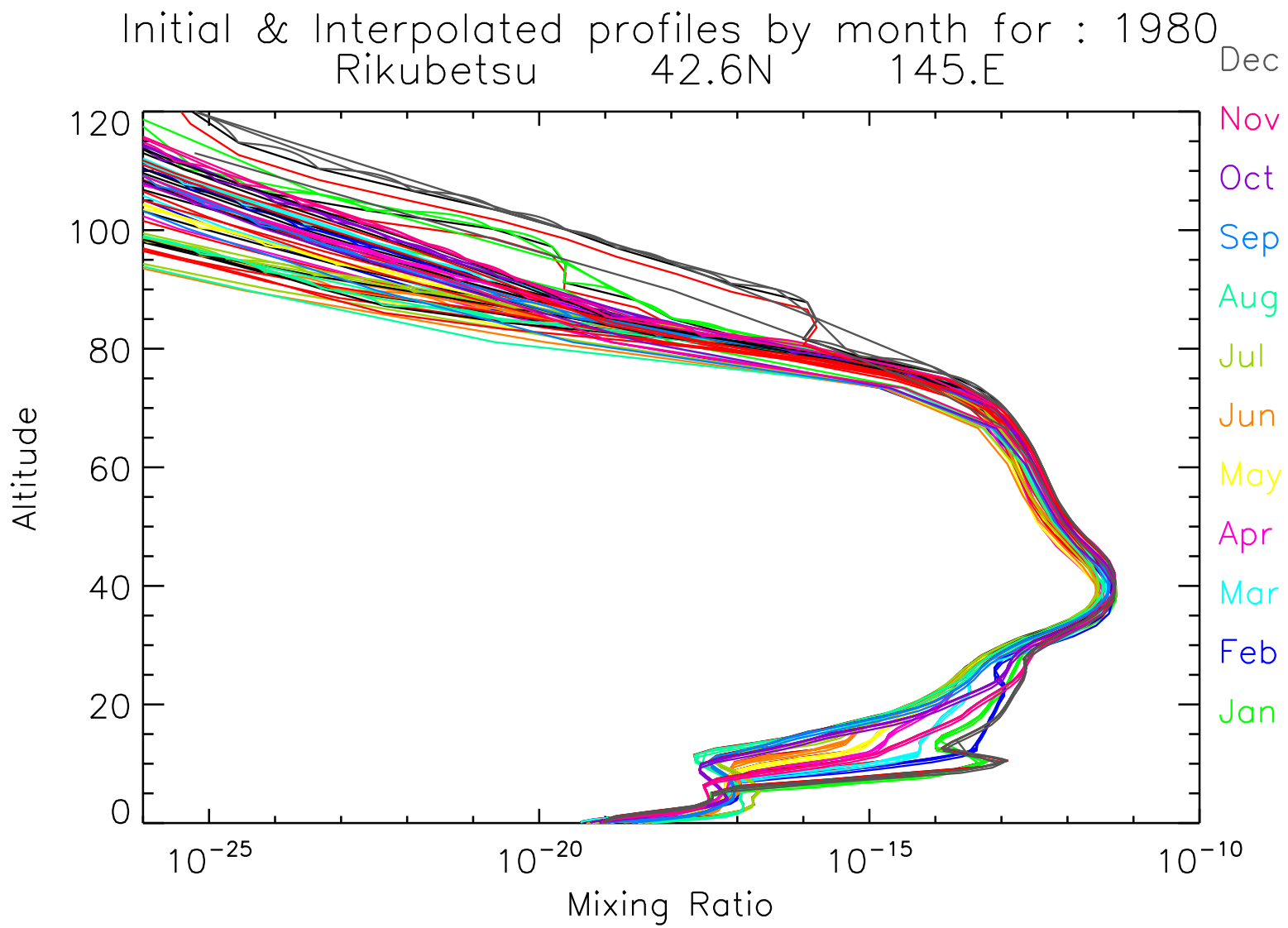
Initial & Interpolated profiles by month for : 1980
Rikubetsu 42.6N 145.E
Dec
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Altitude
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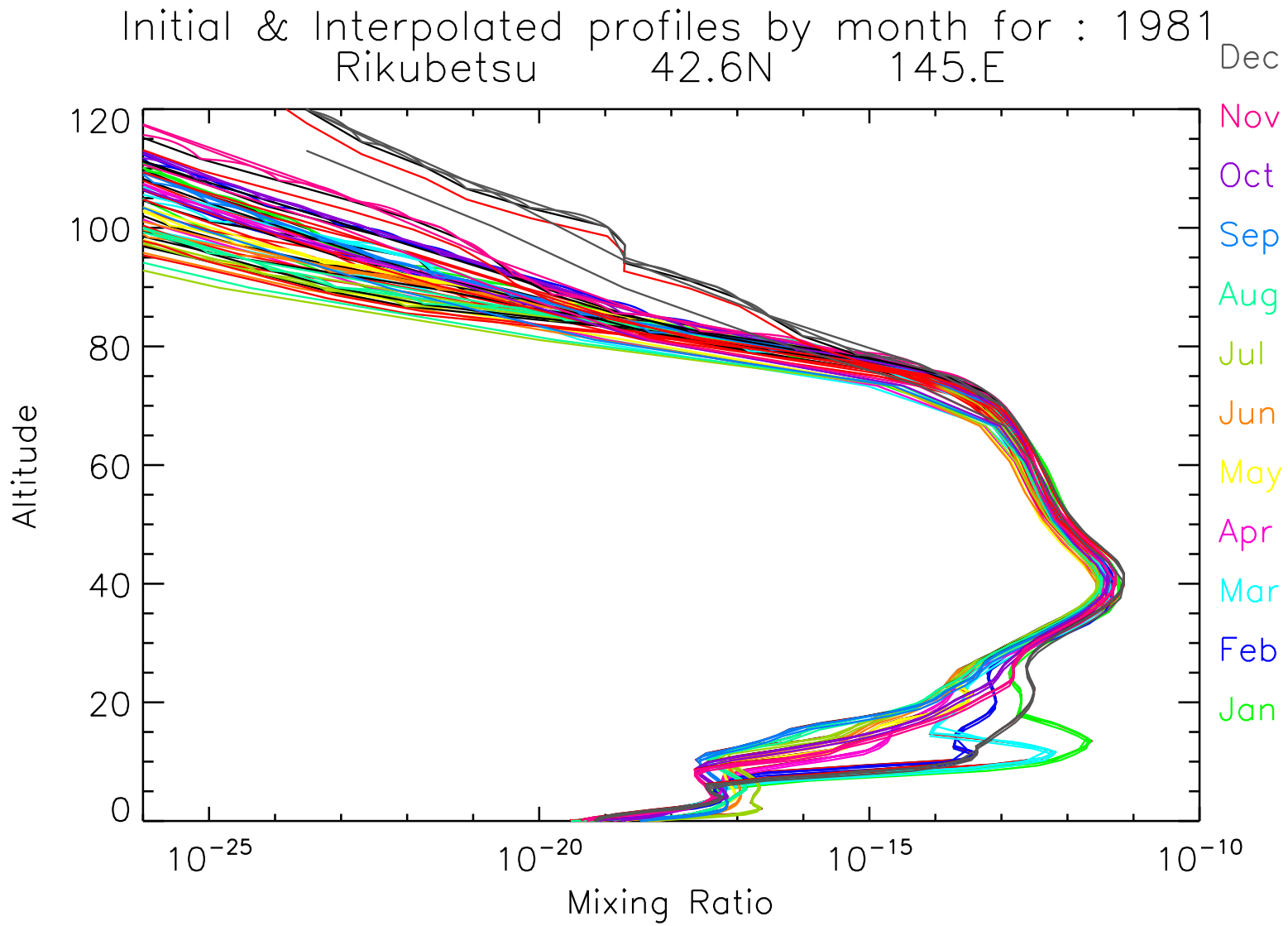
Mixing Ratio


Initial & Interpolated profiles by month for : 1981
Rikubetsu 42.6N 145.E
Dec
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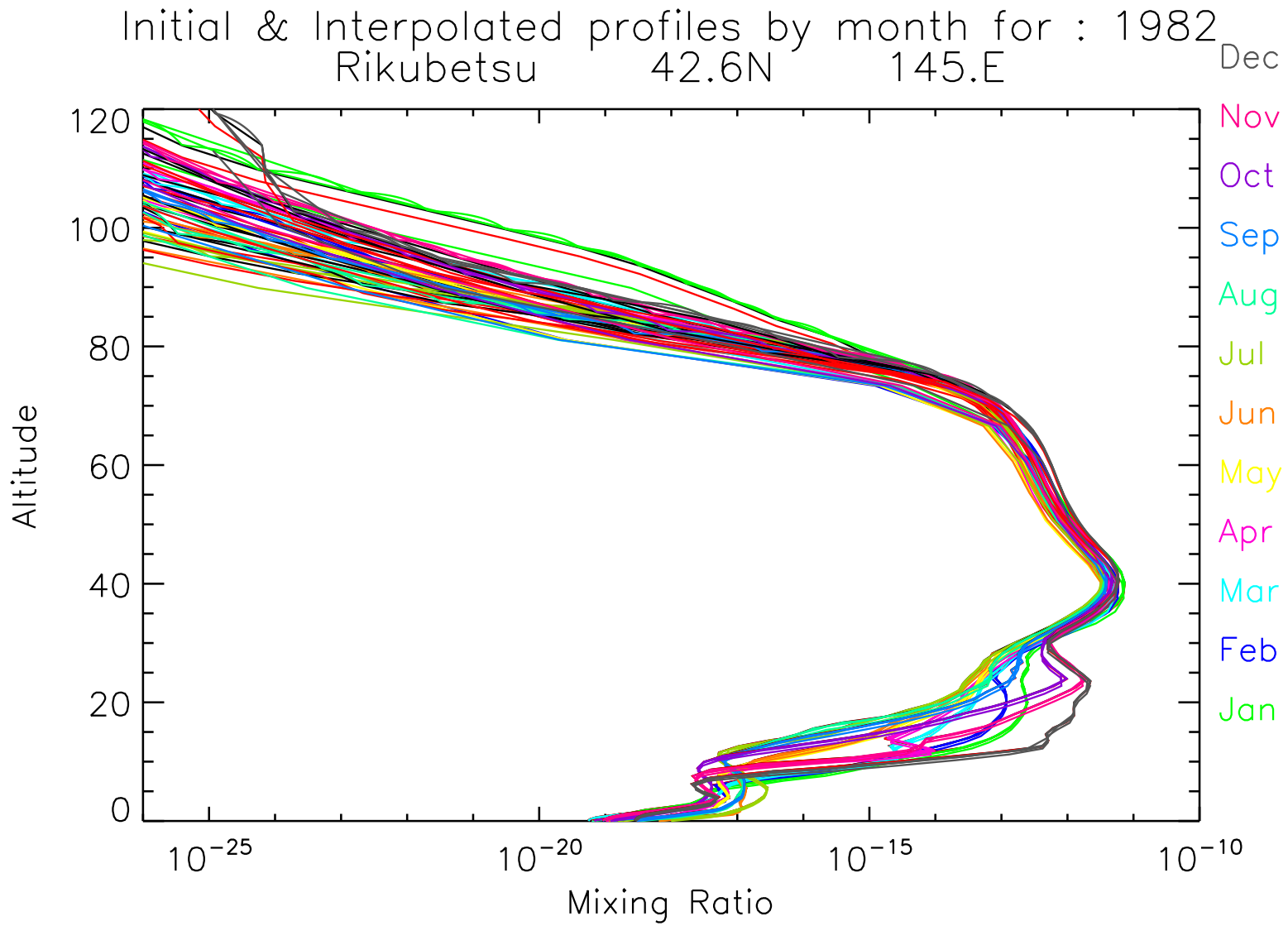
Mixing Ratio


Initial & Interpolated profiles by month for : 1982
Rikubetsu 42.6N 145.E
Dec
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Altitude
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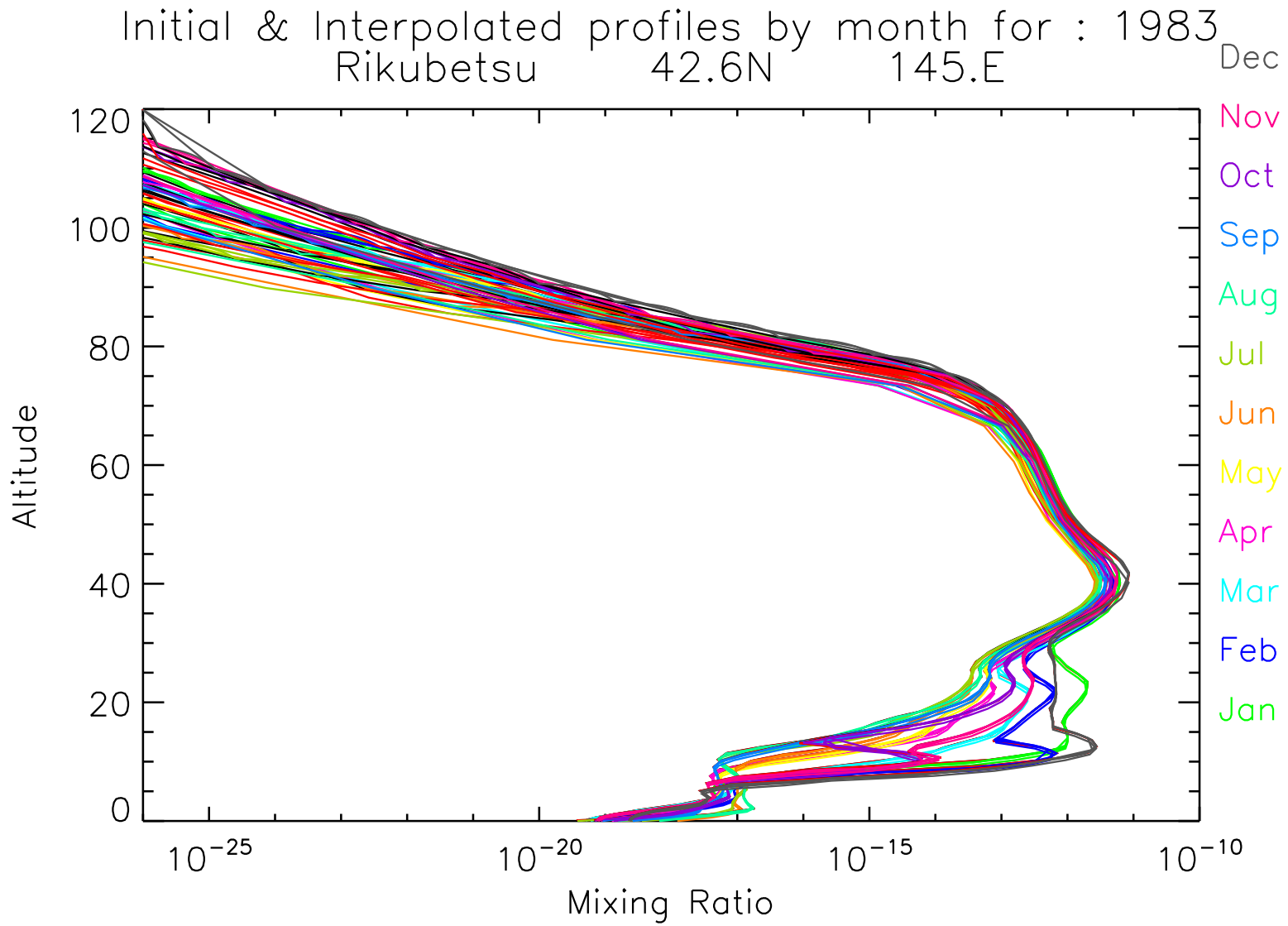
Mixing Ratio


Initial & Interpolated profiles by month for : 1983
Rikubetsu 42.6N 145.E
Dec
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Altitude
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$10^{-20}$
$10^{-15}$
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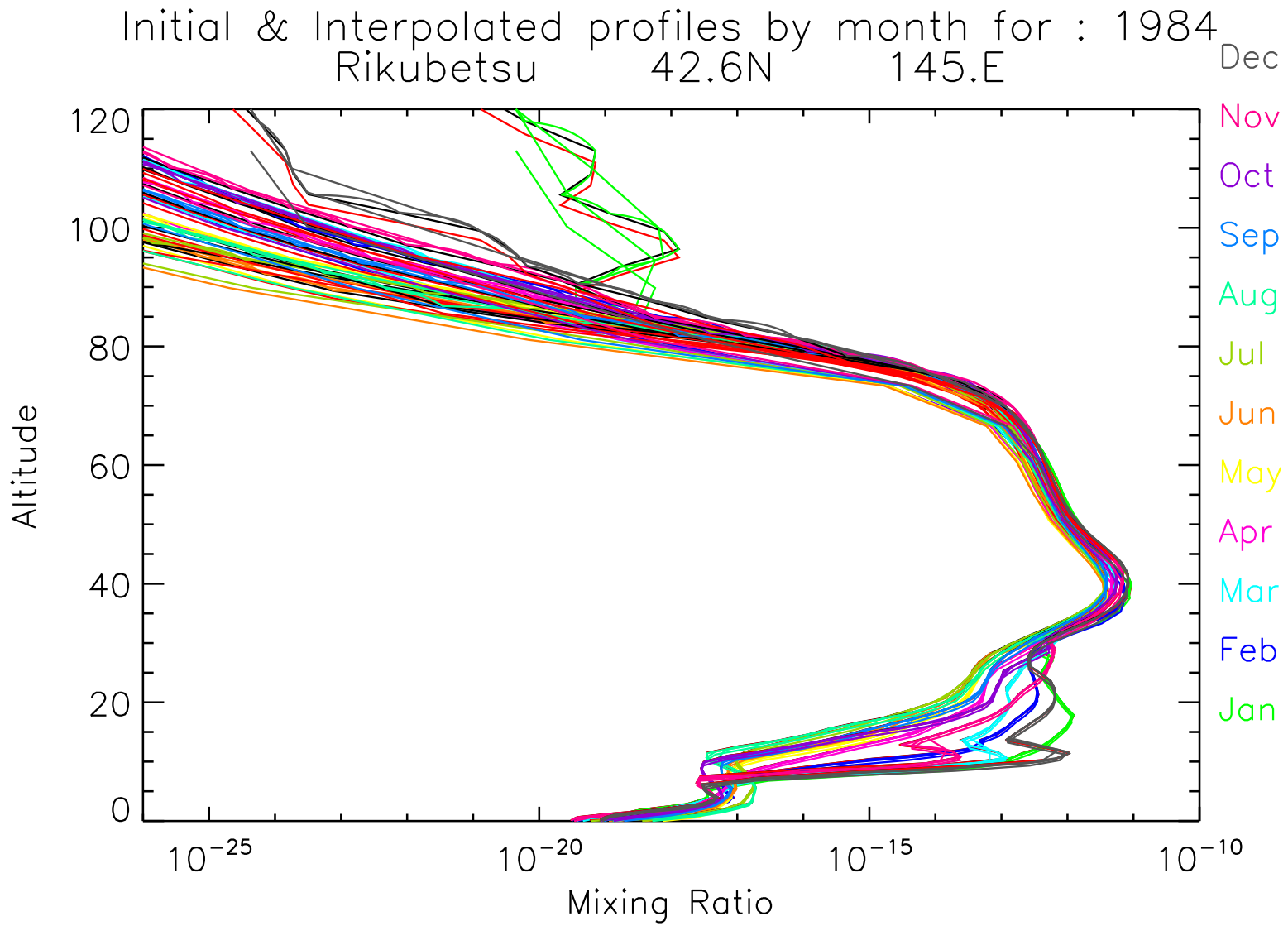
Mixing Ratio


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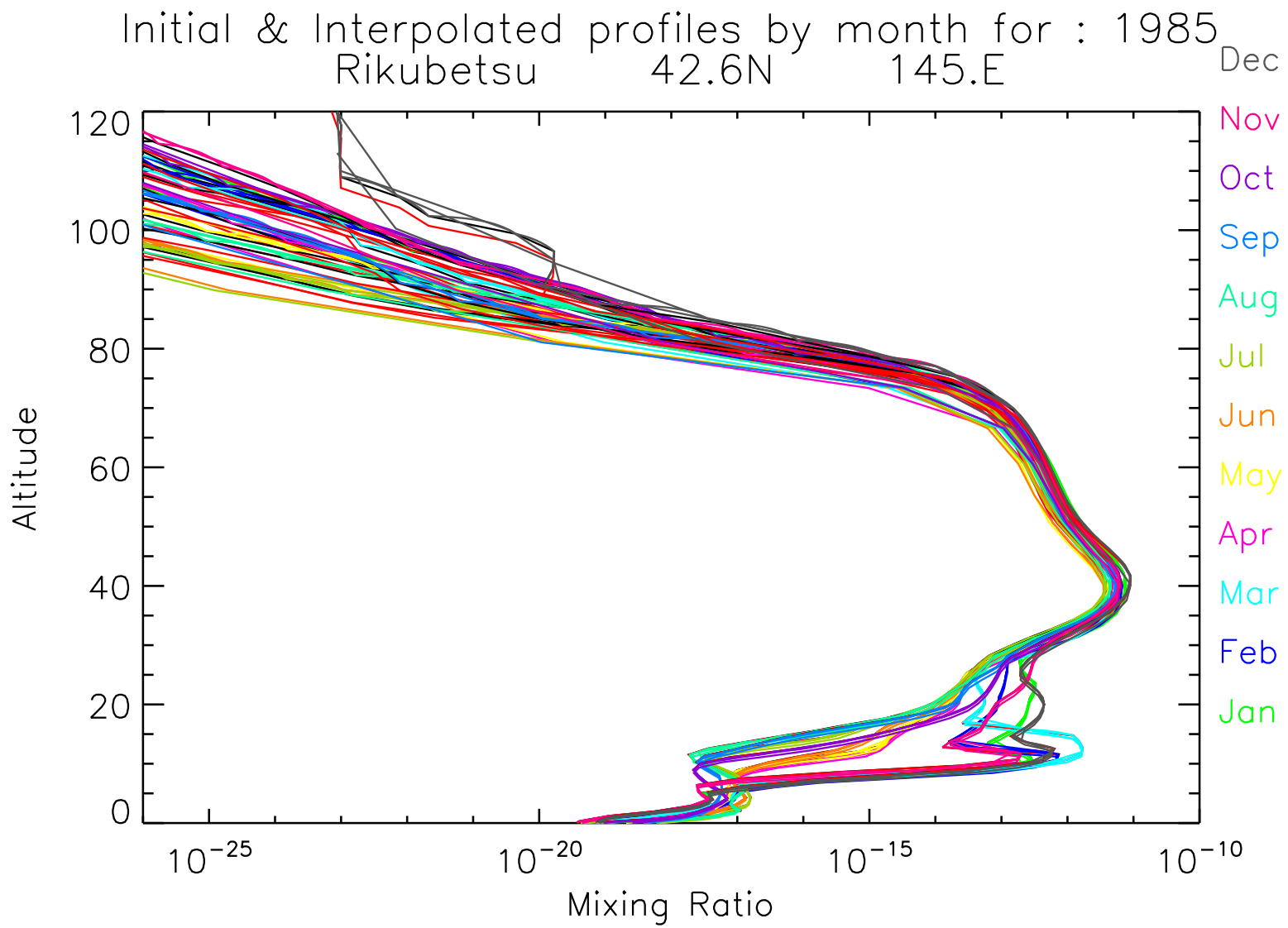
Mixing Ratio


