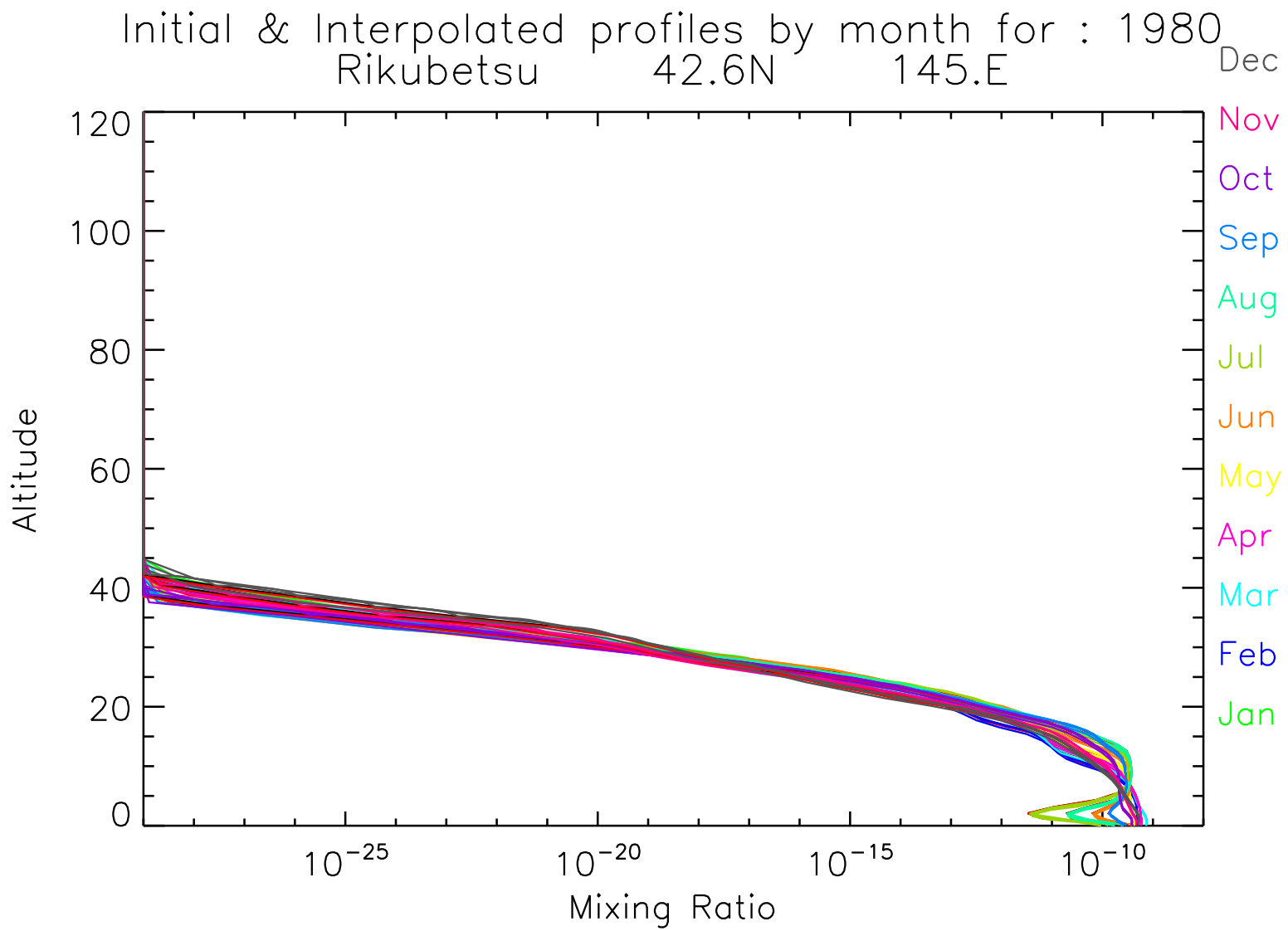
Initial & Interpolated profiles by month for : 1980
Rikubetsu 42.6N 145.E
Dec
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120
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0
Altitude
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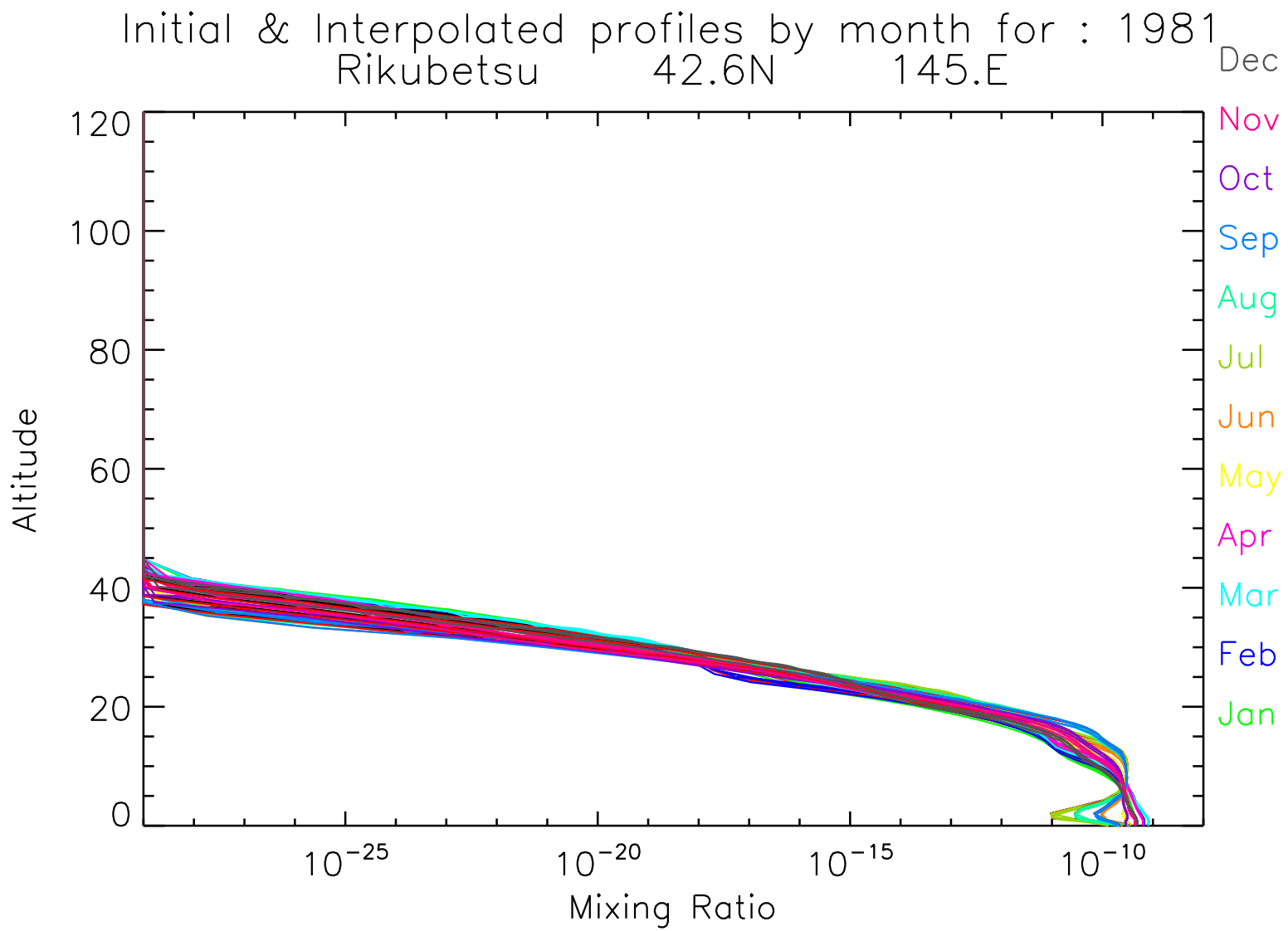
10^{-15}
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1981
Rikubetsu 42.6N 145.E
Dec
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Altitude
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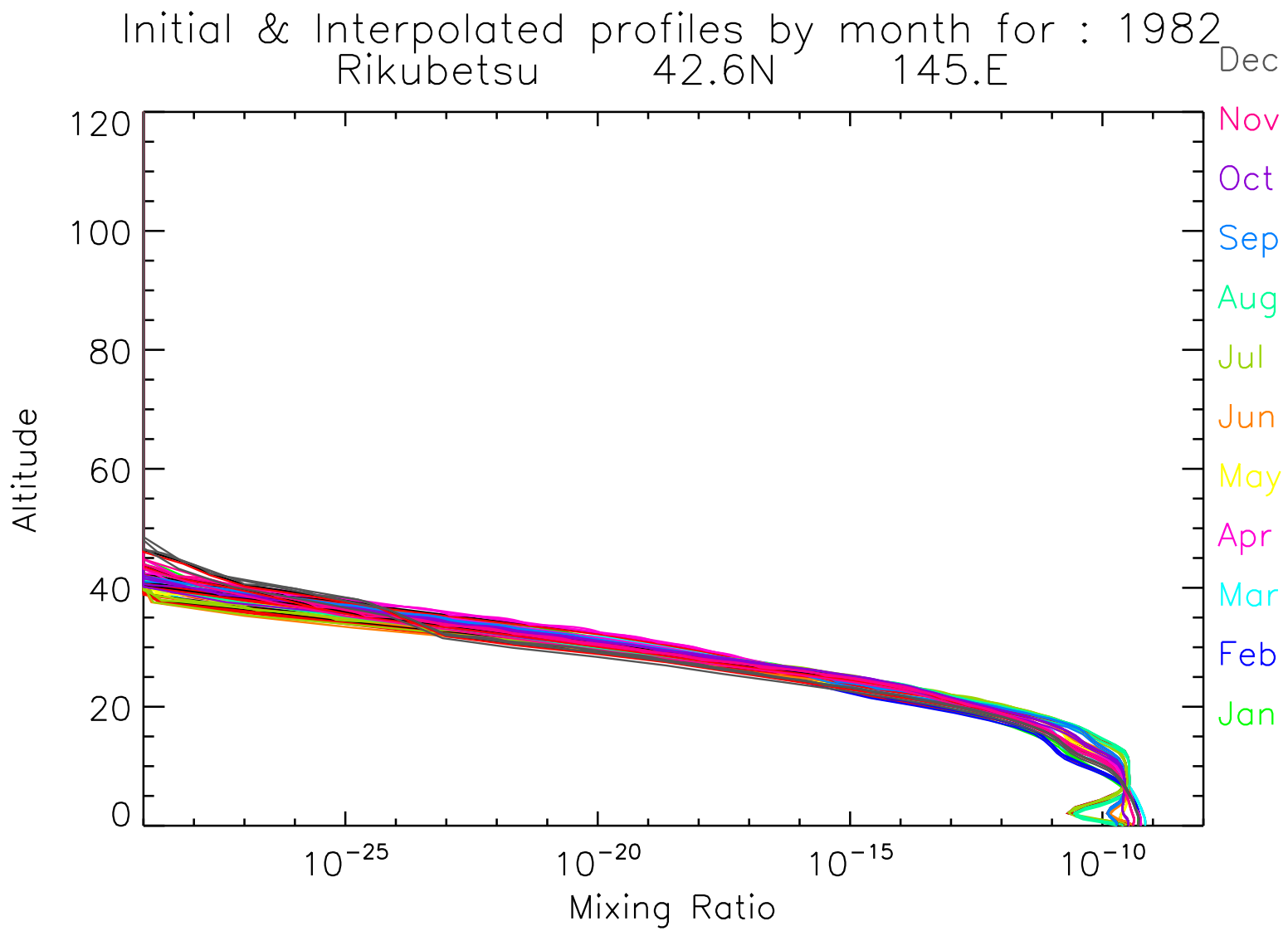
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1982
Rikubetsu 42.6N 145.E
Dec
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Altitude
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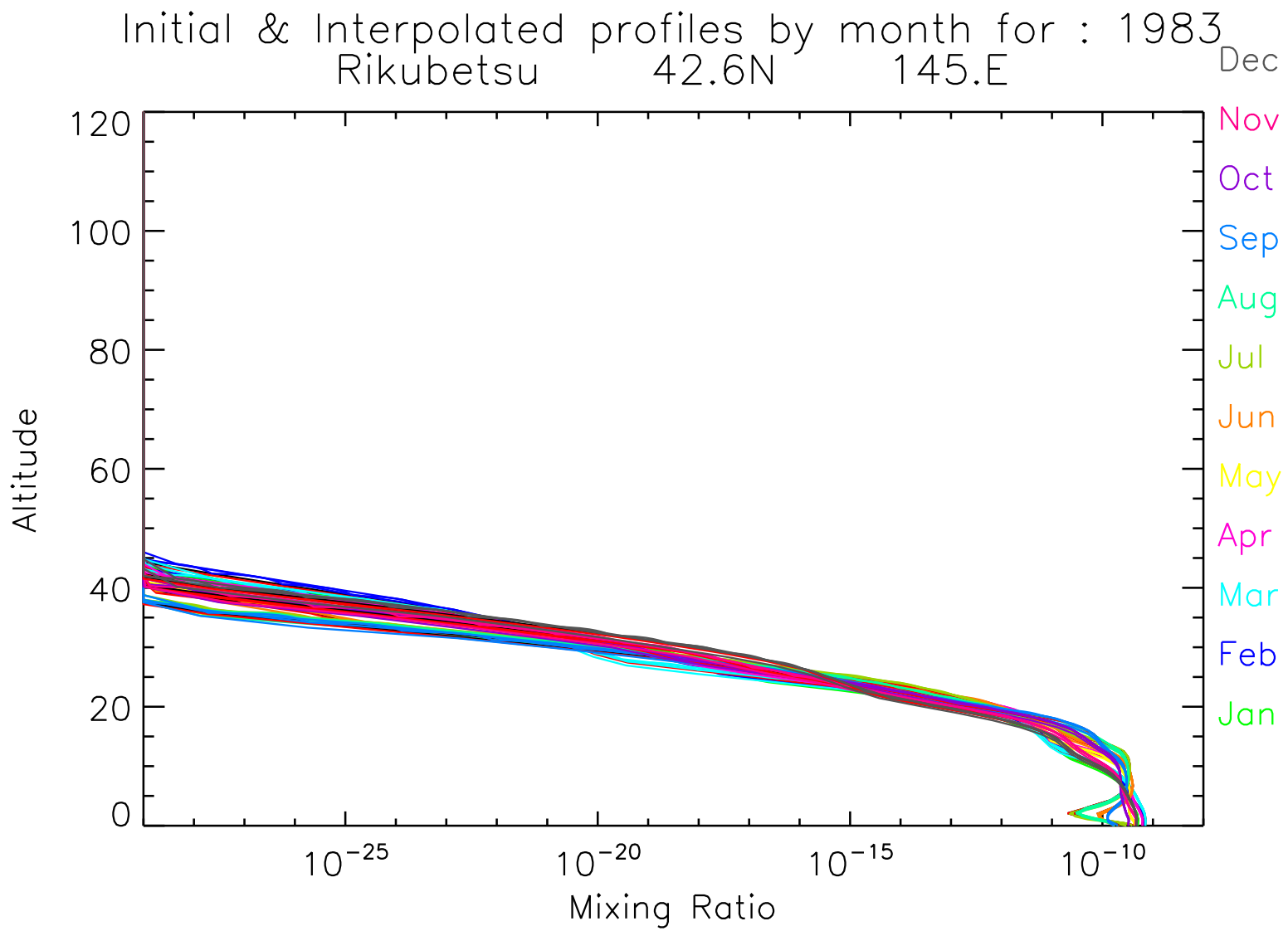
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1983
Rikubetsu 42.6N 145.E
Dec
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Altitude
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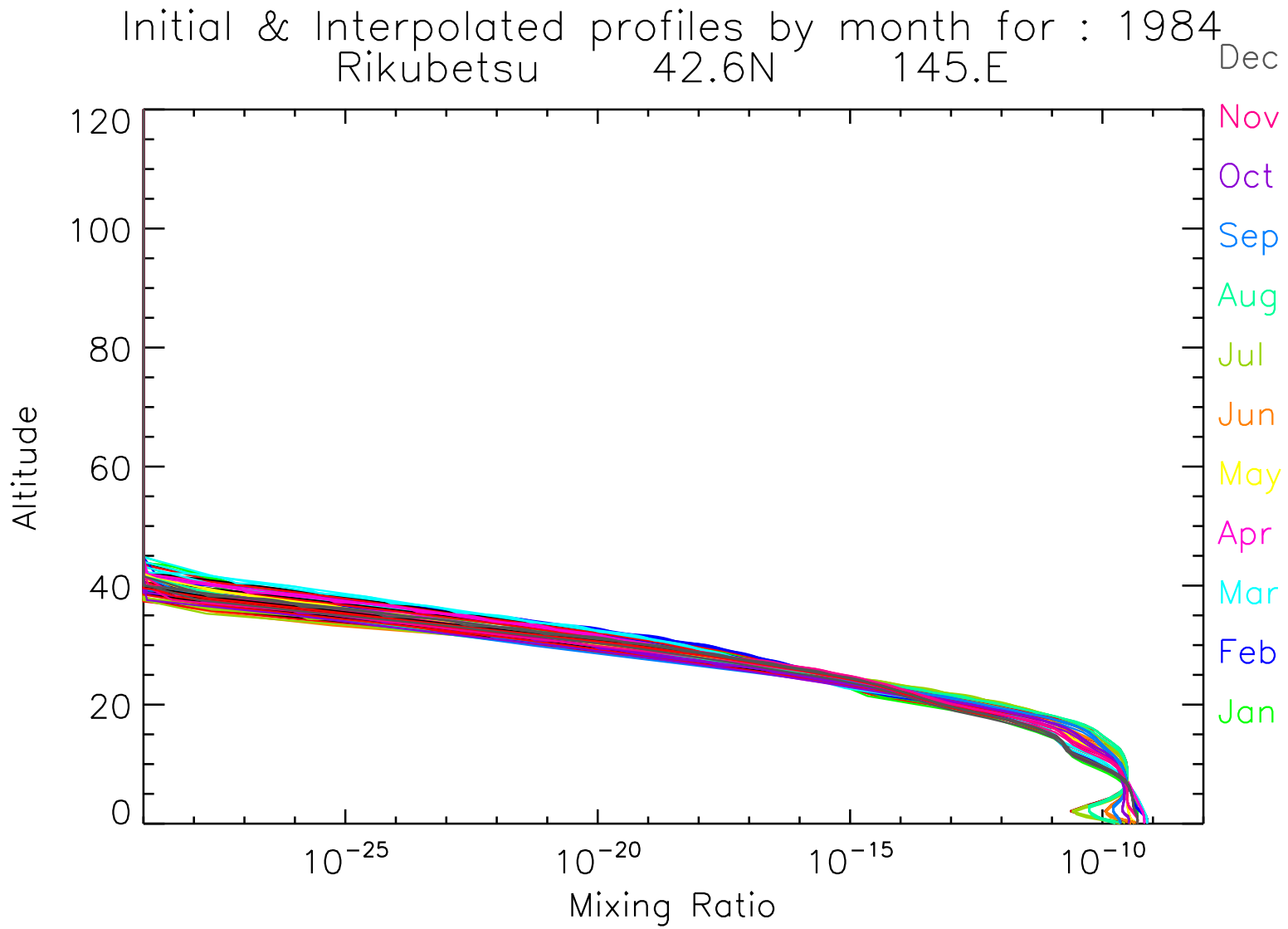
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1984
Rikubetsu 42.6N 145.E
Dec
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Altitude
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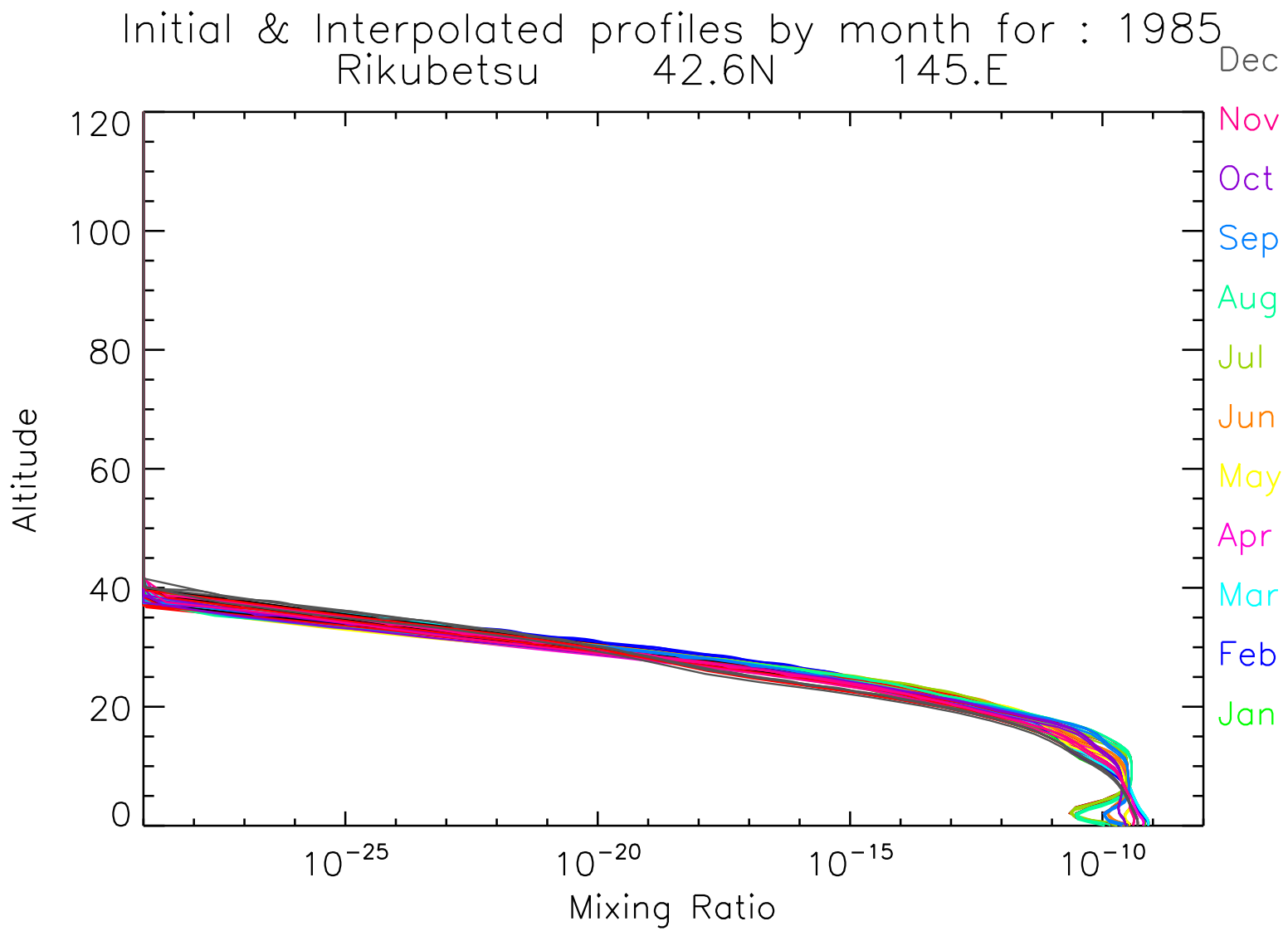
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1985
Rikubetsu 42.6N 145.E
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Altitude
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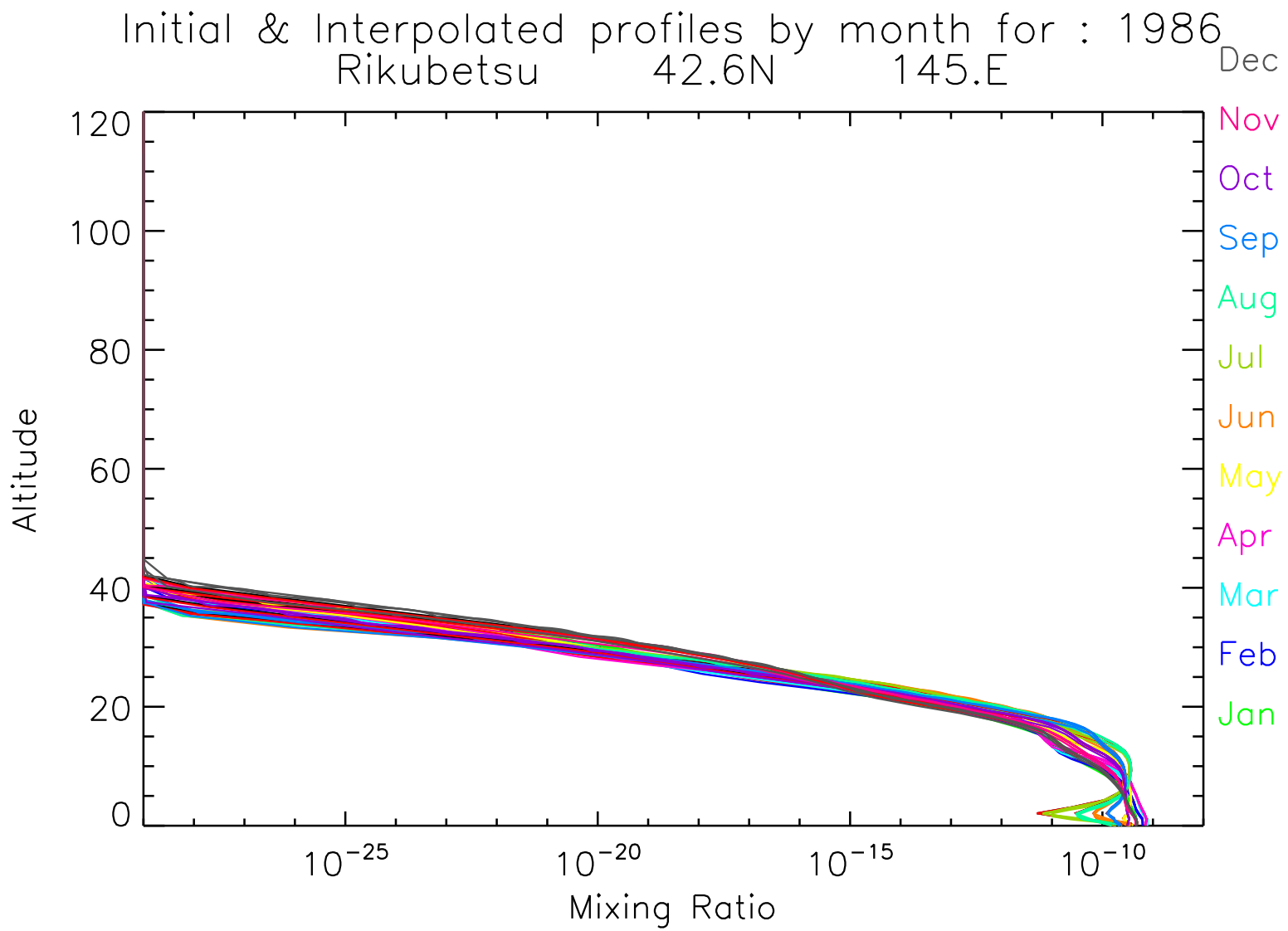
10^{-15}
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1986
Rikubetsu 42.6N 145.E
Dec
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Altitude
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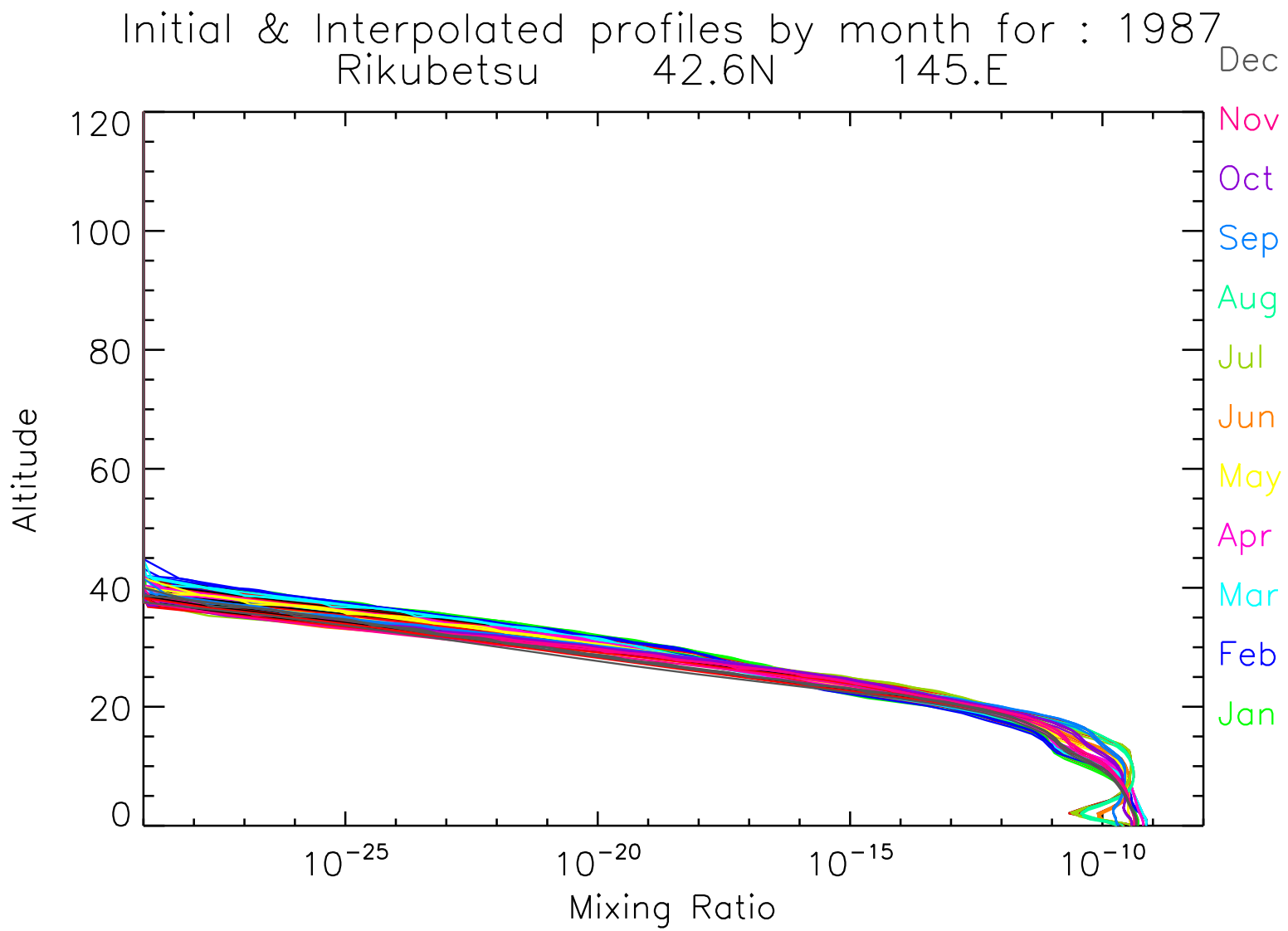
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1987
Rikubetsu 42.6N 145.E
Dec
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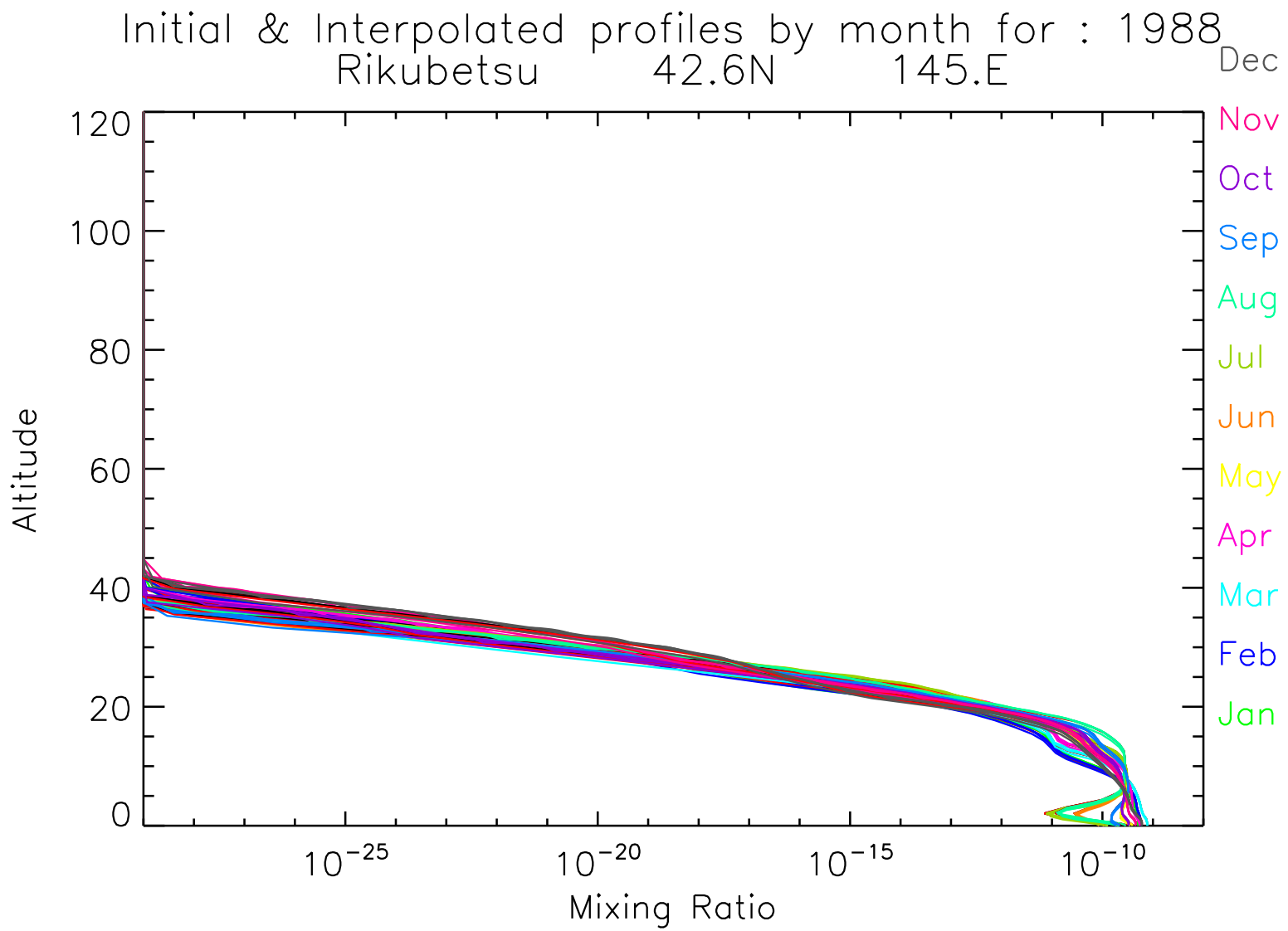
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1988
Rikubetsu 42.6N 145.E
Dec
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Altitude
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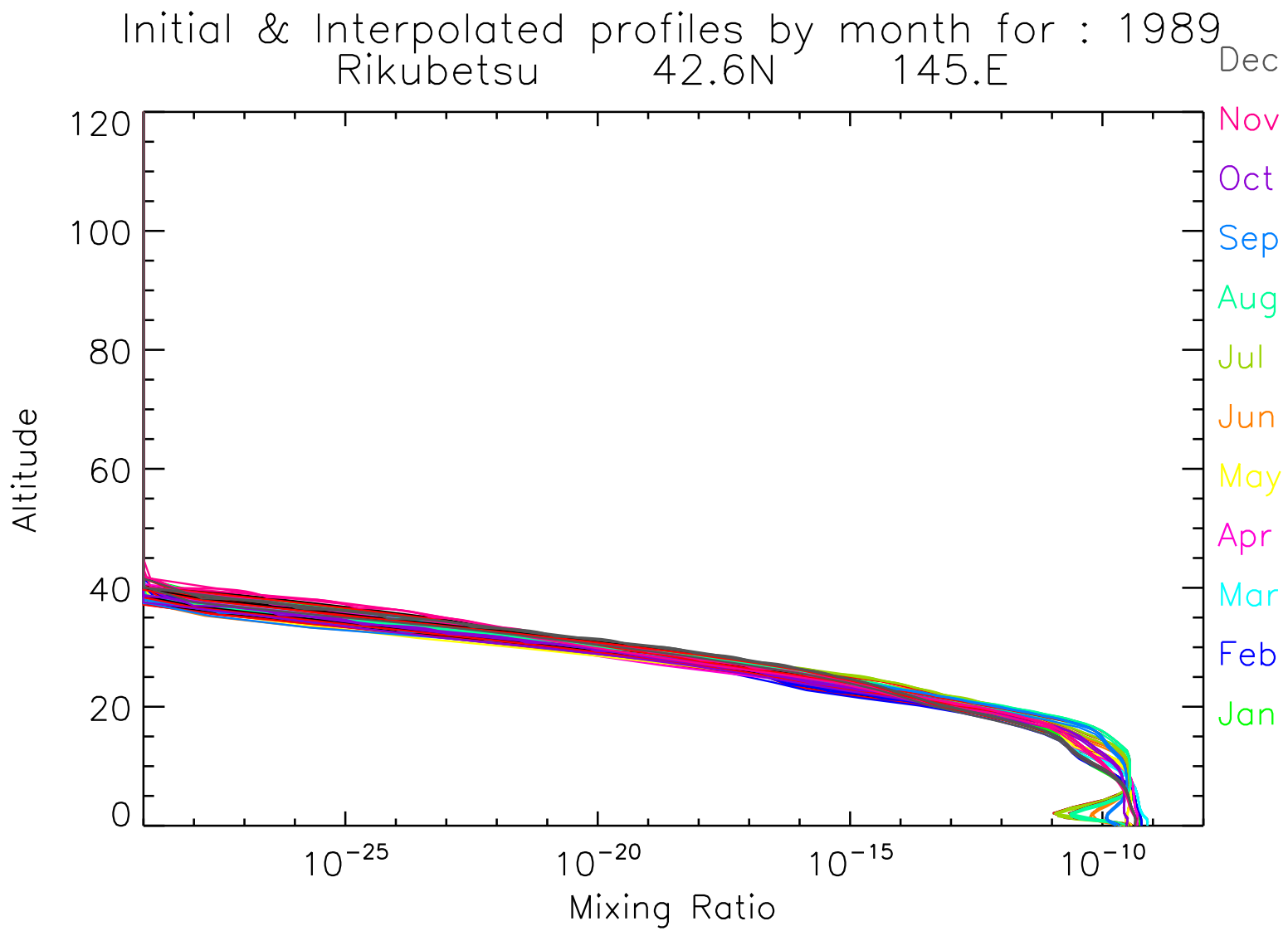
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1989
Rikubetsu 42.6N 145.E
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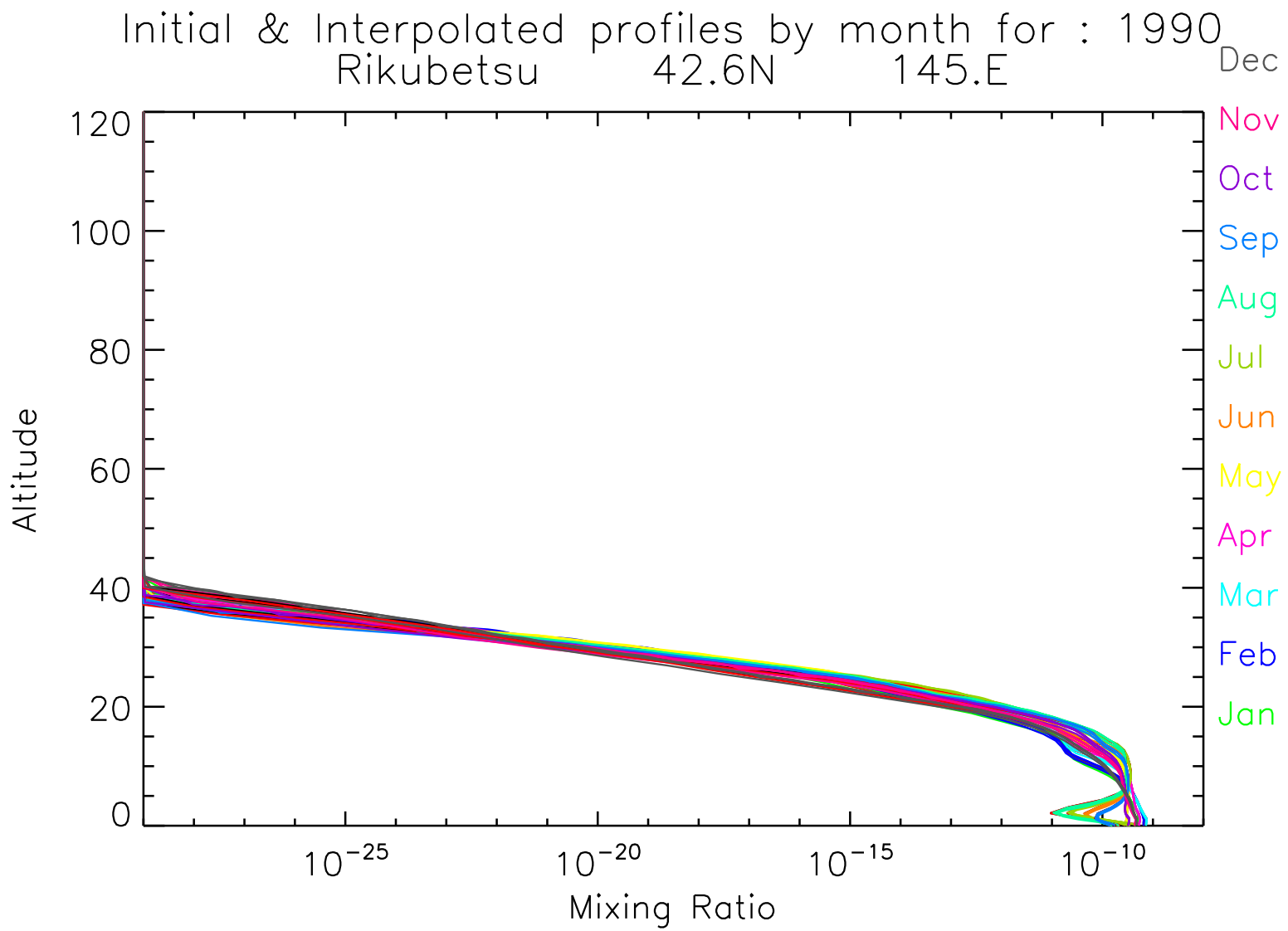
Mixing Ratio


