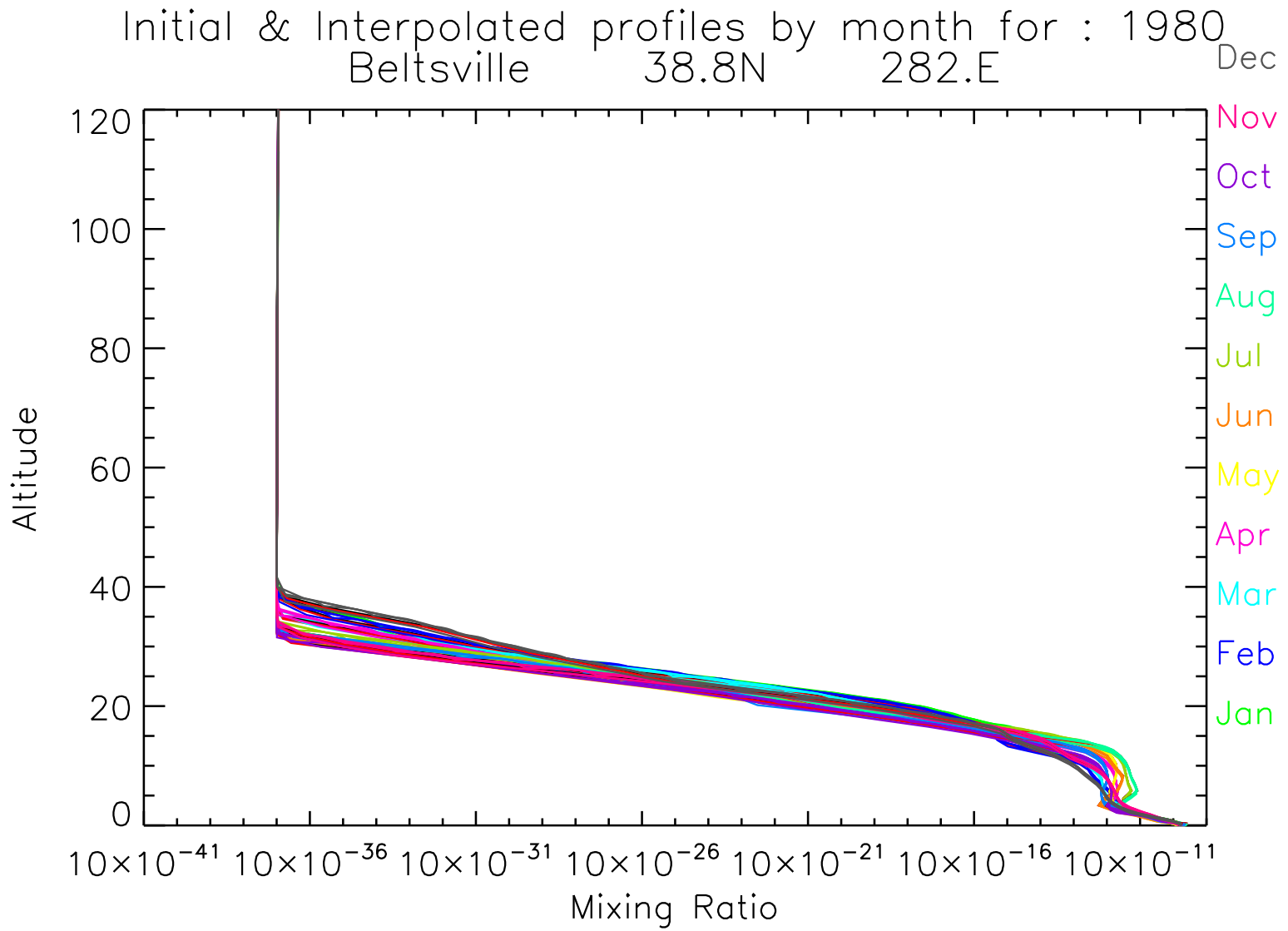
