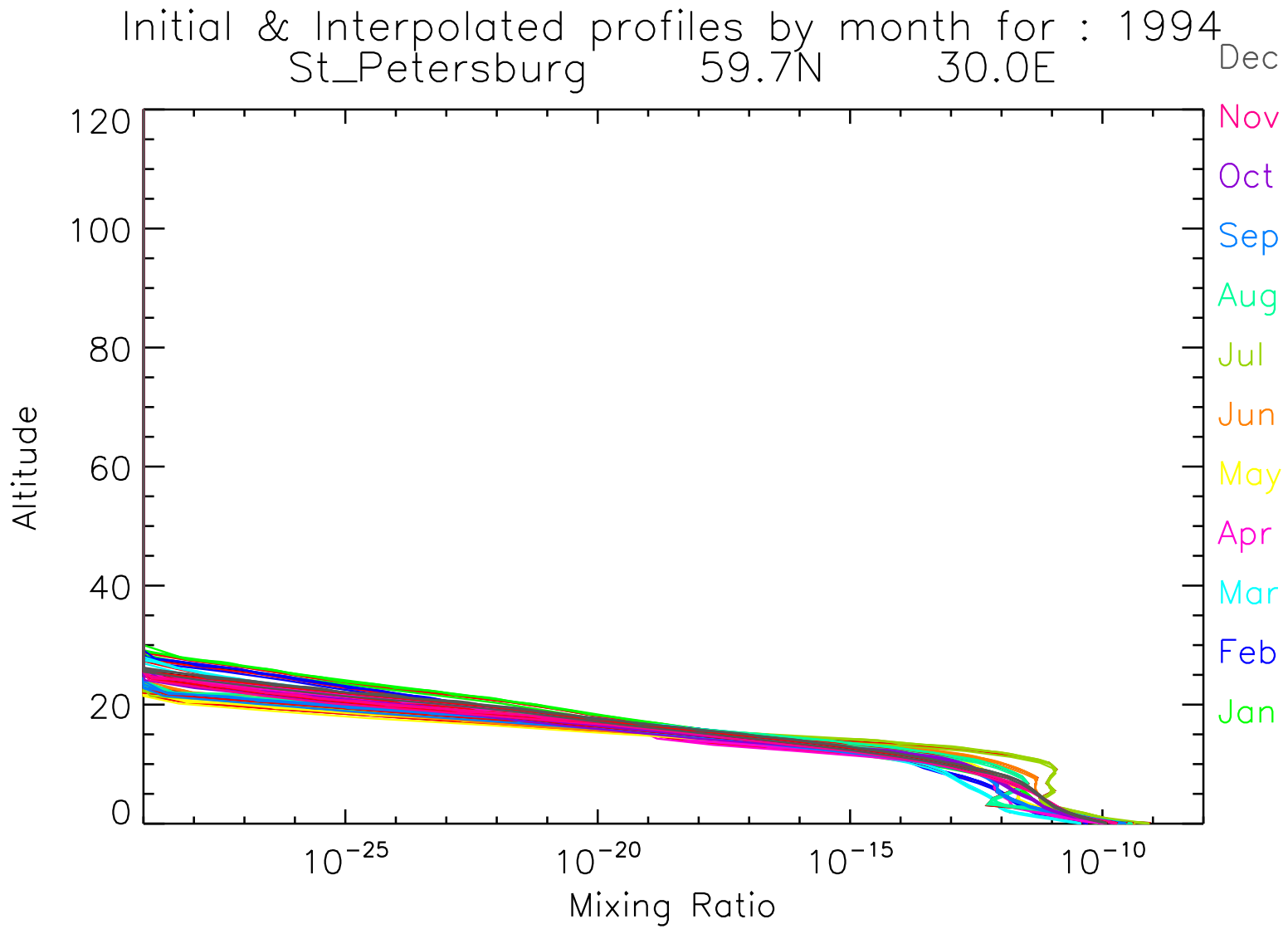
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1994
St_Petersburg 59.7N 30.0E
Dec
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Altitude
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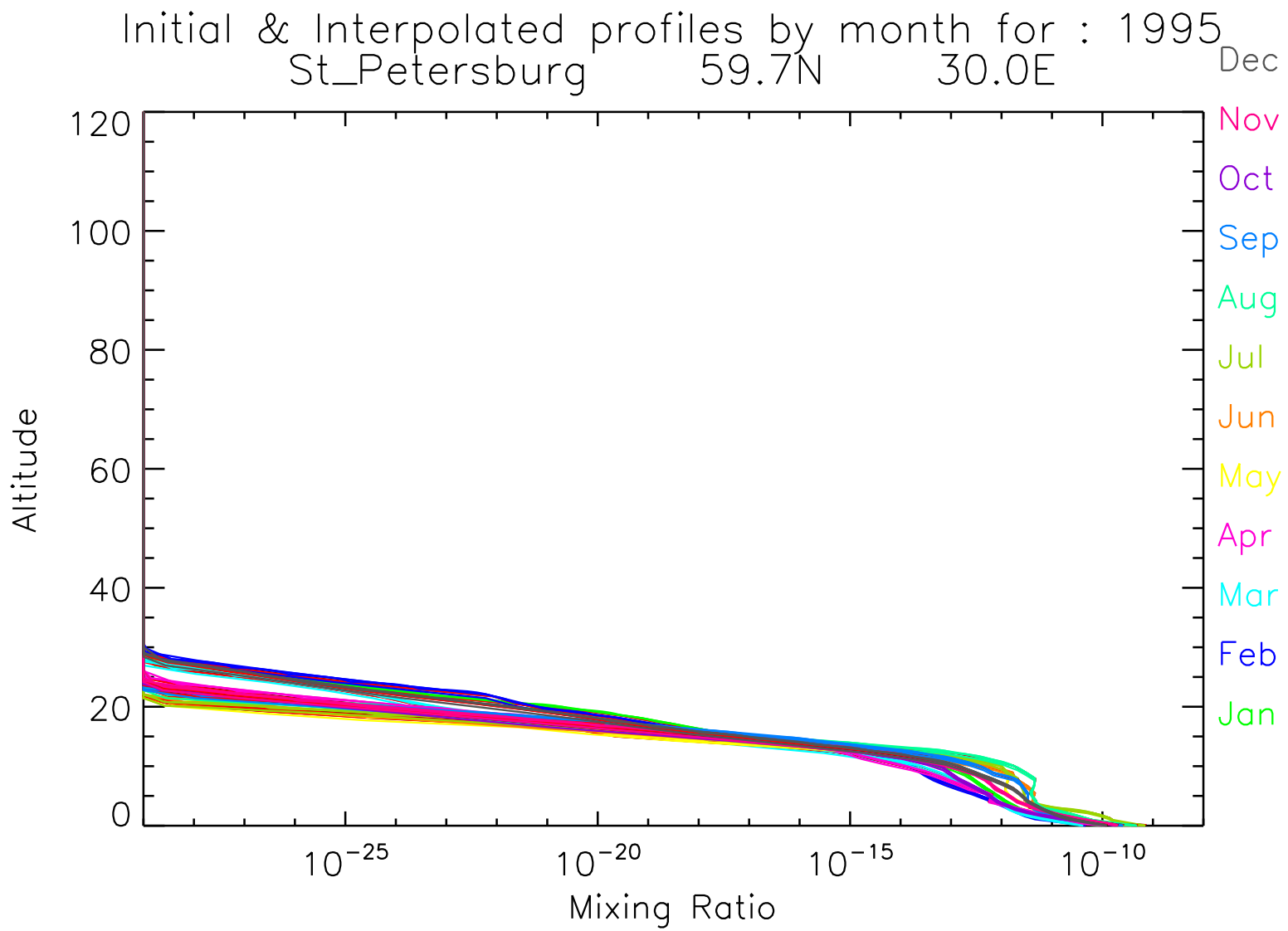
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1995
St_Petersburg 59.7N 30.0E
Dec
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Altitude
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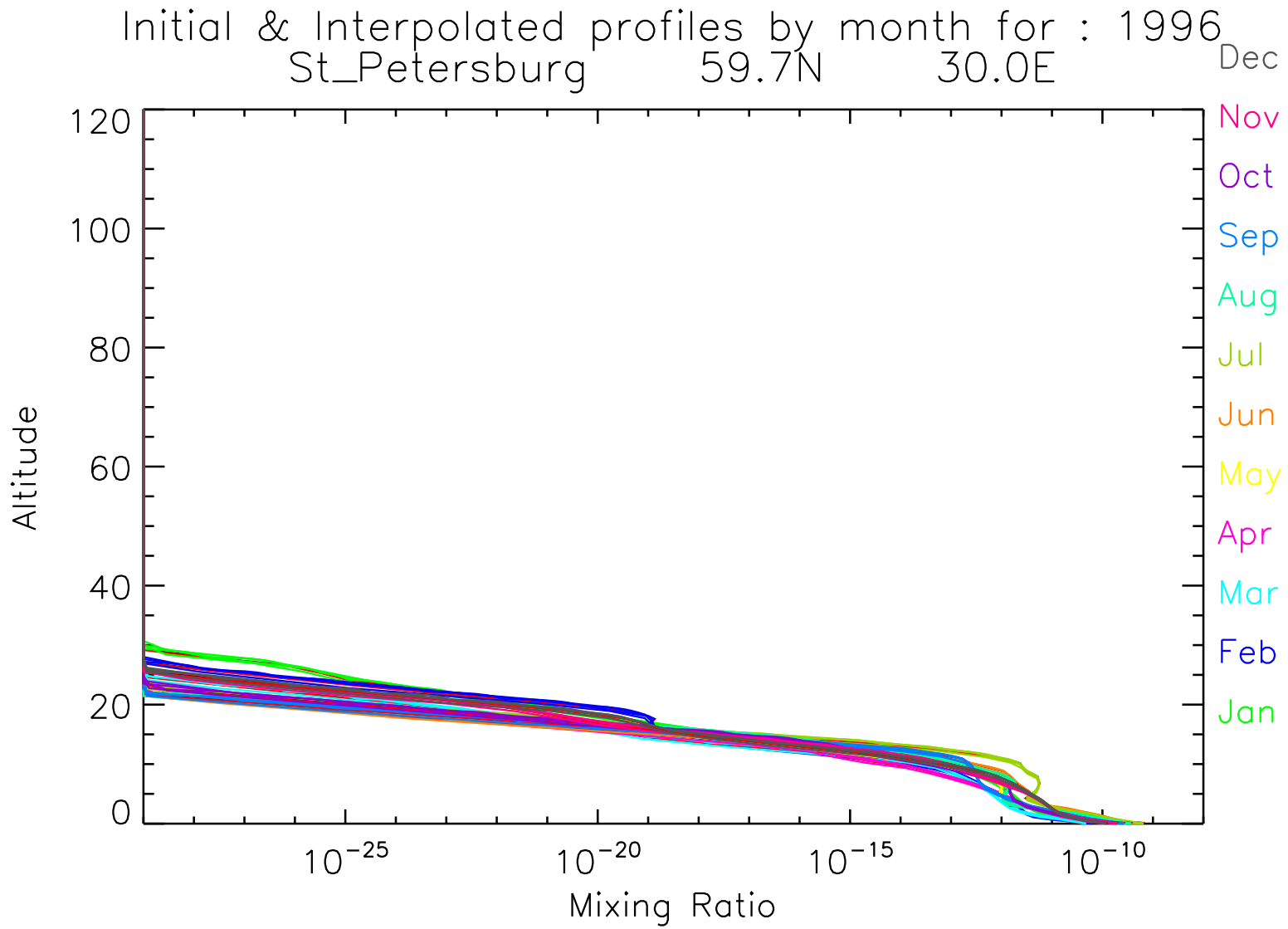
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1996
St_Petersburg 59.7N 30.0E
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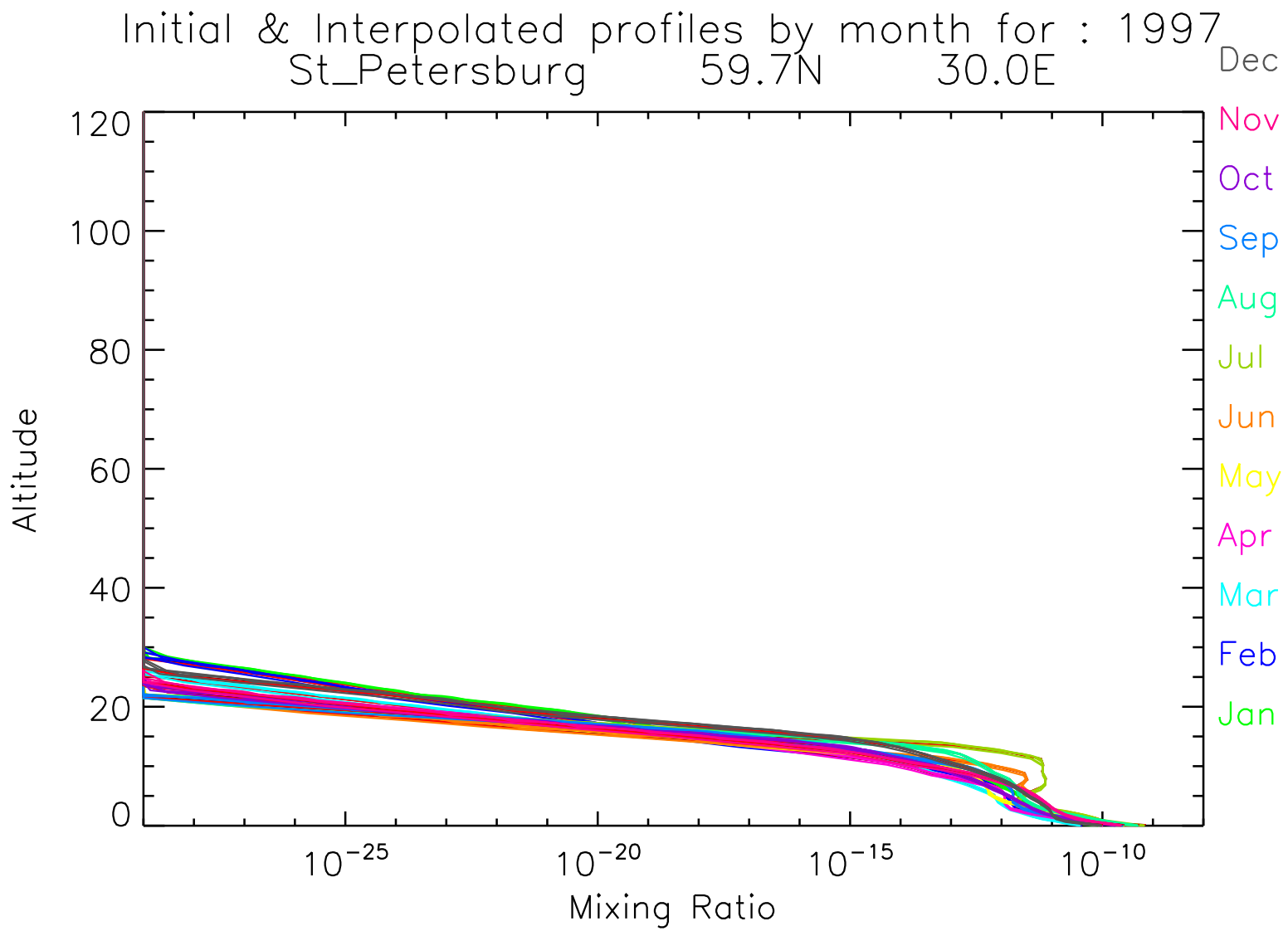
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1997
St_Petersburg 59.7N 30.0E
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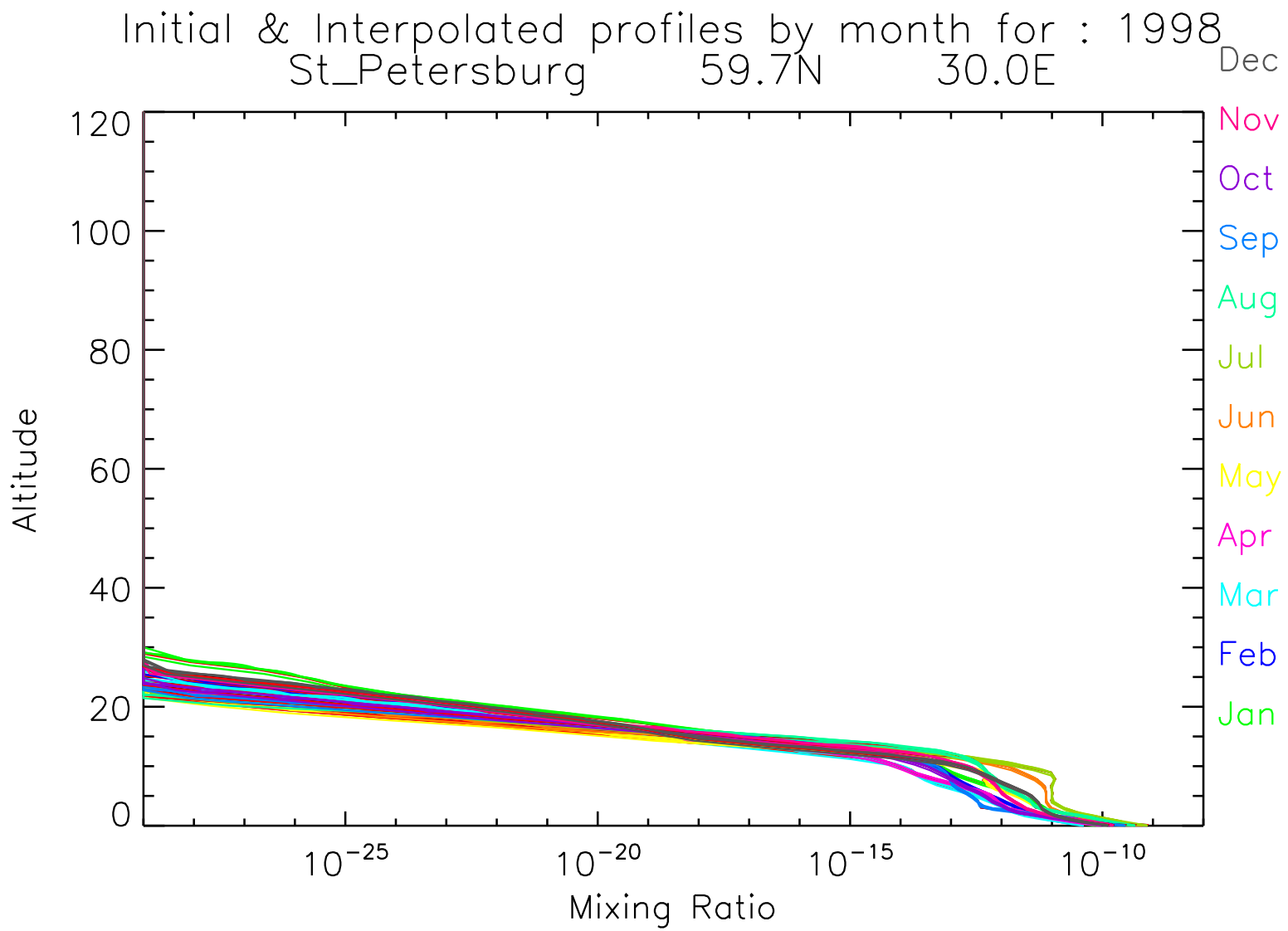
$10^{-10}$
Mixing Ratio


