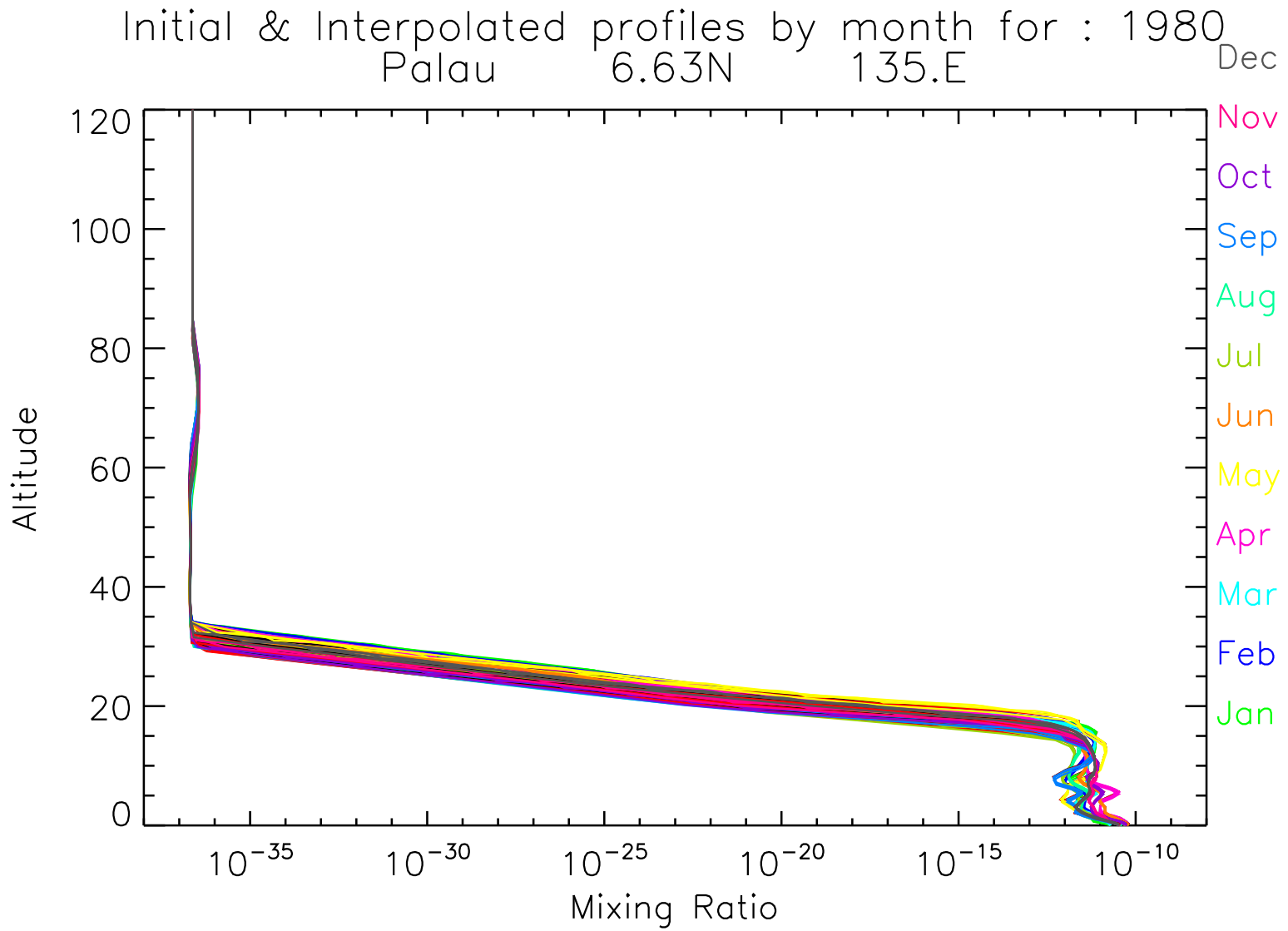
Initial & Interpolated profiles by month for : 1980
Palau 6.63N 135.E
Dec
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120
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Altitude
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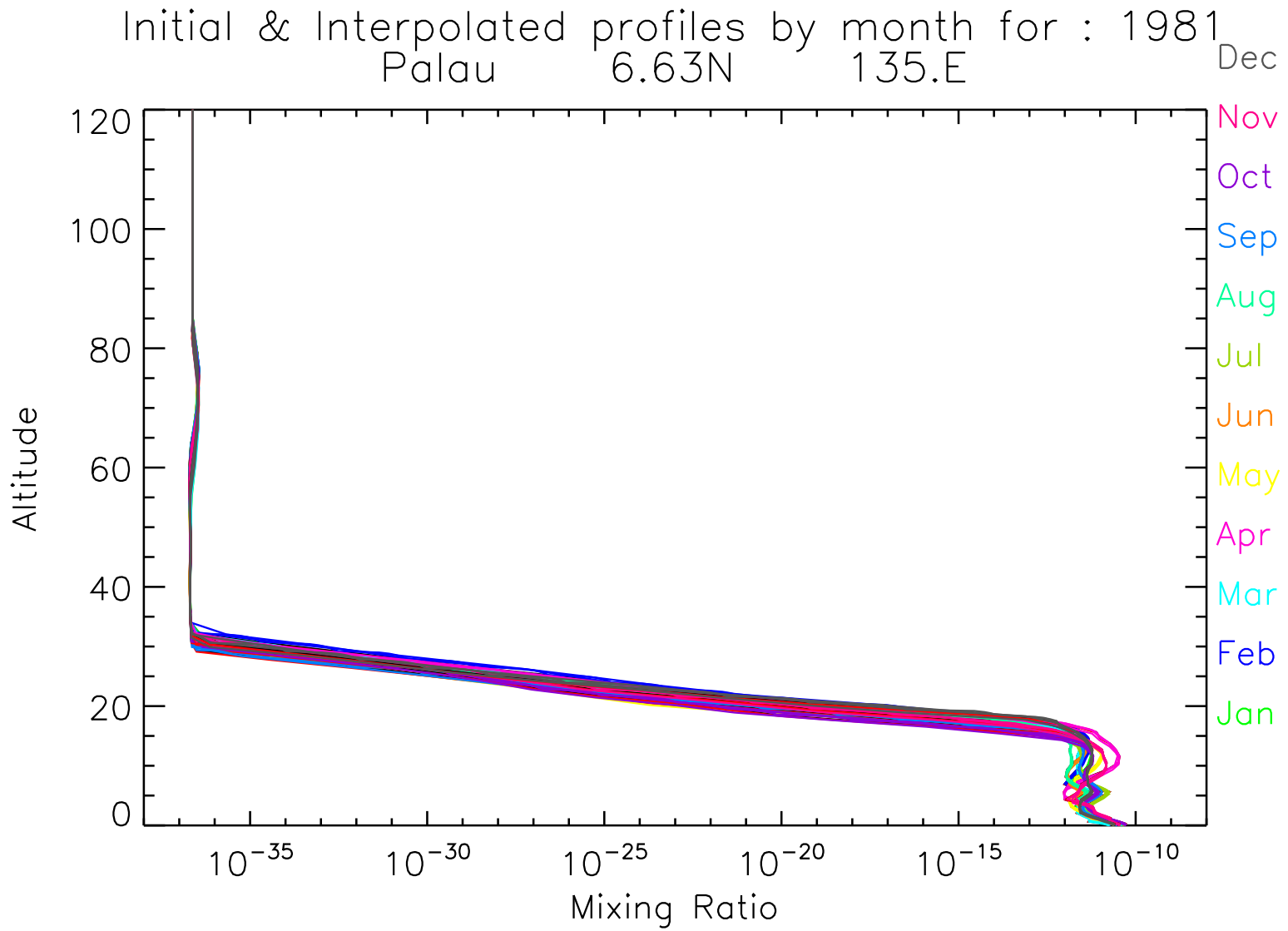
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1981
Palau 6.63N 135.E
Dec
Nov
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Jun
May
Apr
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Feb
Jan
Altitude
120
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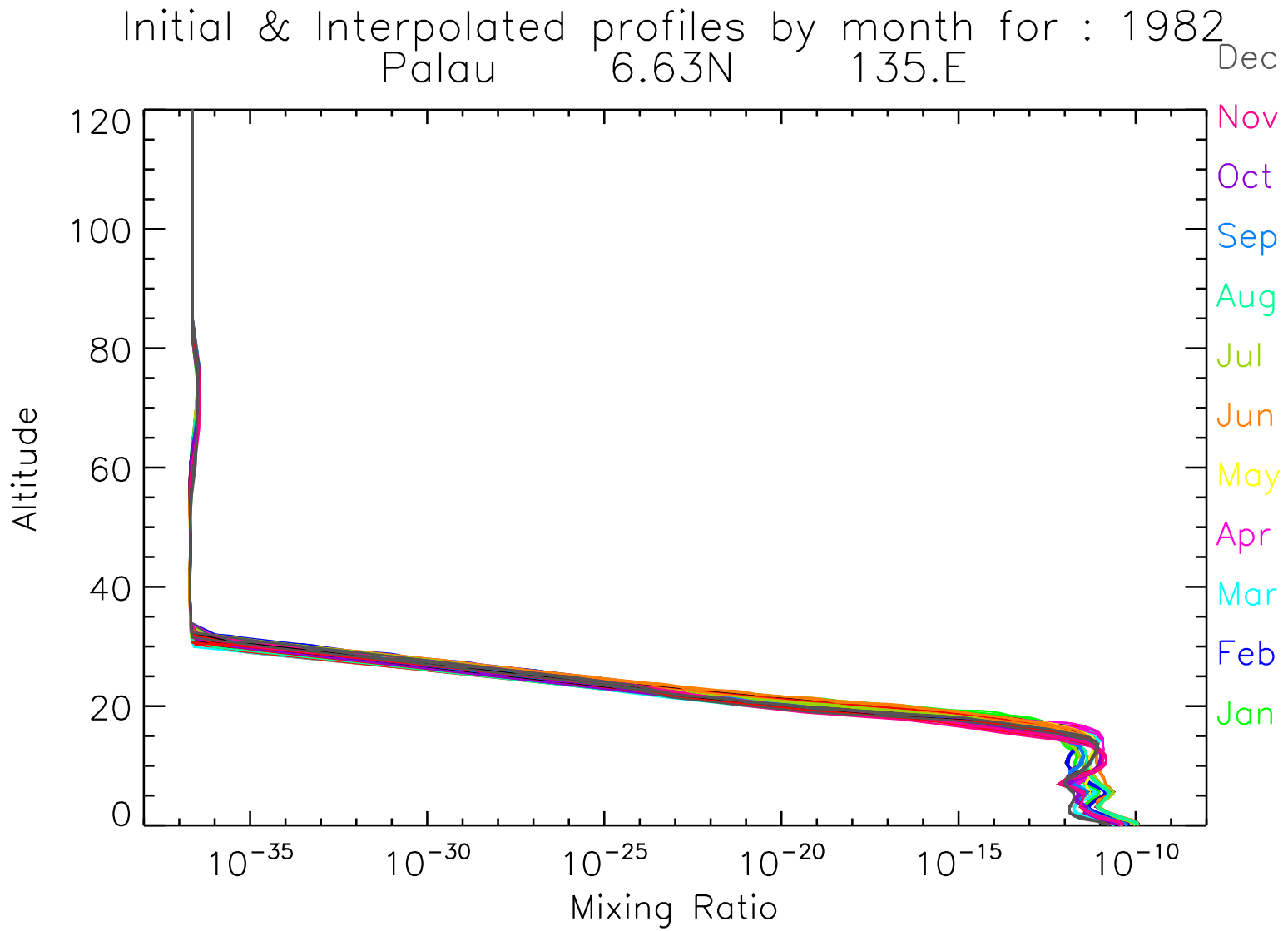
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1982
Palau 6.63N 135.E
Dec
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Altitude
120
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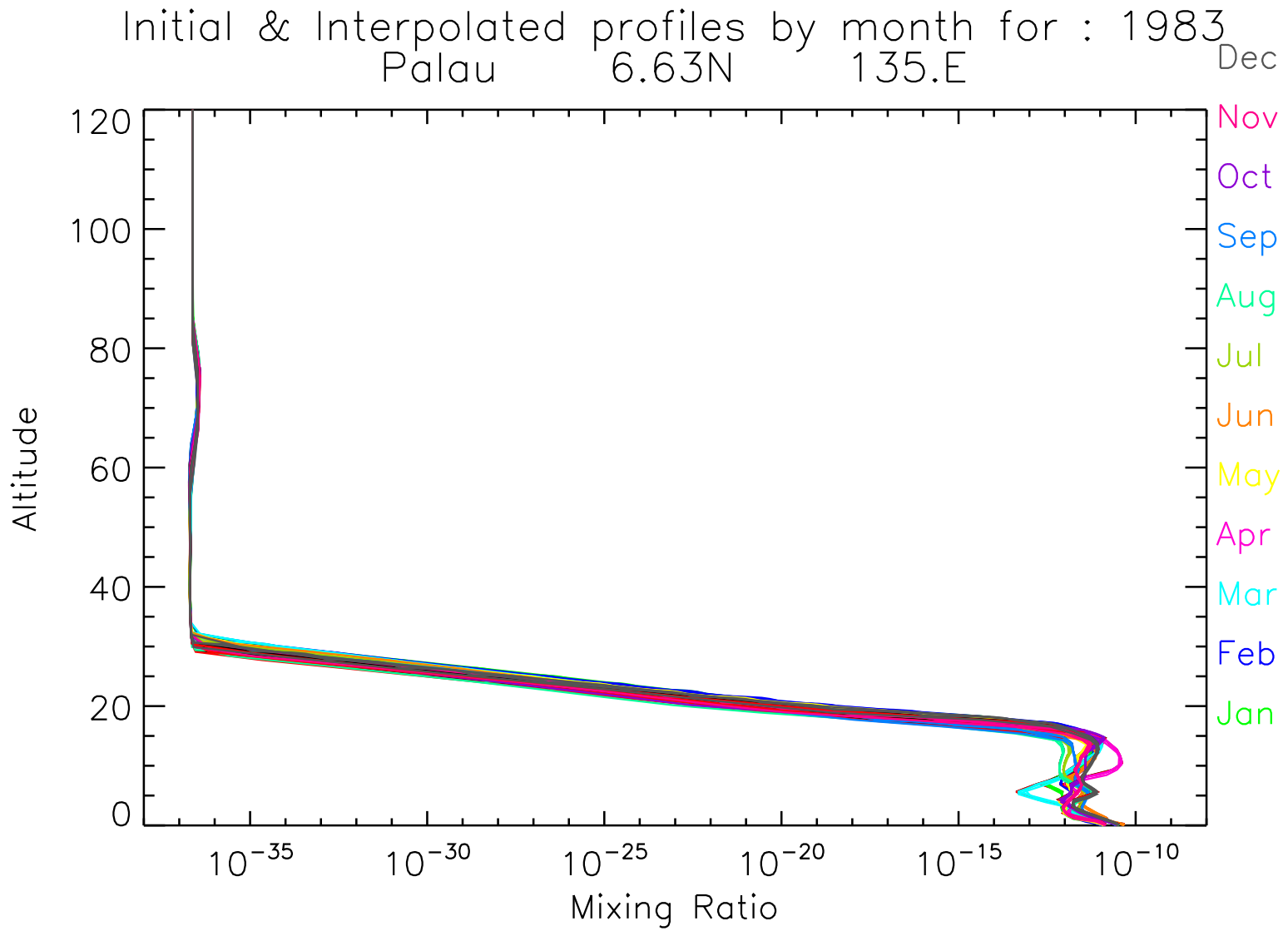
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1983
Palau 6.63N 135.E
Dec
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Altitude
120
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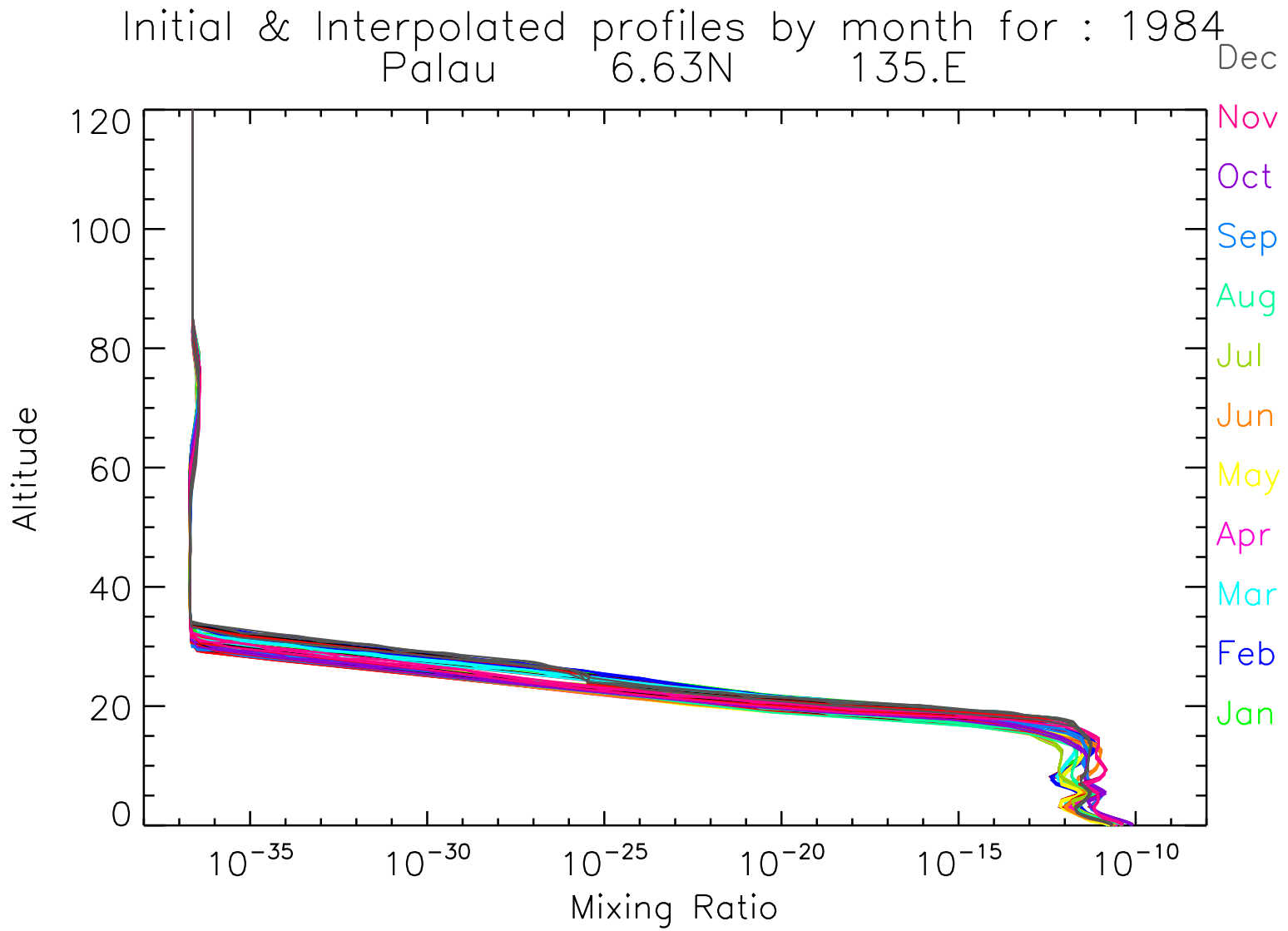
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1984
Palau 6.63N 135.E
Dec
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Altitude
120
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10^{-35}
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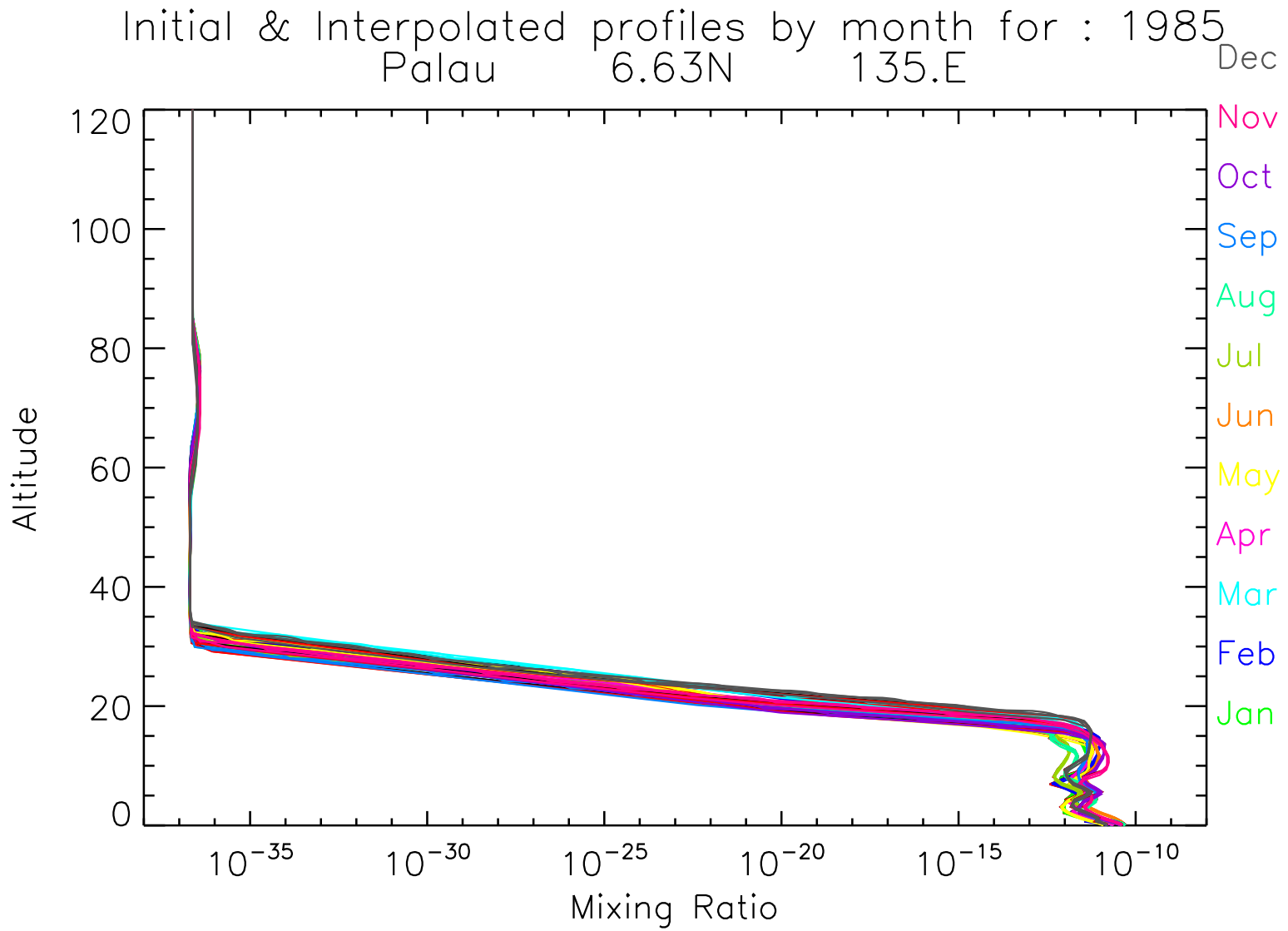
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1985
Palau 6.63N 135.E
Dec
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Altitude
