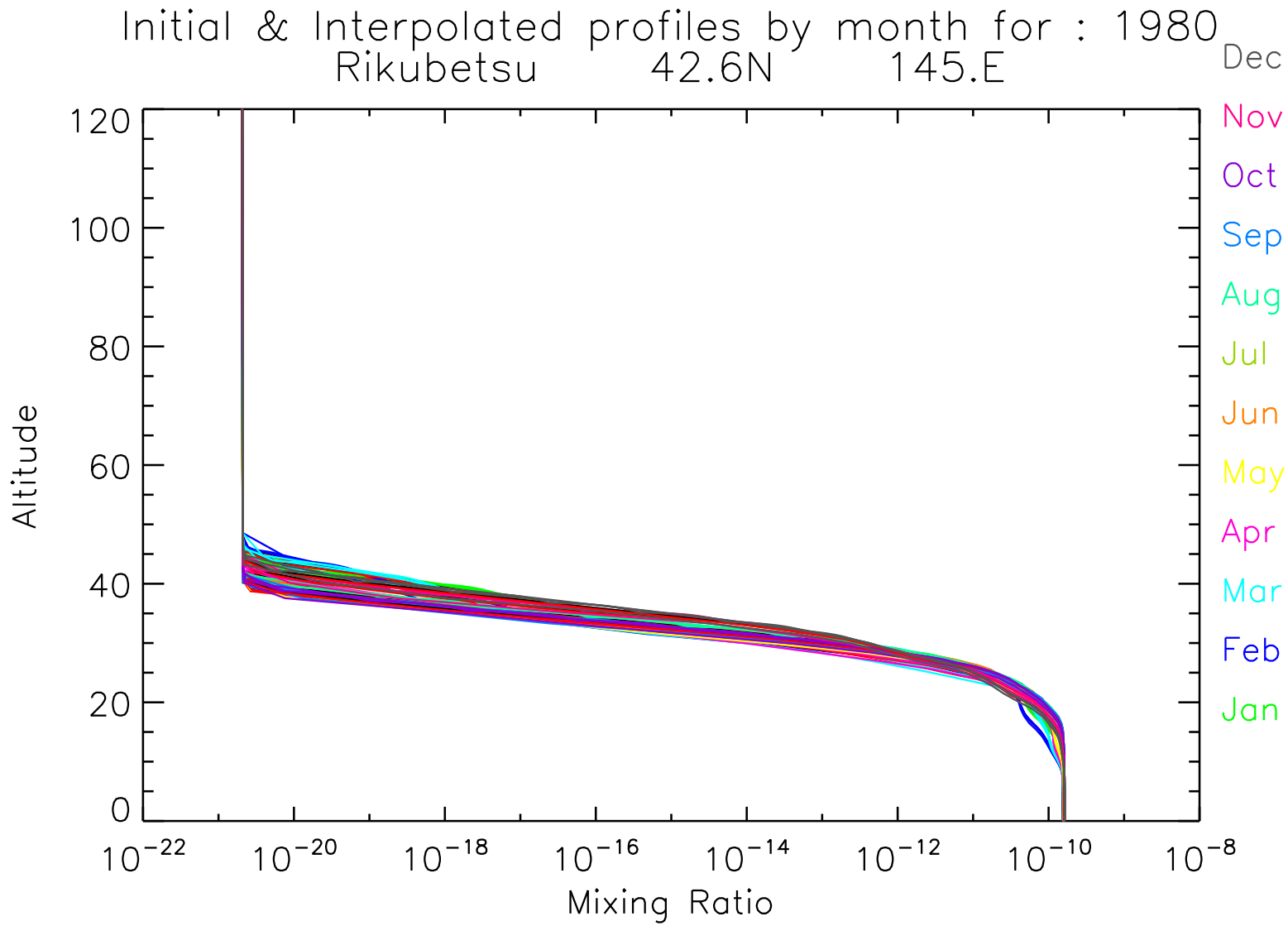
Initial & Interpolated profiles by month for : 1980
Rikubetsu 42.6N 145.E
Dec
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Altitude
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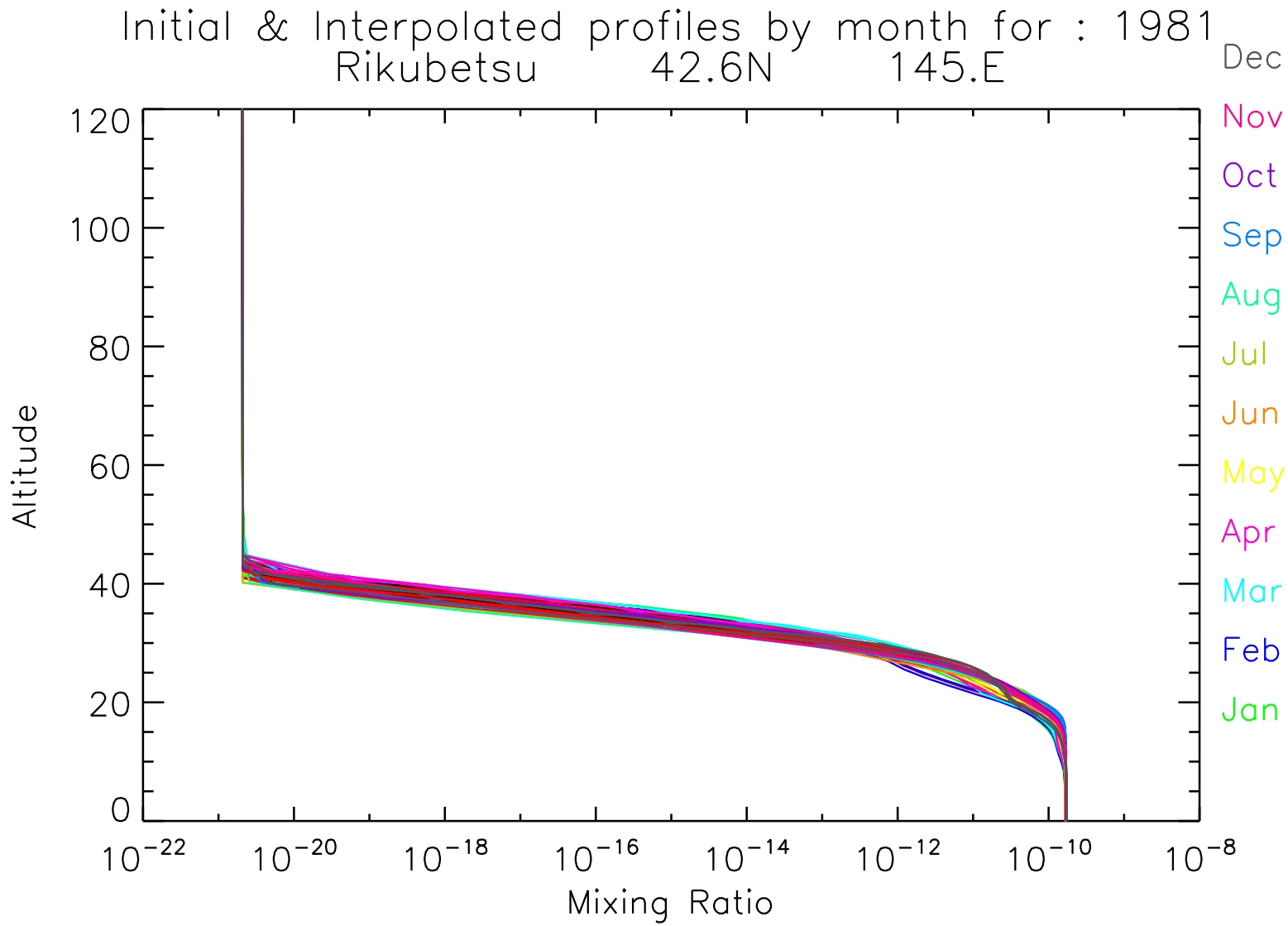
Mixing Ratio


Initial & Interpolated profiles by month for : 1981
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Altitude
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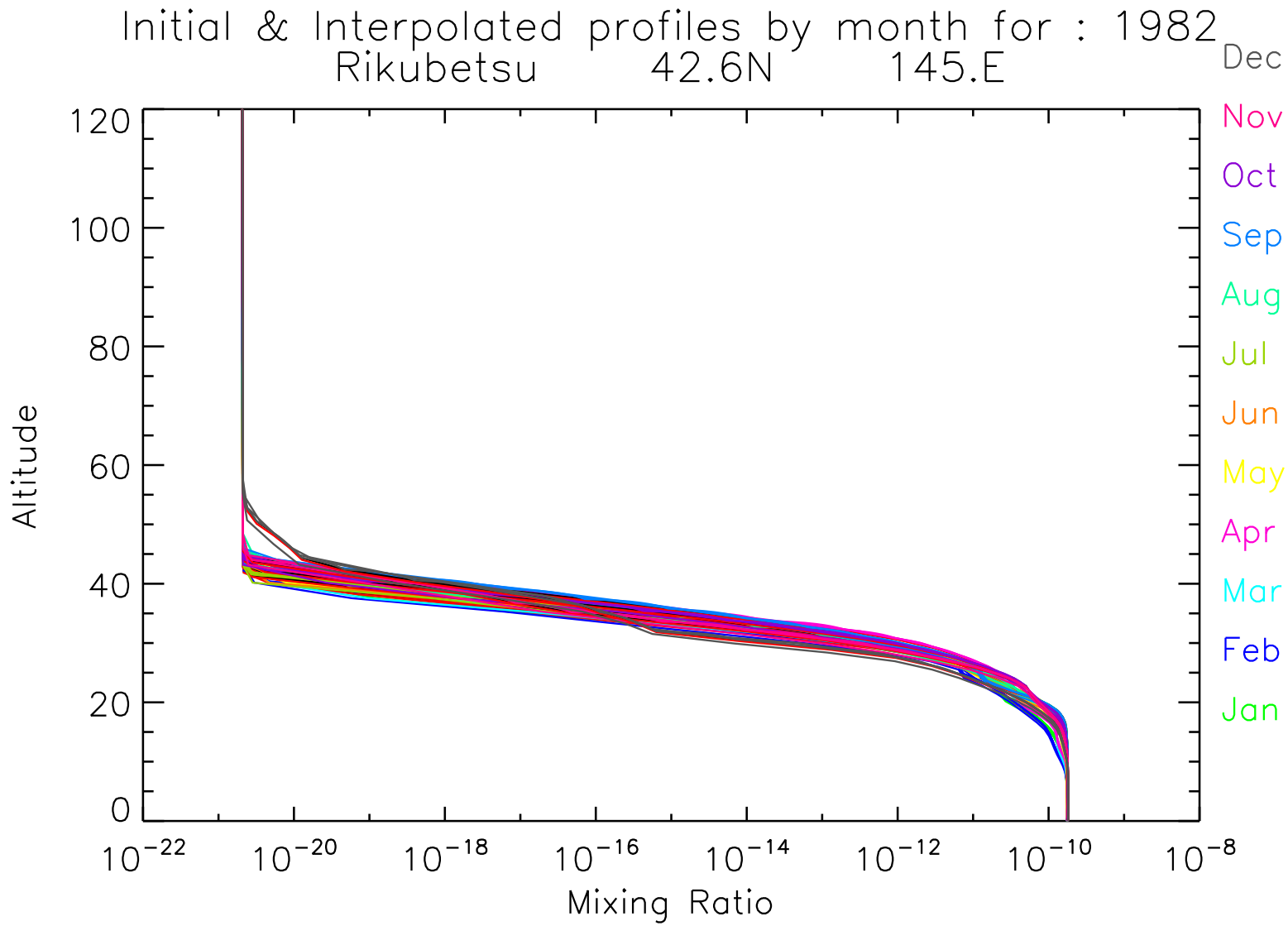
Mixing Ratio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Altitude
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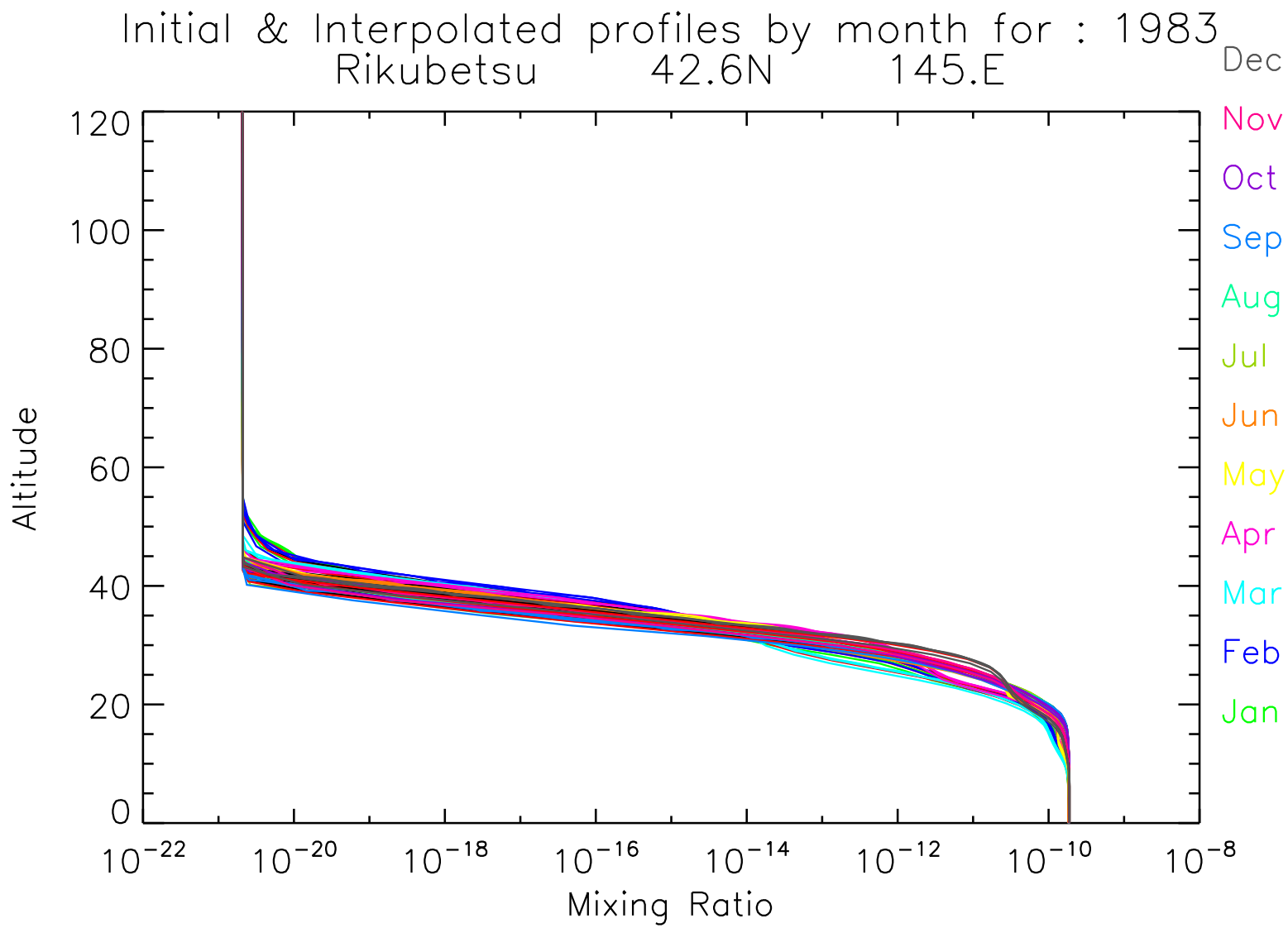
Mixing Ratio


Initial & Interpolated profiles by month for : 1983
Rikubetsu 42.6N 145.E
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Altitude
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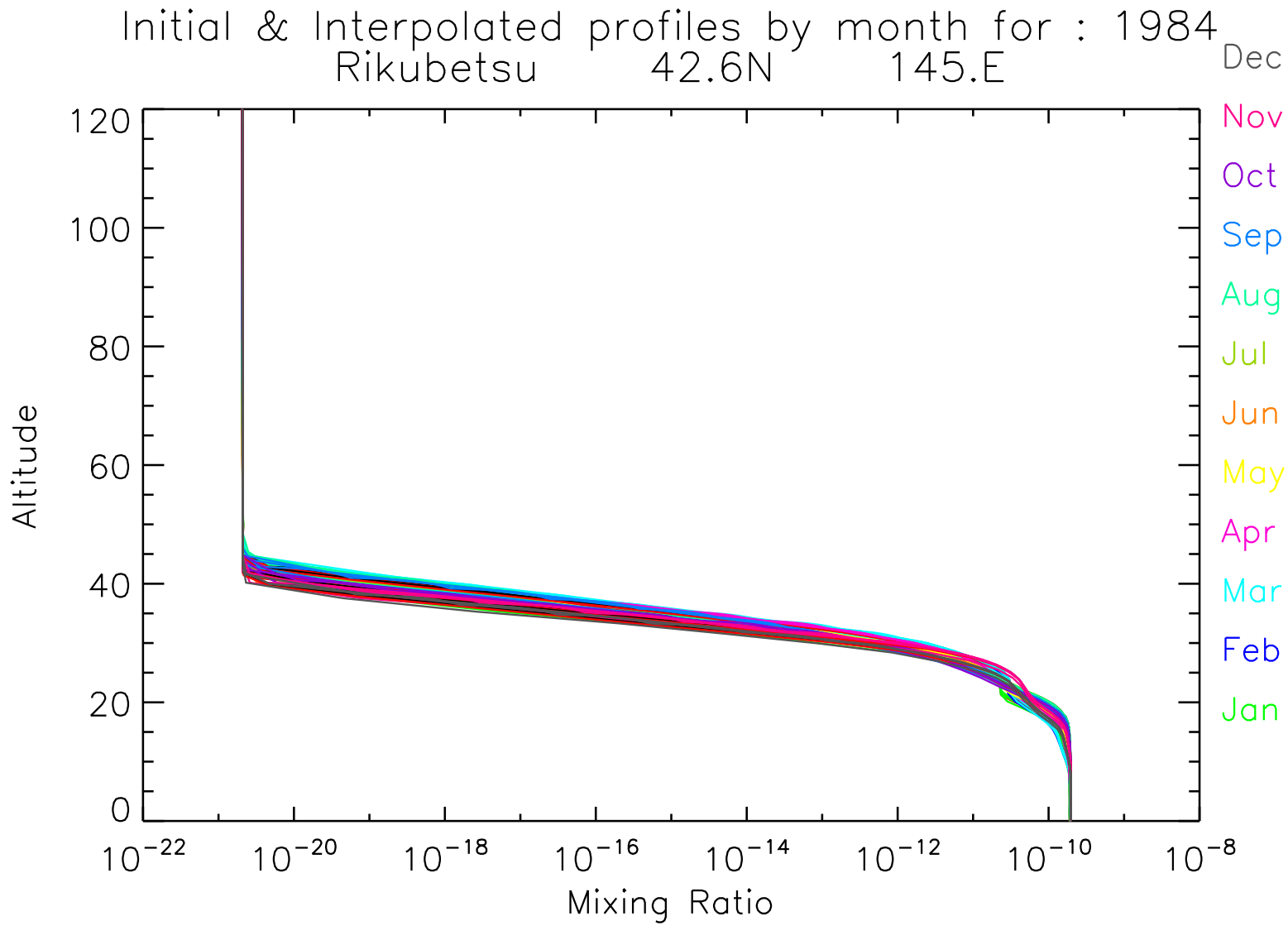
Mixing Ratio


Initial & Interpolated profiles by month for : 1984
Rikubetsu 42.6N 145.E
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Altitude
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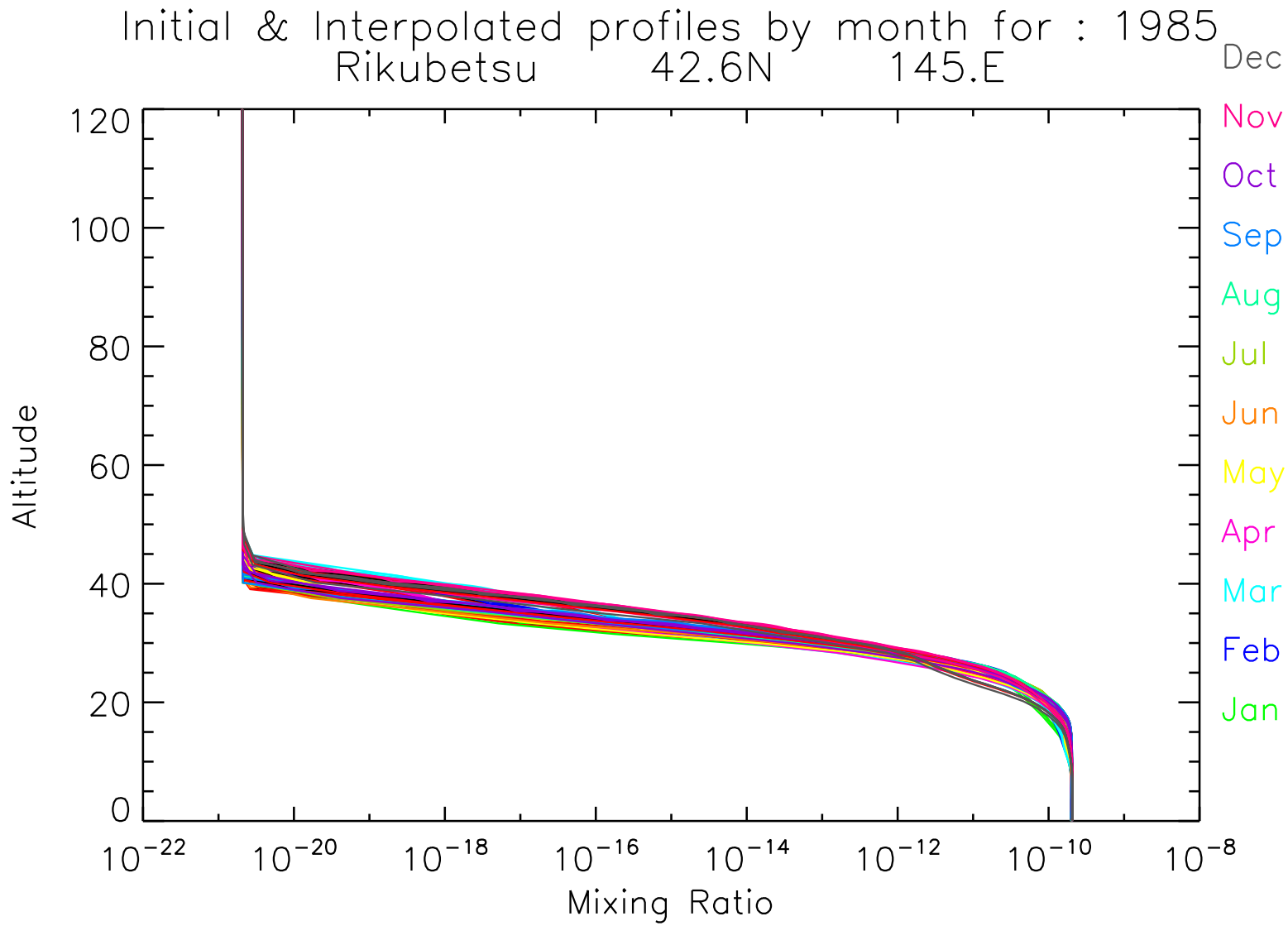
Mixing Ratio