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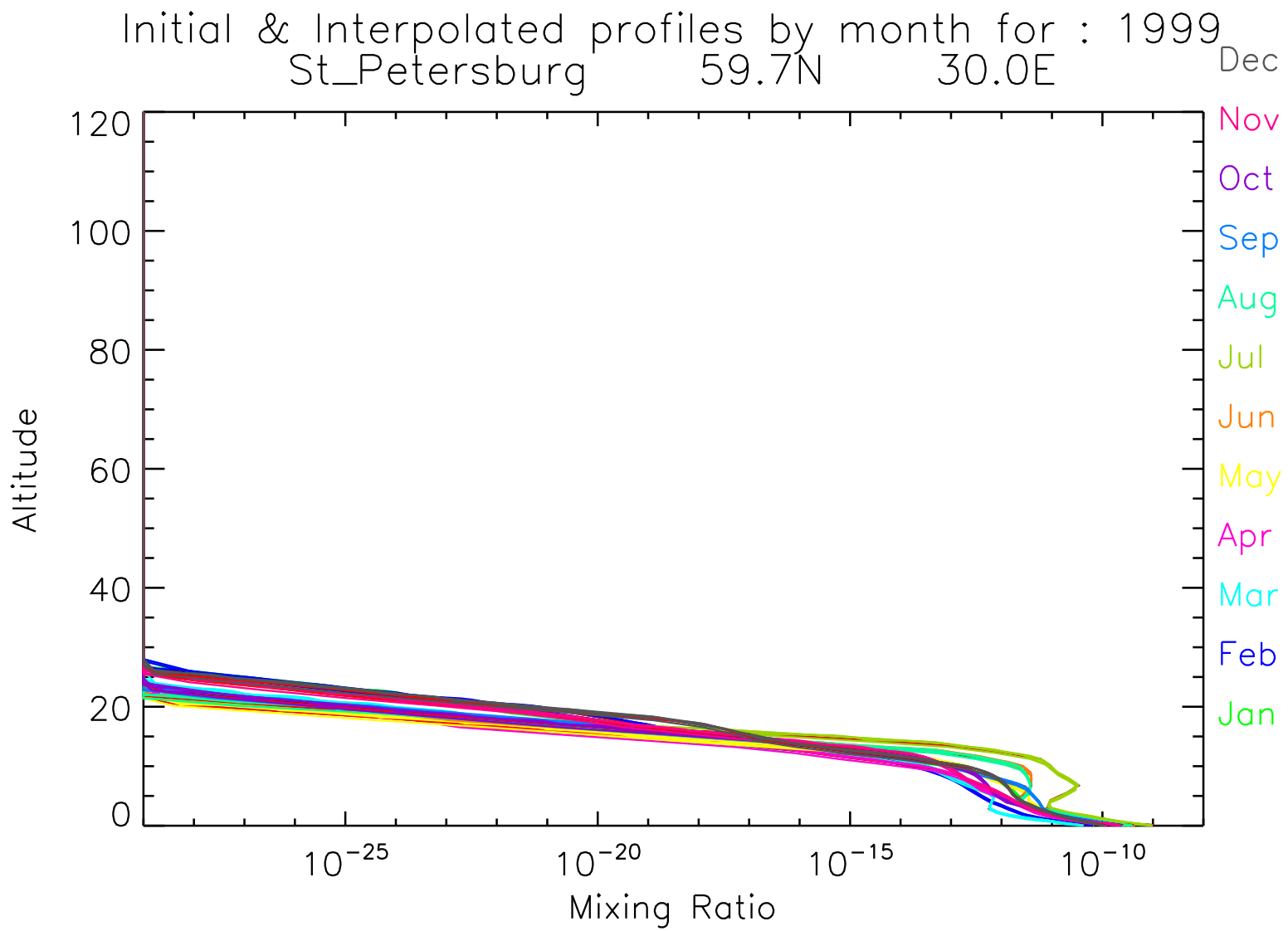
Mixing Ratio


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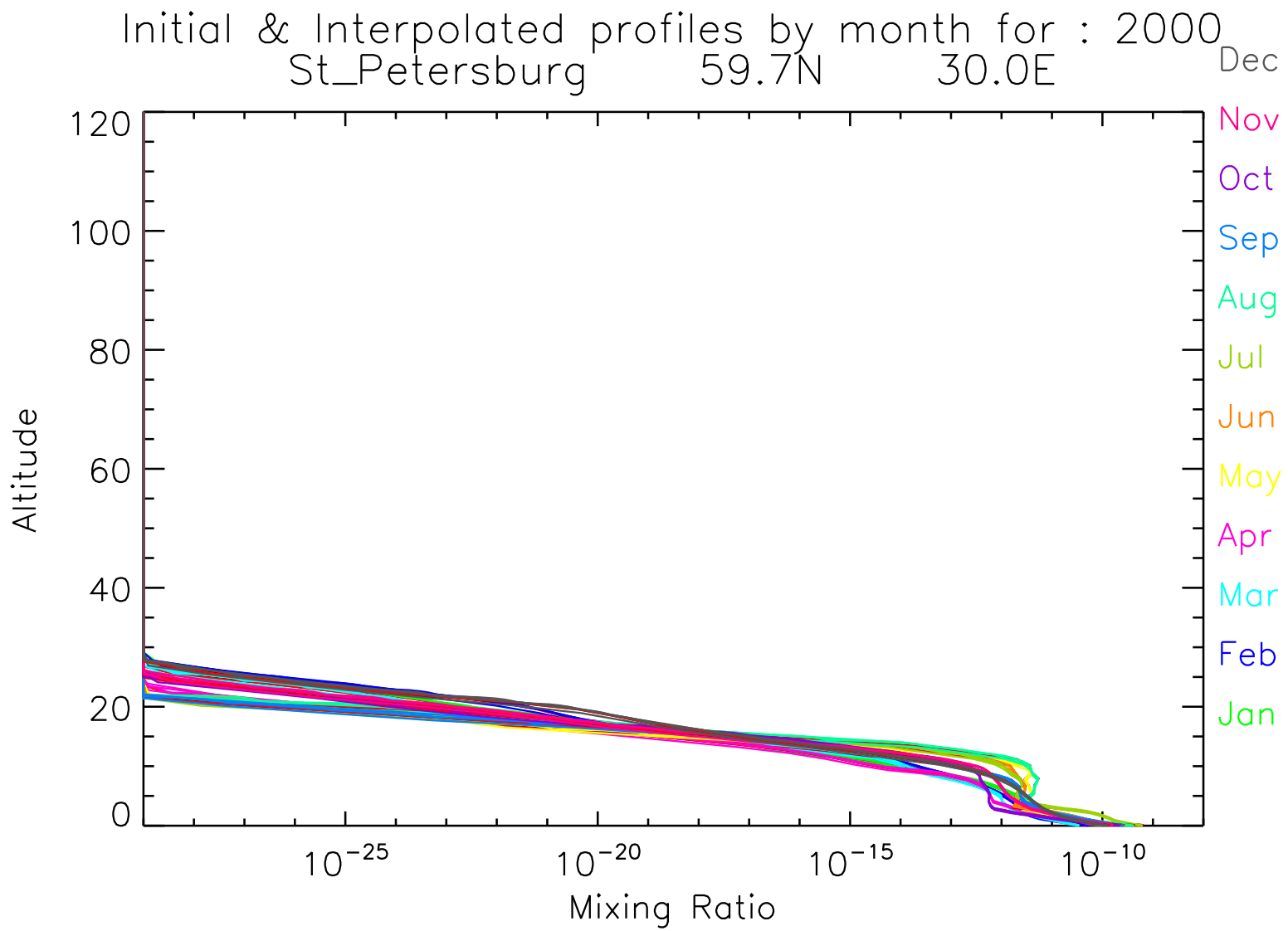
Mixing Ratio