Initial & Interpolated profiles by month for : 1990
Rikubetsu 42.6N 145.E
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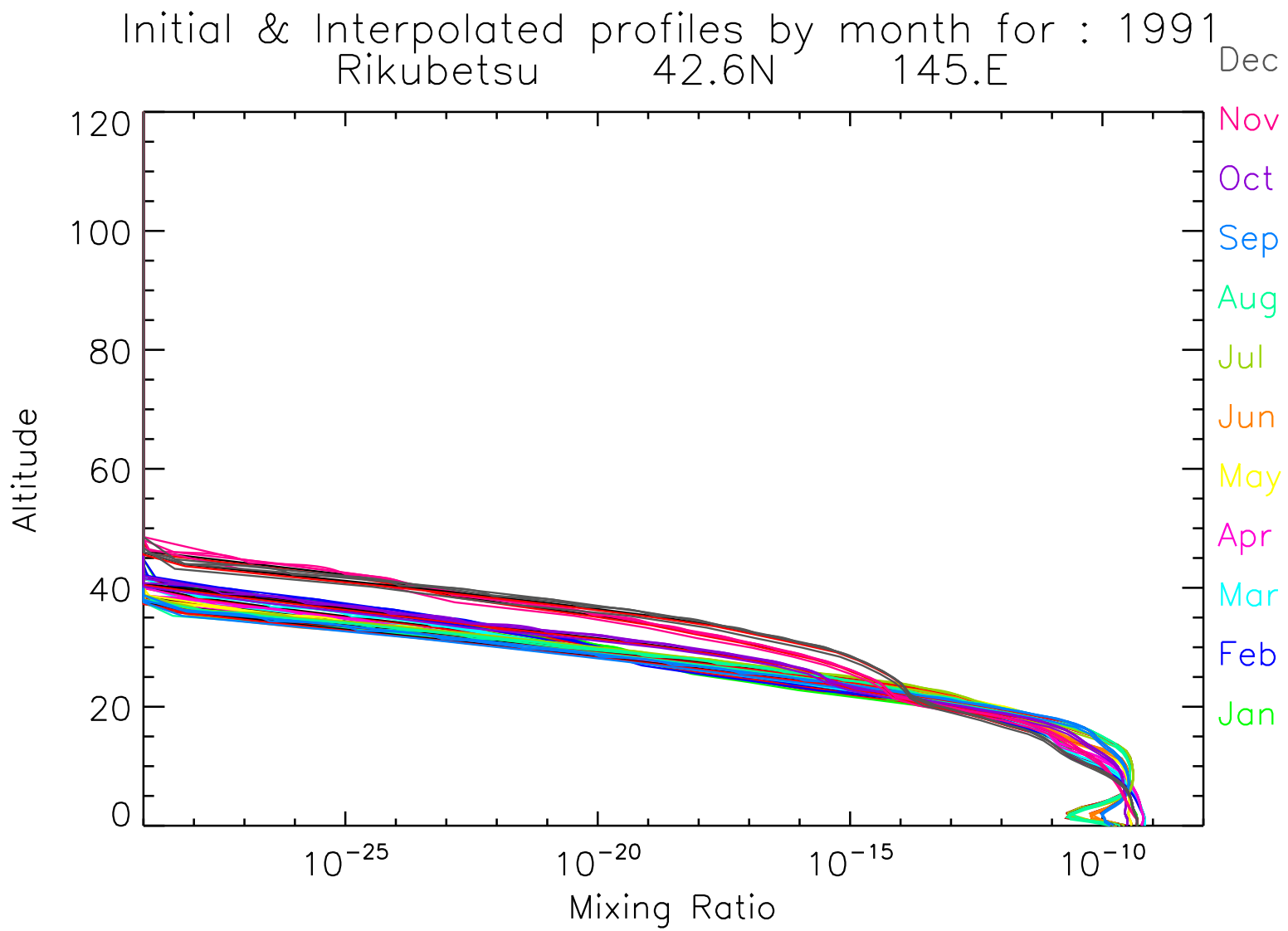
Mixing Ratio