Initial & Interpolated profiles by month for : 1985
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Altitude
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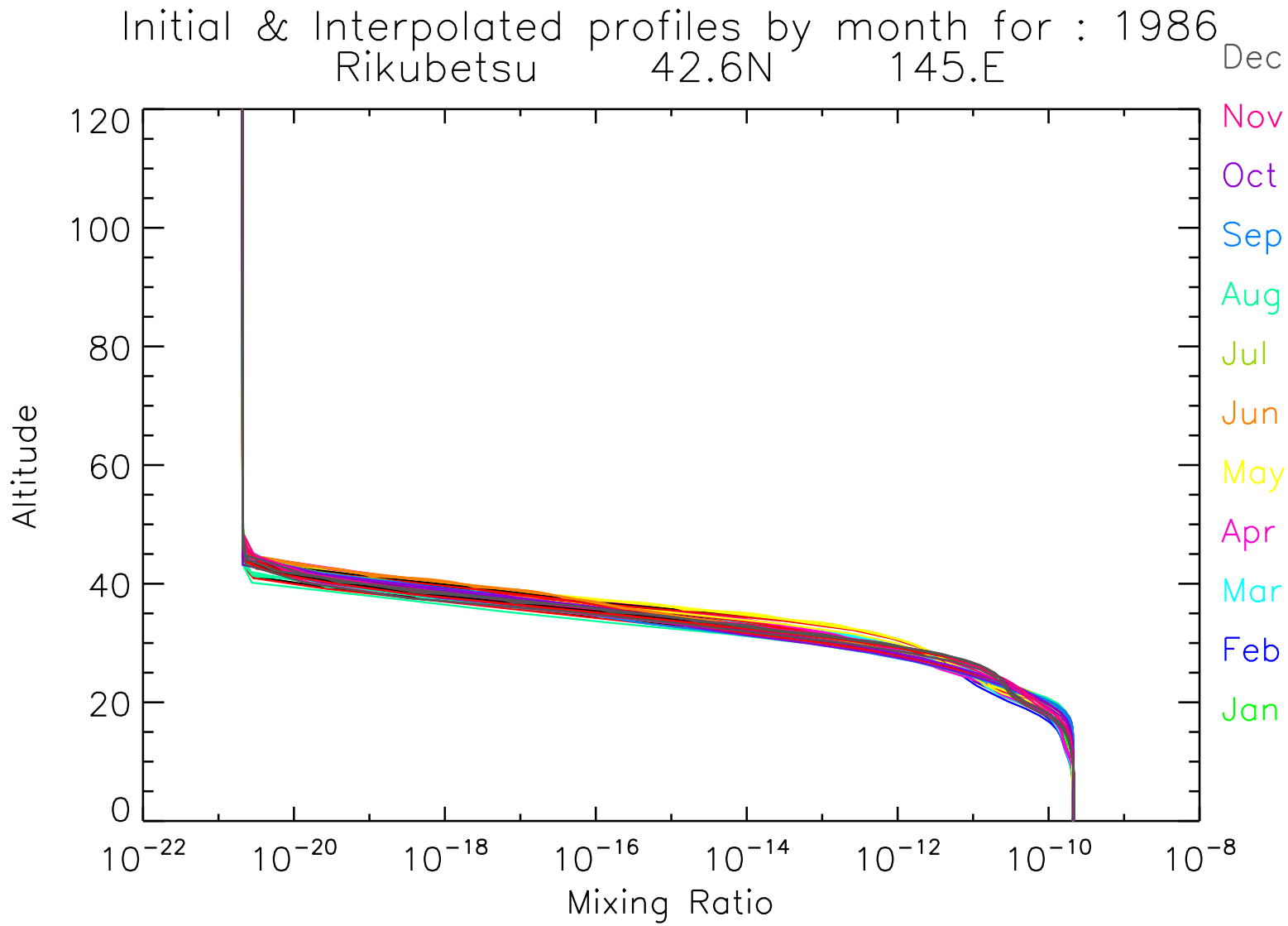
Mixing Ratio


Initial & Interpolated profiles by month for : 1986
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Altitude
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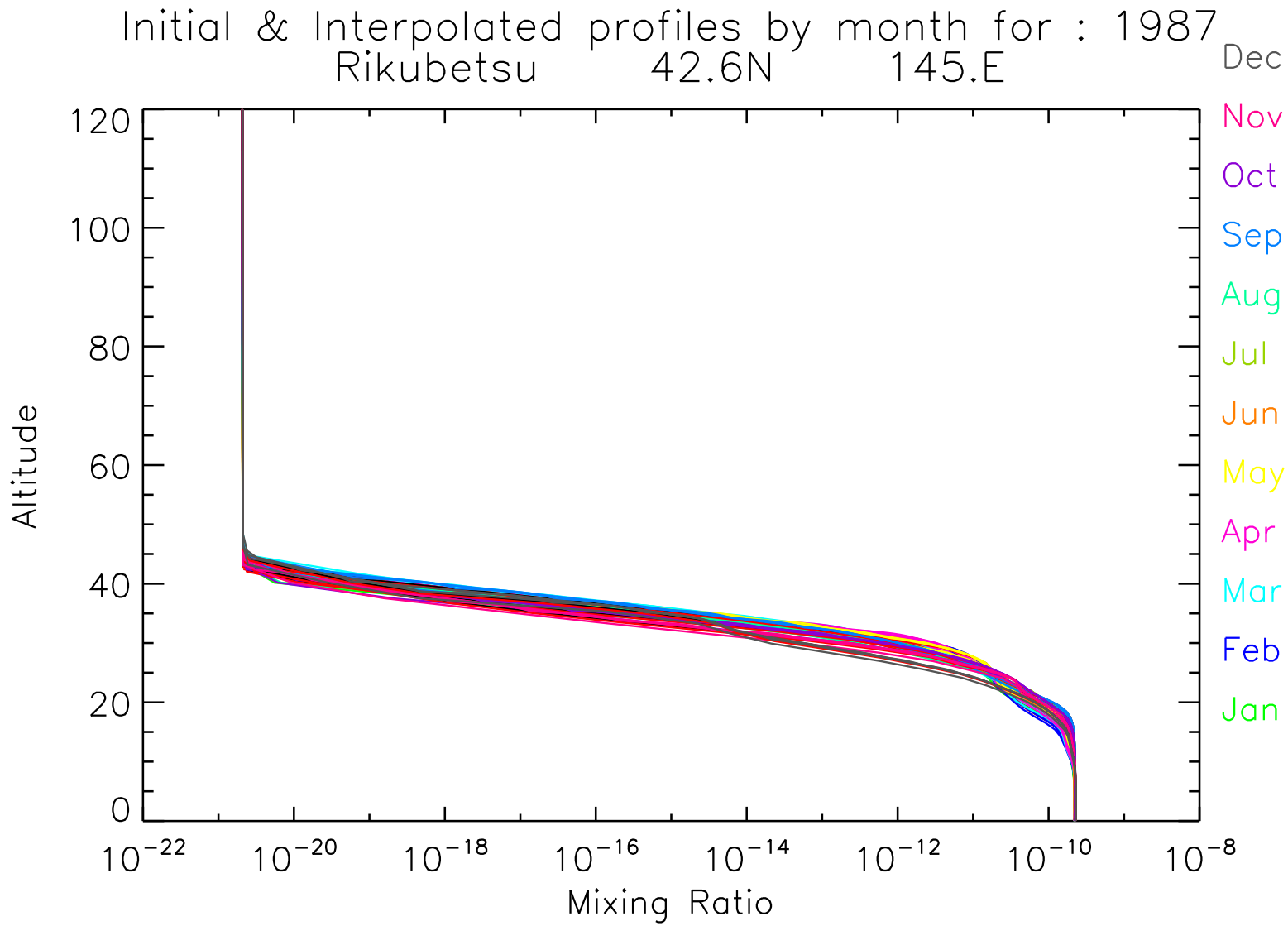
Mixing Ratio


Initial & Interpolated profiles by month for : 1987
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Altitude
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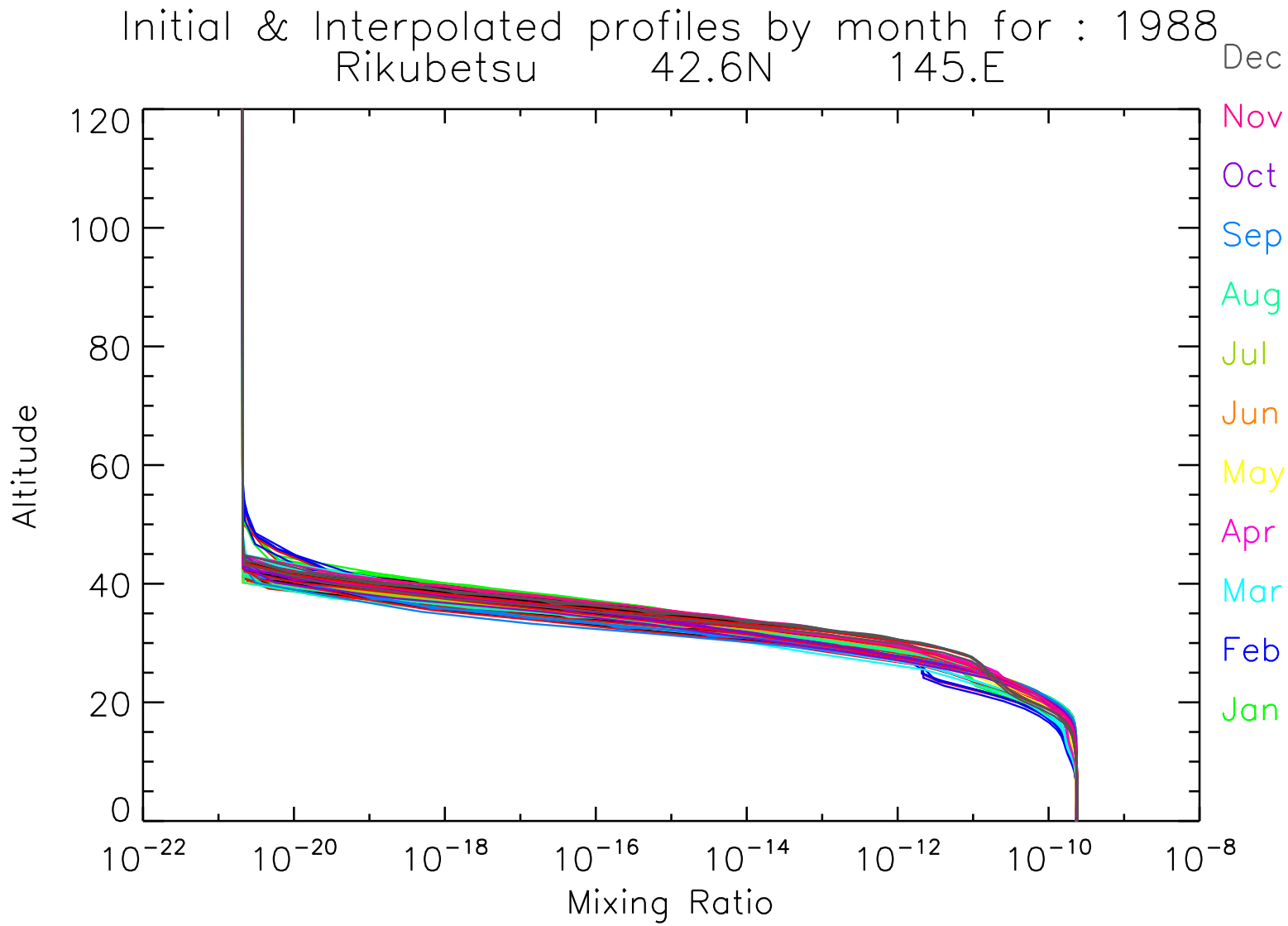
Mixing Ratio


Initial & Interpolated profiles by month for : 1988
Rikubetsu 42.6N 145.E
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Altitude
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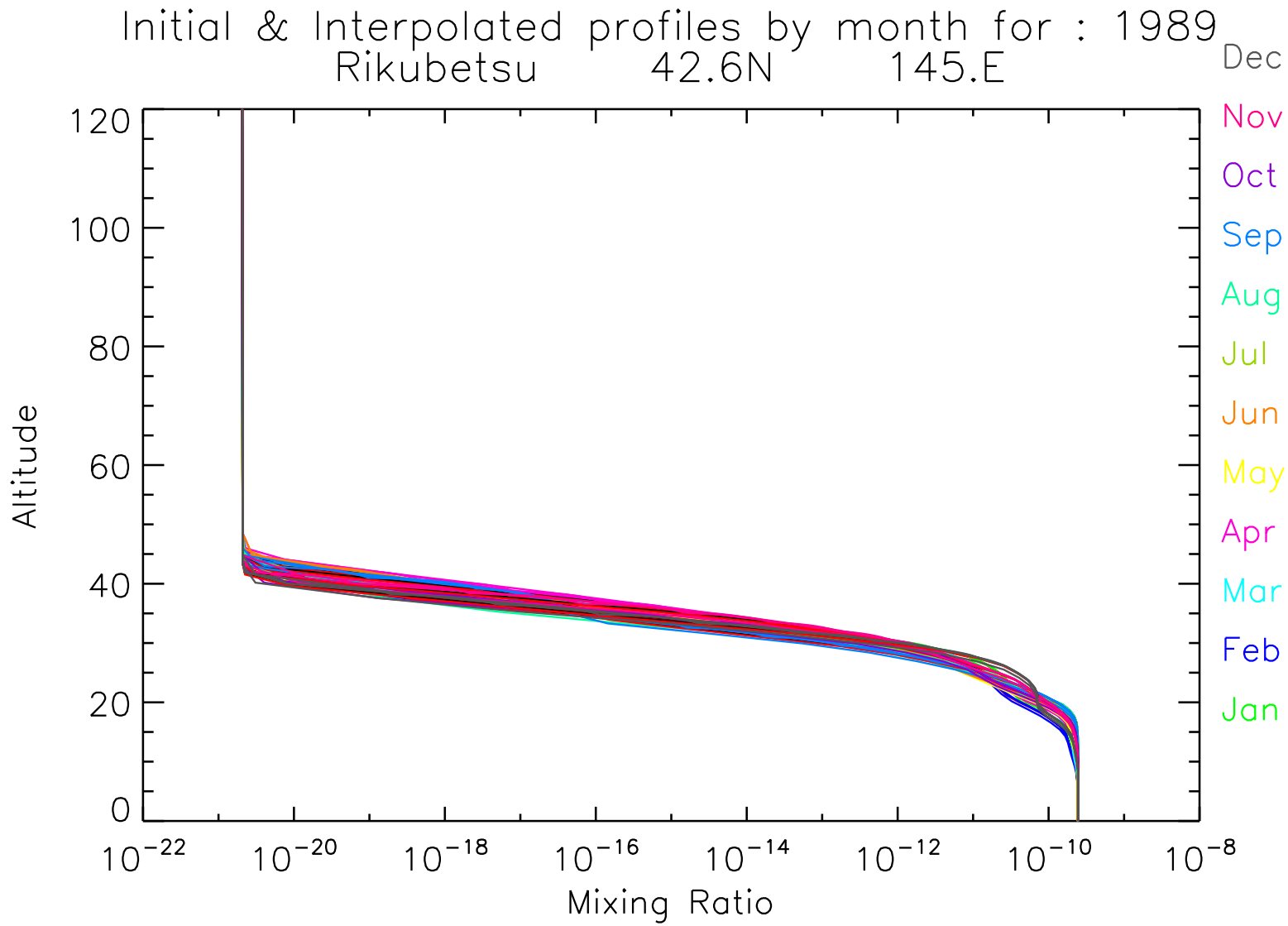
Mixing Ratio


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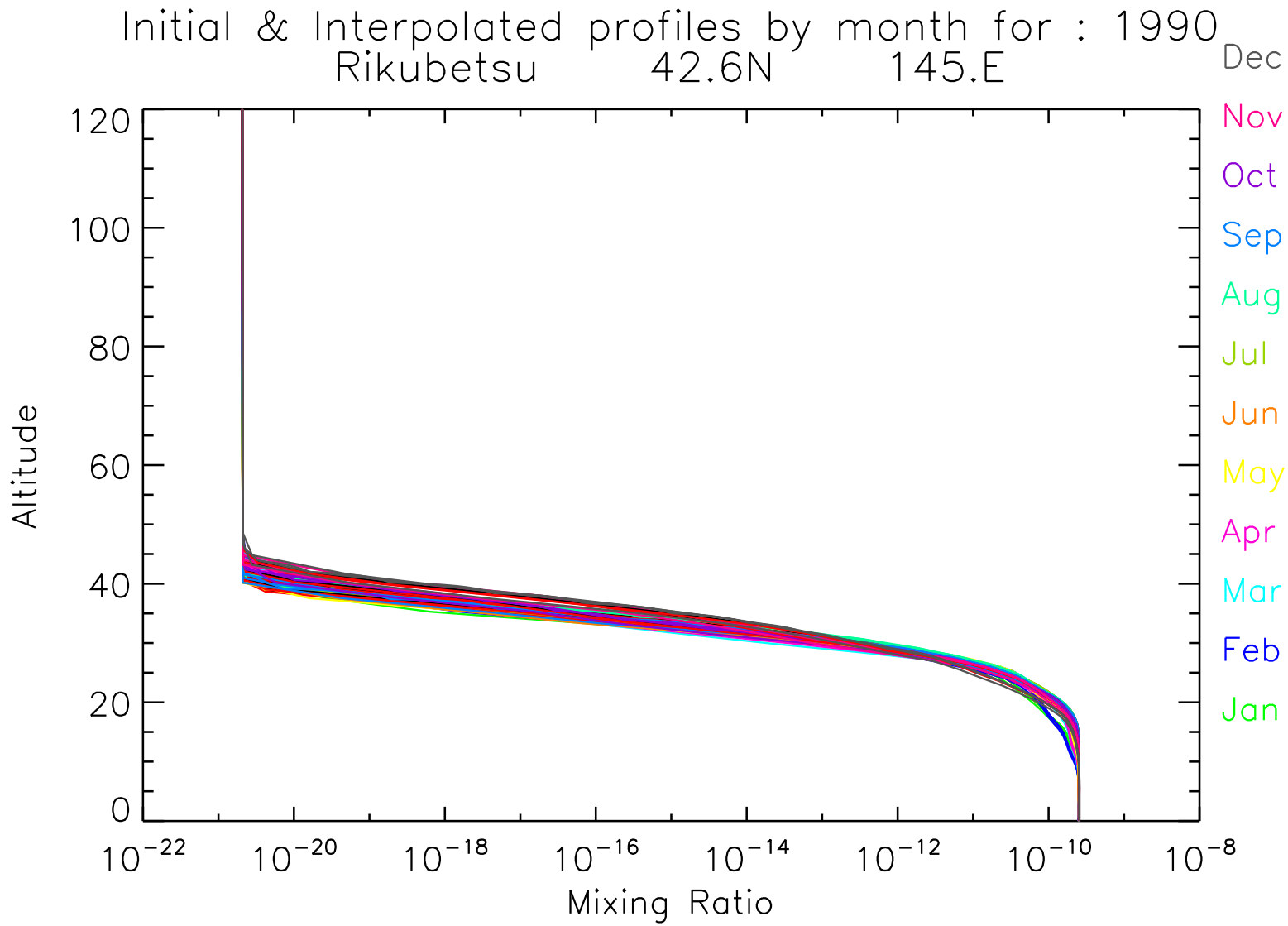
Mixing Ratio


Initial & Interpolated profiles by month for : 1990
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Altitude
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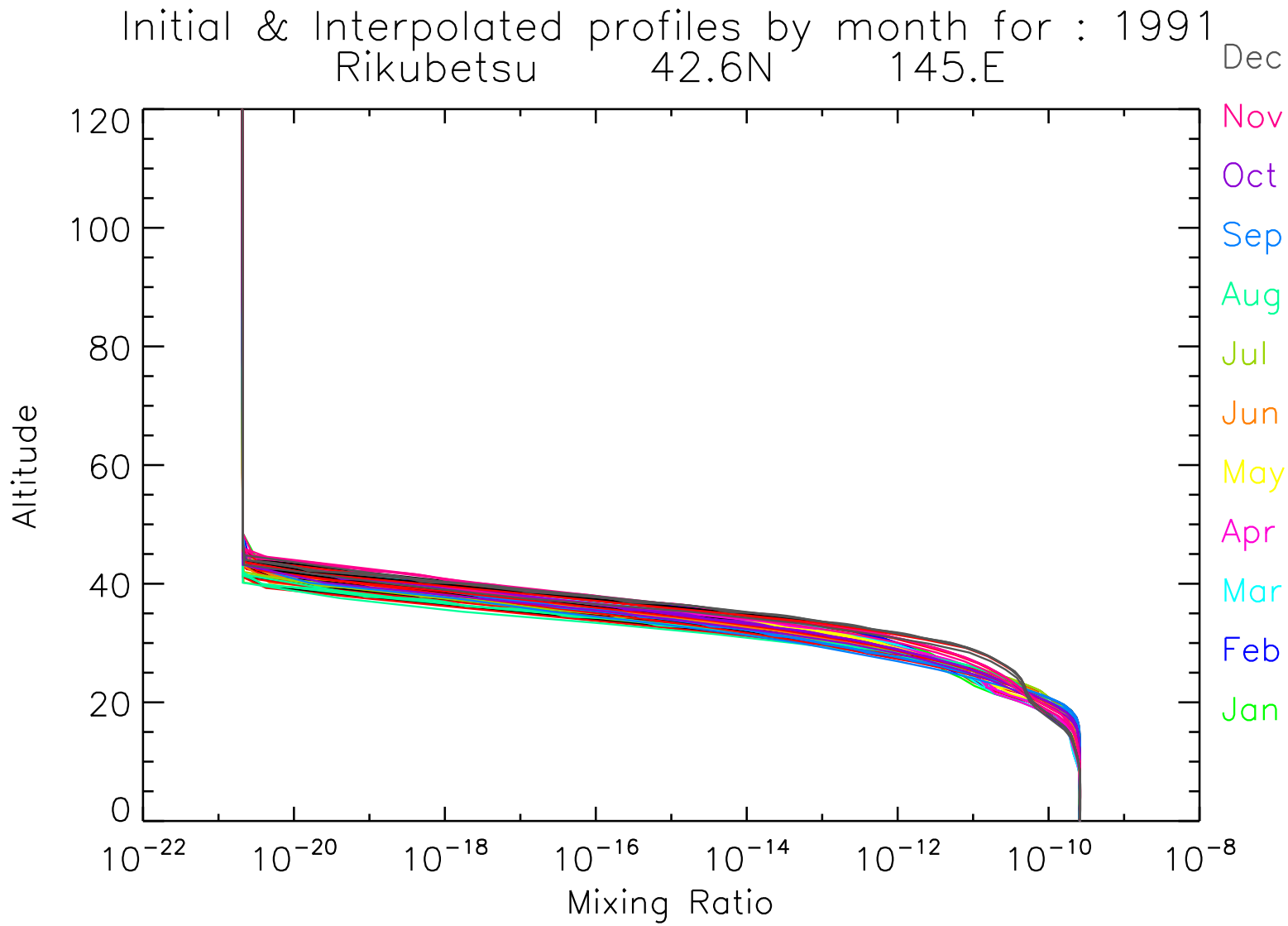
Mixing Ratio