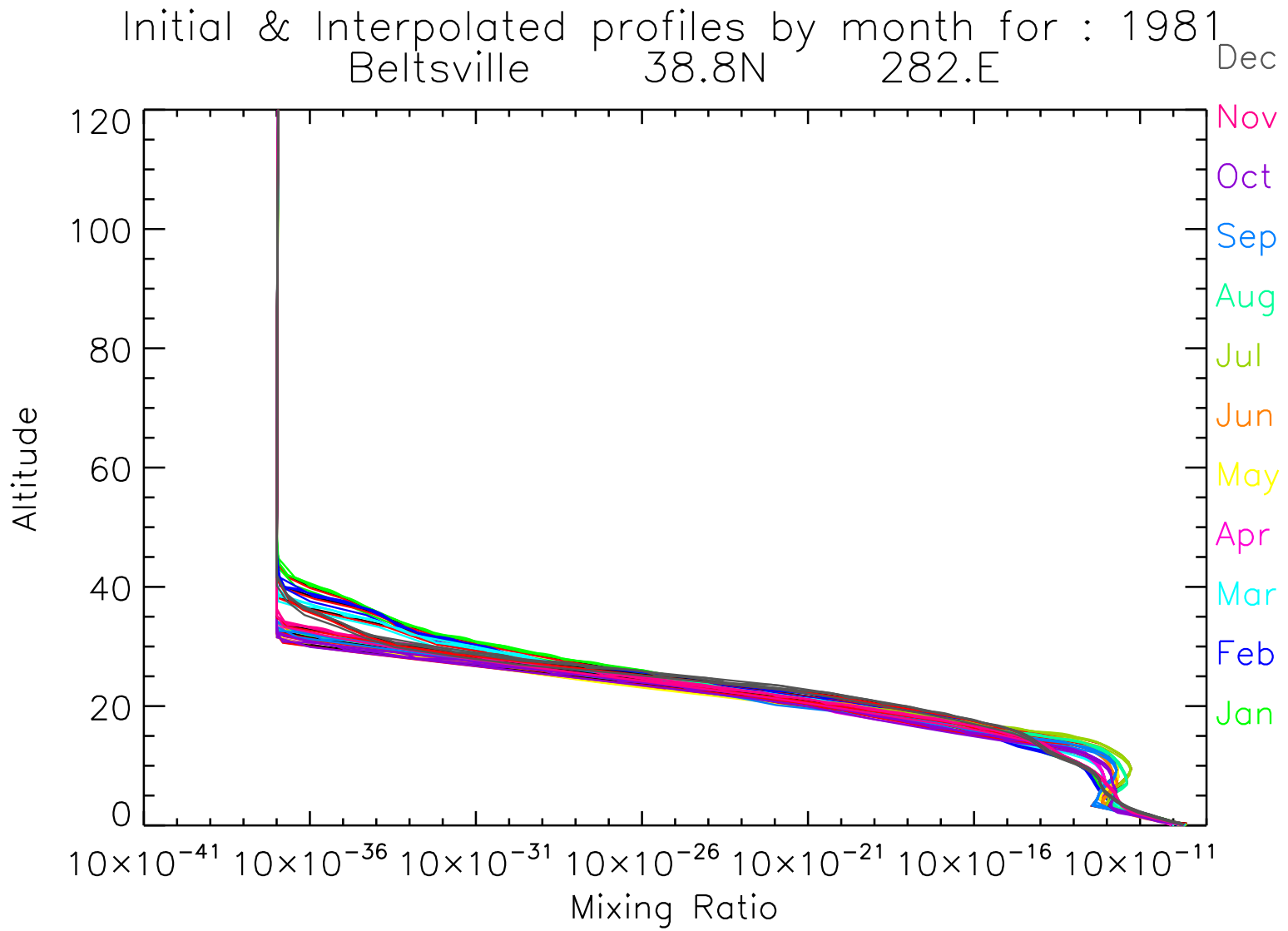