Initial & Interpolated profiles by month for : 1985
Rikubetsu 42.6N 145.E
Dec
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Altitude
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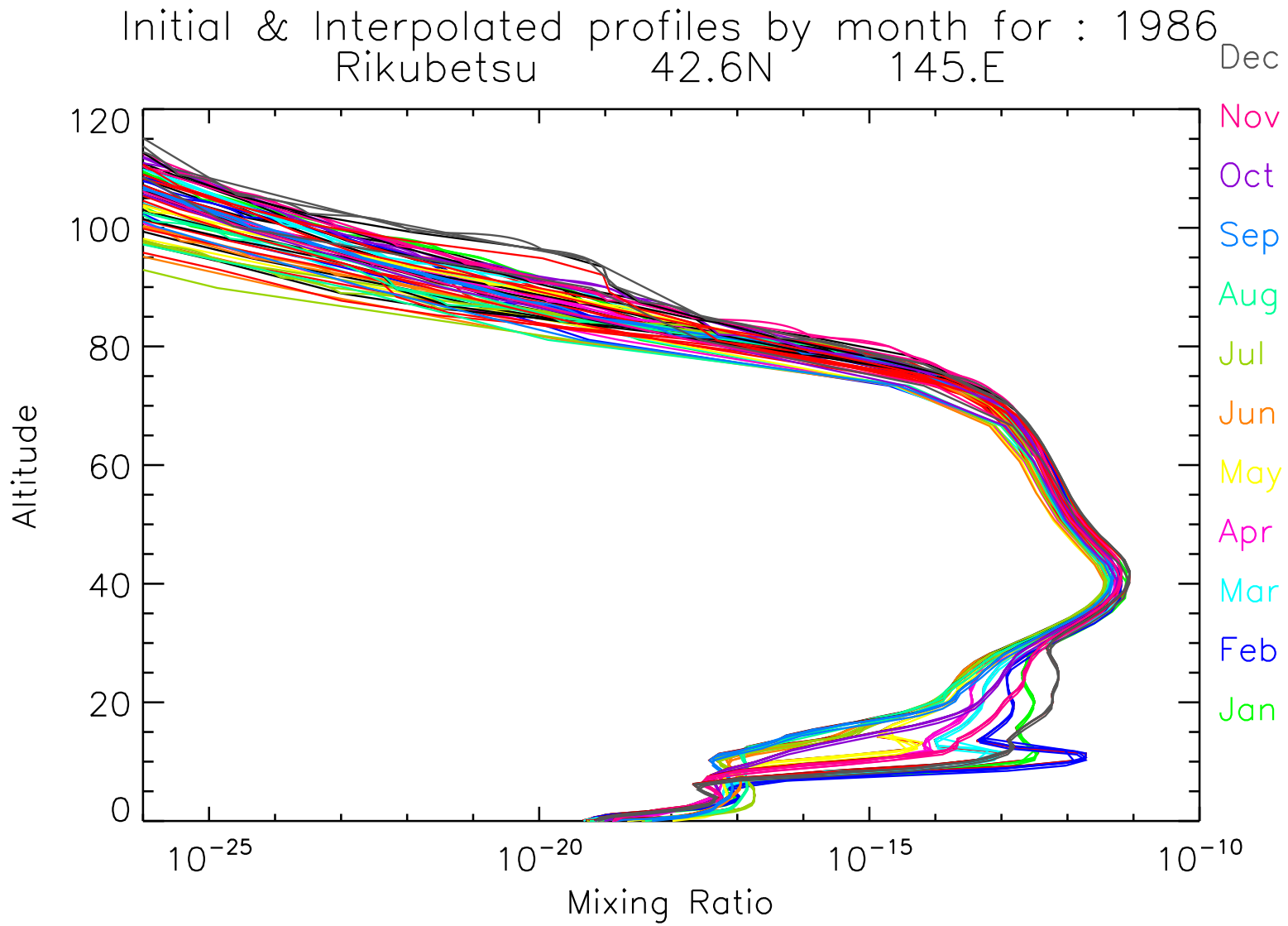
Mixing Ratio


Initial & Interpolated profiles by month for : 1986
Rikubetsu 42.6N 145.E
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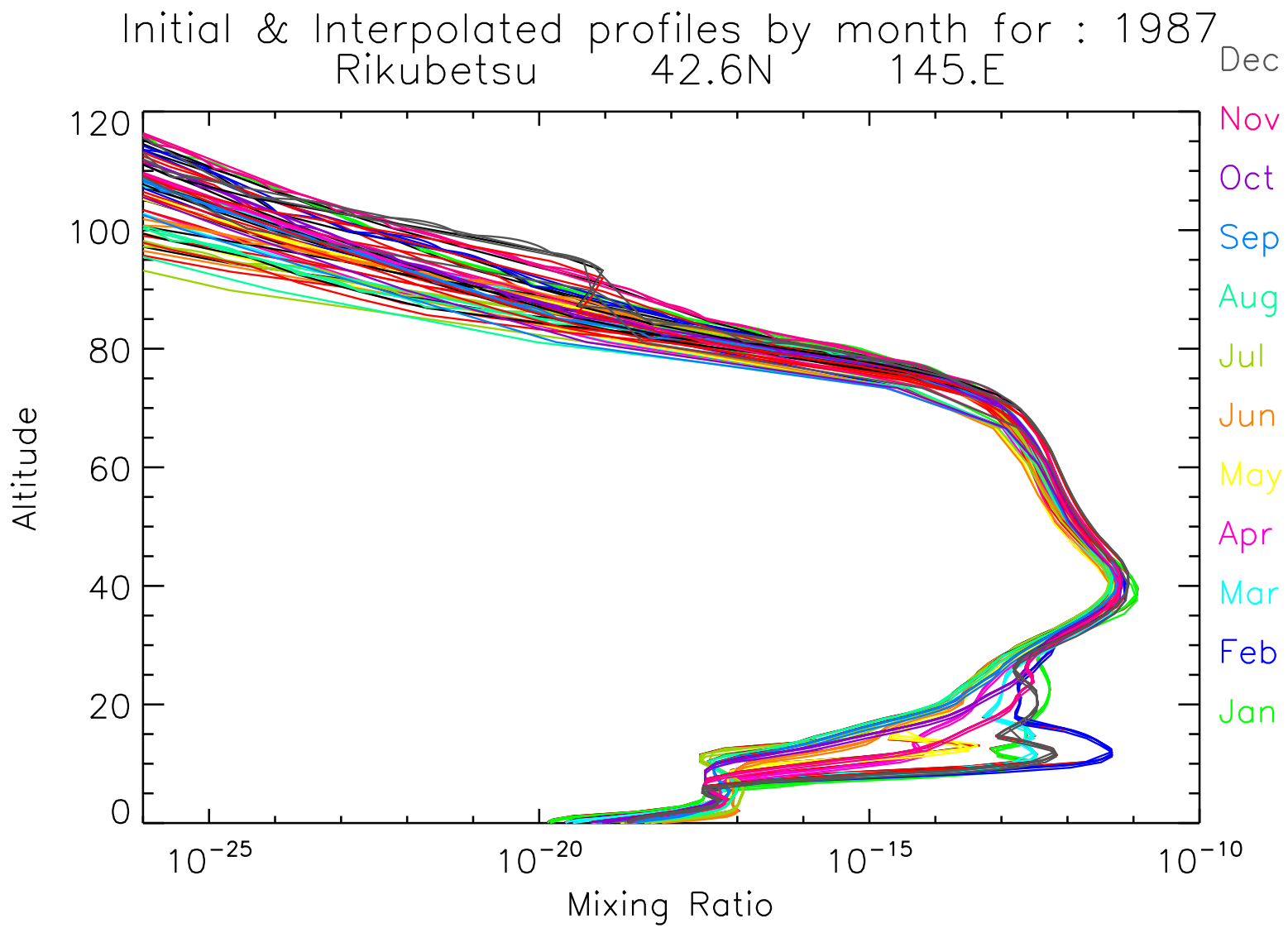
Mixing Ratio


Initial & Interpolated profiles by month for : 1987
Rikubetsu 42.6N 145.E
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$10^{-15}$
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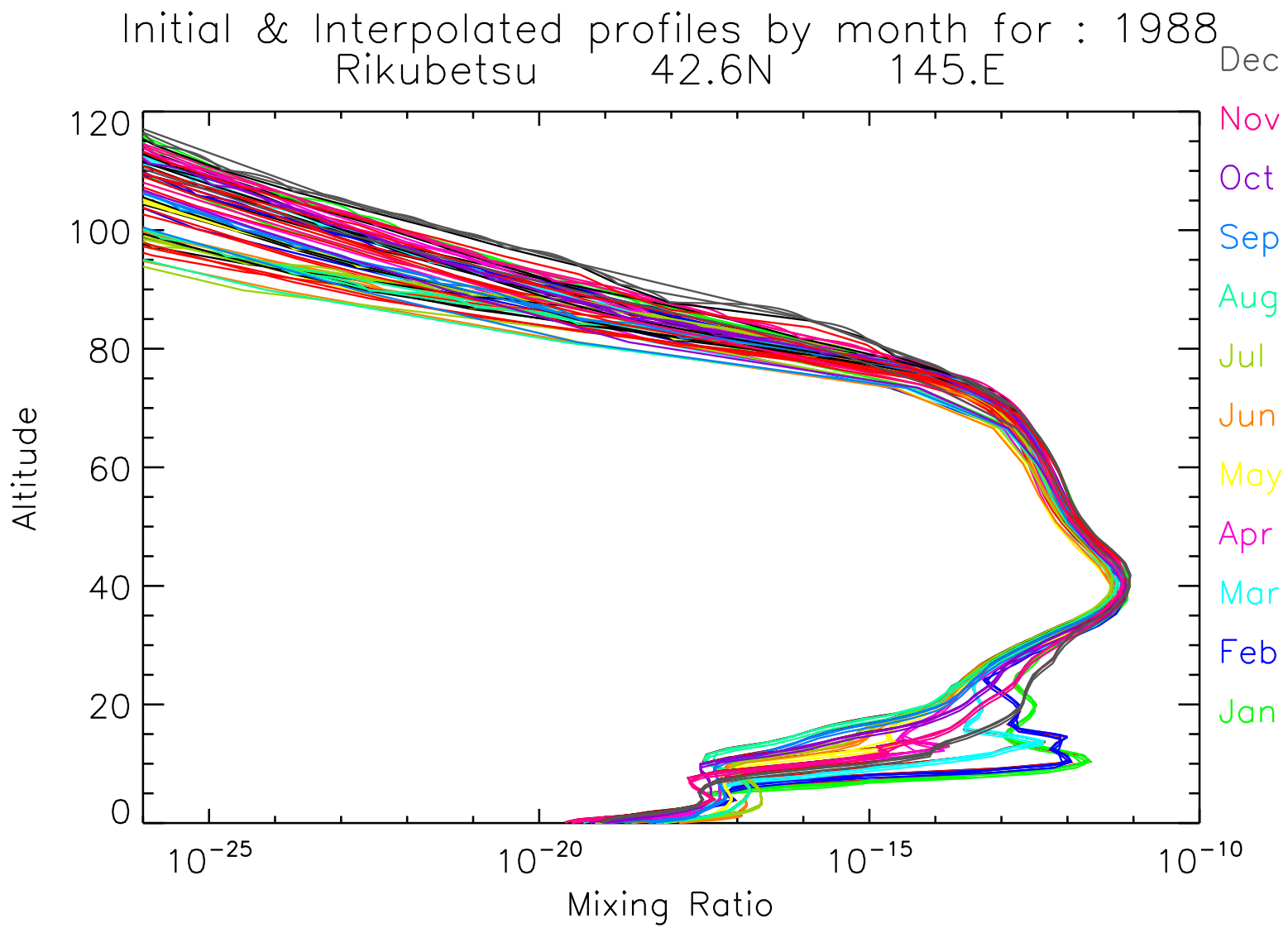
Mixing Ratio


Initial & Interpolated profiles by month for : 1988
Rikubetsu 42.6N 145.E
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Altitude
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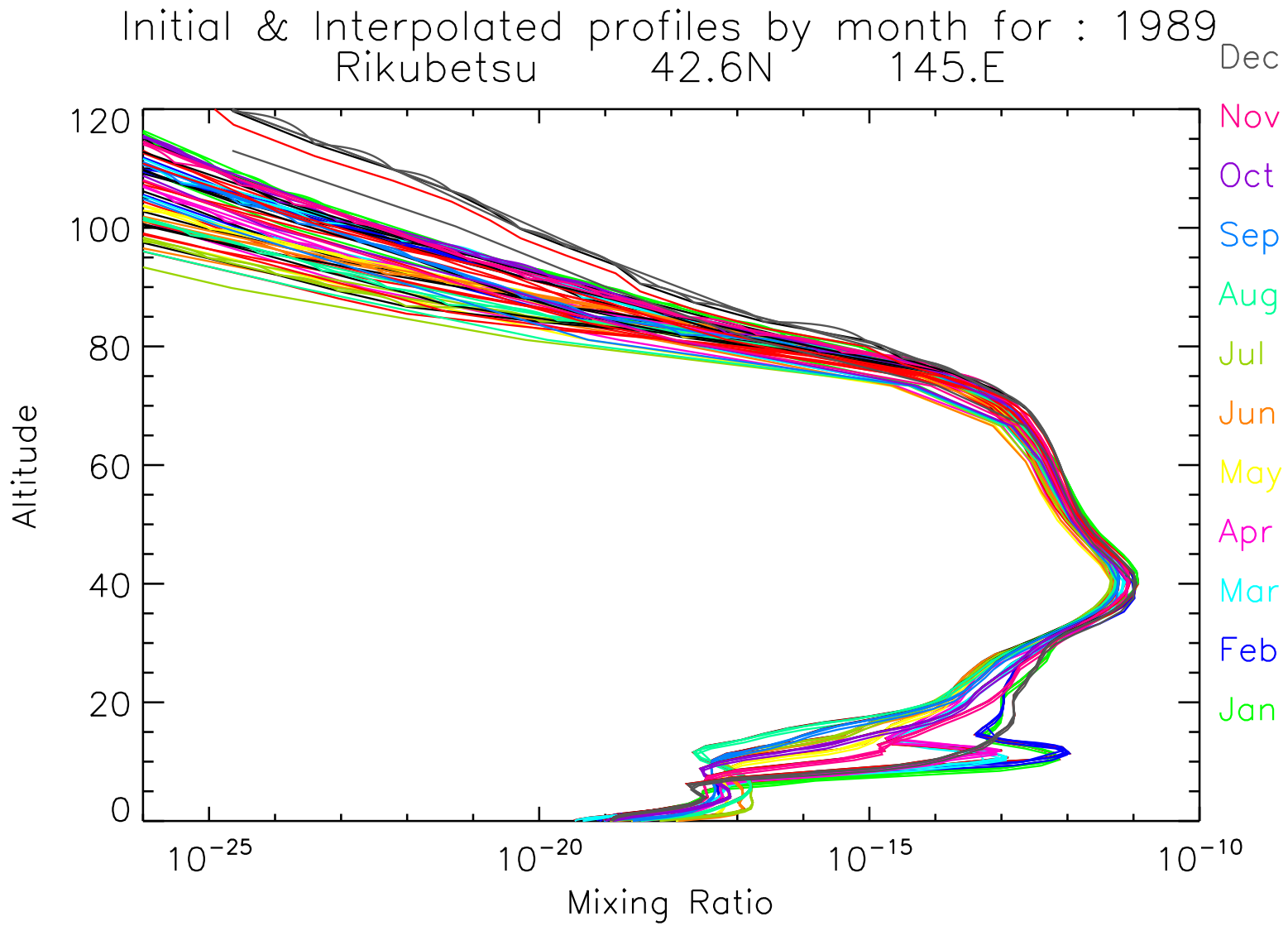
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1989
Rikubetsu 42.6N 145.E
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Altitude
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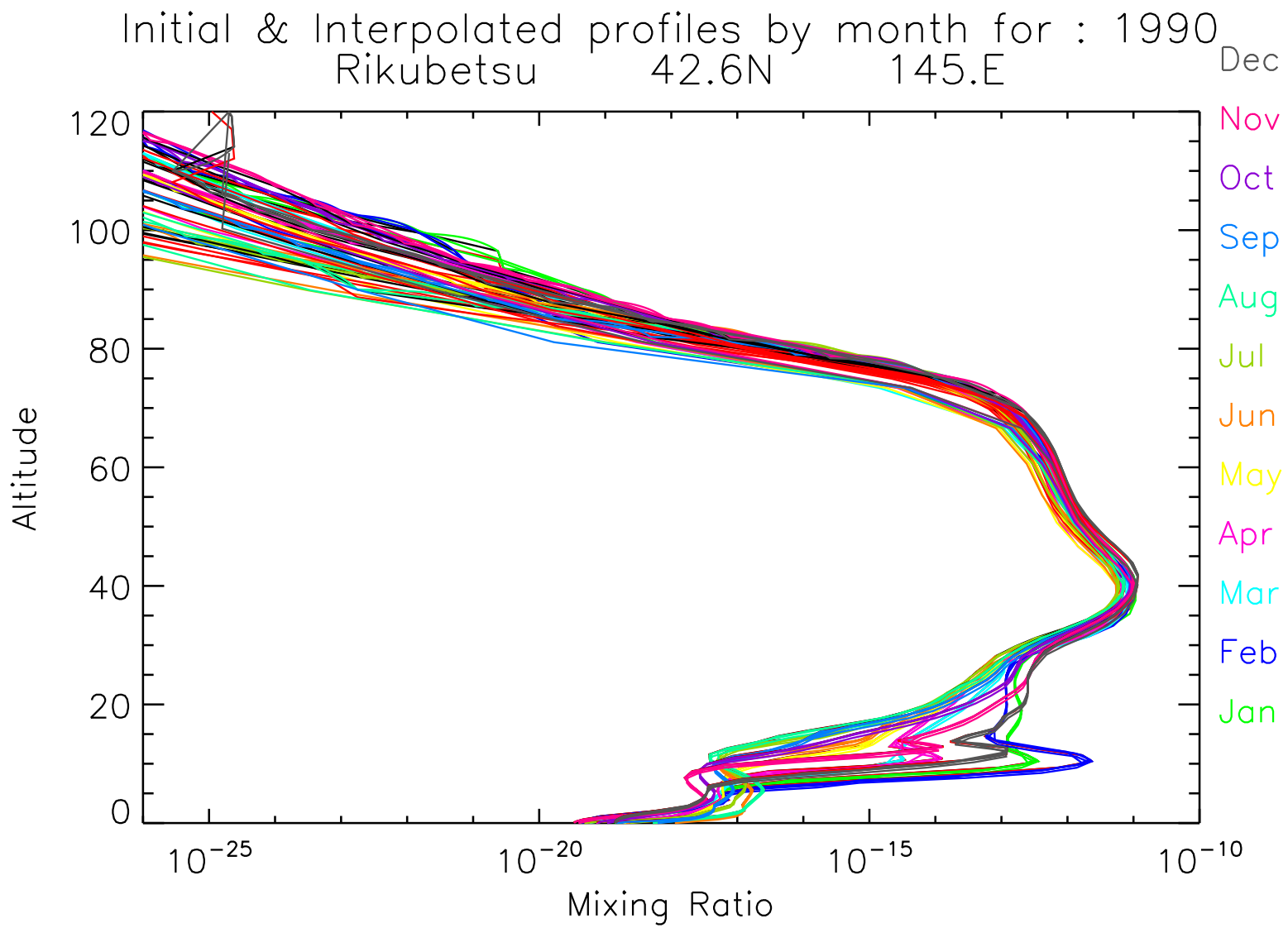
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1990
Rikubetsu 42.6N 145.E
Dec
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Altitude
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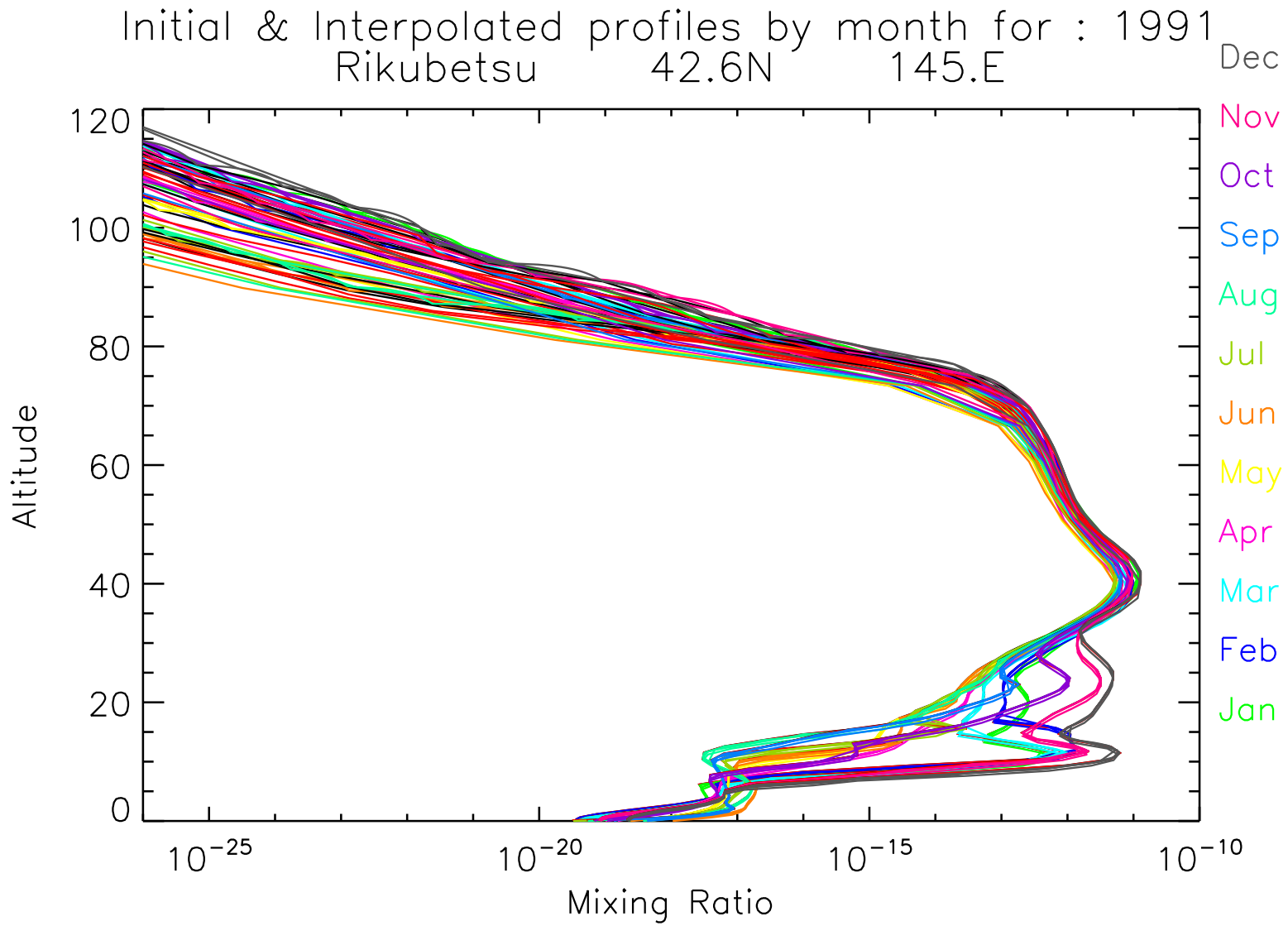
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1991
Rikubetsu 42.6N 145.E
Dec
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Altitude
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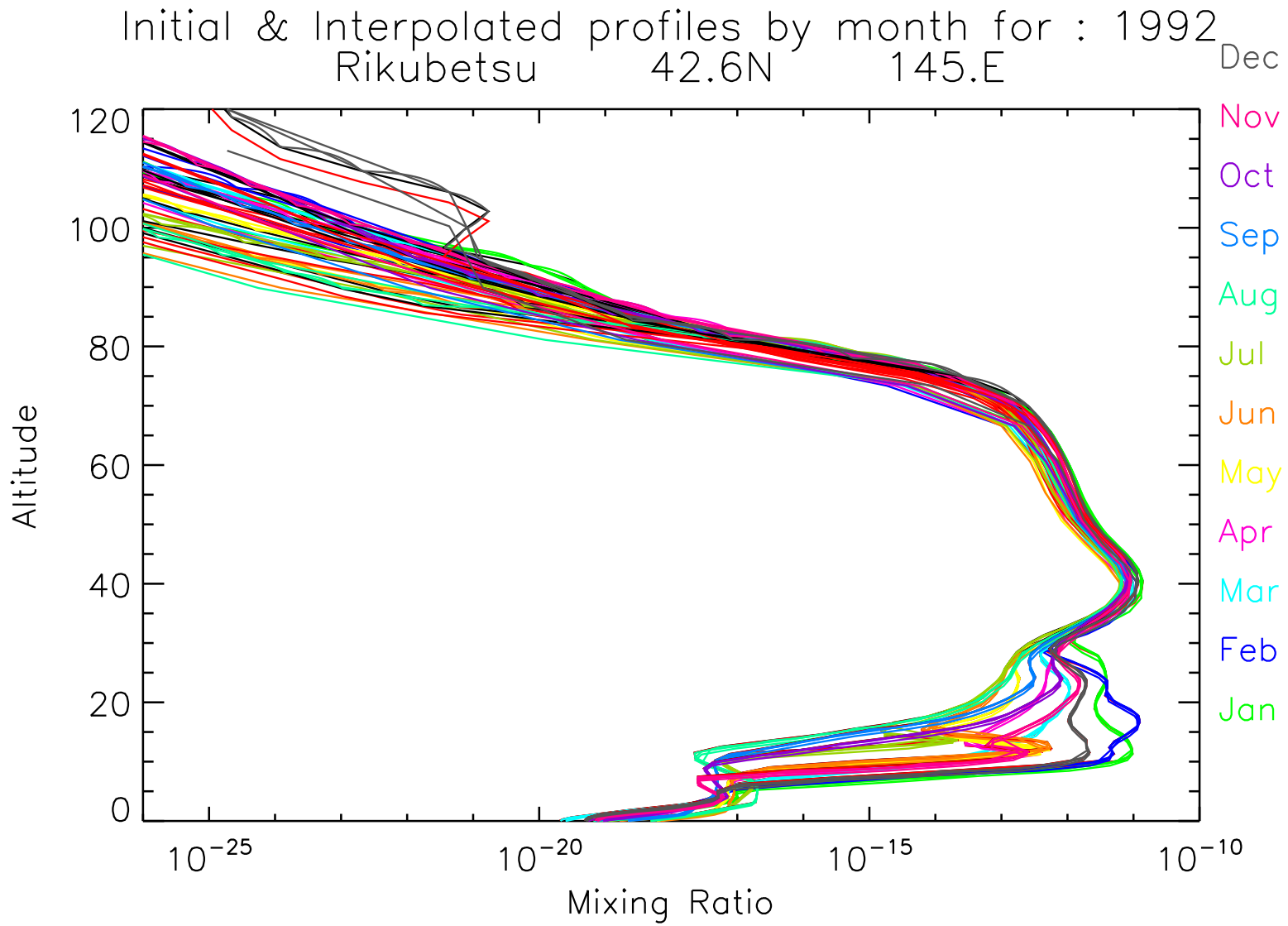
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1992
Rikubetsu 42.6N 145.E
Dec
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Altitude
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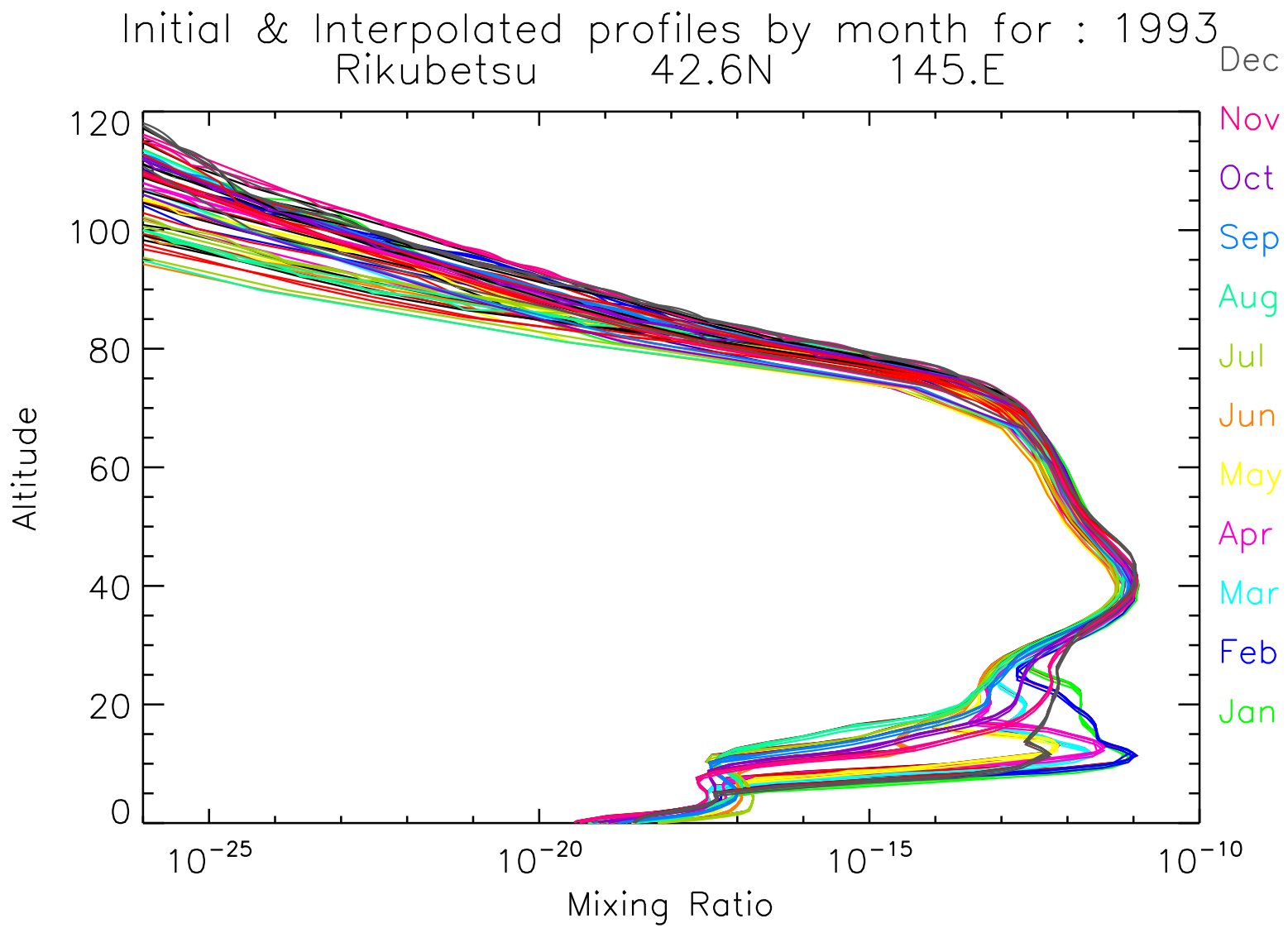
$10^{-10}$
Mixing Ratio