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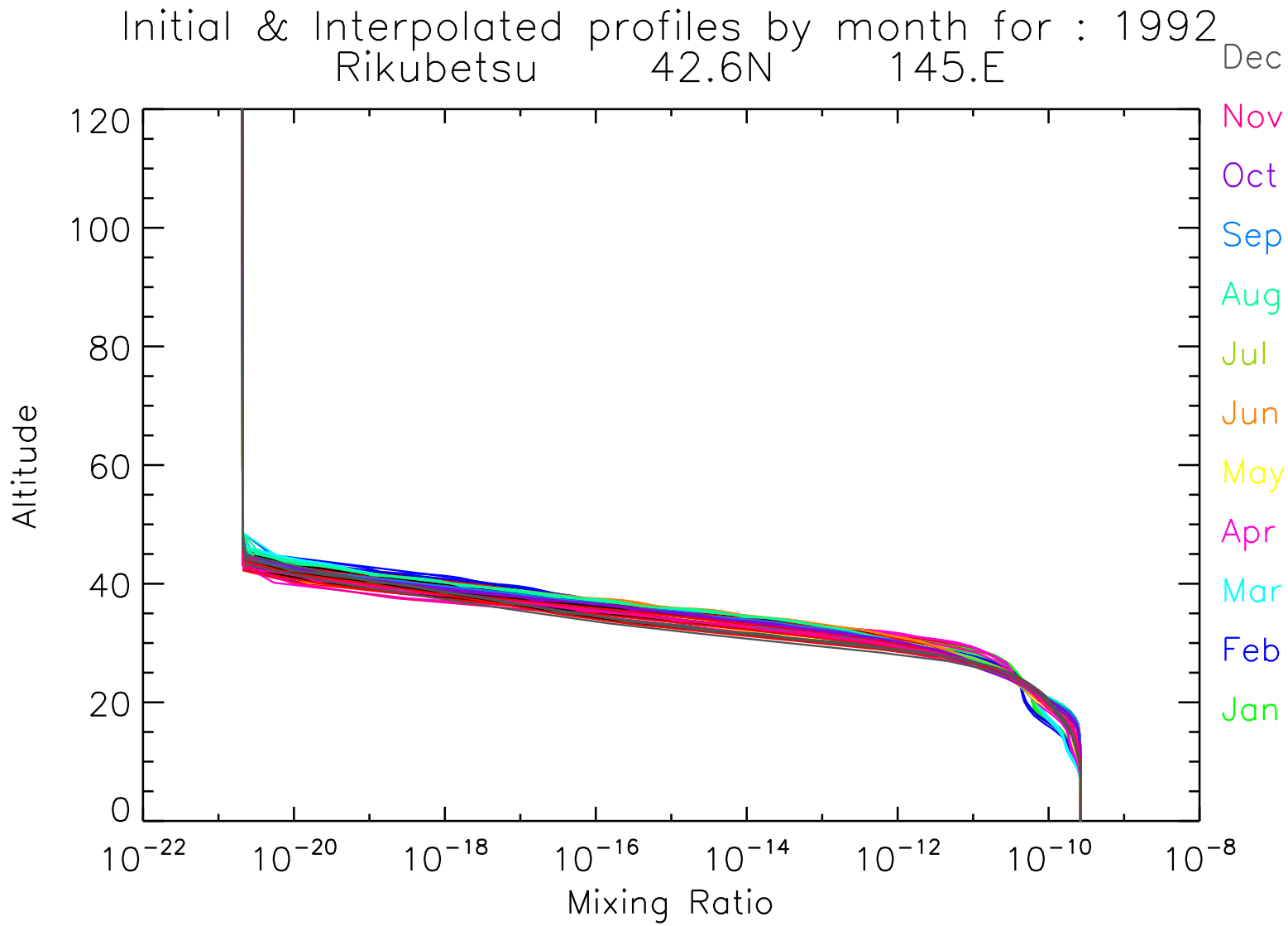
Mixing Ratio


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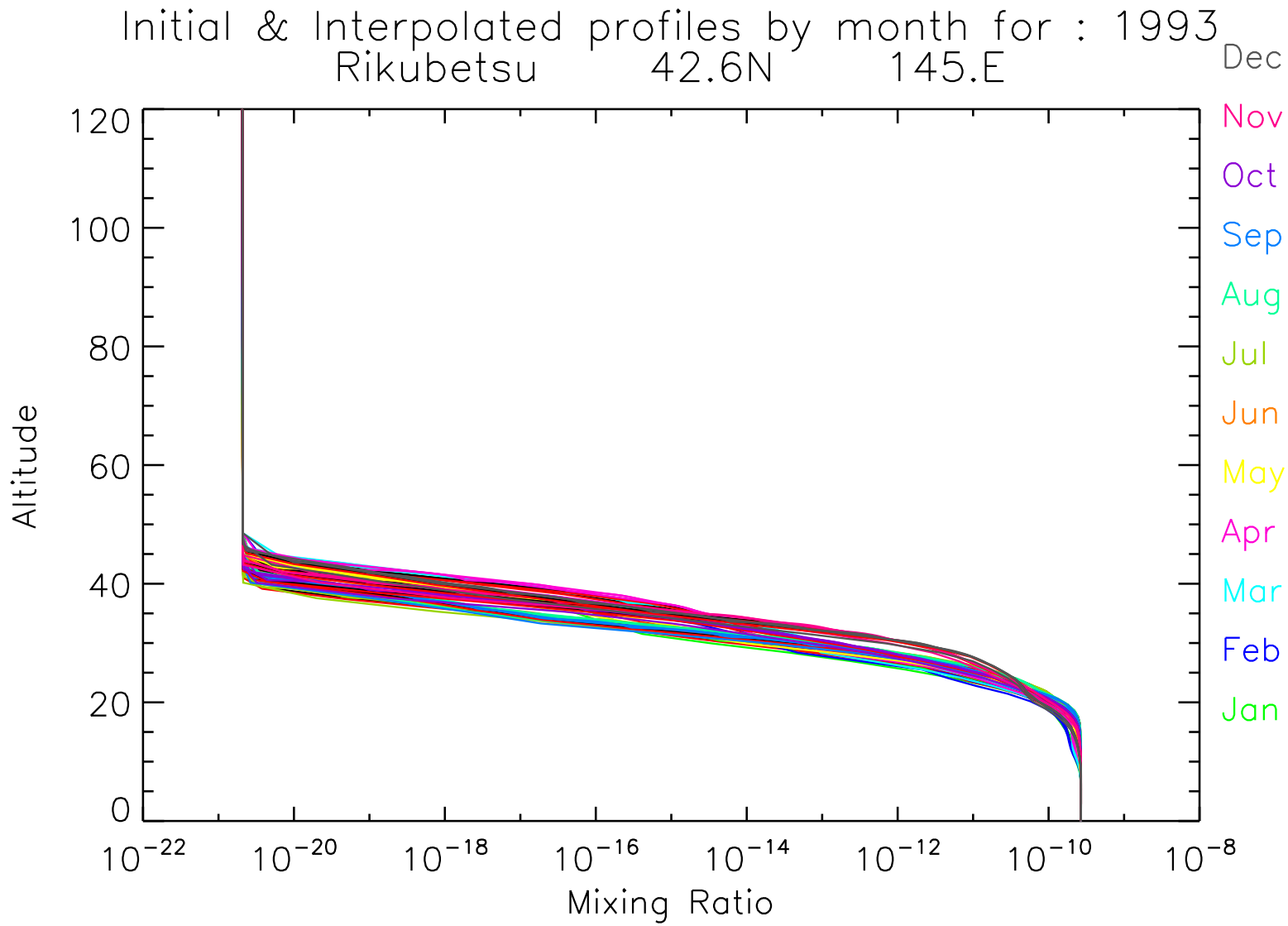
Mixing Ratio


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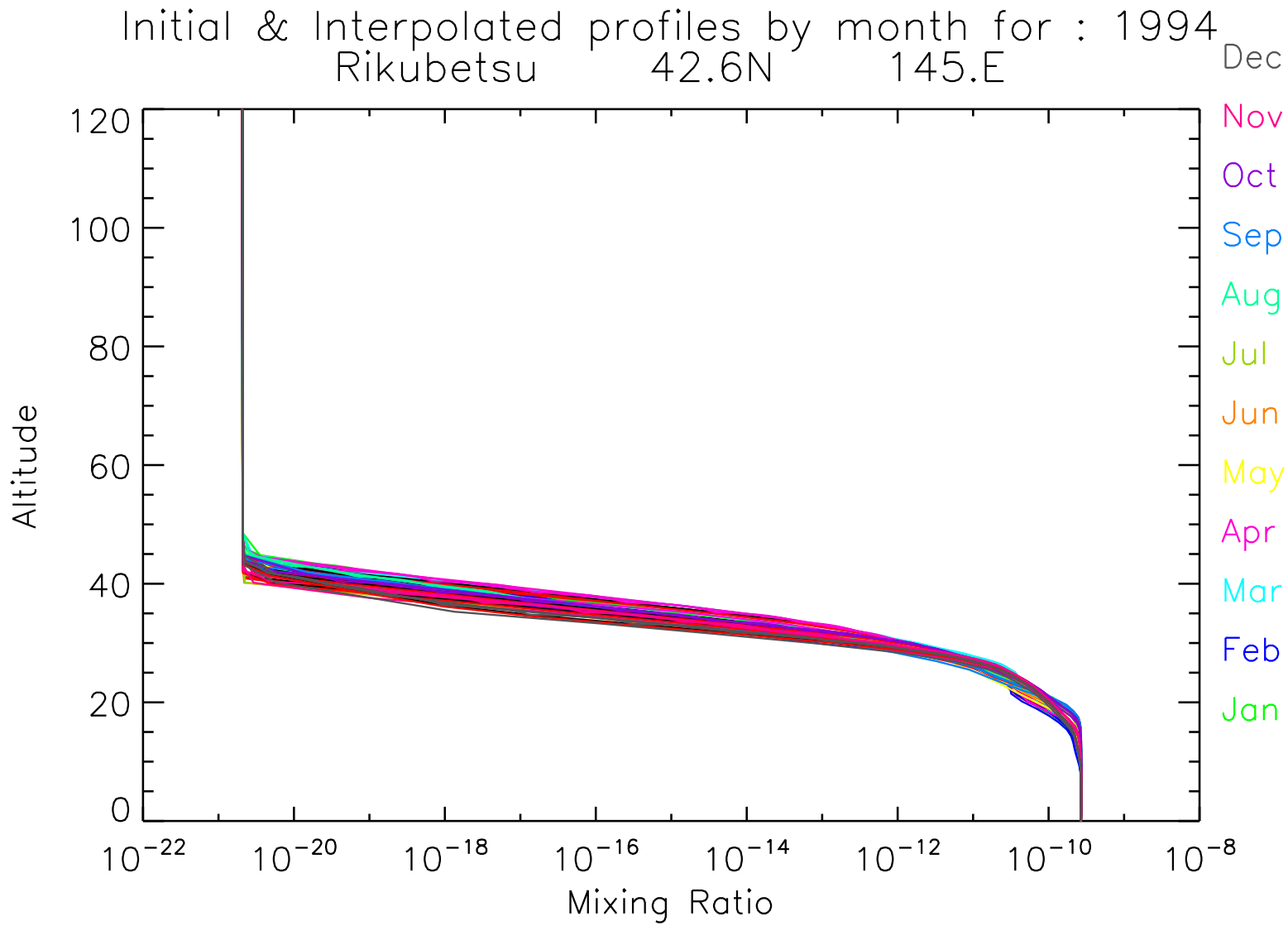
Mixing Ratio


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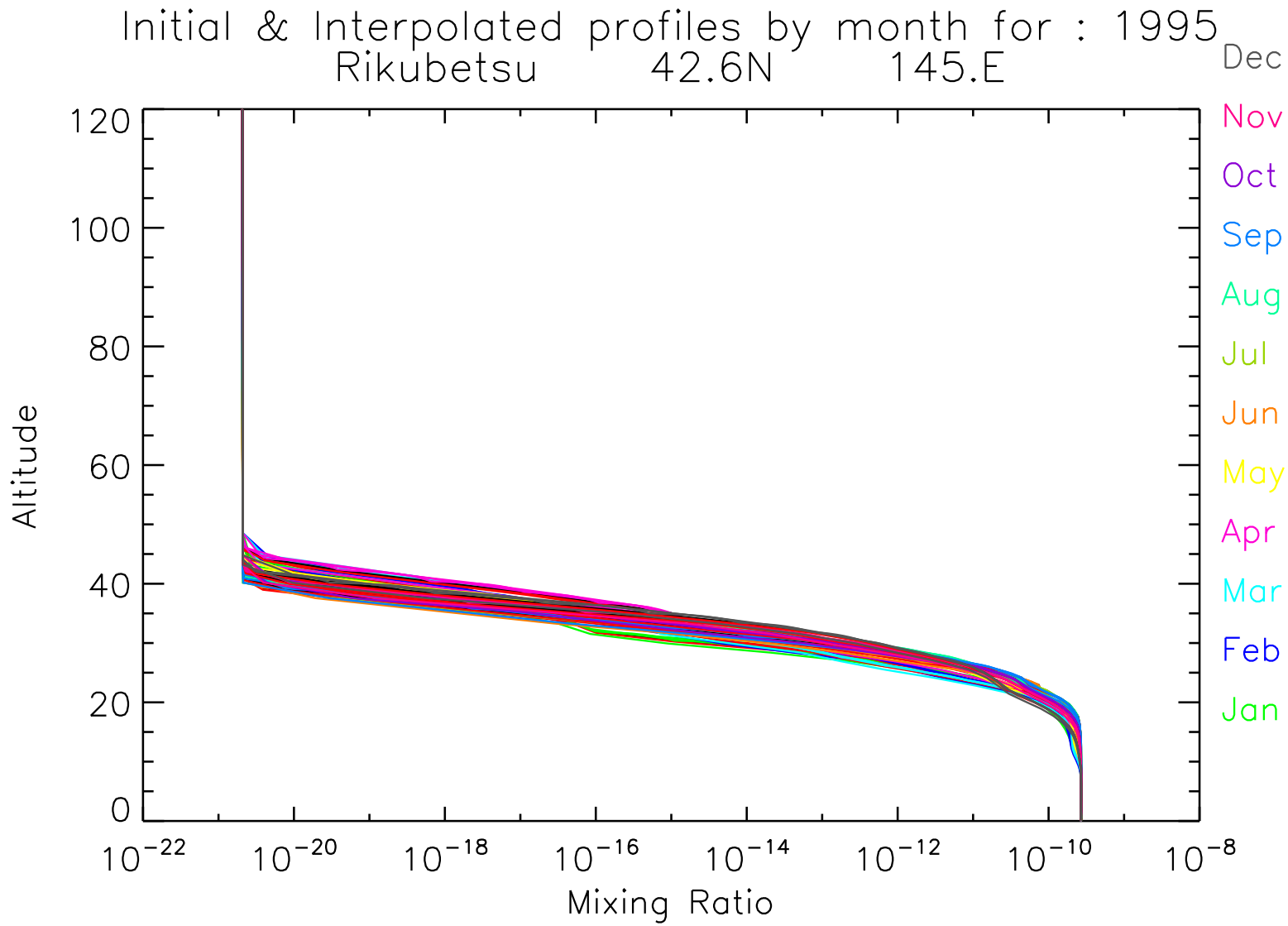
Mixing Ratio


Initial & Interpolated profiles by month for : 1995
Rikubetsu 42.6N 145.E
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Altitude
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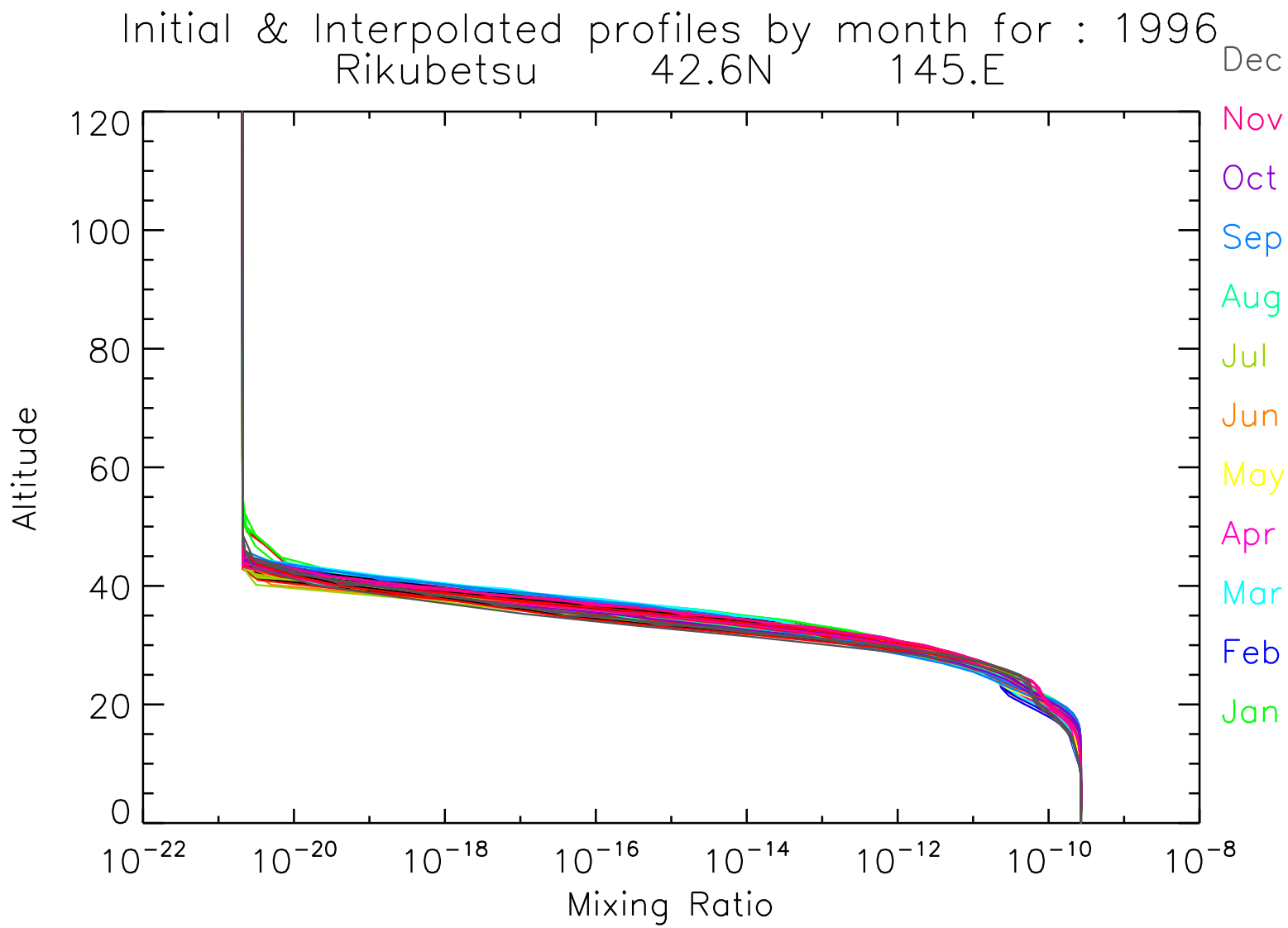
Mixing Ratio


Initial & Interpolated profiles by month for : 1996
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Altitude
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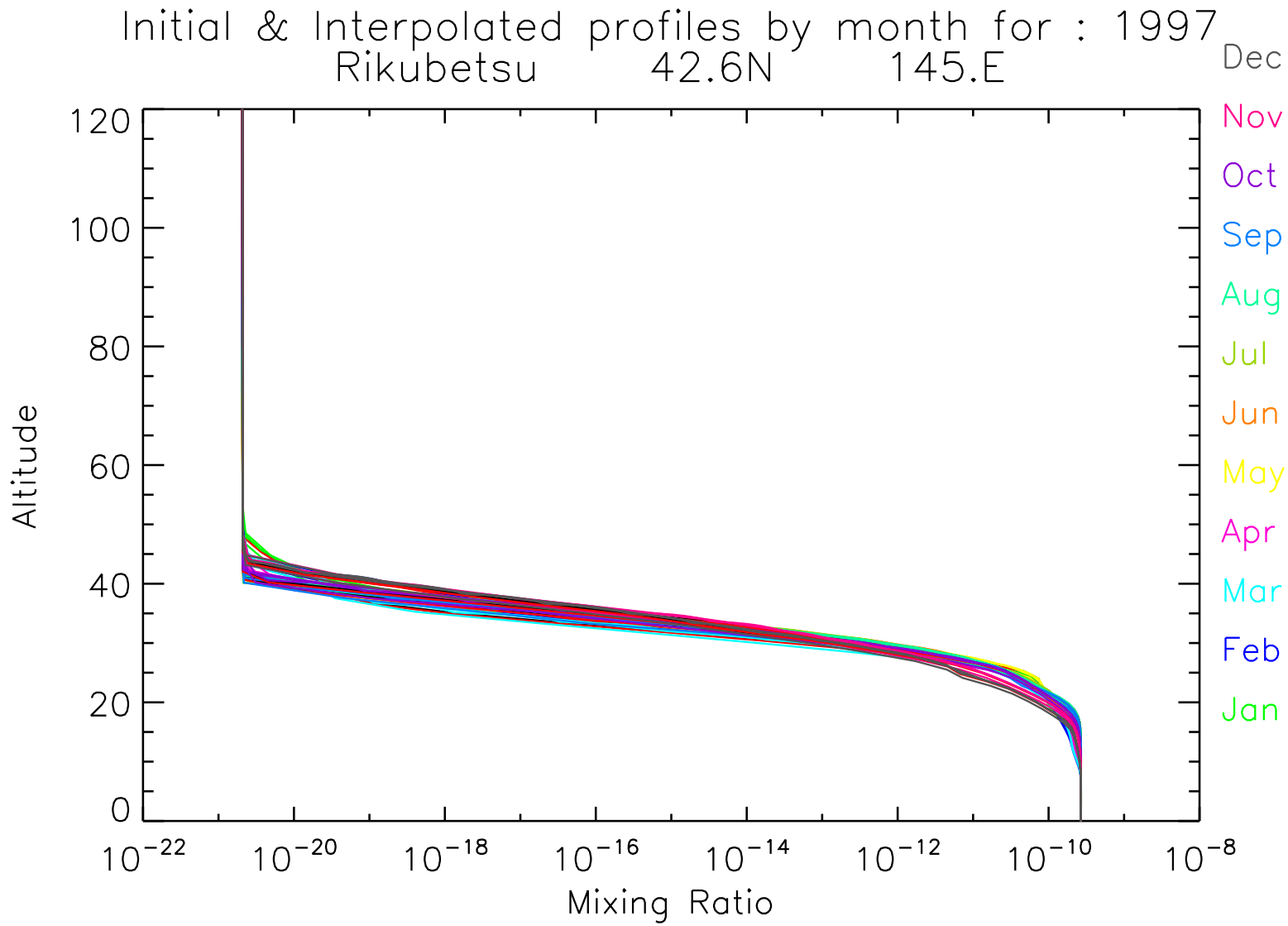
Mixing Ratio