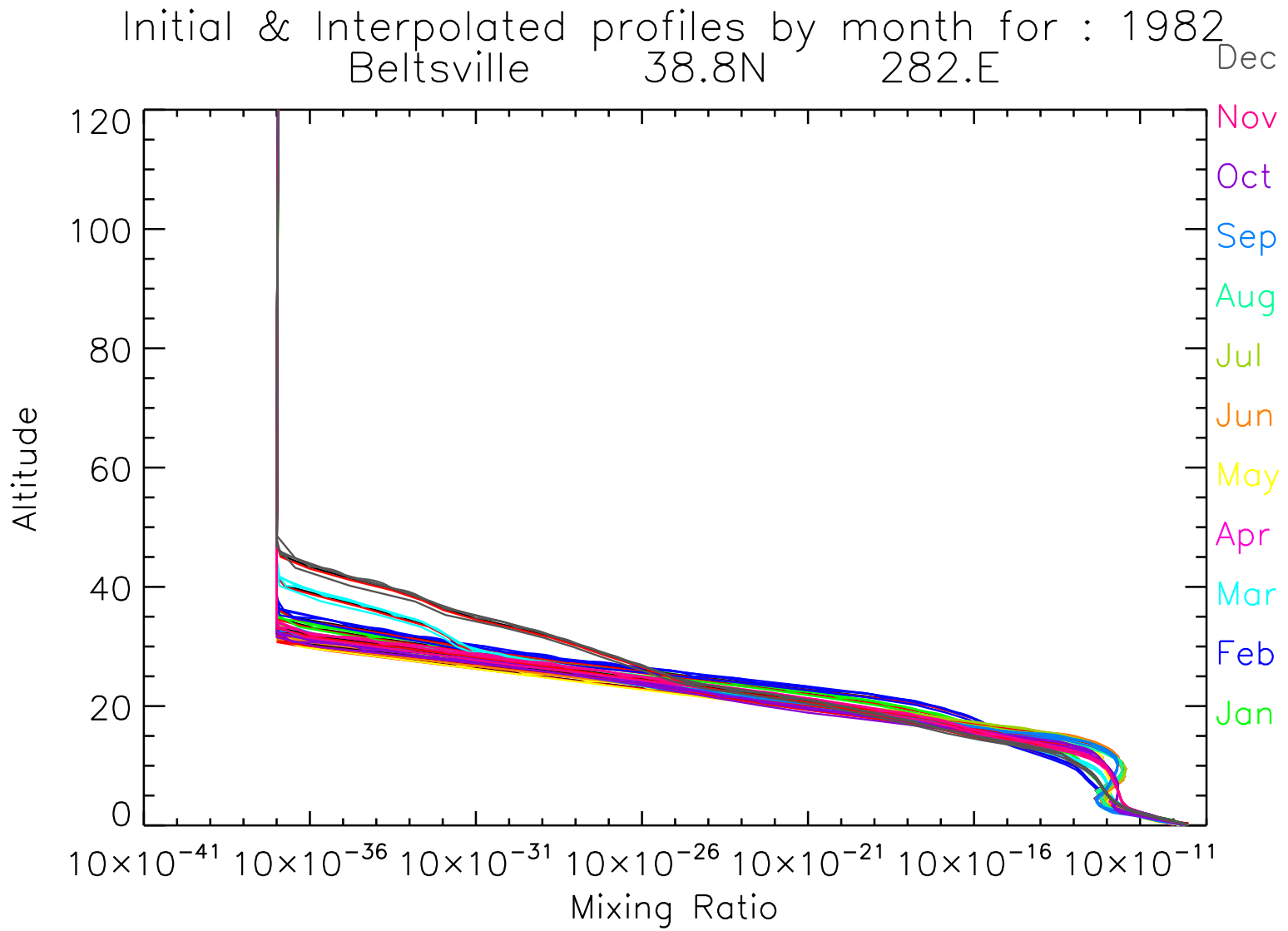