Initial & Interpolated profiles by month for : 1991
Rikubetsu 42.6N 145.E
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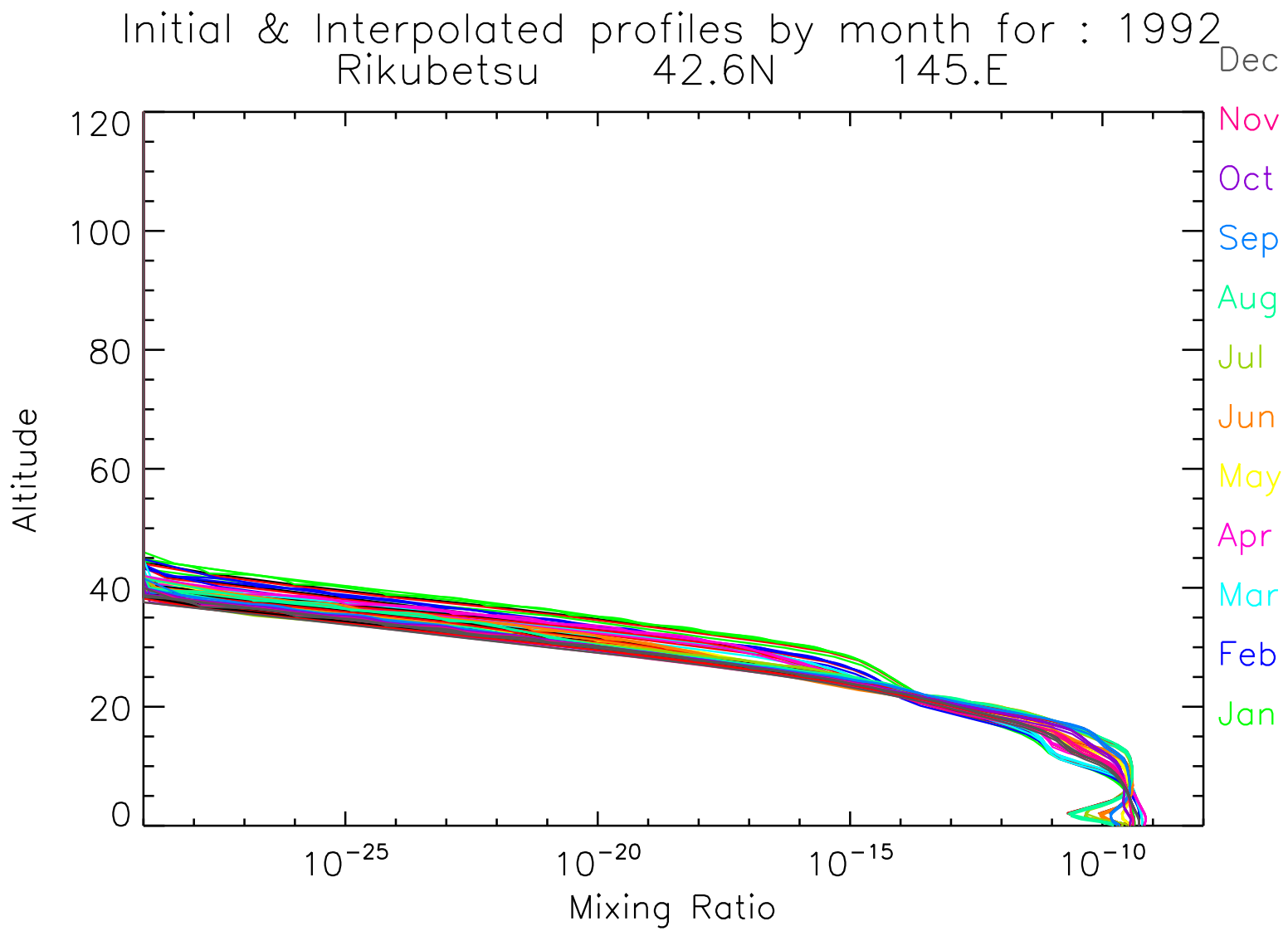
Mixing Ratio


Initial & Interpolated profiles by month for : 1992
Rikubetsu 42.6N 145.E
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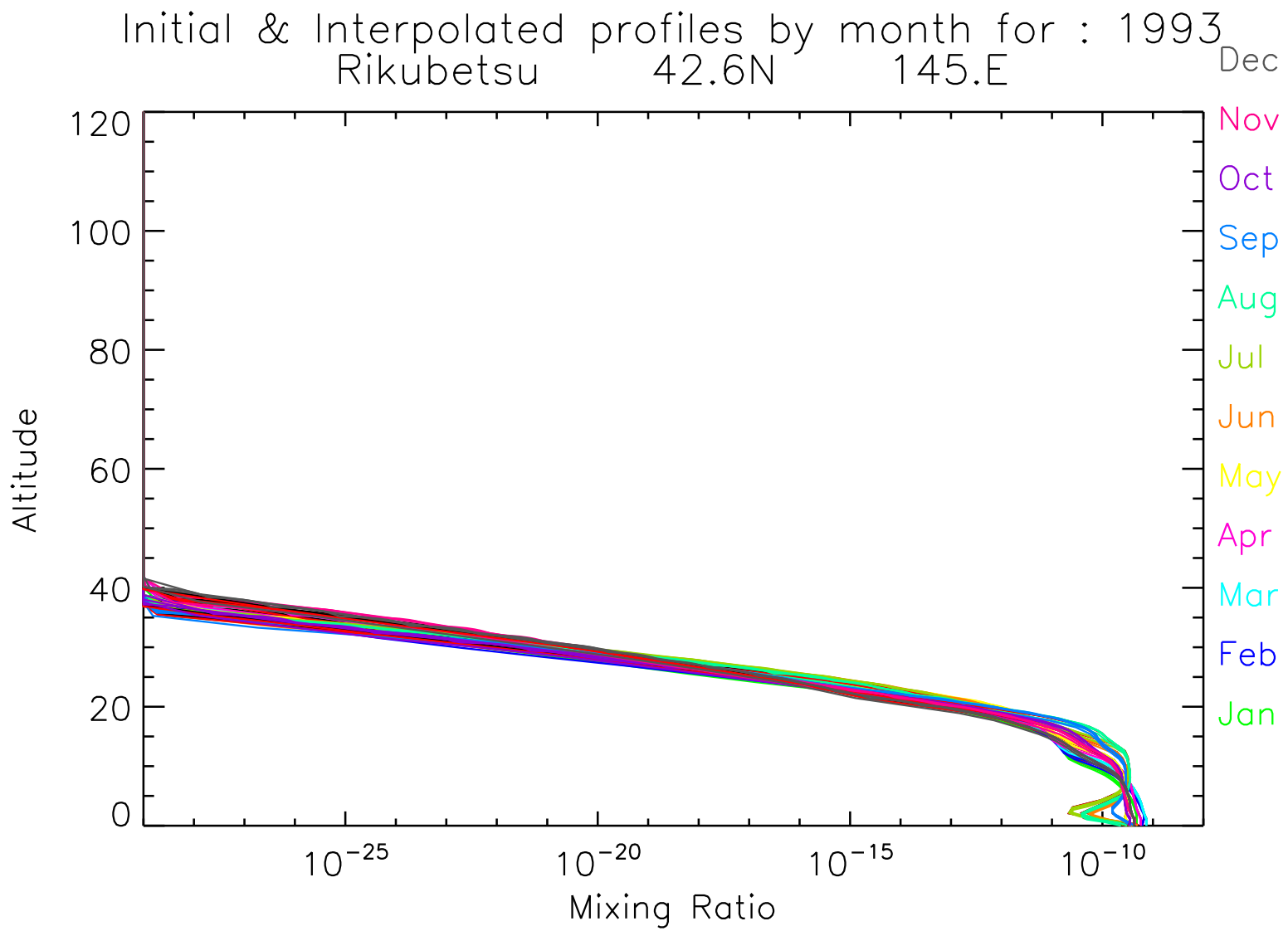
Mixing Ratio


Initial & Interpolated profiles by month for : 1993
Rikubetsu 42.6N 145.E
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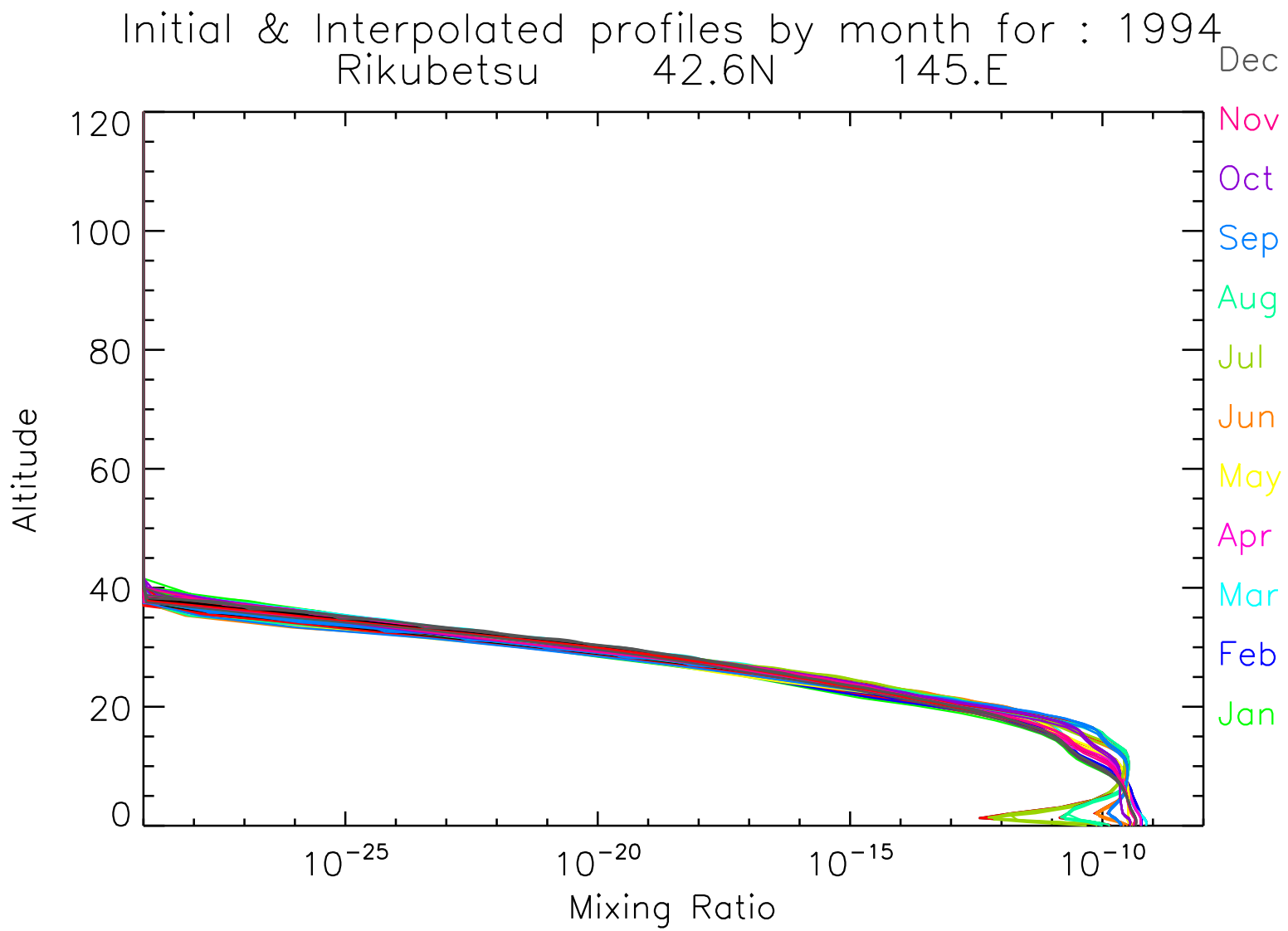
Mixing Ratio


Initial & Interpolated profiles by month for : 1994
Rikubetsu 42.6N 145.E
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Altitude
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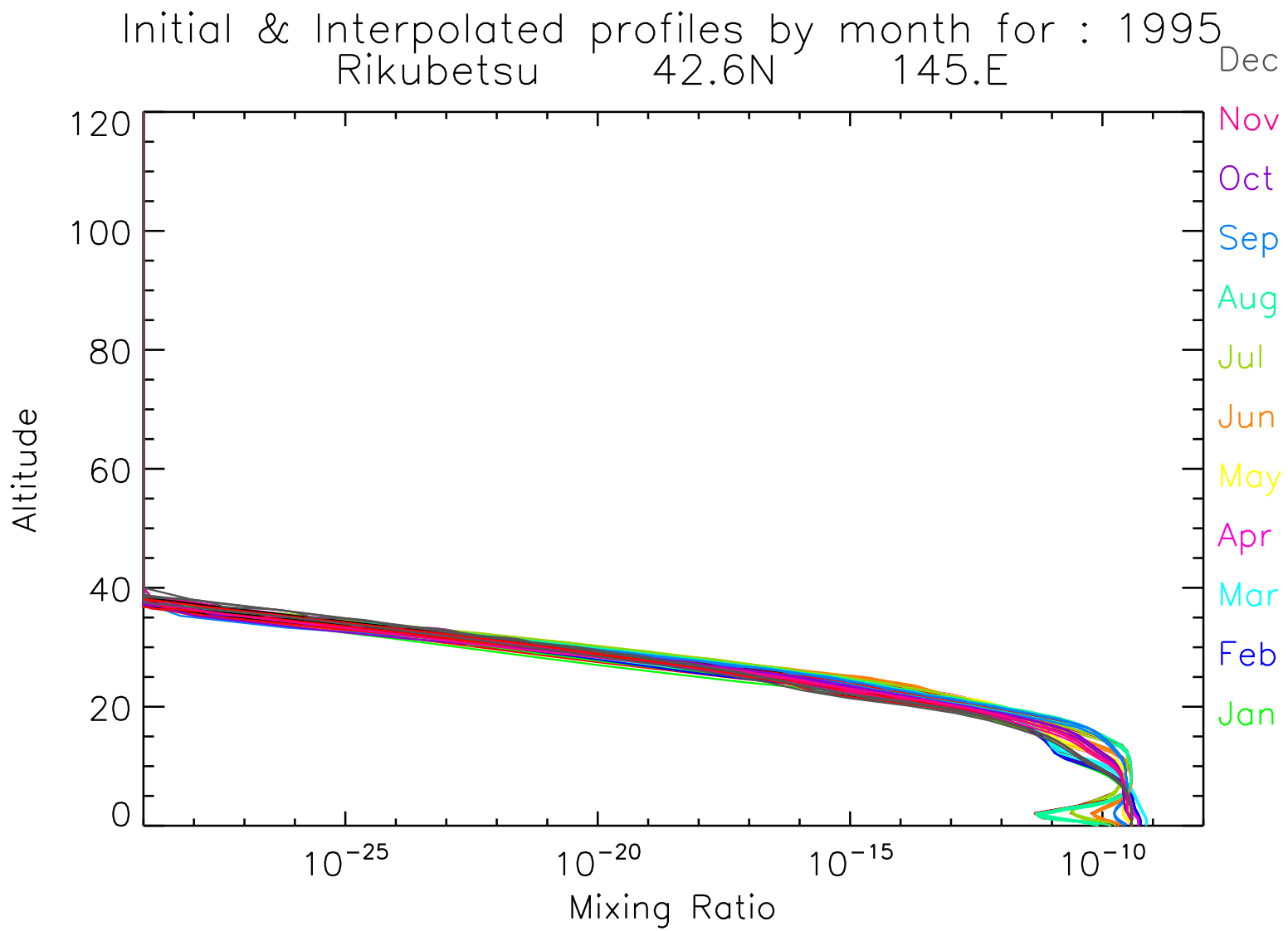
Mixing Ratio