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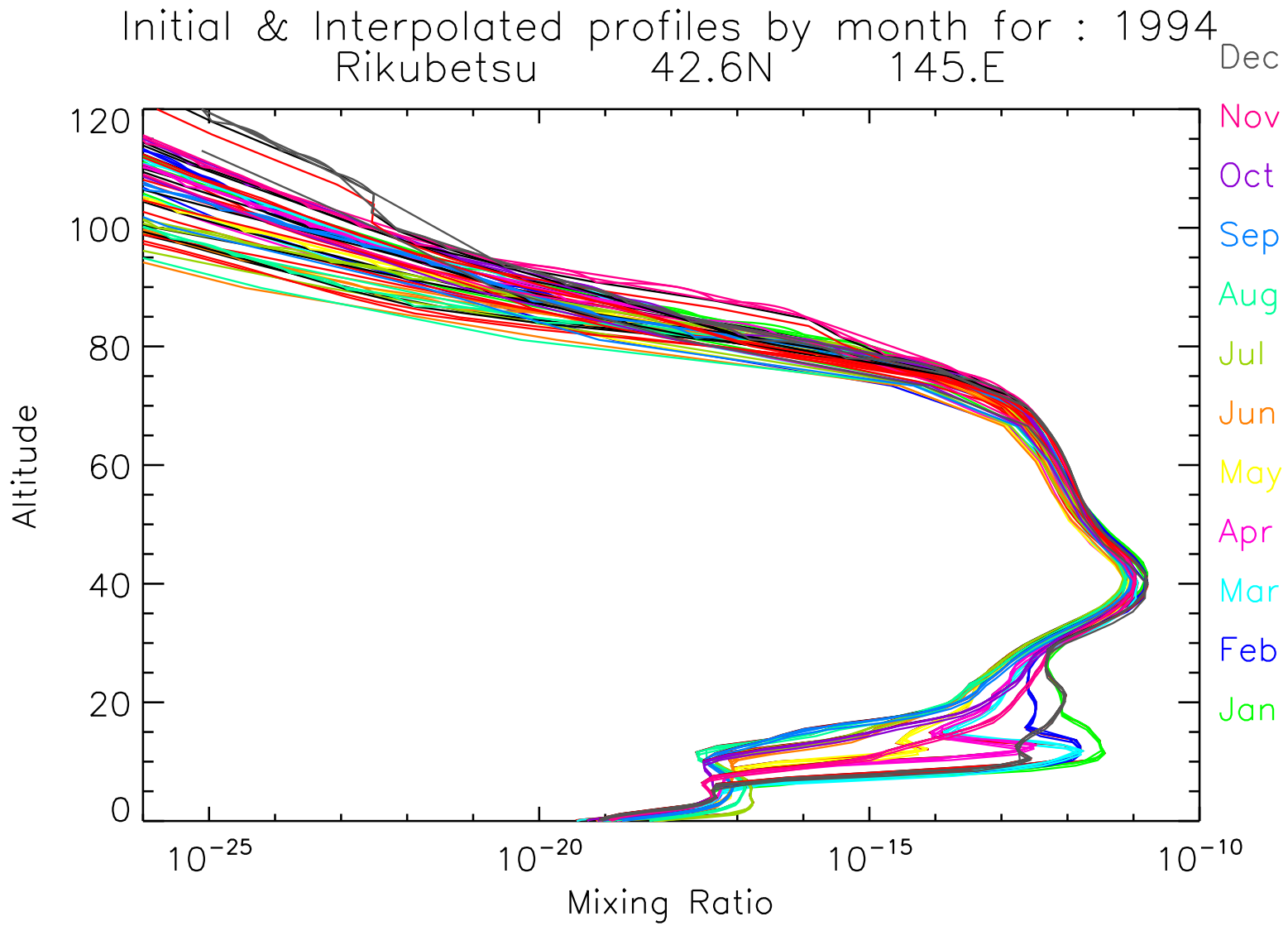
Mixing Ratio


Initial & Interpolated profiles by month for : 1994
Rikubetsu 42.6N 145.E
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Altitude
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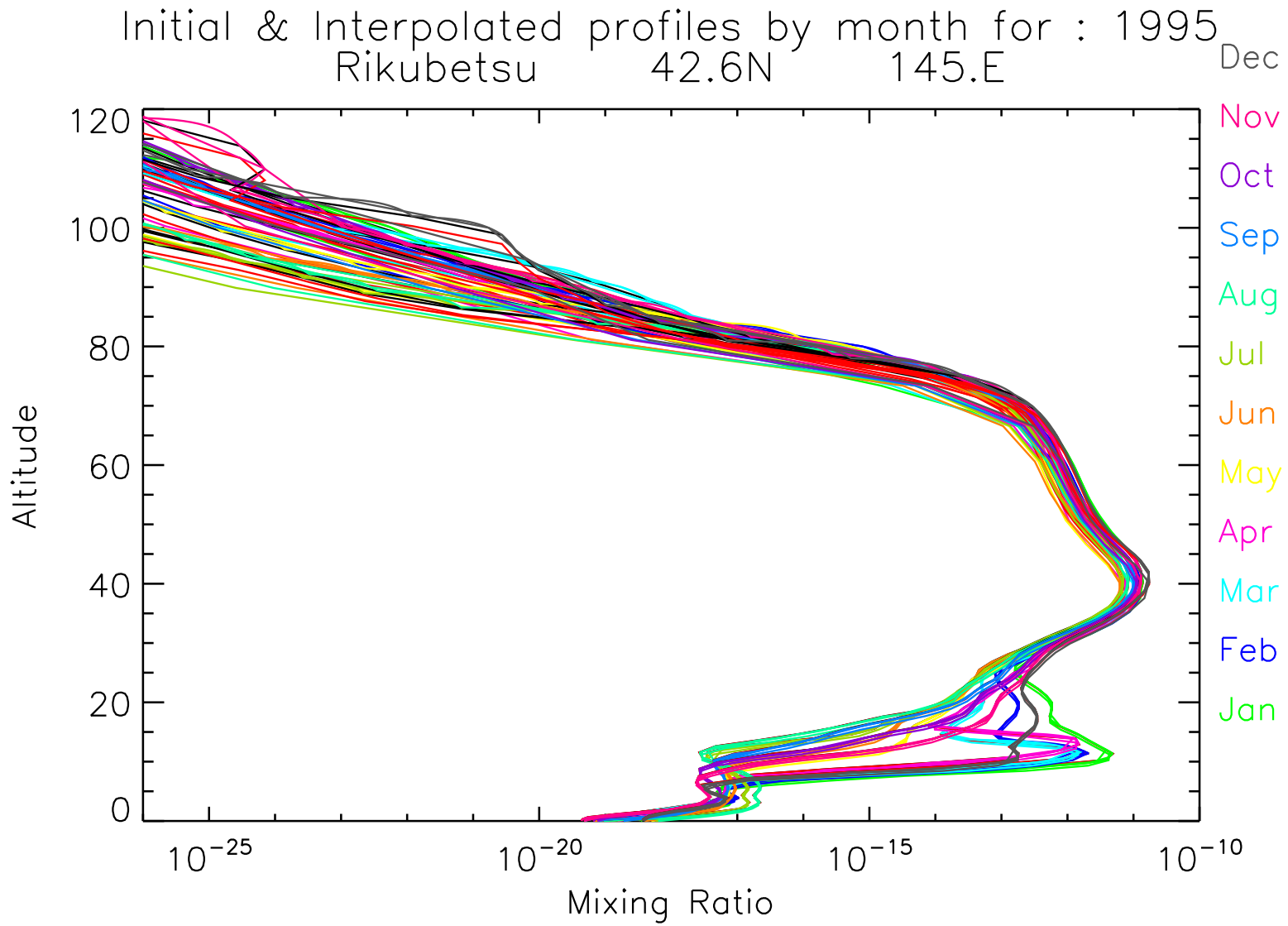
$10^{-15}$
$10^{-10}$
Mixing Ratio


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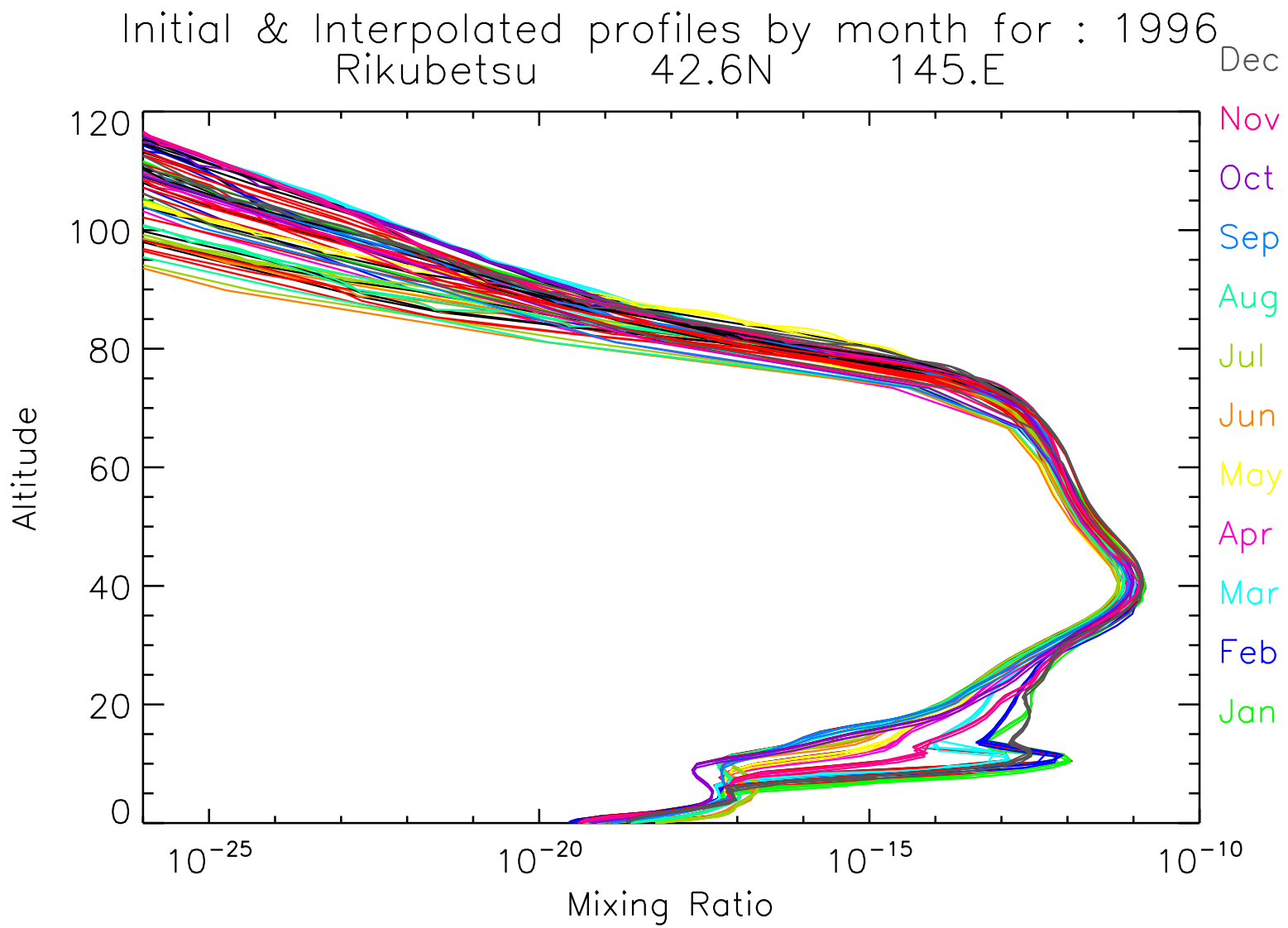
Mixing Ratio


Initial & Interpolated profiles by month for : 1996
Rikubetsu 42.6N 145.E
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$10^{-20}$
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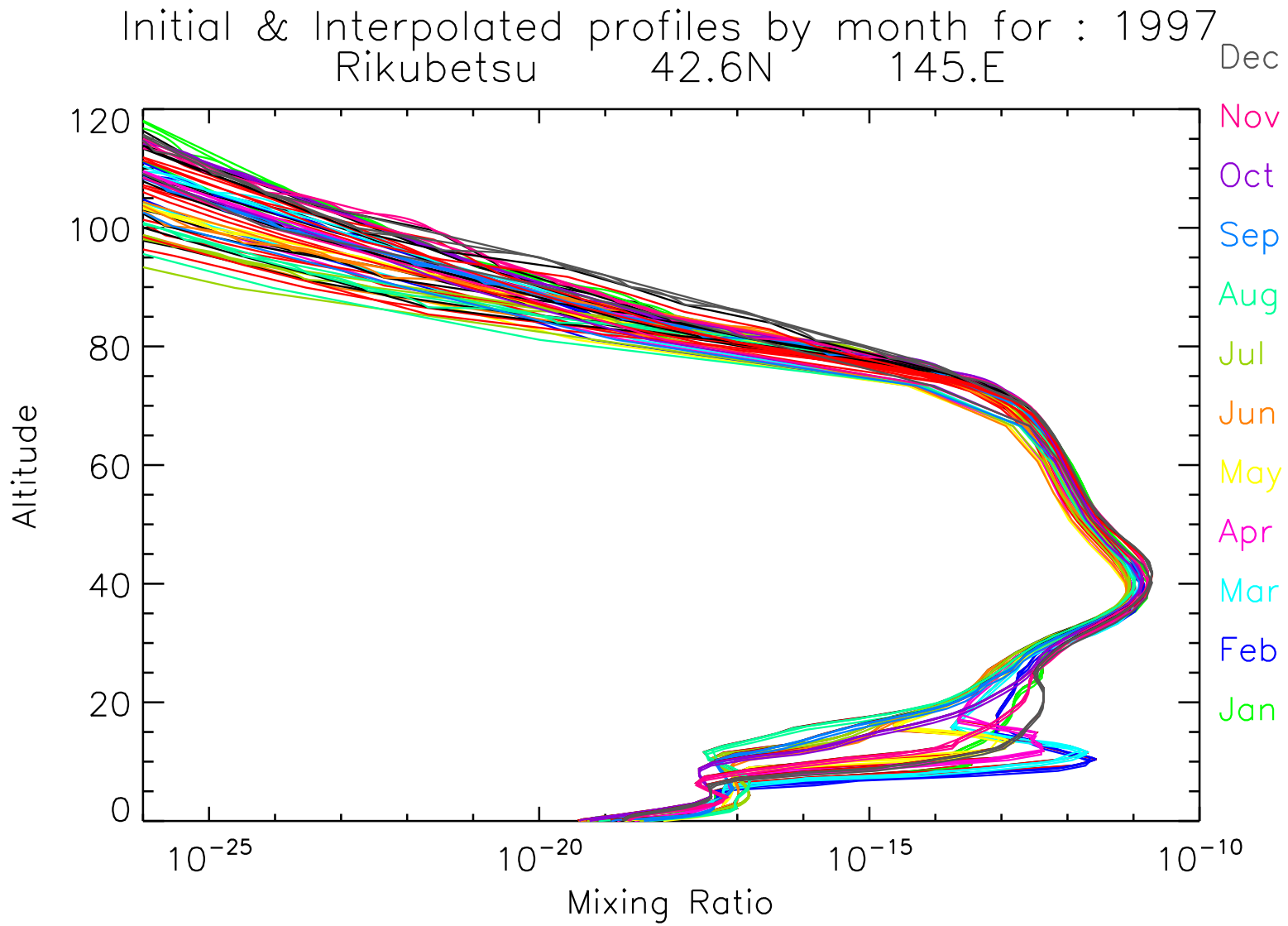
Mixing Ratio