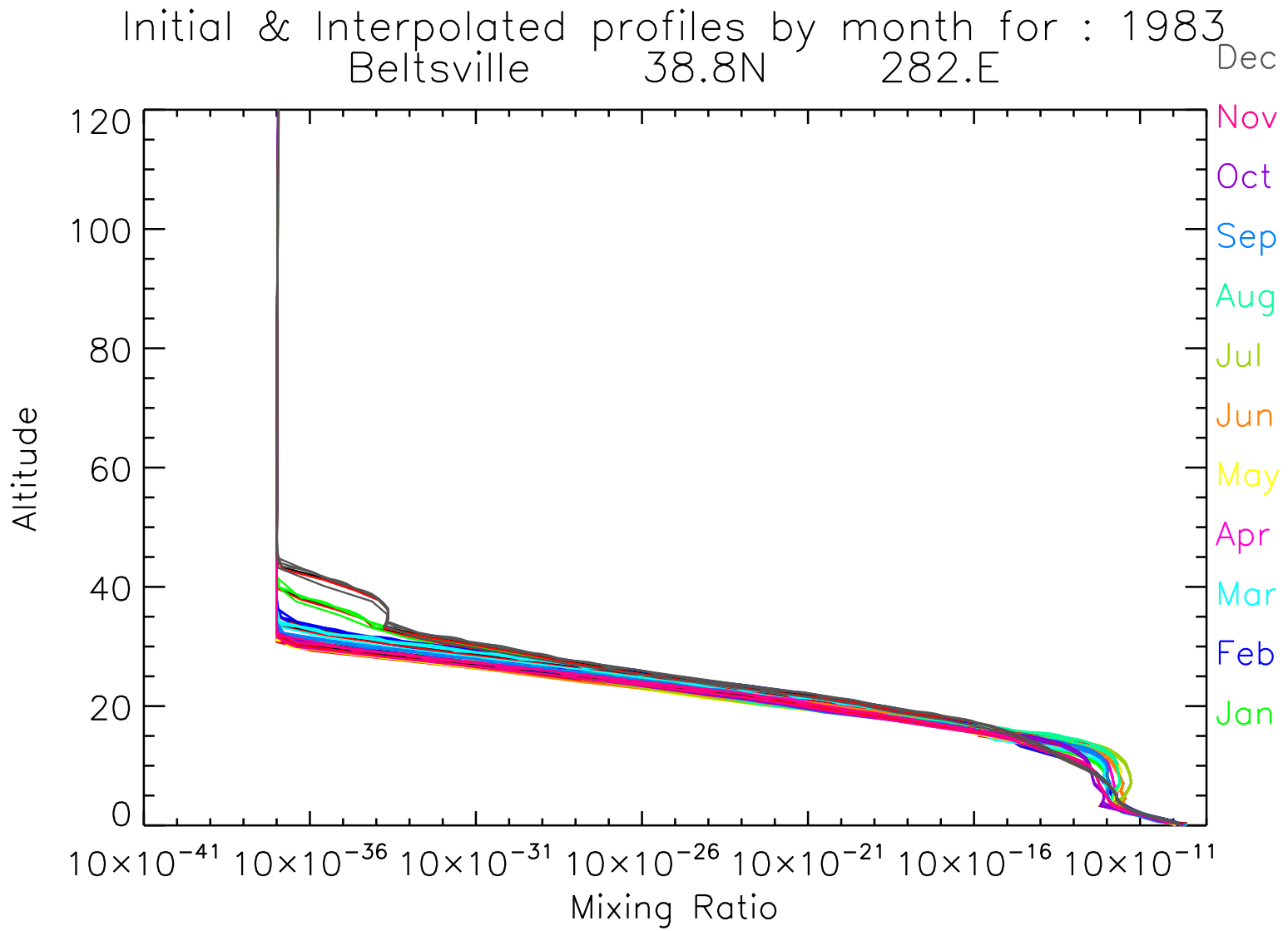