Initial & Interpolated profiles by month for : 1995
Rikubetsu 42.6N 145.E
Dec
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Altitude
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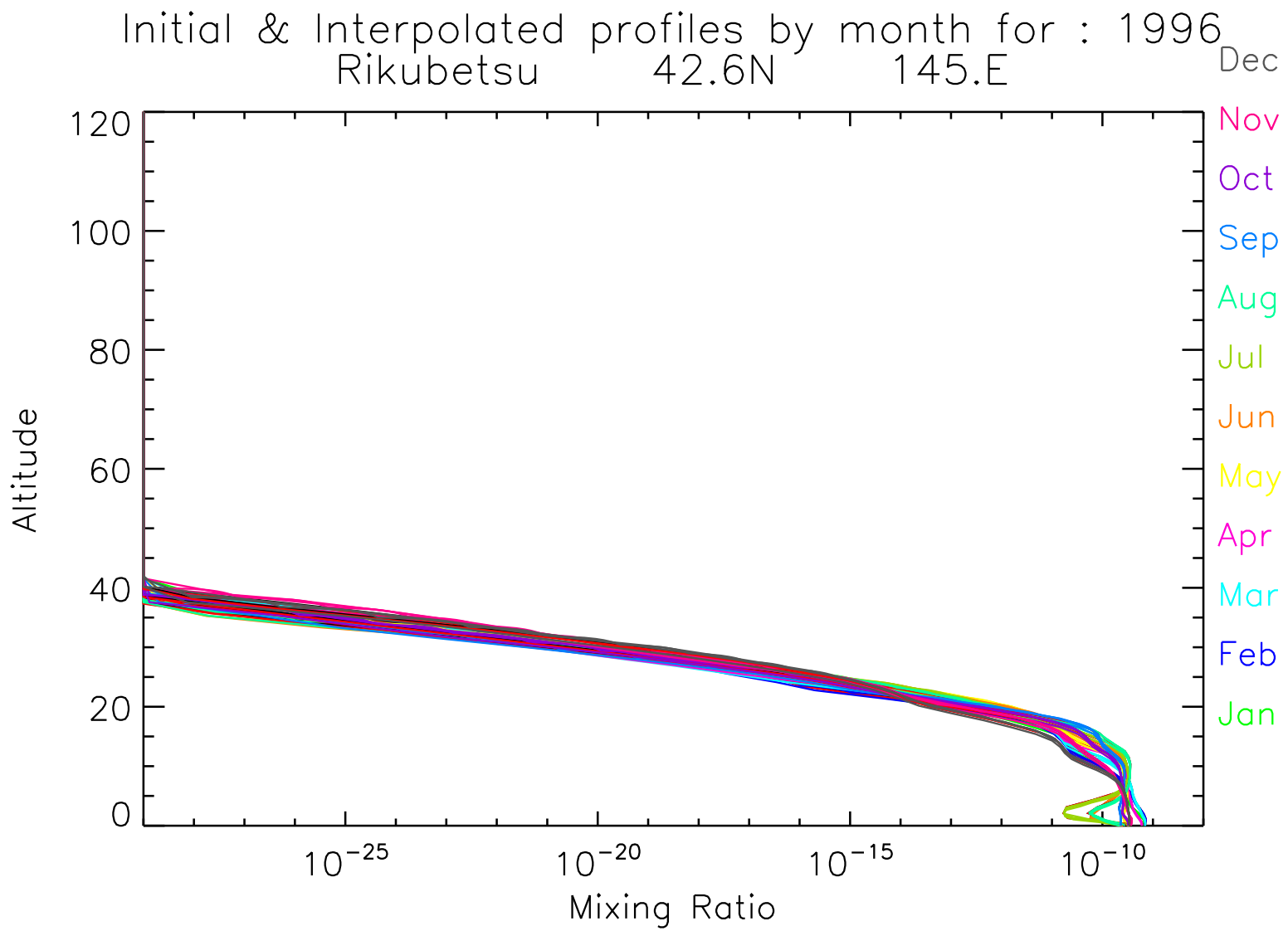
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1996
Rikubetsu 42.6N 145.E
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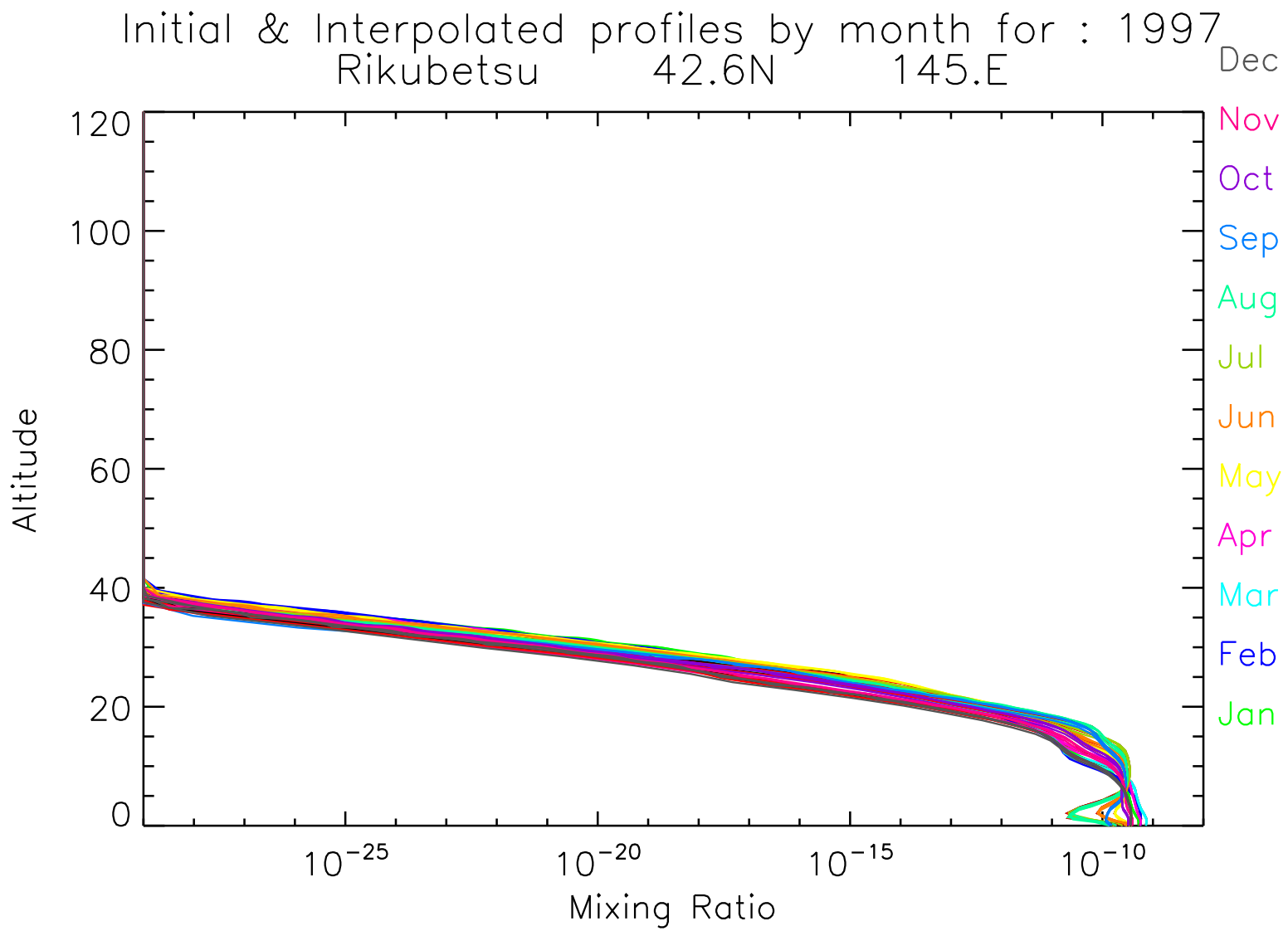
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1997
Rikubetsu 42.6N 145.E
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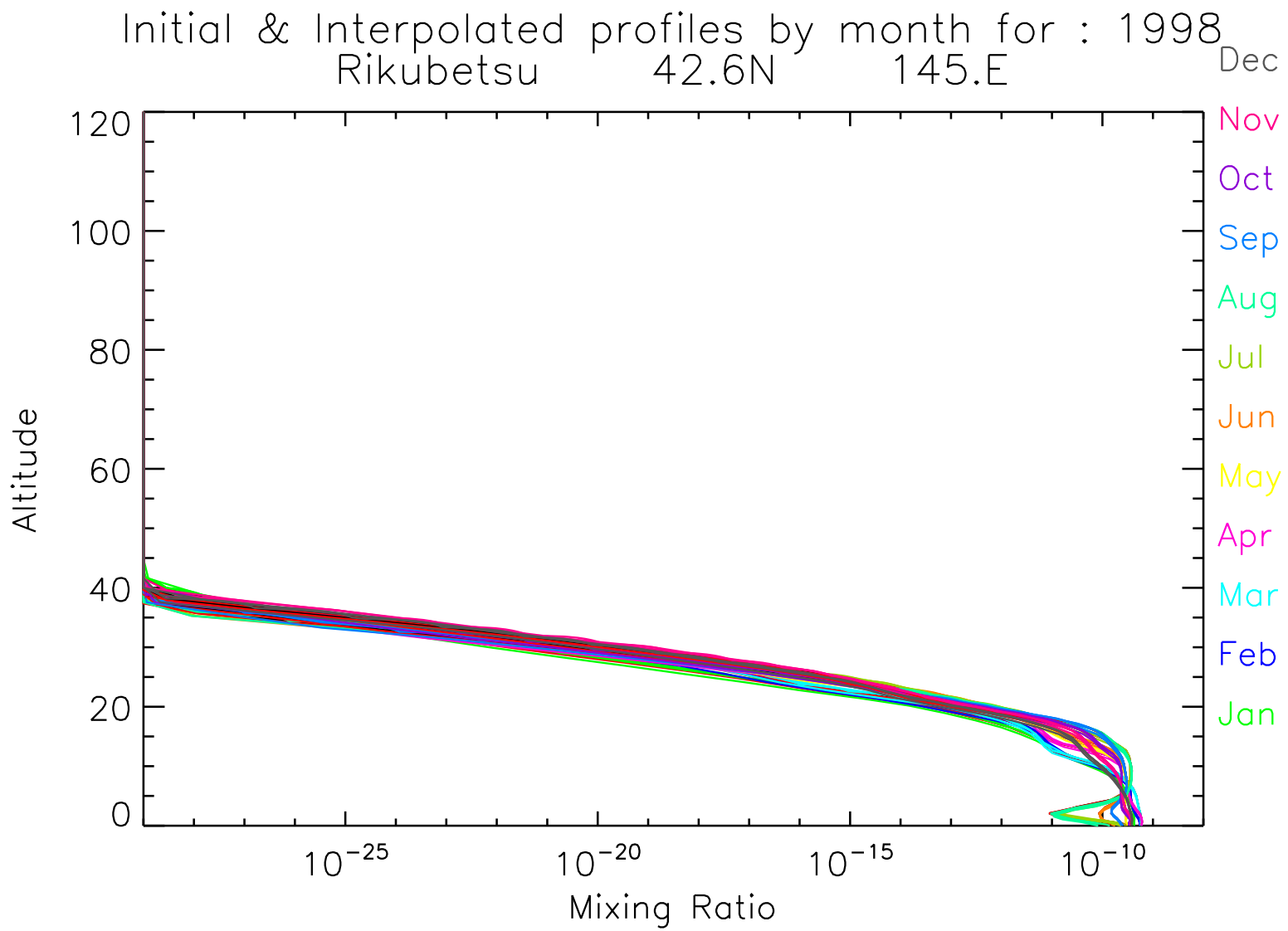
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1998
Rikubetsu 42.6N 145.E
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Altitude
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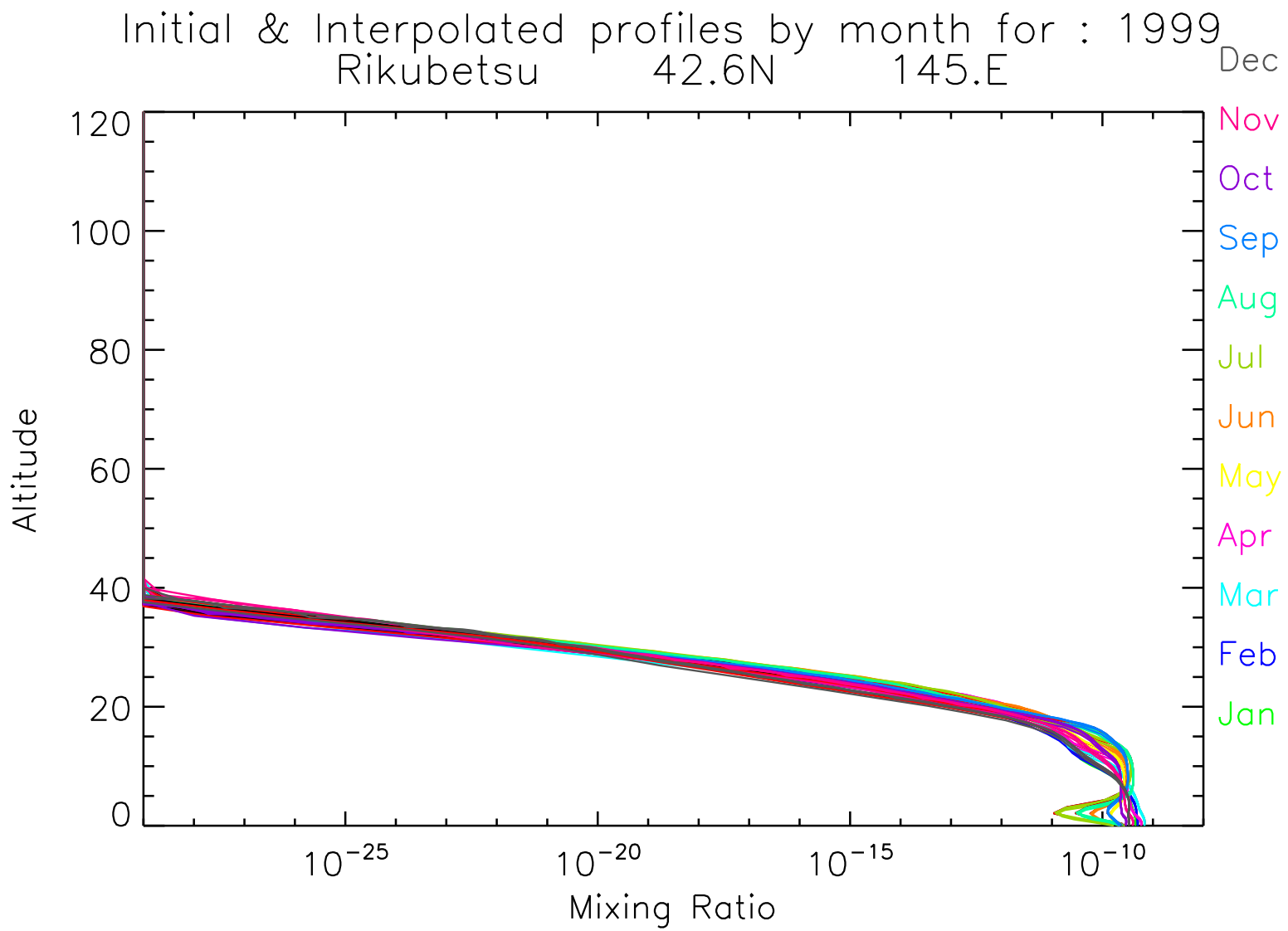
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1999
Rikubetsu 42.6N 145.E
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Altitude
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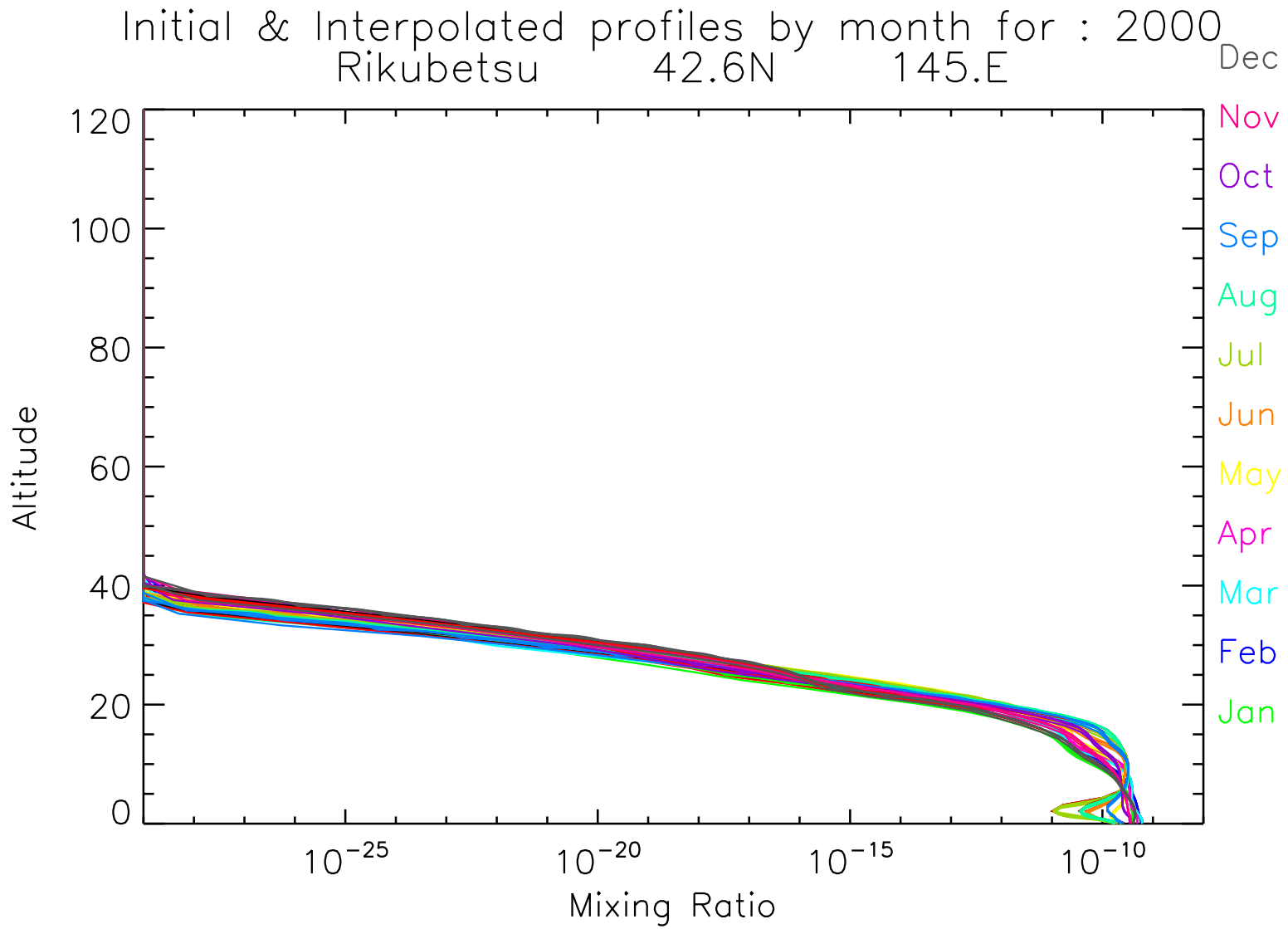
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 2000
Rikubetsu 42.6N 145.E
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Altitude
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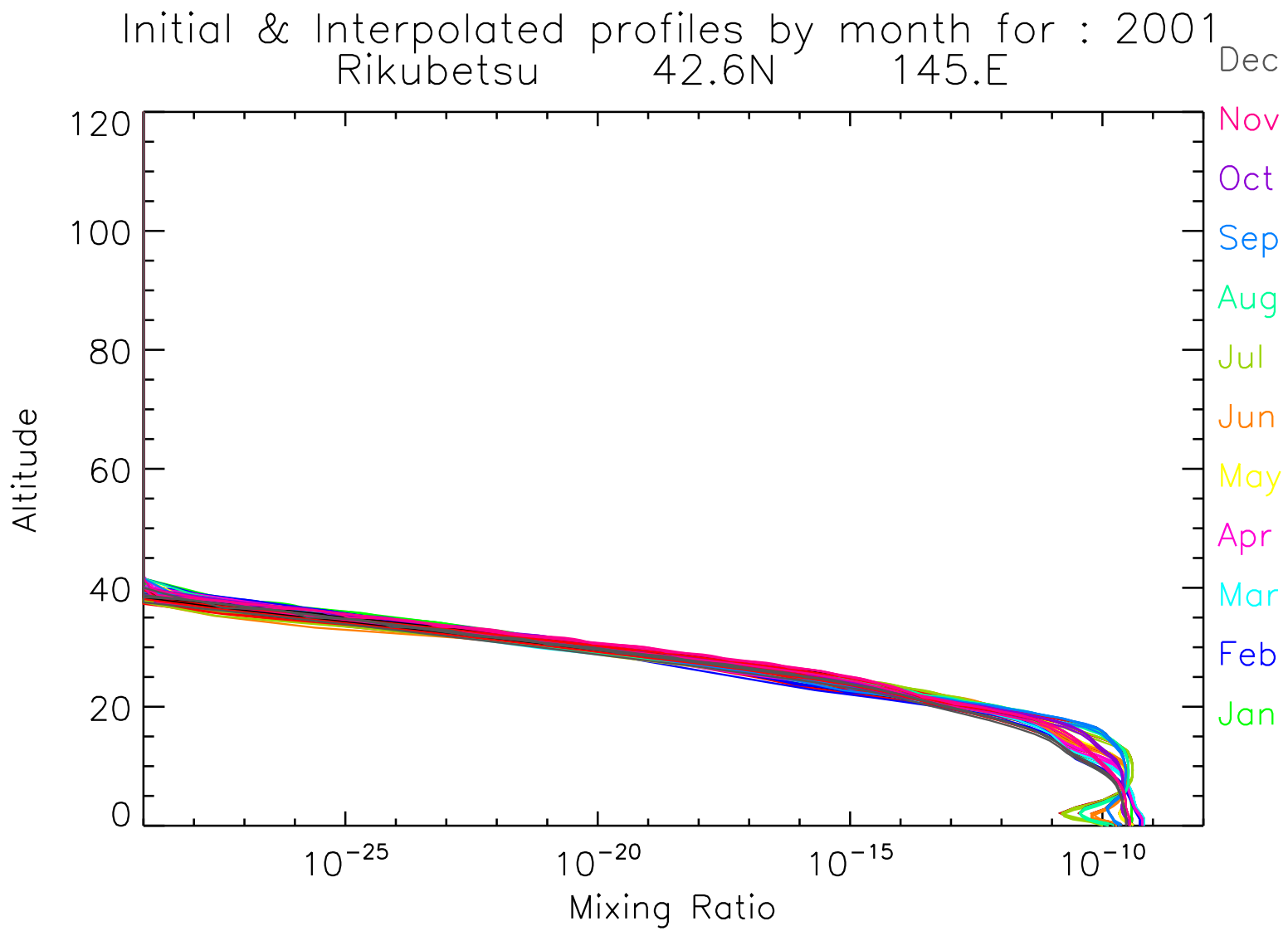
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 2001
Rikubetsu 42.6N 145.E
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Altitude
10^{-25}
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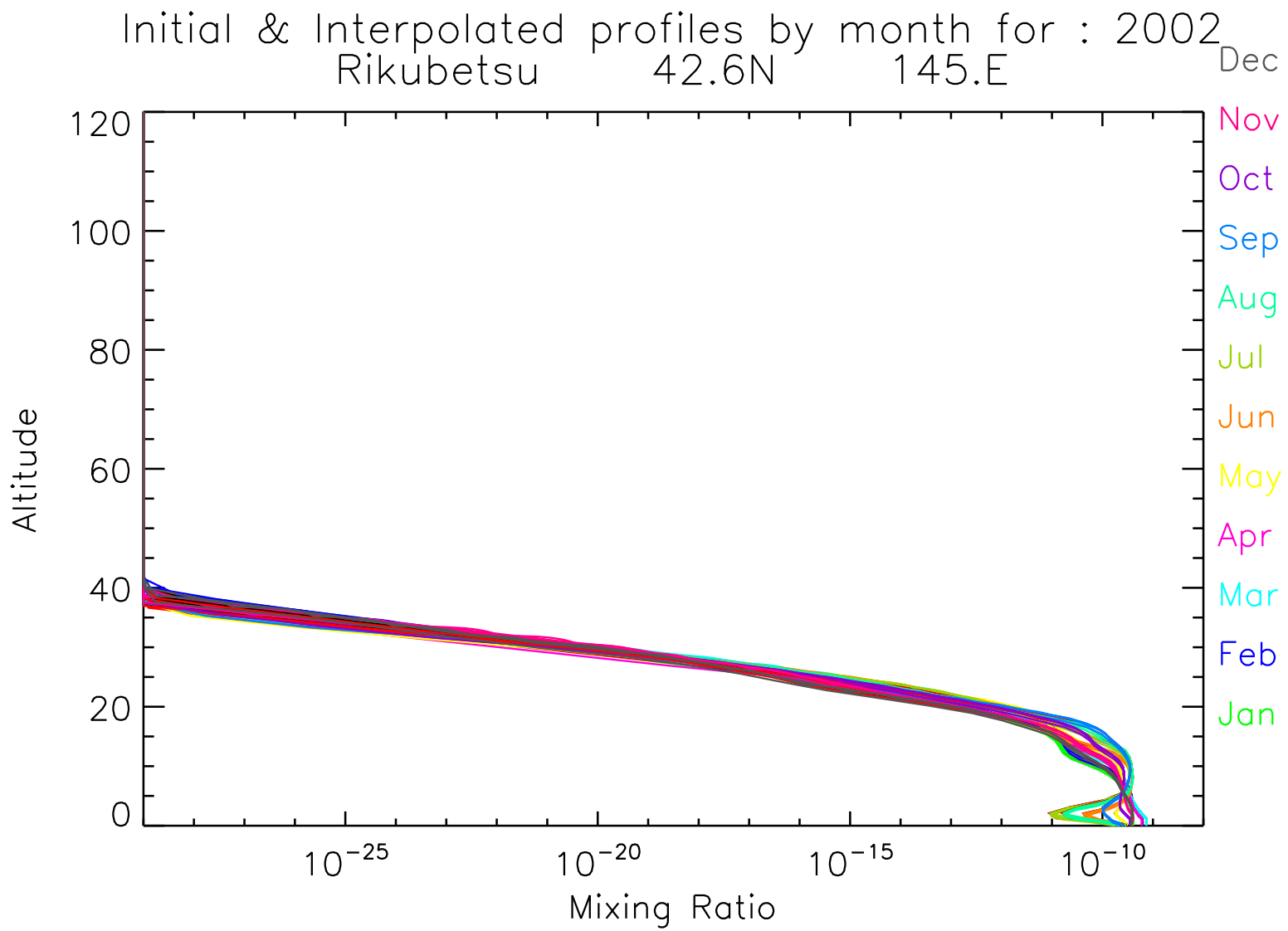
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 2002
Rikubetsu 42.6N 145.E
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Altitude
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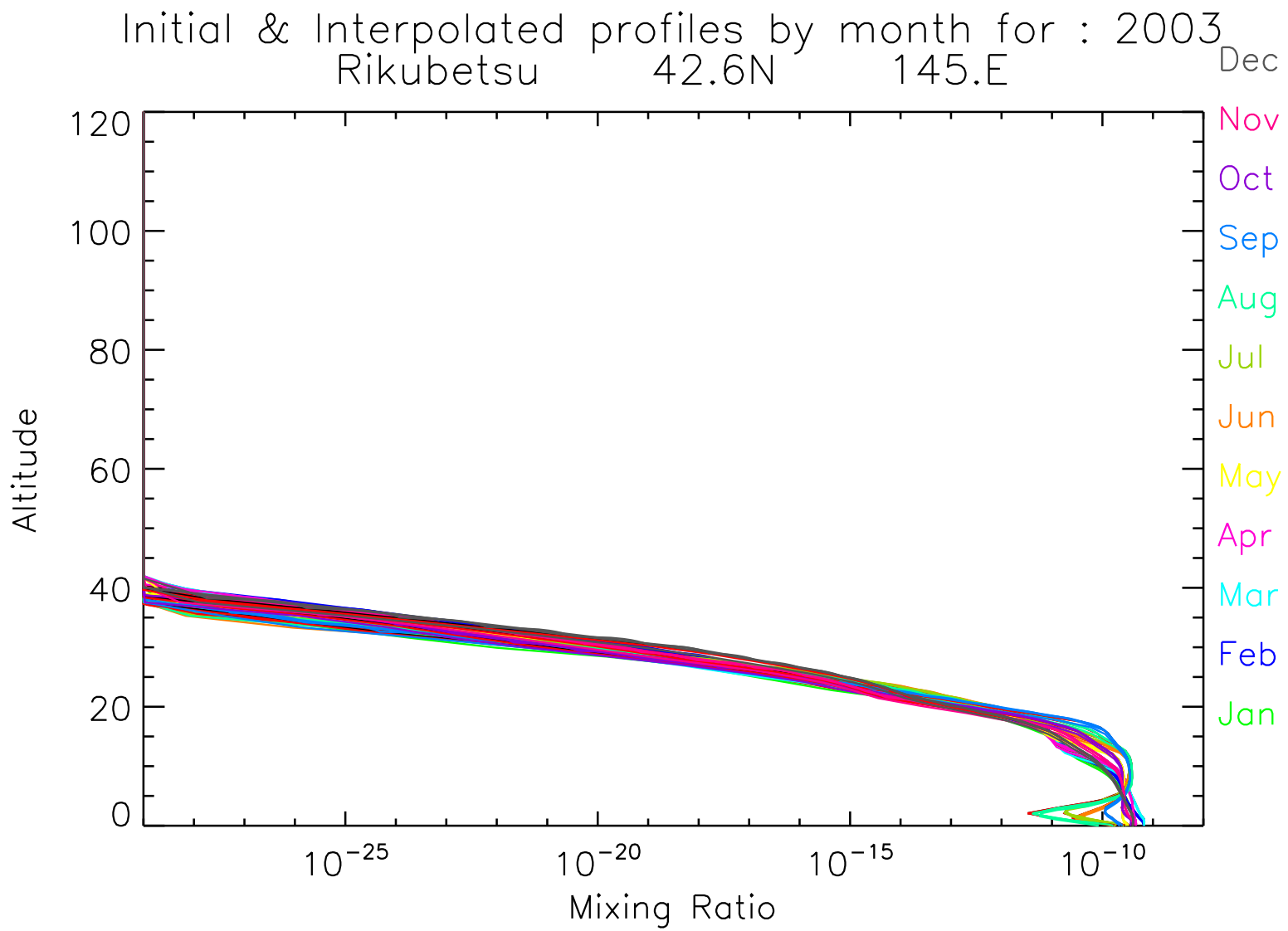
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 2003
Rikubetsu 42.6N 145.E
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Altitude
10^{-25}
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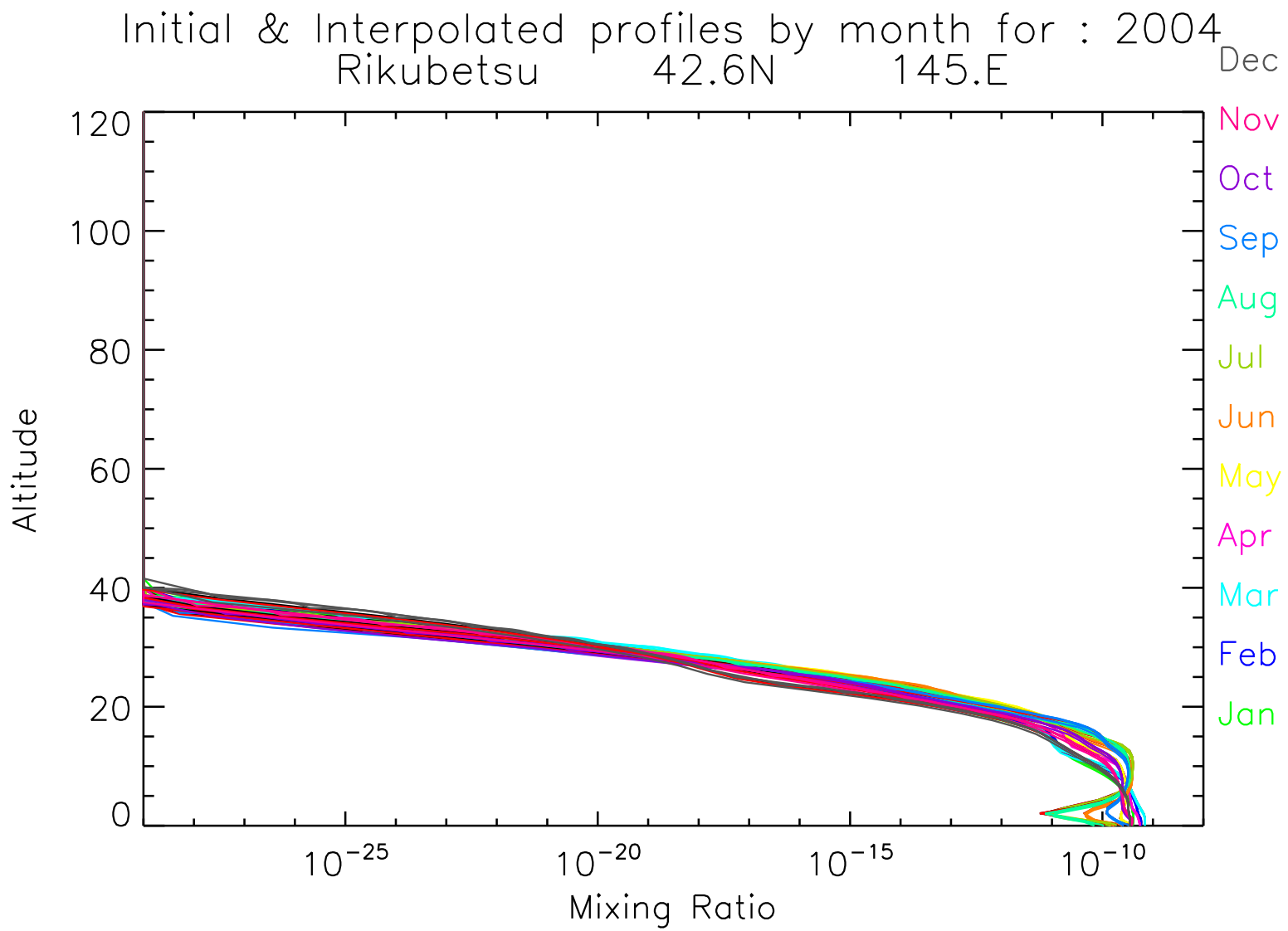
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 2004
Rikubetsu 42.6N 145.E
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Altitude
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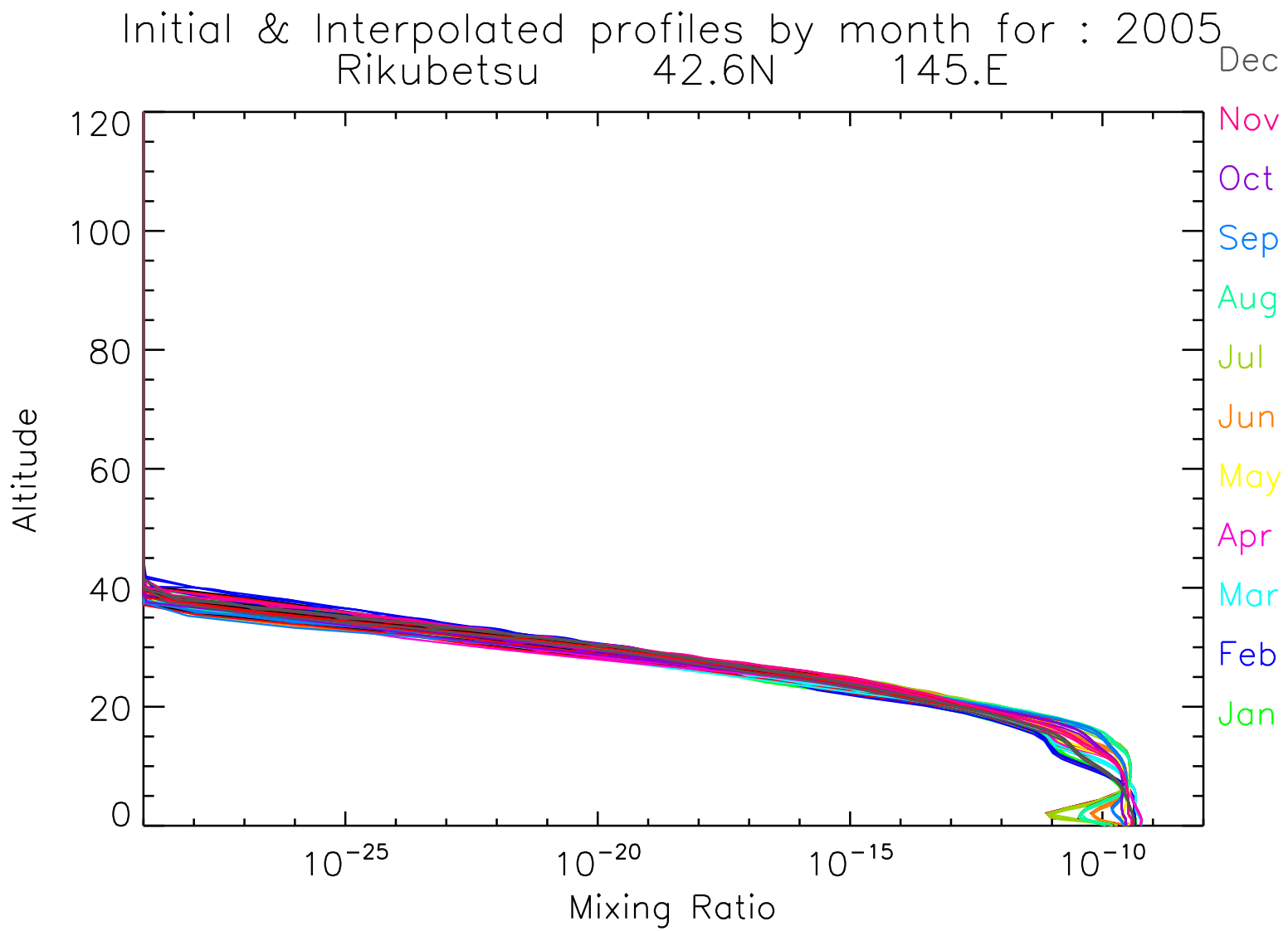
10^{-15}
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 2005
Rikubetsu 42.6N 145.E
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Altitude
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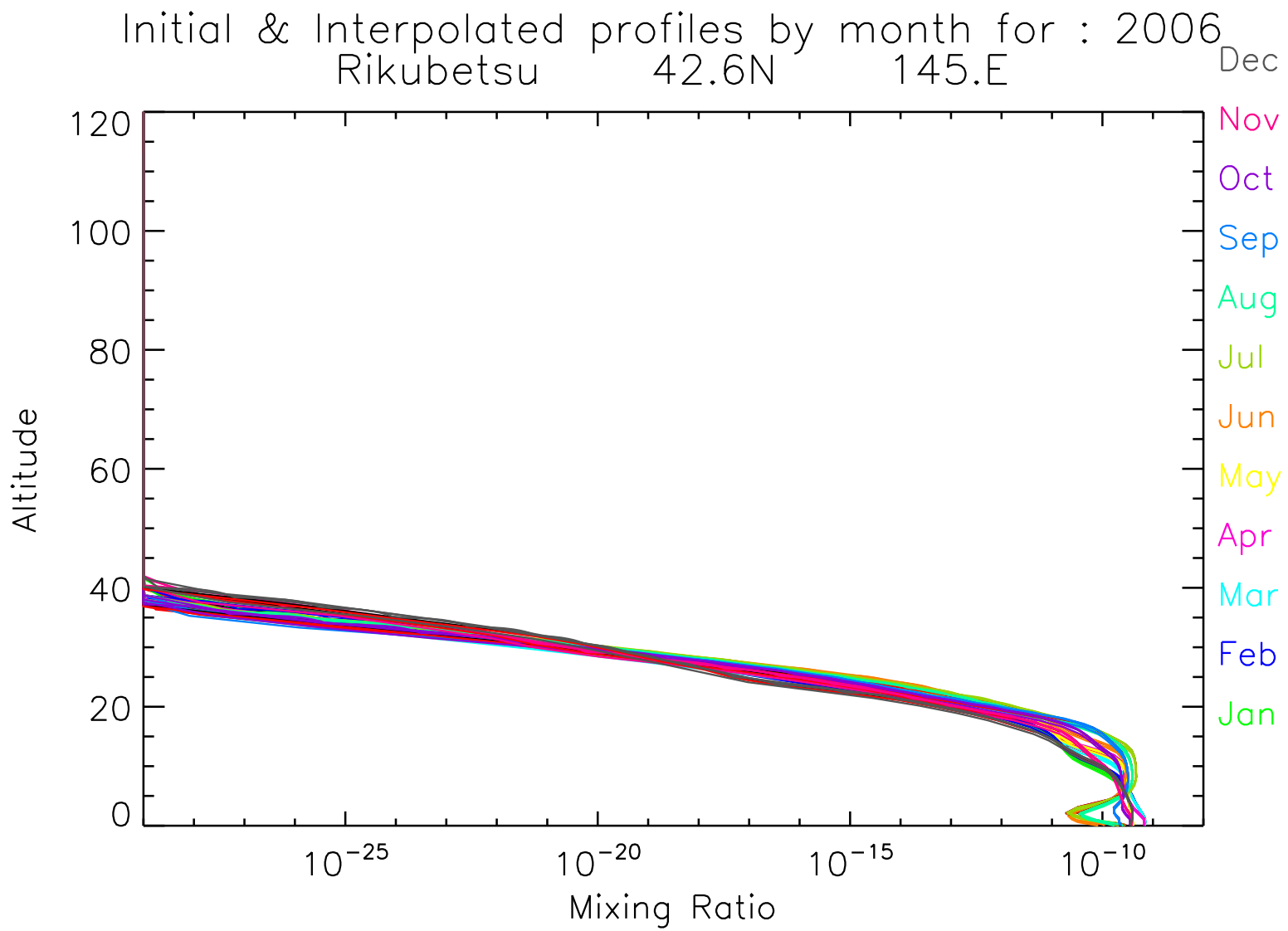
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 2006
Rikubetsu 42.6N 145.E
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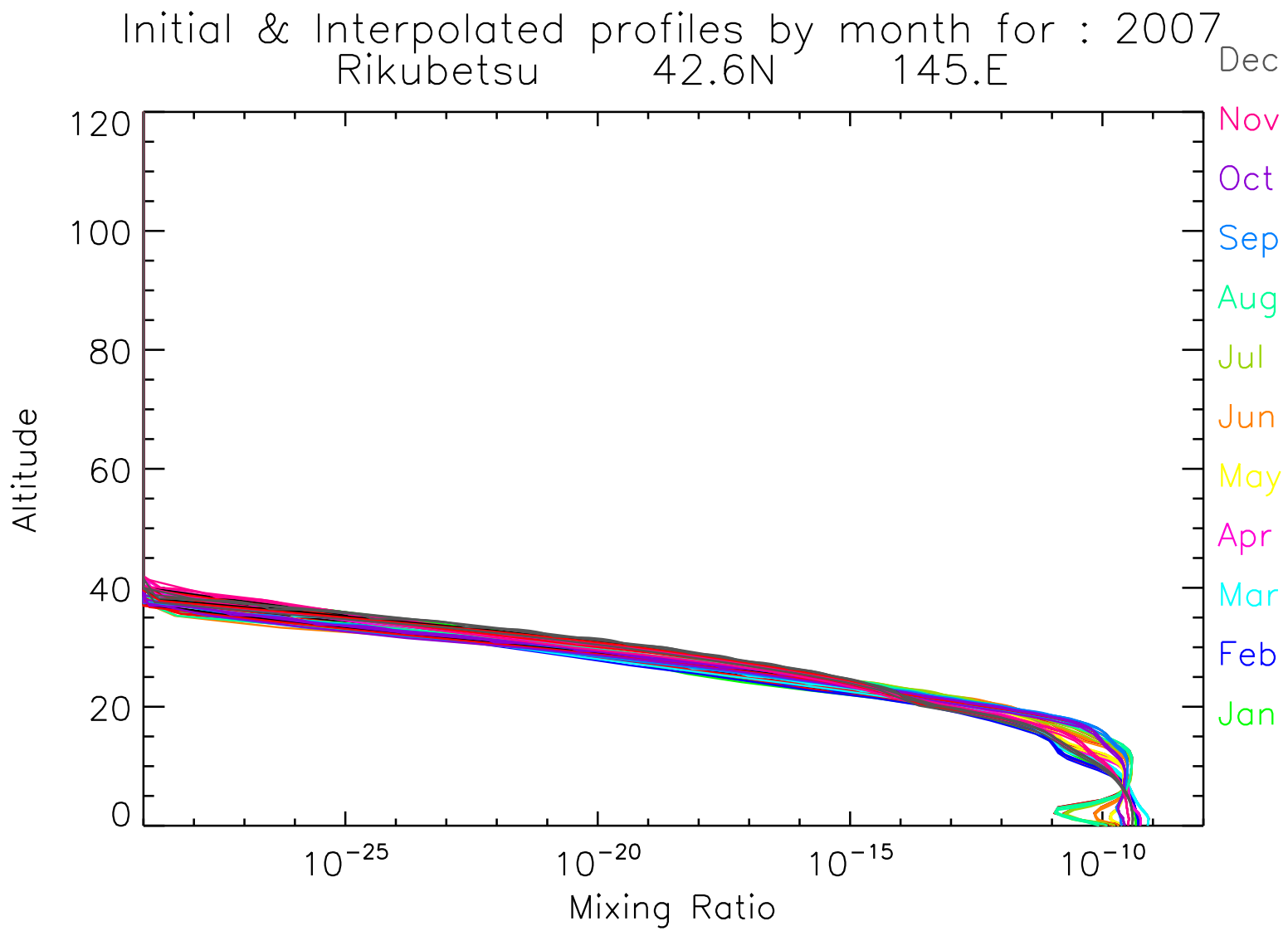
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 2007
Rikubetsu 42.6N 145.E
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Altitude
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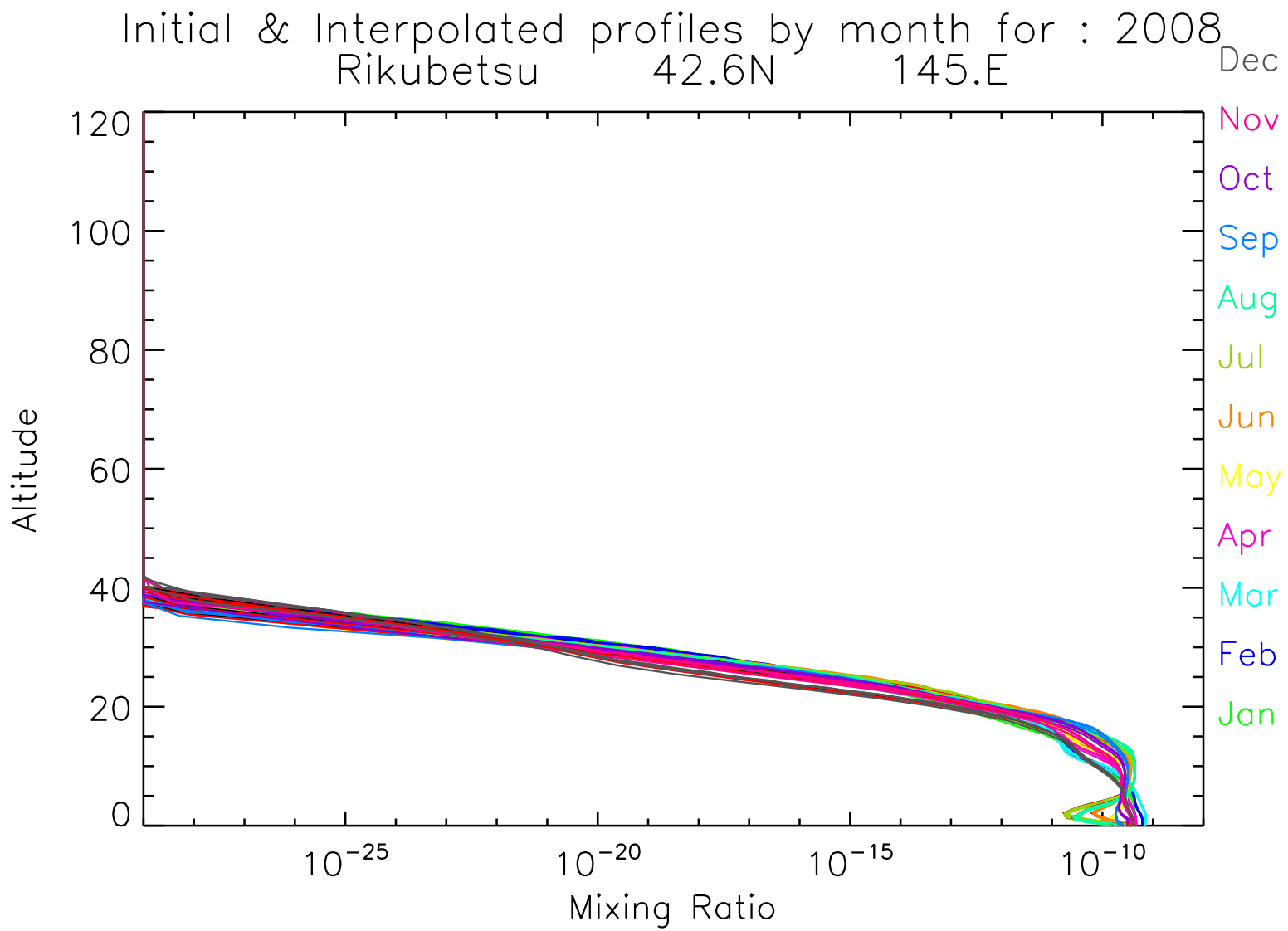
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 2008
Rikubetsu 42.6N 145.E
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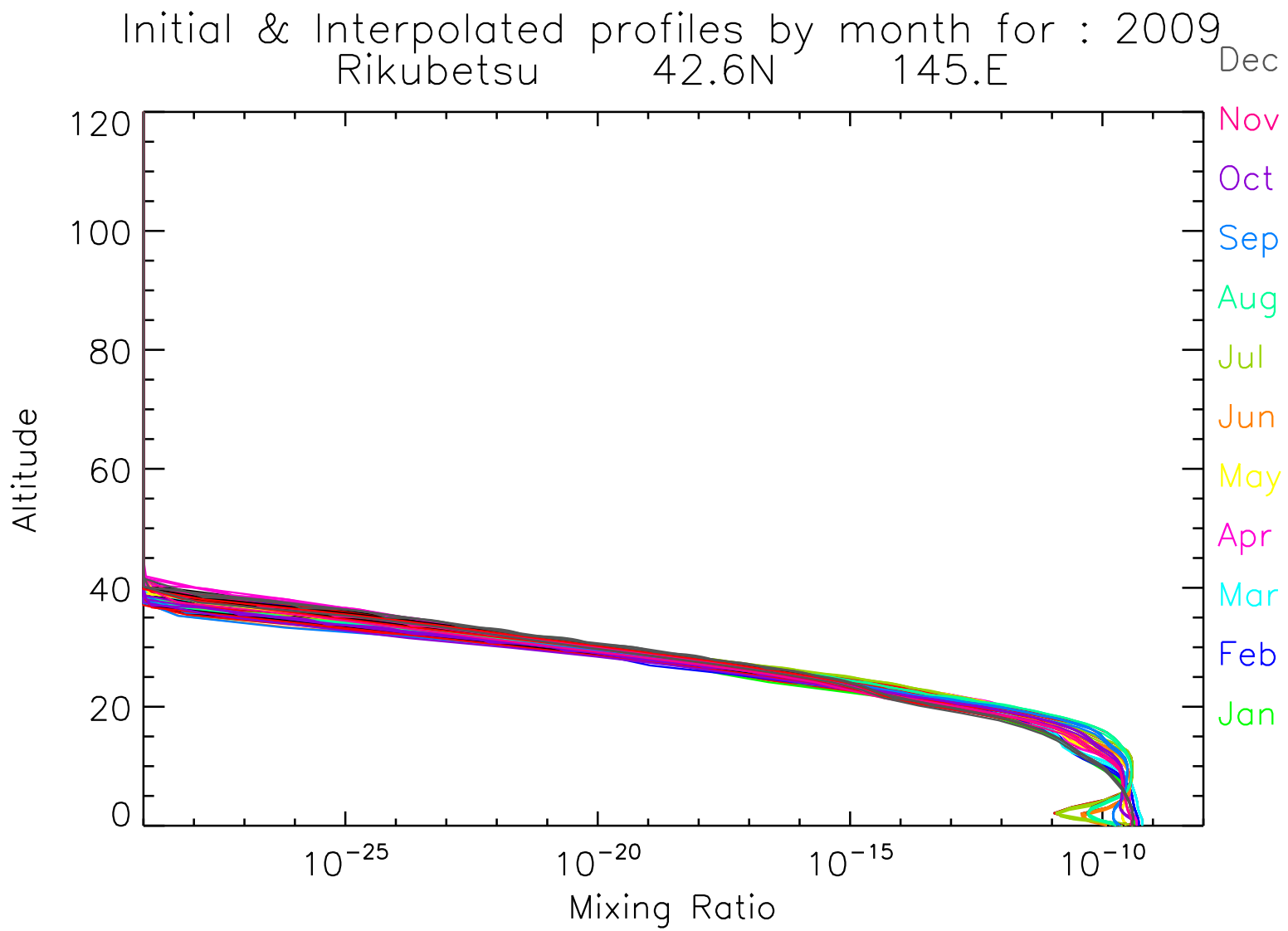
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 2009
Rikubetsu 42.6N 145.E
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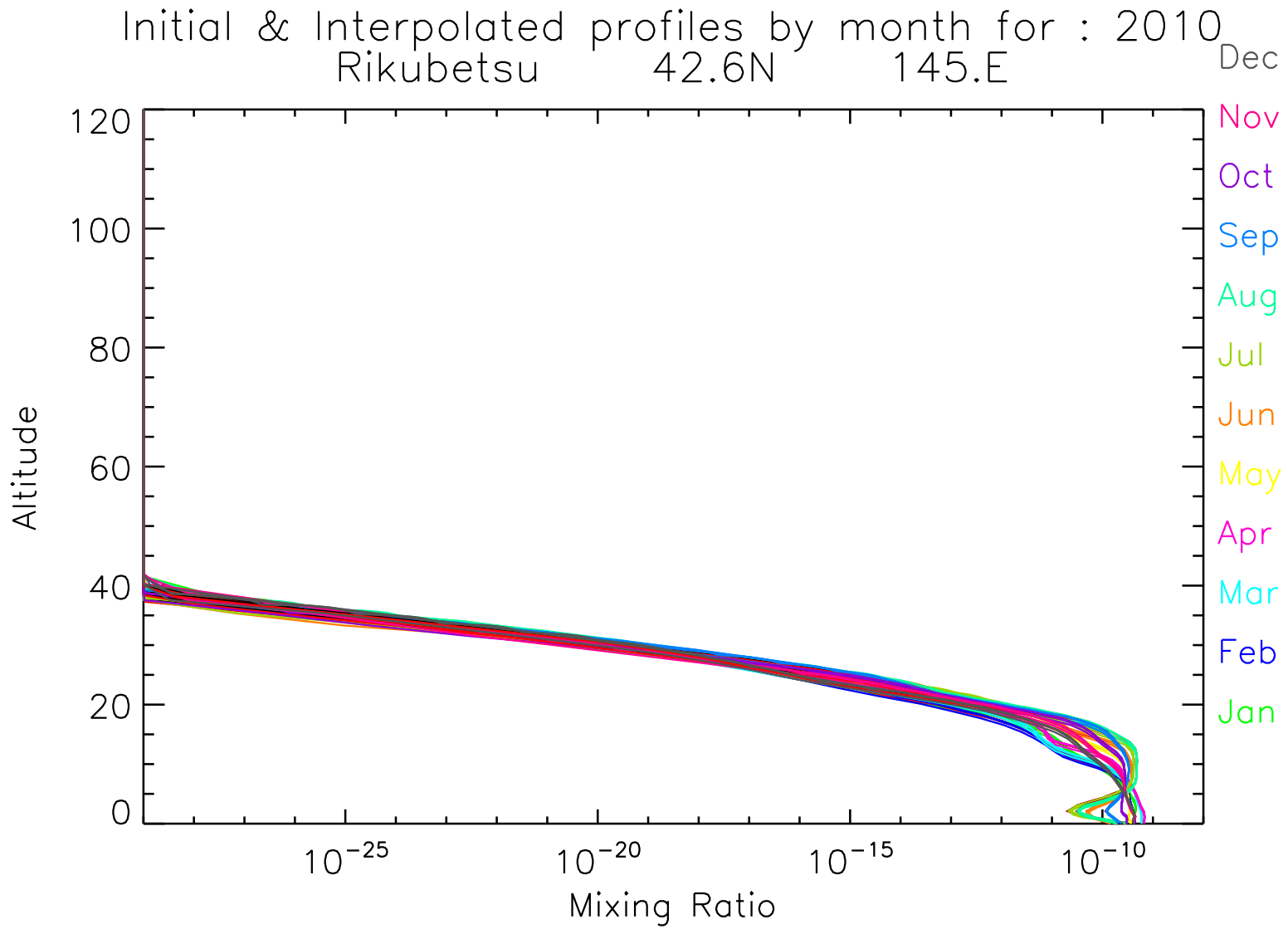
Mixing Ratio