Initial & Interpolated profiles by month for : 1997
Rikubetsu 42.6N 145.E
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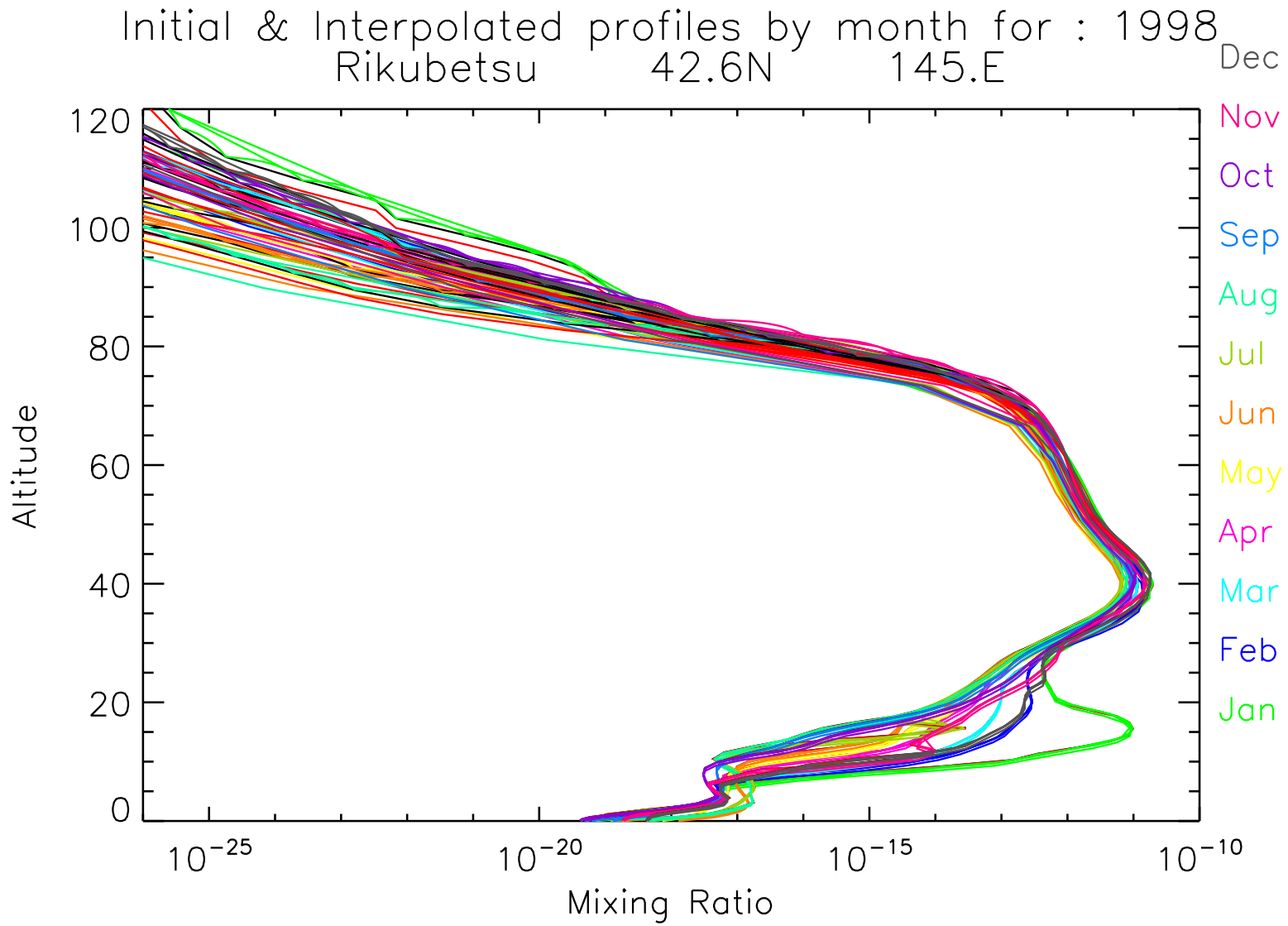
Mixing Ratio


Initial & Interpolated profiles by month for : 1998
Rikubetsu 42.6N 145.E
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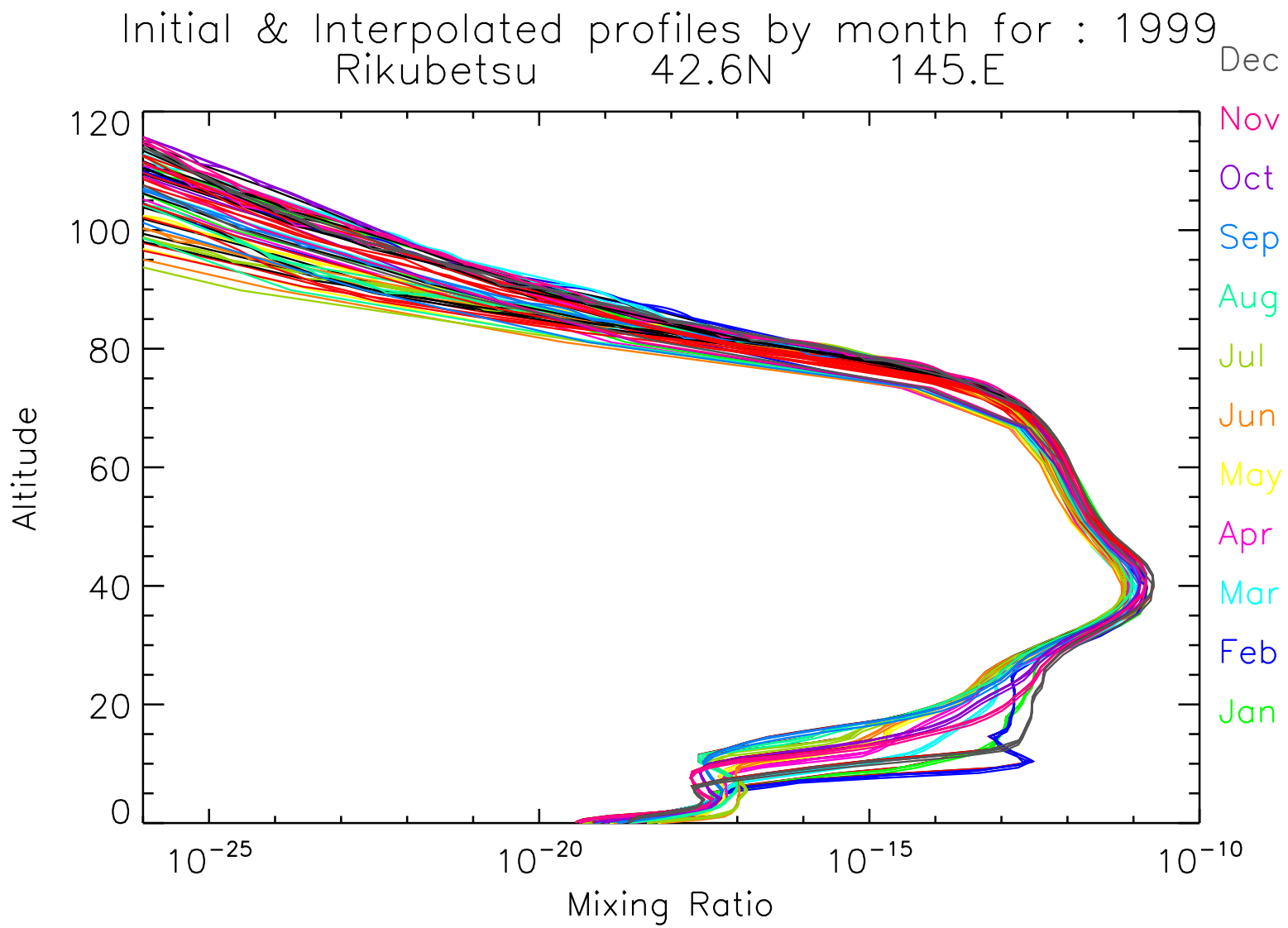
Mixing Ratio


Initial & Interpolated profiles by month for : 1999
Rikubetsu 42.6N 145.E
Dec
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Altitude
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$10^{-20}$
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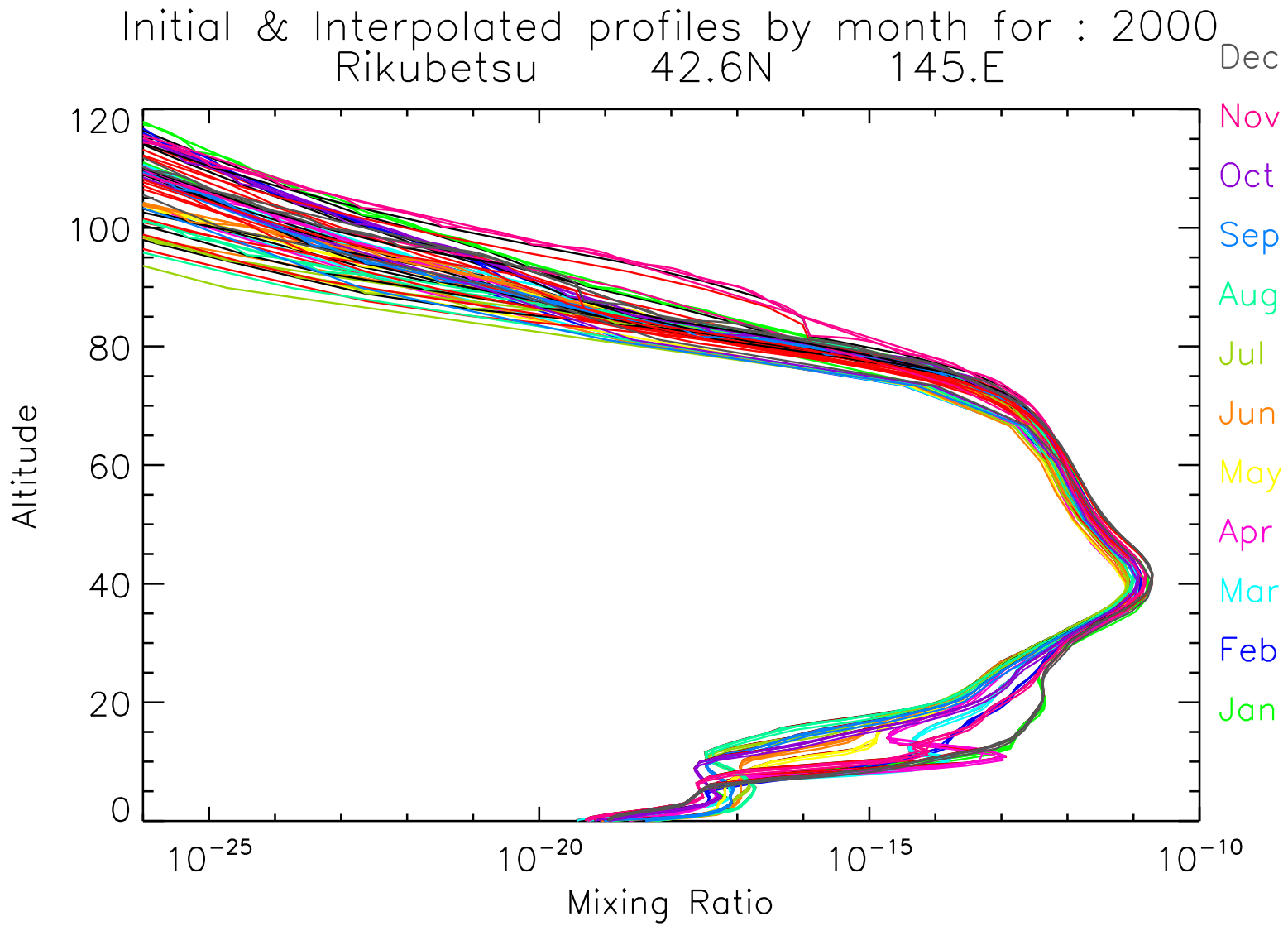
Mixing Ratio


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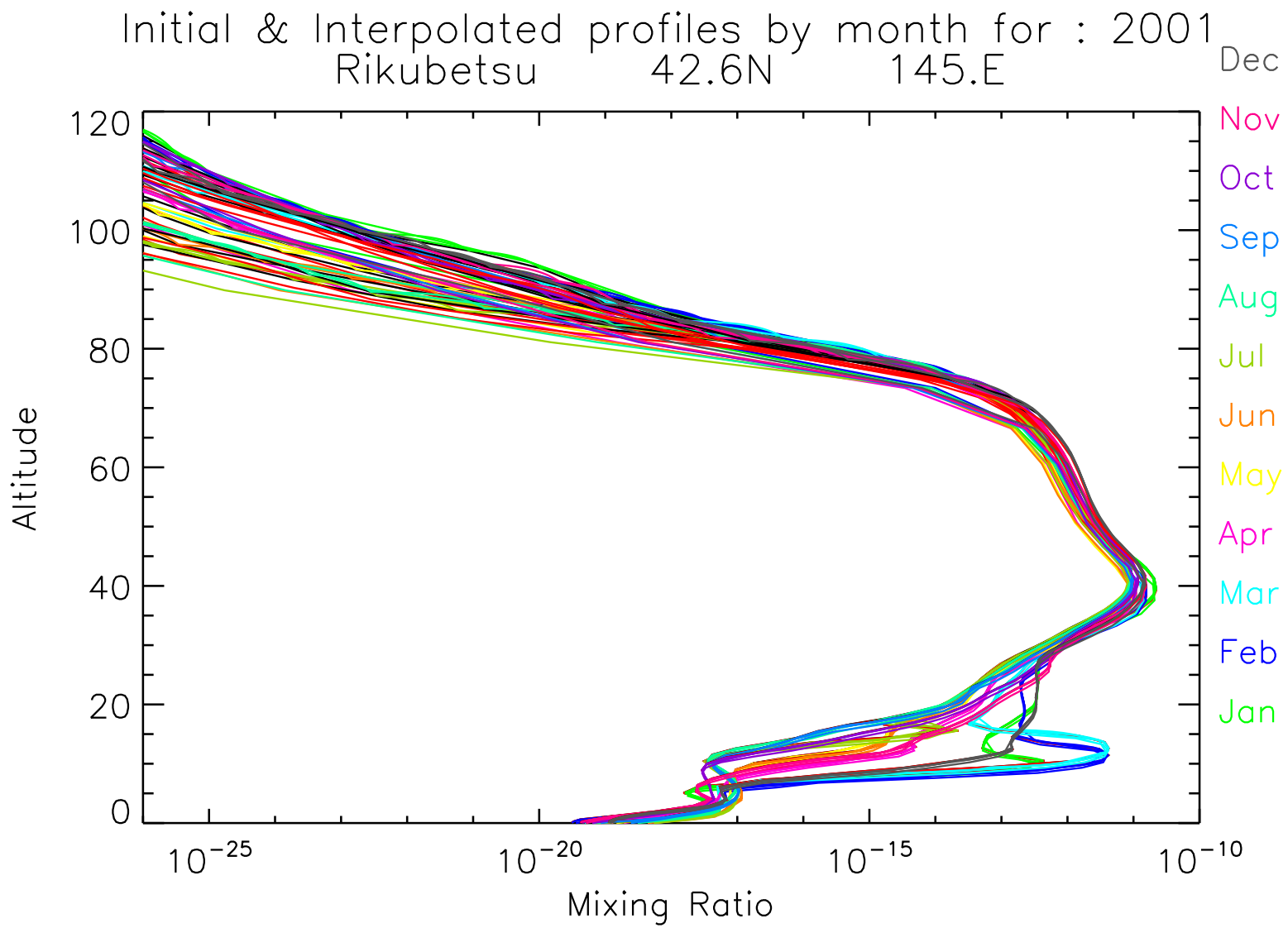
Mixing Ratio