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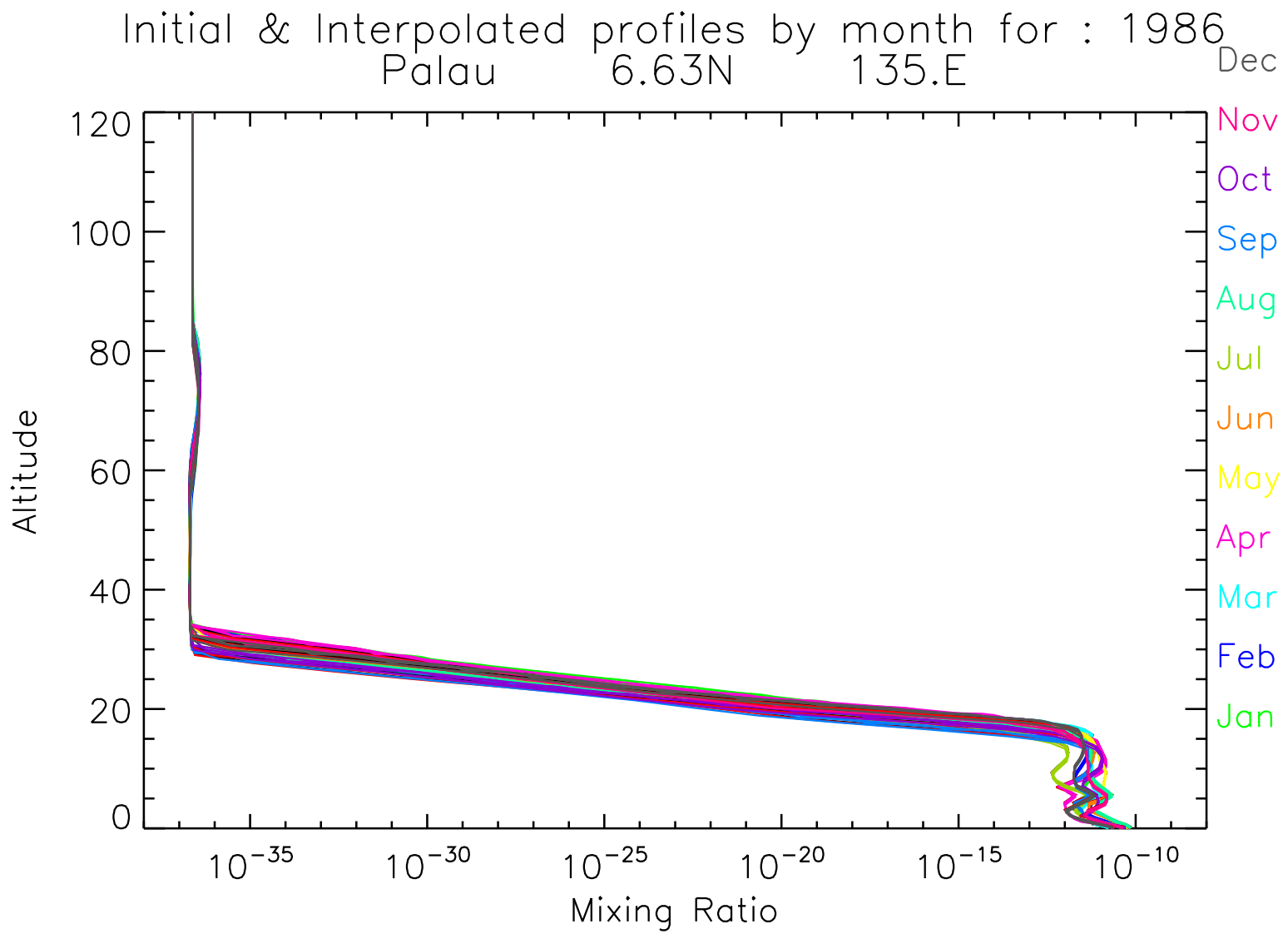
10^{-15}
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1986
Palau 6.63N 135.E
Dec
Nov
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120
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Altitude
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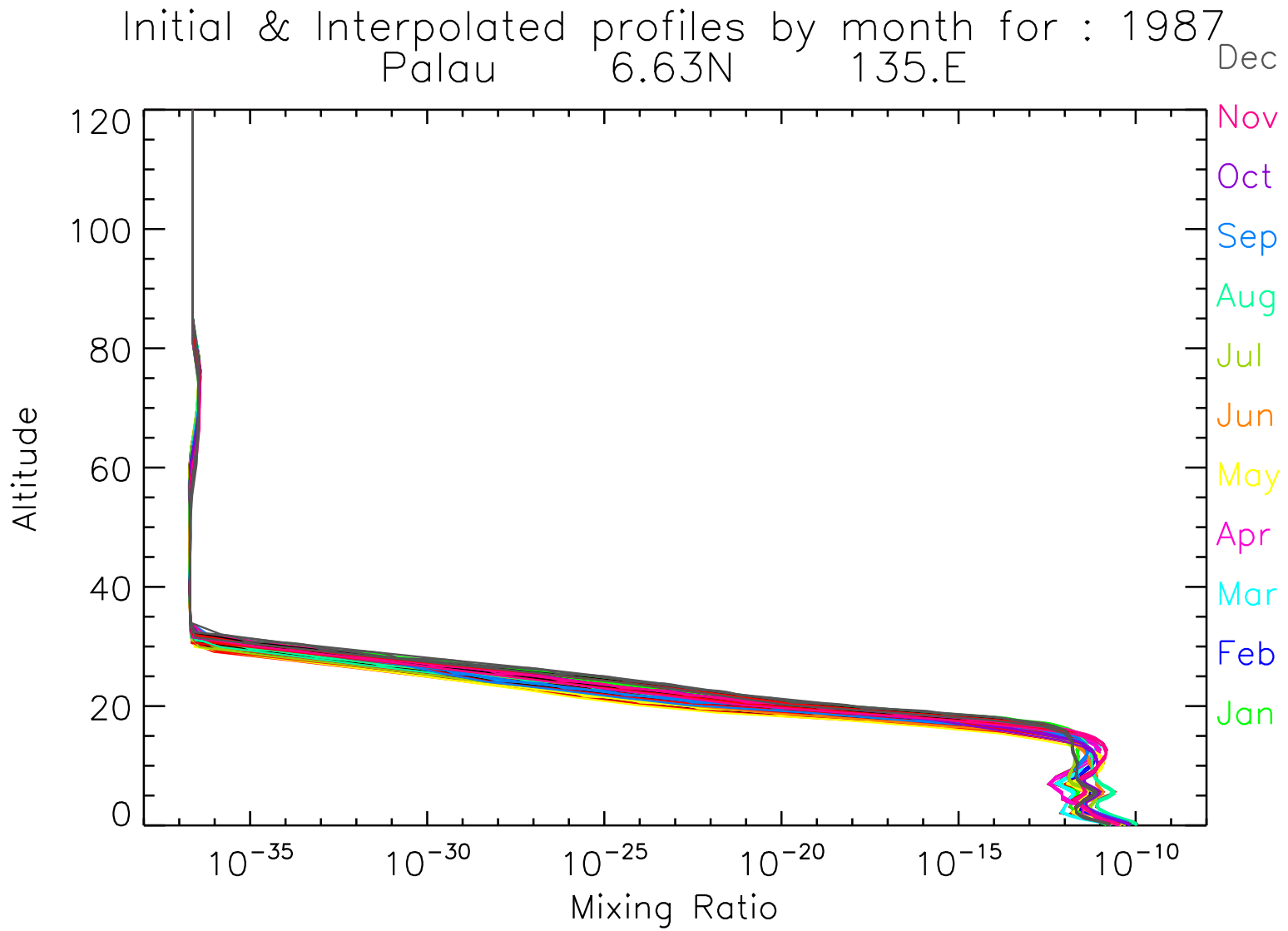
10^{-15}
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1987
Palau 6.63N 135.E
Dec
Nov
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Altitude
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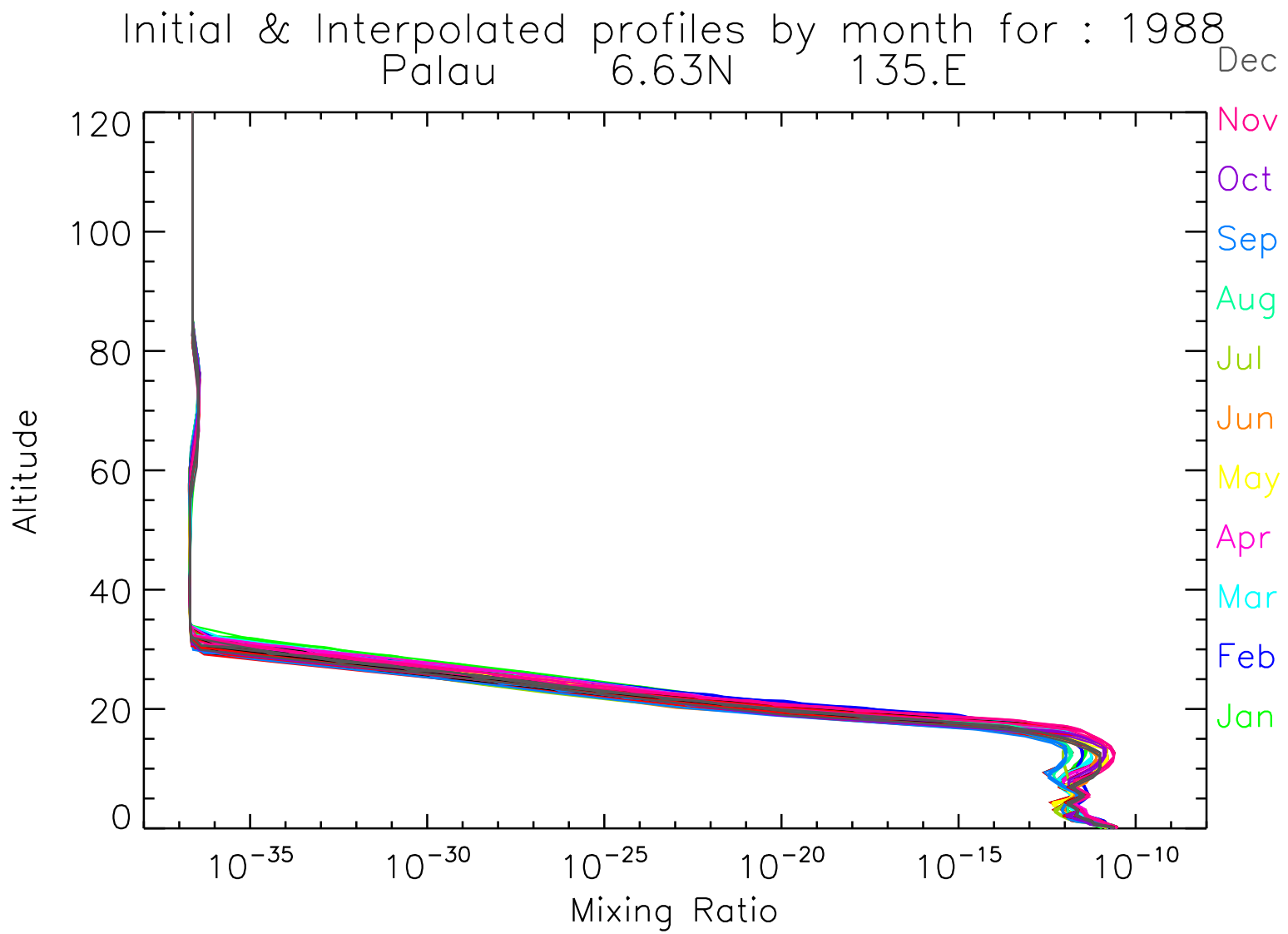
10^{-15}
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1988
Palau 6.63N 135.E
Dec
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Altitude
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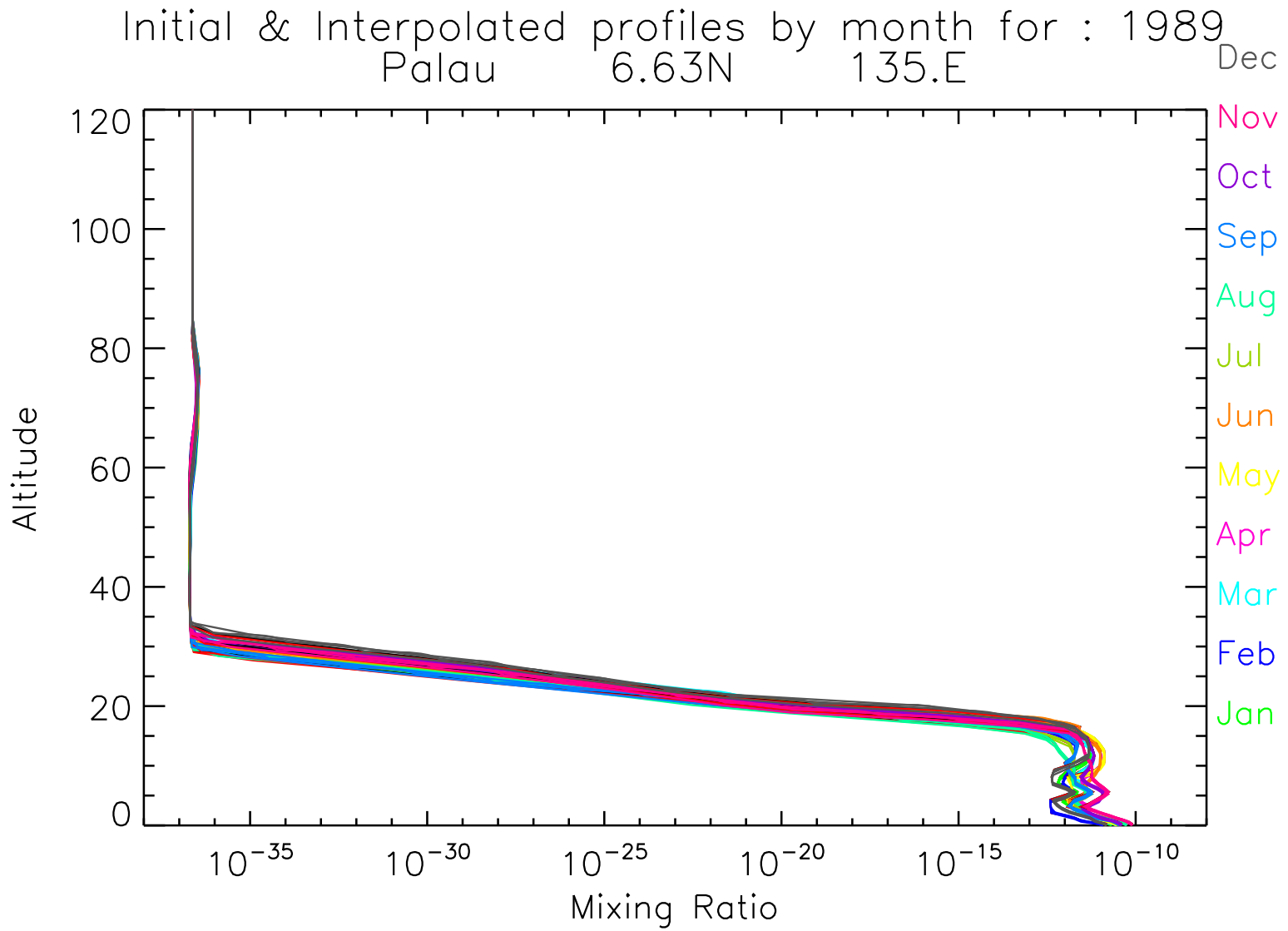
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1989
Palau 6.63N 135.E
Dec
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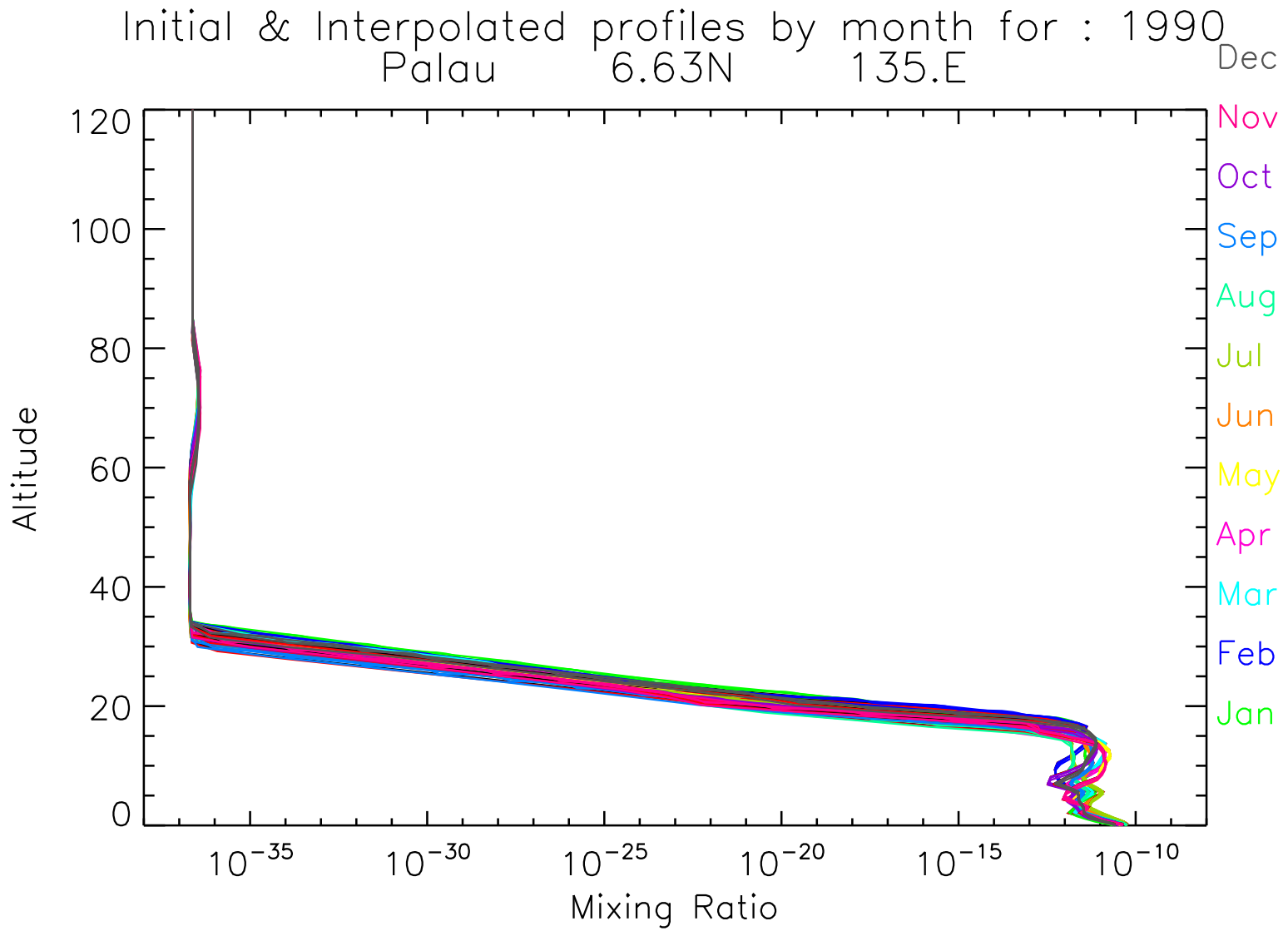
10^{-15}
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1990
Palau 6.63N 135.E
Dec
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Altitude
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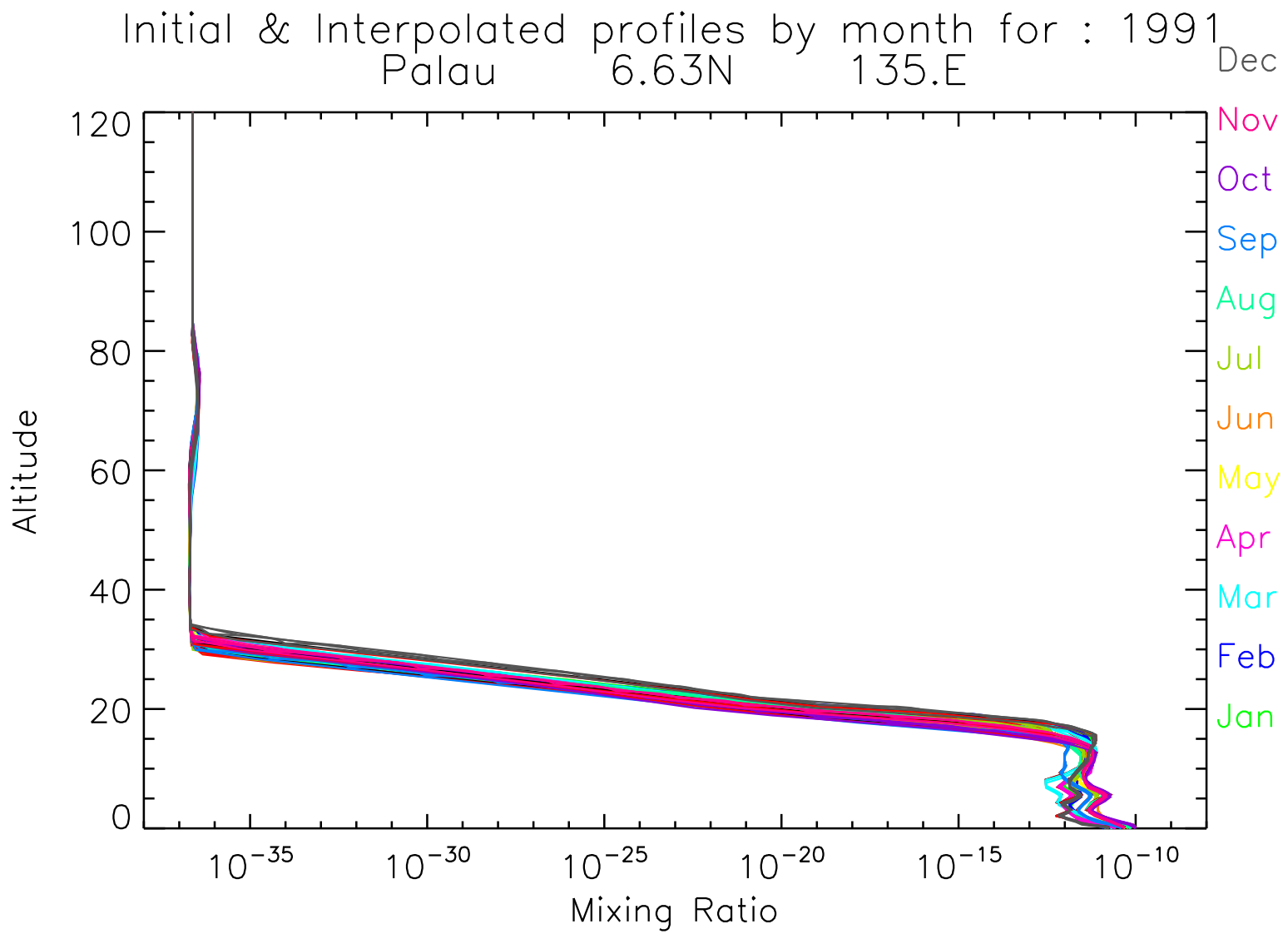
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1991
Palau 6.63N 135.E
Dec
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Altitude
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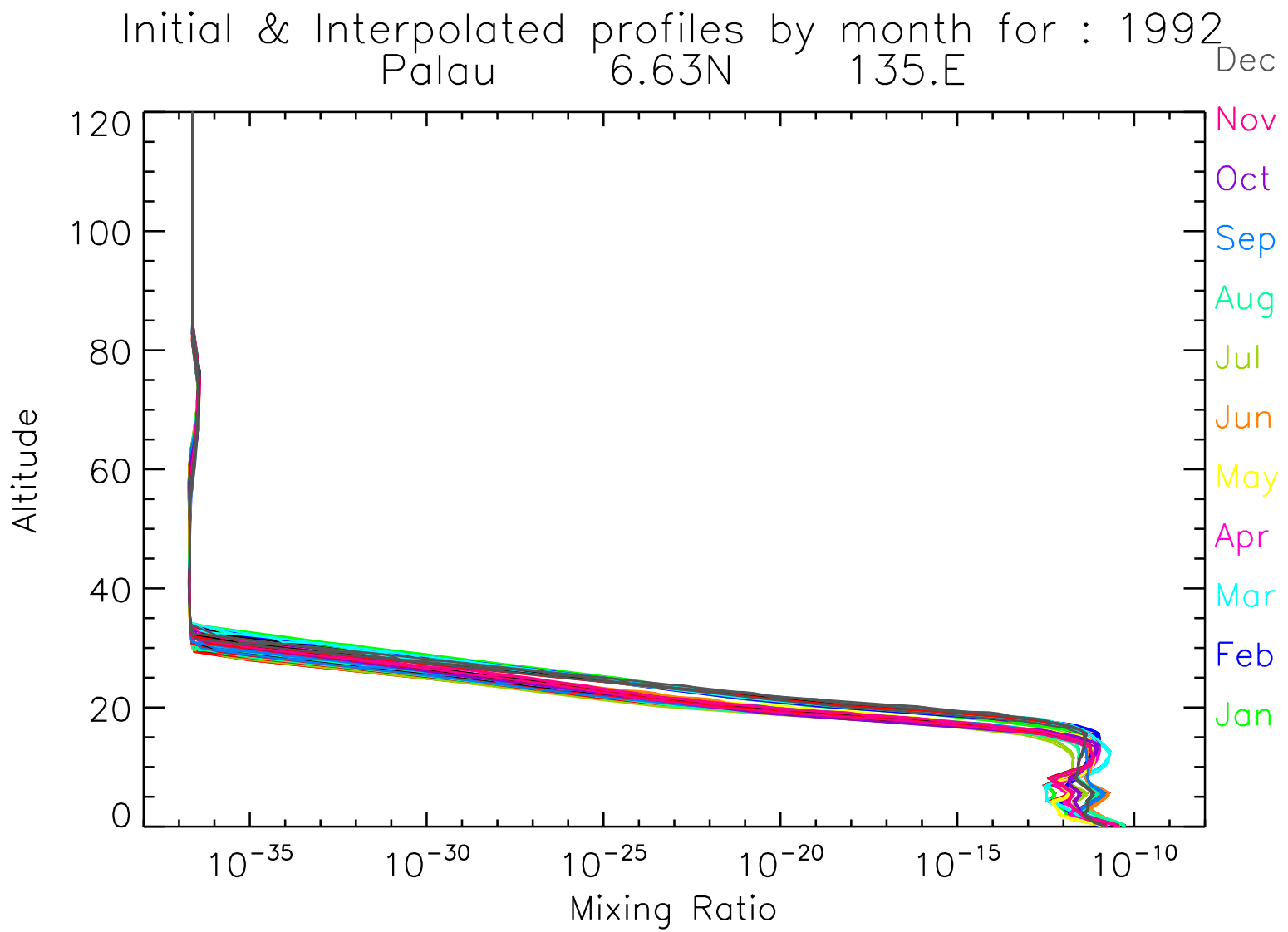