Initial & Interpolated profiles by month for : 1997
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Altitude
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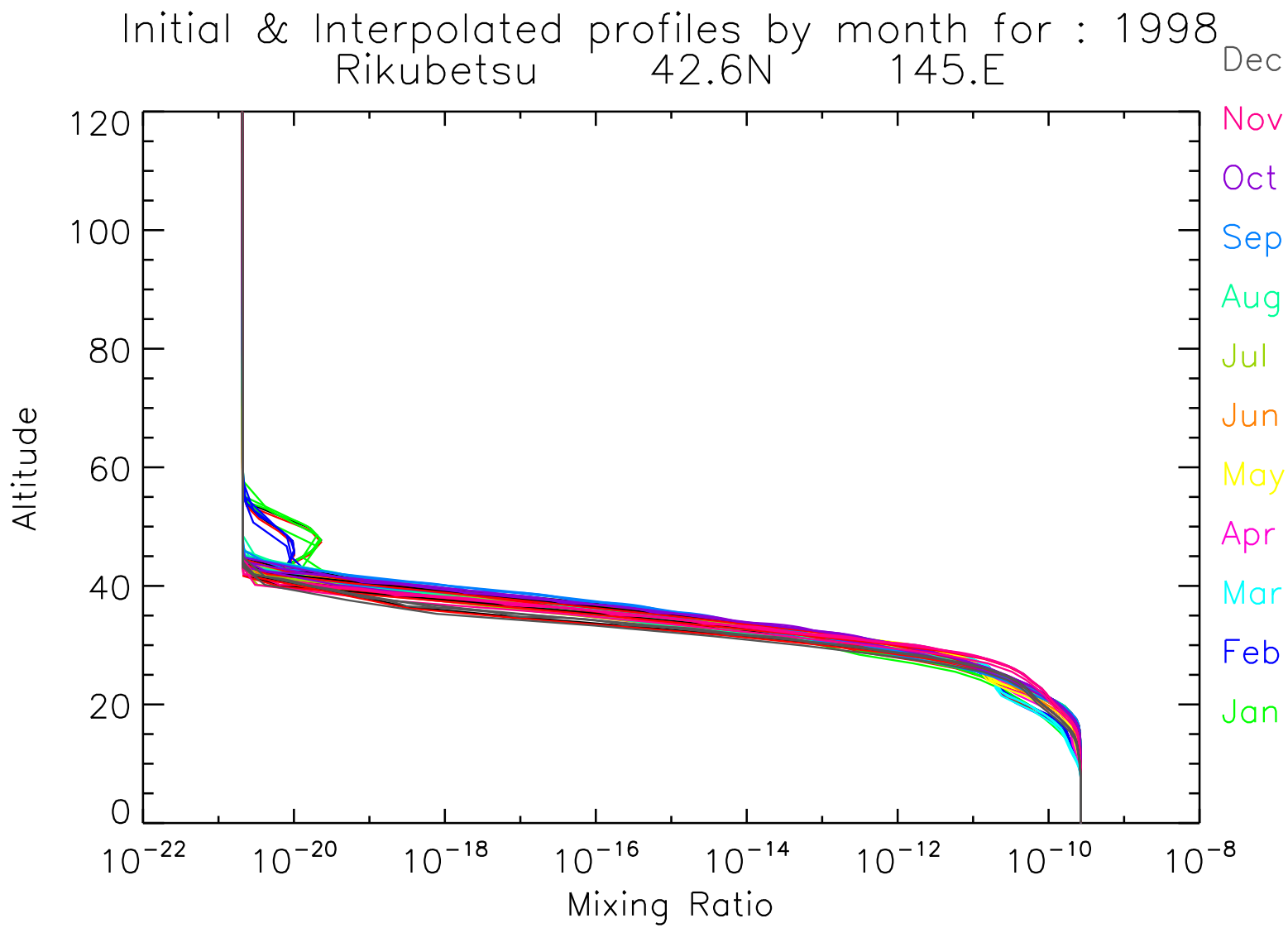
Mixing Ratio


Initial & Interpolated profiles by month for : 1998
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Altitude
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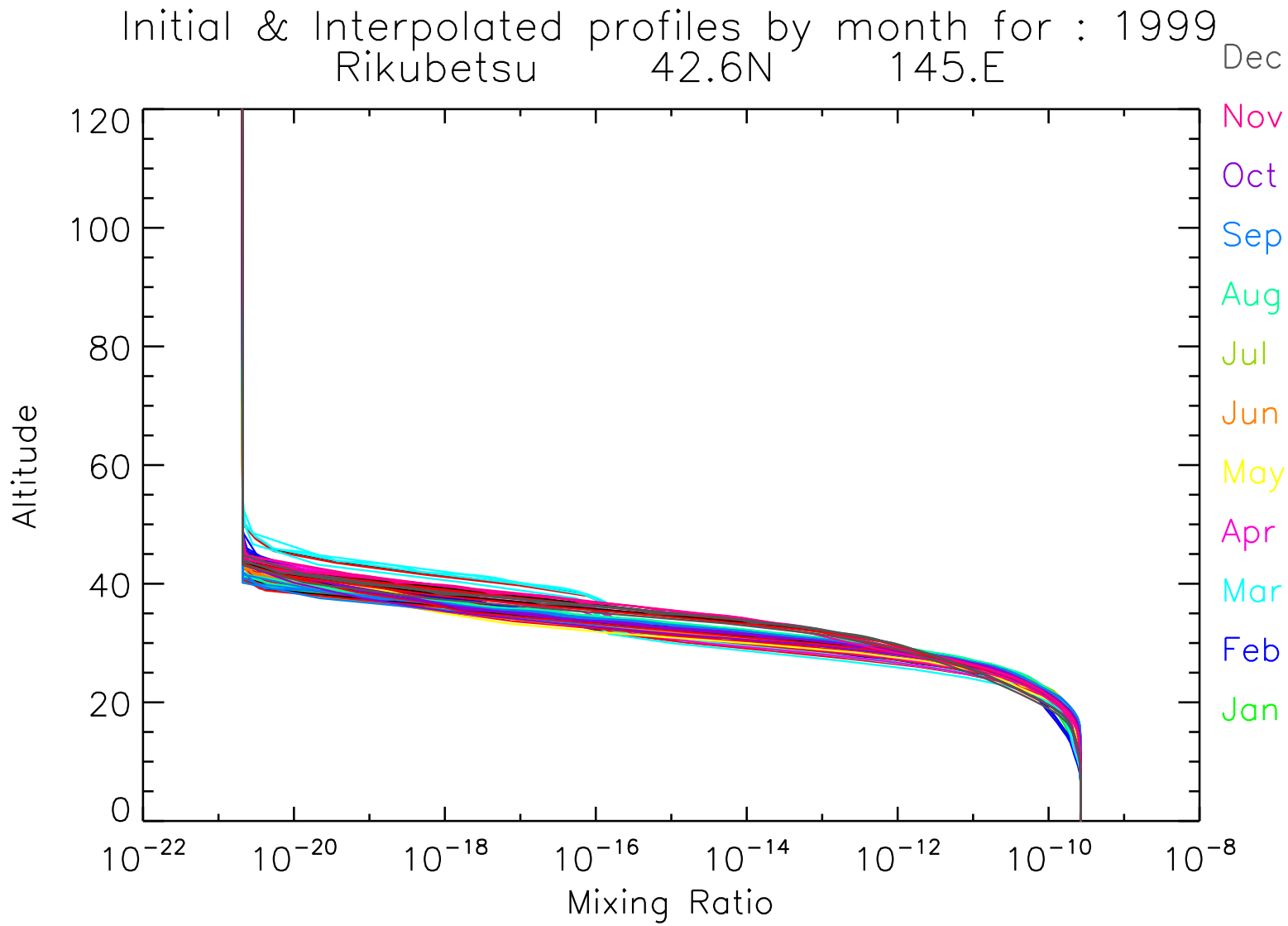
Mixing Ratio


Initial & Interpolated profiles by month for : 1999
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Altitude
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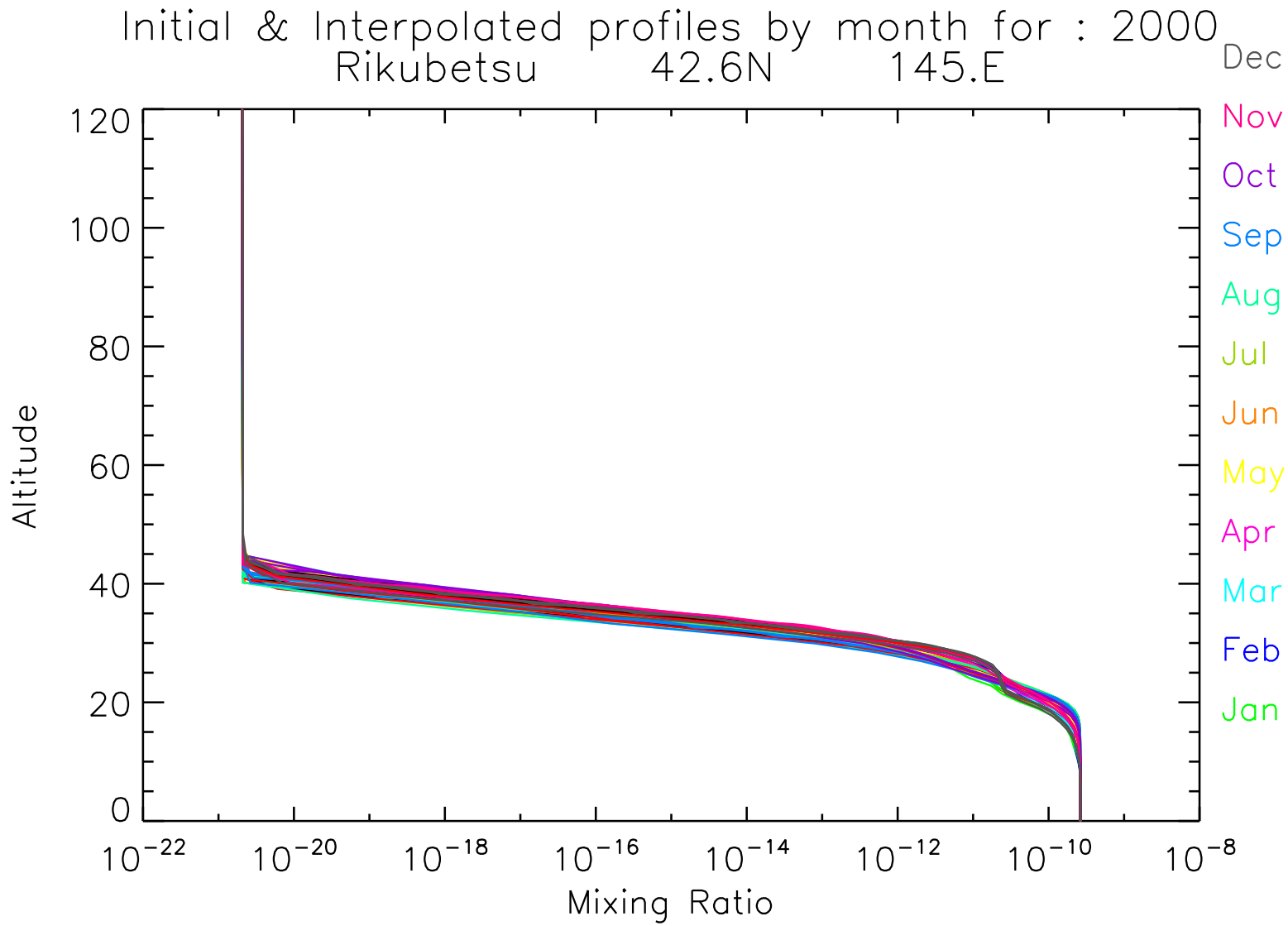
Mixing Ratio


Initial & Interpolated profiles by month for : 2000
Rikubetsu 42.6N 145.E
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Altitude
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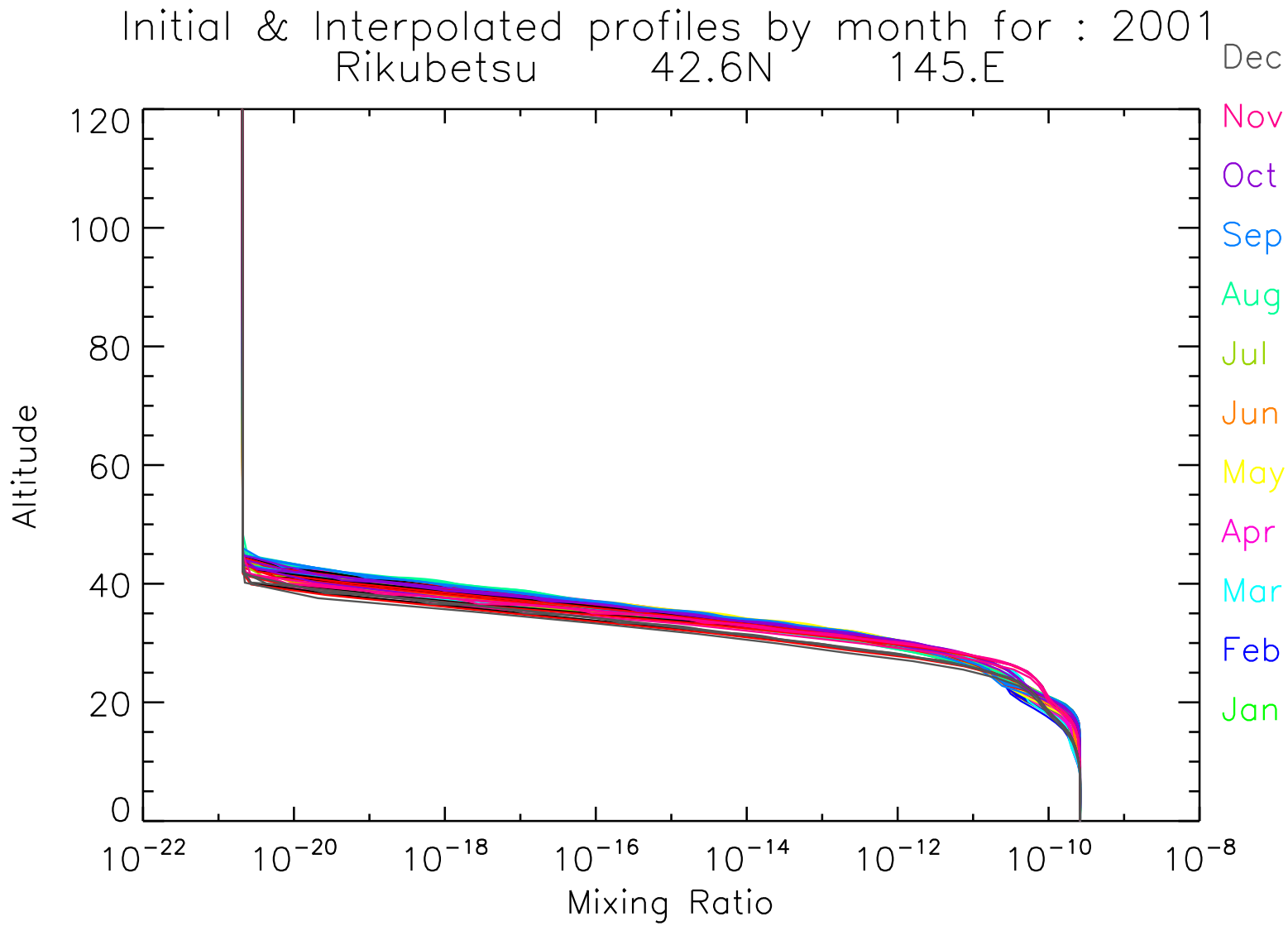
Mixing Ratio


Initial & Interpolated profiles by month for : 2001
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Altitude
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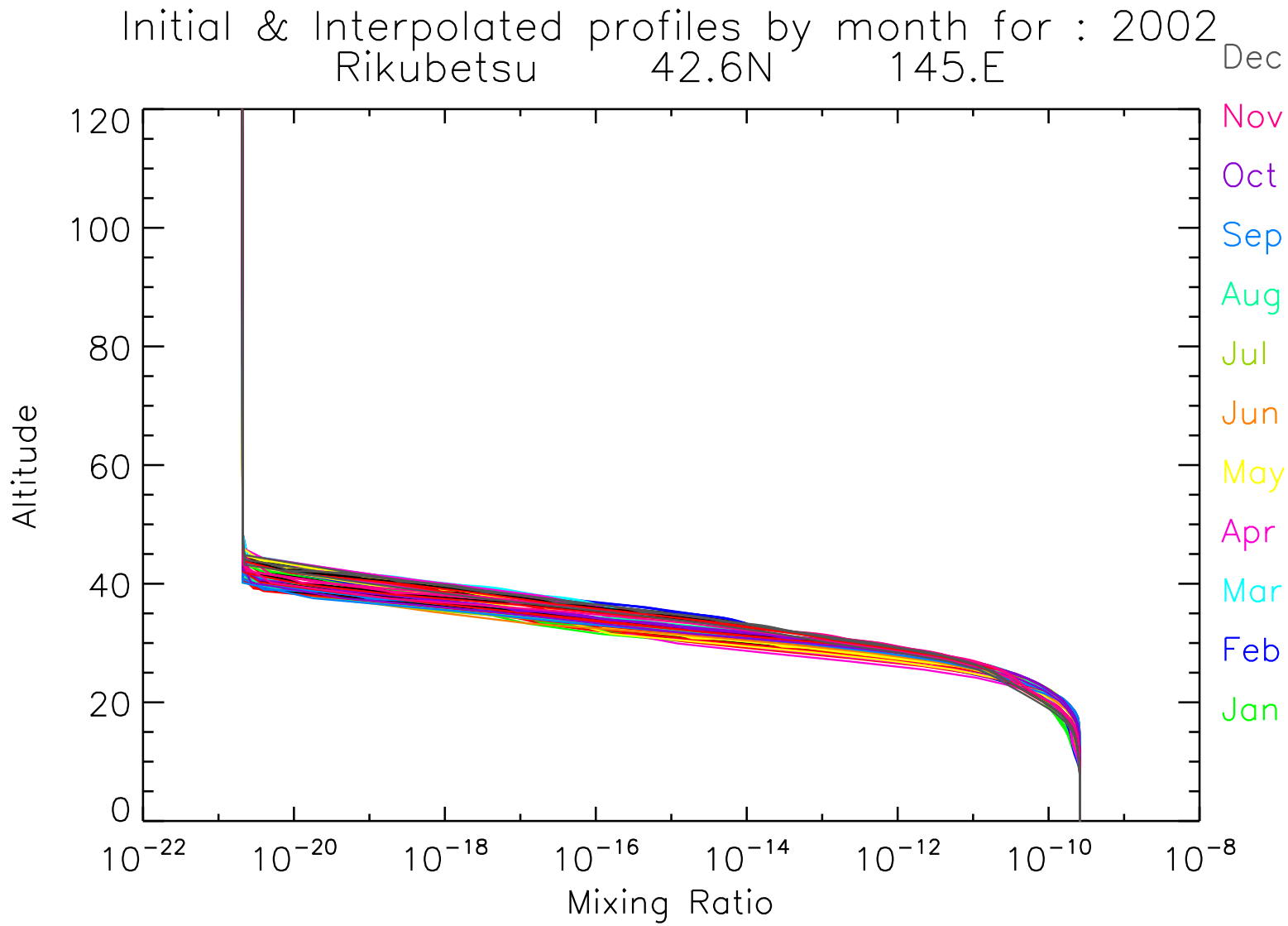
Mixing Ratio