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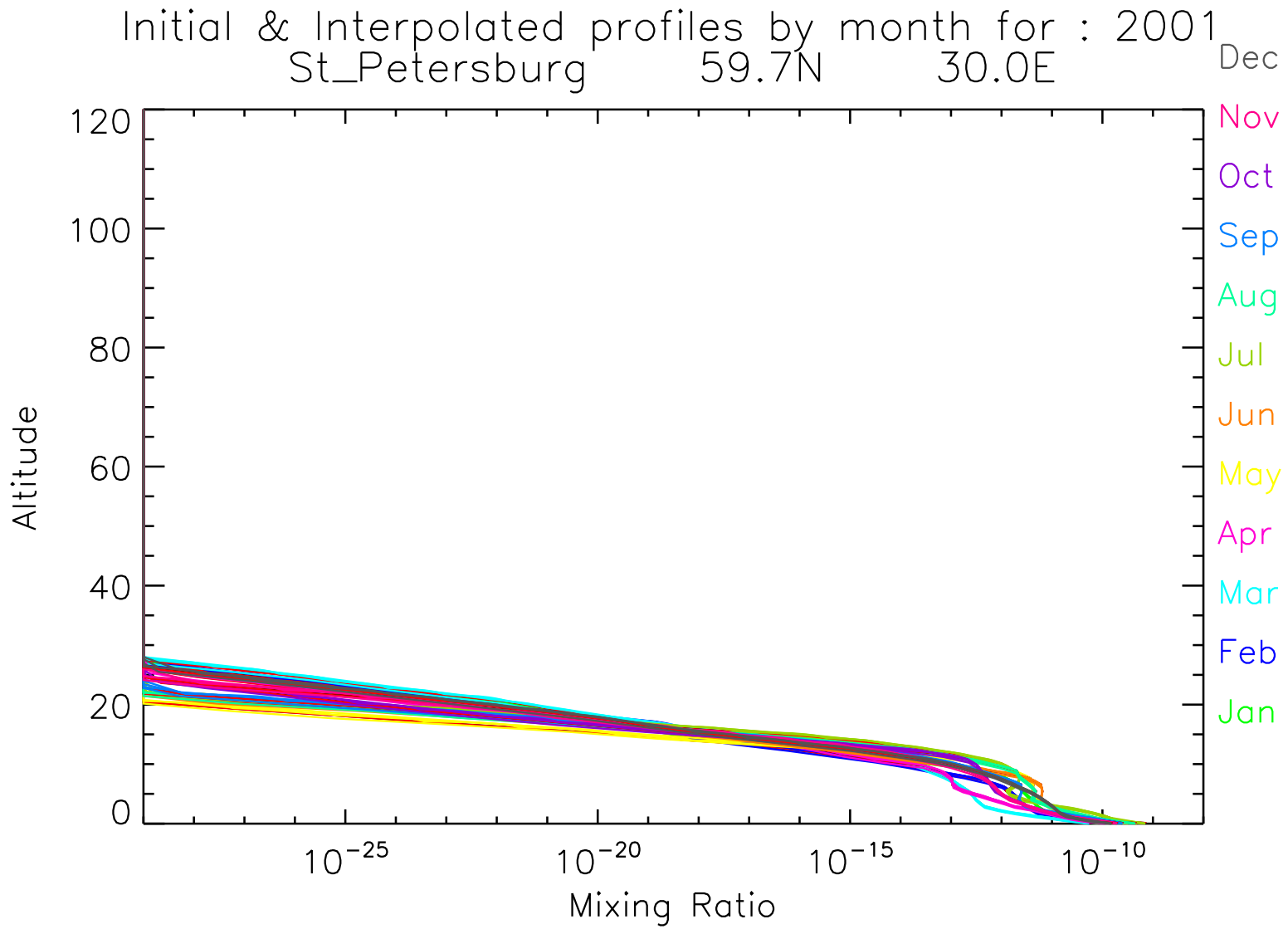
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 2001
St_Petersburg 59.7N 30.0E
Dec
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Altitude
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$10^{-20}$
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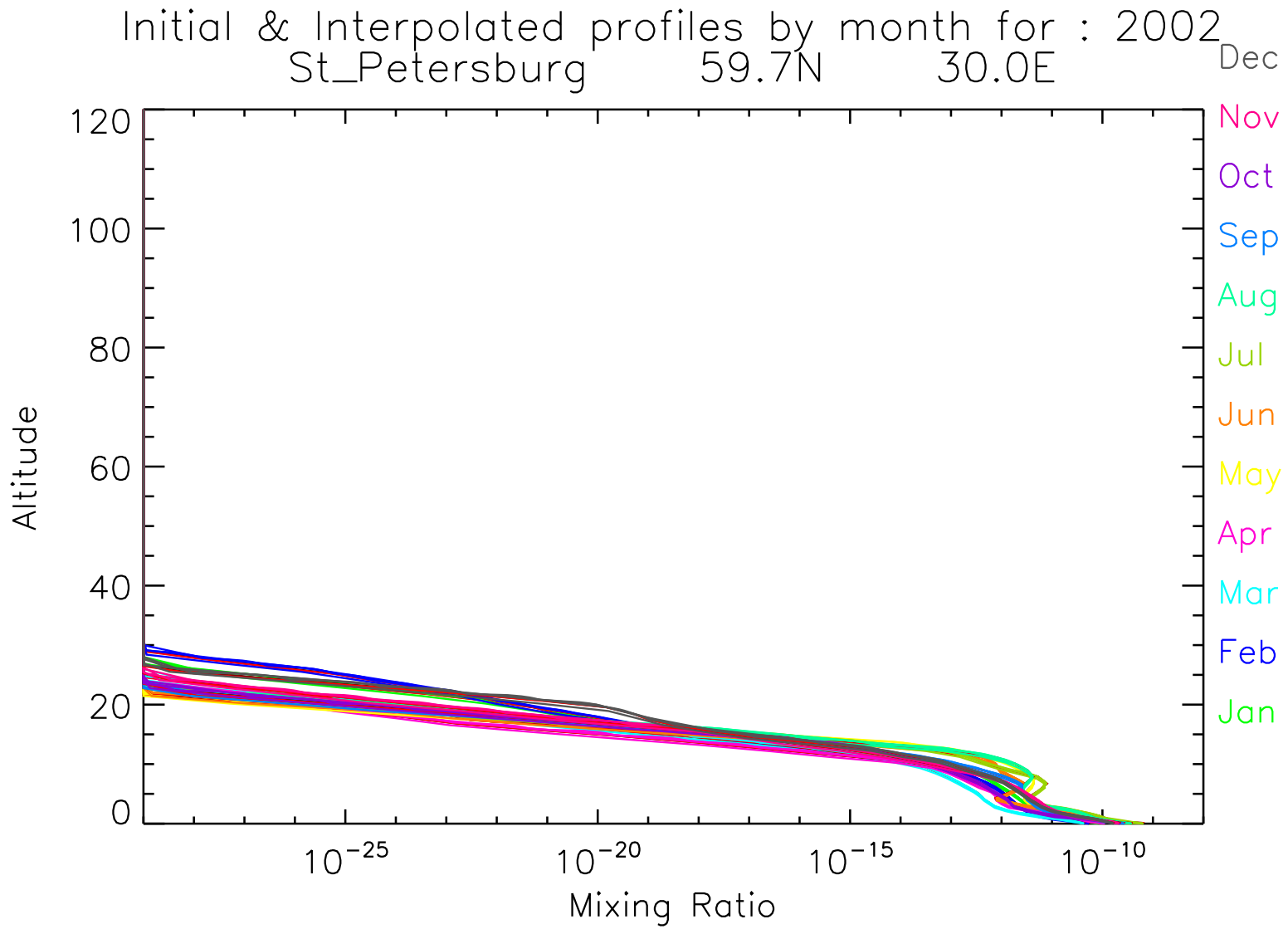
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 2002
St_Petersburg 59.7N 30.0E
Dec
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Altitude
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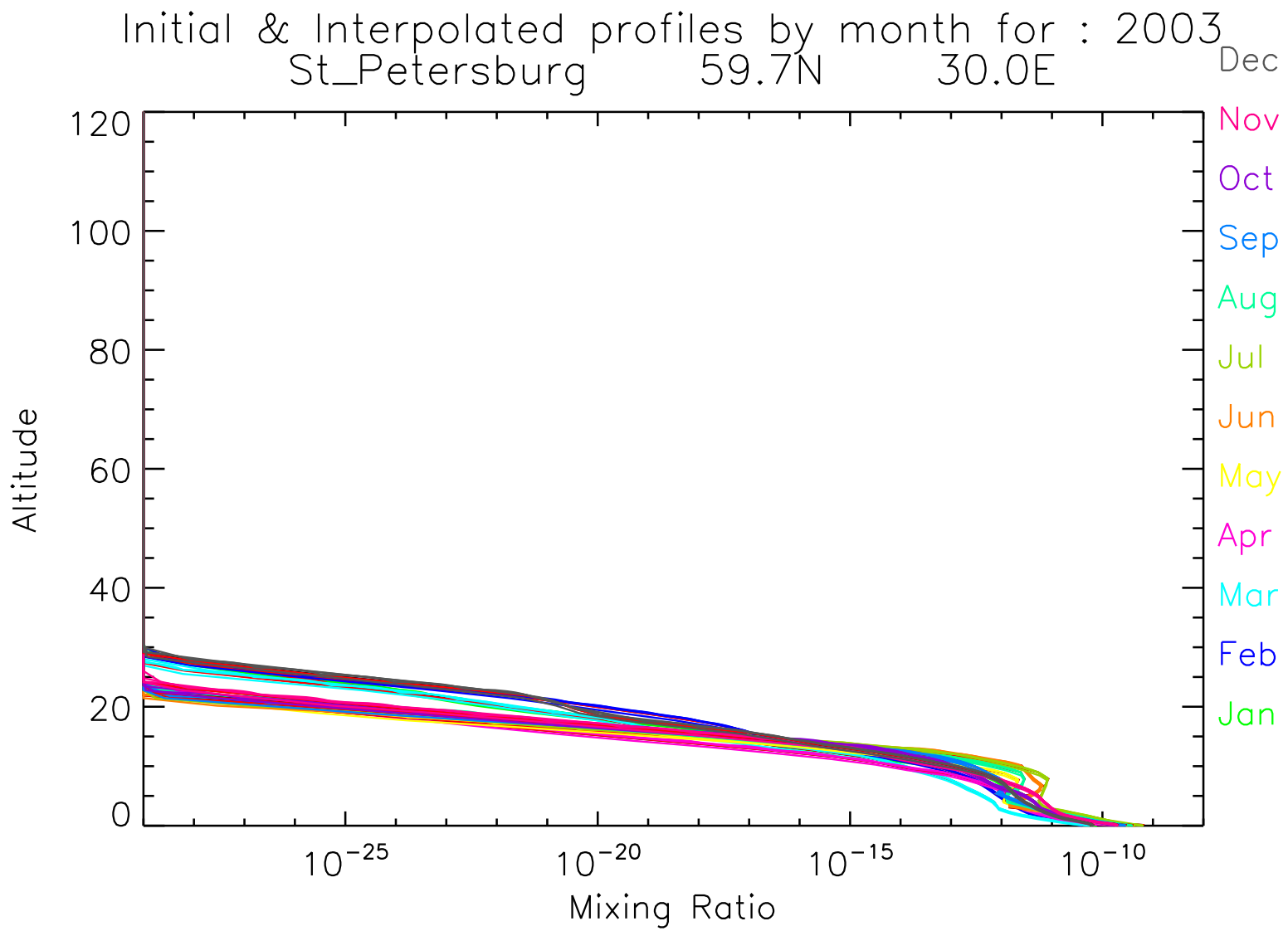
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 2003
St_Petersburg 59.7N 30.0E
Dec
Nov
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Altitude
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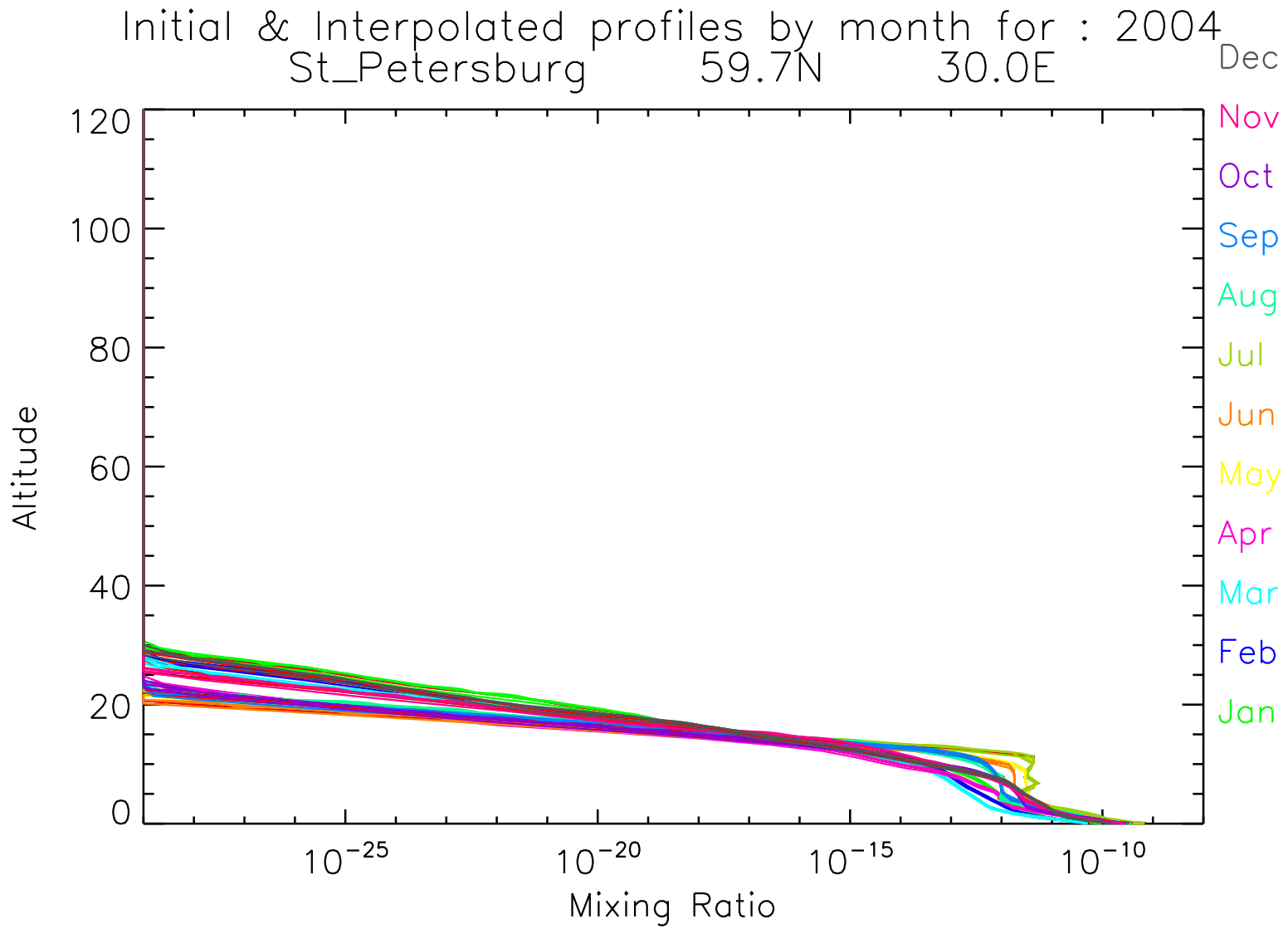
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 2004
St_Petersburg 59.7N 30.0E
Dec
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Altitude
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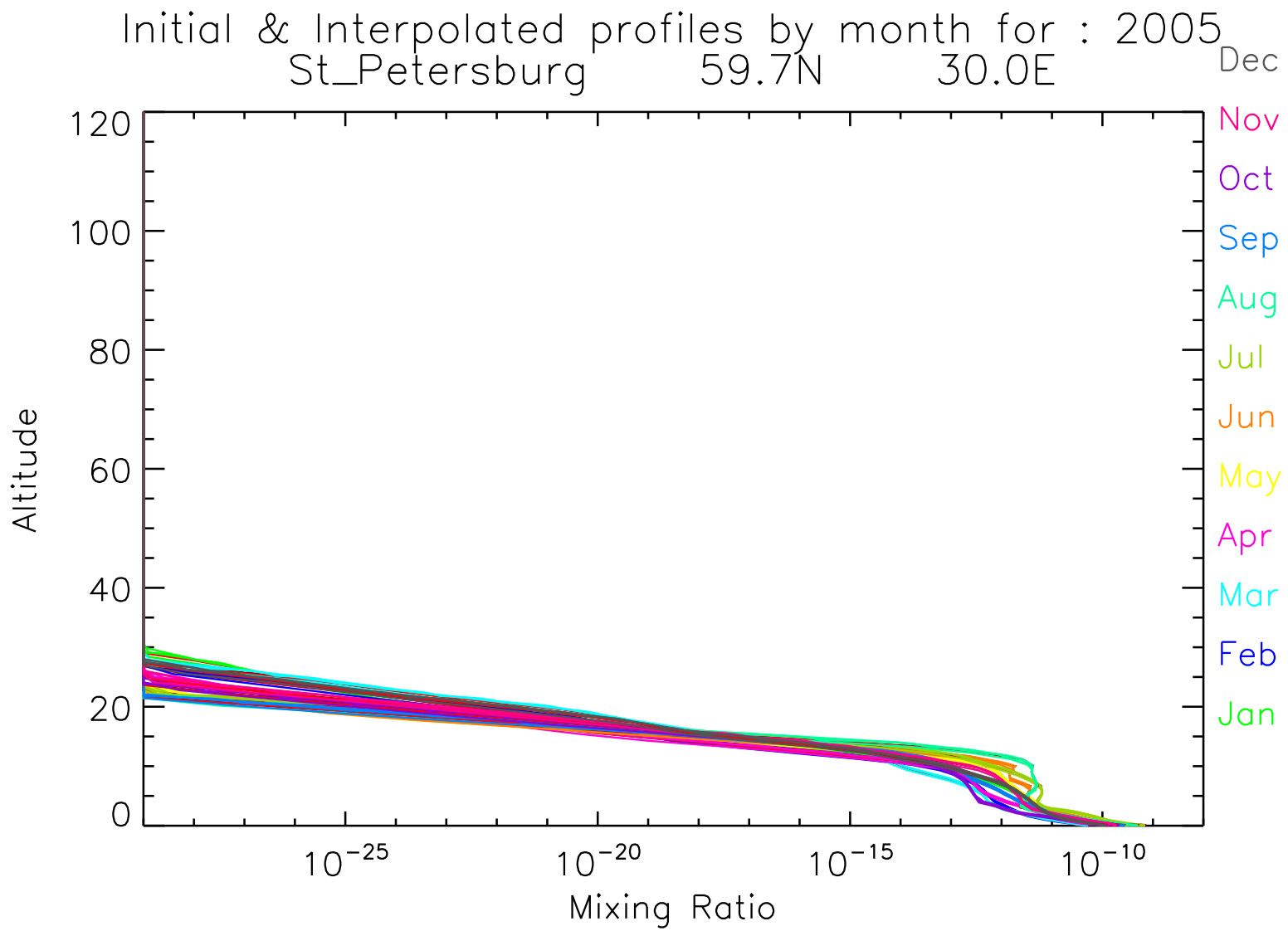
Mixing Ratio


Initial & Interpolated profiles by month for : 2005
St_Petersburg 59.7N 30.0E
Dec
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Altitude
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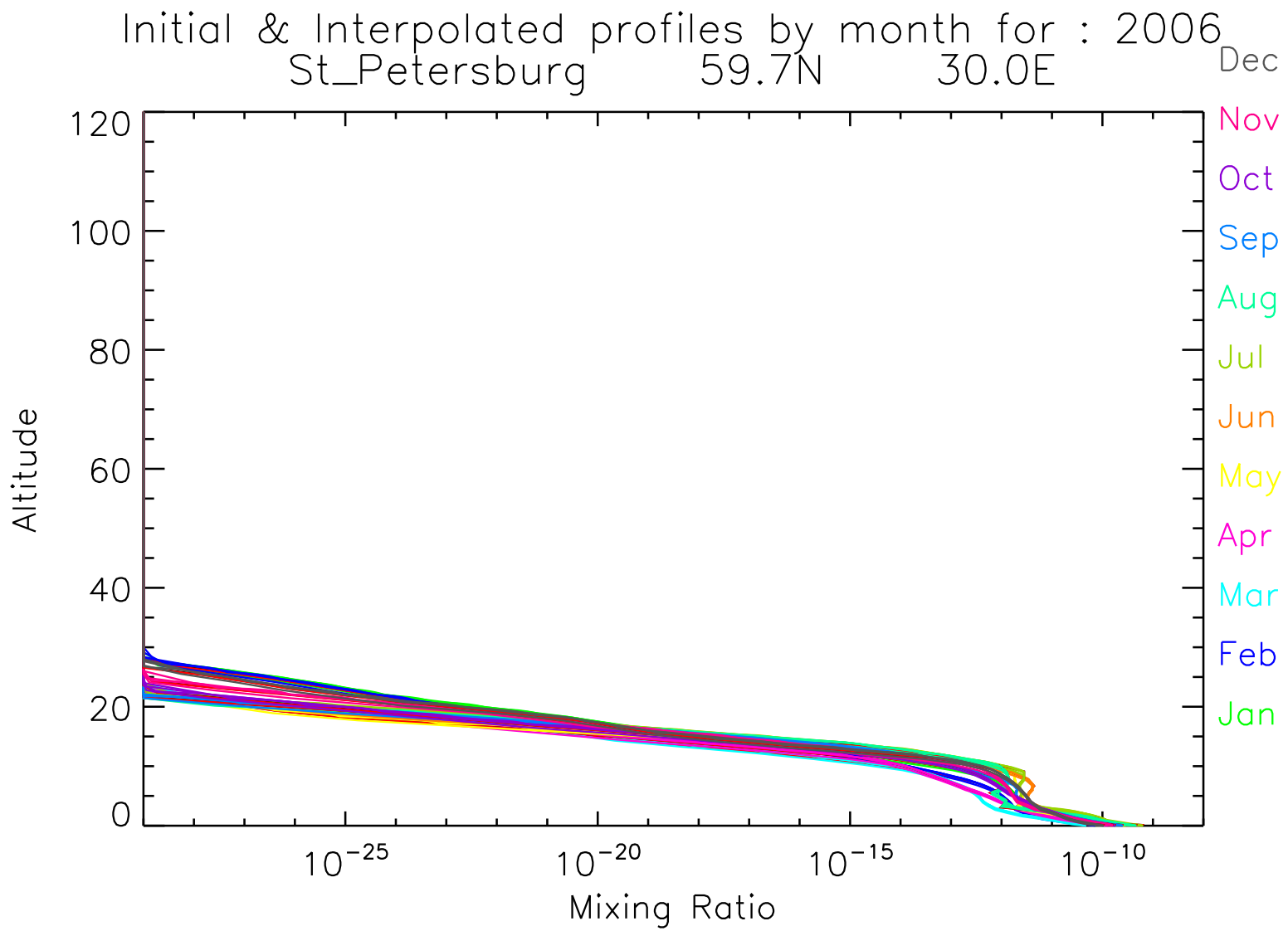
Mixing Ratio