10^{-15}
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1992
Palau 6.63N 135.E
Dec
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Altitude
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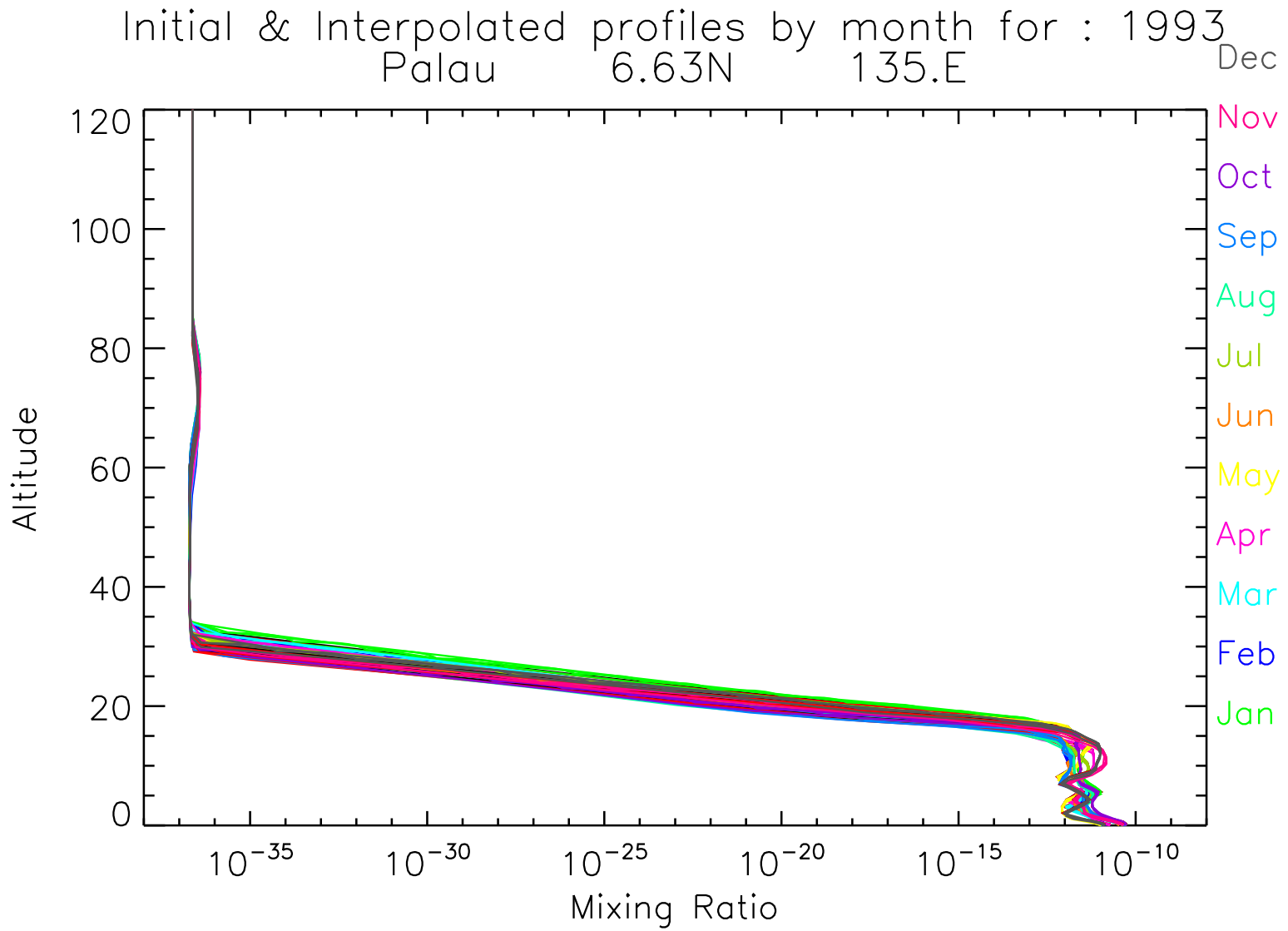
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1993
Palau 6.63N 135.E
Dec
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Altitude
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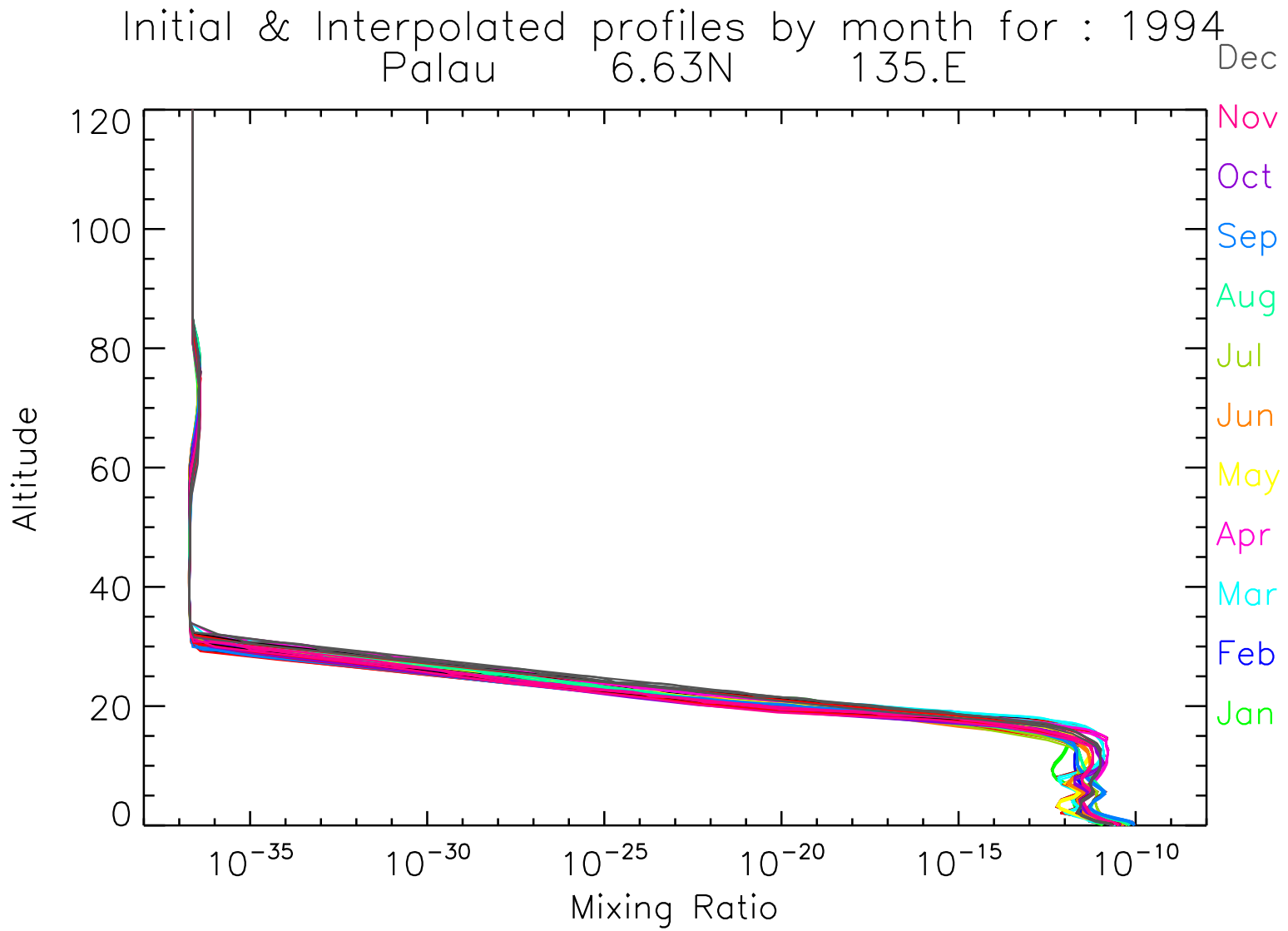
10^{-15}
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1994
Palau 6.63N 135.E
Dec
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Altitude
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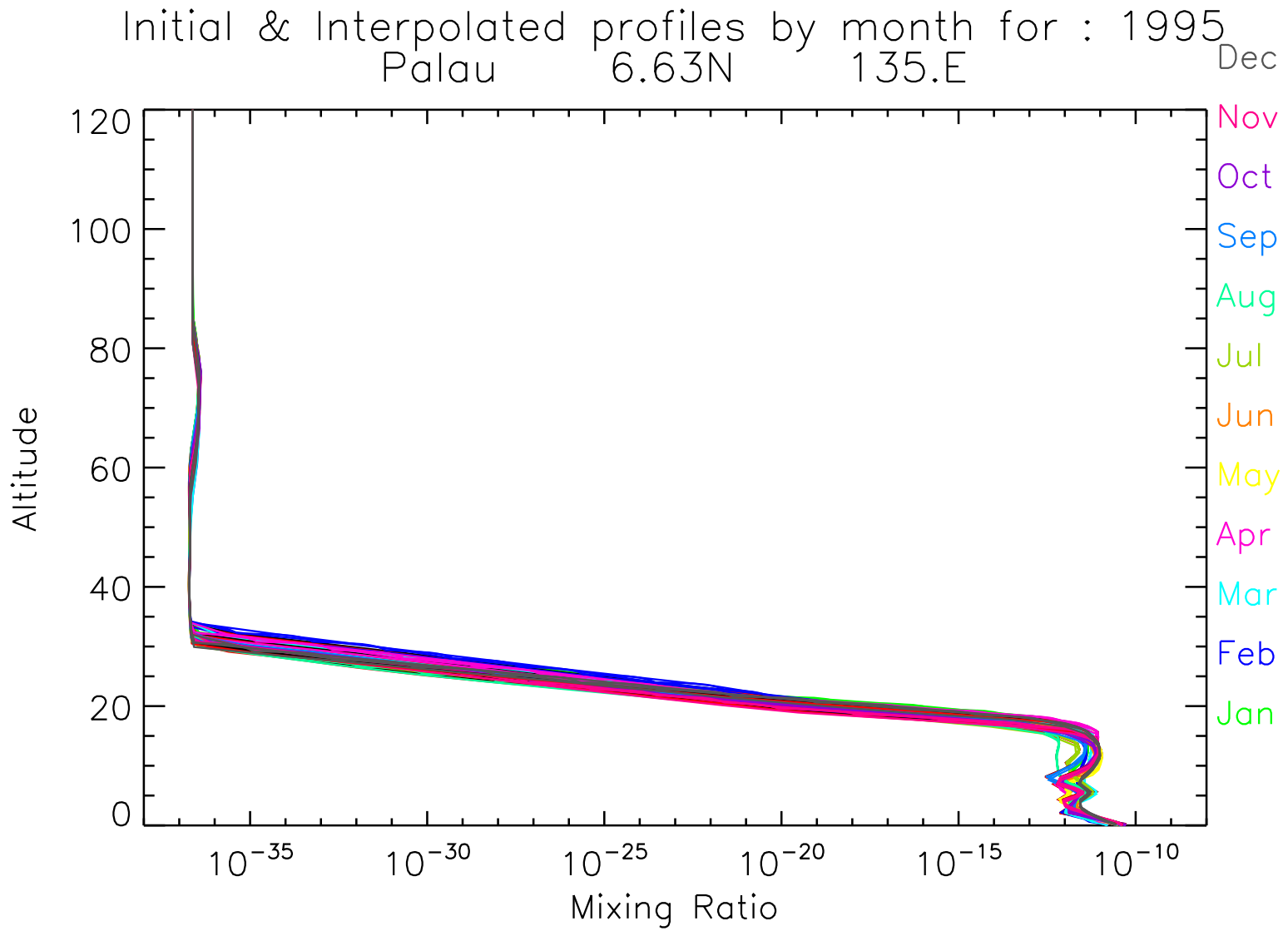
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1995
Palau 6.63N 135.E
Dec
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Altitude
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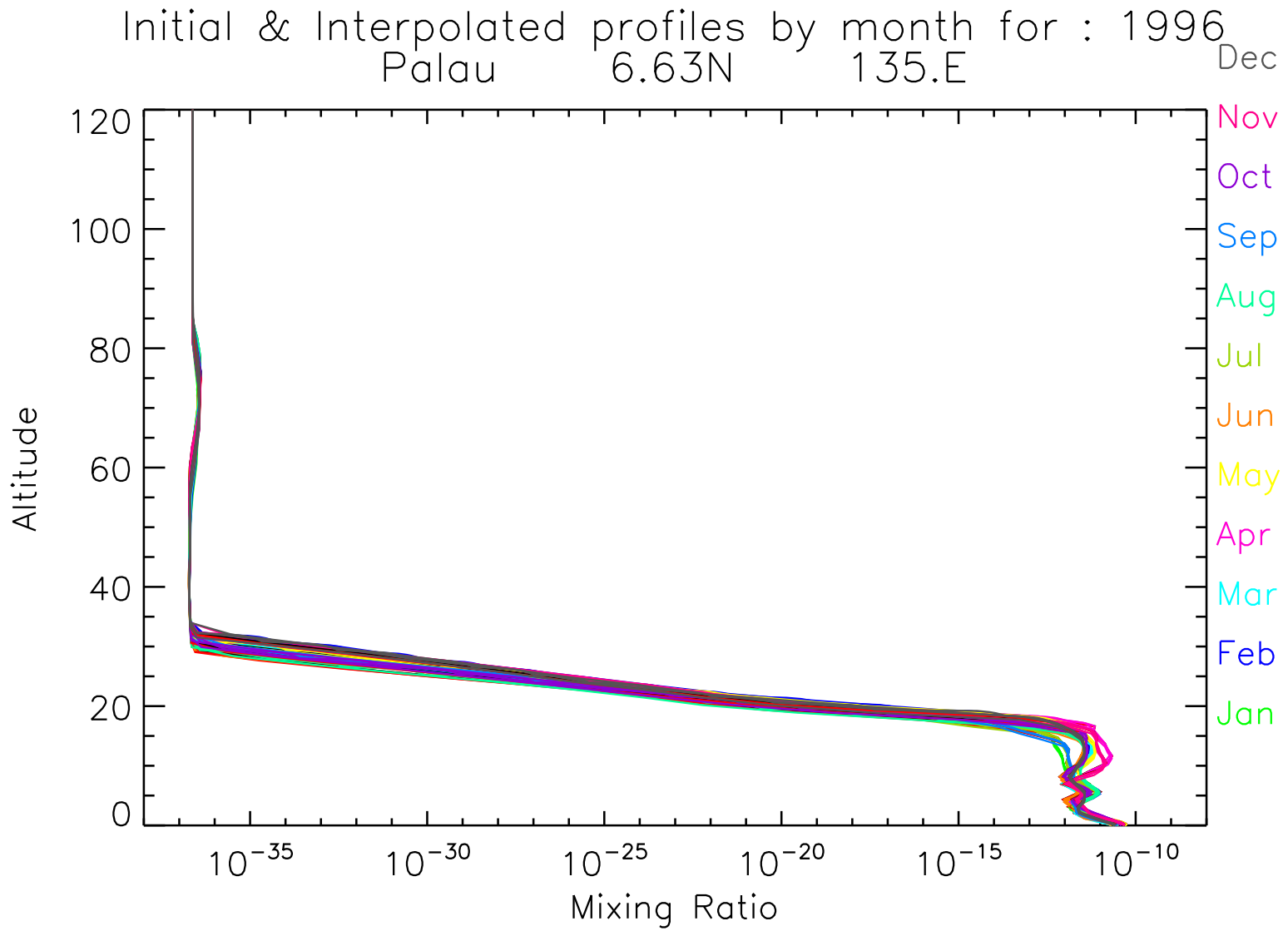
10^{-15}
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1996
Palau 6.63N 135.E
Dec
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Altitude
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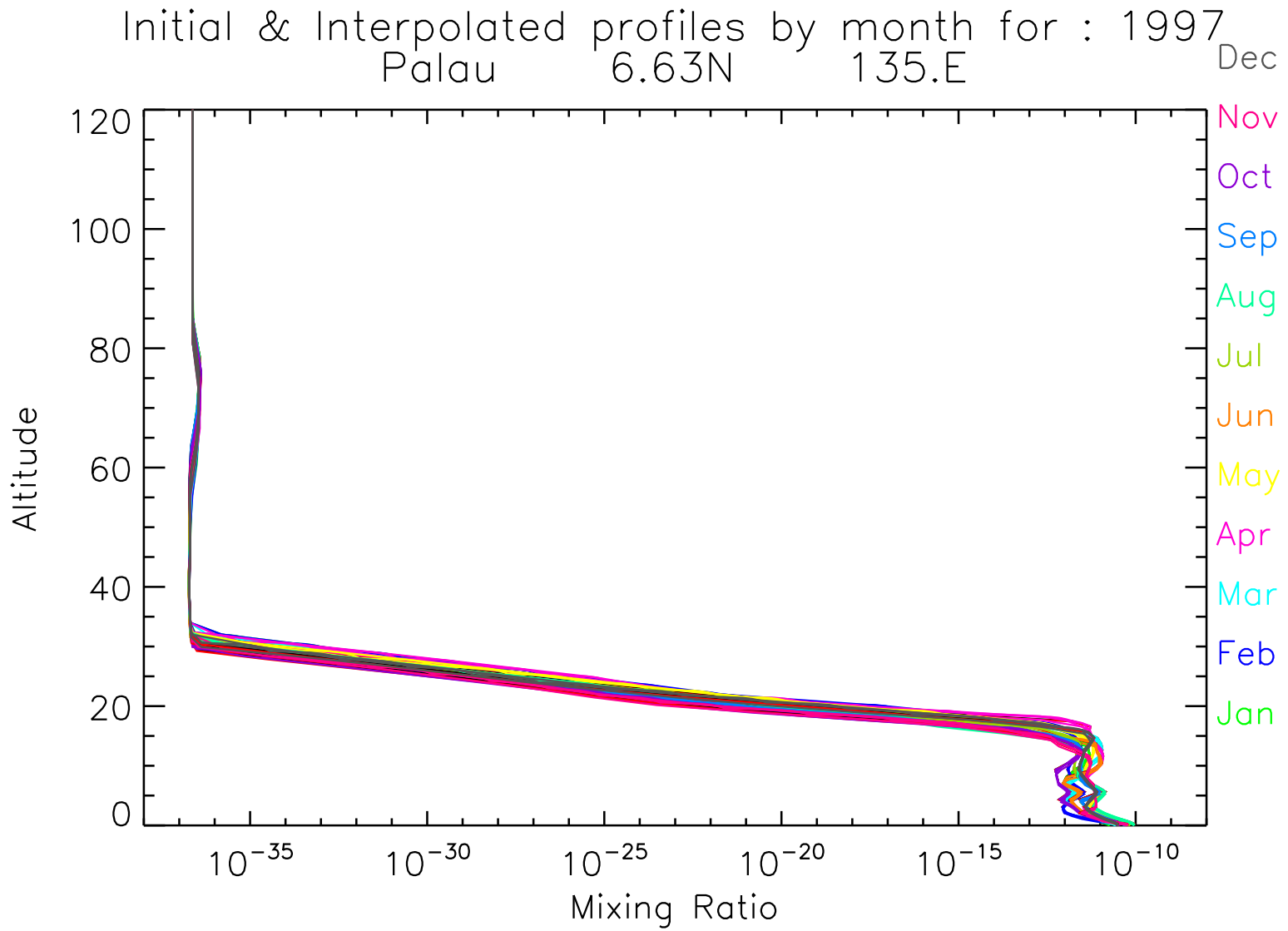
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1997
Palau 6.63N 135.E
Dec
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Altitude
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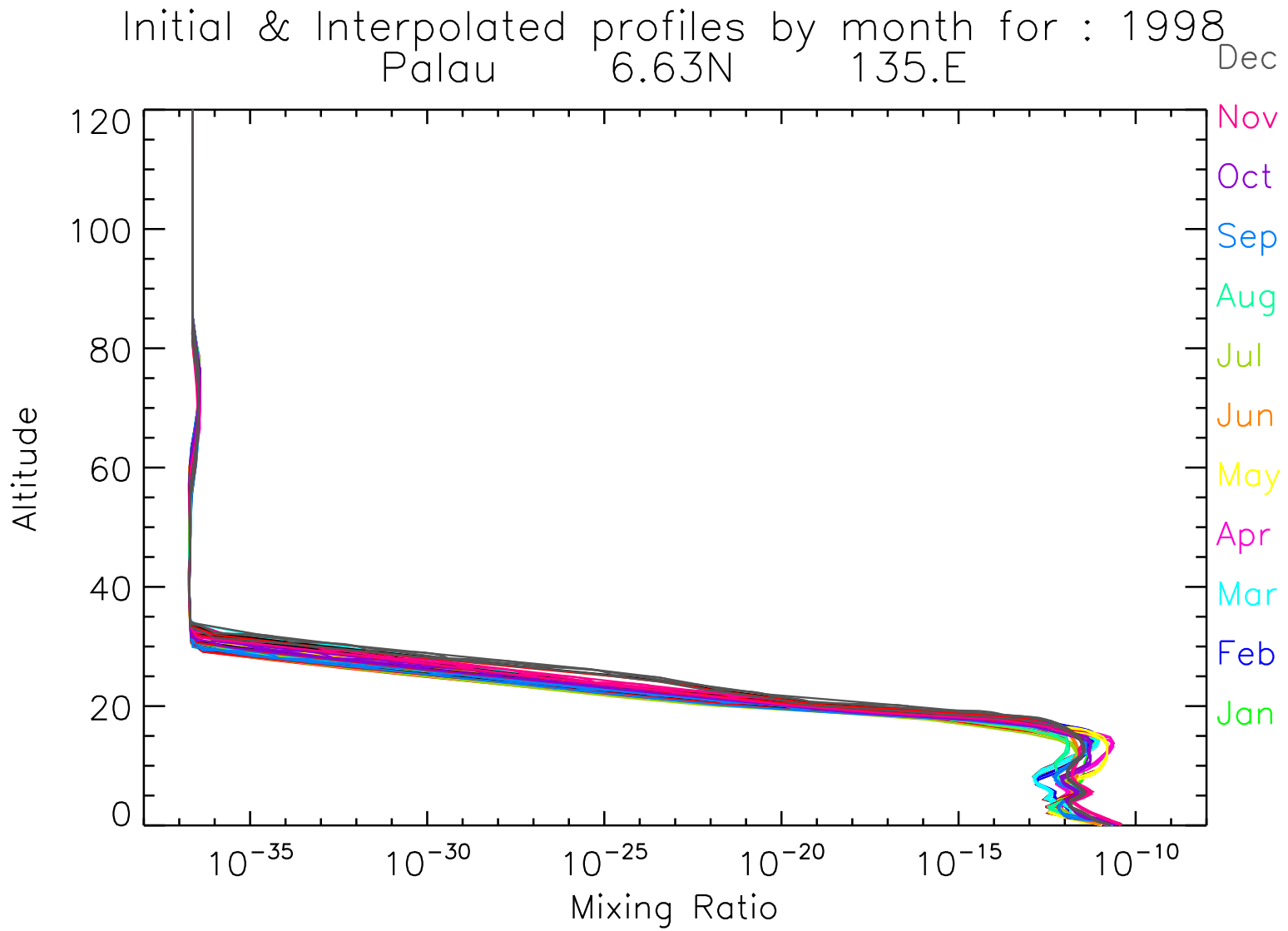
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1998
Palau 6.63N 135.E
Dec