Initial & Interpolated profiles by month for : 2010
Rikubetsu 42.6N 145.E
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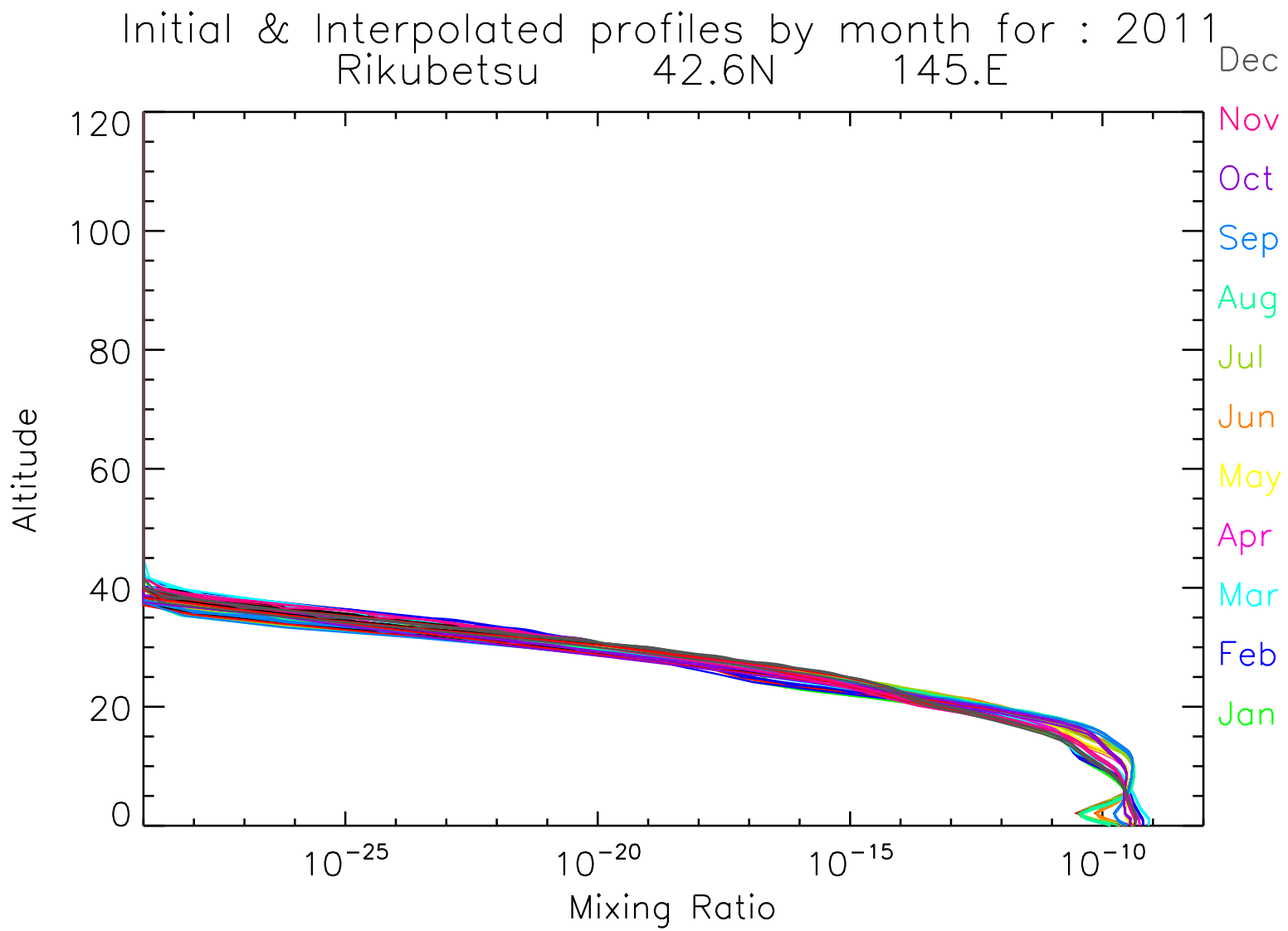
Mixing Ratio