Initial & Interpolated profiles by month for : 2002
Rikubetsu 42.6N 145.E
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Altitude
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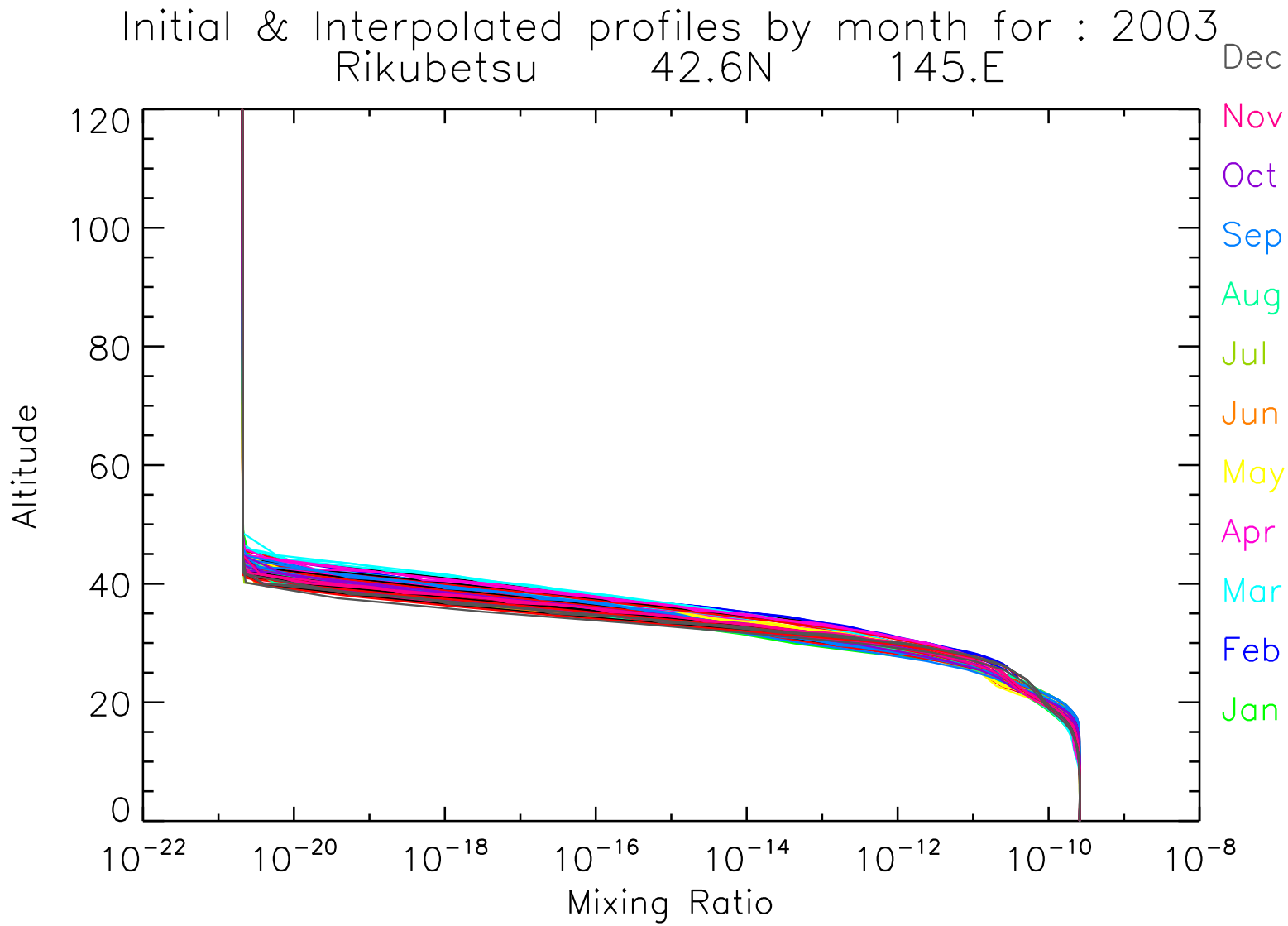
Mixing Ratio


Initial & Interpolated profiles by month for : 2003
Rikubetsu 42.6N 145.E
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Altitude
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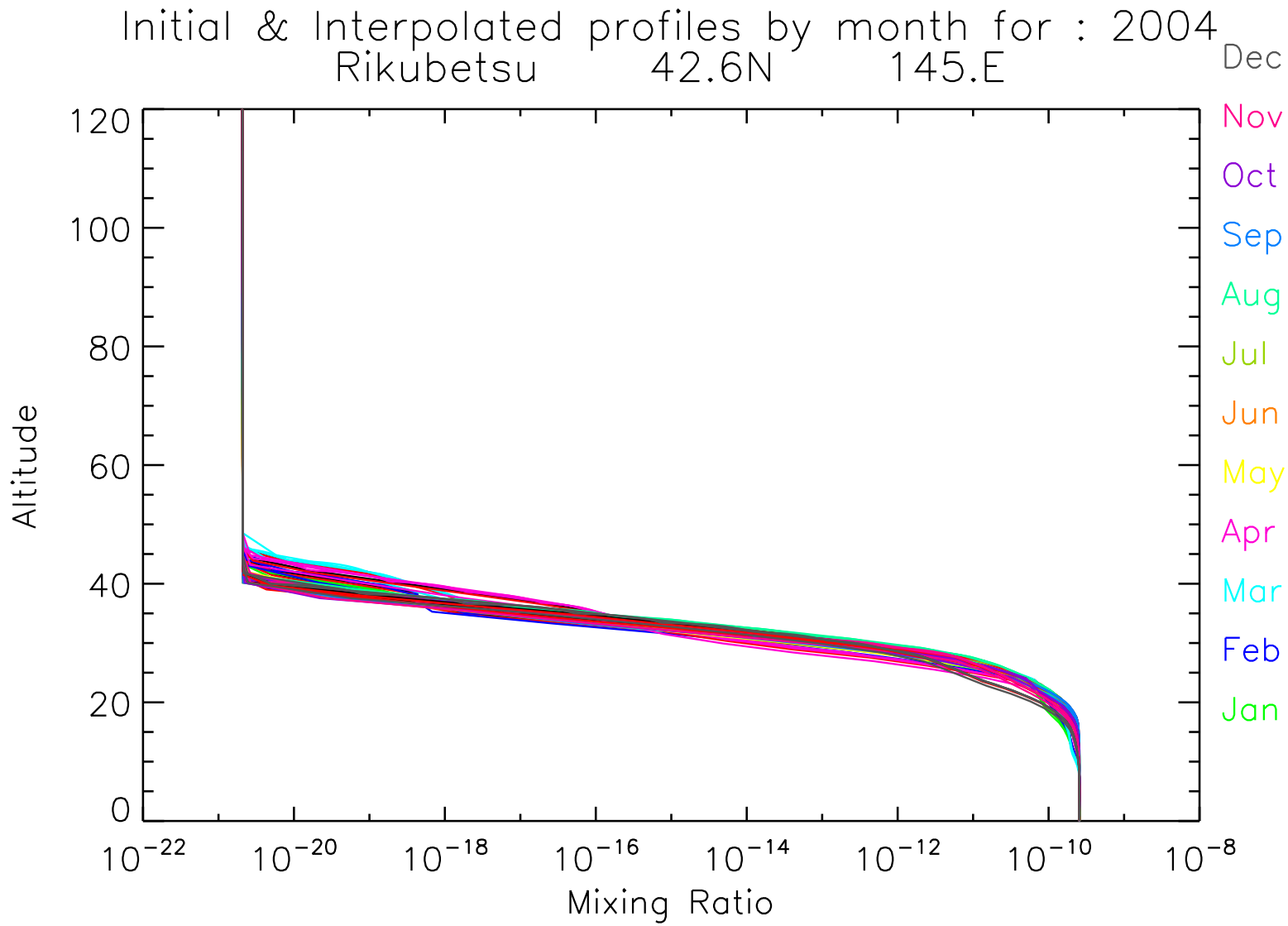
Mixing Ratio


Initial & Interpolated profiles by month for : 2004
Rikubetsu 42.6N 145.E
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Altitude
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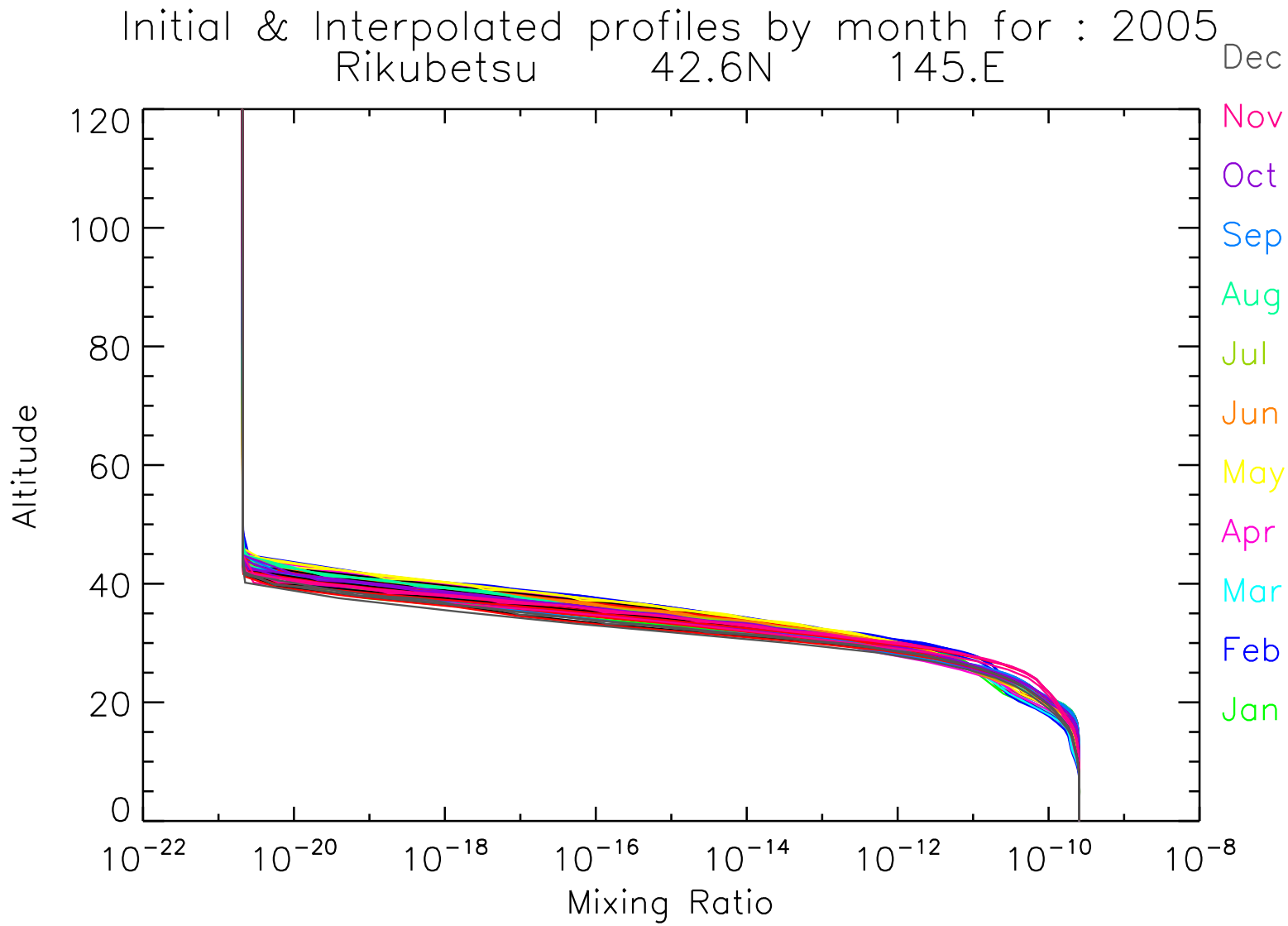
Mixing Ratio


Initial & Interpolated profiles by month for : 2005
Rikubetsu 42.6N 145.E
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Altitude
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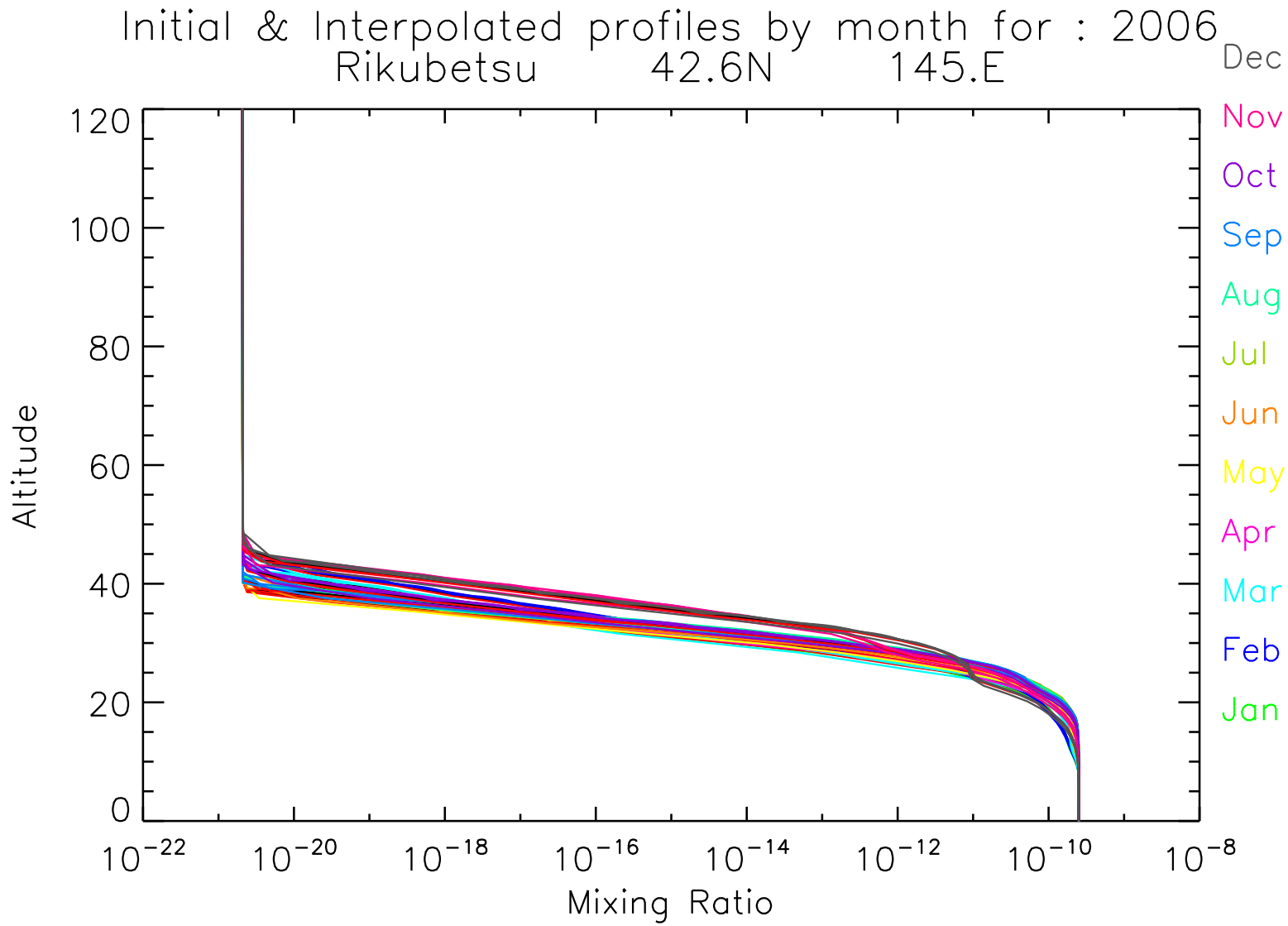
Mixing Ratio


Initial & Interpolated profiles by month for : 2006
Rikubetsu 42.6N 145.E
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Altitude
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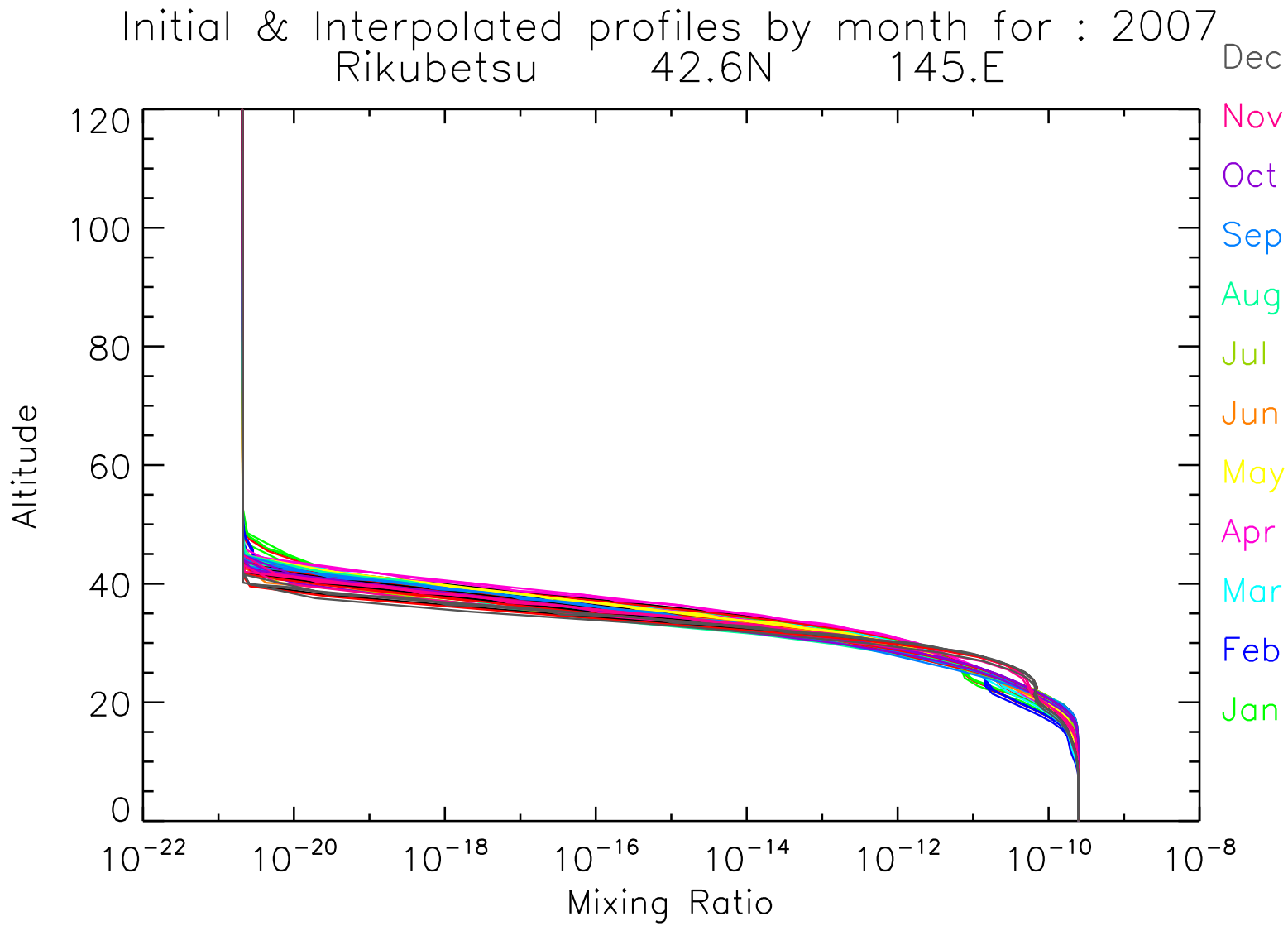
Mixing Ratio


Initial & Interpolated profiles by month for : 2007
Rikubetsu 42.6N 145.E
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Altitude
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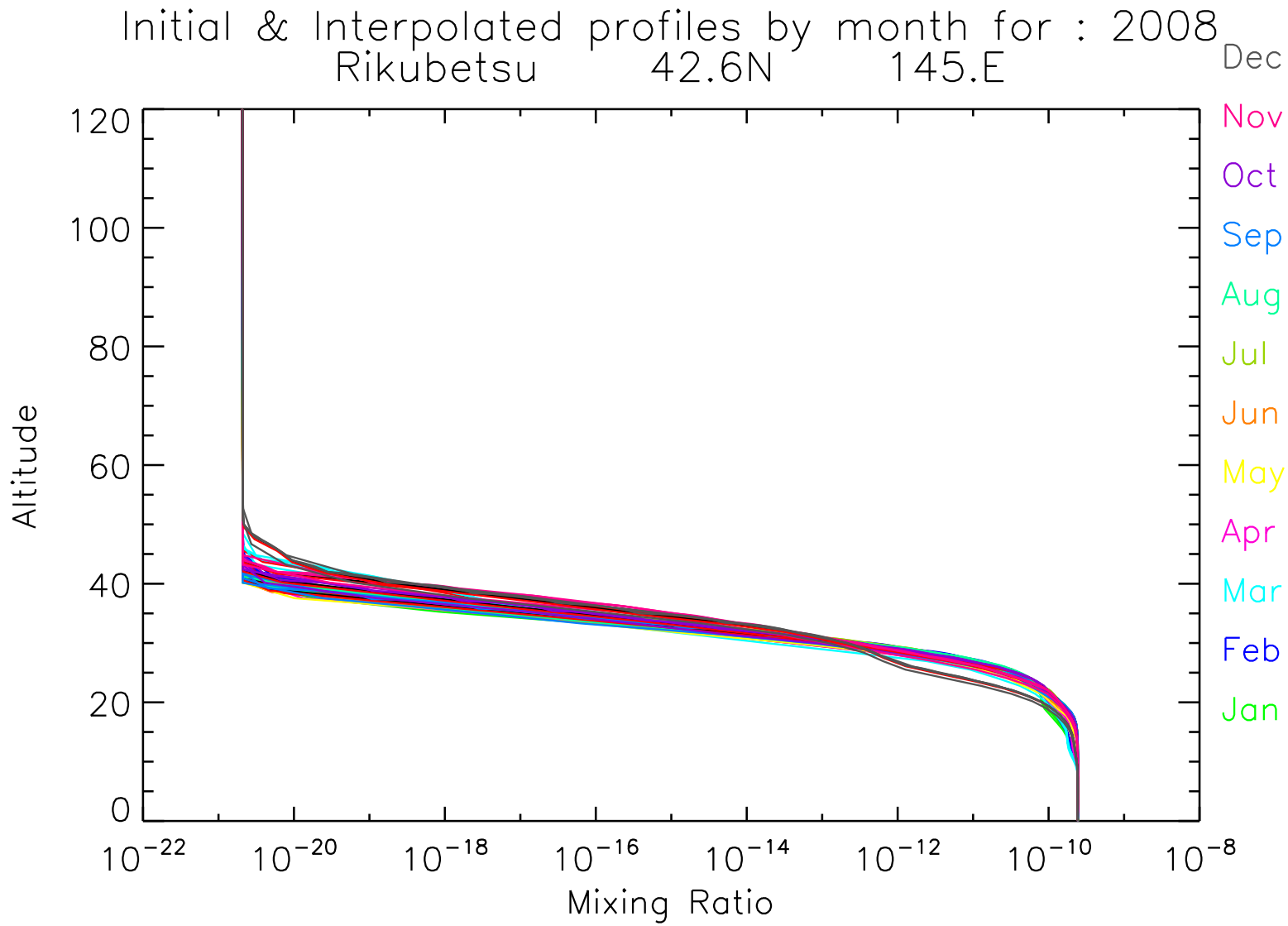
Mixing Ratio