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Altitude
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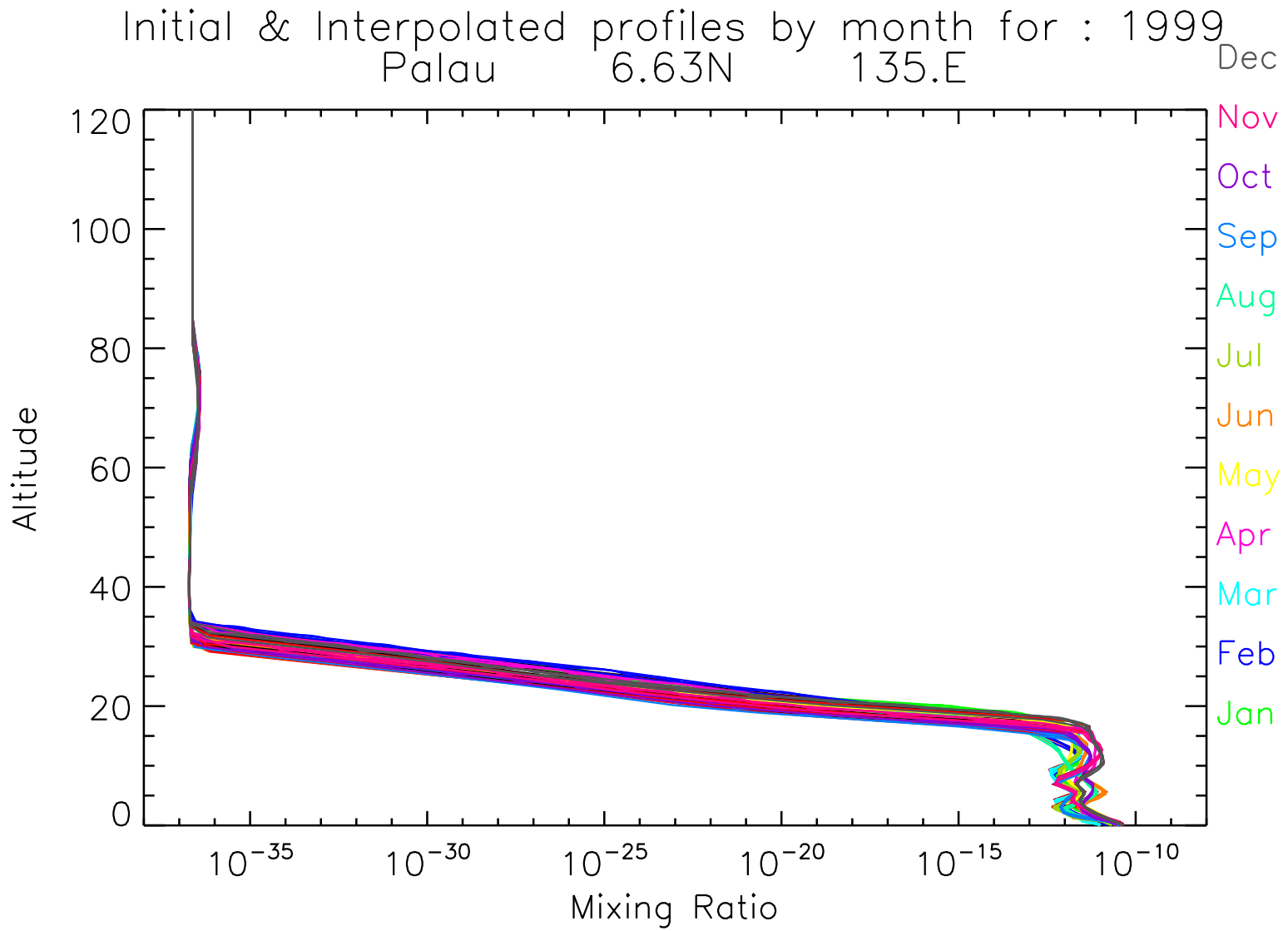
10^{-15}
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 1999
Palau 6.63N 135.E
Dec
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Altitude
120
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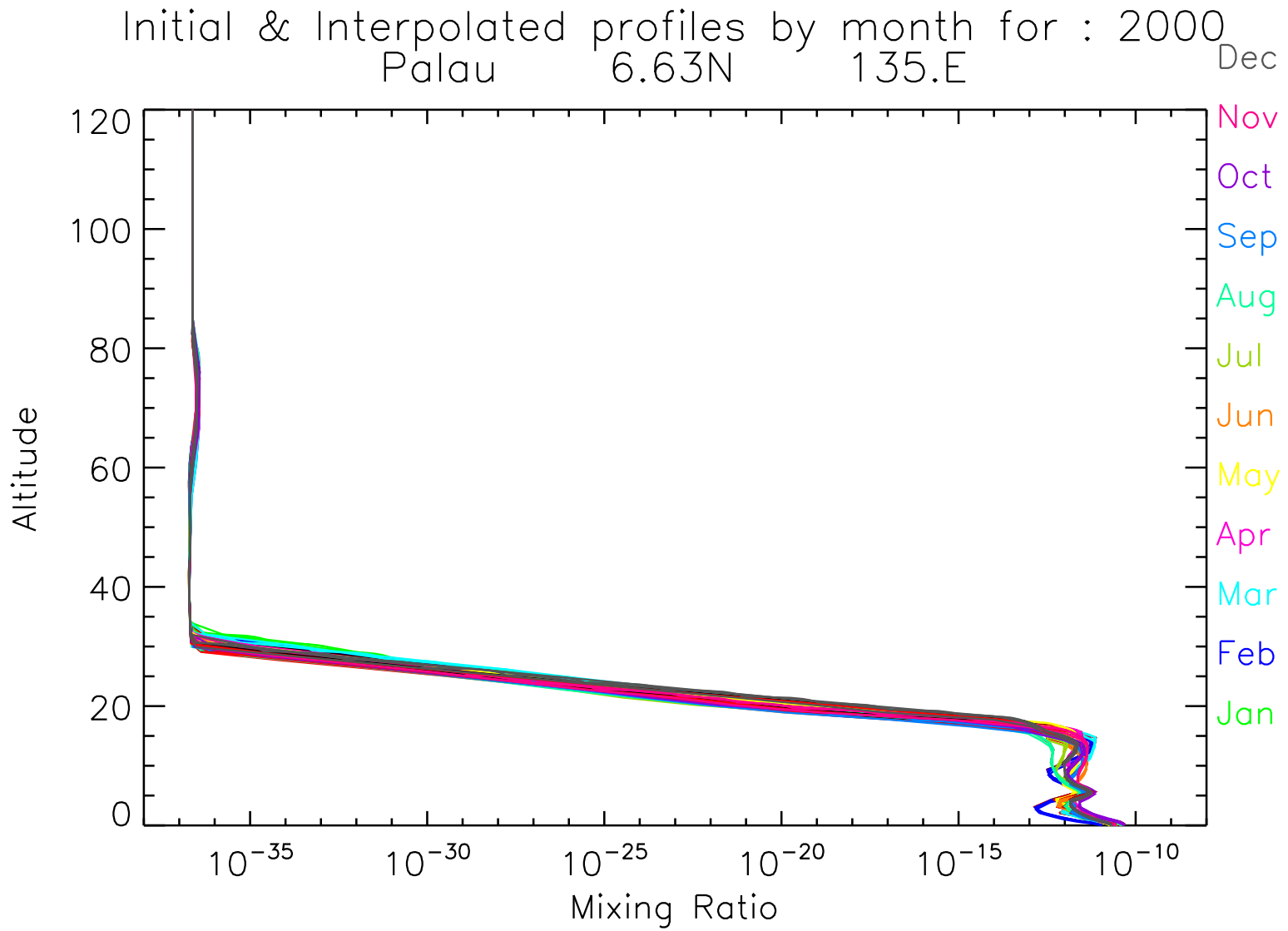
10^{-15}
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 2000
Palau 6.63N 135.E
Dec
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Altitude
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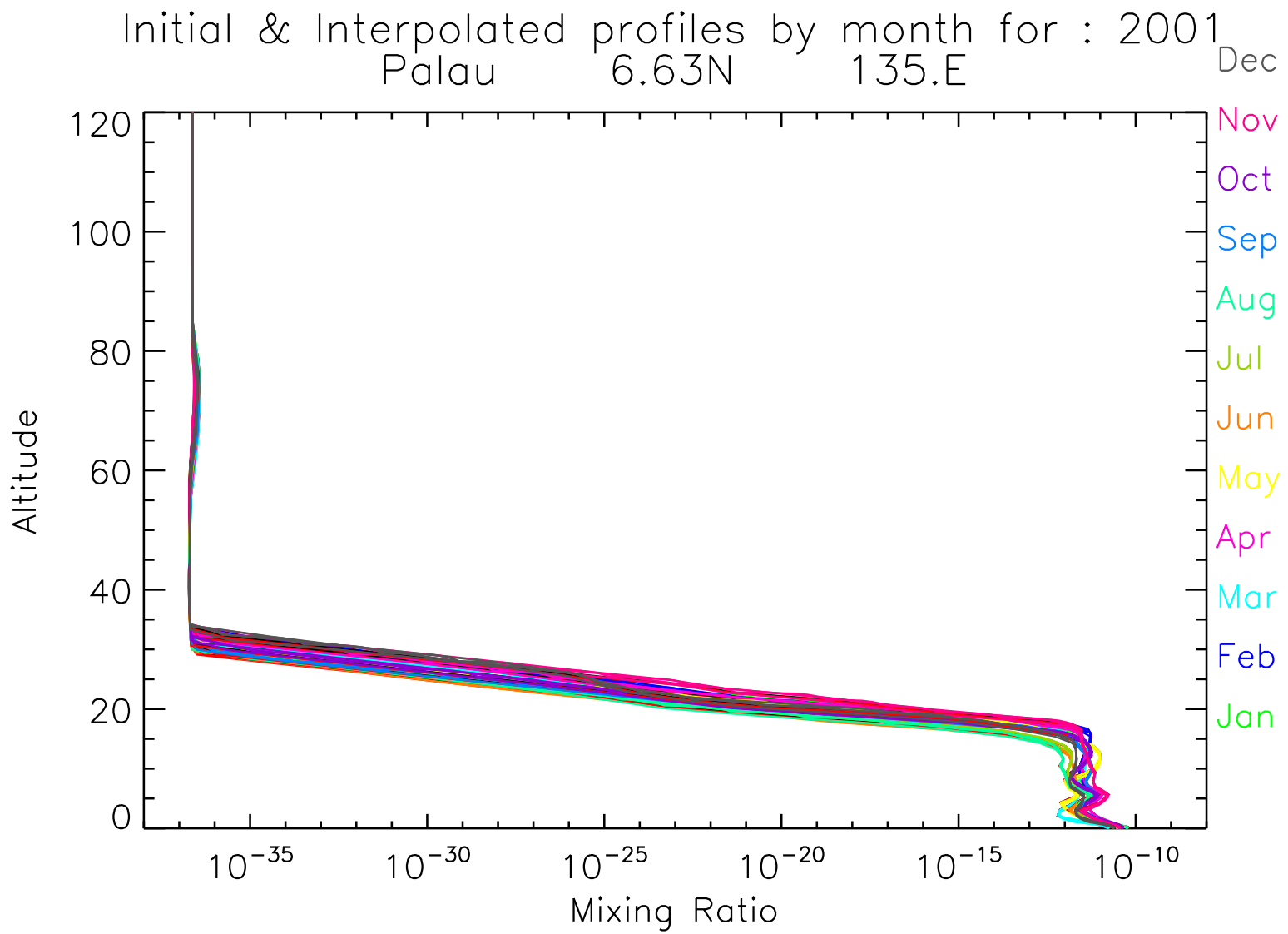
10^{-15}
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 2001
Palau 6.63N 135.E
Dec
Nov
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Altitude
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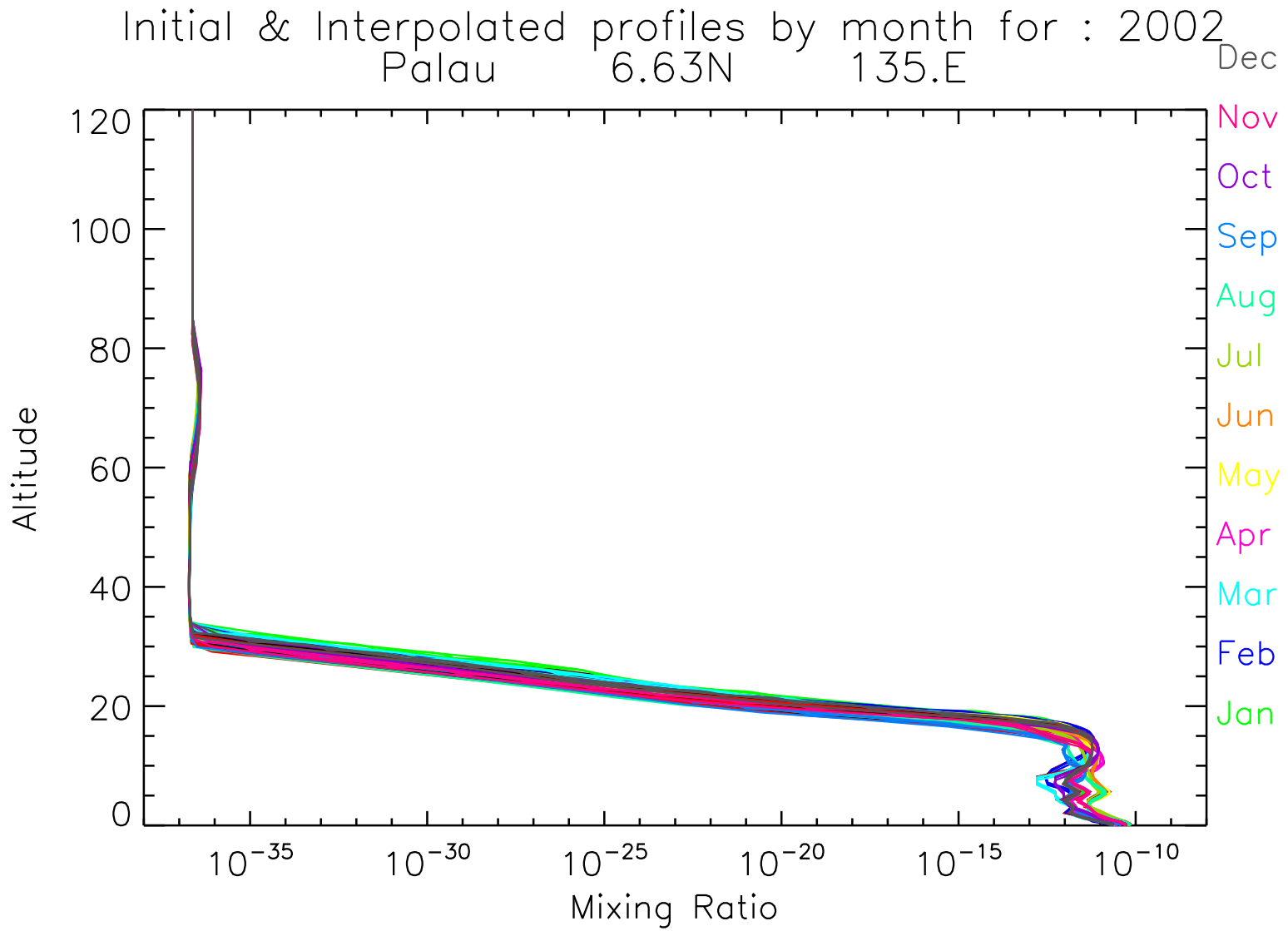
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 2002
Palau 6.63N 135.E
Dec
Nov
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Altitude
120
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10^{-35}
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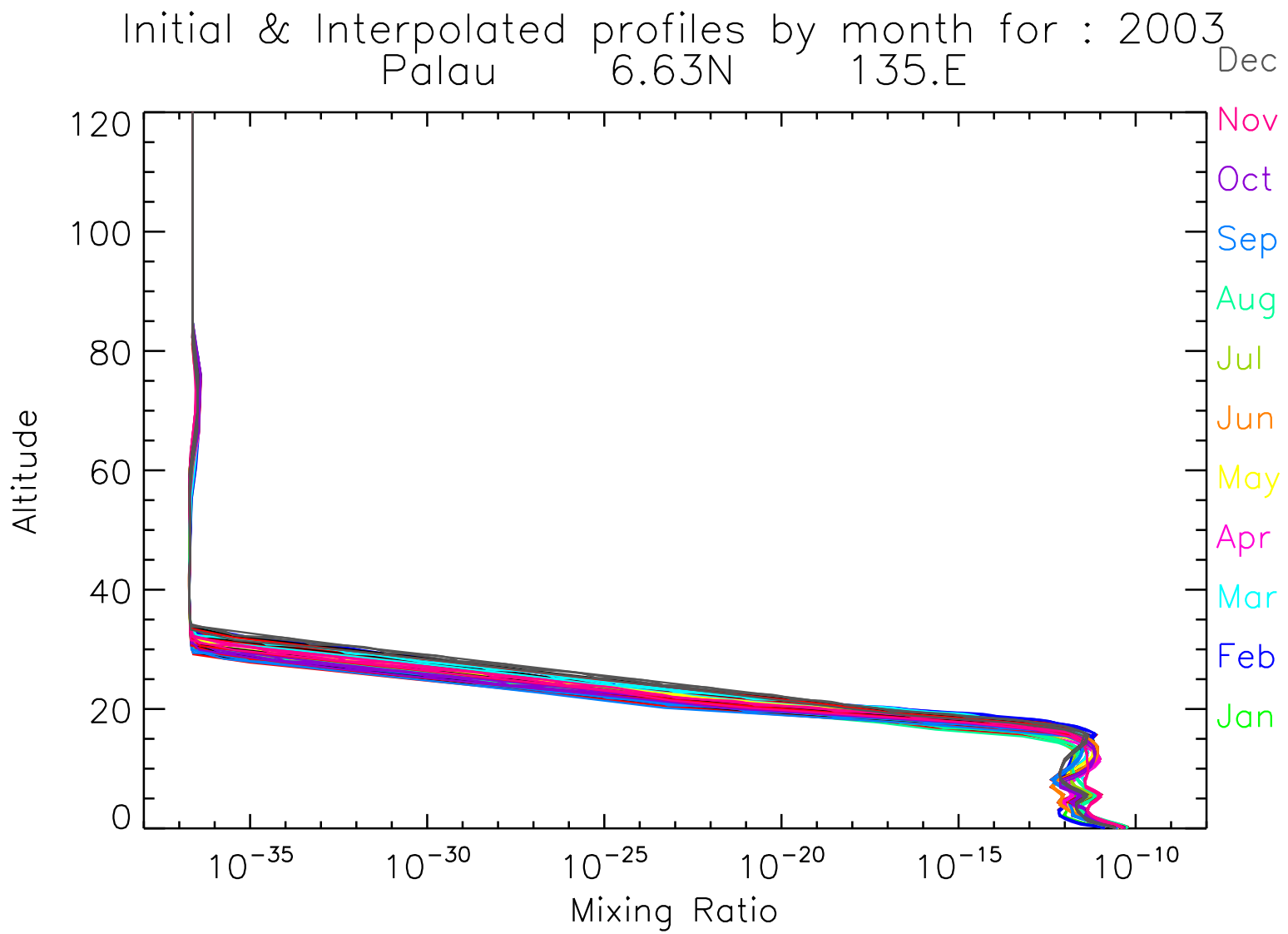
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 2003
Palau 6.63N 135.E
Dec
Nov
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Altitude
120
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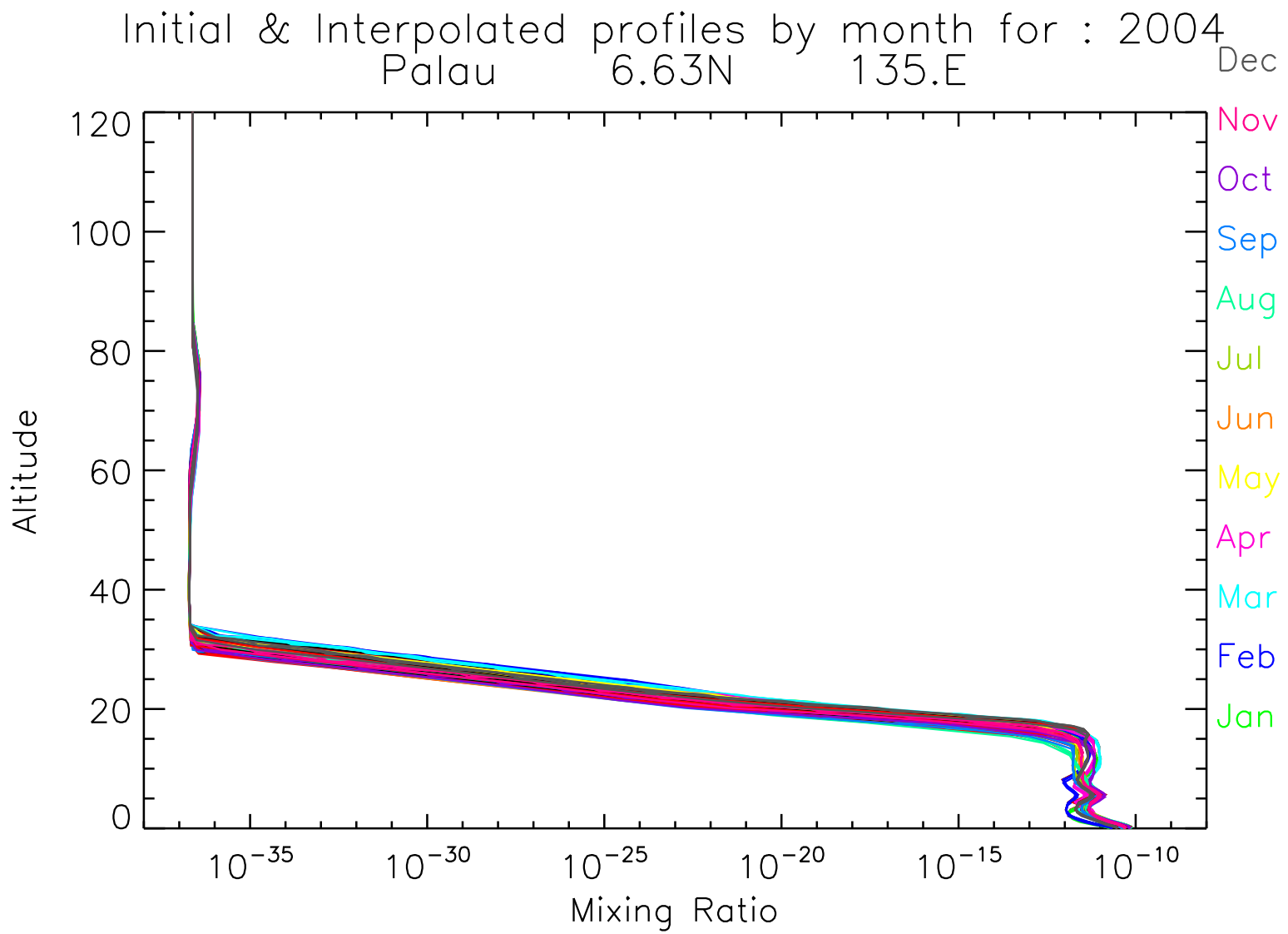
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 2004
Palau 6.63N 135.E
Dec
Nov