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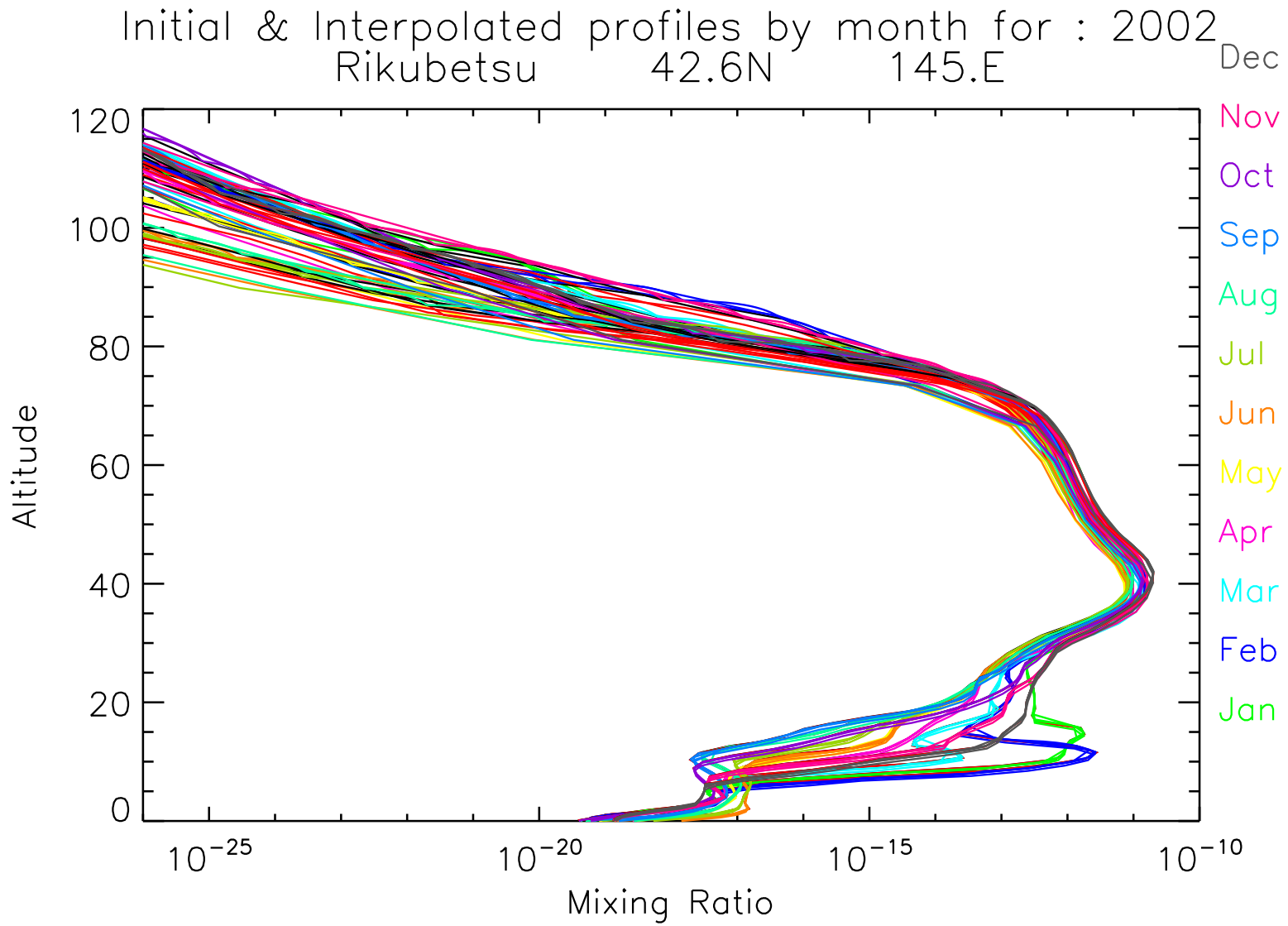
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 2002
Rikubetsu 42.6N 145.E
Dec
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Altitude
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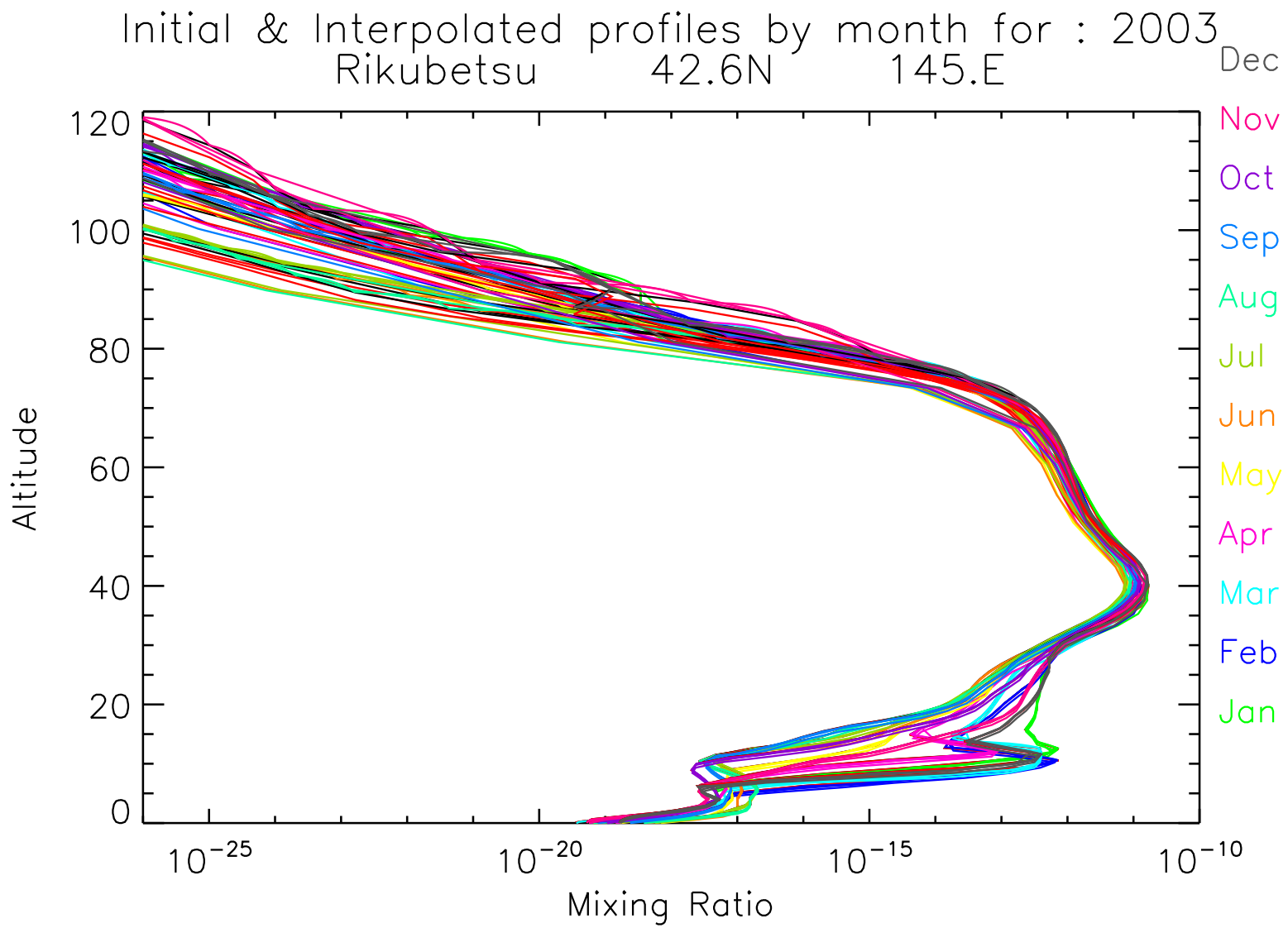
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 2003
Rikubetsu 42.6N 145.E
Dec
Nov
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Feb
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Altitude
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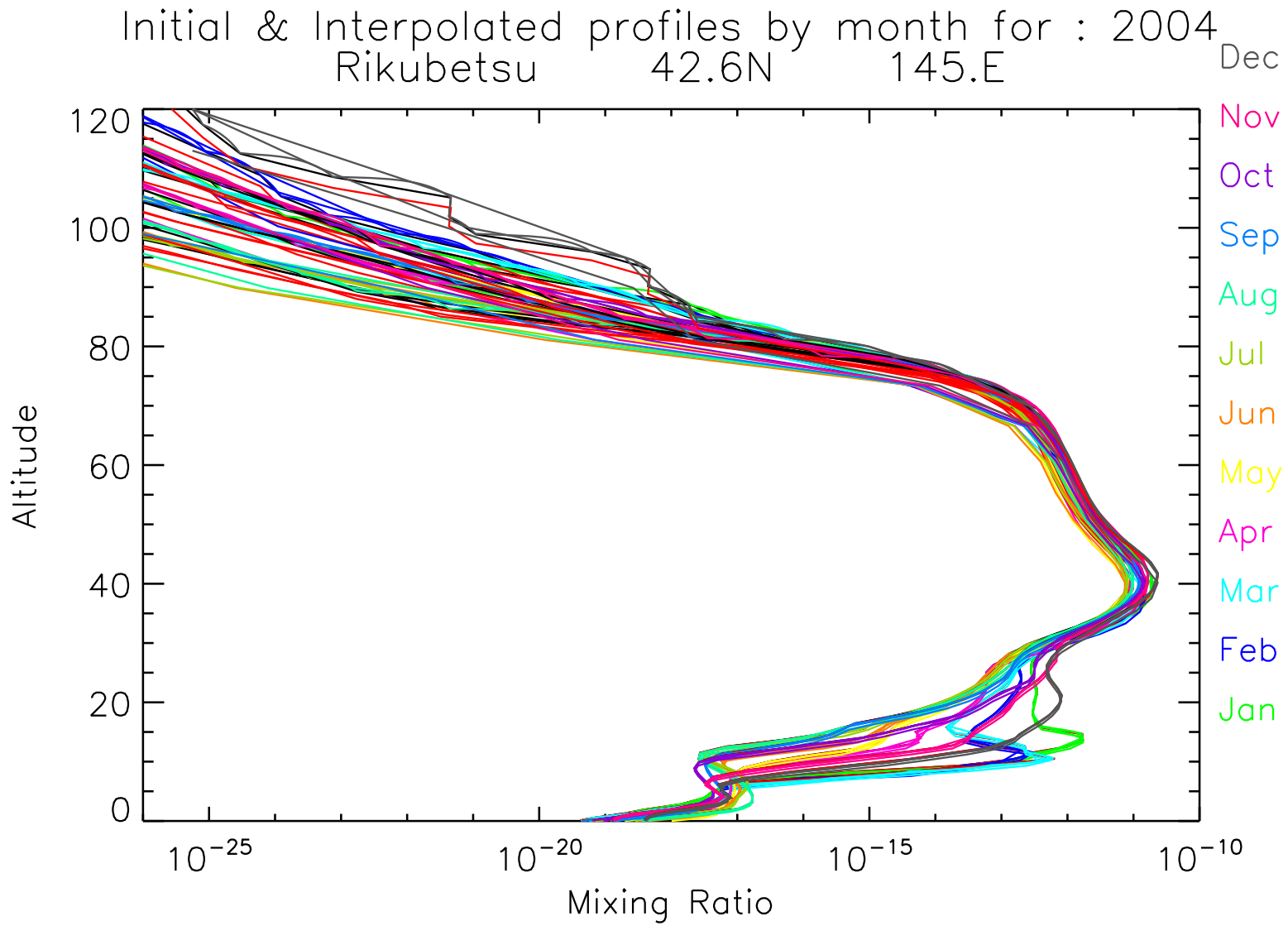
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 2004
Rikubetsu 42.6N 145.E
Dec
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Altitude
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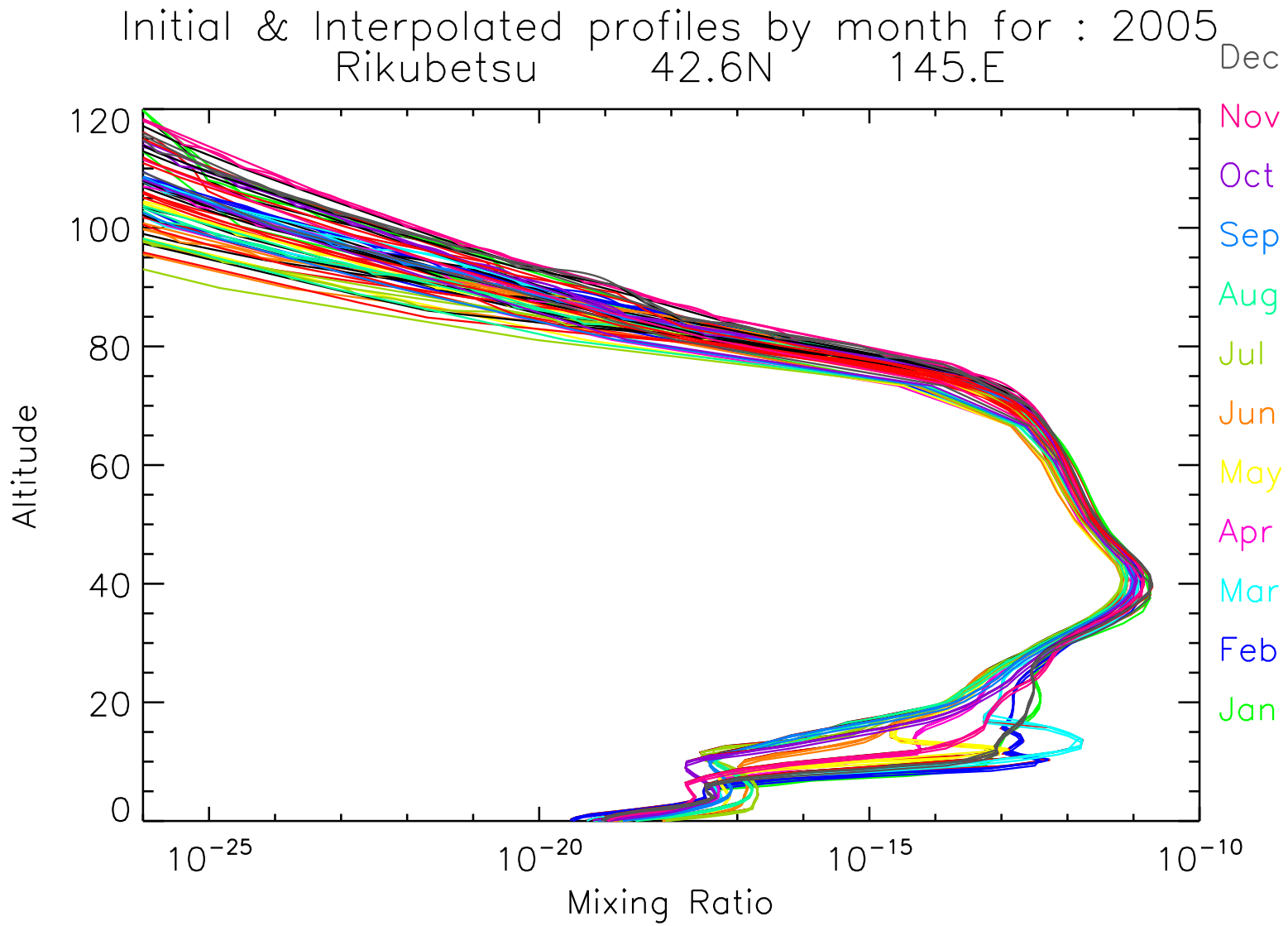
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 2005
Rikubetsu 42.6N 145.E
Dec
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Altitude
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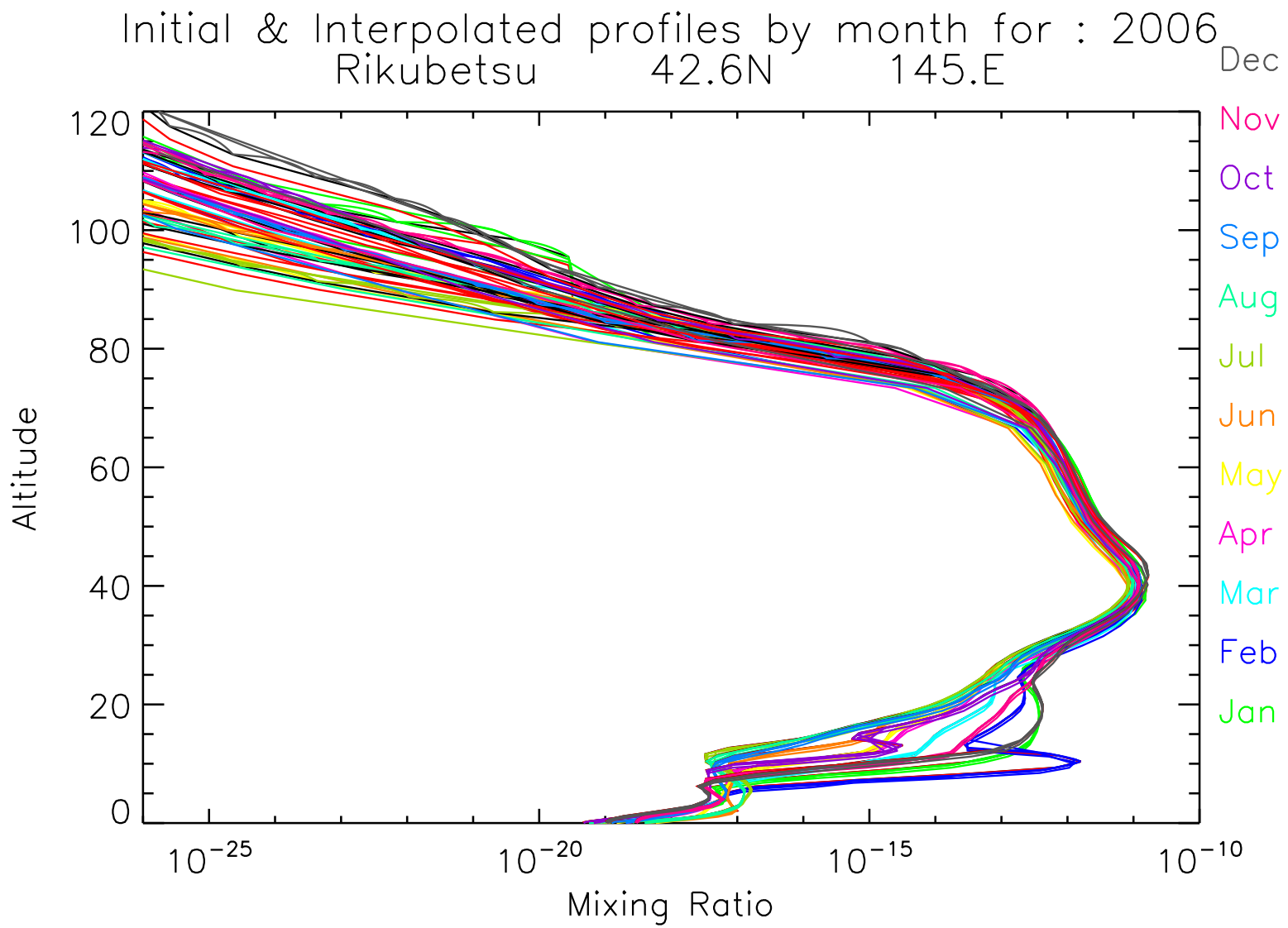
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 2006
Rikubetsu 42.6N 145.E
Altitude
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$10^{-25}$
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Mixing Ratio
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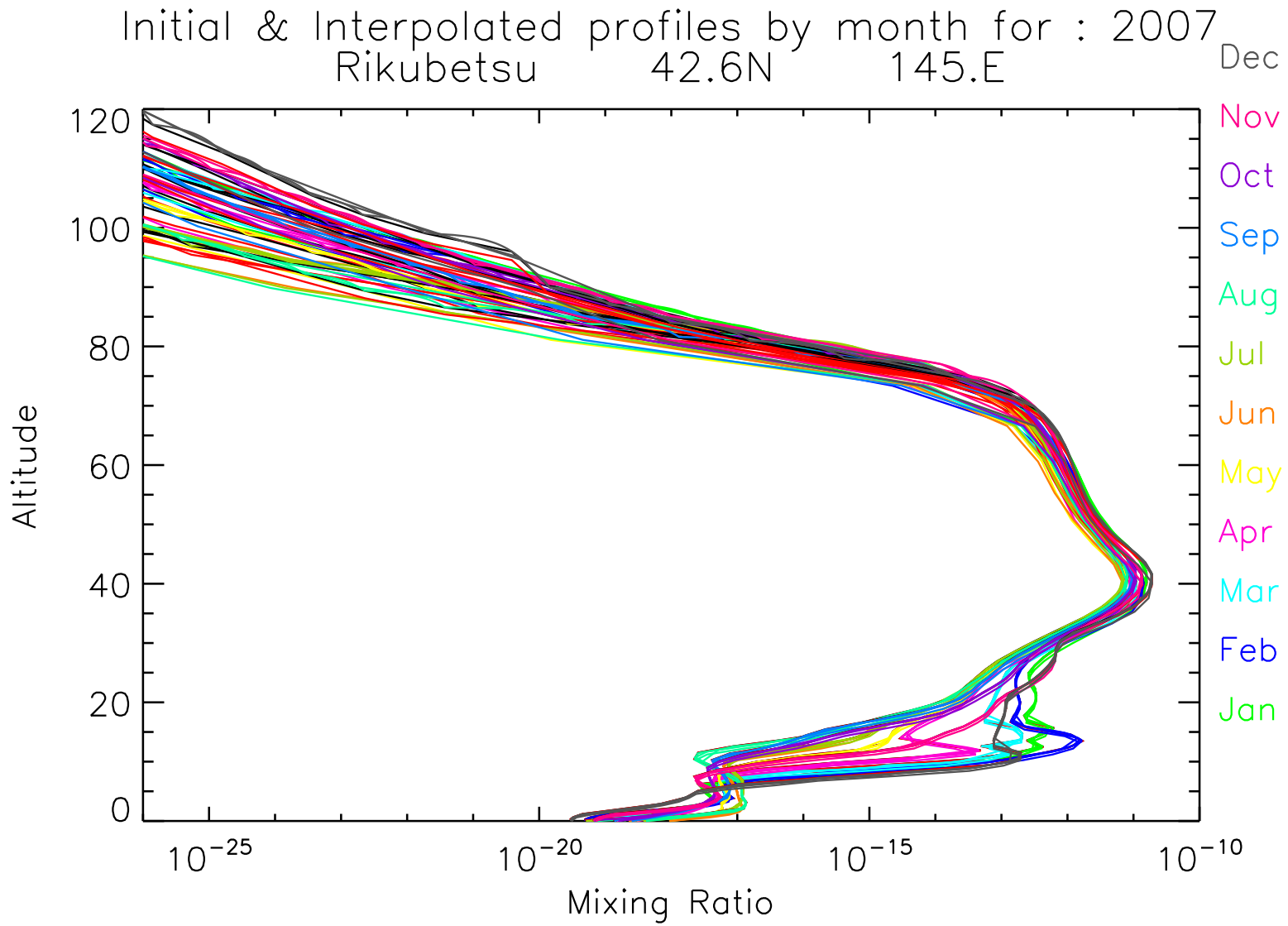
Jan