Initial & Interpolated profiles by month for : 2006
St_Petersburg 59.7N 30.0E
Dec
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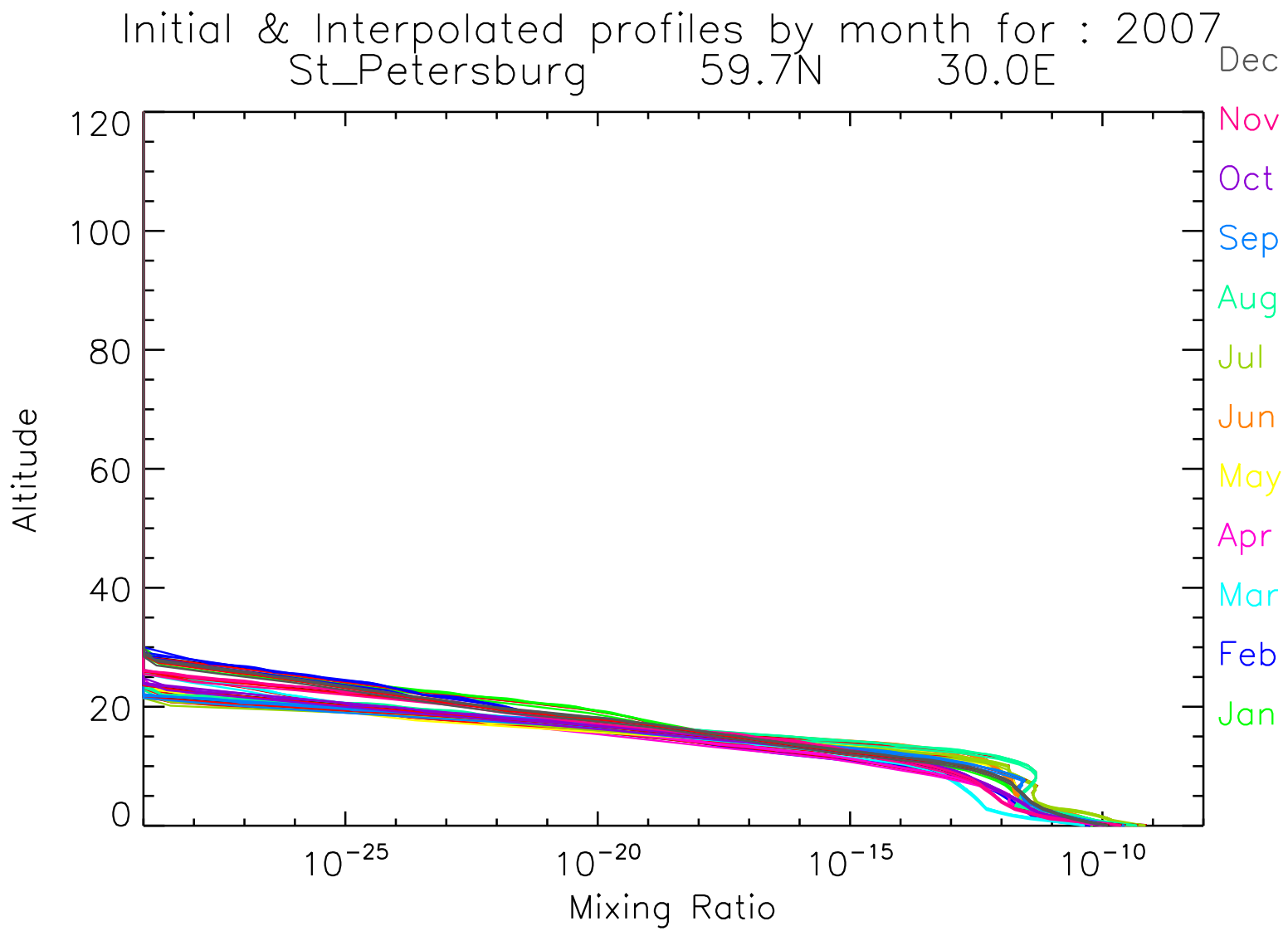
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 2007
St_Petersburg 59.7N 30.0E
Dec
Nov
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Jan
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Altitude
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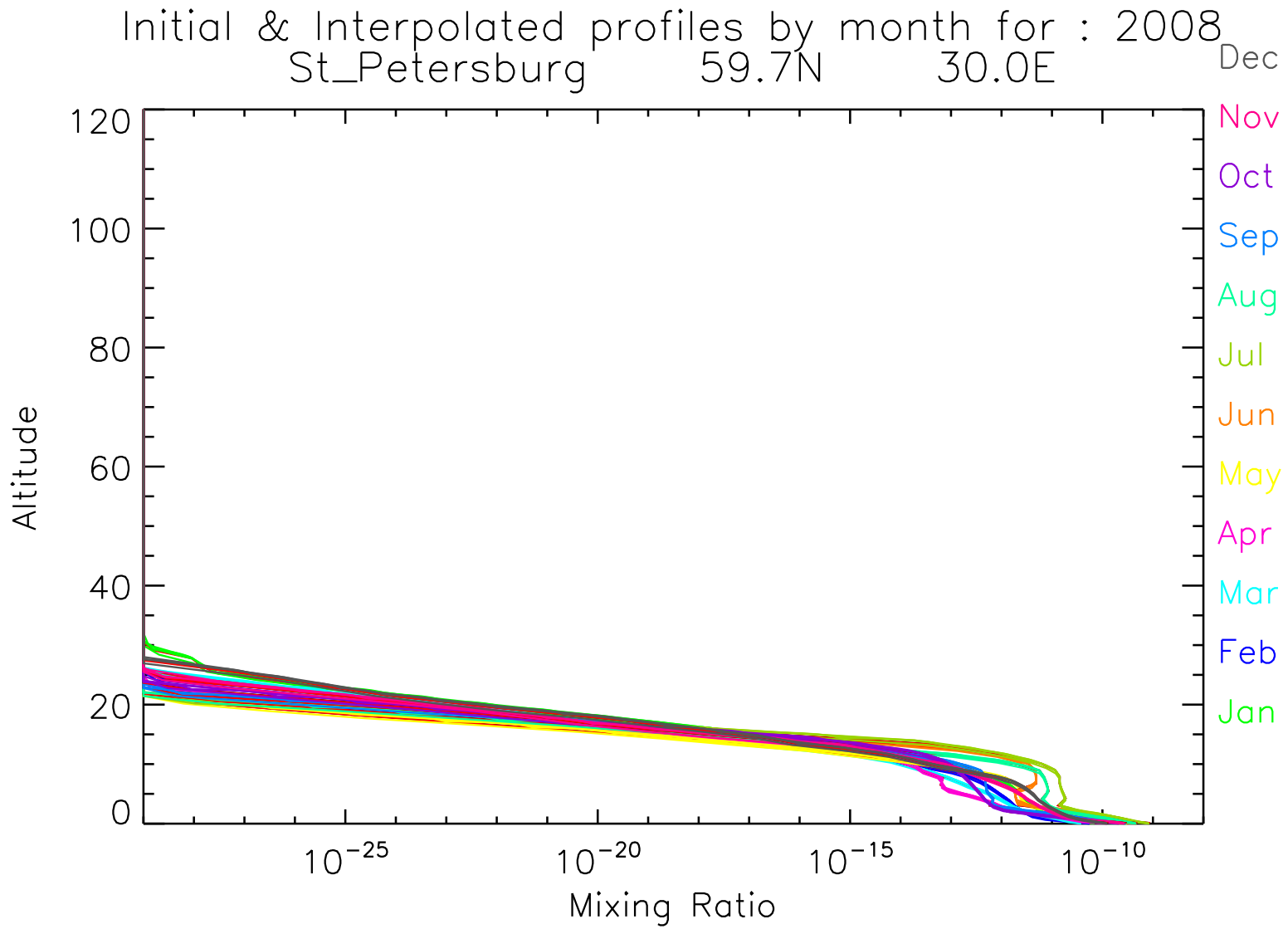
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 2008
St_Petersburg 59.7N 30.0E
Dec
Nov
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Jan
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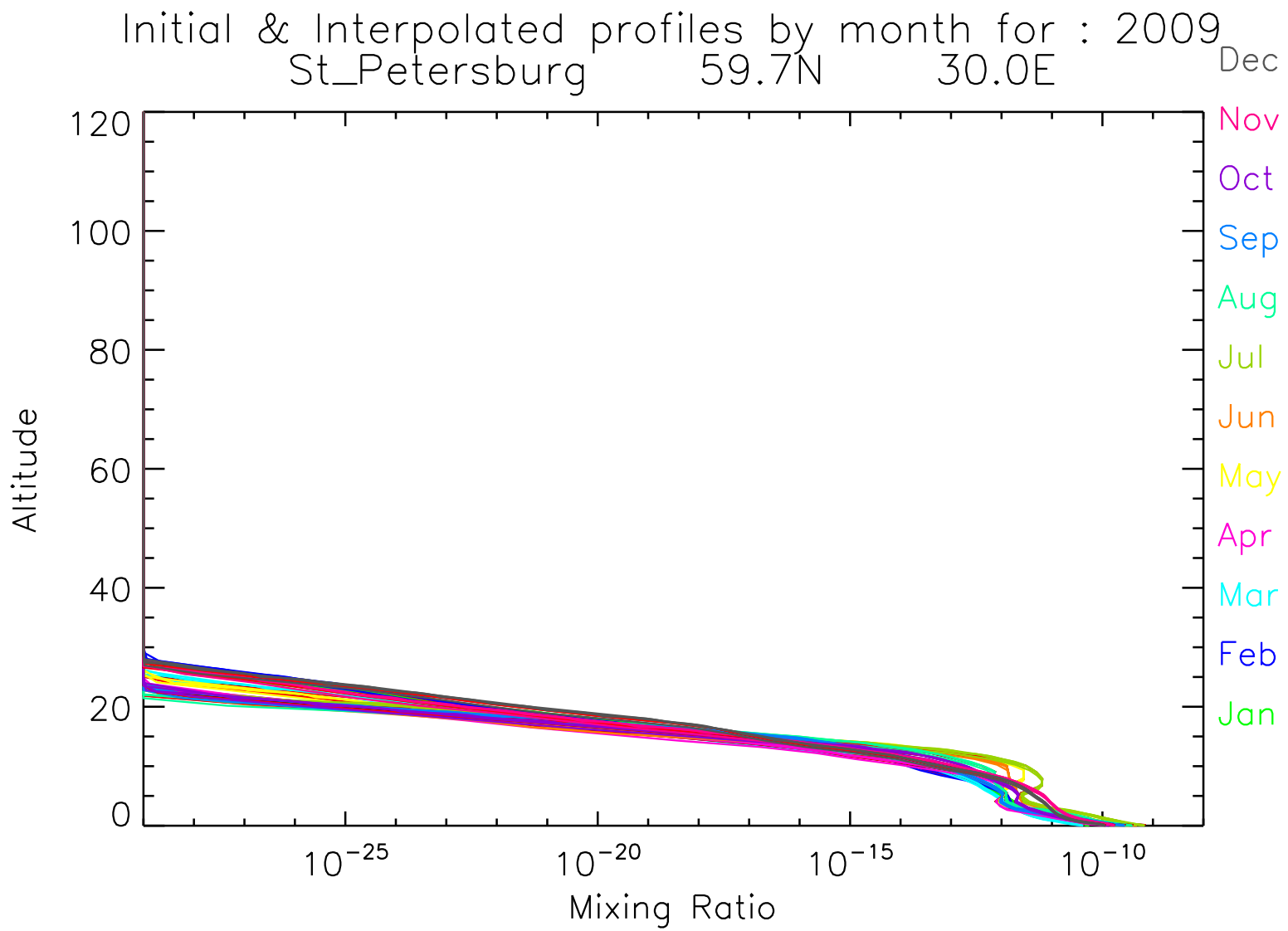
Altitude
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 2009
St_Petersburg 59.7N 30.0E