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Feb
Jan
Altitude
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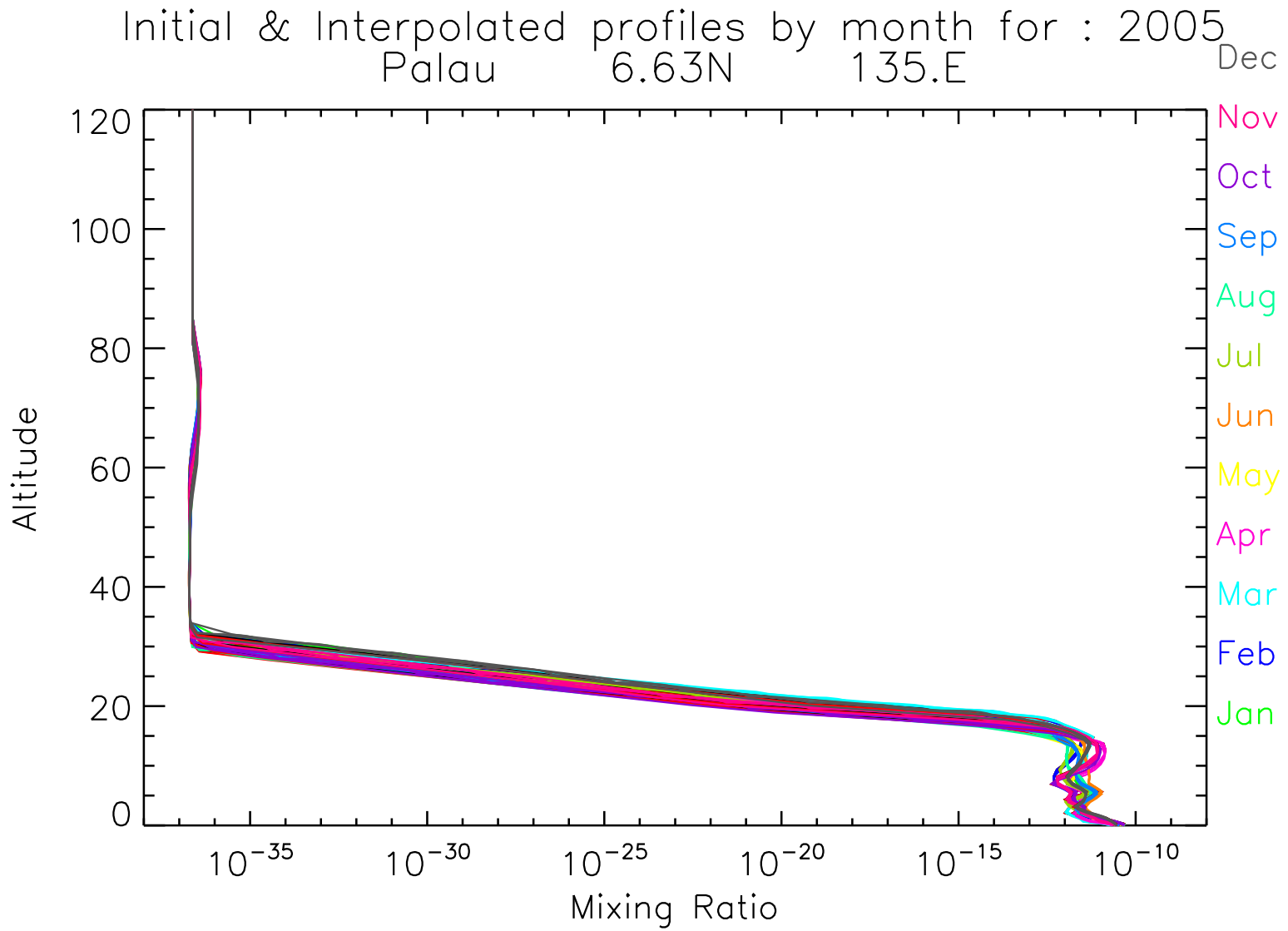
10^{-25}
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 2005
Palau 6.63N 135.E
Dec
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Feb
Jan
Altitude
120
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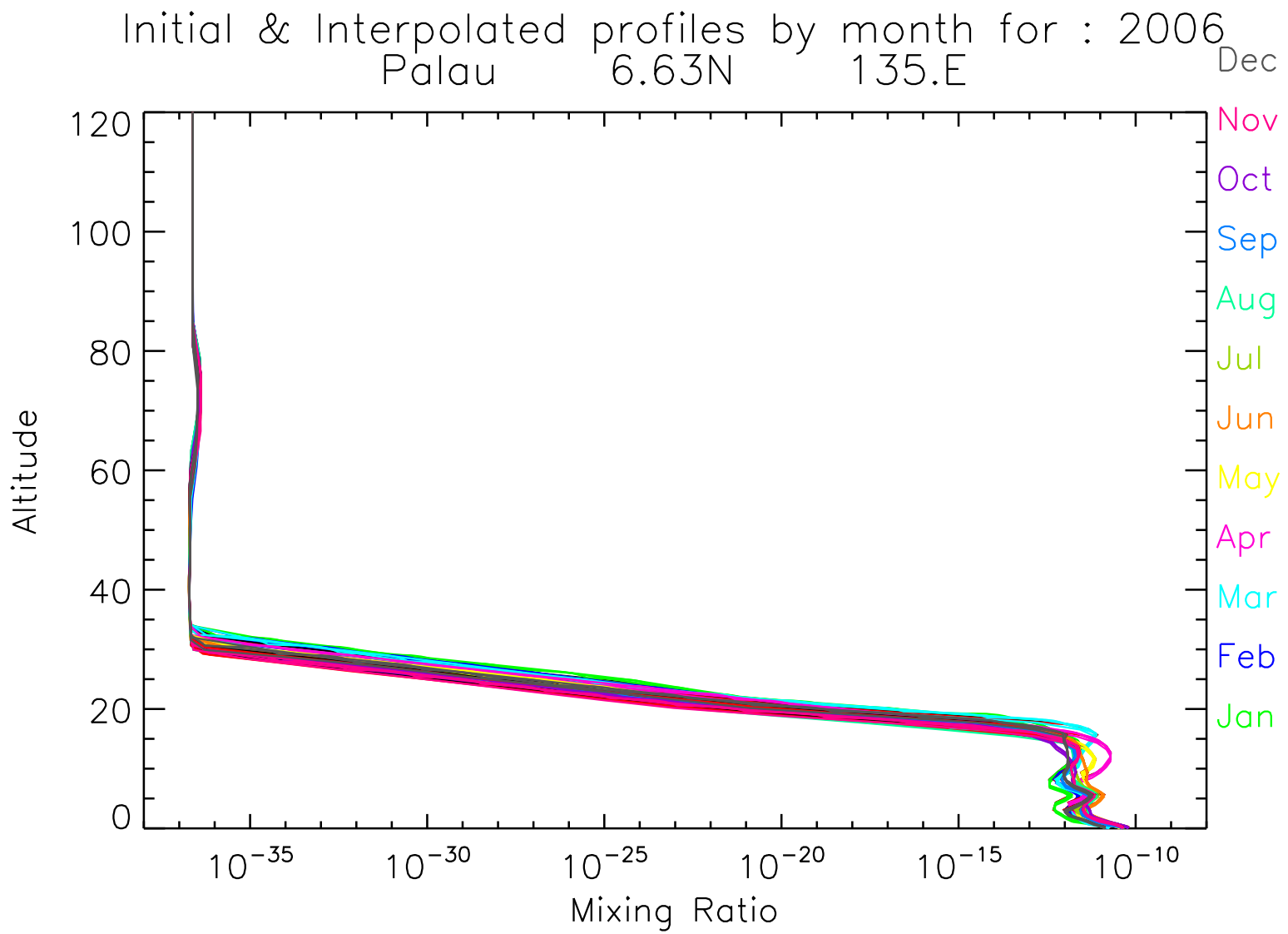
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 2006
Palau 6.63N 135.E
Dec
Nov
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Altitude
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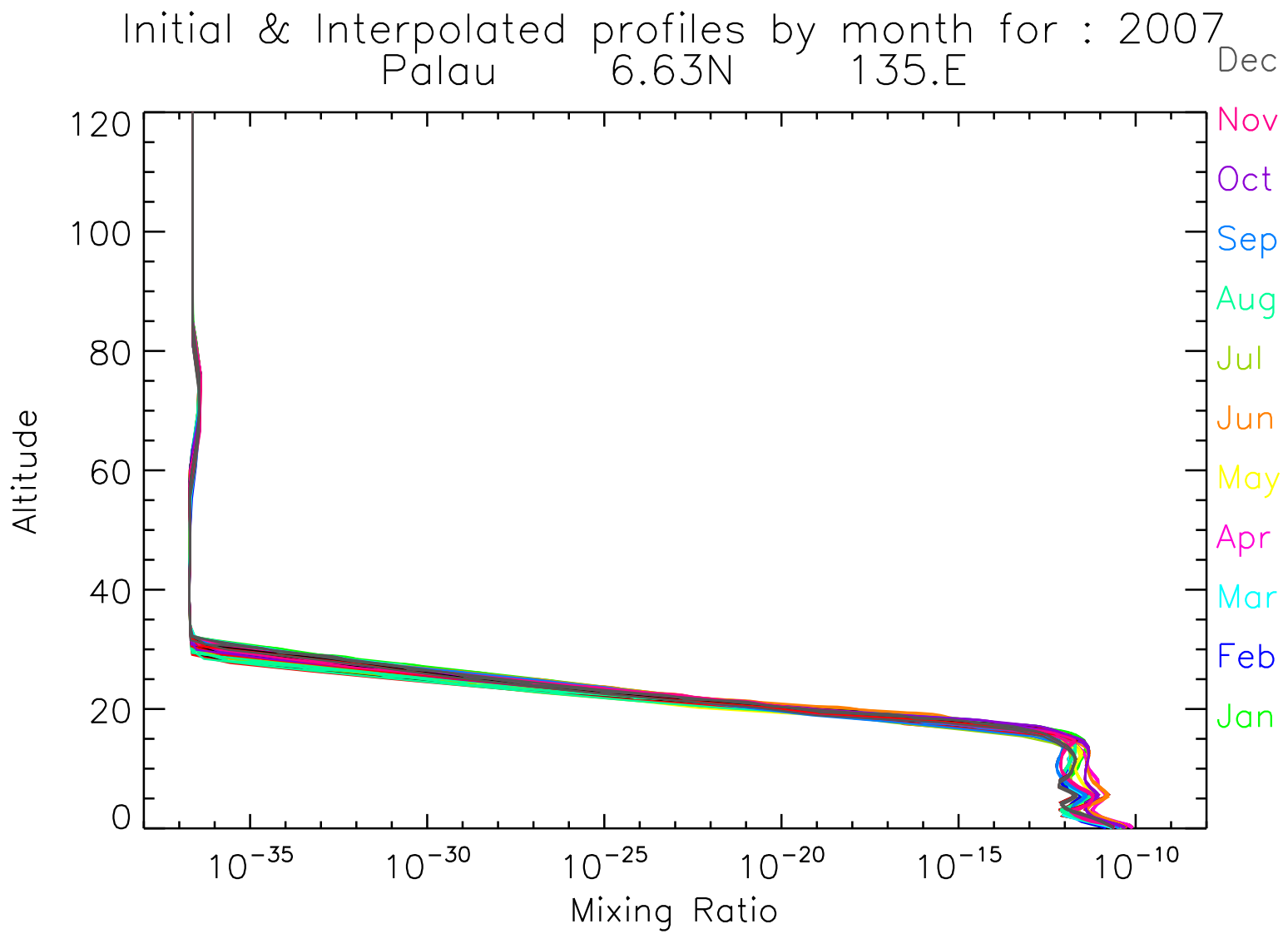
10^{-15}
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 2007
Palau 6.63N 135.E
Dec
Nov
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Feb
Jan
Altitude
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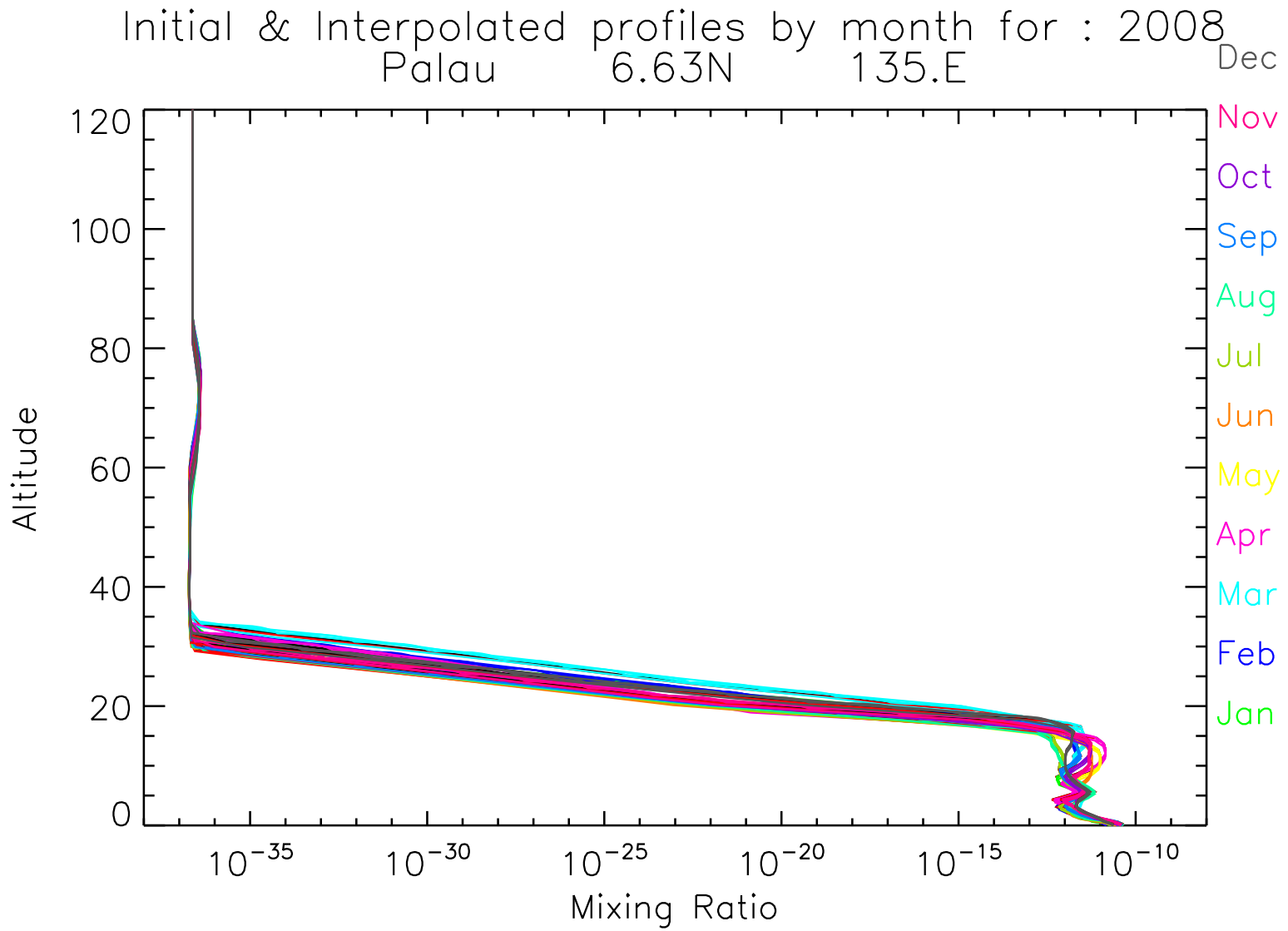
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 2008
Palau 6.63N 135.E
Dec
Nov
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Feb
Jan
Altitude
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10^{-35}
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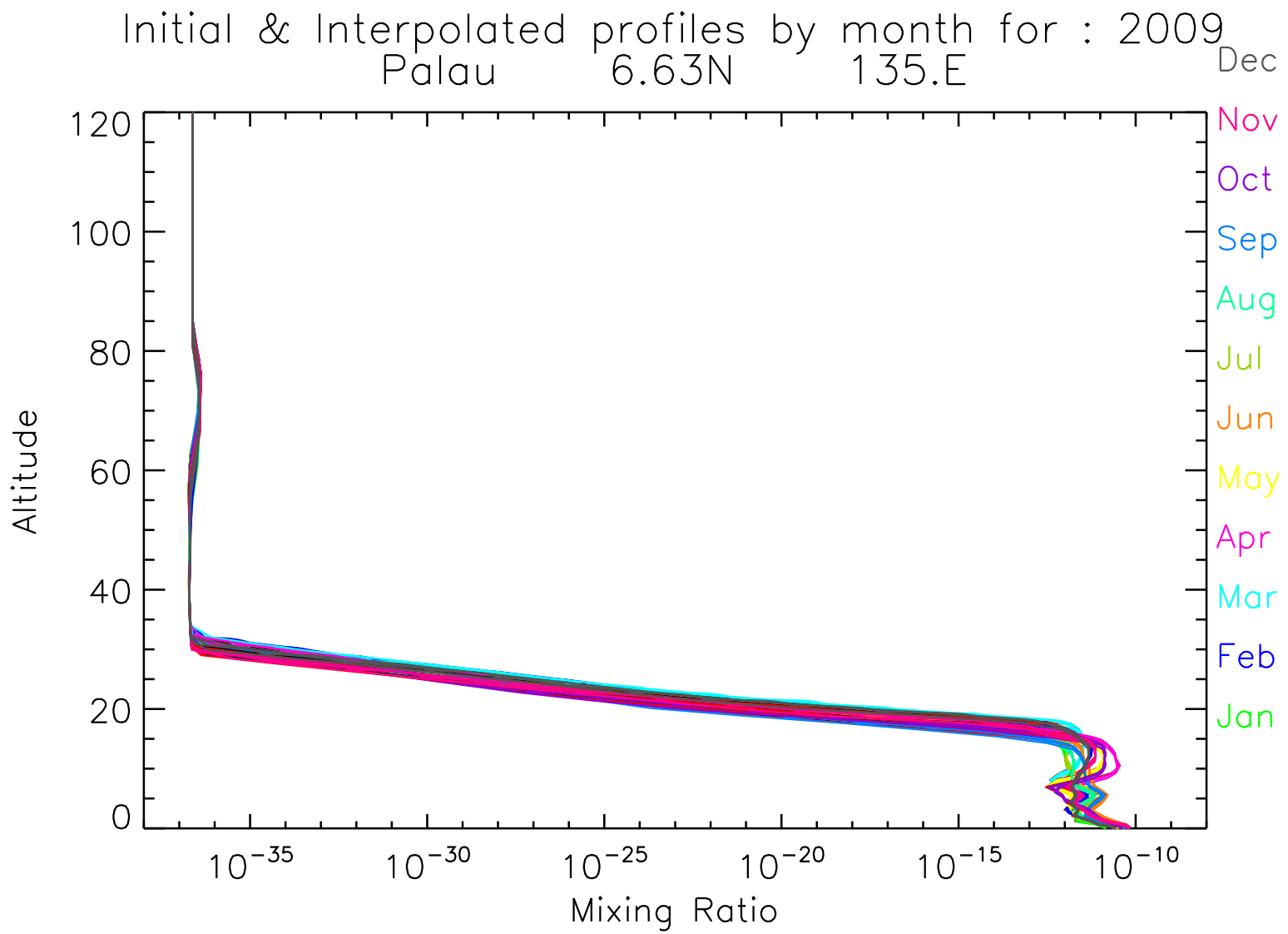
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 2009
Palau 6.63N 135.E
Dec
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Feb
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Altitude
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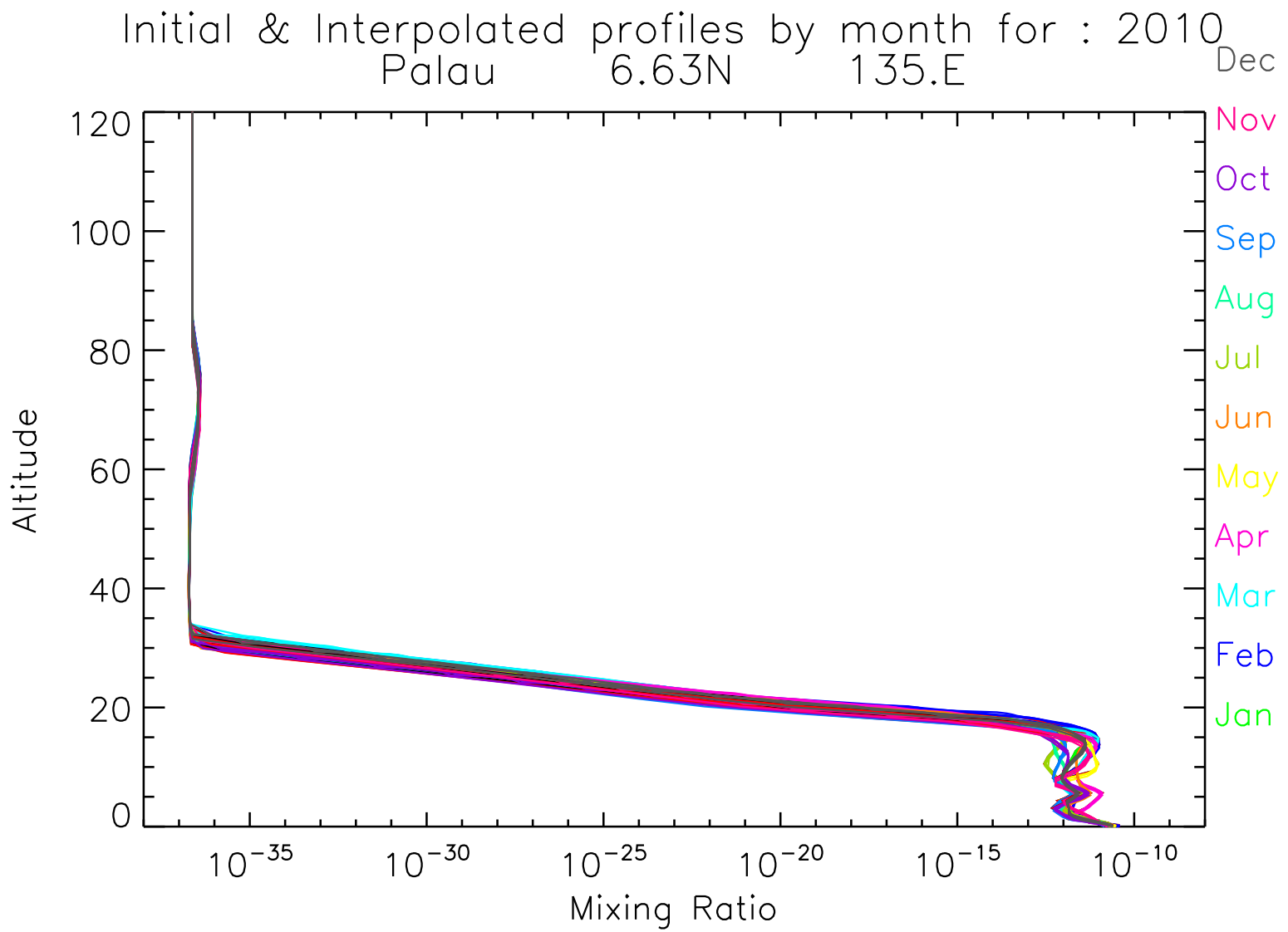
10^{-15}
10^{-10}
Mixing Ratio