Initial & Interpolated profiles by month for : 2008
Rikubetsu 42.6N 145.E
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Altitude
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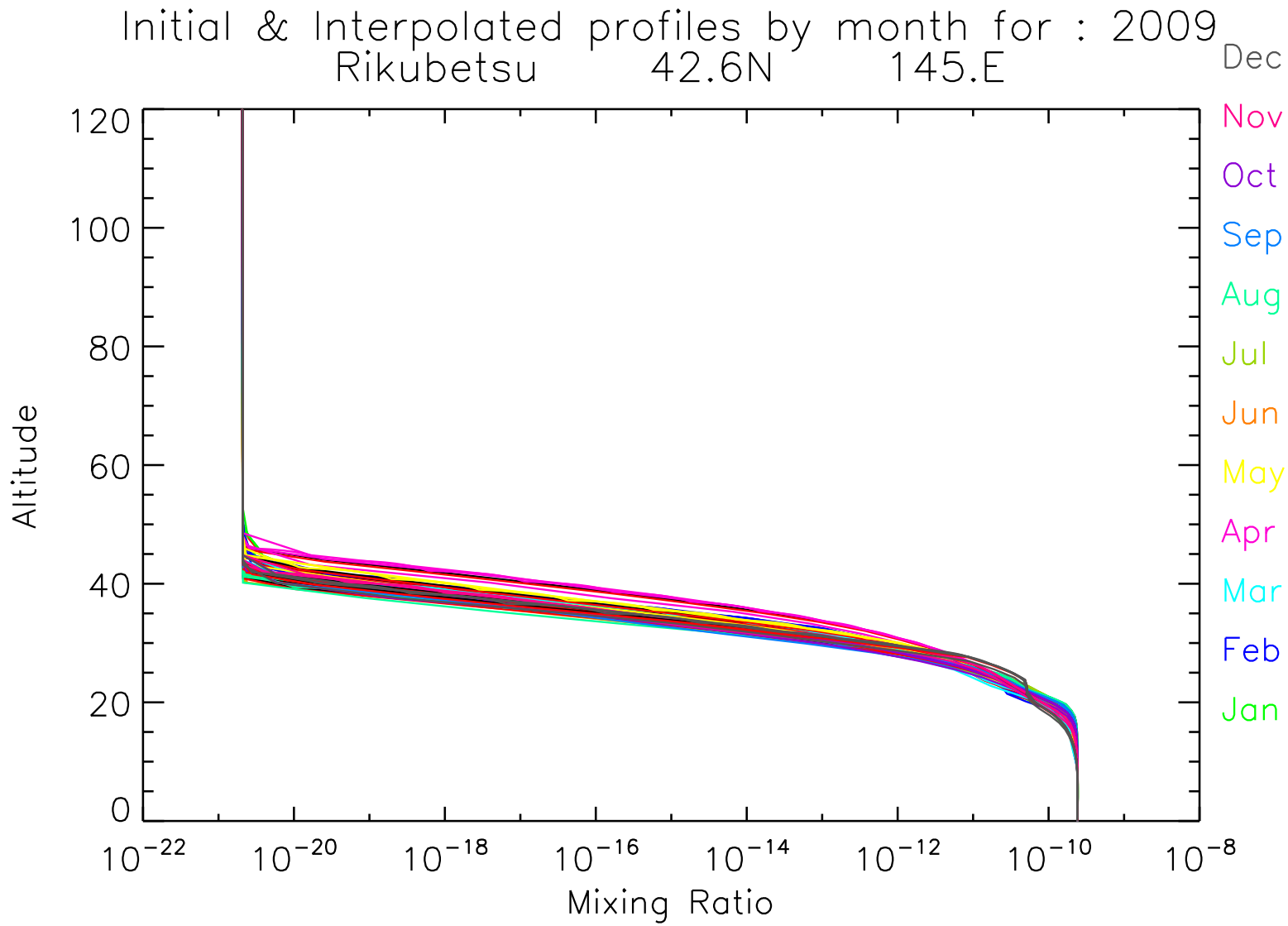
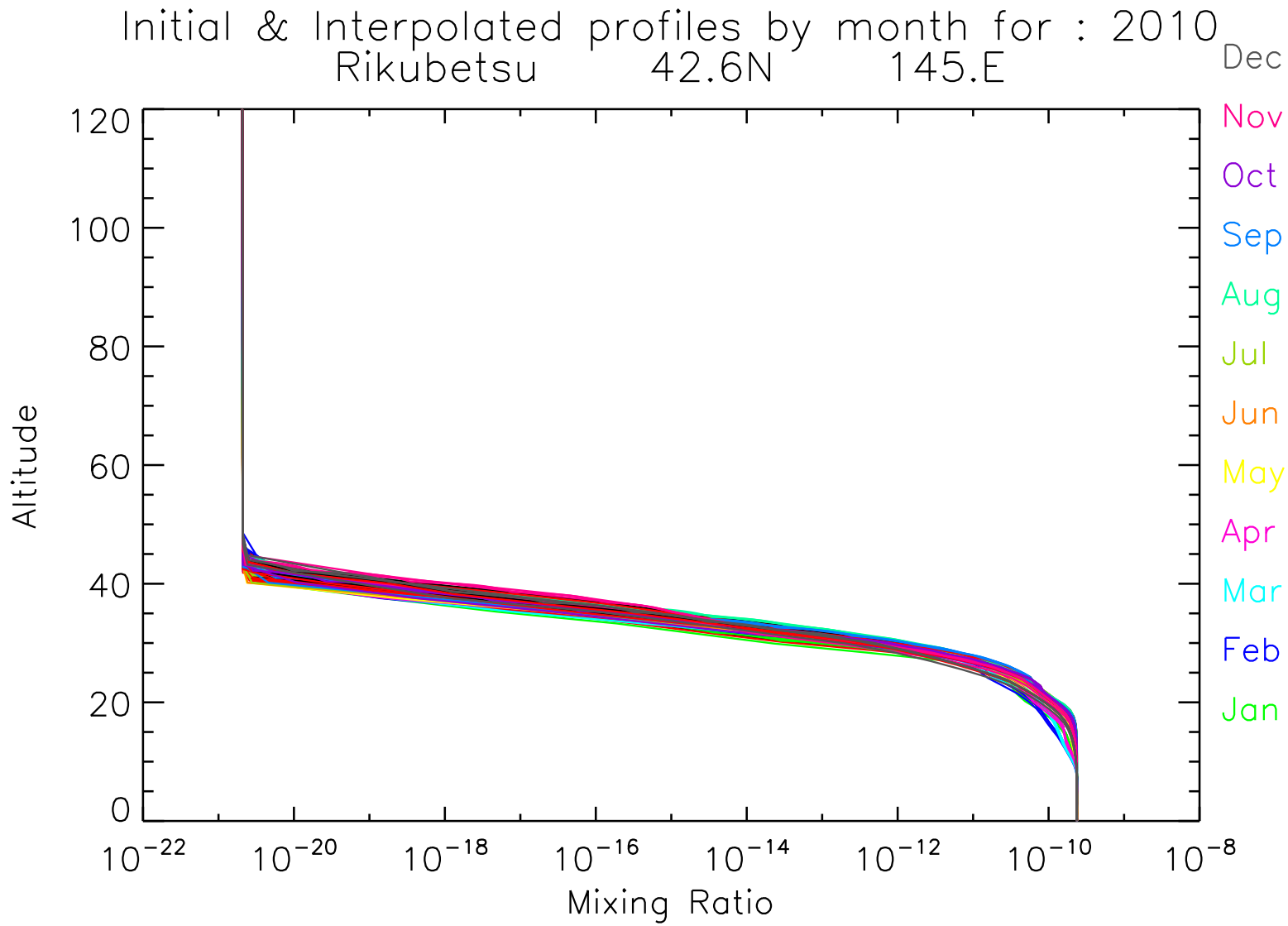
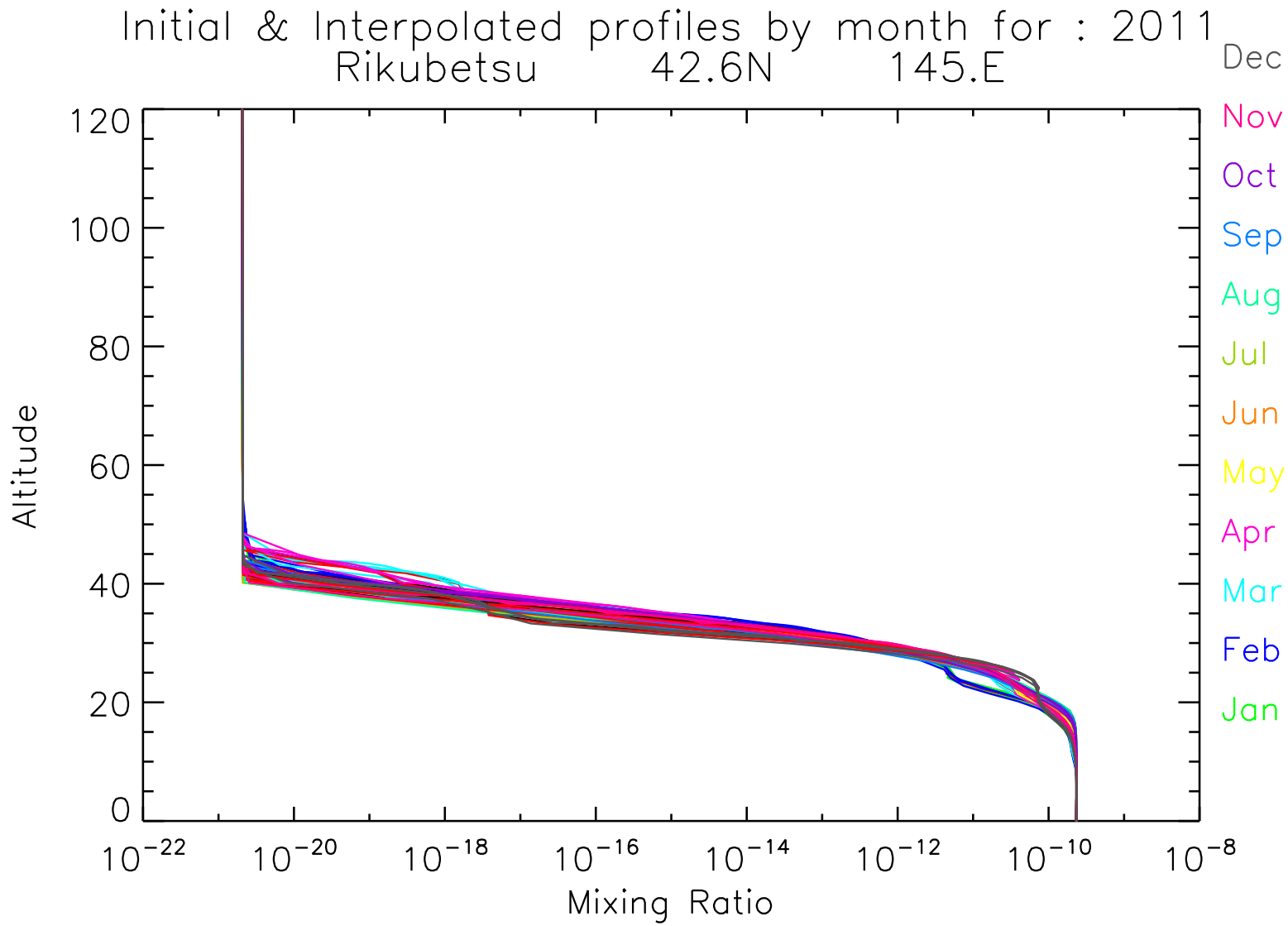
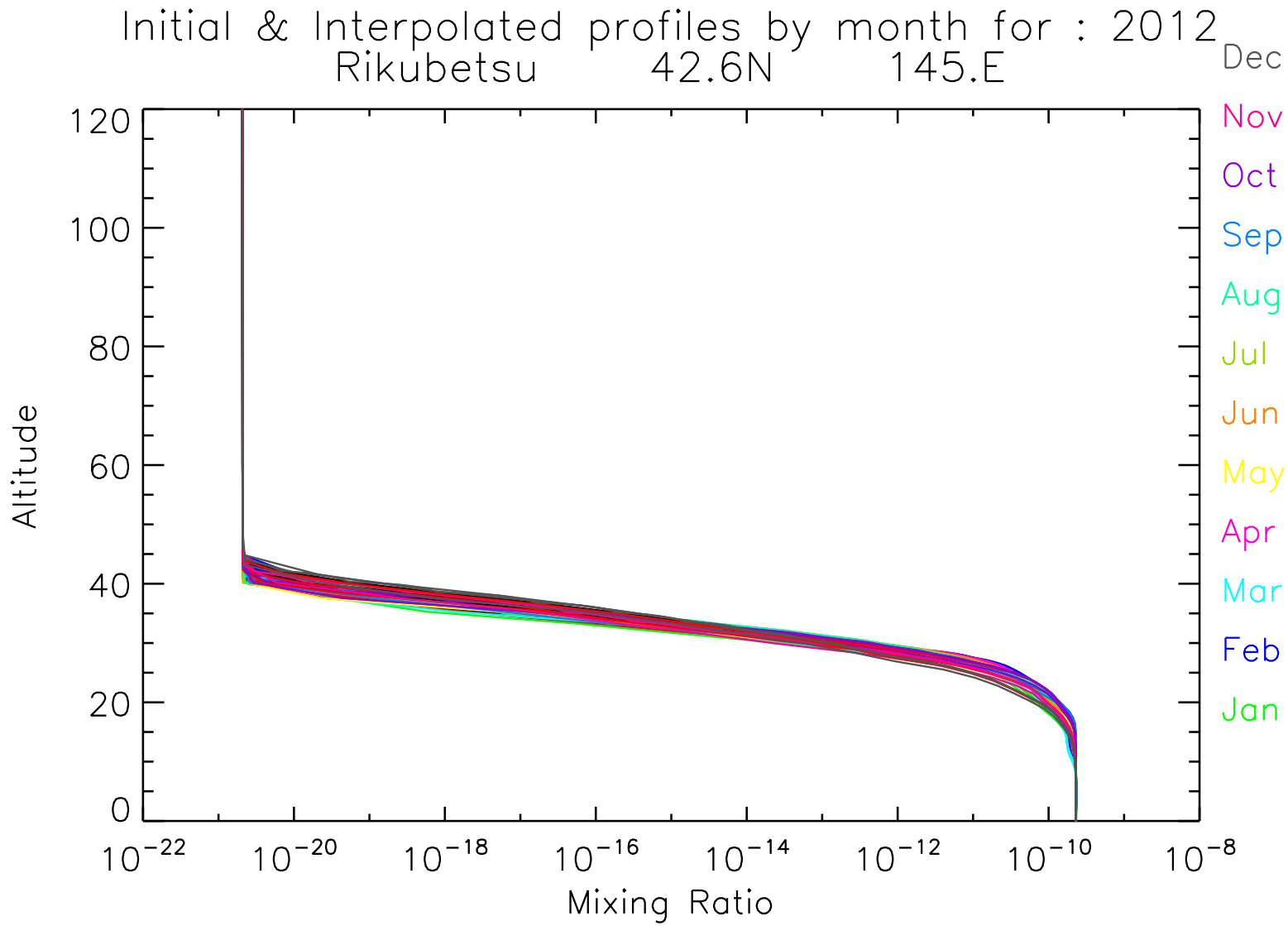
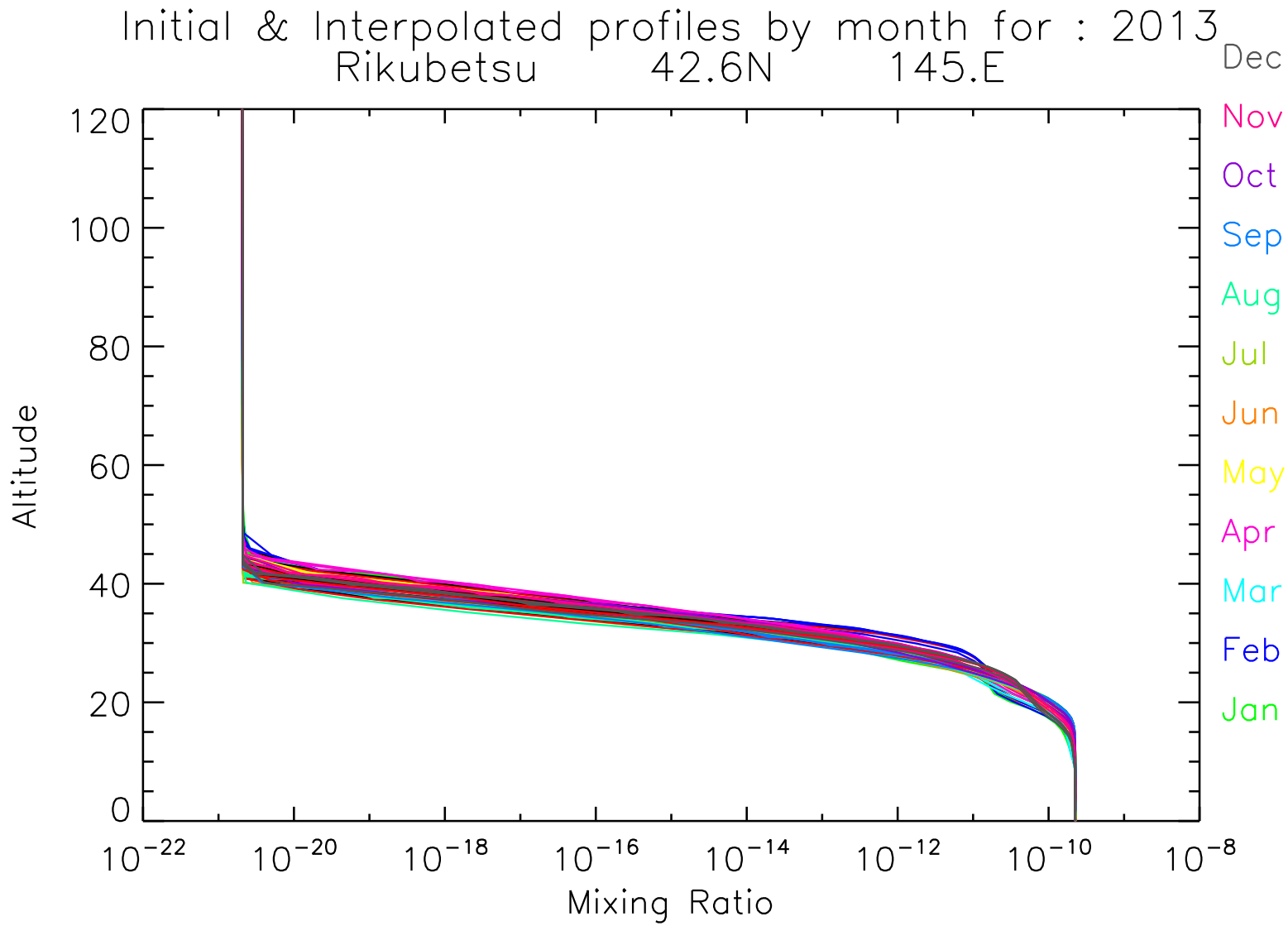
$10^{-8}$
Mixing Ratio

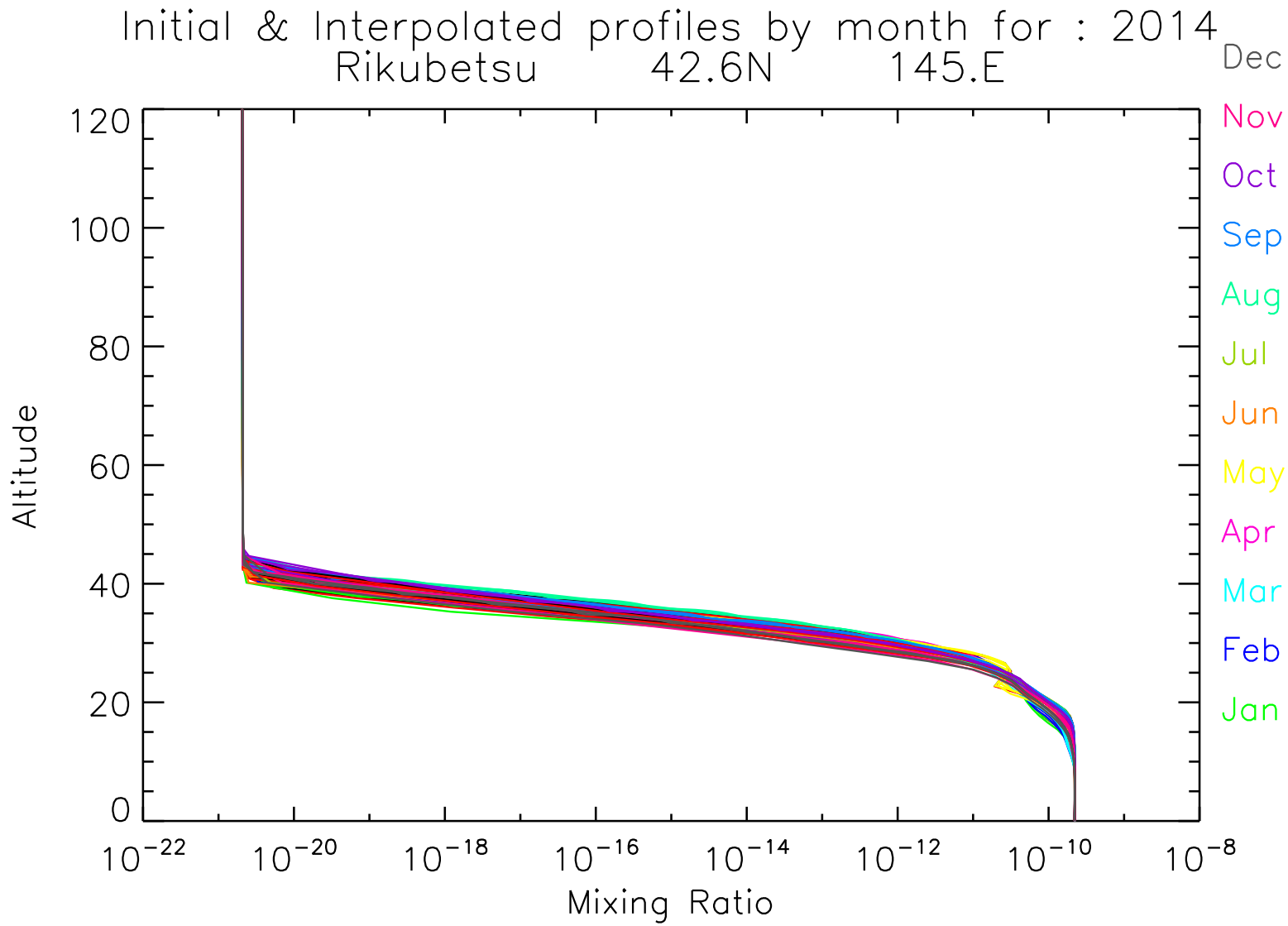

Initial & Interpolated profiles by month for : 2009
Rikubetsu 42.6N 145.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
$10^{-22}$
$10^{-20}$
$10^{-18}$
$10^{-16}$
$10^{-14}$
$10^{-12}$
$10^{-10}$
$10^{-8}$
Mixing Ratio