Initial & Interpolated profiles by month for : 2007
Rikubetsu 42.6N 145.E
Dec
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Altitude
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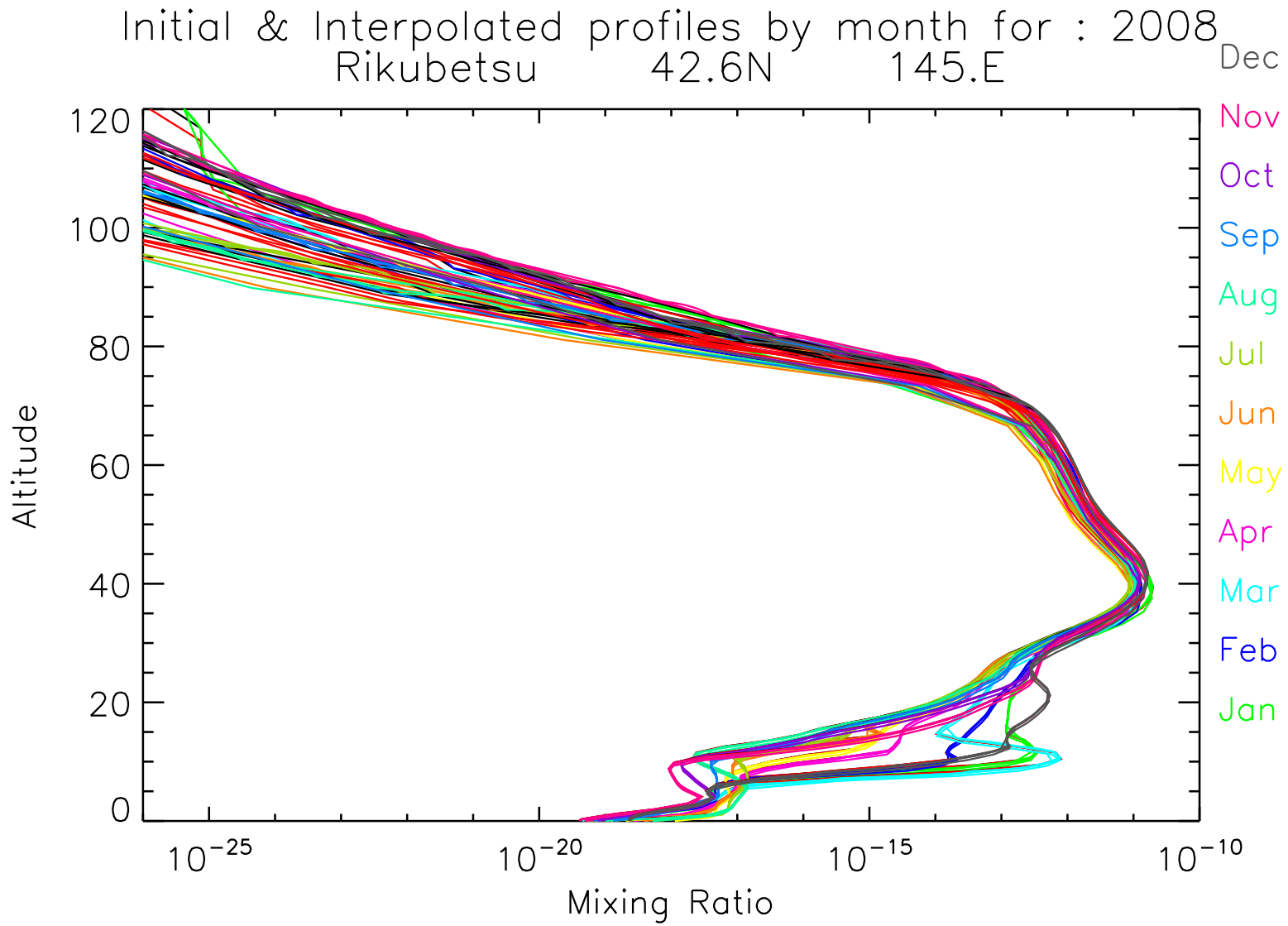
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 2008
Rikubetsu 42.6N 145.E
Dec
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Altitude
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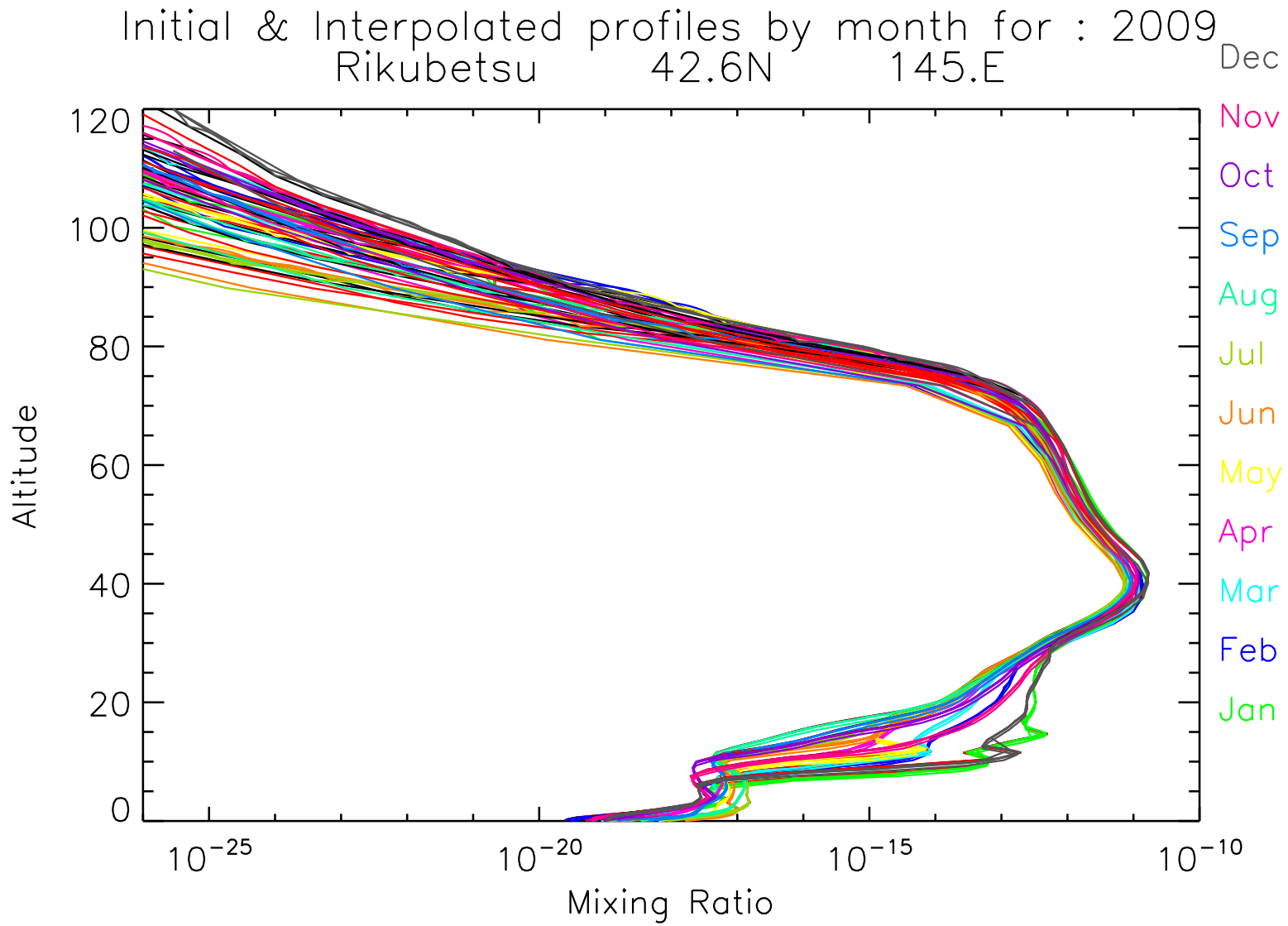
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 2009
Rikubetsu 42.6N 145.E
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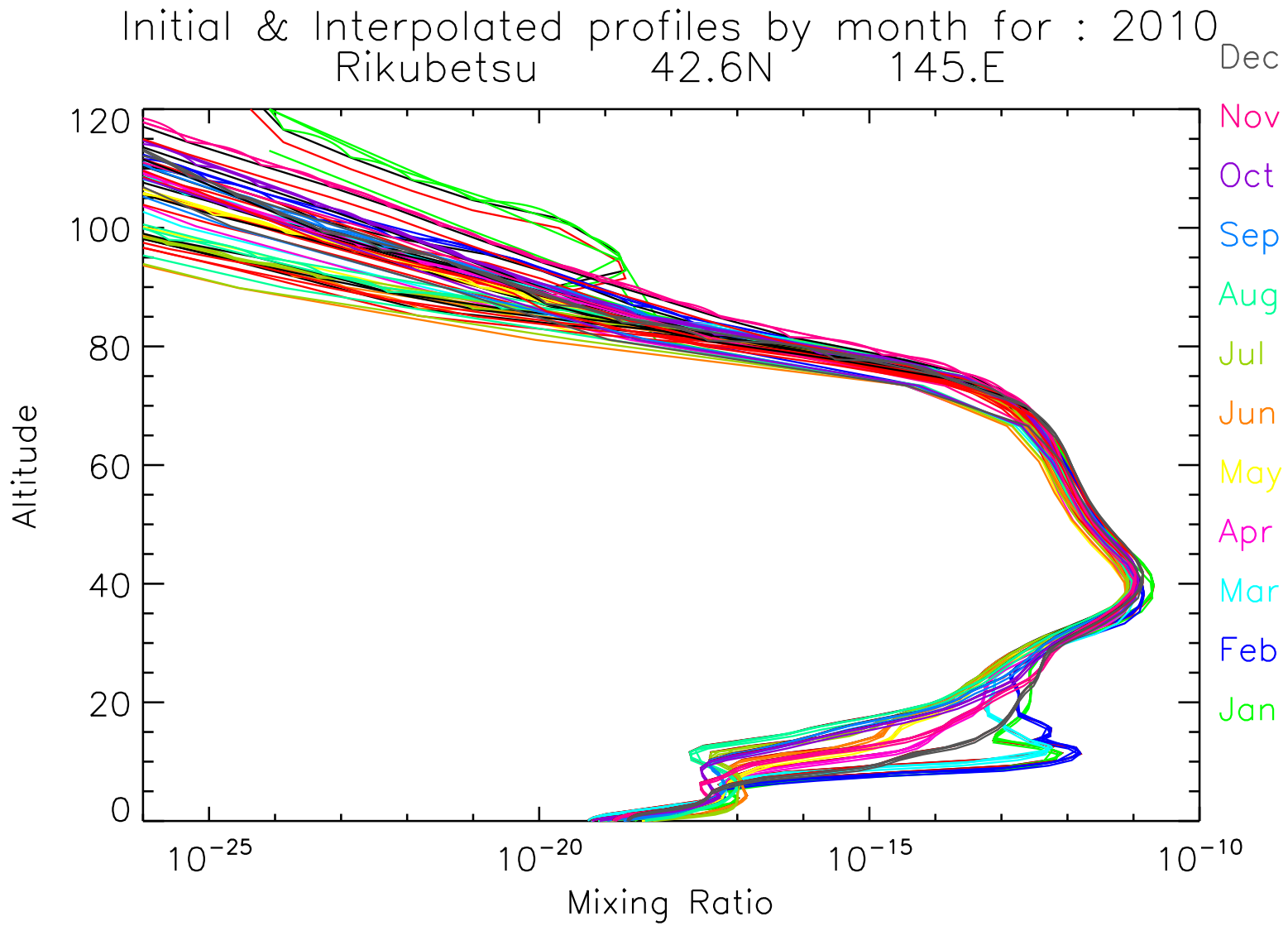
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 2010
Rikubetsu 42.6N 145.E
Dec
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Altitude
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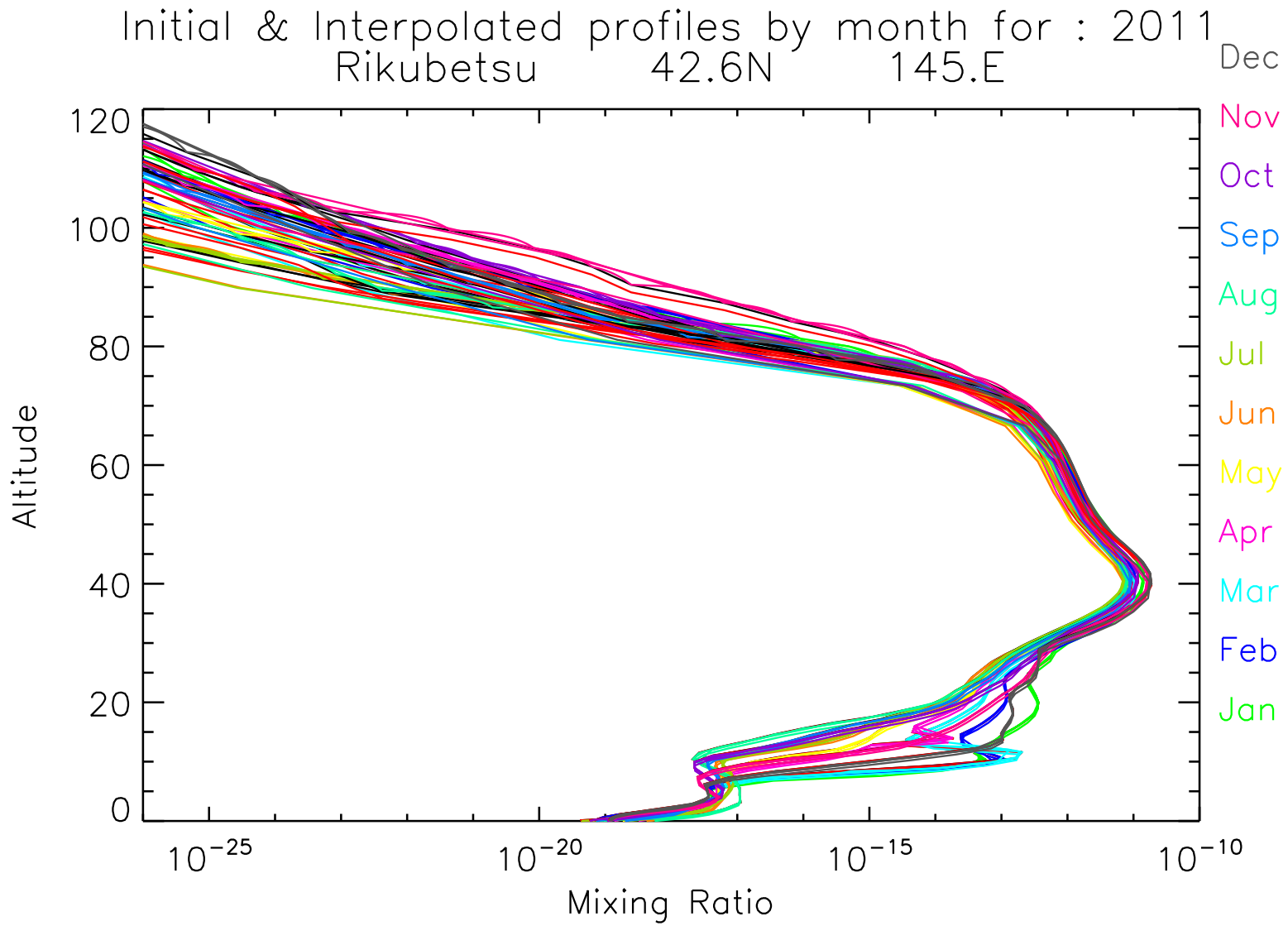
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 2011
Rikubetsu 42.6N 145.E
Dec
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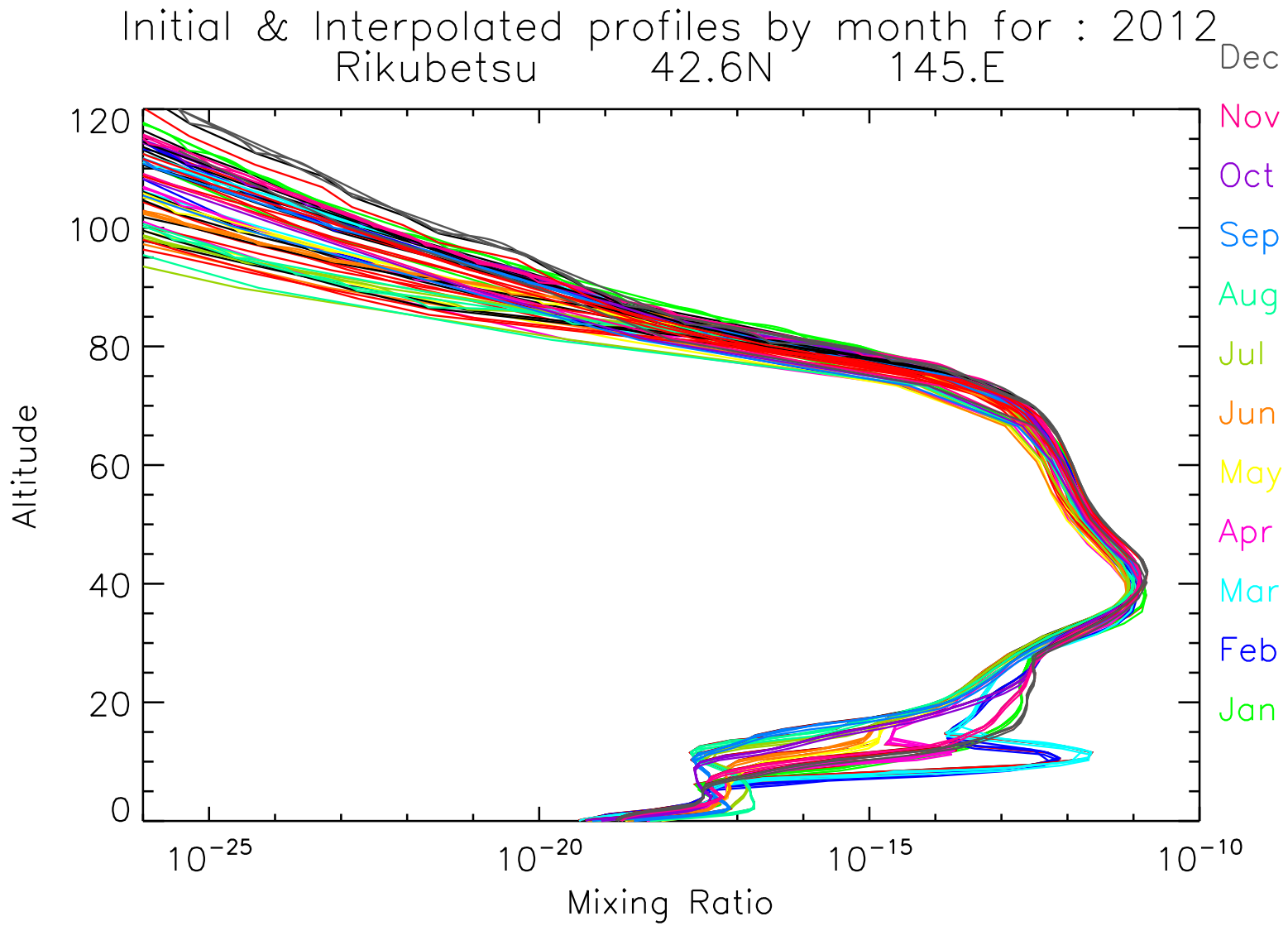
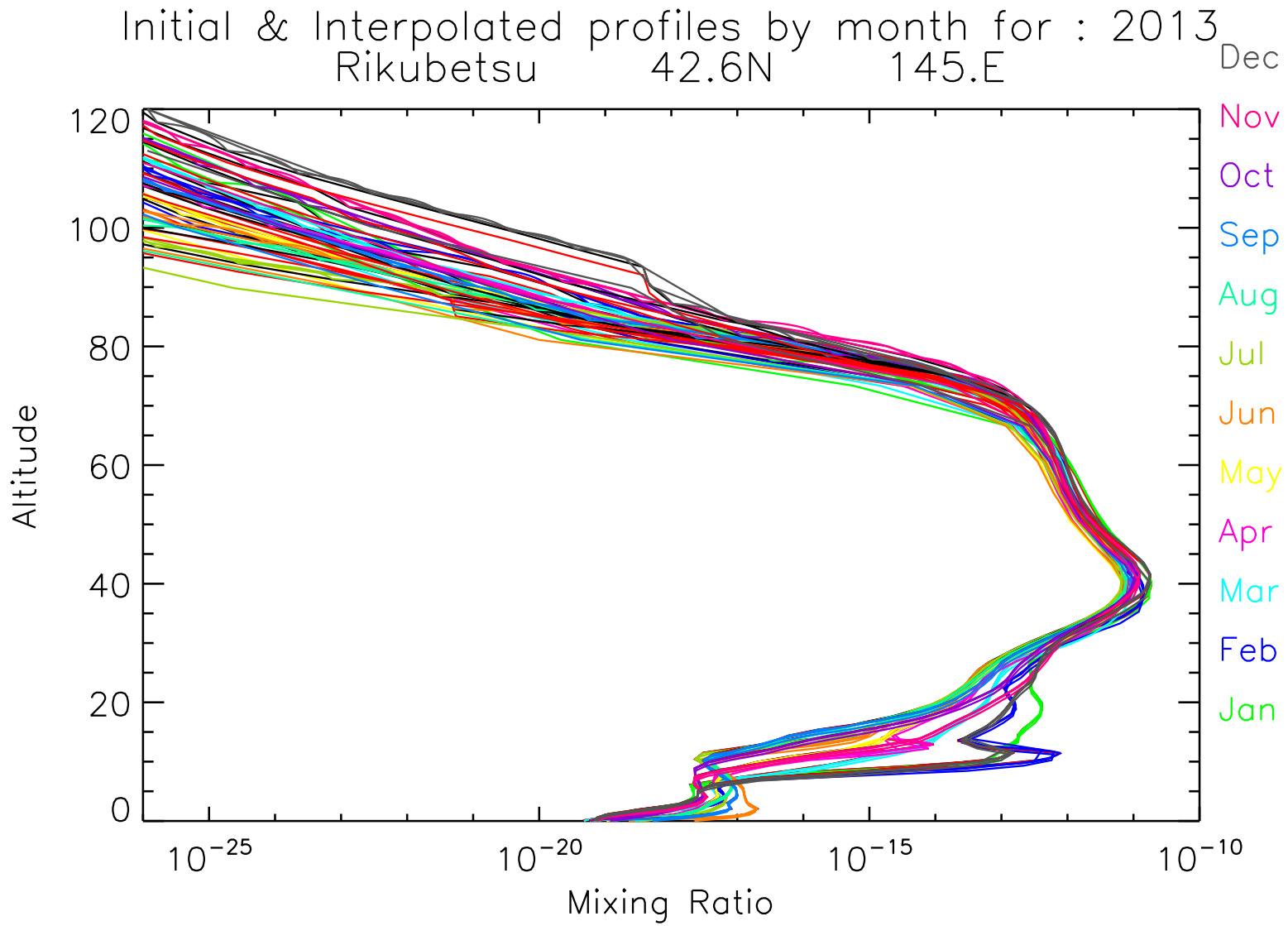
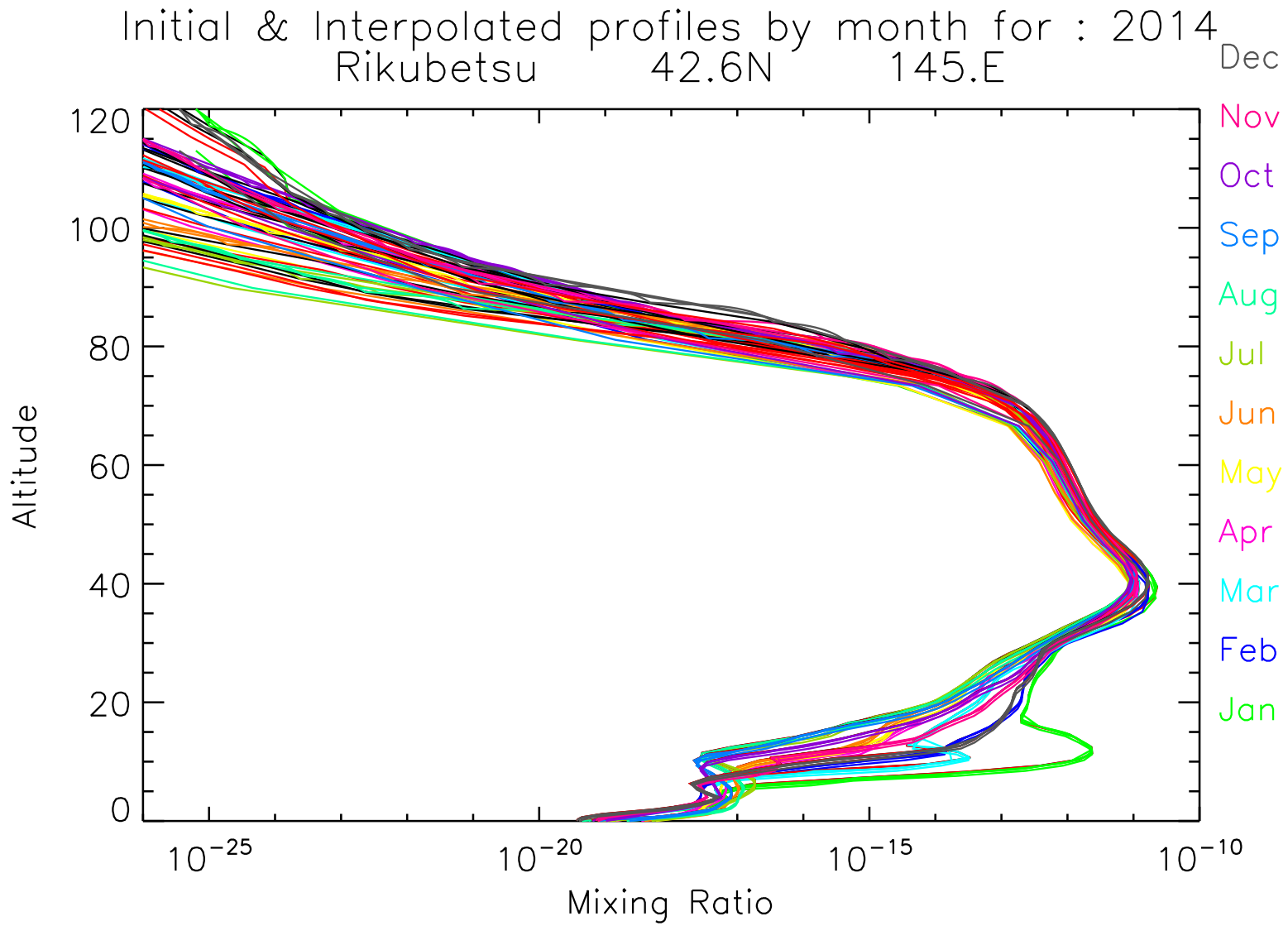
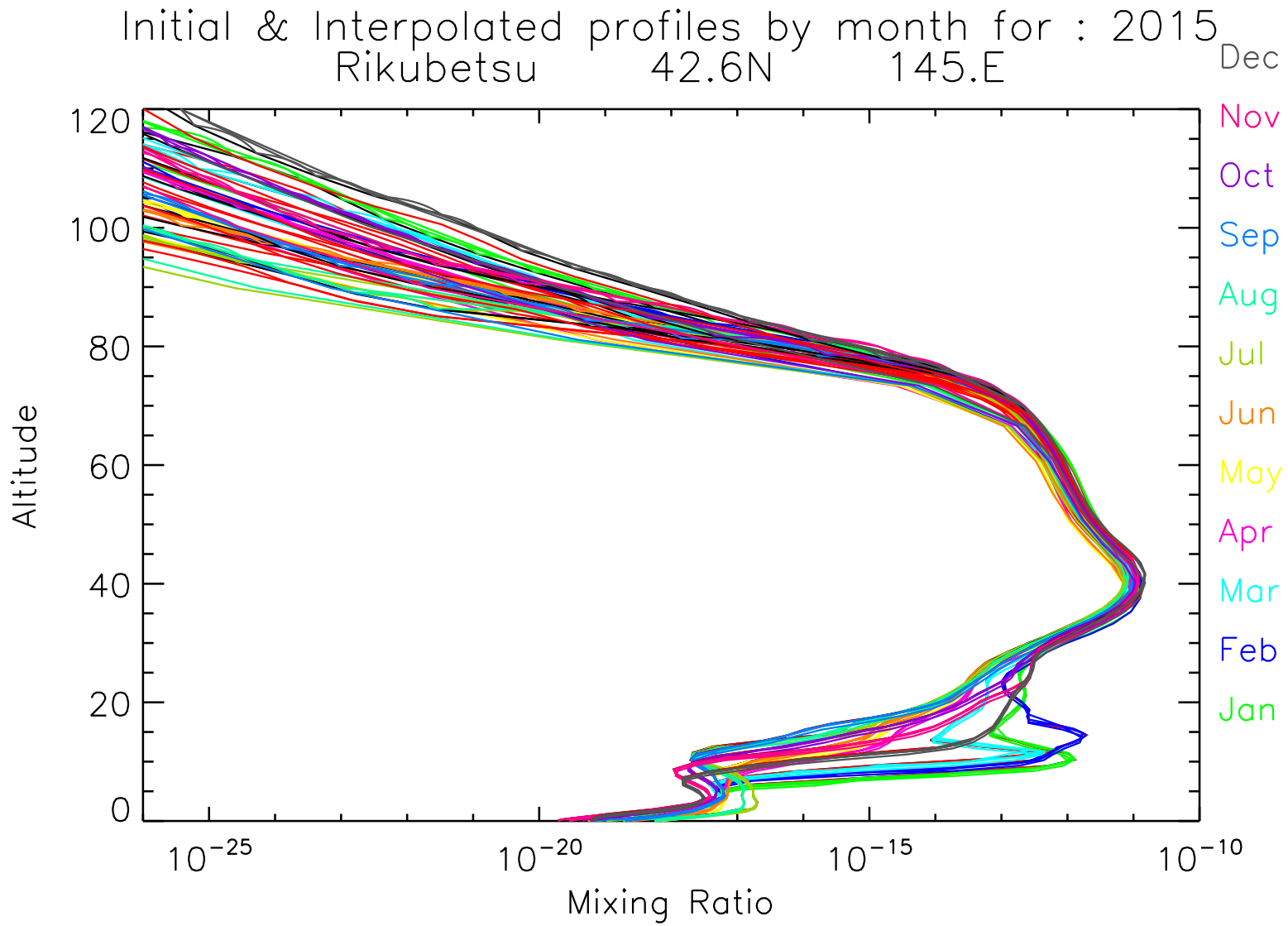
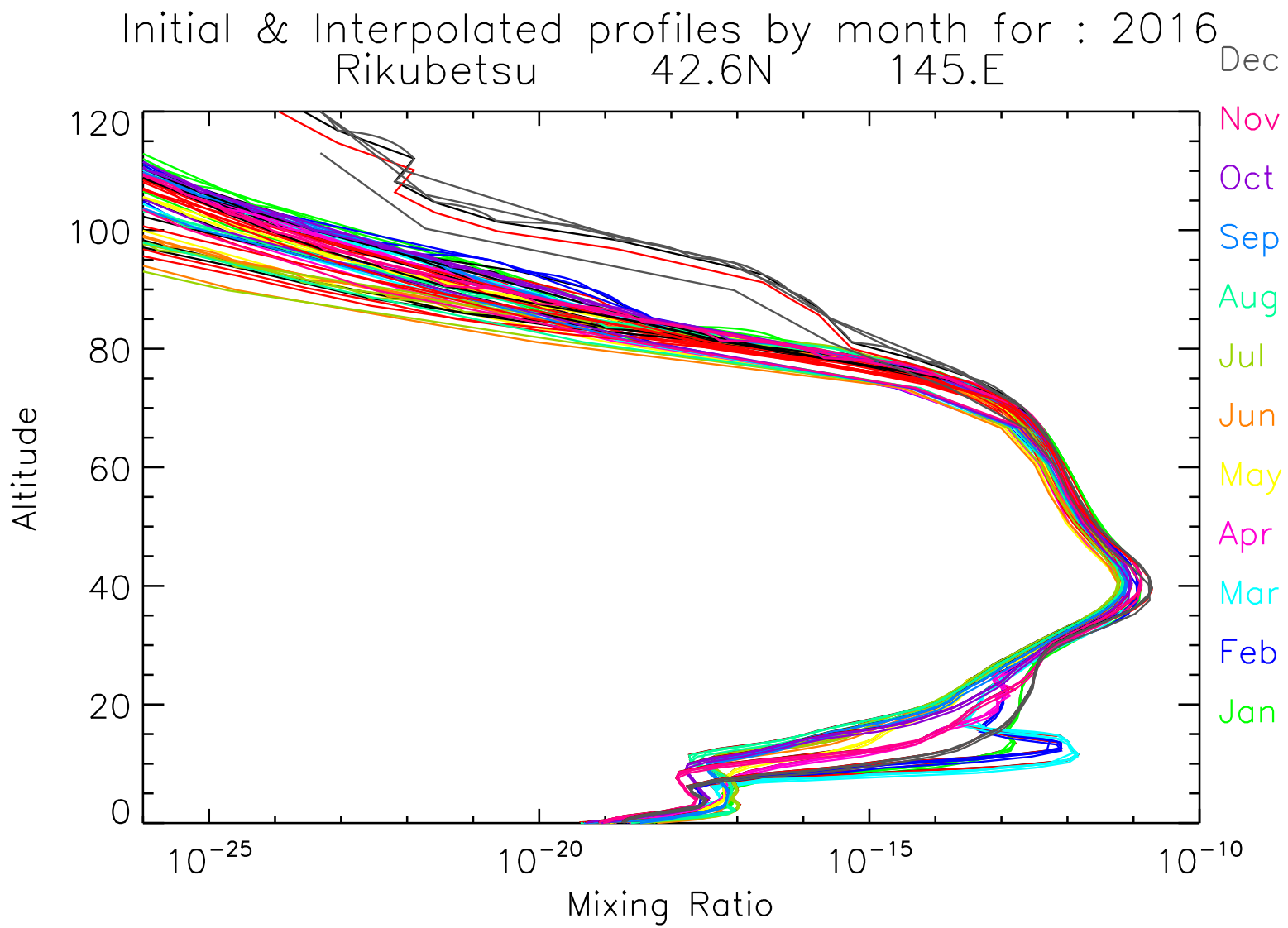
Altitude
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio

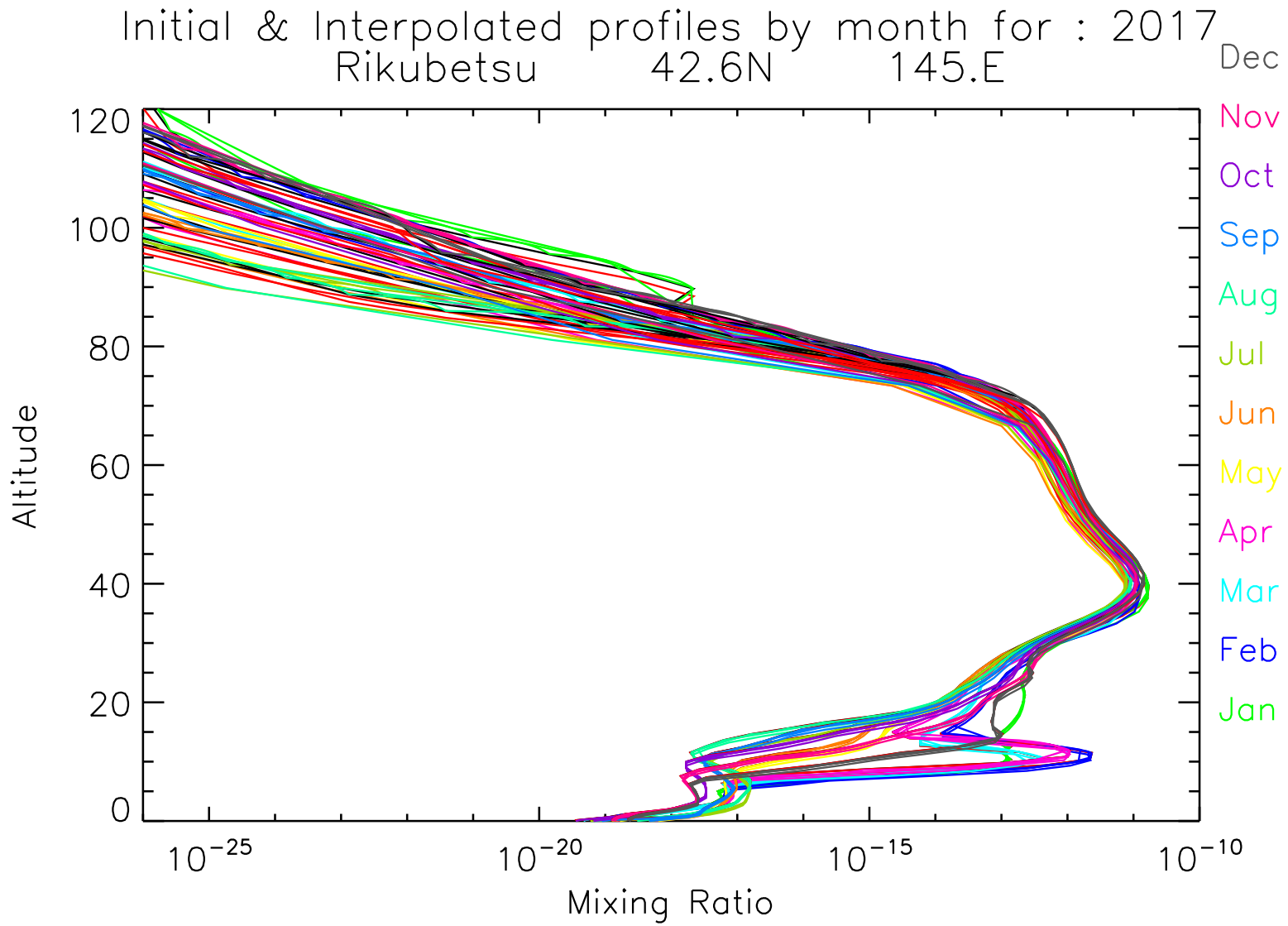

Initial & Interpolated profiles by month for : 2012
Rikubetsu 42.6N 145.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio

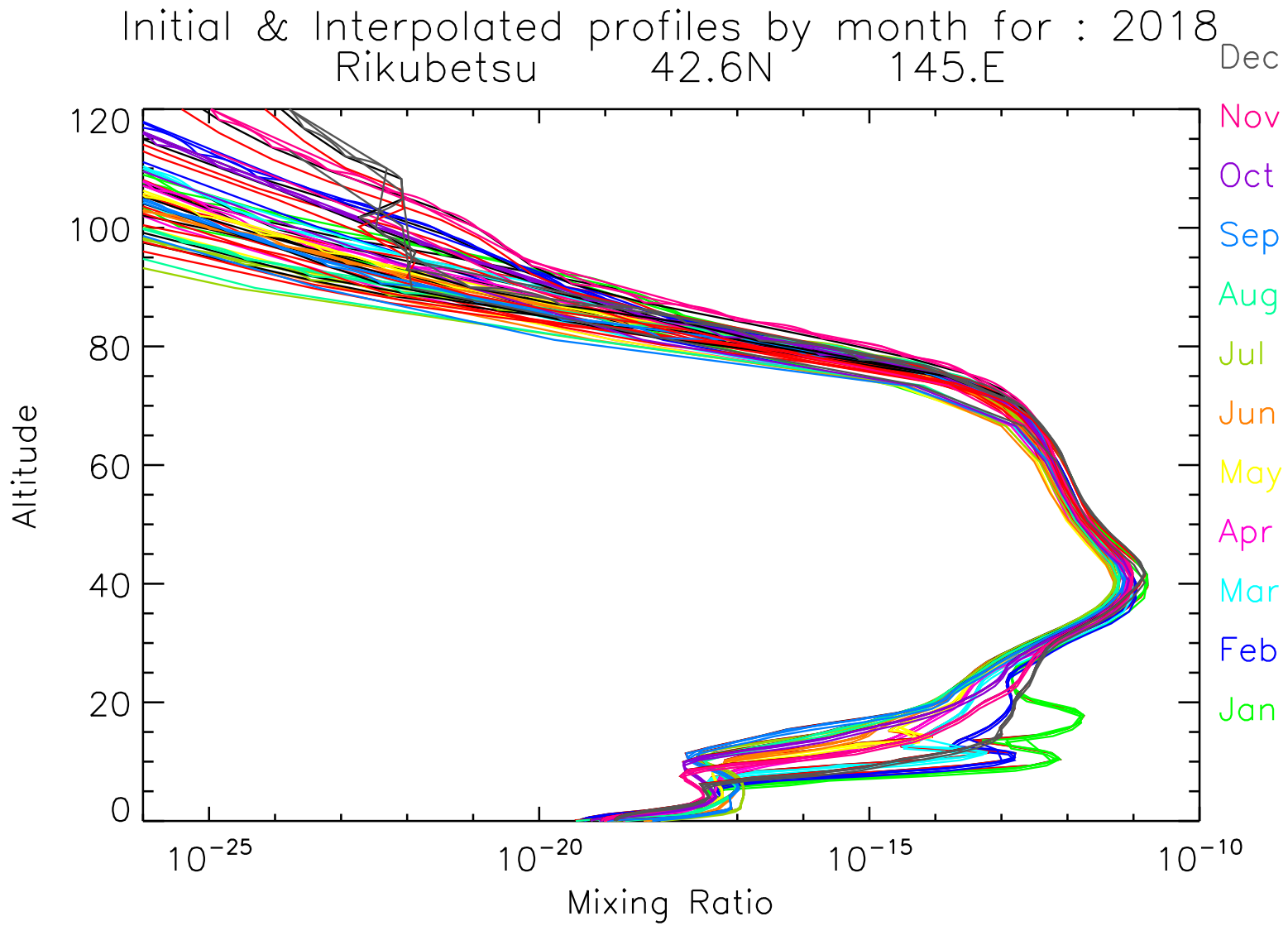

Initial & Interpolated profiles by month for : 2013
Rikubetsu 42.6N 145.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio

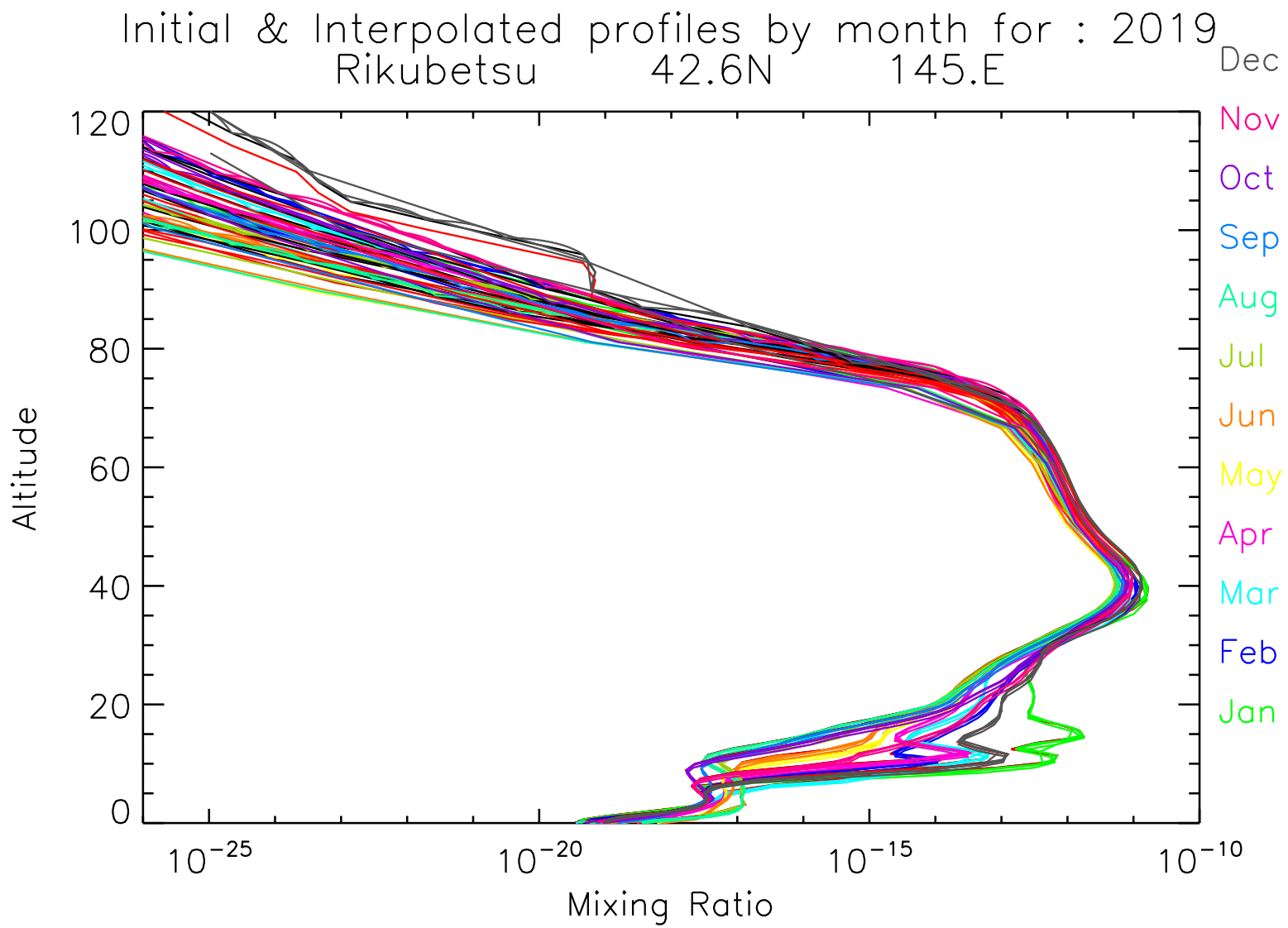

Initial & Interpolated profiles by month for : 2014
Rikubetsu 42.6N 145.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio

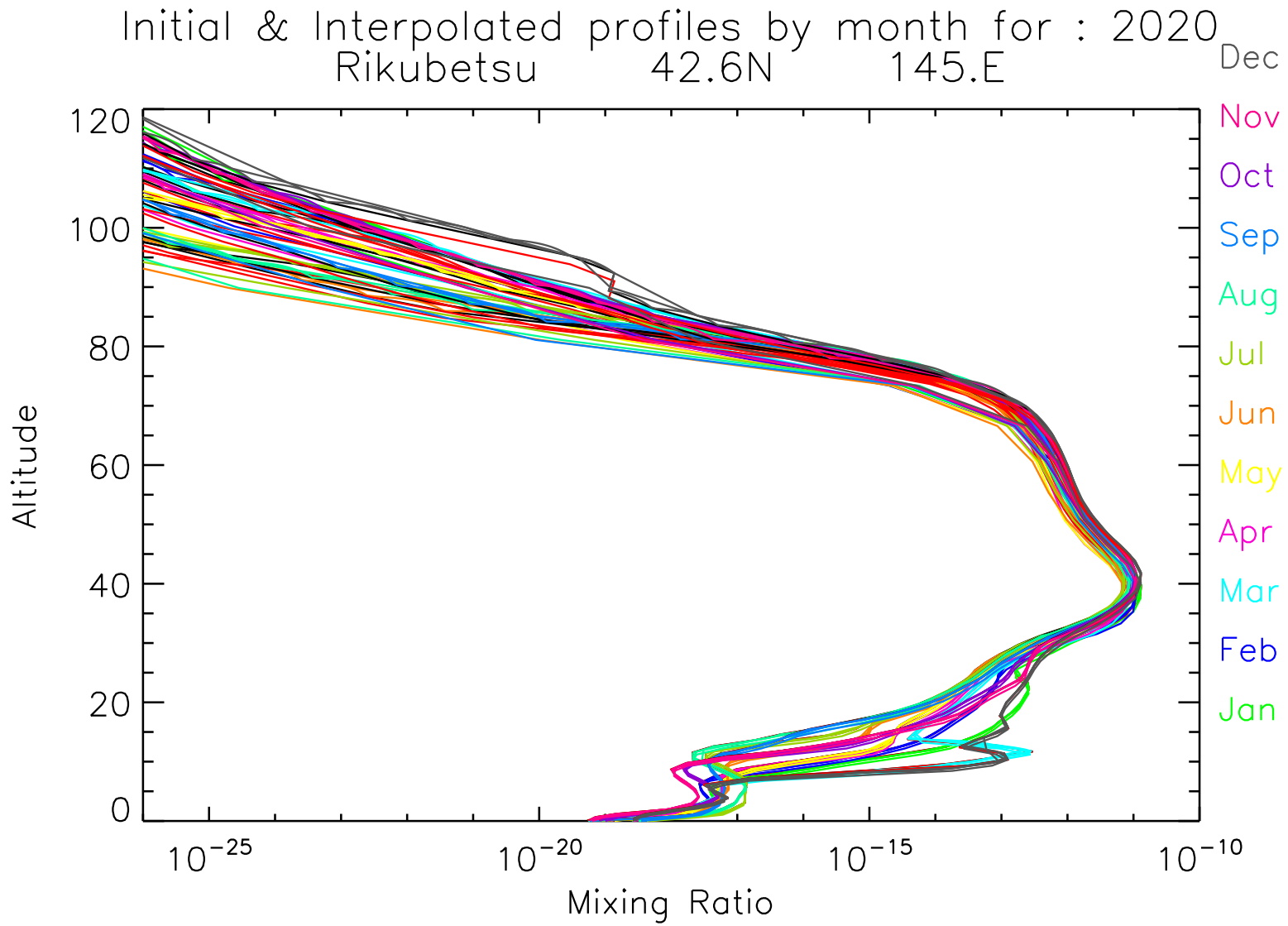

Initial & Interpolated profiles by month for : 2015
Rikubetsu 42.6N 145.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio

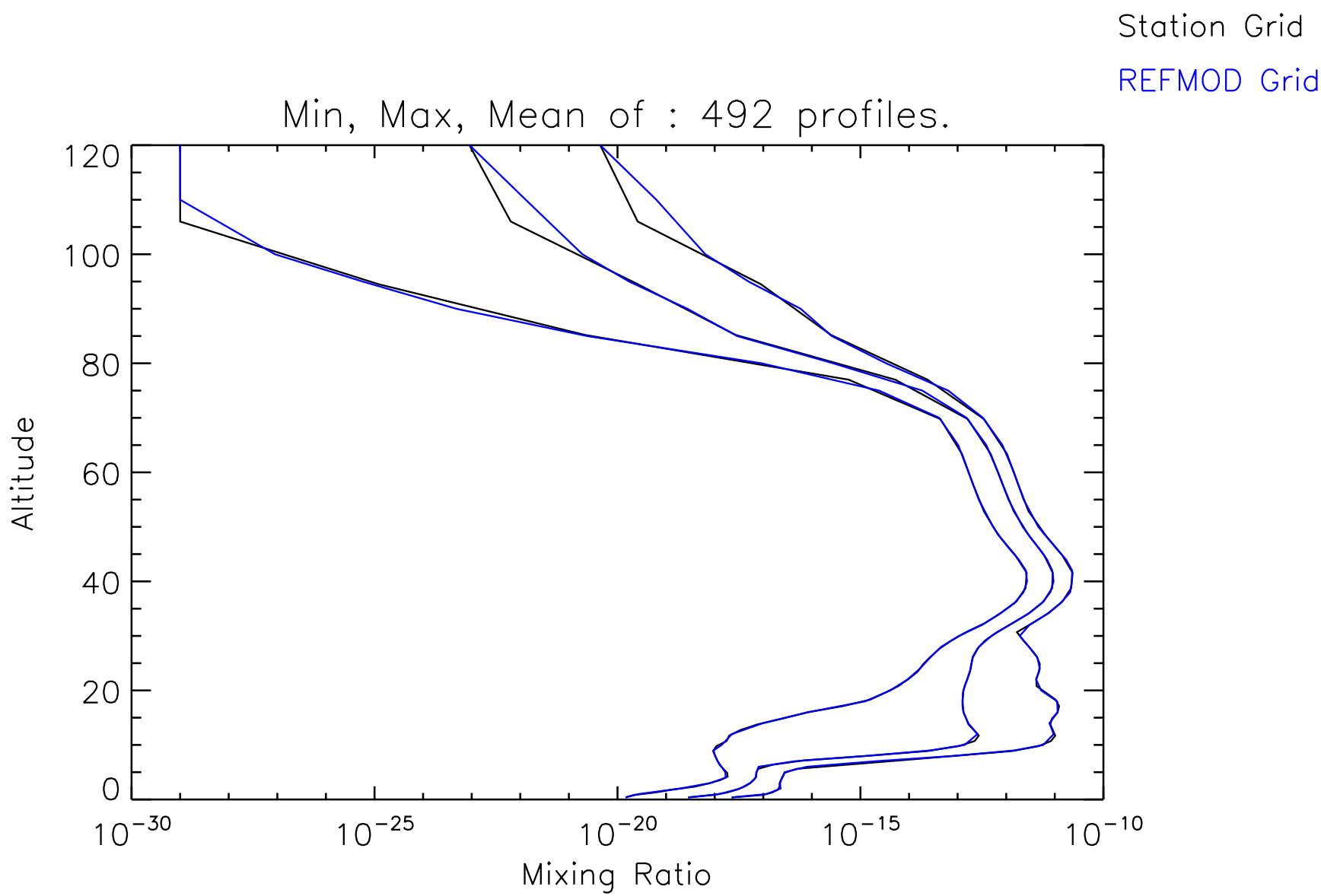

Initial & Interpolated profiles by month for : 2016
Rikubetsu 42.6N 145.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio

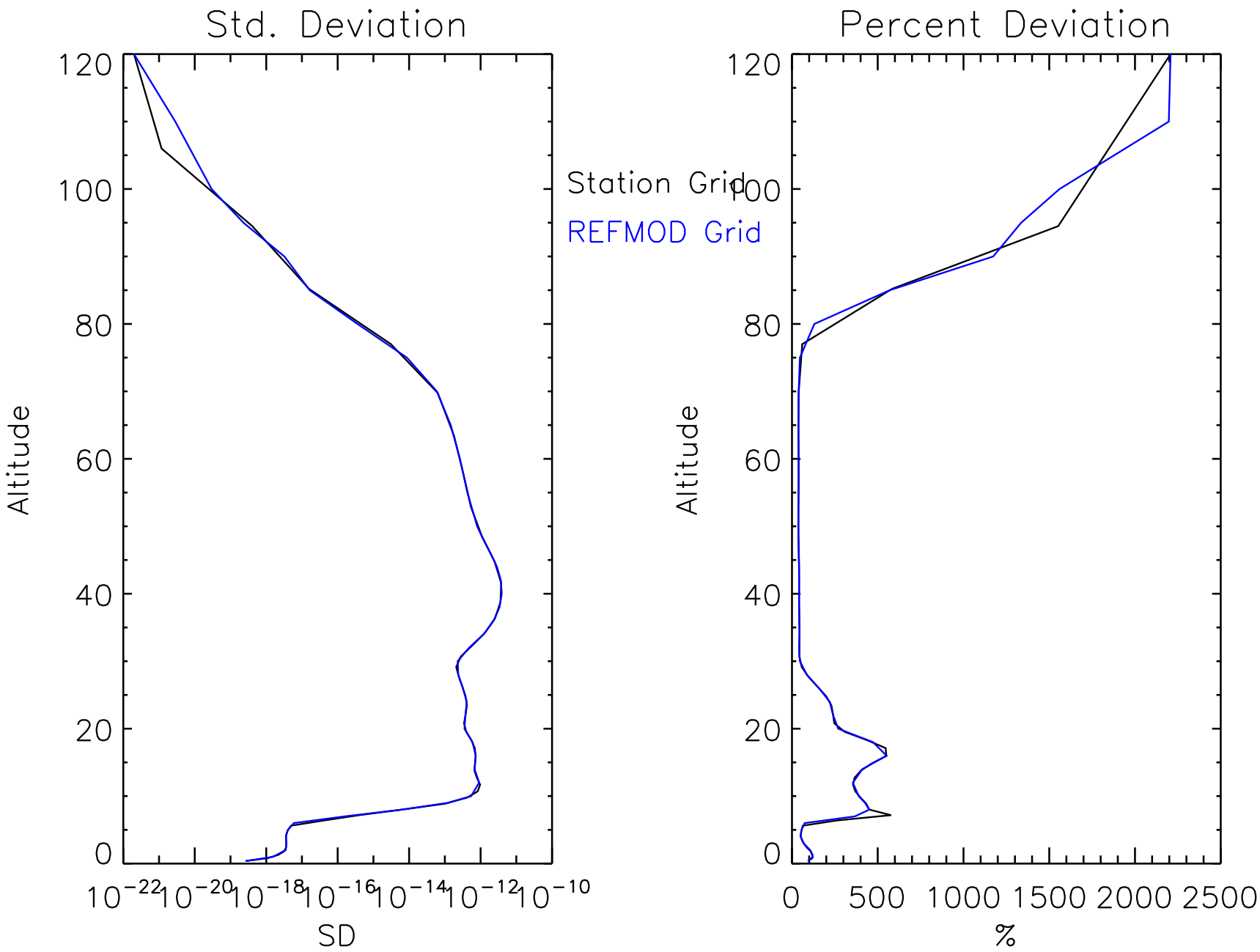

Initial & Interpolated profiles by month for : 2017
Rikubetsu 42.6N 145.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio

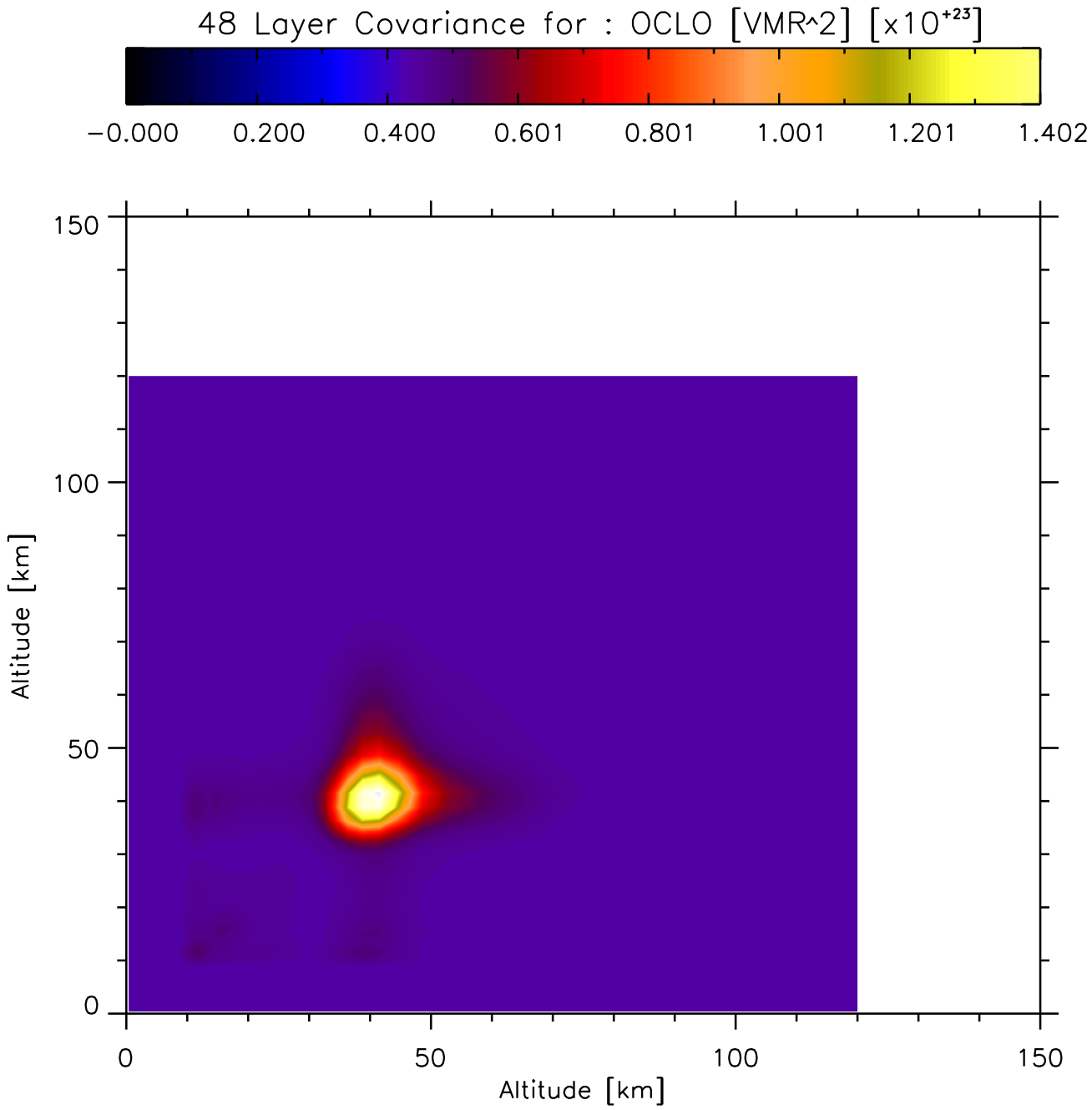

Initial & Interpolated profiles by month for : 2018
Rikubetsu 42.6N 145.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio

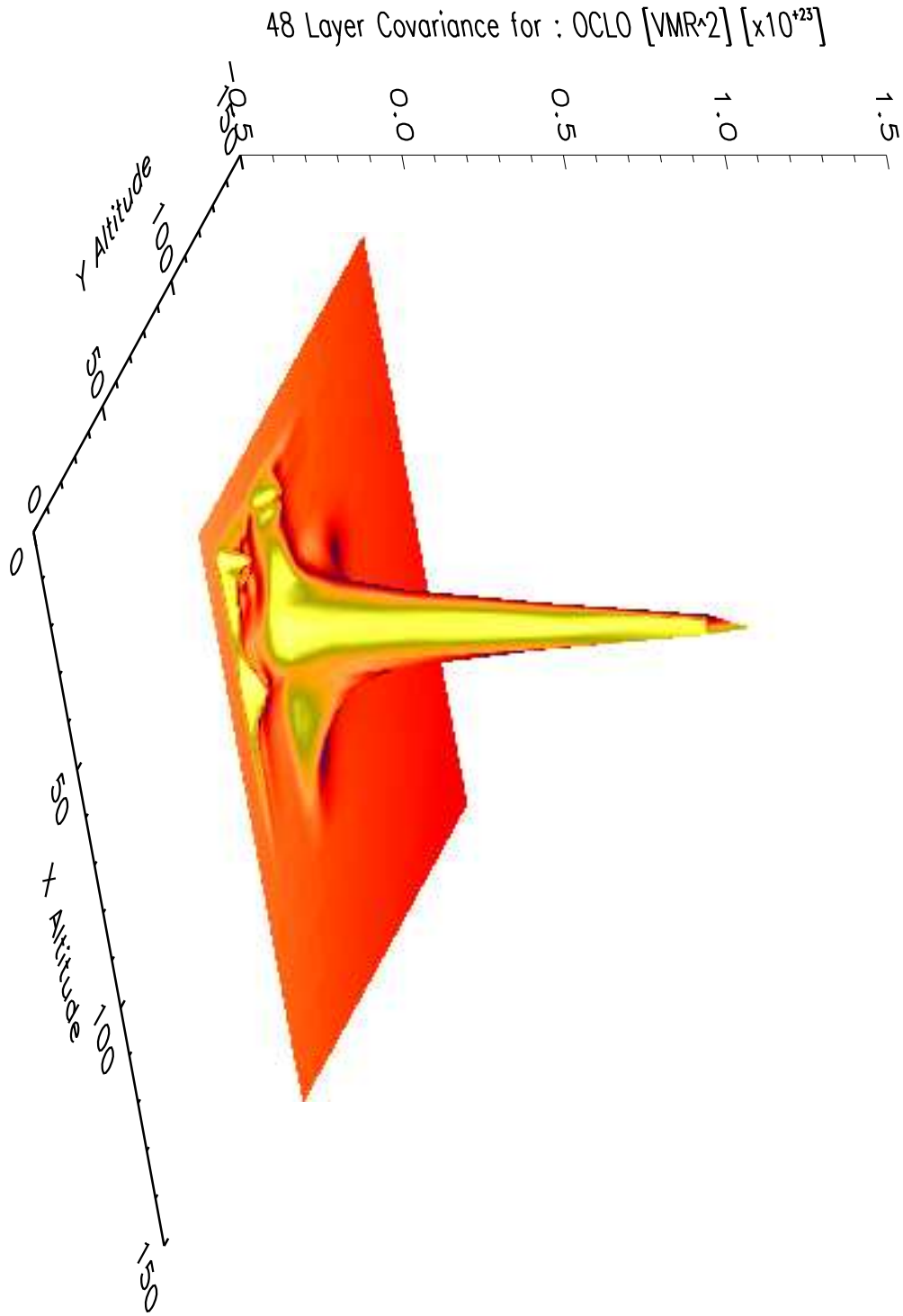

Initial & Interpolated profiles by month for : 2019
Rikubetsu 42.6N 145.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio

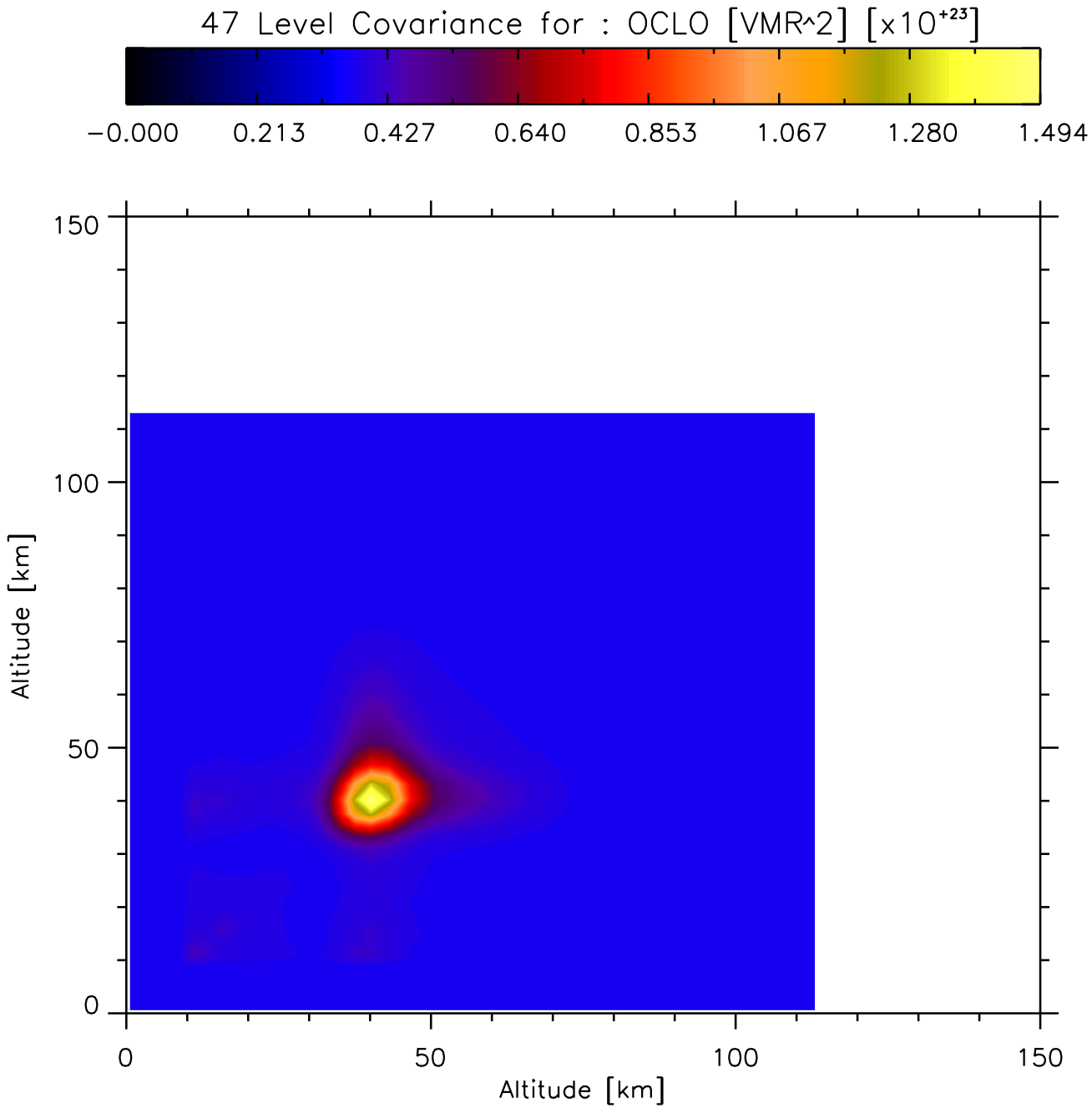

Initial & Interpolated profiles by month for : 2020
Rikubetsu 42.6N 145.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio

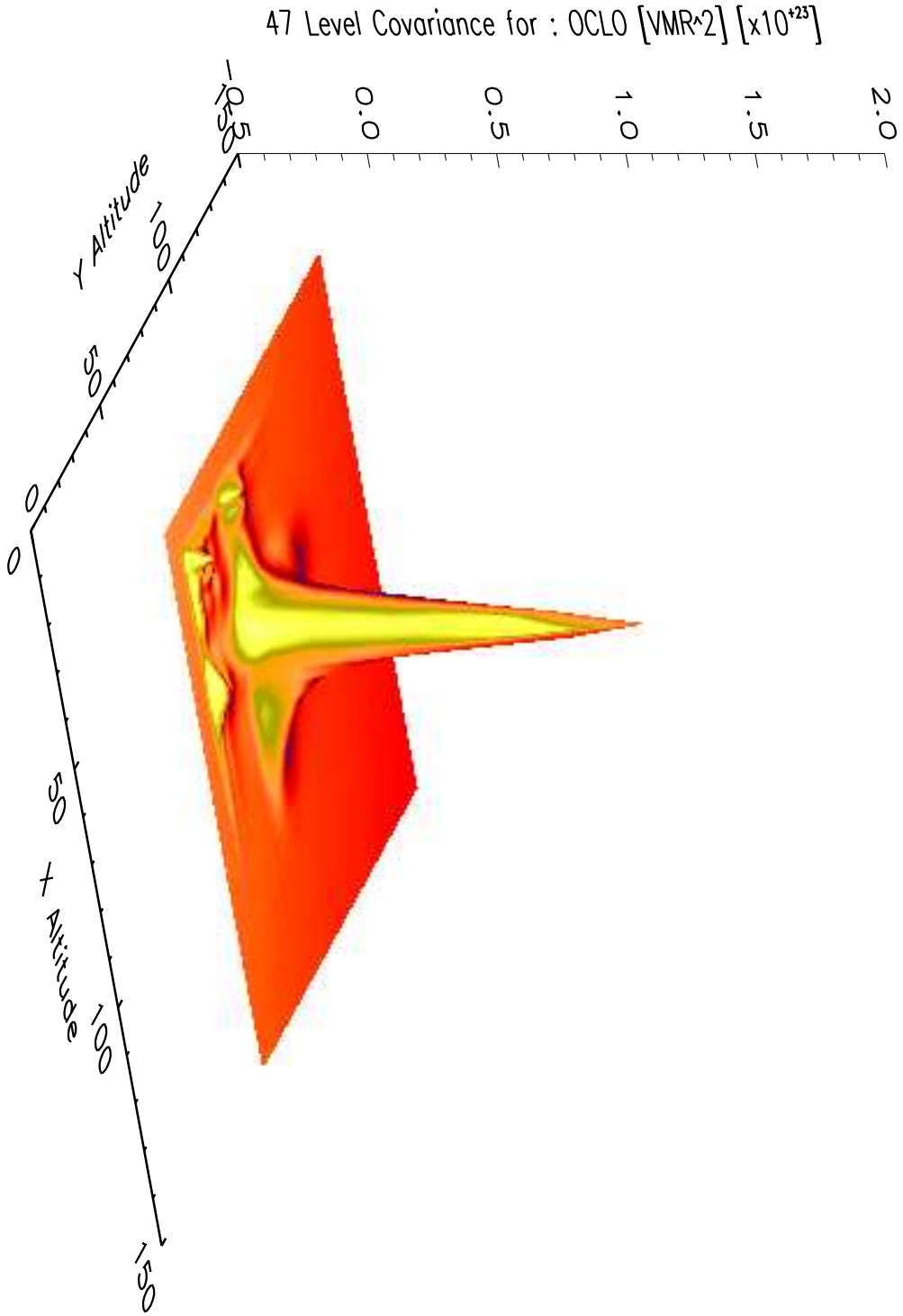

Station Grid
REFMOD Grid
Min, Max, Mean of : 492 profiles.
Altitude
120
100
80
60
40
20
0
$10^{-30}$
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Std. Deviation
Percent Deviation
Station Grid
REFMOD Grid
Altitude
Altitude
120
100
80
60
40
20
0
$10^{-22}$ $10^{-20}$ $10^{-18}$ $10^{-16}$ $10^{-14}$ $10^{-12}$ $10^{-10}$
SD
0 500 1000 1500 2000 2500
%


48 Layer Covariance for : OCLO [VMR^2] [x10^+23]
−0.000
0.200
0.400
0.601
0.801
1.001
1.201
1.402
150
100
50
0
Altitude [km]
0
50
100
150
Altitude [km]


48 Layer Covariance for : OCLO [VMR^2] [x10^+23]
-0.5
0.0
0.5
1.0
1.5
Y Altitude
0
50
100
150
X Altitude
0
50
100
150


47 Level Covariance for : OCLO [VMR^2] [x10^+23]
−0.000
0.213
0.427
0.640
0.853
1.067
1.280
1.494
150
100
50
0
Altitude [km]
0
50
100
150
Altitude [km]


47 Level Covariance for : OCLO [VMR^2] [x10^+23]
-0.5
0.0
0.5
1.0
1.5
2.0
Y Altitude
0
50
100
0
50
100
X Altitude