Initial & Interpolated profiles by month for : 2010
Palau 6.63N 135.E
Dec
Nov
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May
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Mar
Feb
Jan
Altitude
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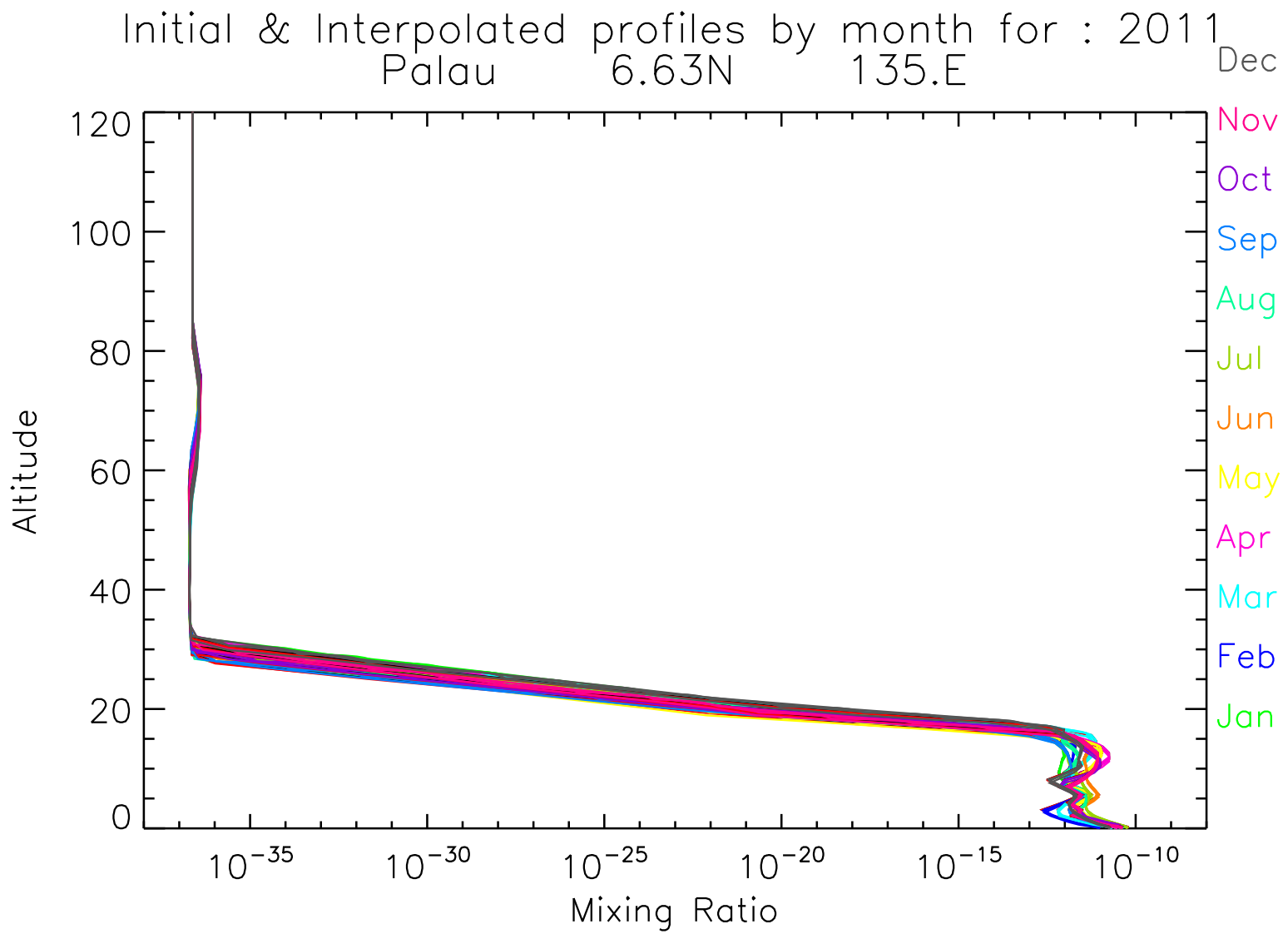
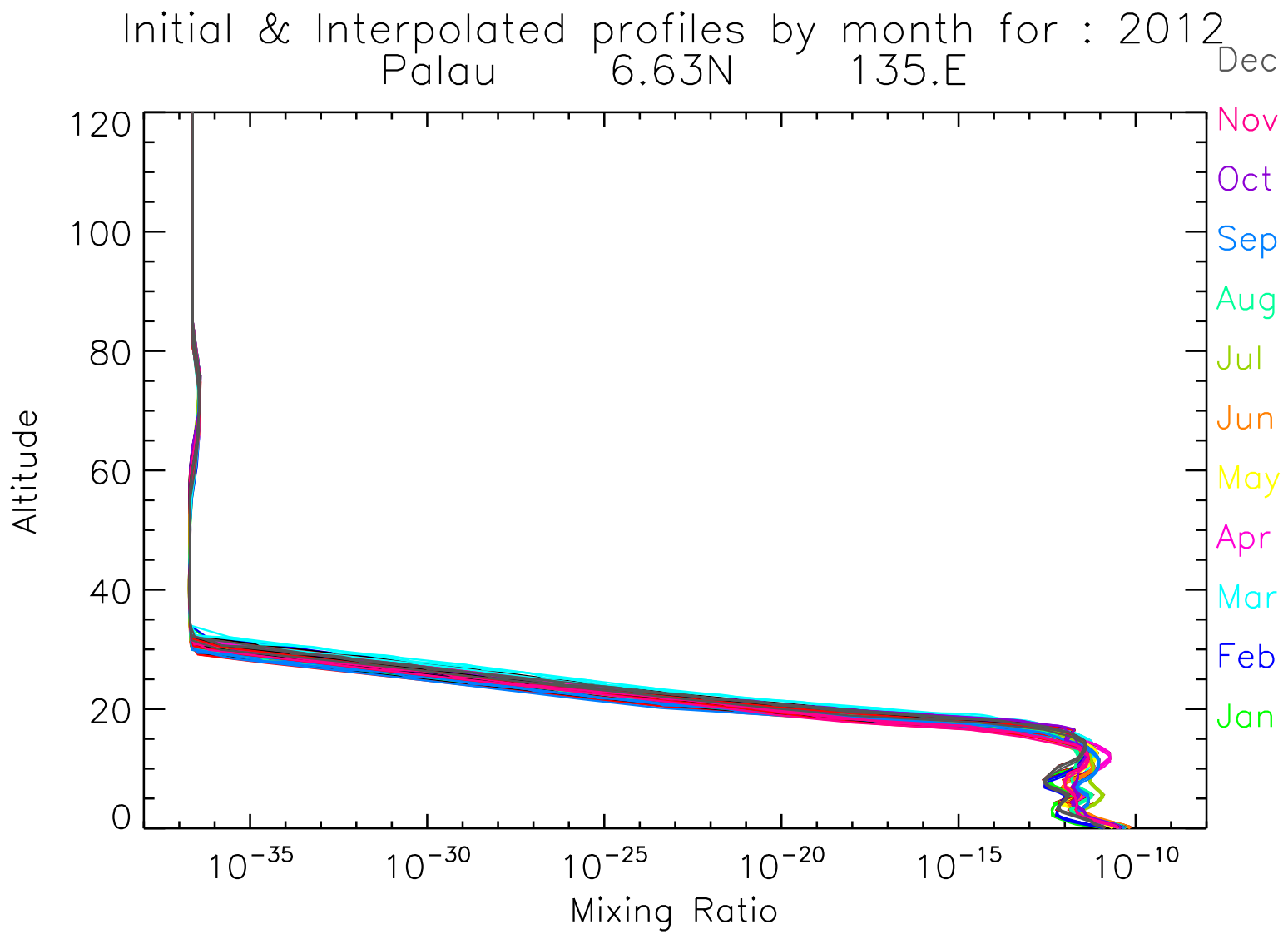
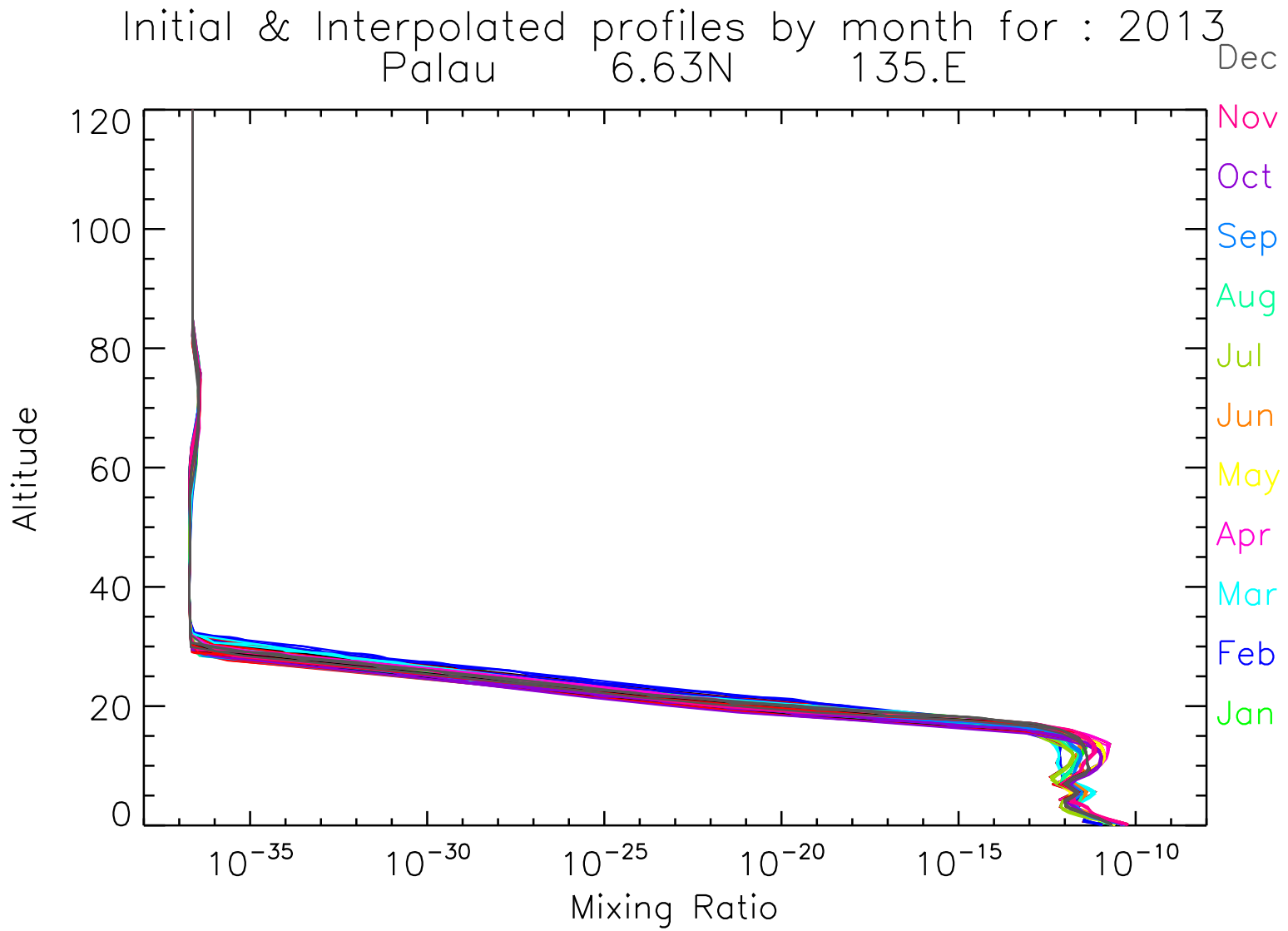
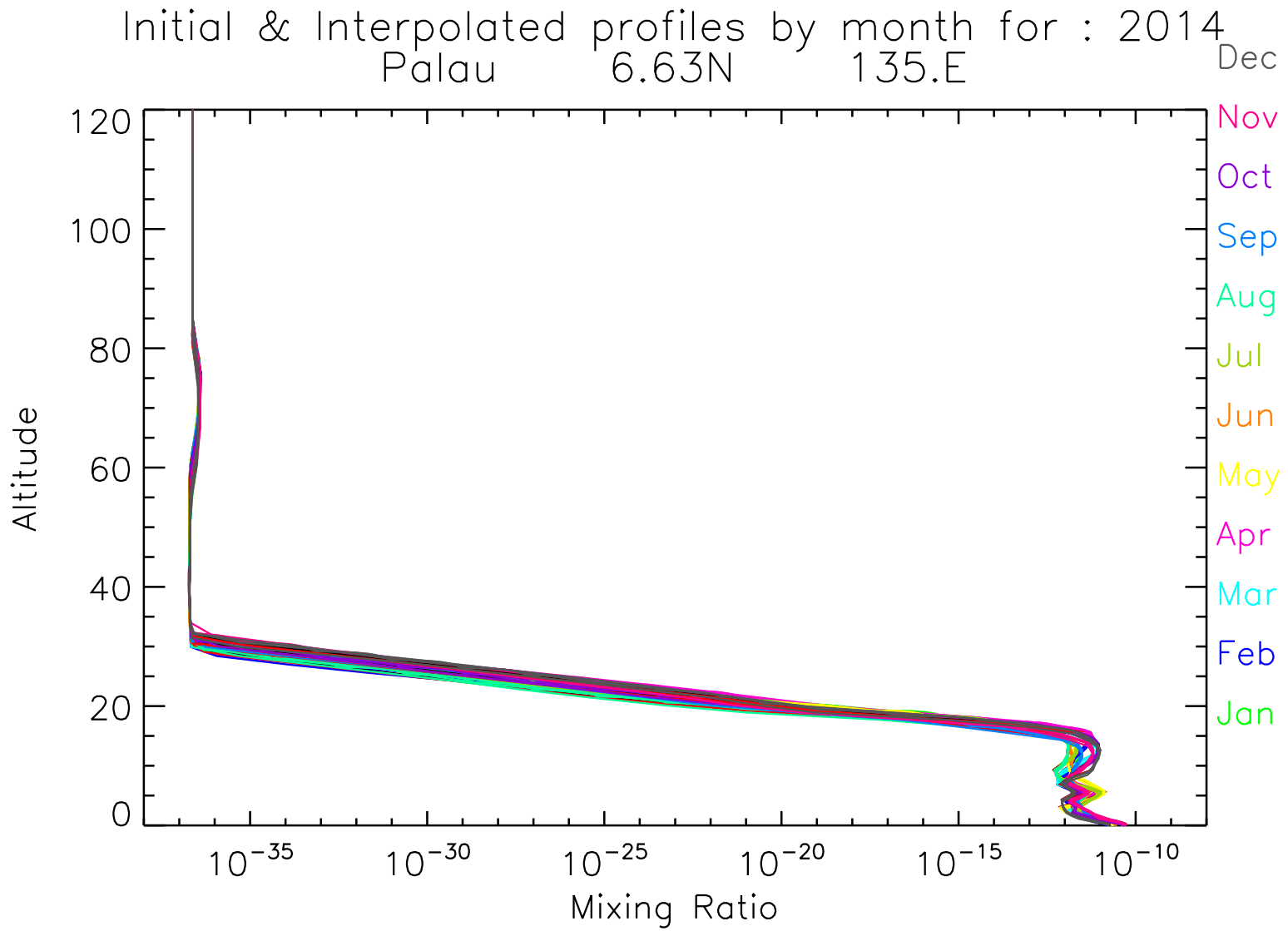
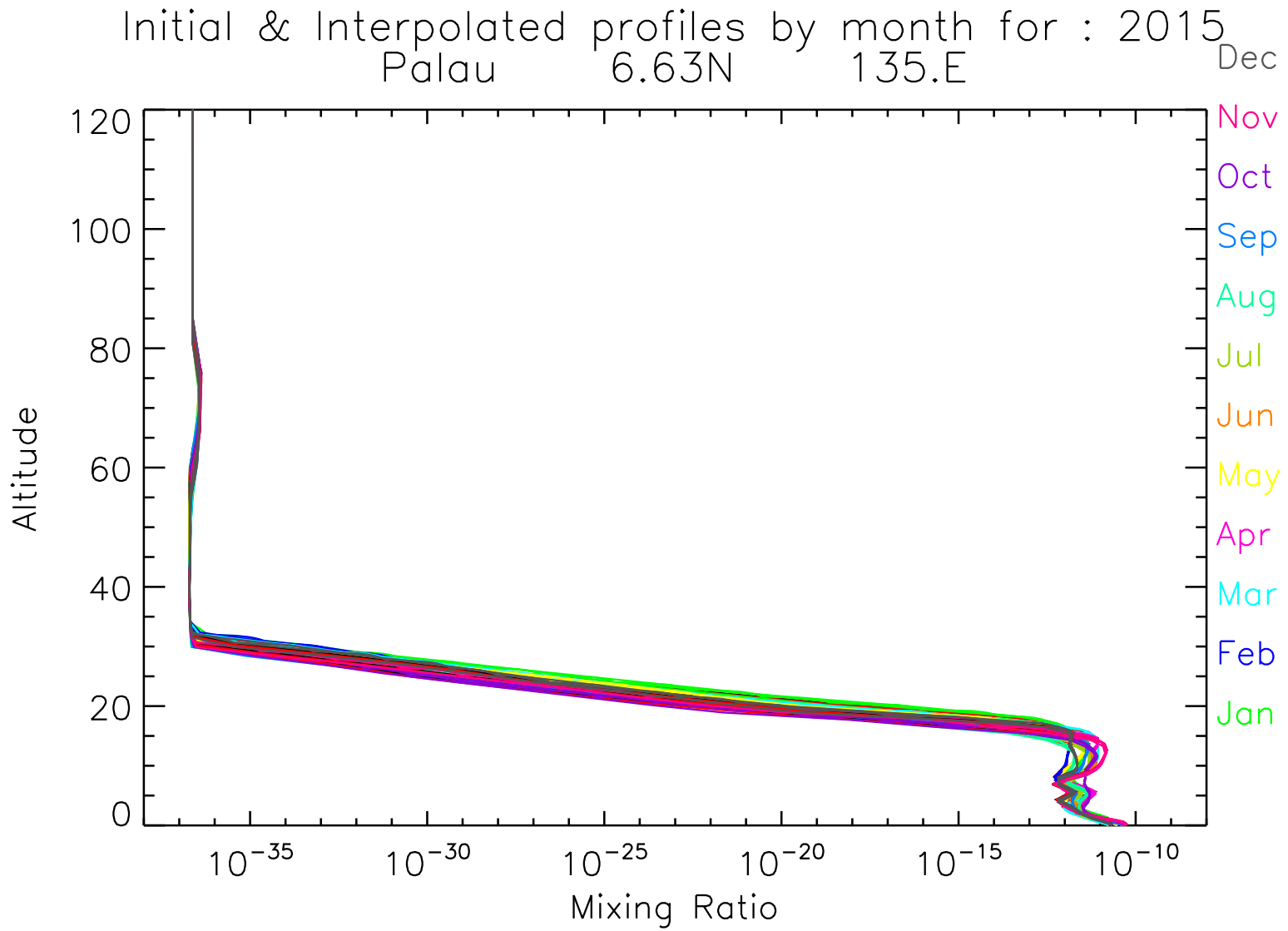
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio

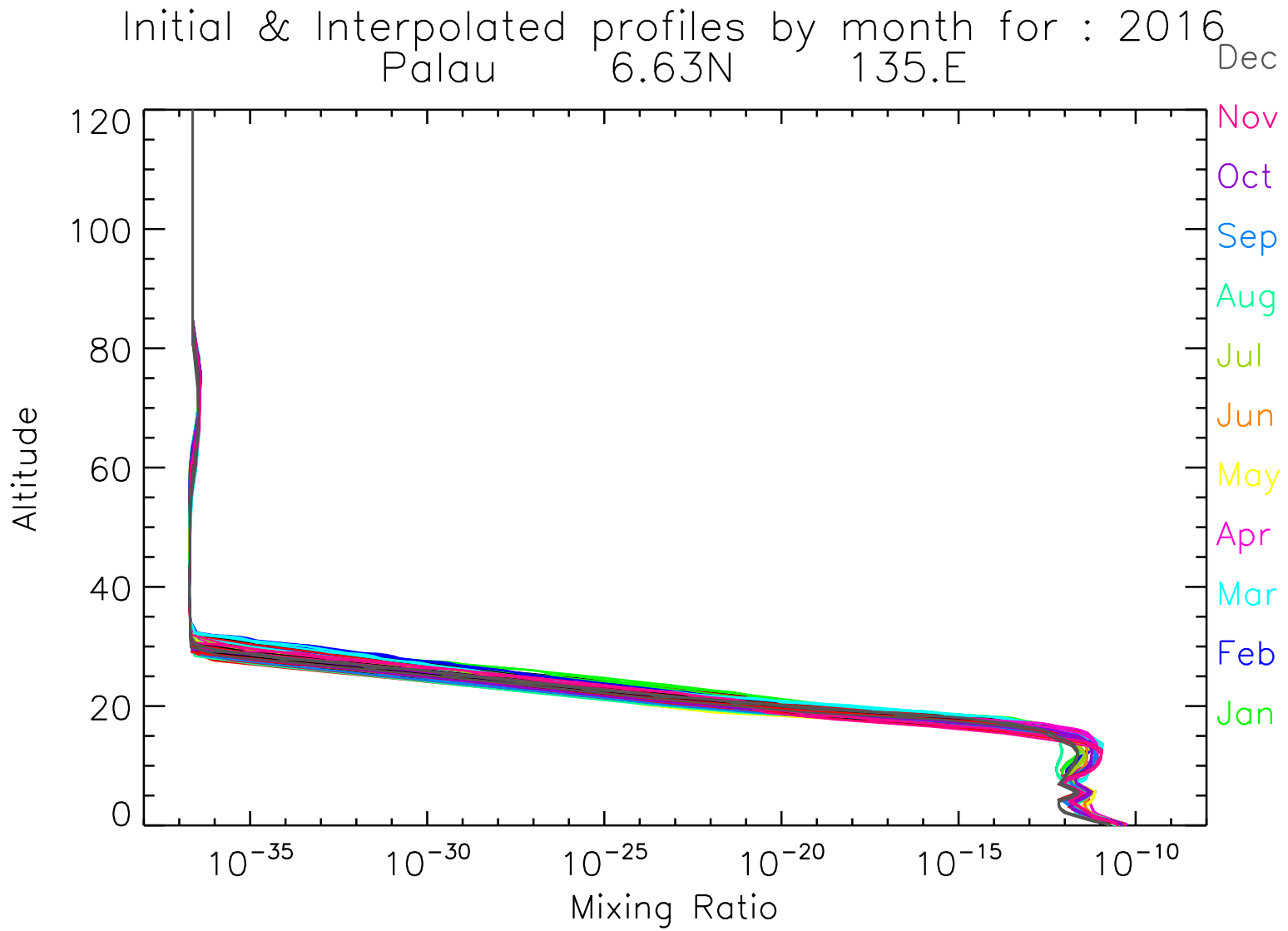

Initial & Interpolated profiles by month for : 2011
Palau 6.63N 135.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10^{-35}
10^{-30}
10^{-25}
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio

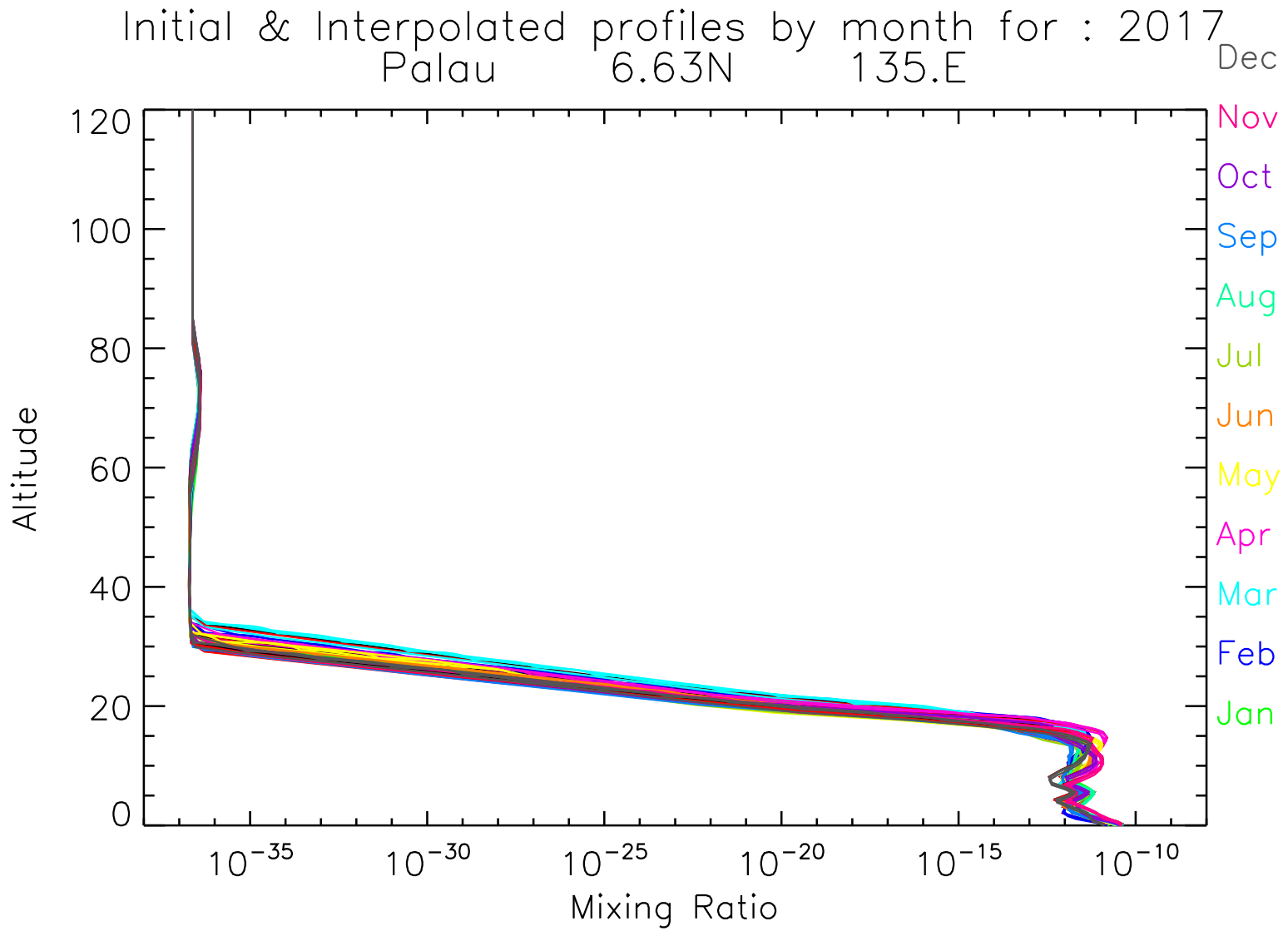

Initial & Interpolated profiles by month for : 2012
Palau 6.63N 135.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10^{-35}
10^{-30}
10^{-25}
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio

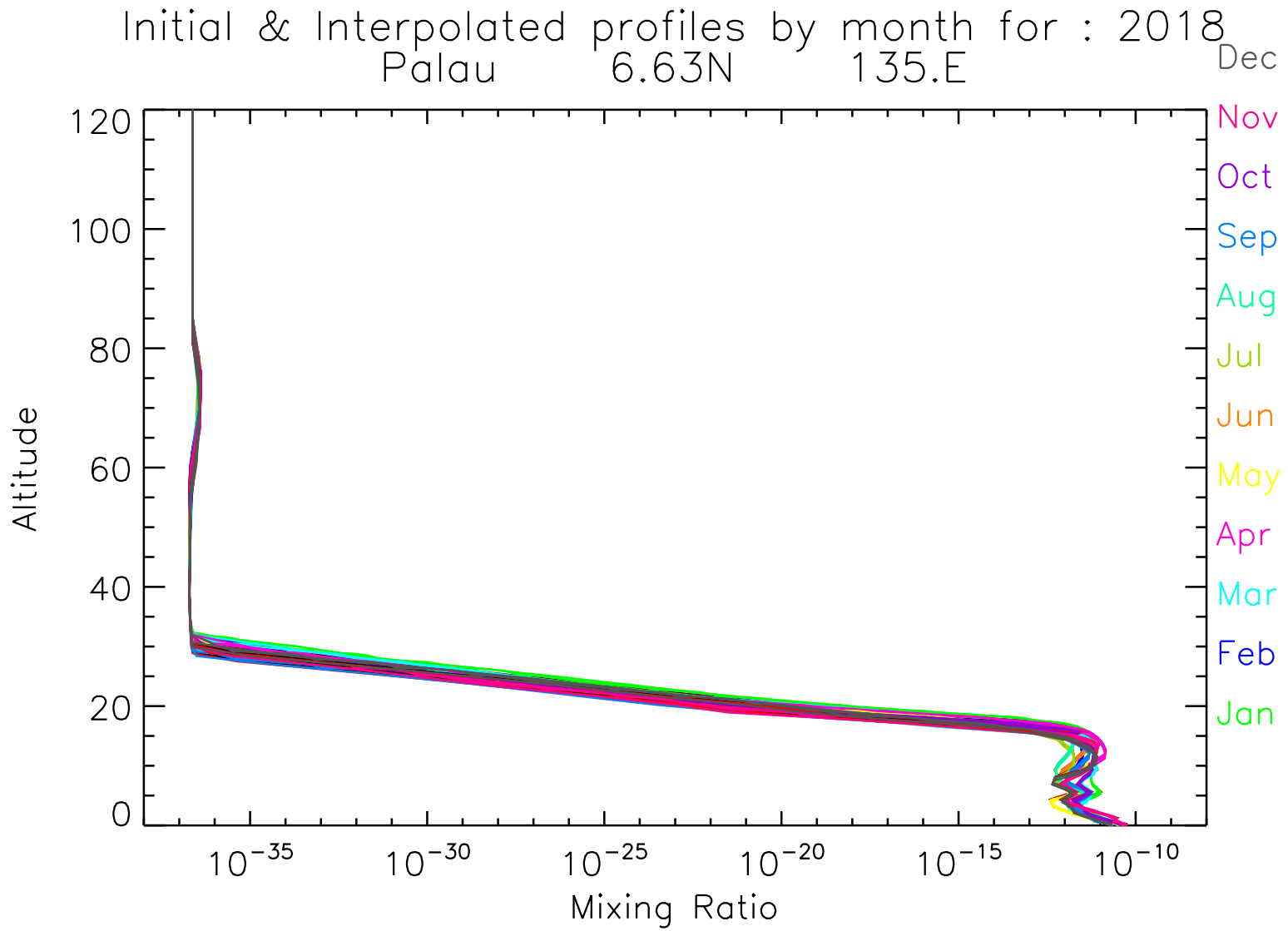

Initial & Interpolated profiles by month for : 2013
Palau 6.63N 135.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10^{-35}
10^{-30}
10^{-25}
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio

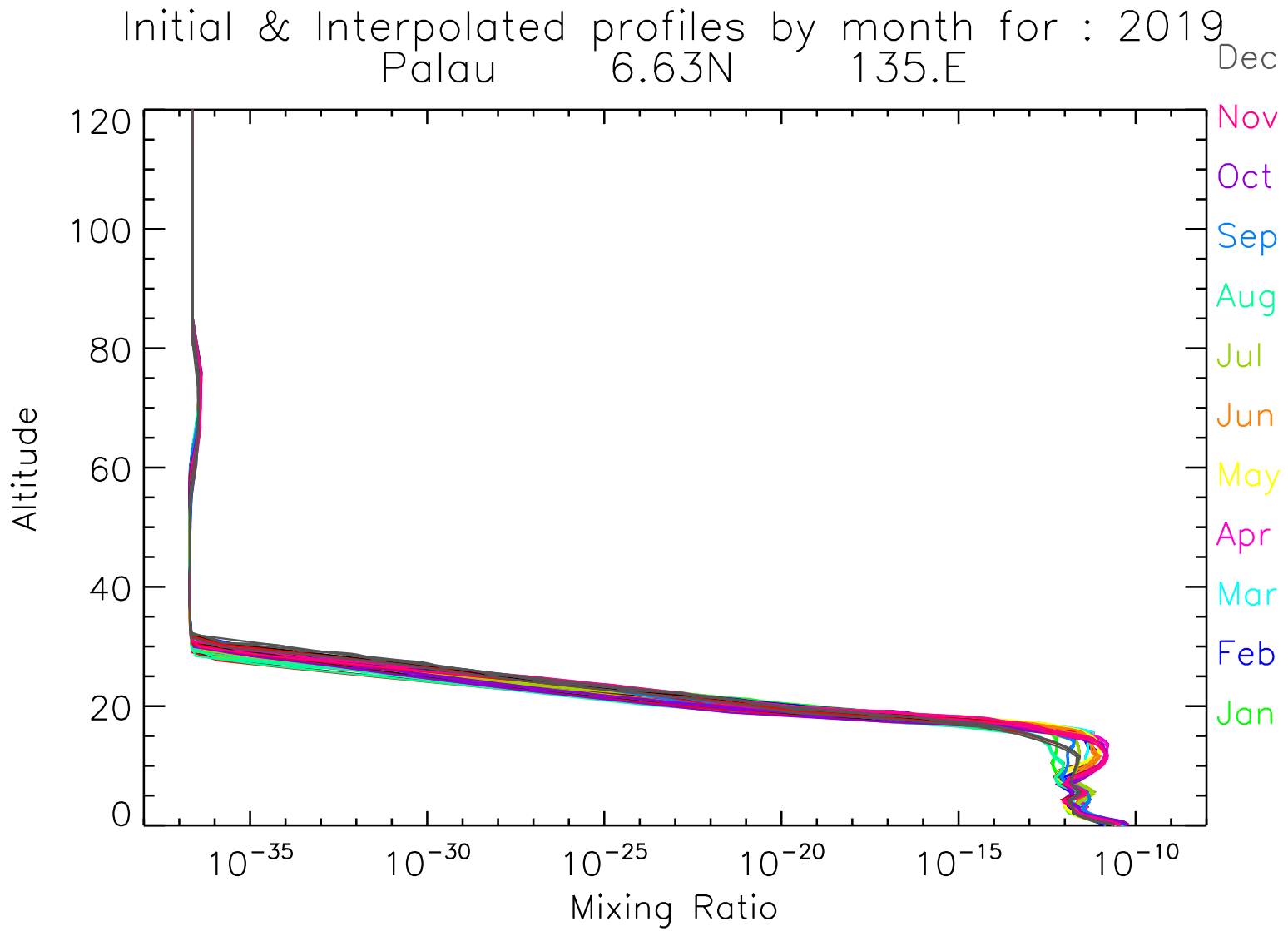

Initial & Interpolated profiles by month for : 2014
Palau 6.63N 135.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10^{-35}
10^{-30}
10^{-25}
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio

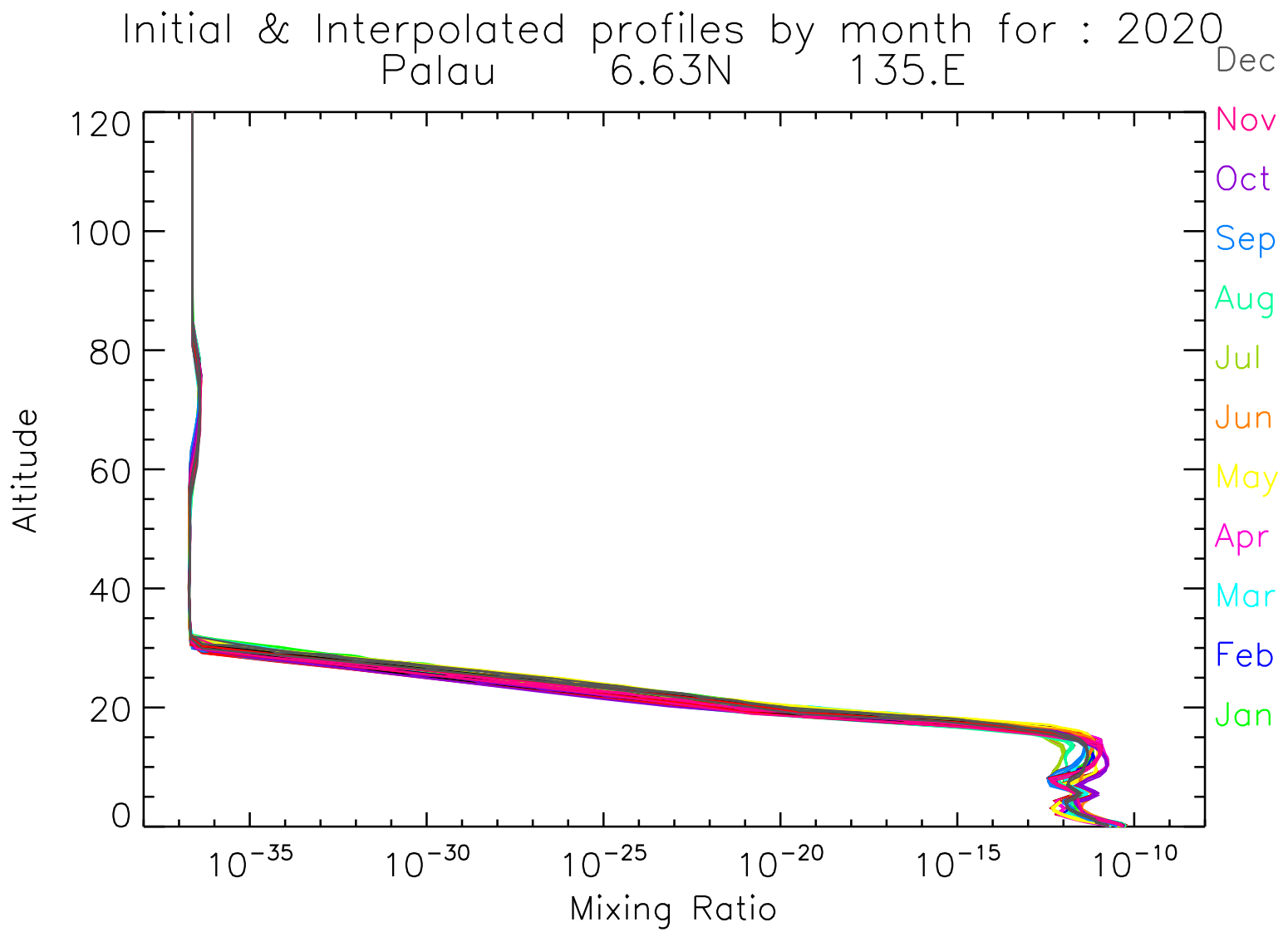

Initial & Interpolated profiles by month for : 2015
Palau 6.63N 135.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
10^{-35}
10^{-30}
10^{-25}
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio