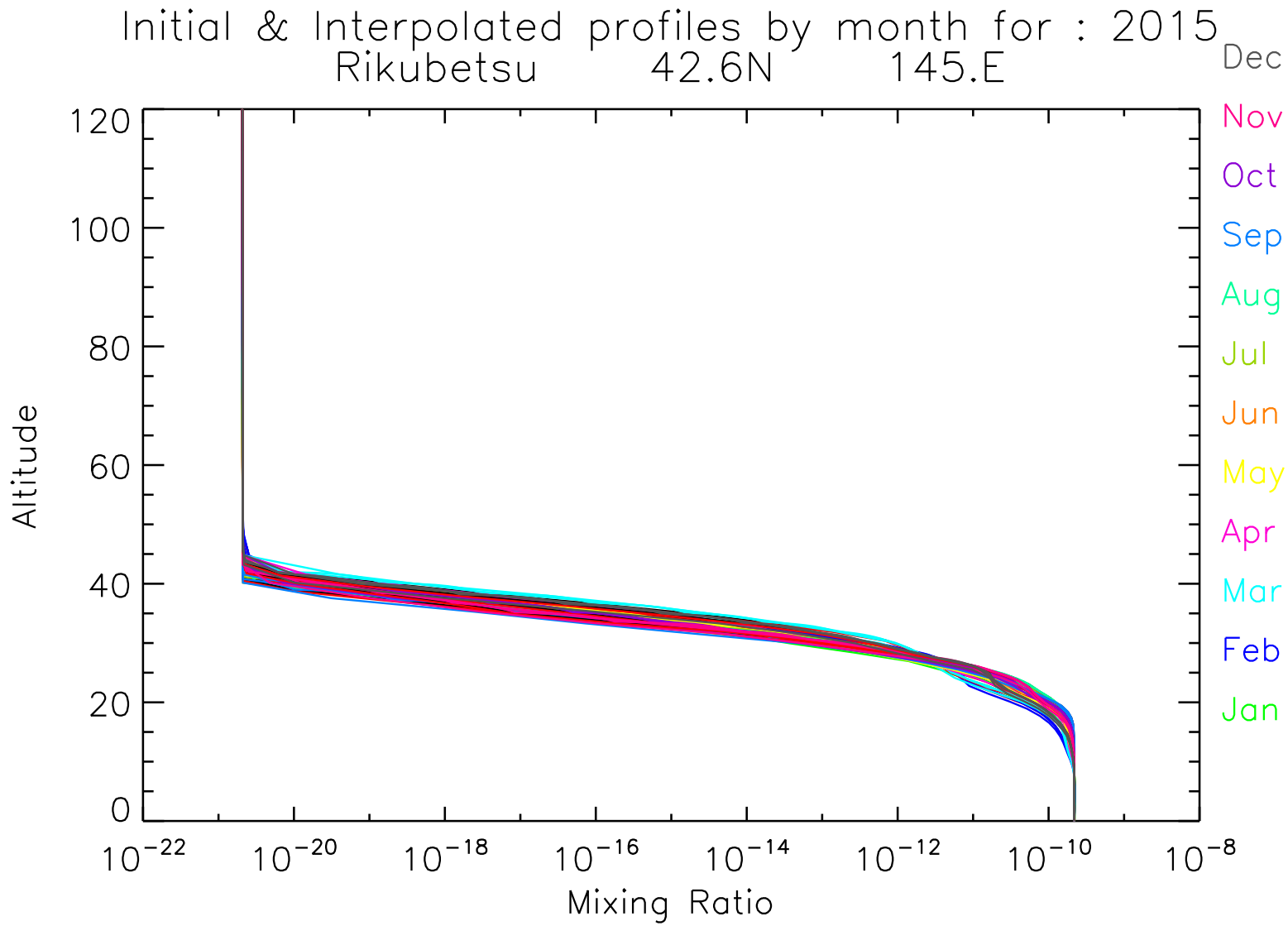

Initial & Interpolated profiles by month for : 2010
Rikubetsu 42.6N 145.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
$10^{-22}$
$10^{-20}$
$10^{-18}$
$10^{-16}$
$10^{-14}$
$10^{-12}$
$10^{-10}$
$10^{-8}$
Mixing Ratio

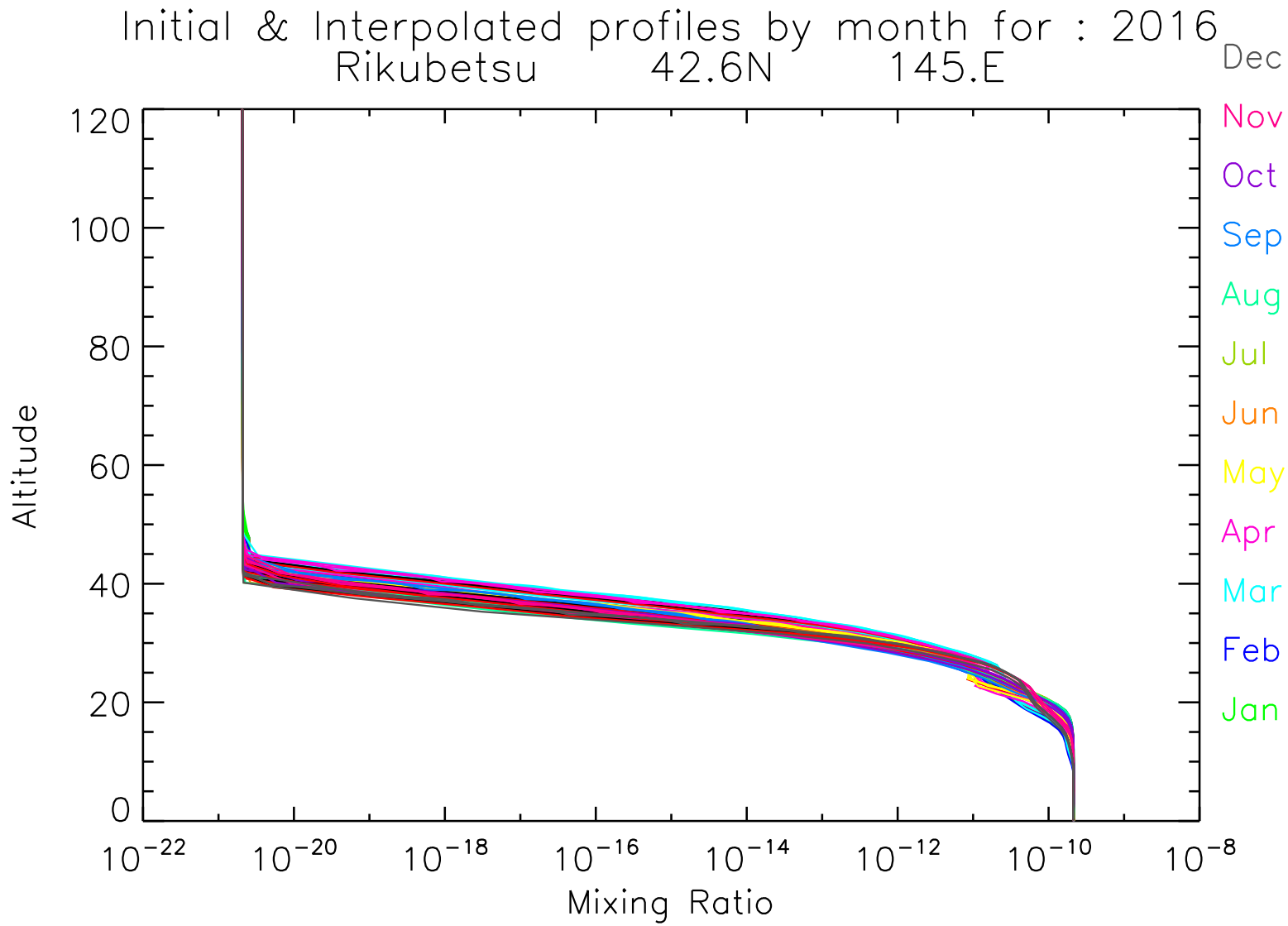

Initial & Interpolated profiles by month for : 2011
Rikubetsu 42.6N 145.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
$10^{-22}$
$10^{-20}$
$10^{-18}$
$10^{-16}$
$10^{-14}$
$10^{-12}$
$10^{-10}$
$10^{-8}$
Mixing Ratio

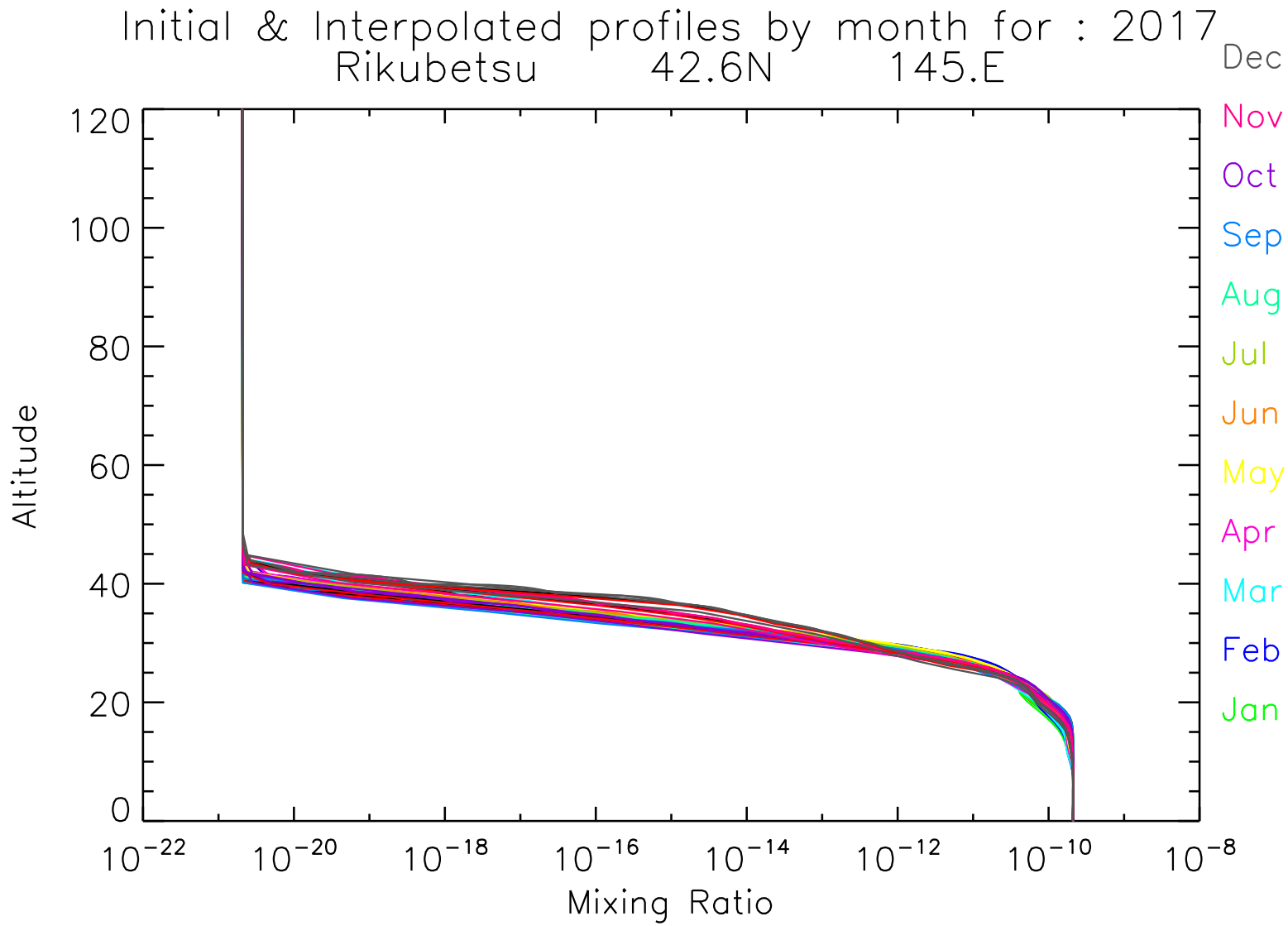

Initial & Interpolated profiles by month for : 2012
Rikubetsu 42.6N 145.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
$10^{-22}$
$10^{-20}$
$10^{-18}$
$10^{-16}$
$10^{-14}$
$10^{-12}$
$10^{-10}$
$10^{-8}$
Mixing Ratio

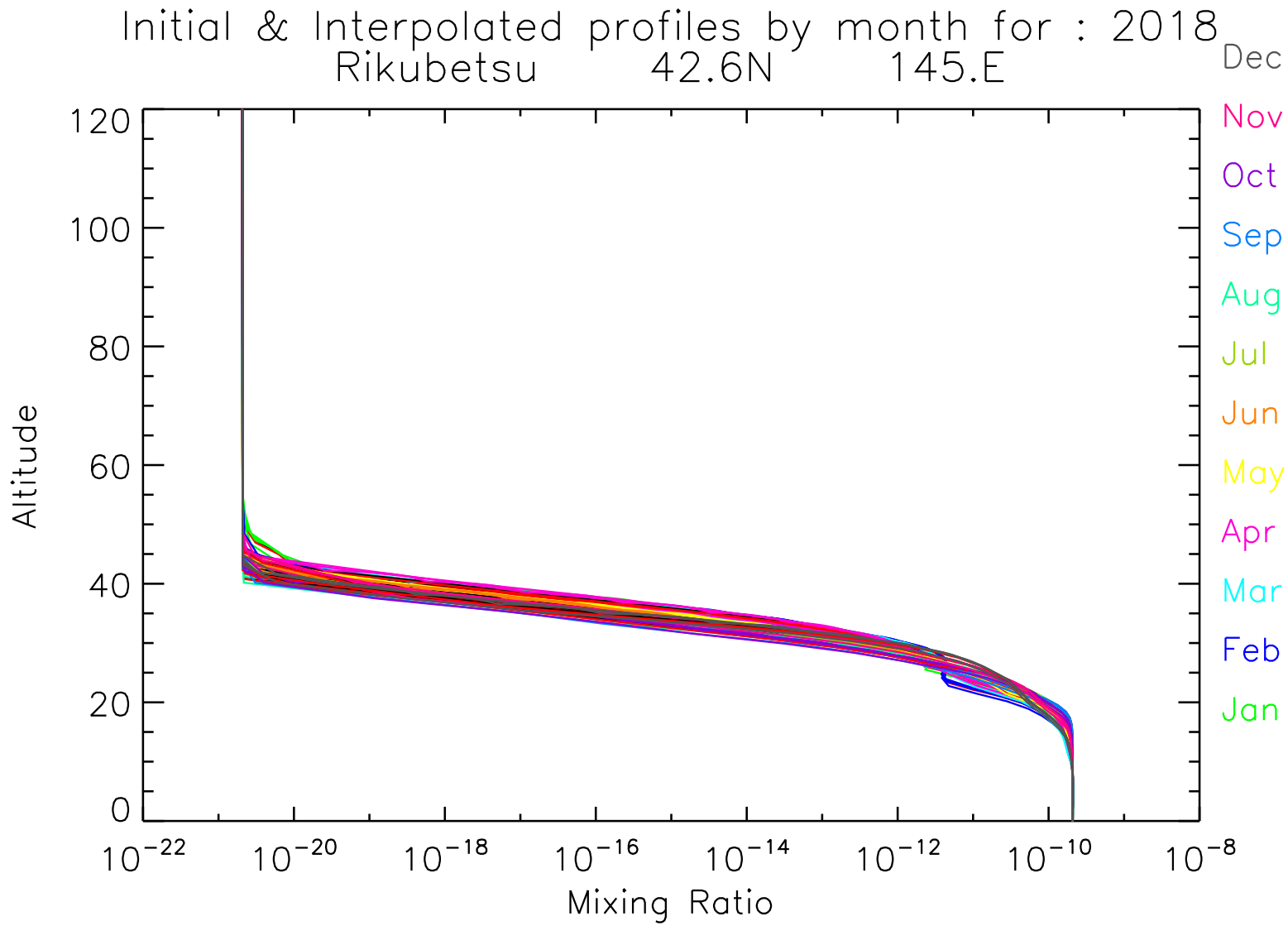

Initial & Interpolated profiles by month for : 2013
Rikubetsu 42.6N 145.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
$10^{-22}$
$10^{-20}$
$10^{-18}$
$10^{-16}$
$10^{-14}$
$10^{-12}$
$10^{-10}$
$10^{-8}$
Mixing Ratio

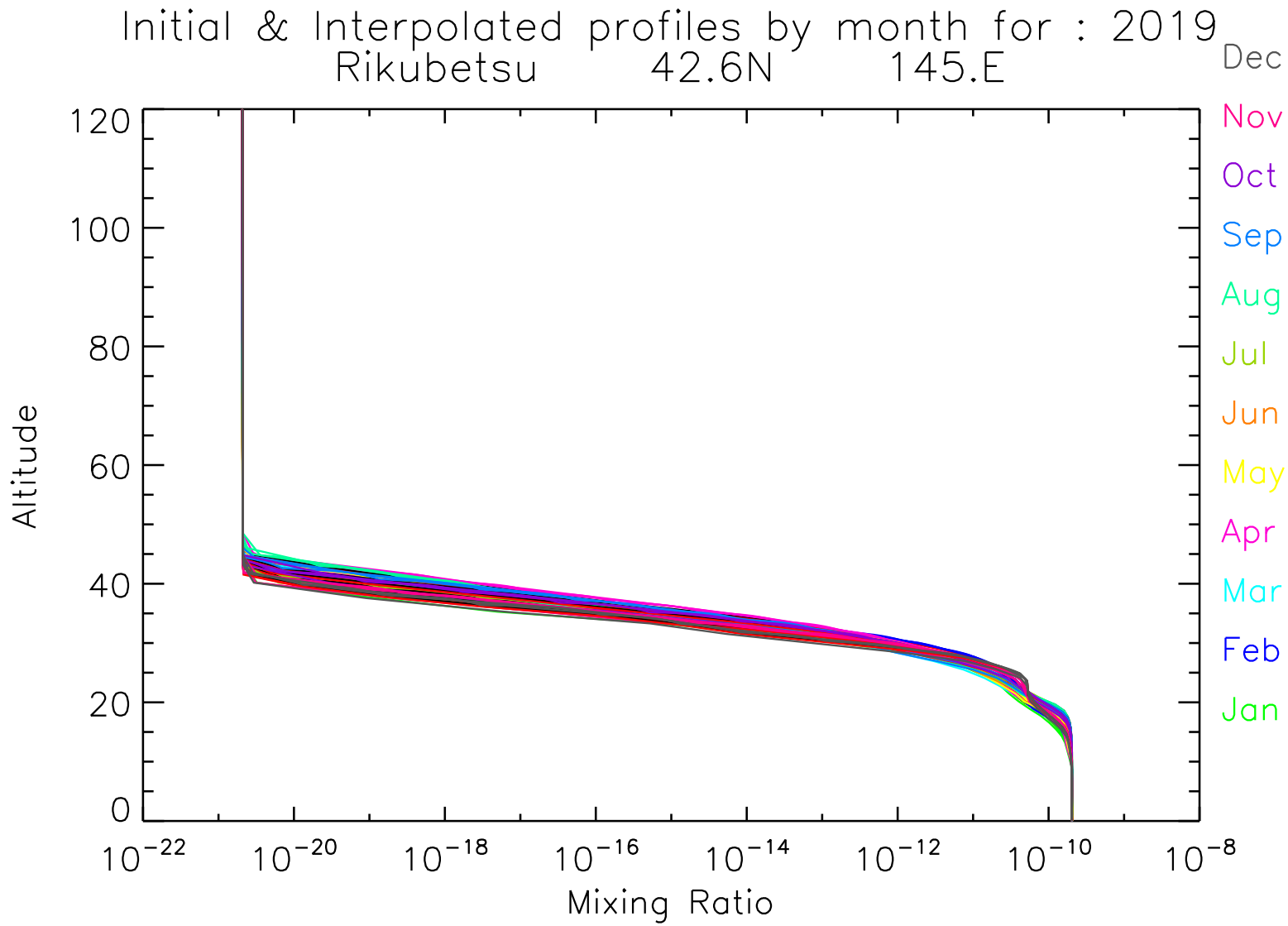

Initial & Interpolated profiles by month for : 2014
Rikubetsu 42.6N 145.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
$10^{-22}$
$10^{-20}$
$10^{-18}$
$10^{-16}$
$10^{-14}$
$10^{-12}$
$10^{-10}$
$10^{-8}$
Mixing Ratio

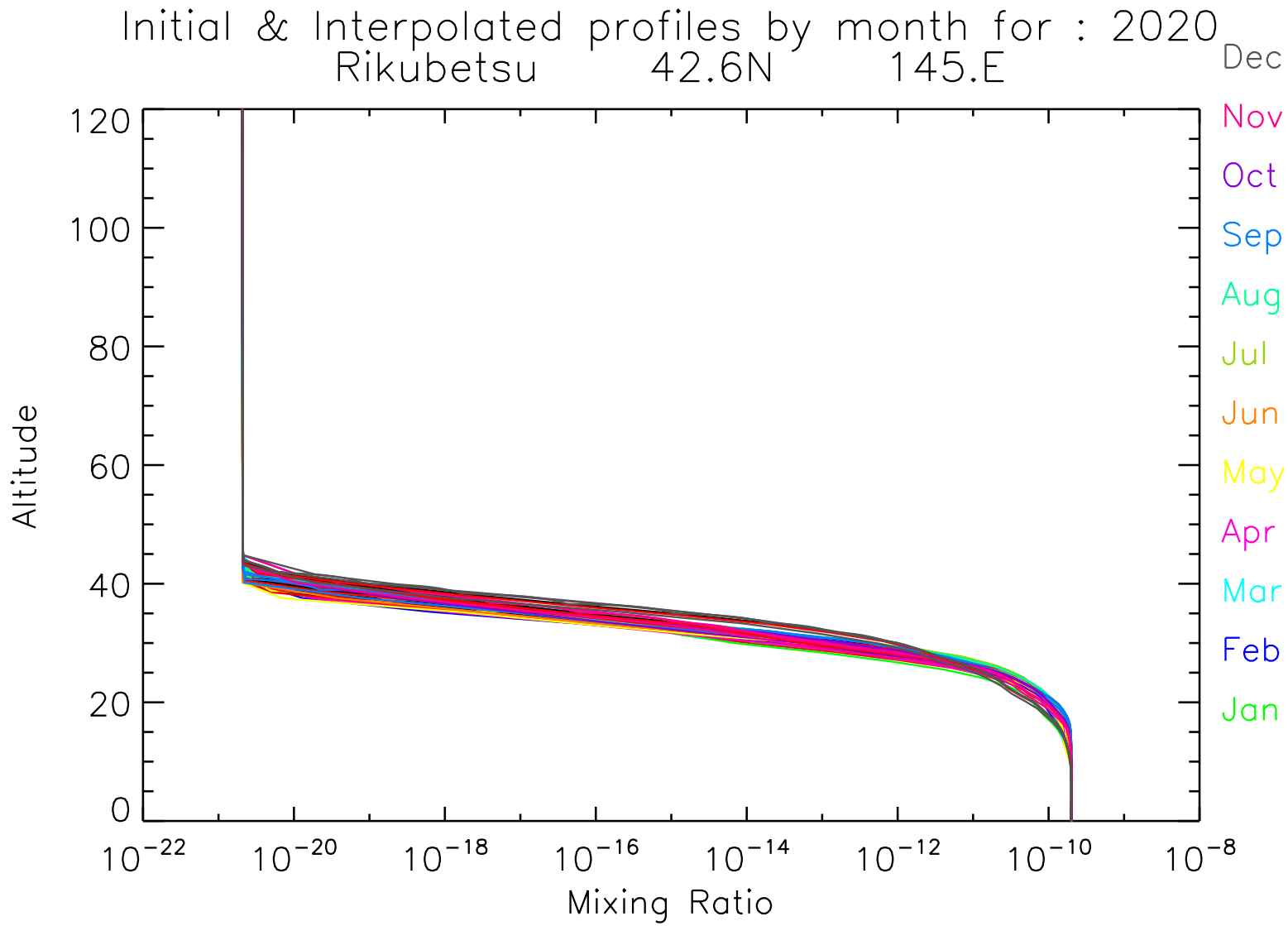

Initial & Interpolated profiles by month for : 2015
Rikubetsu 42.6N 145.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
$10^{-22}$
$10^{-20}$
$10^{-18}$
$10^{-16}$
$10^{-14}$
$10^{-12}$
$10^{-10}$
$10^{-8}$
Mixing Ratio