Initial & Interpolated profiles by month for : 2011
Rikubetsu 42.6N 145.E
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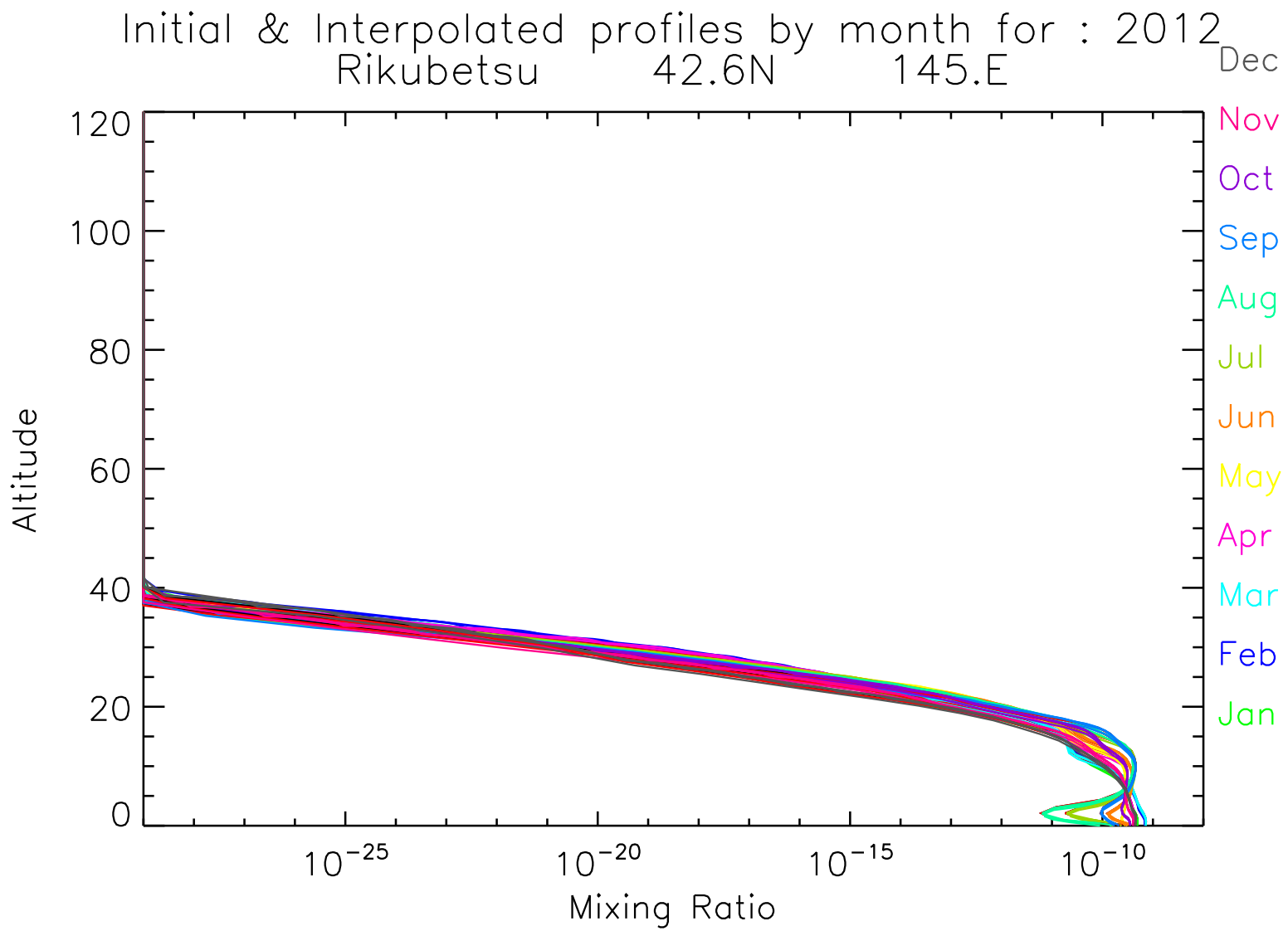
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 2012
Rikubetsu 42.6N 145.E
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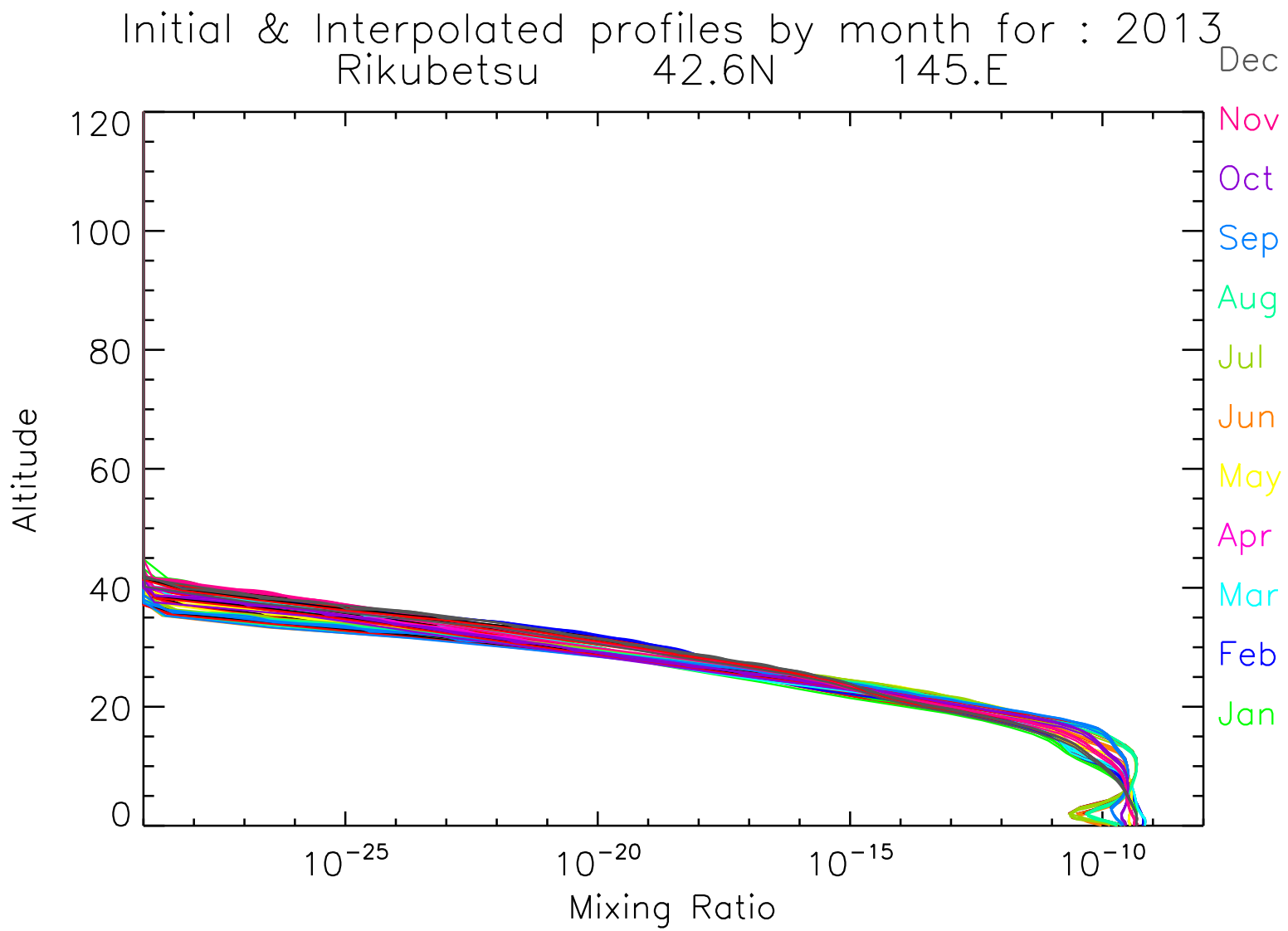
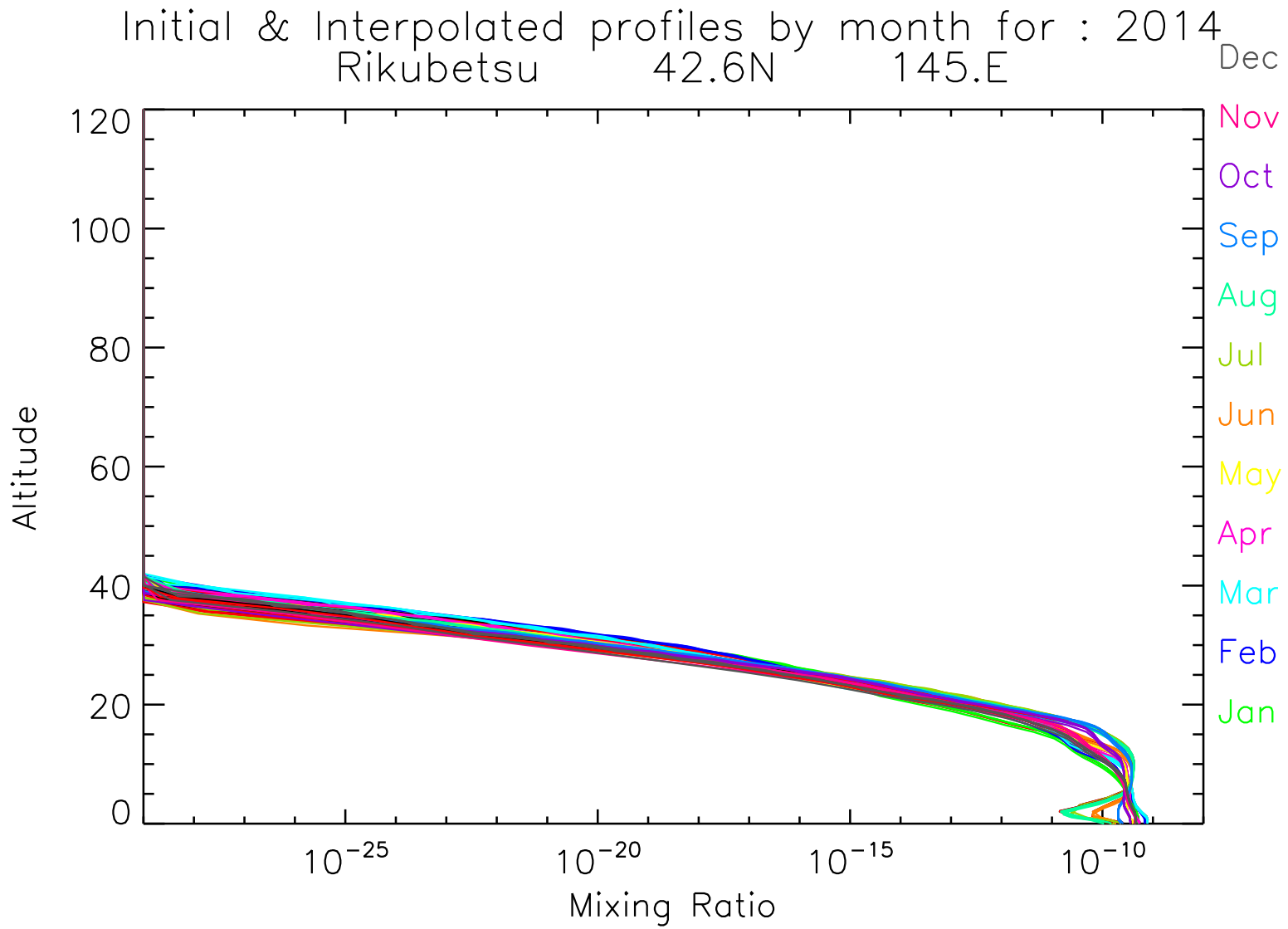
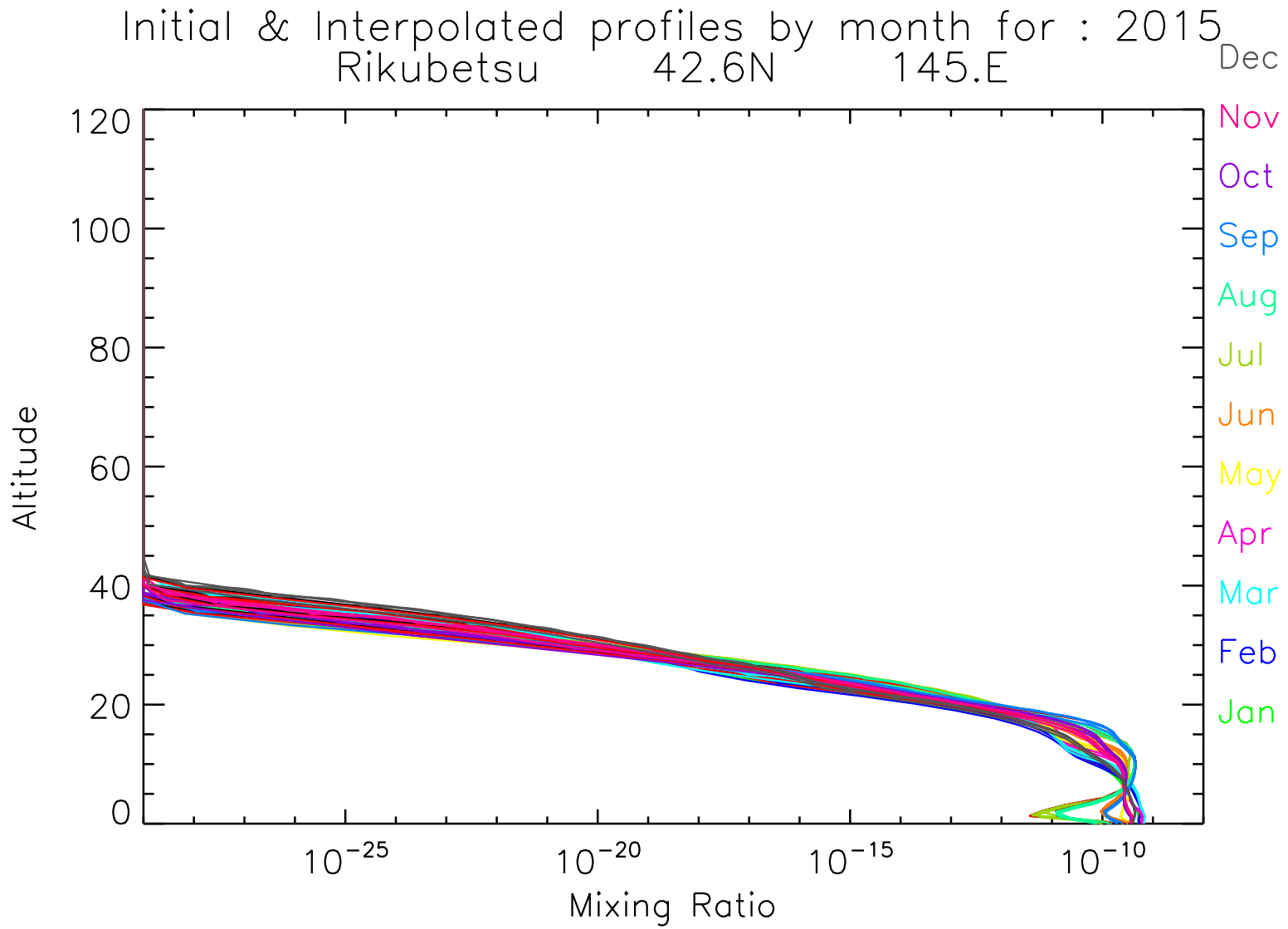
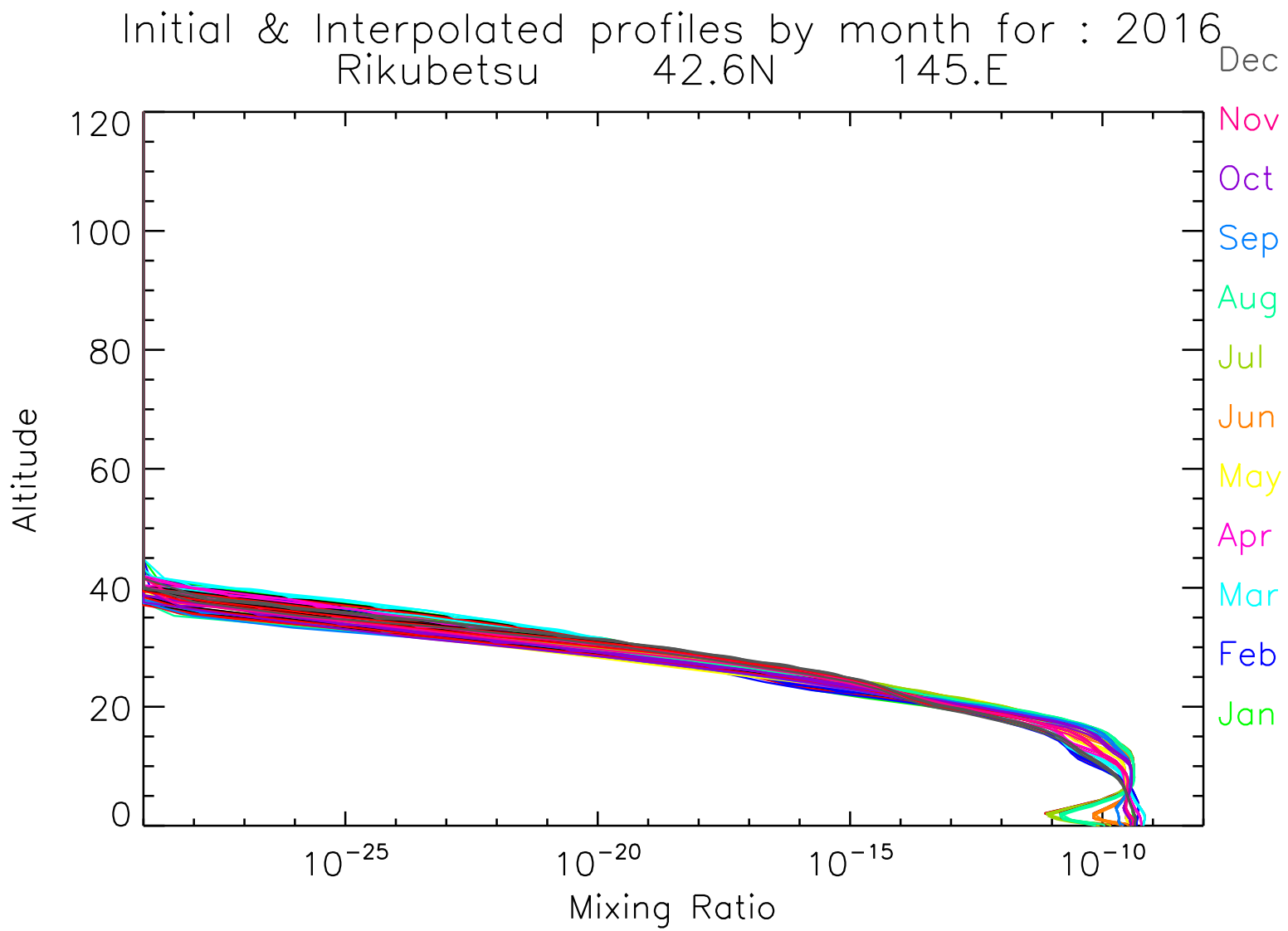
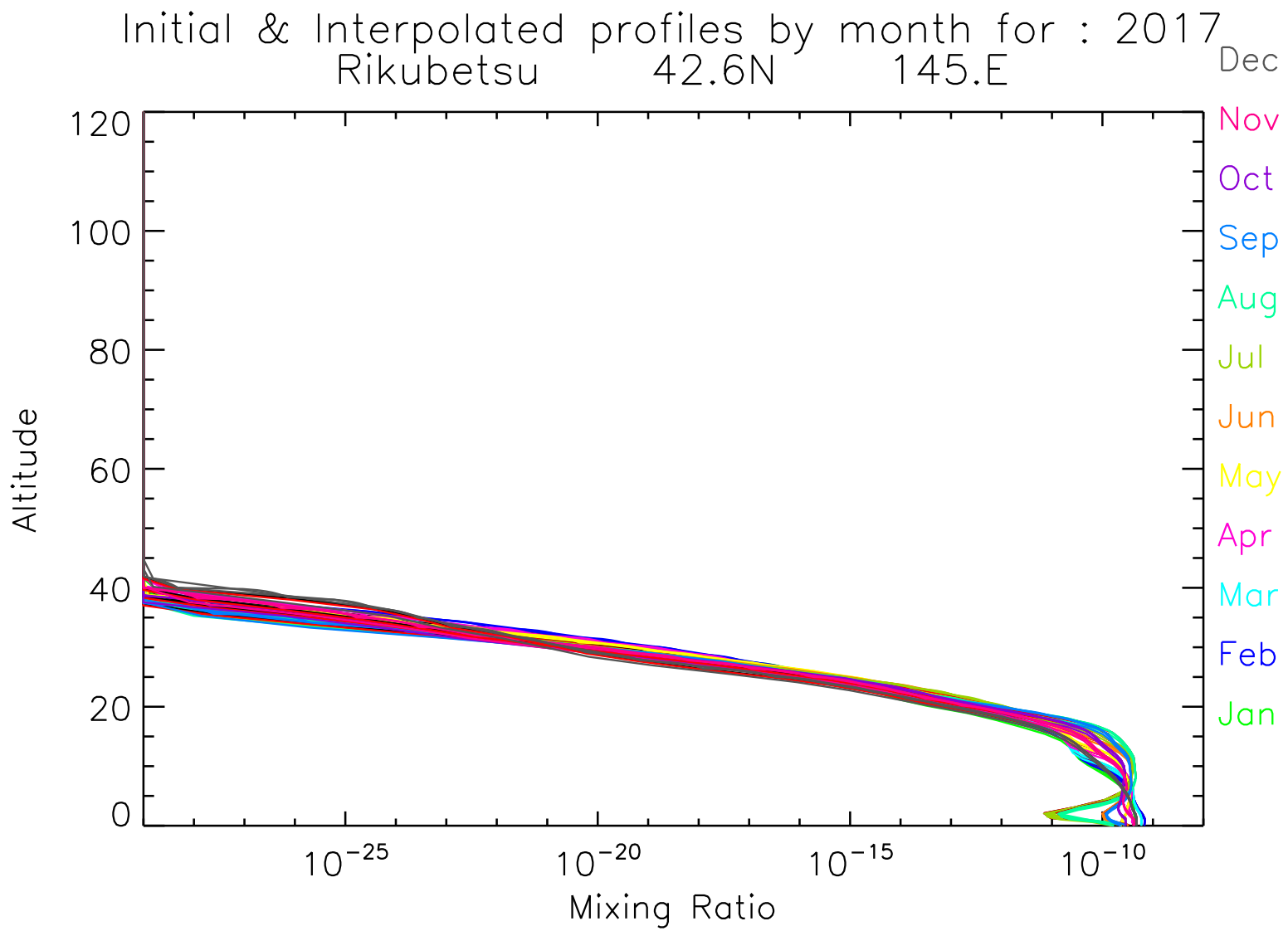
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
10^{-25}
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio

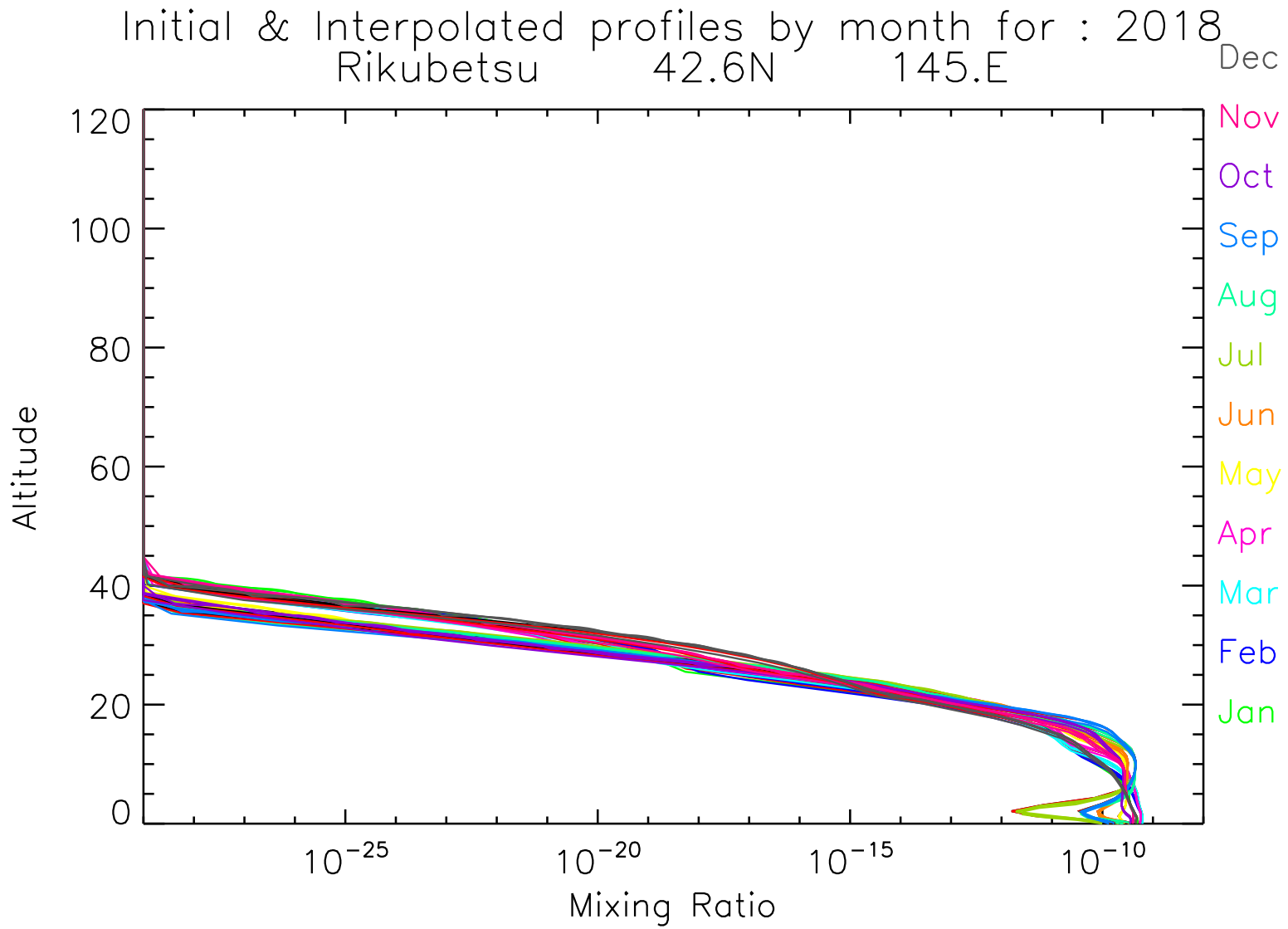

Initial & Interpolated profiles by month for : 2013
Rikubetsu 42.6N 145.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
10^{-25}
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio

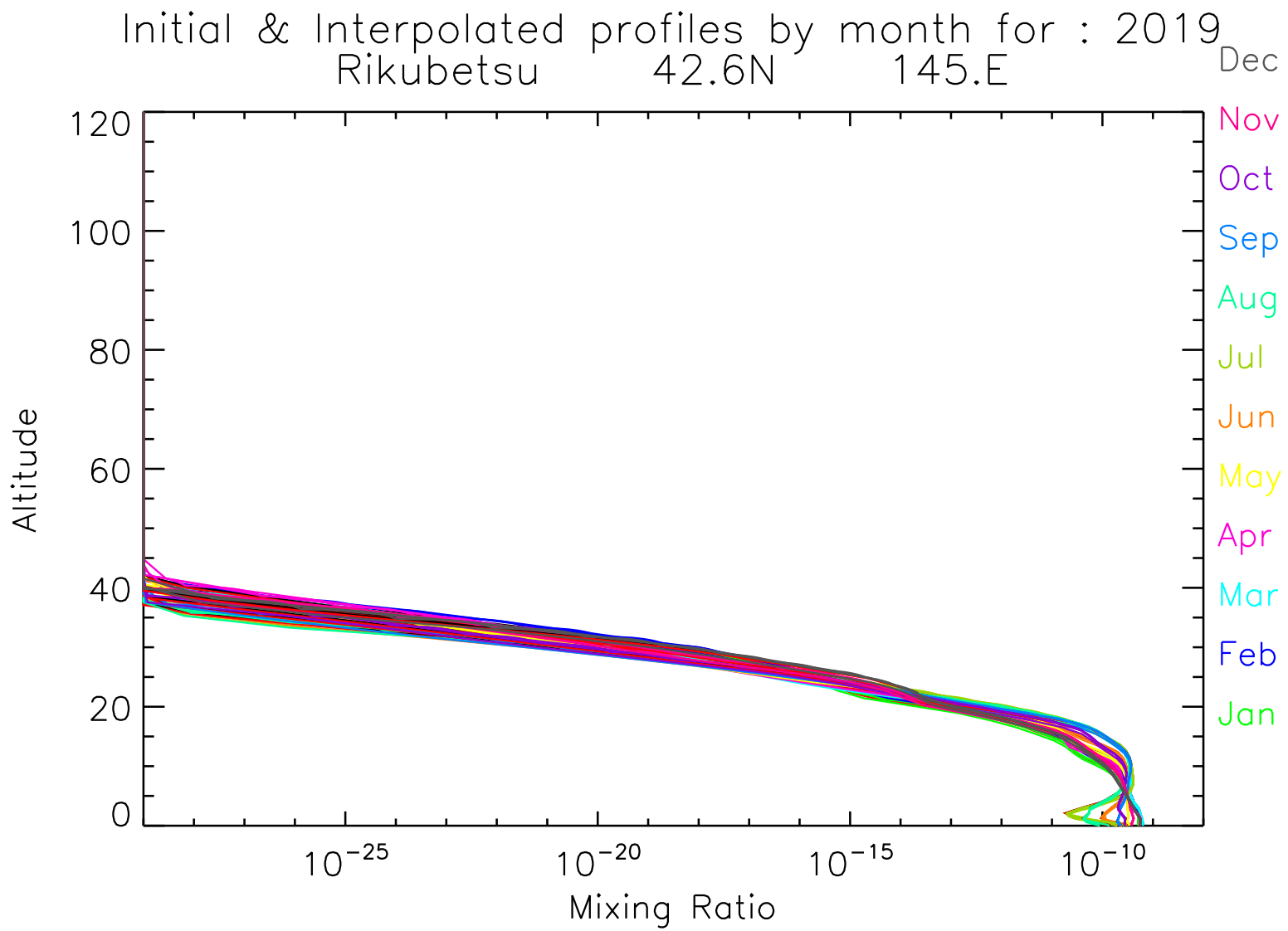

Initial & Interpolated profiles by month for : 2014
Rikubetsu 42.6N 145.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
10^{-25}
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio

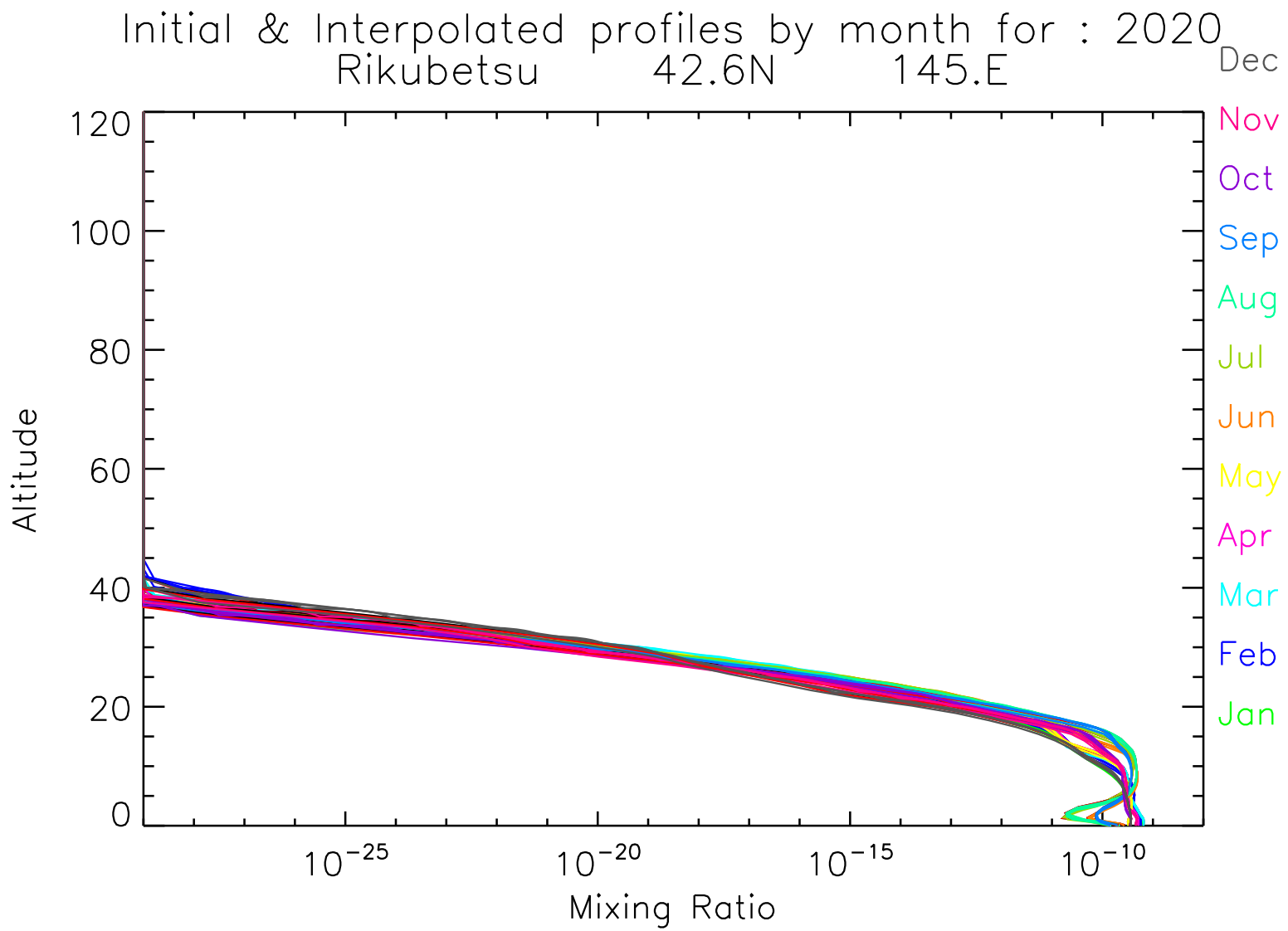

Initial & Interpolated profiles by month for : 2015
Rikubetsu 42.6N 145.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
10^{-25}
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio

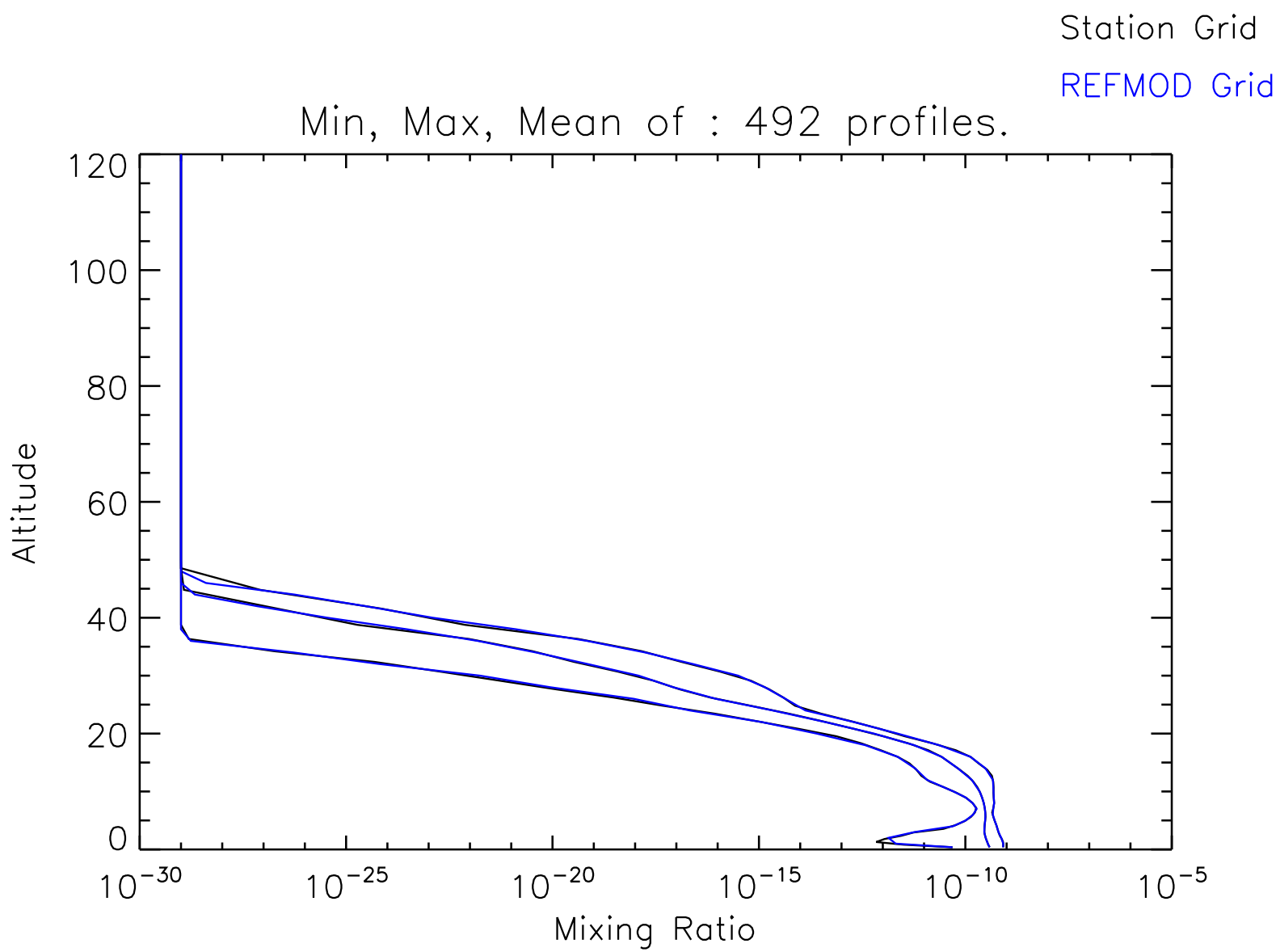

Initial & Interpolated profiles by month for : 2016
Rikubetsu 42.6N 145.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
10^{-25}
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio

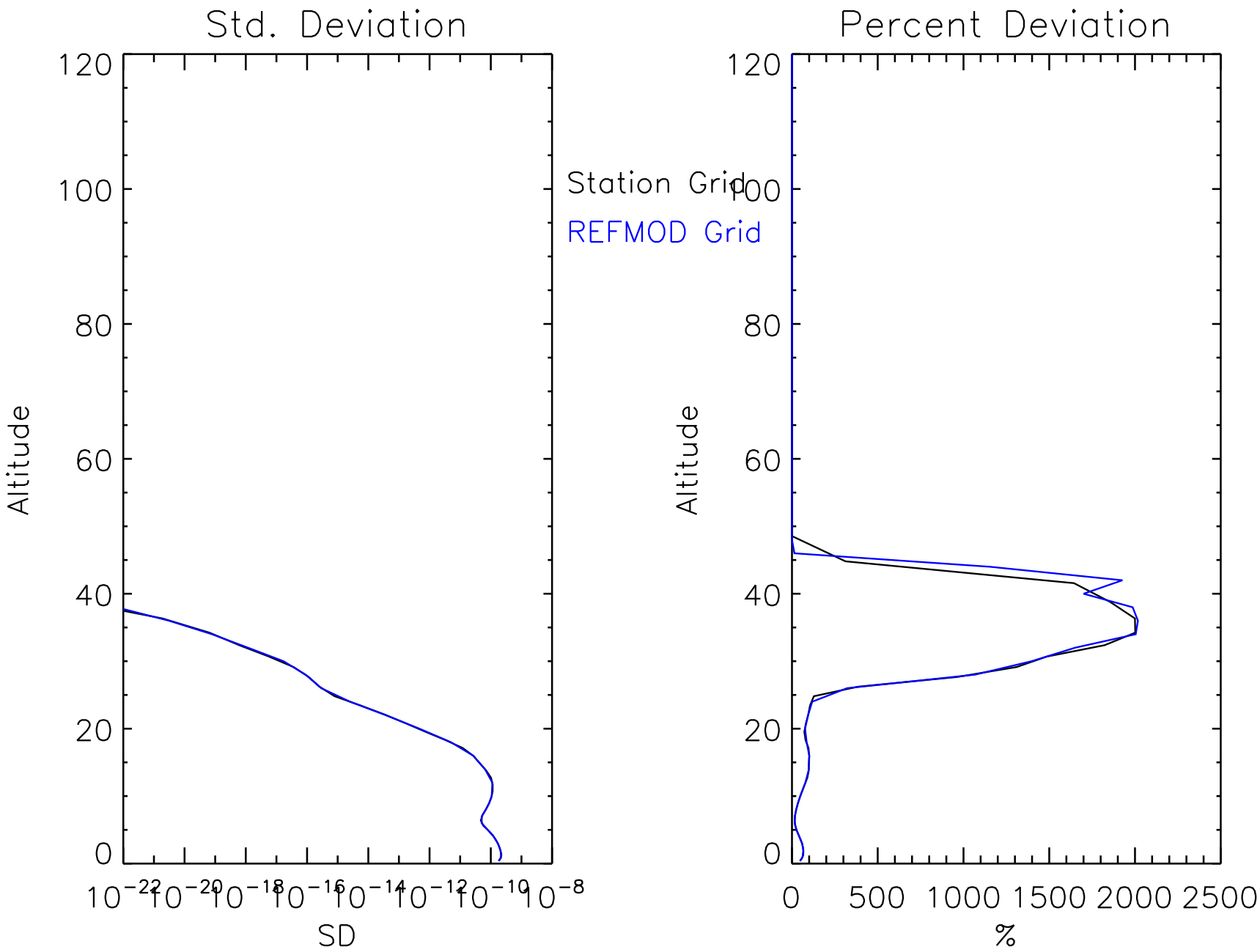

Initial & Interpolated profiles by month for : 2017
Rikubetsu 42.6N 145.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
10^{-25}
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio

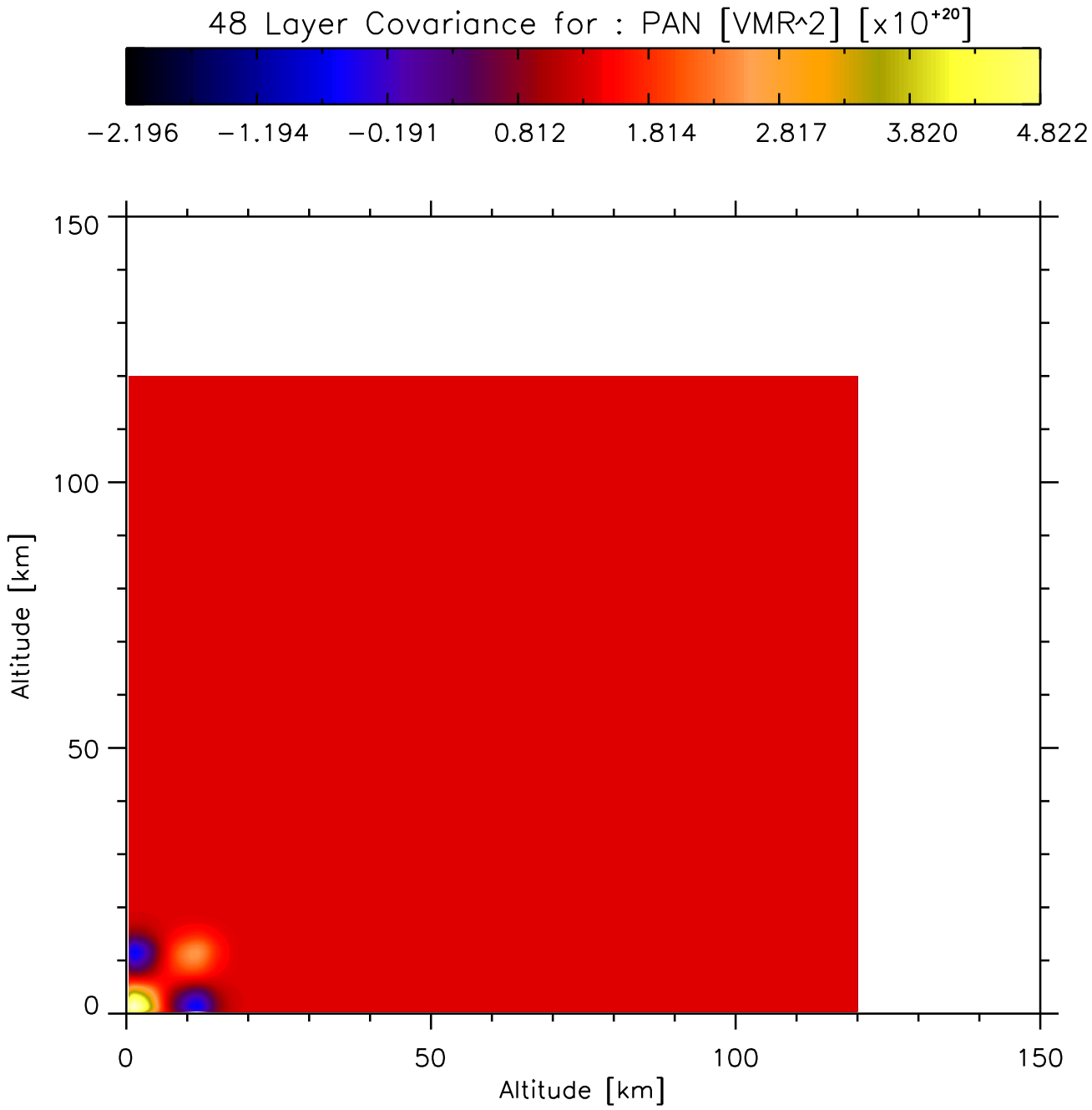

Initial & Interpolated profiles by month for : 2018
Rikubetsu 42.6N 145.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
10^{-25}
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio

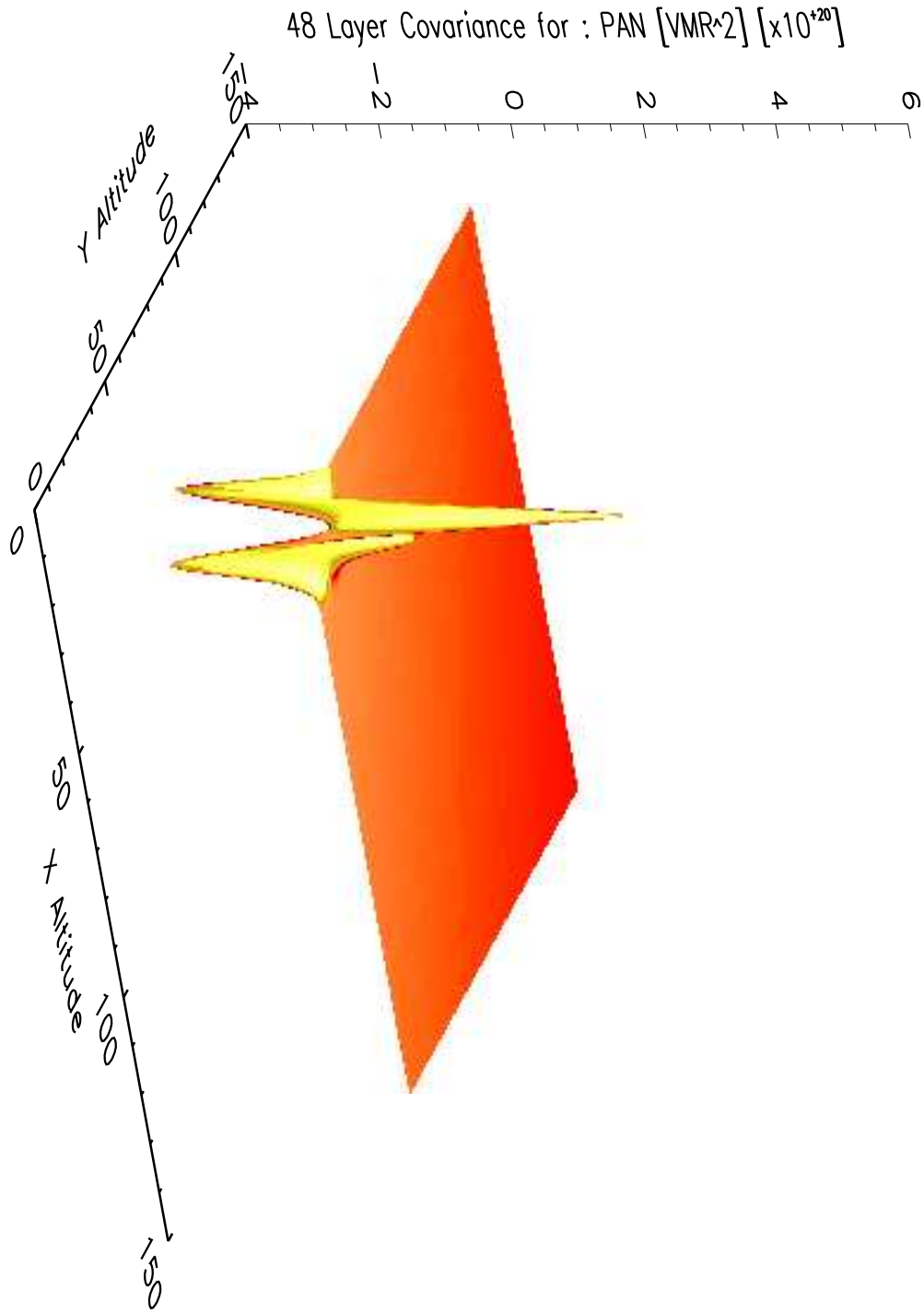

Initial & Interpolated profiles by month for : 2019
Rikubetsu 42.6N 145.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
10^{-25}
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio

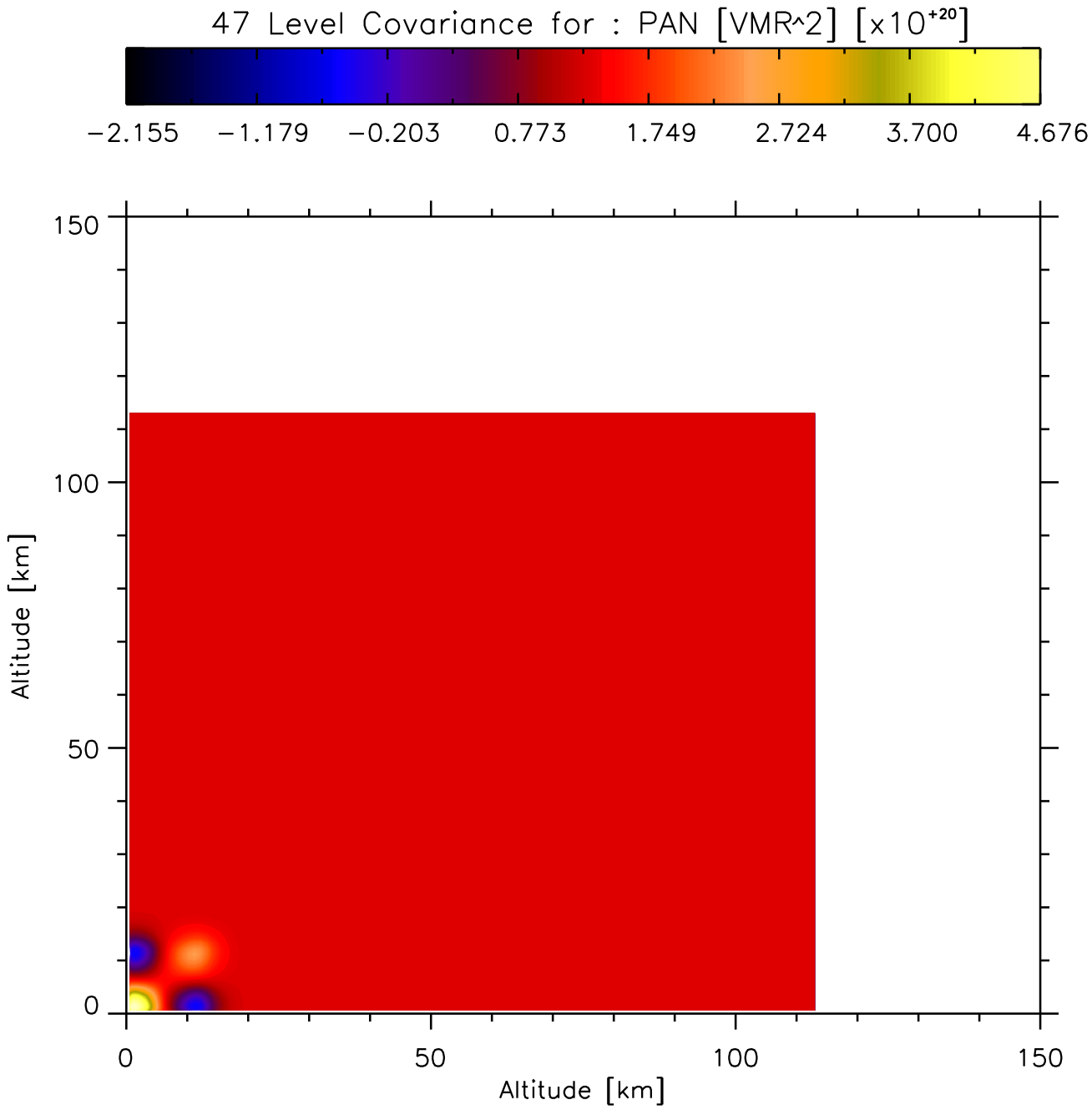

Initial & Interpolated profiles by month for : 2020
Rikubetsu 42.6N 145.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
10^{-25}
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio

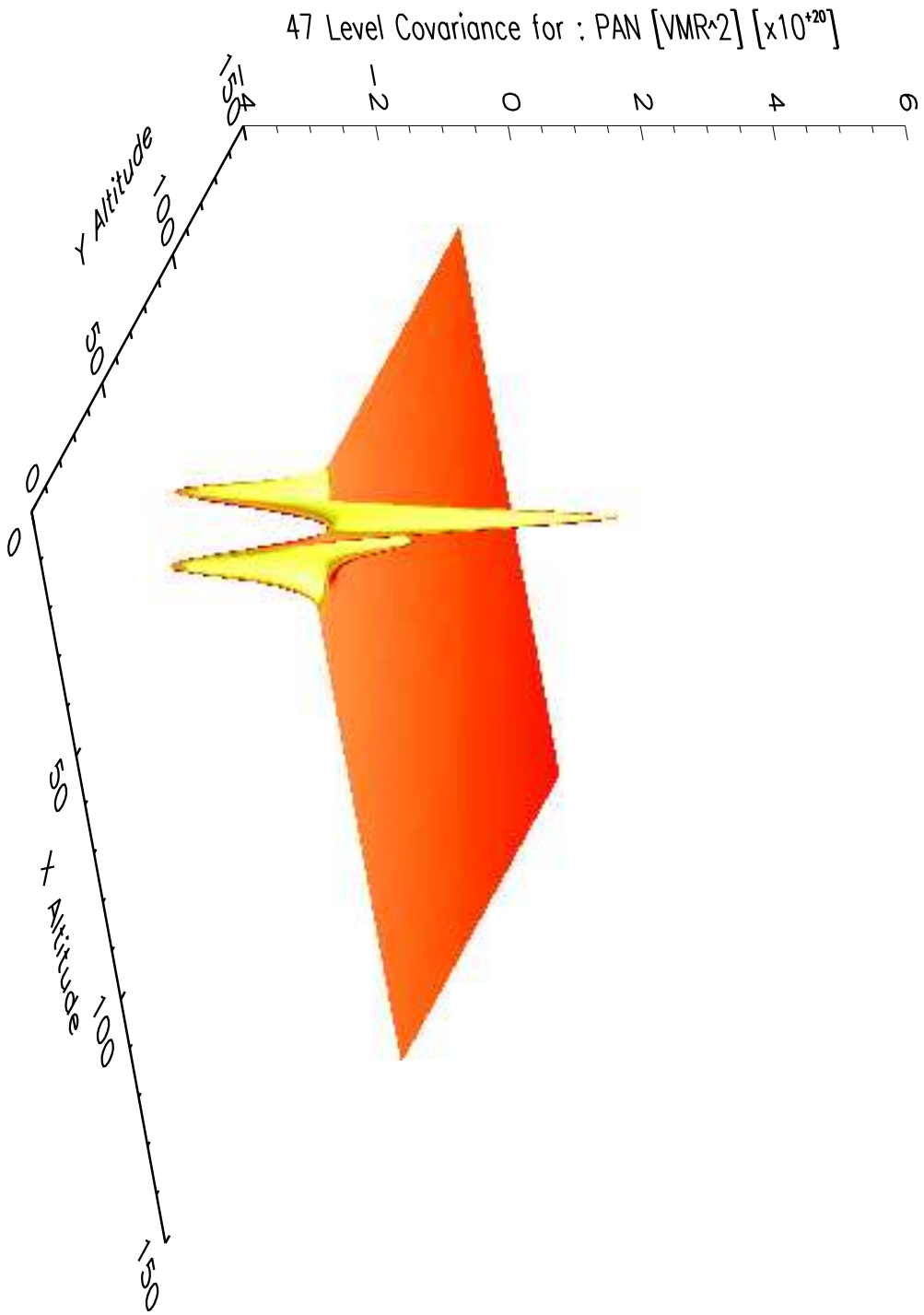

Station Grid
REFMOD Grid
Min, Max, Mean of : 492 profiles.
Altitude
120
100
80
60
40
20
0
10^{-30}
10^{-25}
10^{-20}
10^{-15}
10^{-10}
10^{-5}
Mixing Ratio


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
0 500 1000 1500 2000 2500
%


48 Layer Covariance for : PAN [VMR^2] [x10^+20]
−2.196
−1.194
−0.191
0.812
1.814
2.817
3.820
4.822
150
100
50
0
Altitude [km]
0
50
100
150
Altitude [km]


48 Layer Covariance for : PAN [VMR^2] [x10^+20]
-4
-2
0
2
4
6
Y Altitude
150
100
50
0
X Altitude
0
50
100
150


47 Level Covariance for : PAN [VMR^2] [x10^+20]
−2.155
−1.179
−0.203
0.773
1.749
2.724
3.700
4.676
150
100
50
0
Altitude [km]
0
50
100
150
Altitude [km]


47 Level Covariance for : PAN [VMR^2] [x10^+20]
-150
-100
-50
0
Y Altitude
0
50
100
150
X Altitude
-6
-4
-2
0
2
4
6