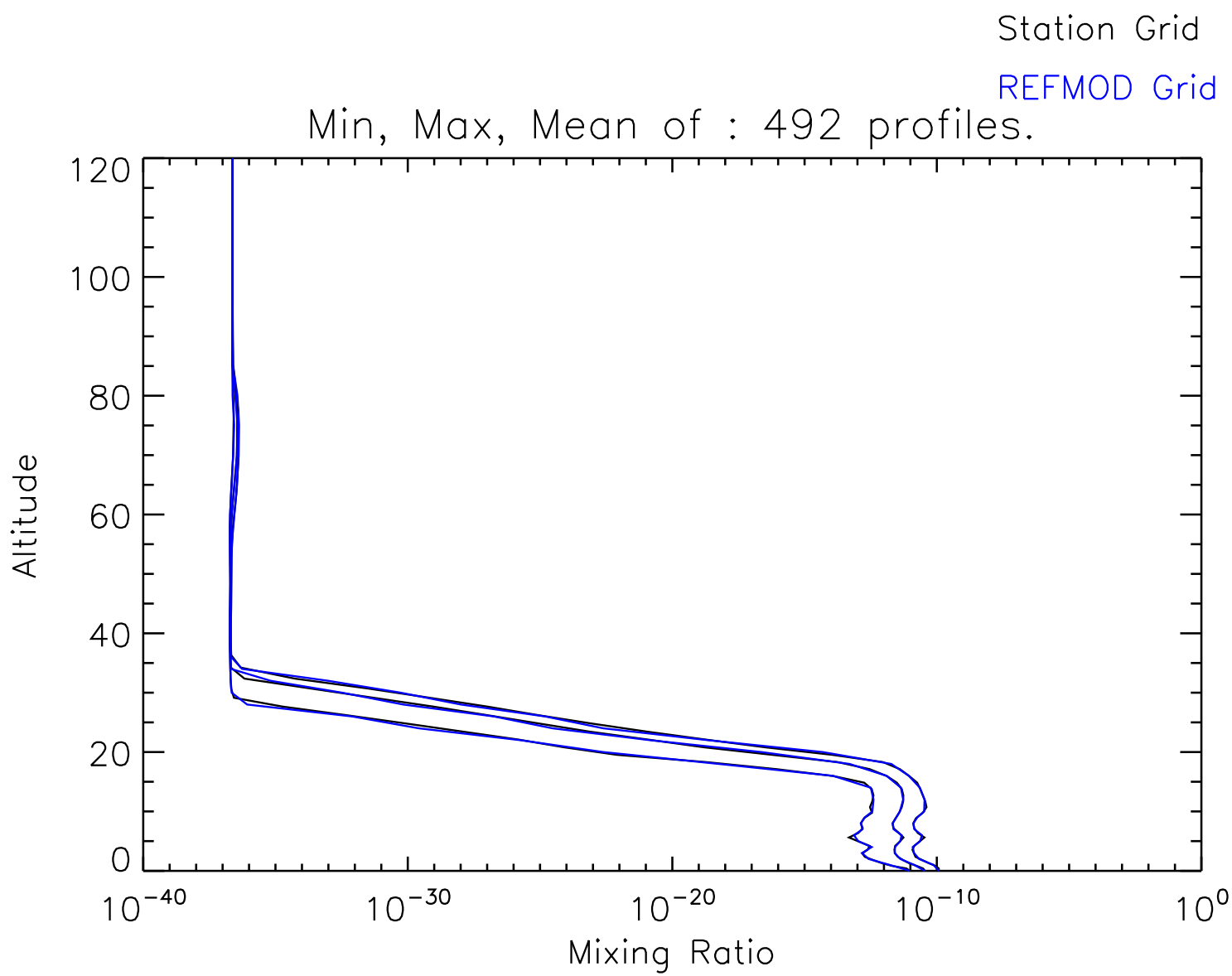

Initial & Interpolated profiles by month for : 2016
Palau 6.63N 135.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10^{-35}
10^{-30}
10^{-25}
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio

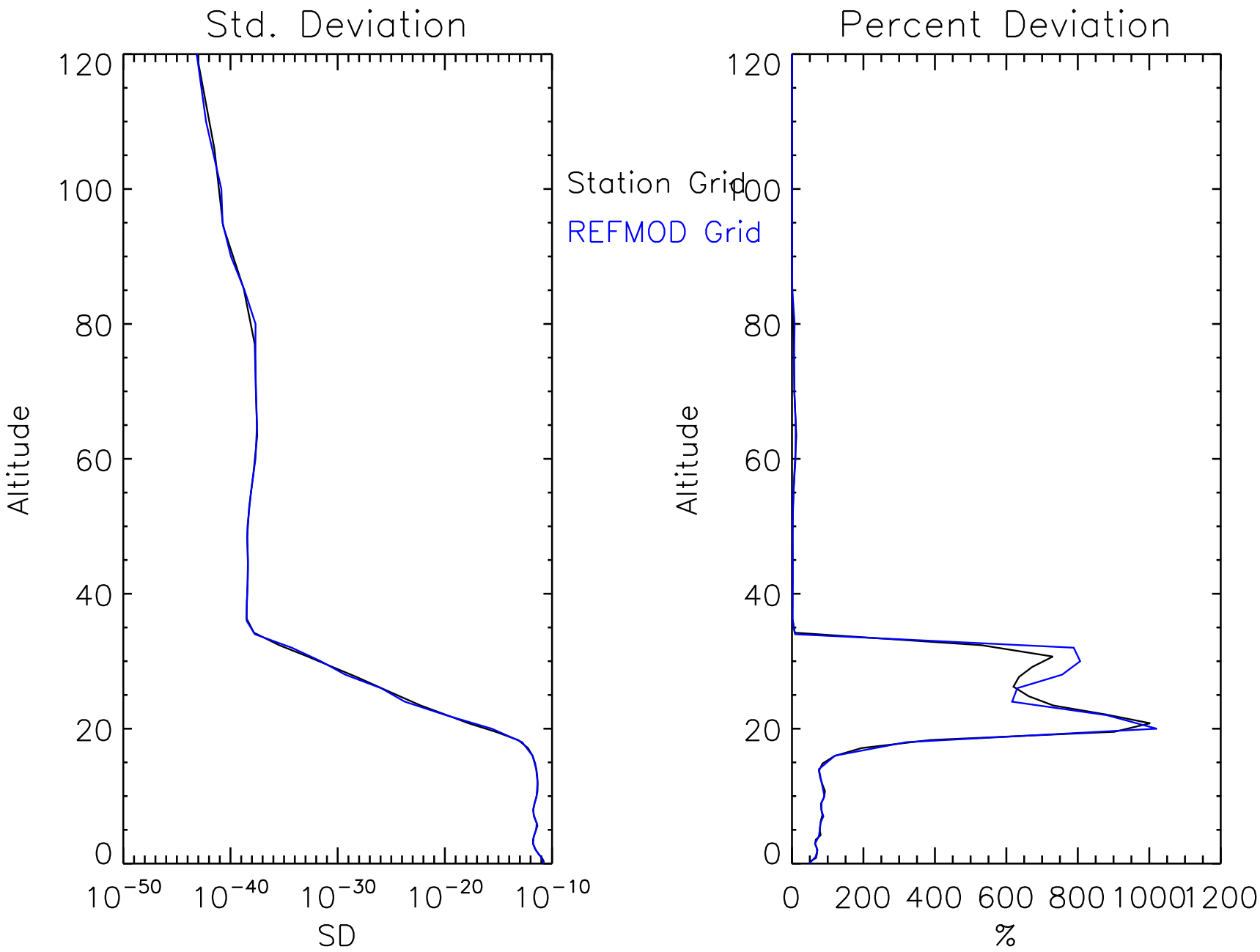

Initial & Interpolated profiles by month for : 2017
Palau 6.63N 135.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10^{-35}
10^{-30}
10^{-25}
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio

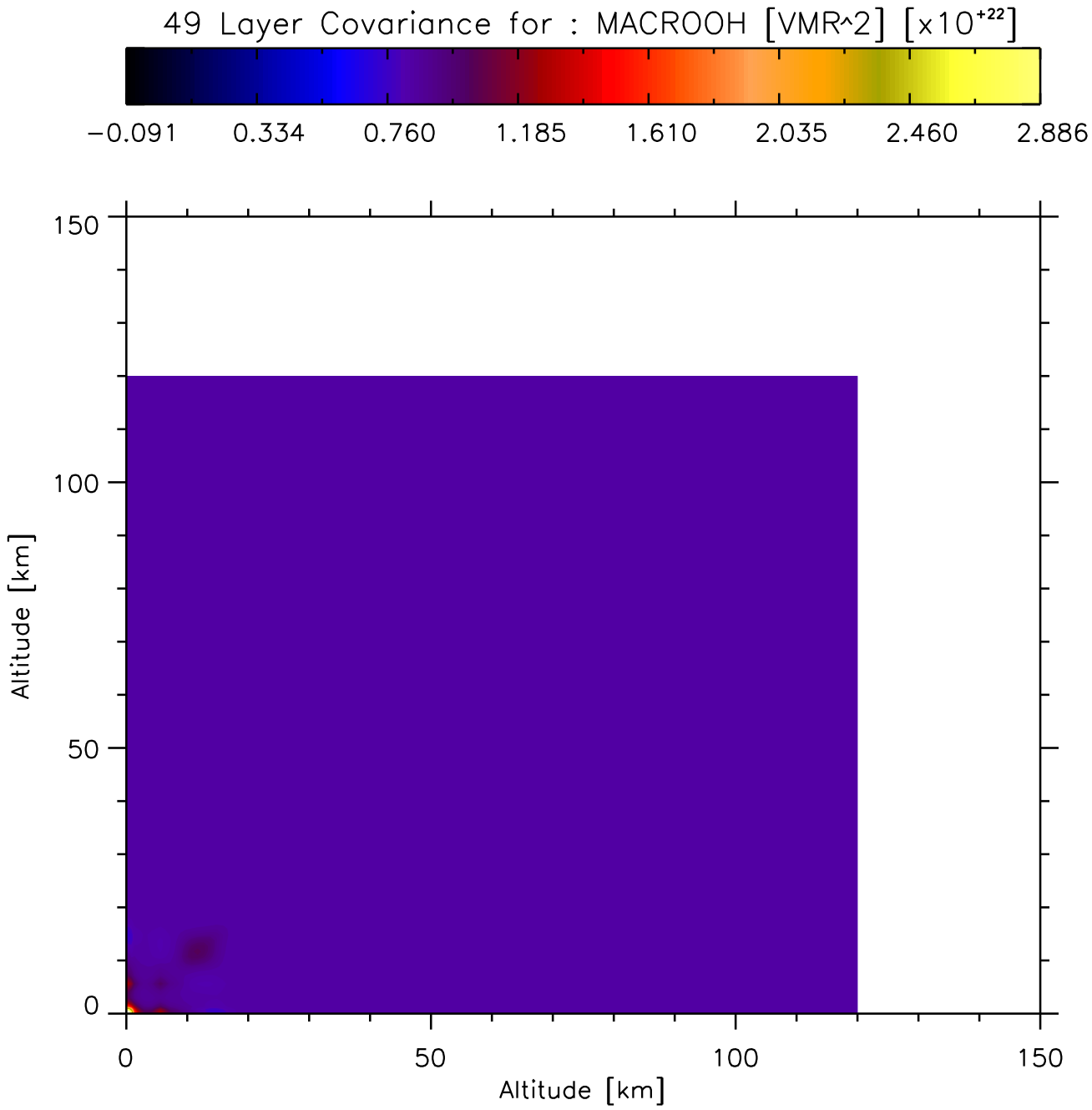

Initial & Interpolated profiles by month for : 2018
Palau 6.63N 135.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
120
100
80
60
40
20
0
Altitude
10^{-35}
10^{-30}
10^{-25}
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio

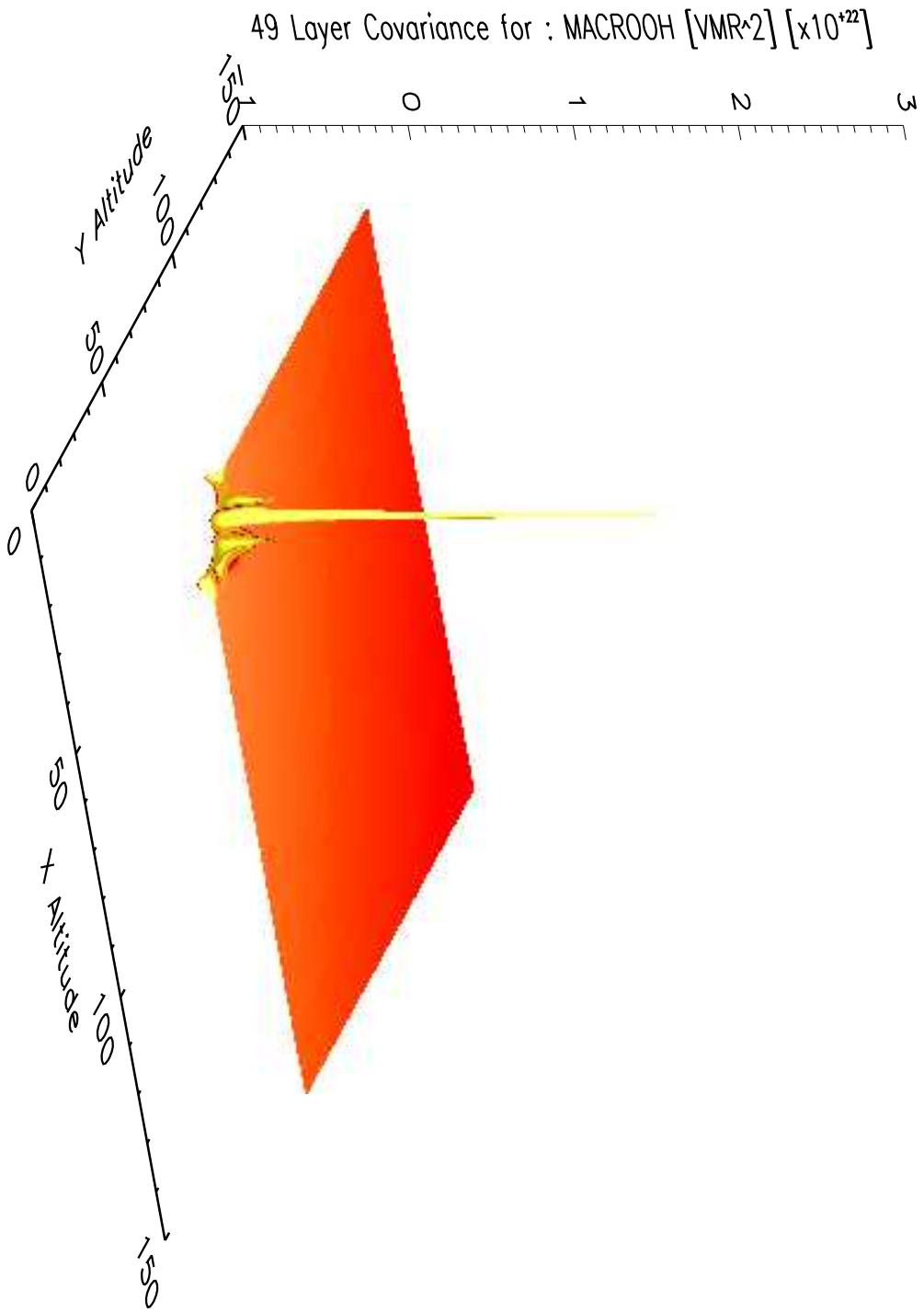

Initial & Interpolated profiles by month for : 2019
Palau 6.63N 135.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10^{-35}
10^{-30}
10^{-25}
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio

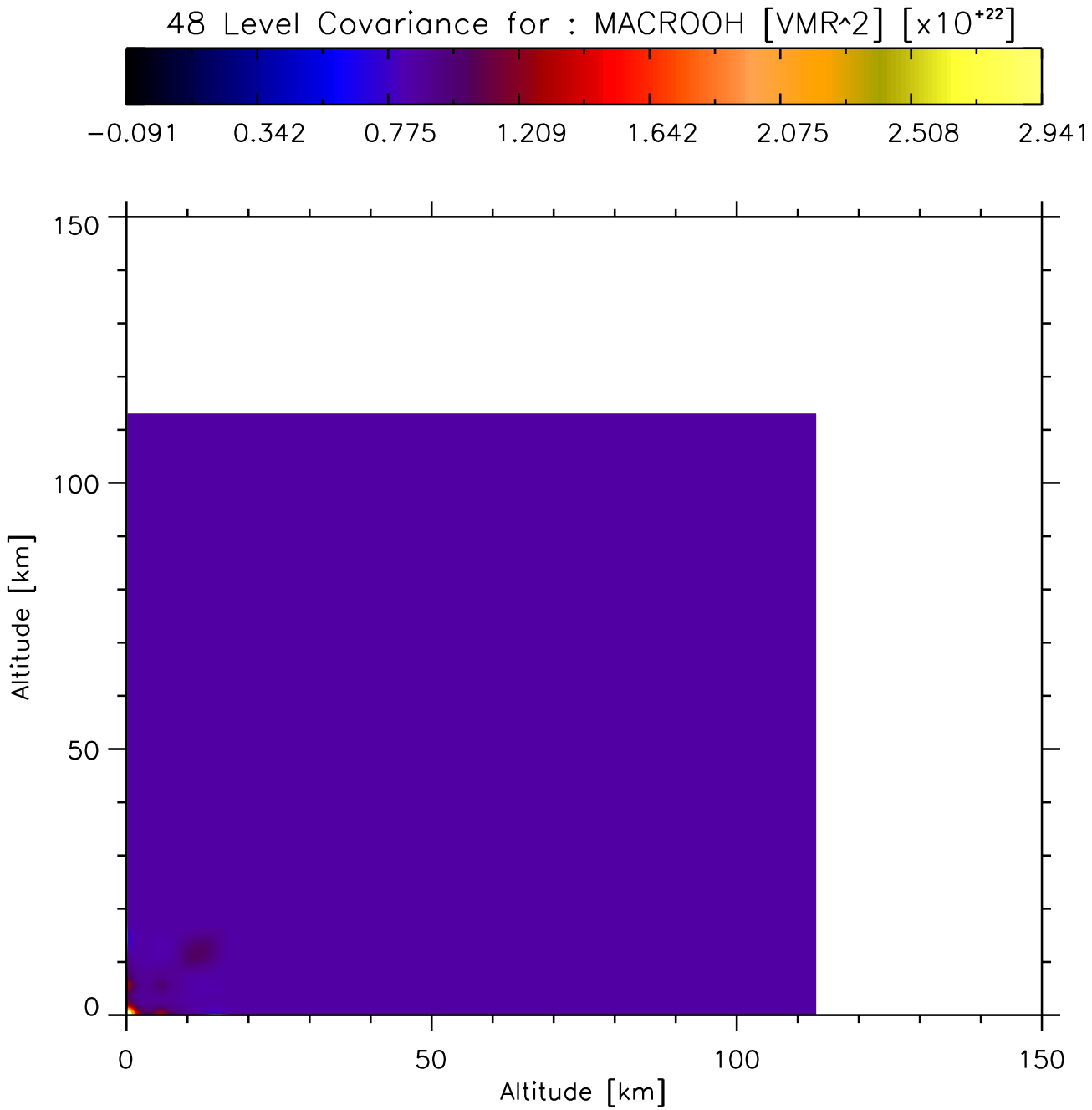

Initial & Interpolated profiles by month for : 2020
Palau 6.63N 135.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10^{-35}
10^{-30}
10^{-25}
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio


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


Std. Deviation
Percent Deviation
Station Grid
REFMOD Grid
Altitude
Altitude
120
100
80
60
40
20
0
10^{-50} 10^{-40} 10^{-30} 10^{-20} 10^{-10}
SD
0 200 400 600 800 1000 1200
%


49 Layer Covariance for : MACROOH [VMR^2] [x10^+22]
−0.091
0.334
0.760
1.185
1.610
2.035
2.460
2.886
150
100
50
0
Altitude [km]
0
50
100
150
Altitude [km]


49 Layer Covariance for : MACROOH [VMR^2] [x10^+22]
0
1
2
3
Y Altitude
0
50
100
150
0
50
100
150
X Altitude


48 Level Covariance for : MACROOH [VMR^2] [x10^+22]
−0.091
0.342
0.775
1.209
1.642
2.075
2.508
2.941
150
100
50
0
Altitude [km]
0
50
100
150
Altitude [km]

48 Level Covariance for : MACROOH [VMR^2] [x10^22]
Y Altitude
X Altitude
0
50
100
150
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
210
220
230
240
250
260
270
280
290
300
310
320
330
340
350
360
370
380
390
400
410
420
430
440
450
460
470
480