Dec
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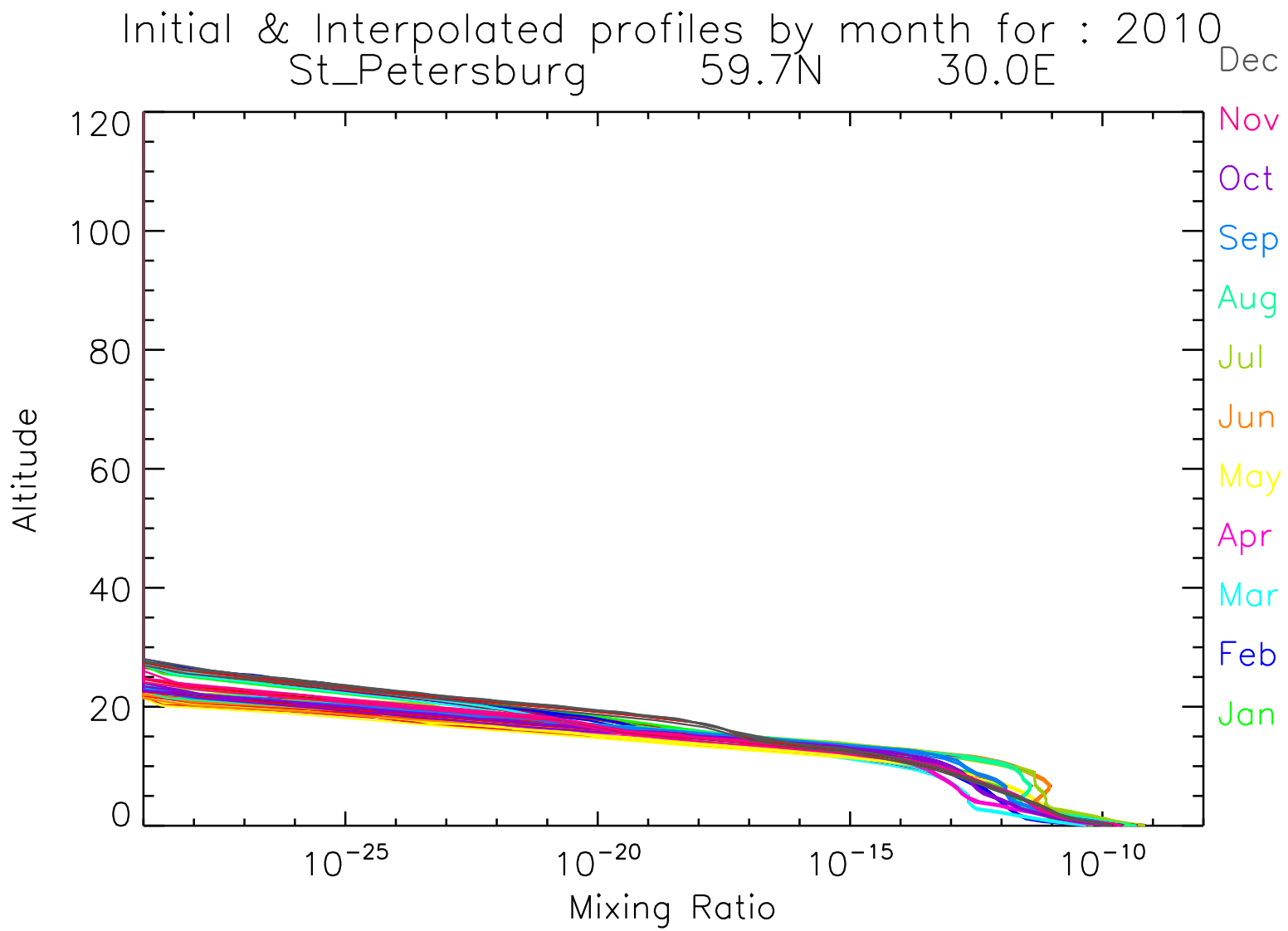
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 2010
St_Petersburg 59.7N 30.0E
Dec
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Altitude
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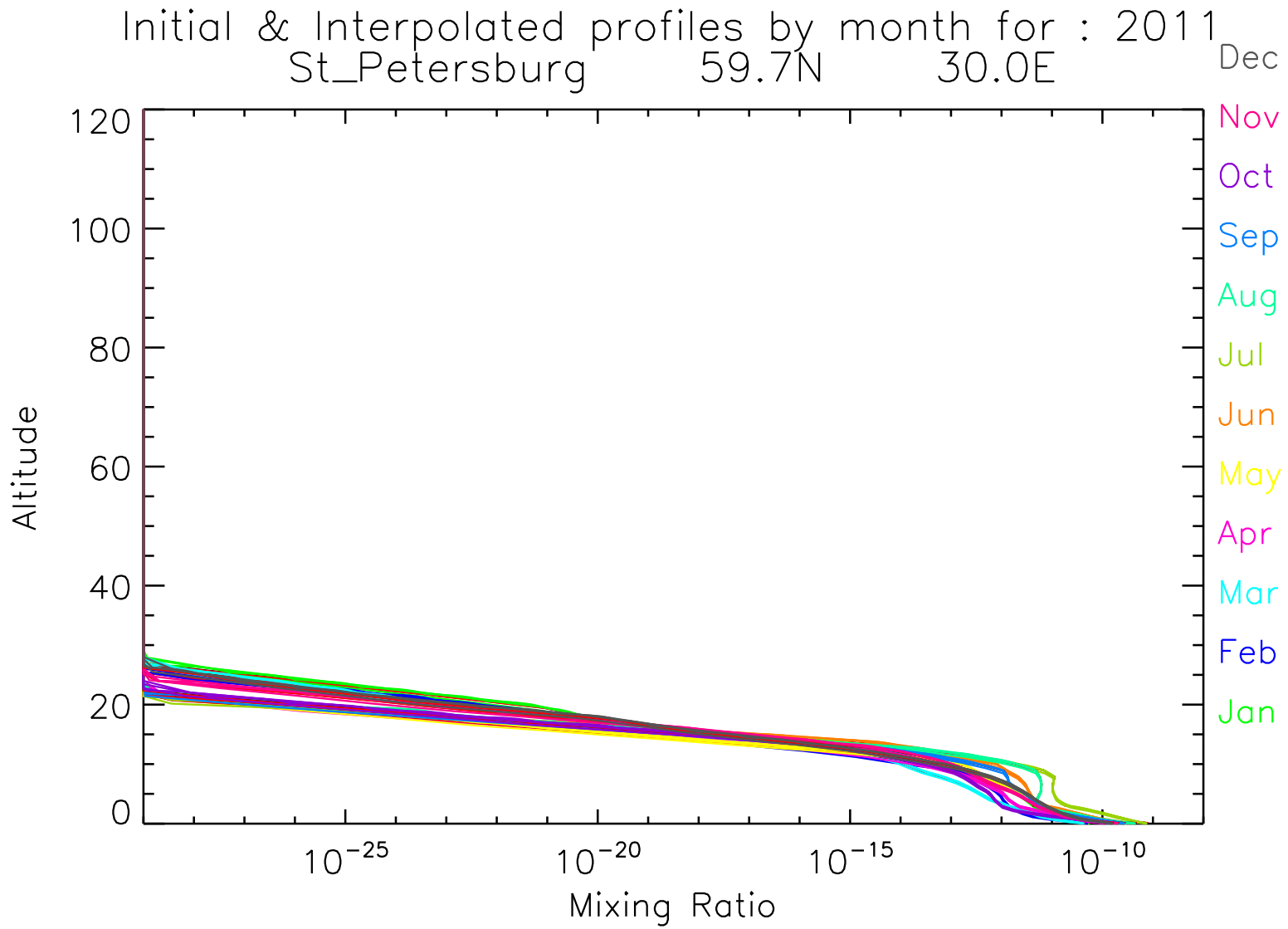
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 2011
St_Petersburg 59.7N 30.0E
Dec
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Jan
120
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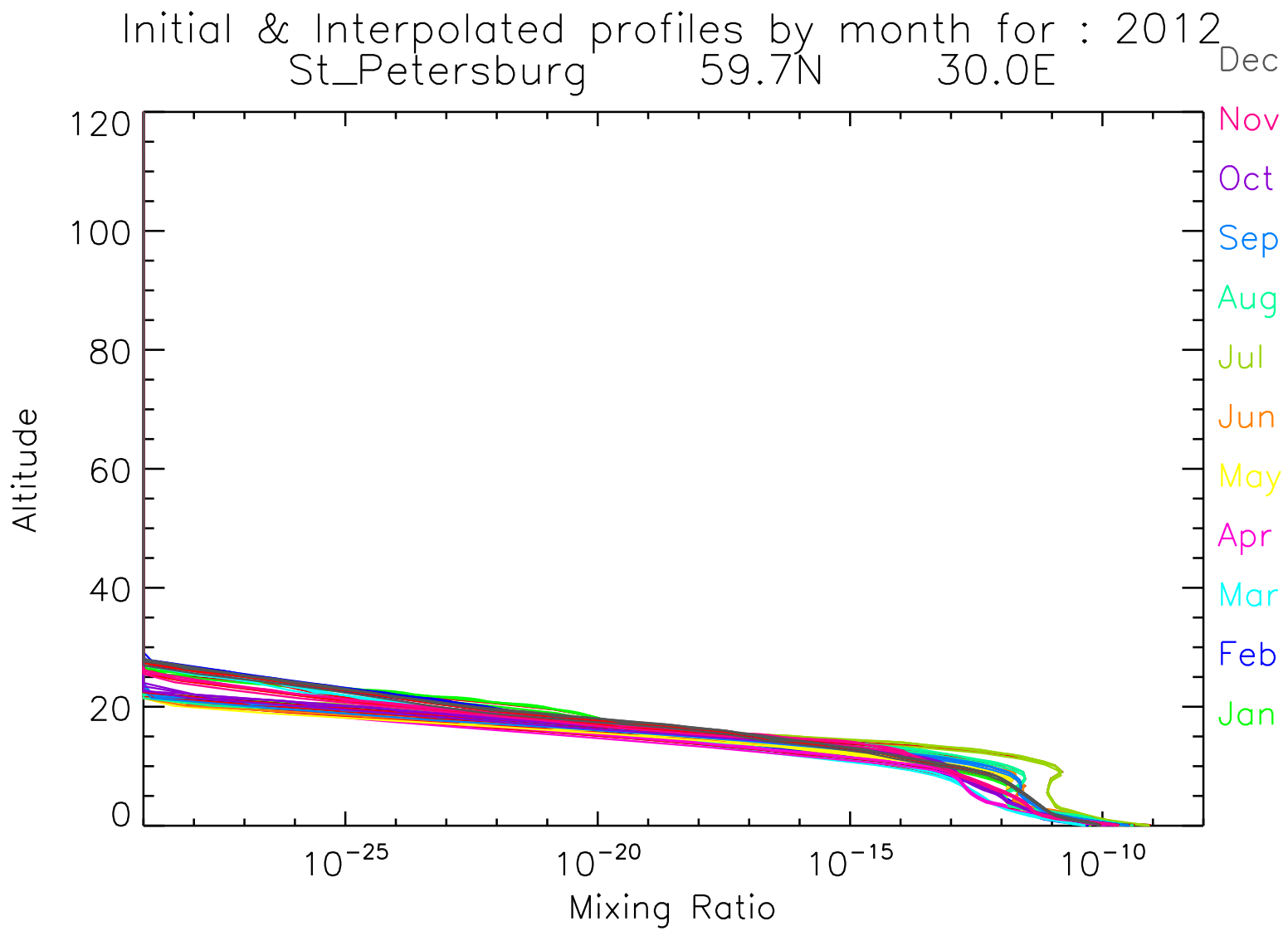
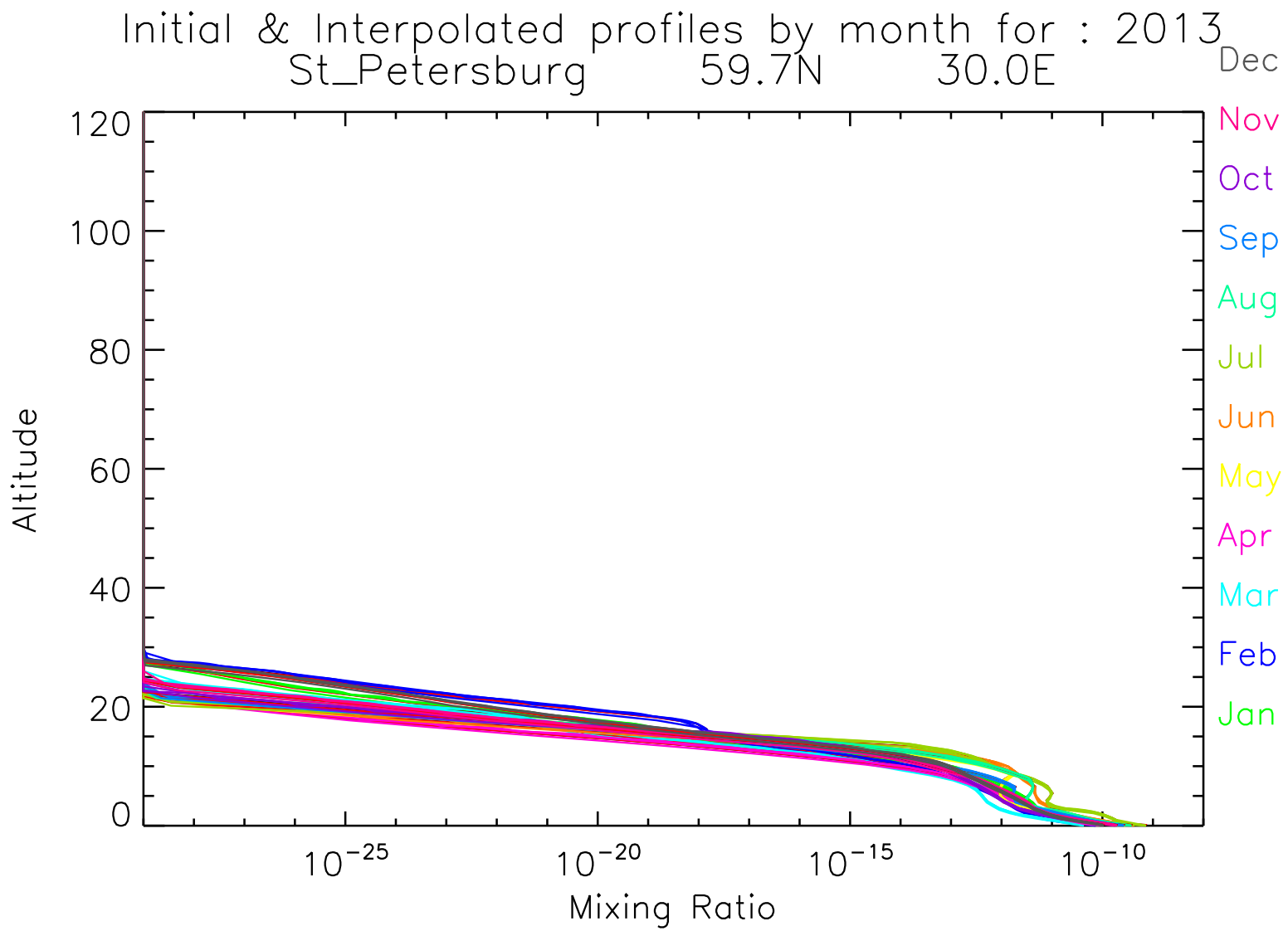
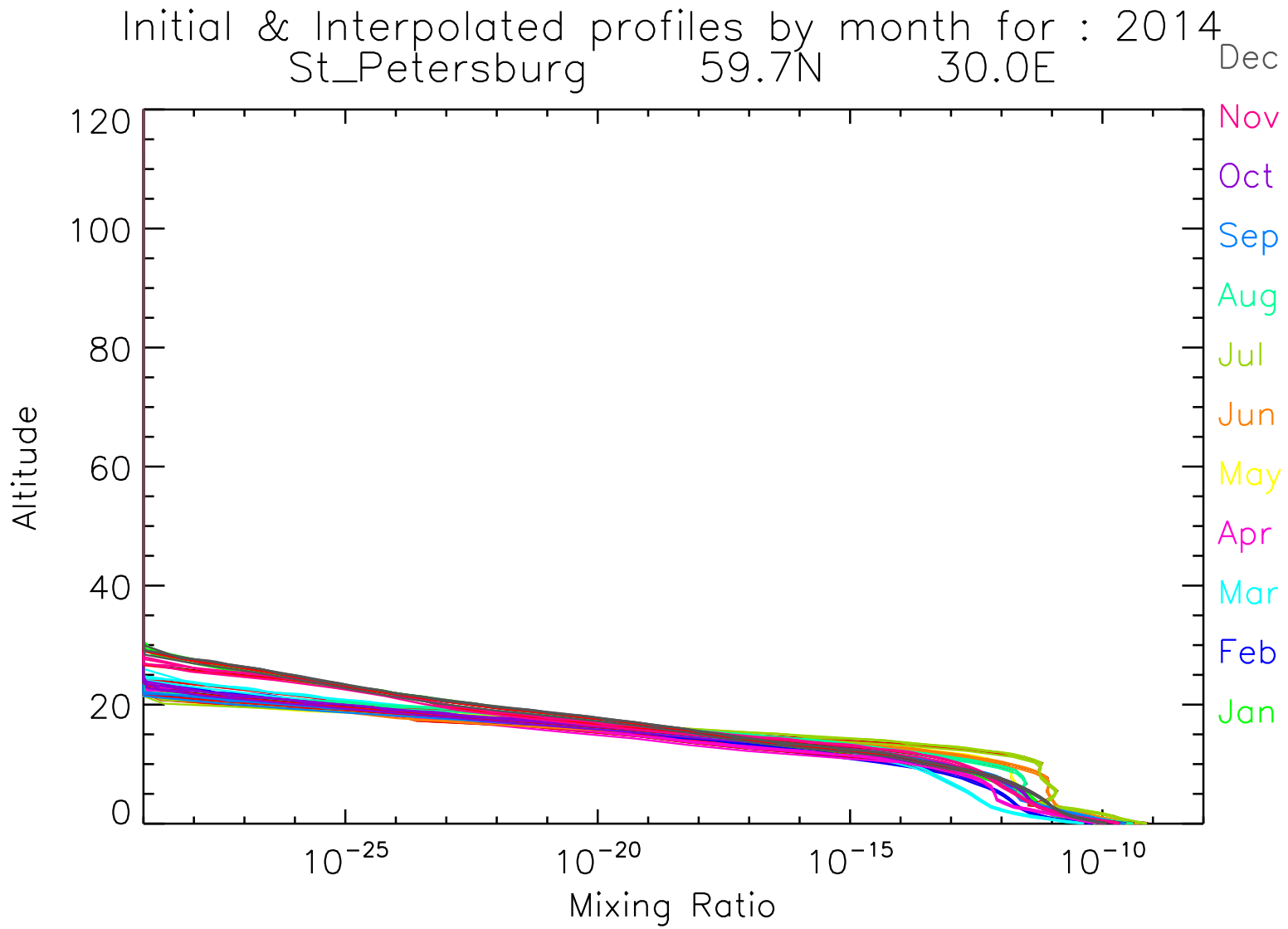
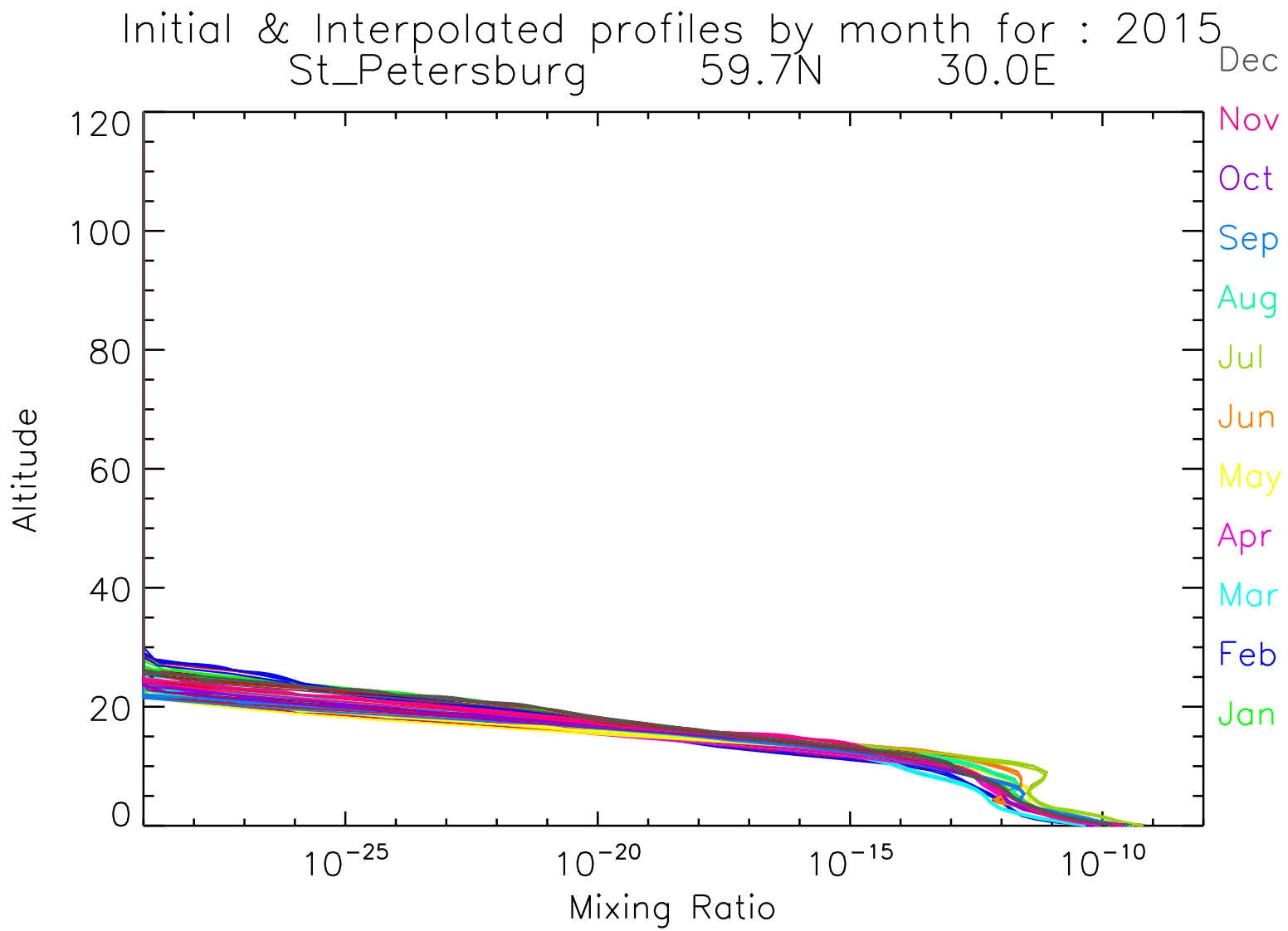
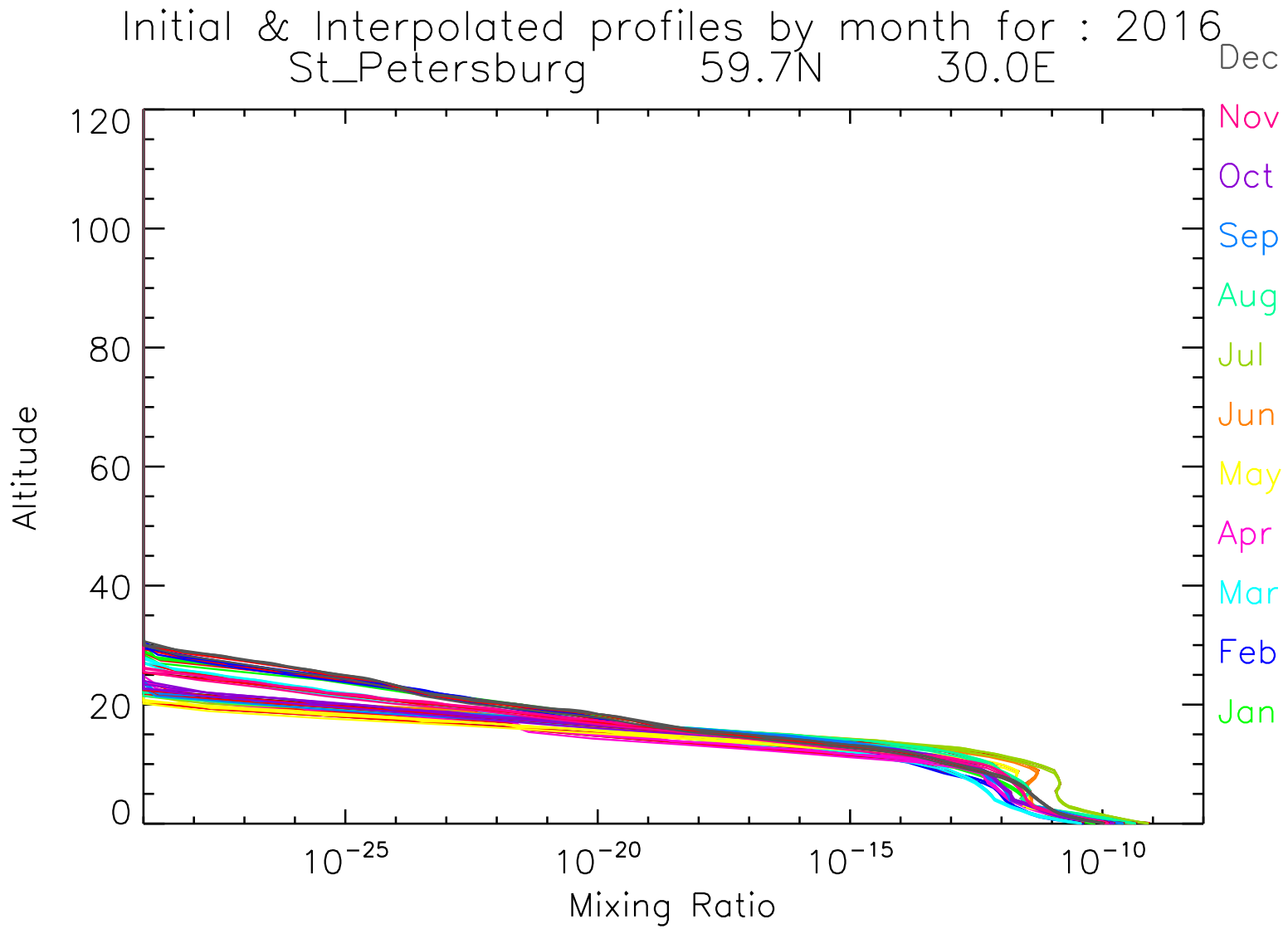
Altitude
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio

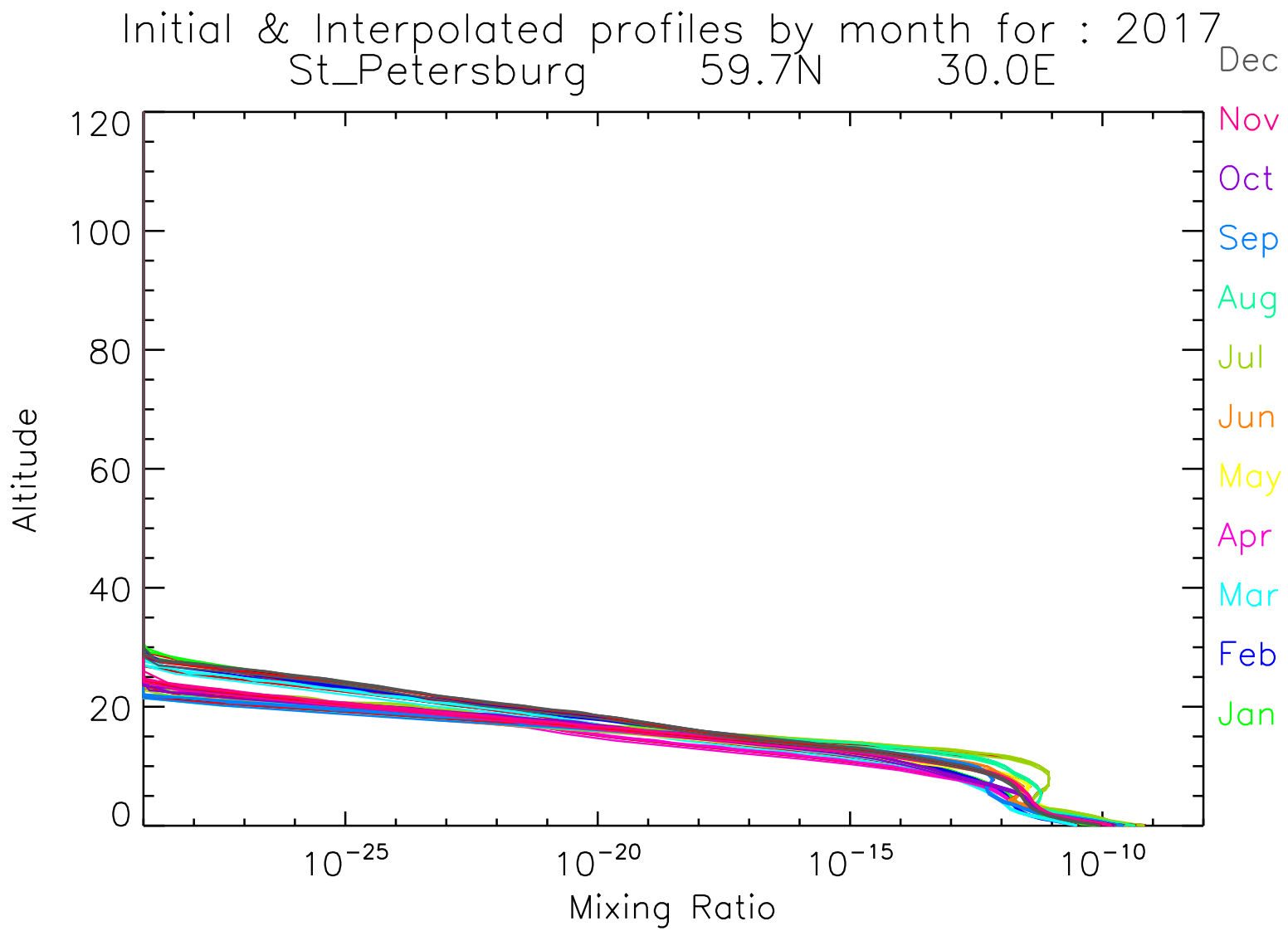

Initial & Interpolated profiles by month for : 2012
St_Petersburg 59.7N 30.0E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio

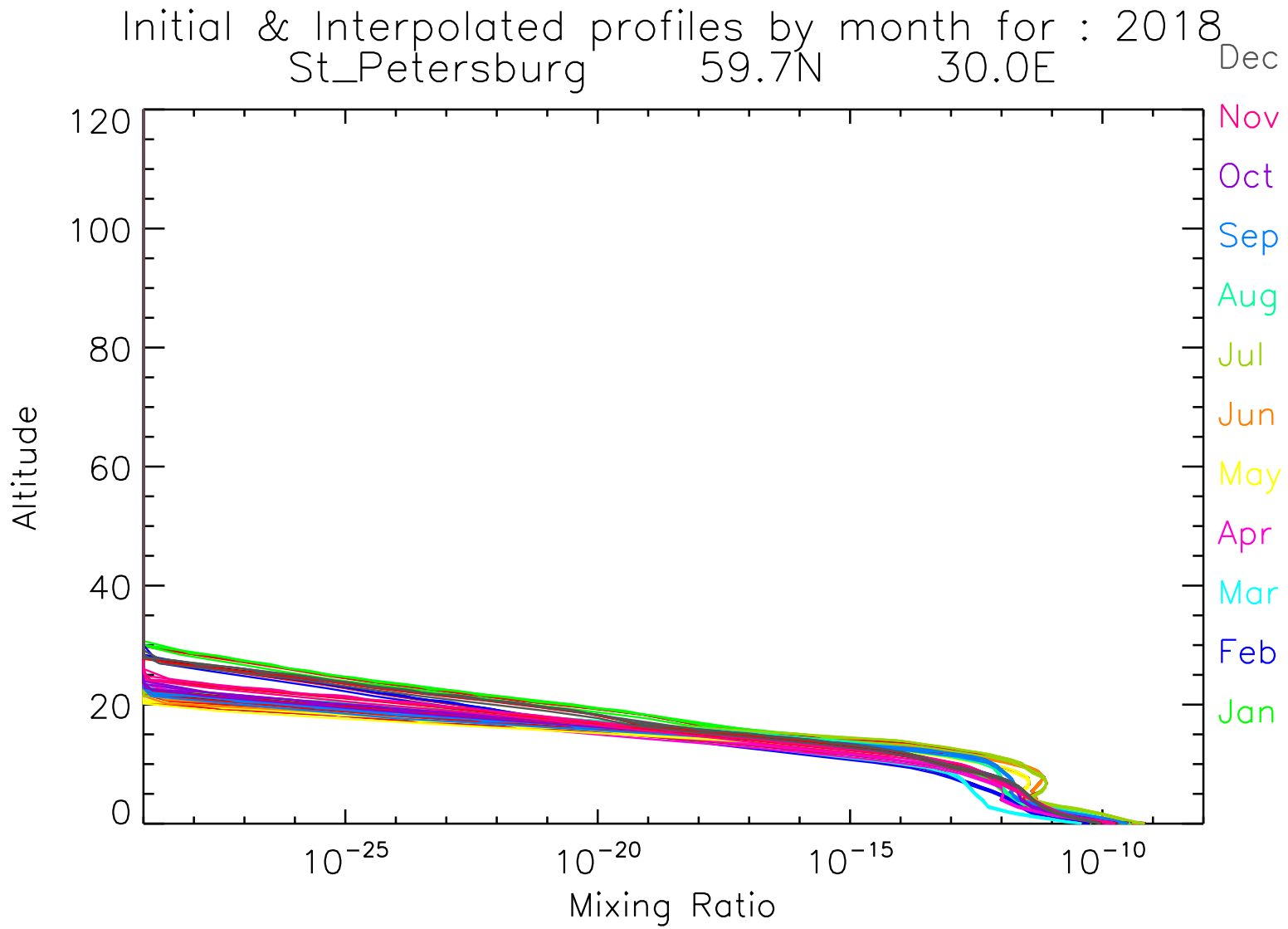

Initial & Interpolated profiles by month for : 2013
St_Petersburg 59.7N 30.0E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio

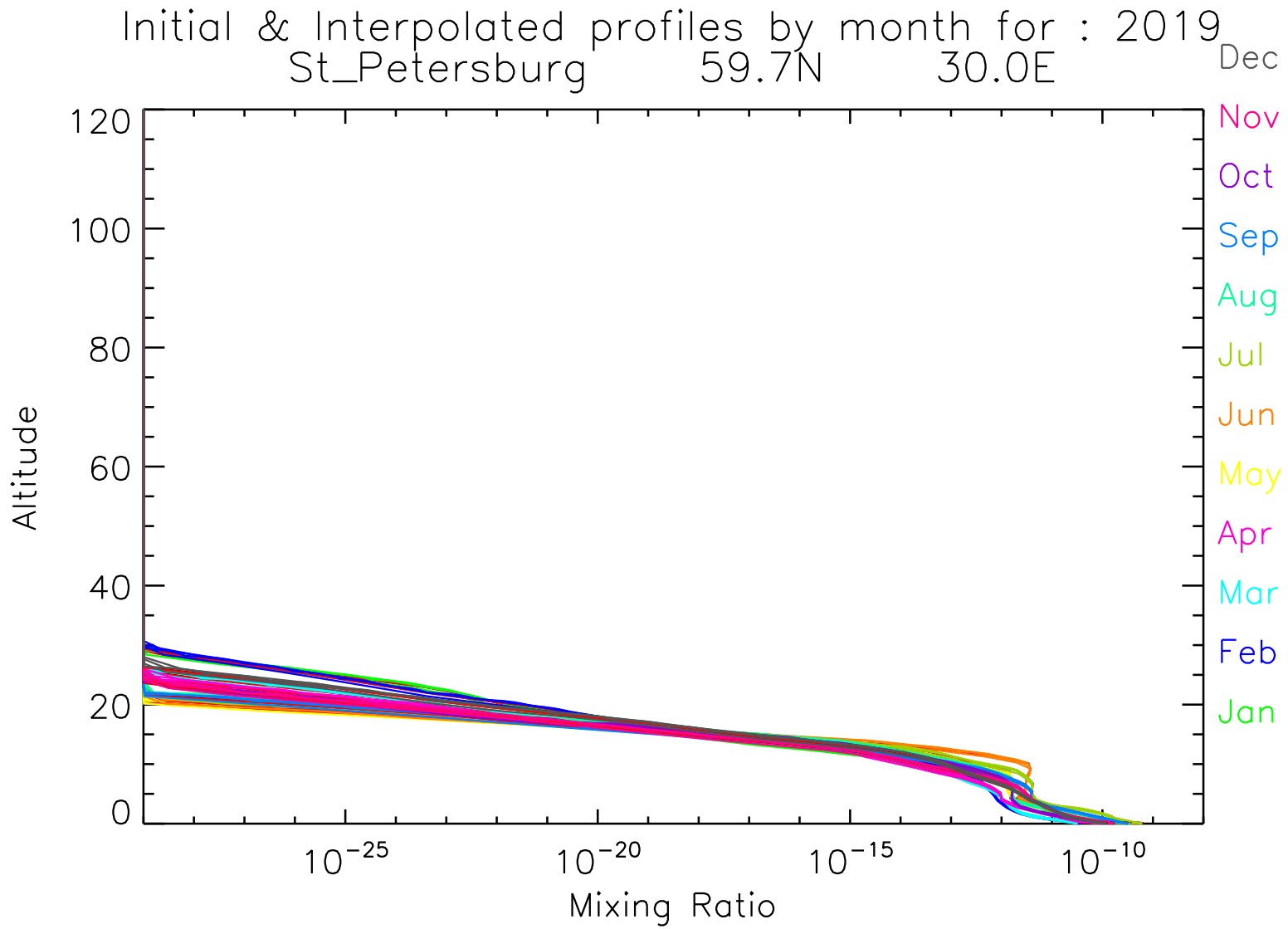

Initial & Interpolated profiles by month for : 2014
St_Petersburg 59.7N 30.0E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio

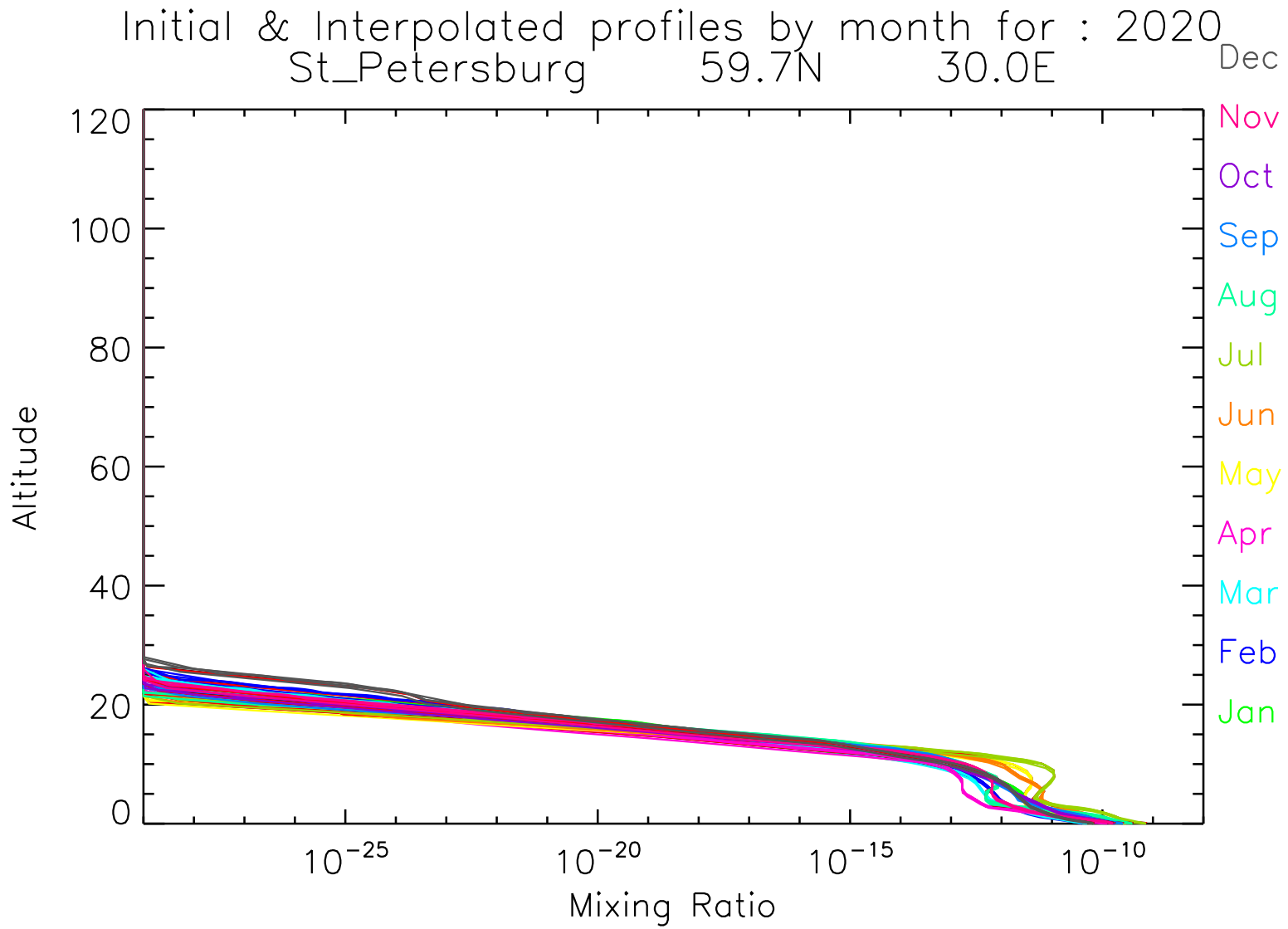

Initial & Interpolated profiles by month for : 2015
St_Petersburg 59.7N 30.0E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio

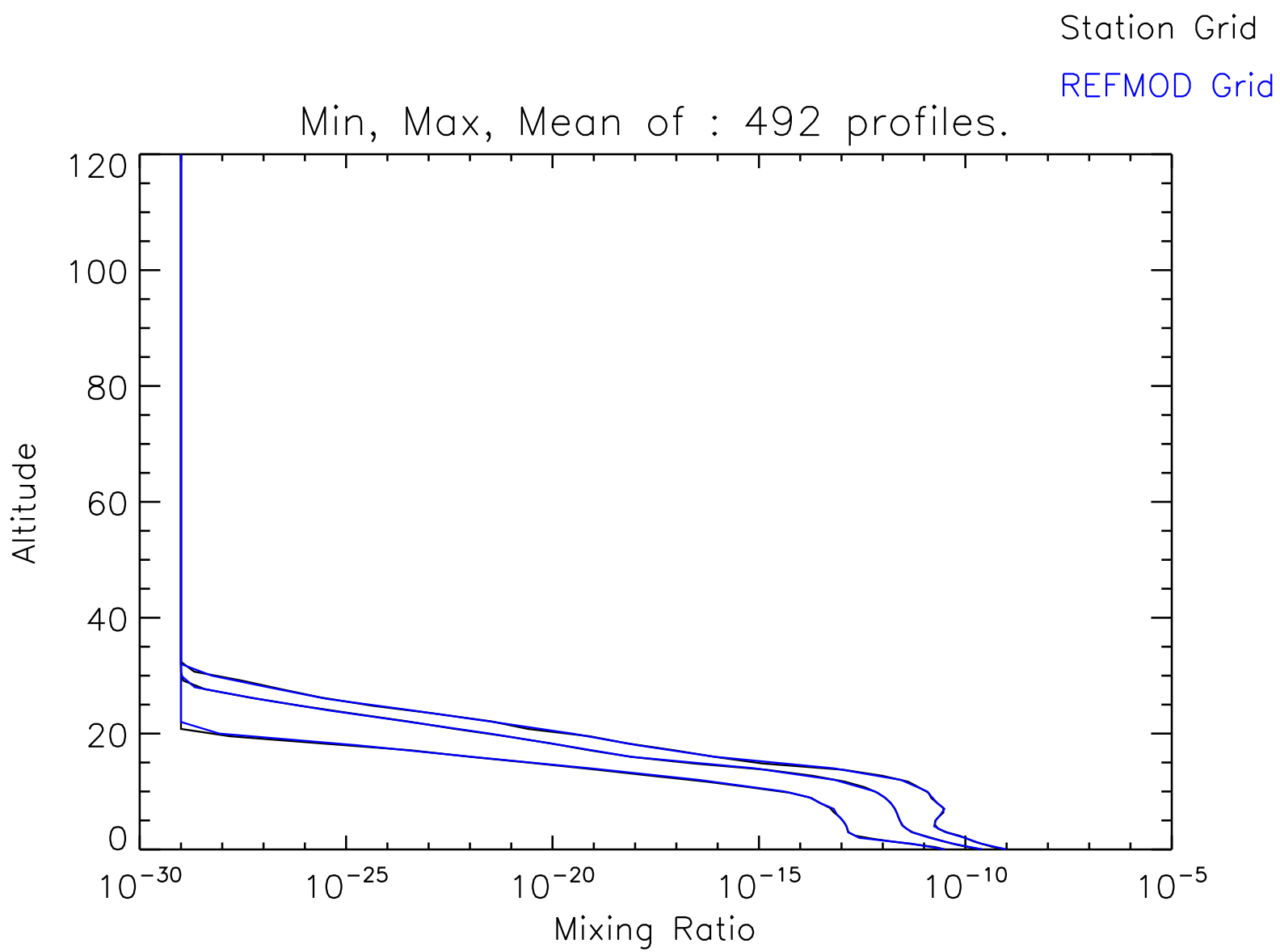

Initial & Interpolated profiles by month for : 2016
St_Petersburg 59.7N 30.0E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio

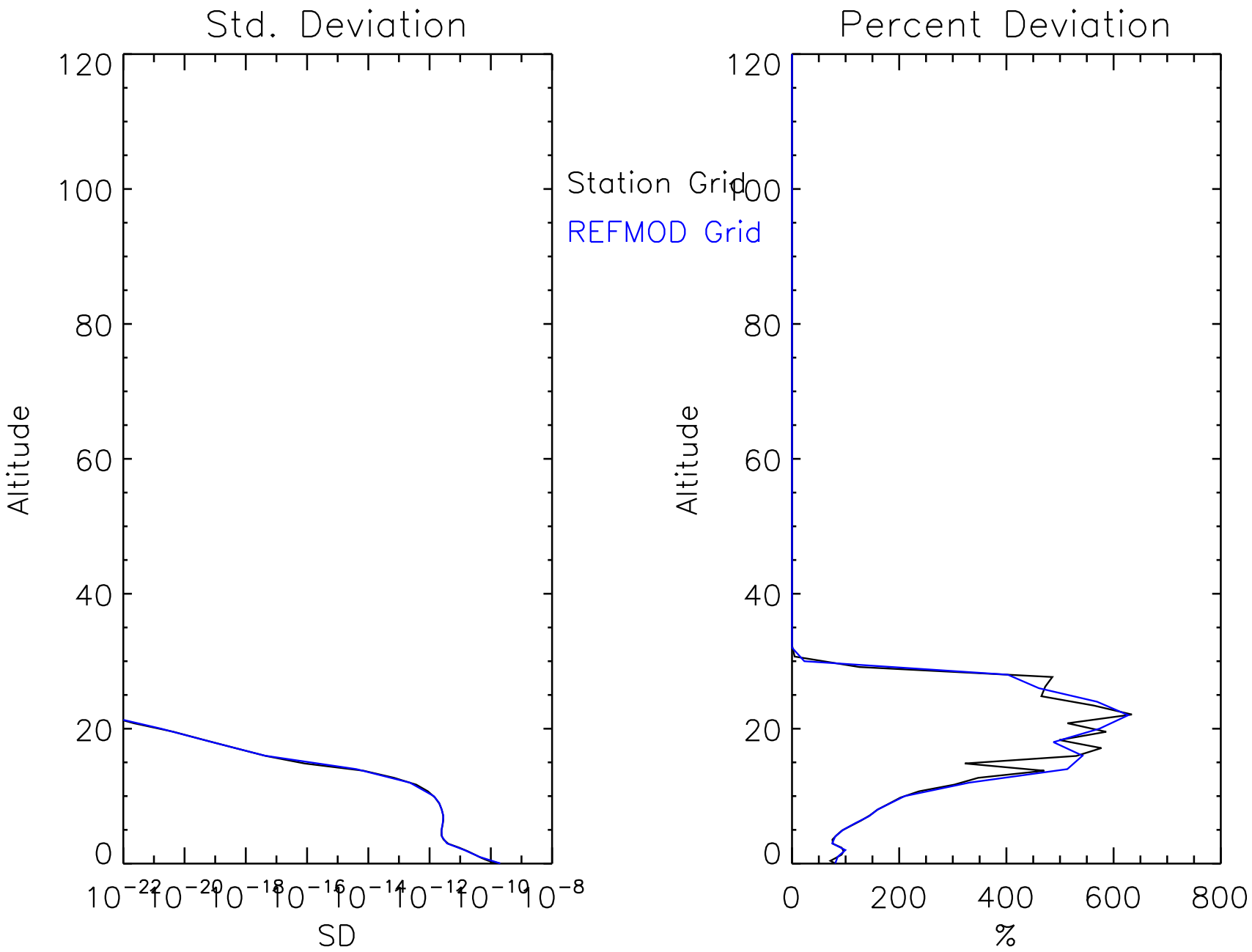

Initial & Interpolated profiles by month for : 2017
St_Petersburg 59.7N 30.0E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio