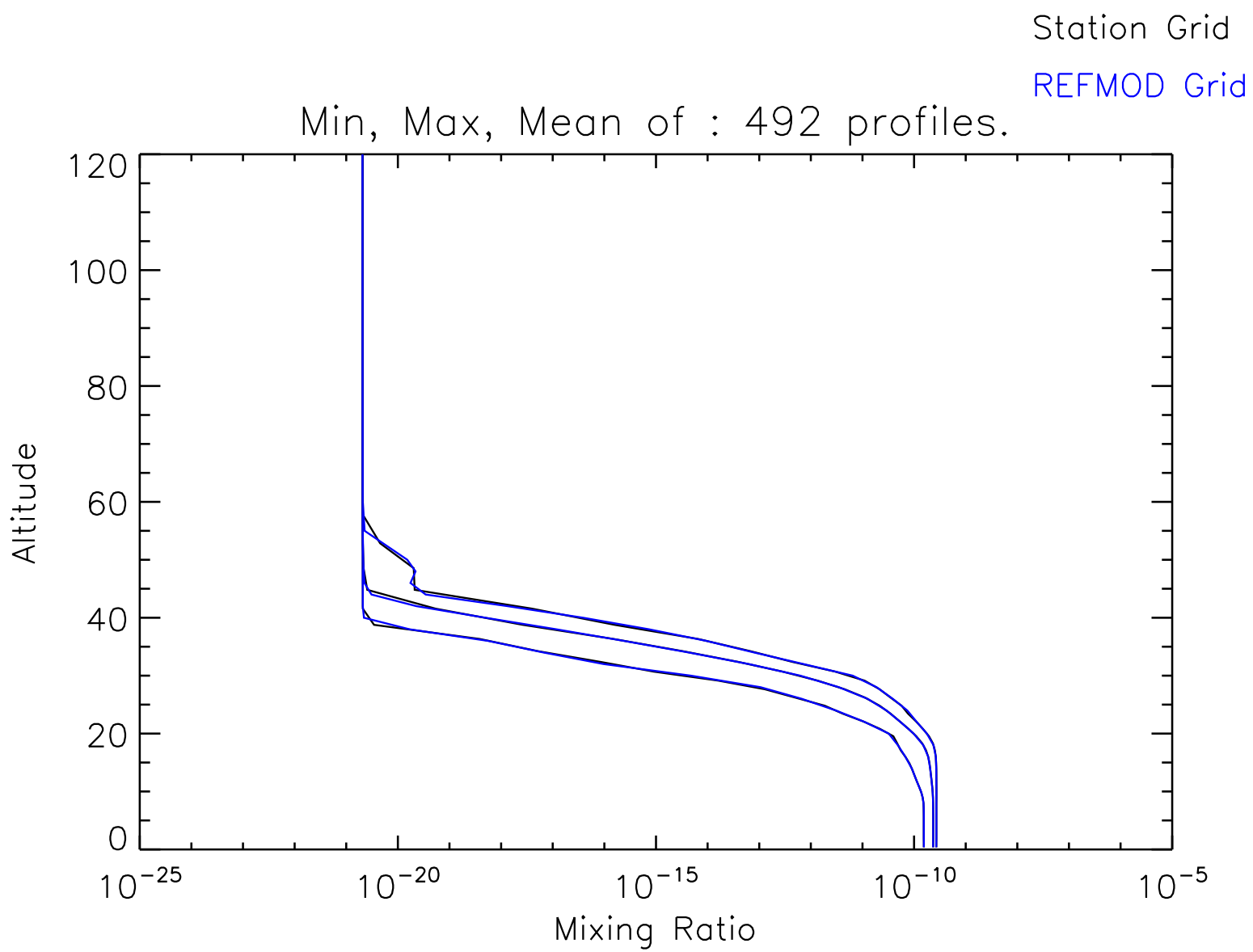

Initial & Interpolated profiles by month for : 2016
Rikubetsu 42.6N 145.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
$10^{-22}$
$10^{-20}$
$10^{-18}$
$10^{-16}$
$10^{-14}$
$10^{-12}$
$10^{-10}$
$10^{-8}$
Mixing Ratio

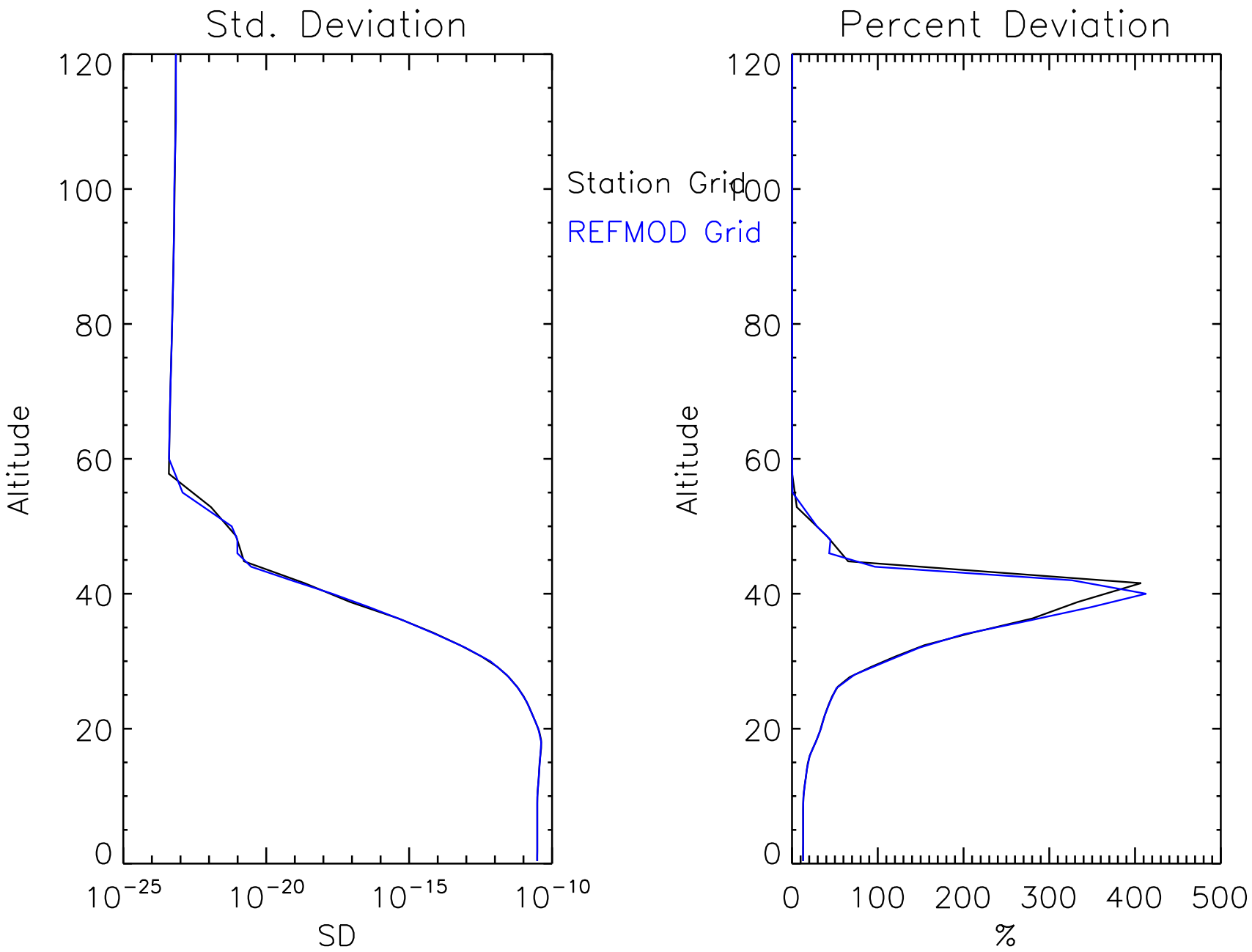

Initial & Interpolated profiles by month for : 2017
Rikubetsu 42.6N 145.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
$10^{-22}$
$10^{-20}$
$10^{-18}$
$10^{-16}$
$10^{-14}$
$10^{-12}$
$10^{-10}$
$10^{-8}$
Mixing Ratio

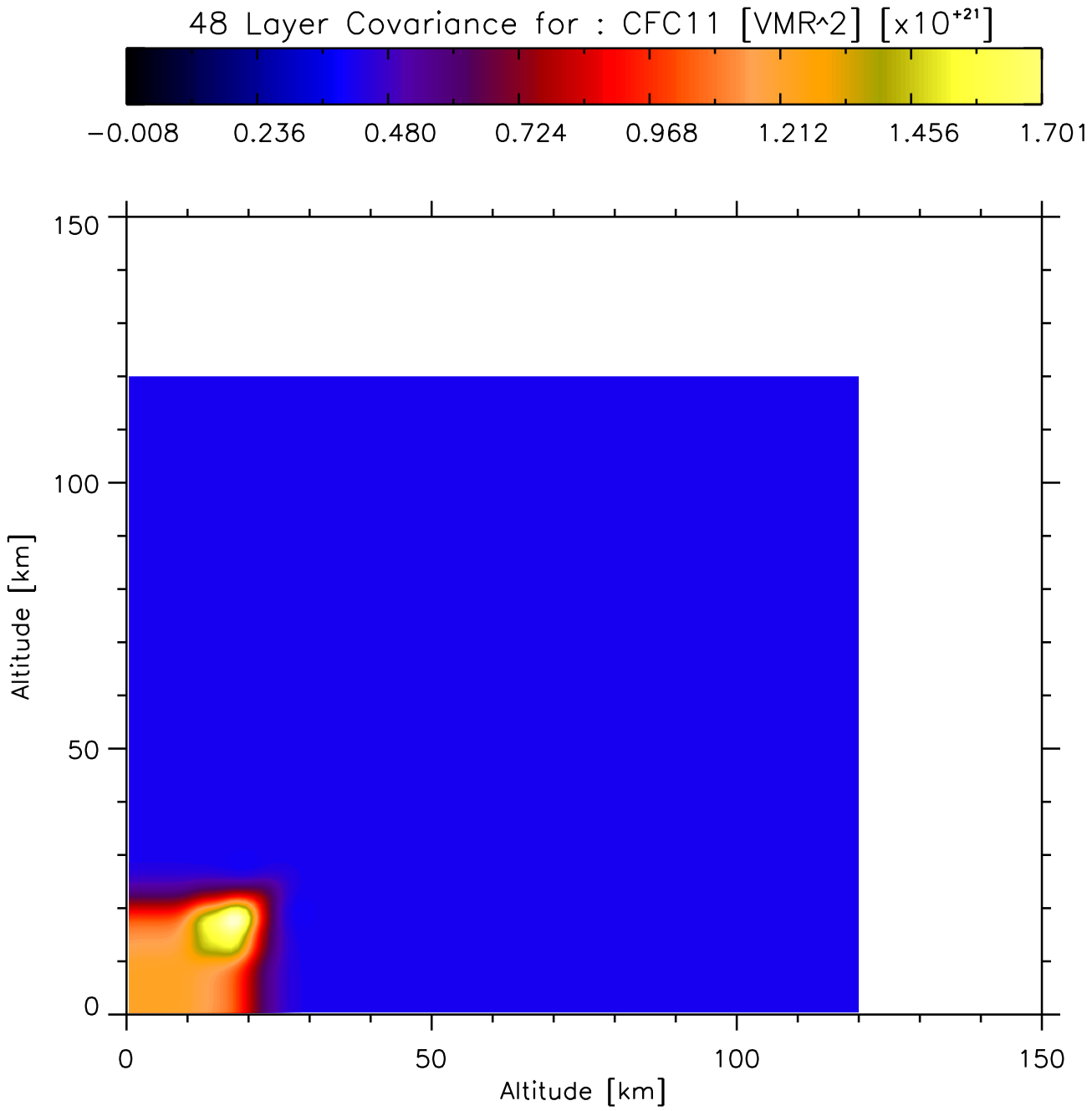

Initial & Interpolated profiles by month for : 2018
Rikubetsu 42.6N 145.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
$10^{-22}$
$10^{-20}$
$10^{-18}$
$10^{-16}$
$10^{-14}$
$10^{-12}$
$10^{-10}$
$10^{-8}$
Mixing Ratio


Initial & Interpolated profiles by month for : 2019
Rikubetsu 42.6N 145.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
$10^{-22}$
$10^{-20}$
$10^{-18}$
$10^{-16}$
$10^{-14}$
$10^{-12}$
$10^{-10}$
$10^{-8}$
Mixing Ratio

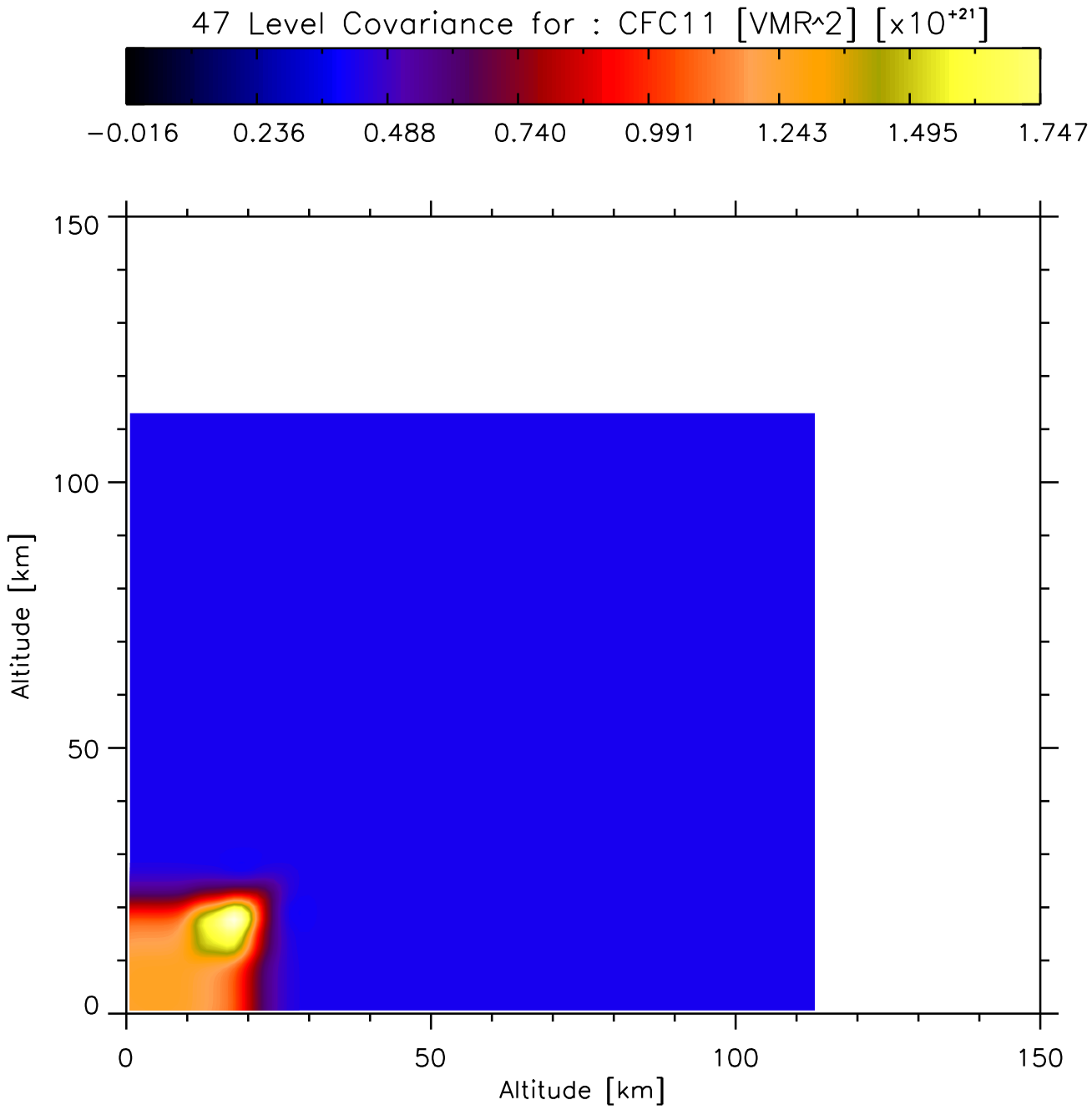

Initial & Interpolated profiles by month for : 2020
Rikubetsu 42.6N 145.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
$10^{-22}$
$10^{-20}$
$10^{-18}$
$10^{-16}$
$10^{-14}$
$10^{-12}$
$10^{-10}$
$10^{-8}$
Mixing Ratio

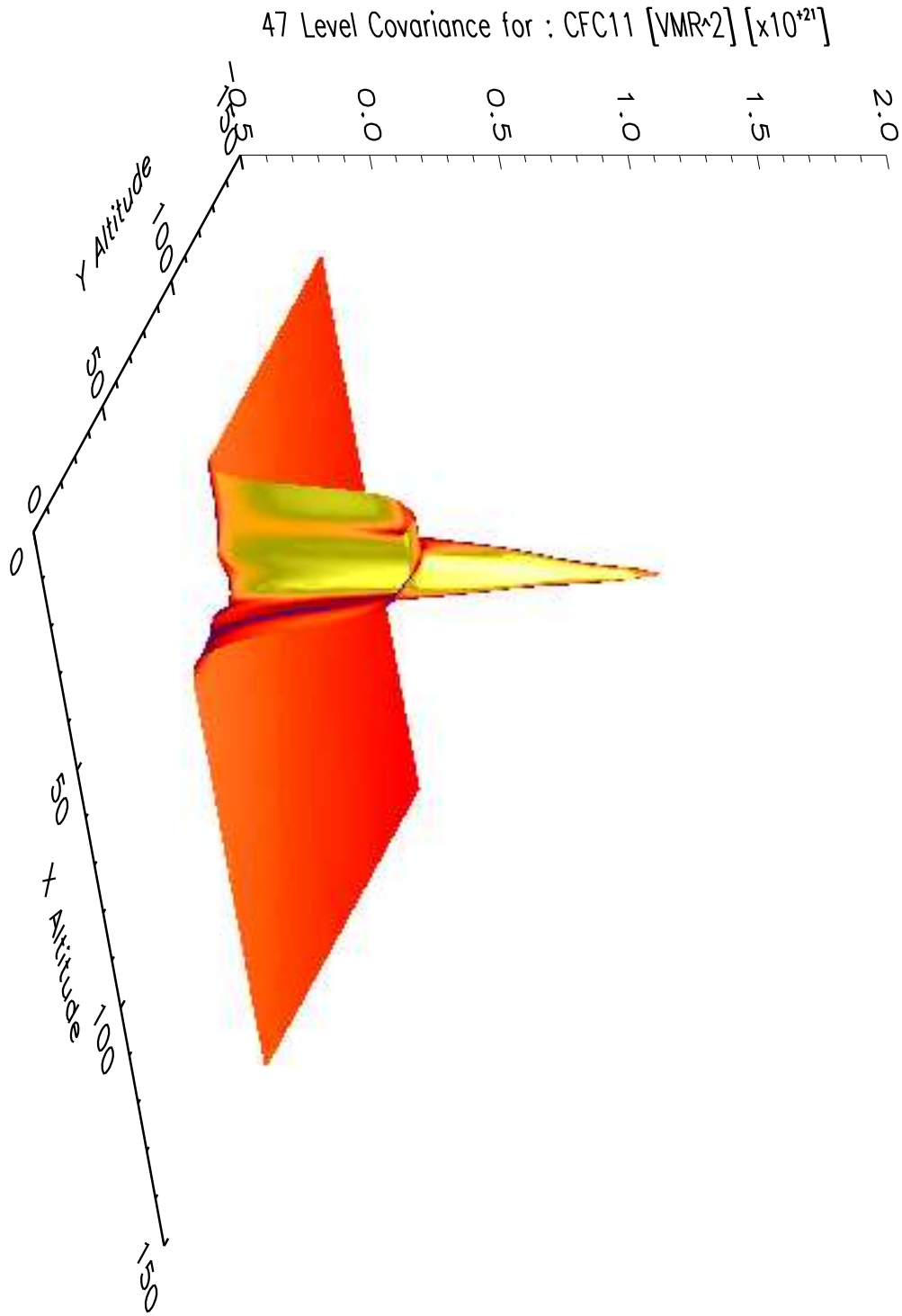

Station Grid
REFMOD Grid
Min, Max, Mean of : 492 profiles.
120
100
80
60
40
20
0
Altitude
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
$10^{-5}$
Mixing Ratio


Std. Deviation
Percent Deviation
Station Grid
REFMOD Grid
Altitude
Altitude
120
100
80
60
40
20
0
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
SD
0
100
200
300
400
500
%


48 Layer Covariance for : CFC11 [VMR^2] [x10^+21]
−0.008
0.236
0.480
0.724
0.968
1.212
1.456
1.701
150
100
50
0
Altitude [km]
0
50
100
150
Altitude [km]

48 Layer Covariance for : CFC11 [VMR^2] [x10^21]
0.0
0.5
1.0
1.5
Y Altitude
0
10
20
30
40
X Altitude
0
50
100
150


47 Level Covariance for : CFC11 [VMR^2] [x10^+21]
−0.016
0.236
0.488
0.740
0.991
1.243
1.495
1.747
150
100
50
0
Altitude [km]
0
50
100
150
Altitude [km]


47 Level Covariance for : CFC11 [VMR^2] [x10^+21]
-0.5
0.0
0.5
1.0
1.5
2.0
Y Altitude
150
100
50
0
X Altitude
0
50
100
150