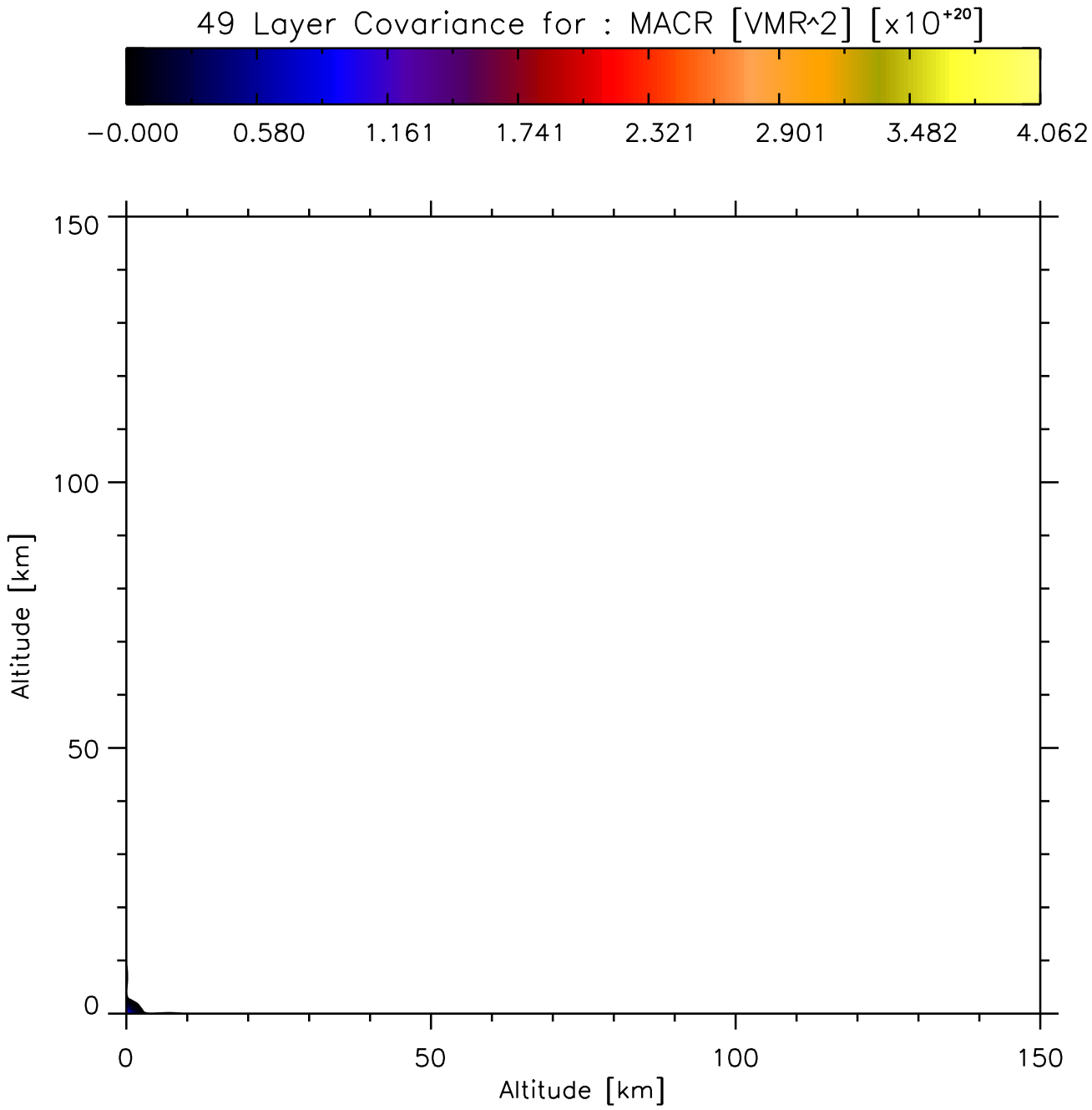

Initial & Interpolated profiles by month for : 2018
St_Petersburg 59.7N 30.0E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio

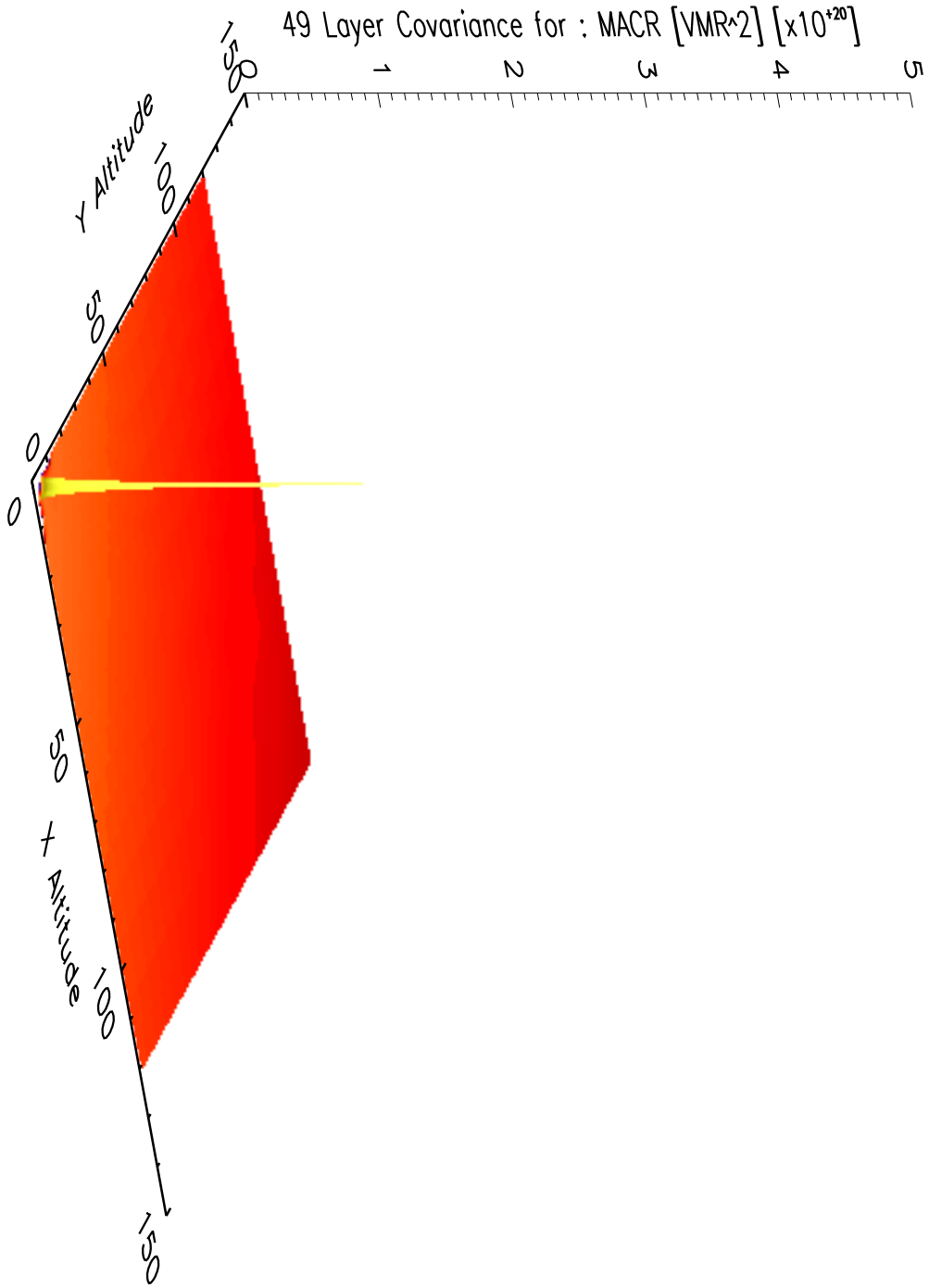

Initial & Interpolated profiles by month for : 2019
St_Petersburg 59.7N 30.0E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio

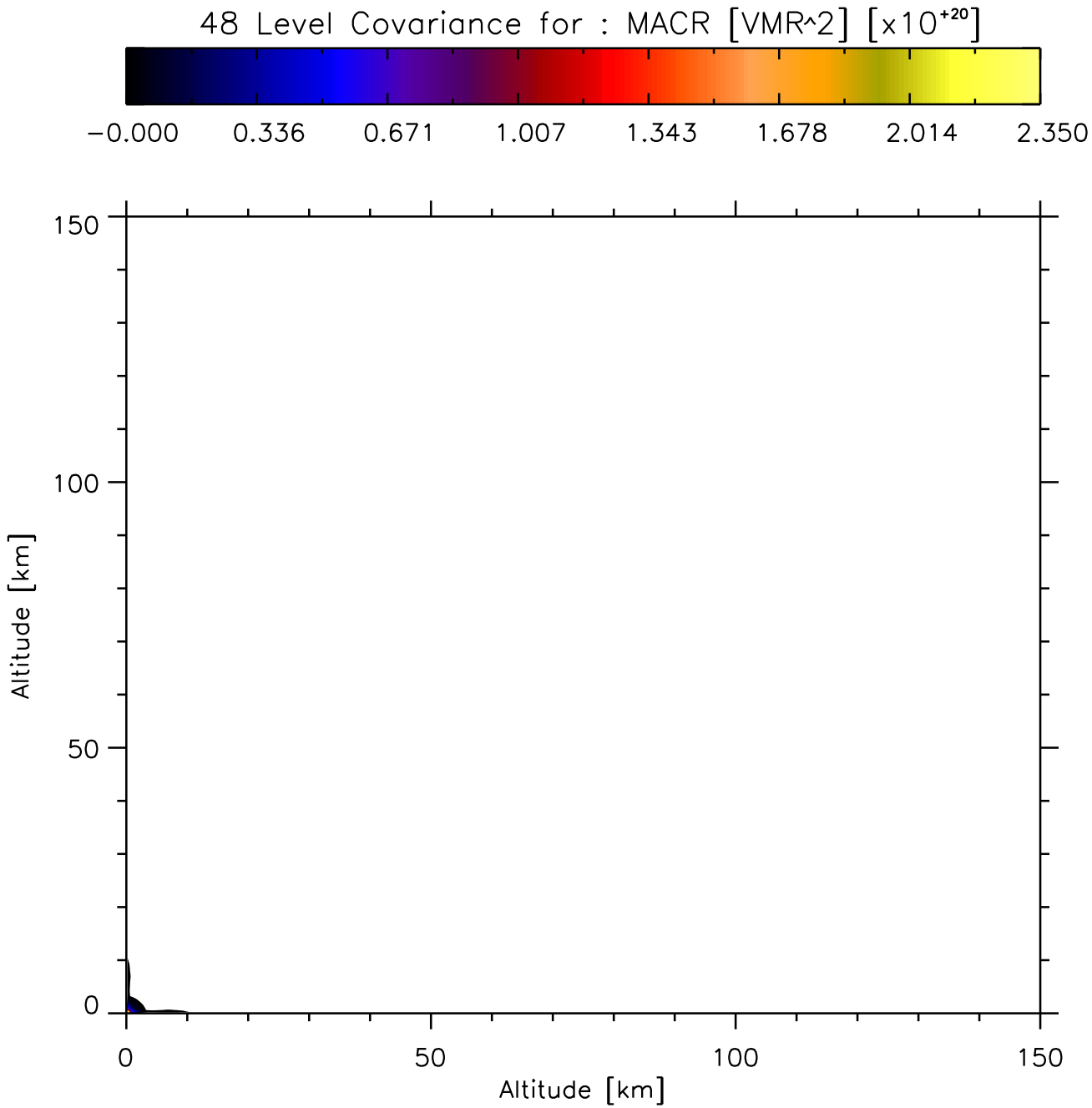

Initial & Interpolated profiles by month for : 2020
St_Petersburg 59.7N 30.0E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio

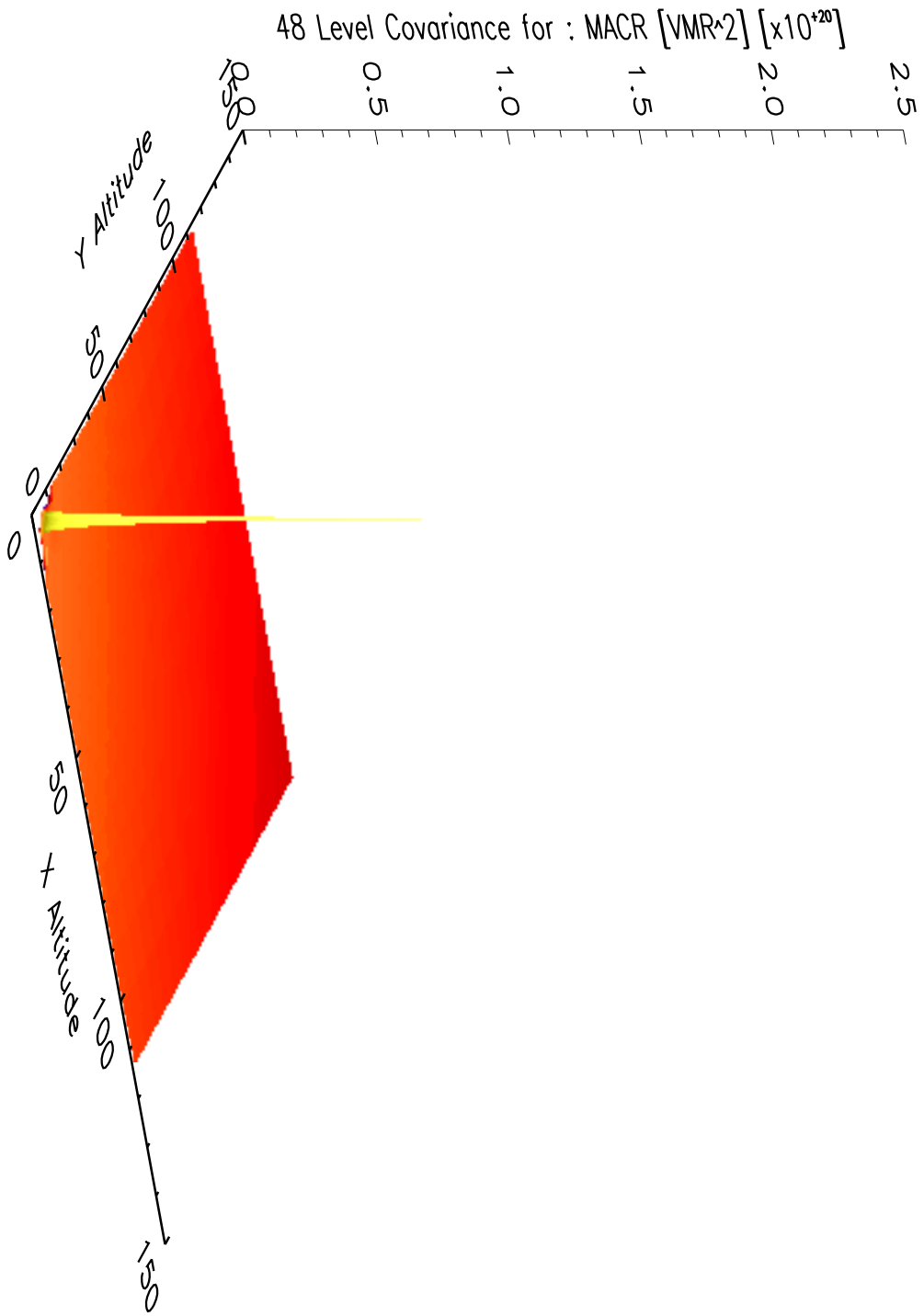

Station Grid
REFMOD Grid
Min, Max, Mean of : 492 profiles.
Altitude
120
100
80
60
40
20
0
$10^{-30}$
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
$10^{-5}$
Mixing Ratio


Std. Deviation
Percent Deviation
Station Grid
REFMOD Grid
Altitude
Altitude
120
100
80
60
40
20
0
$10^{-22}$ $10^{-20}$ $10^{-18}$ $10^{-16}$ $10^{-14}$ $10^{-12}$ $10^{-10}$ $10^{-8}$
SD
0 200 400 600 800
%


49 Layer Covariance for : MACR [VMR^2] [x10^+20]
−0.000
0.580
1.161
1.741
2.321
2.901
3.482
4.062
150
100
50
0
Altitude [km]
0
50
100
150
Altitude [km]


49 Layer Covariance for : MACR [VMR^2] [x10^+20]
150
1
2
3
4
5
Y Altitude
100
50
0
0
50
X Altitude
100
150


48 Level Covariance for : MACR [VMR^2] [x10^+20]
−0.000
0.336
0.671
1.007
1.343
1.678
2.014
2.350
150
100
50
0
Altitude [km]
0
50
100
150
Altitude [km]


48 Level Covariance for : MACR [VMR^2] [x10^+20]
0.0
0.5
1.0
1.5
2.0
2.5
Y Altitude
0
50
100
0
50
X Altitude
100