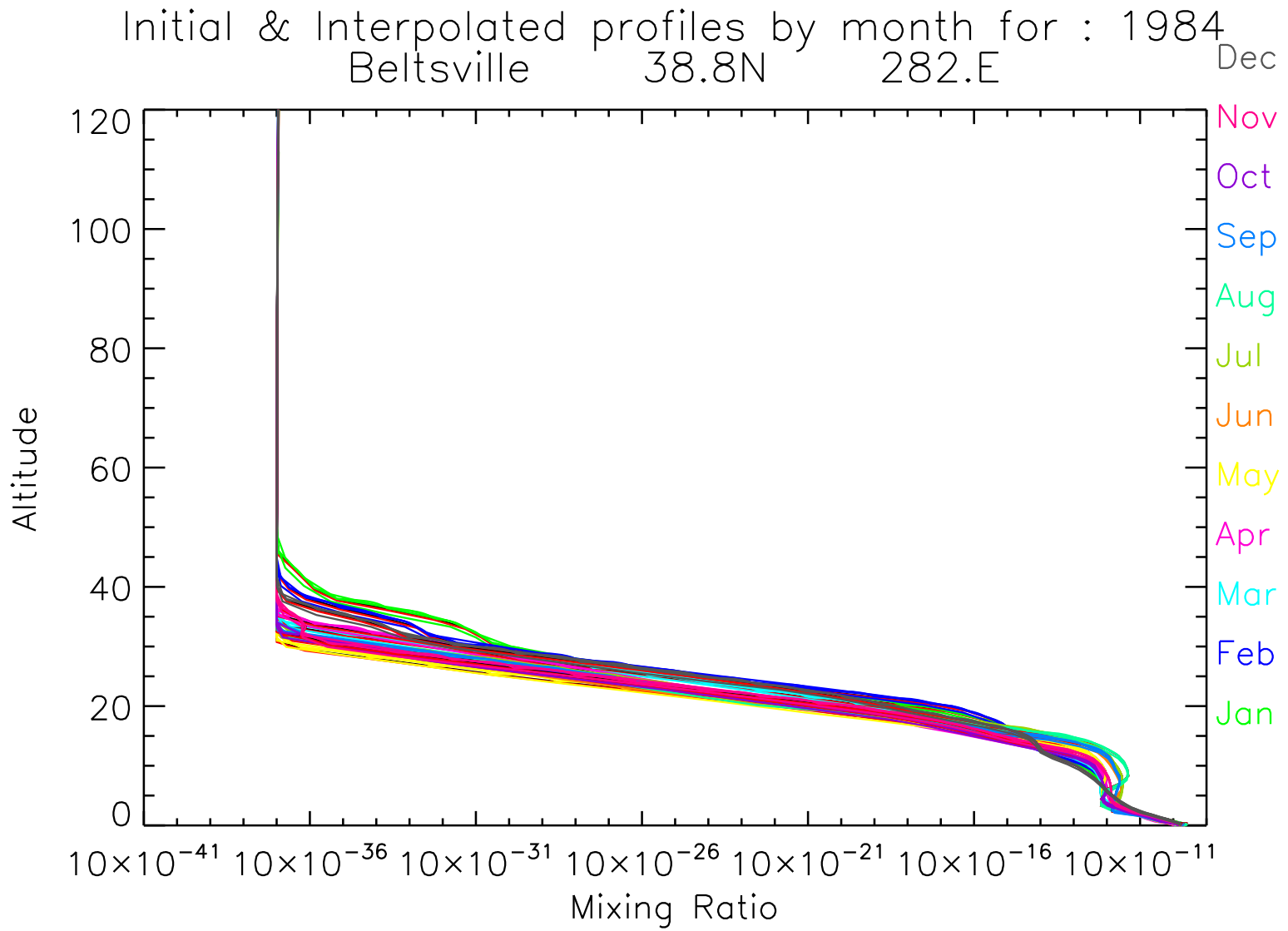
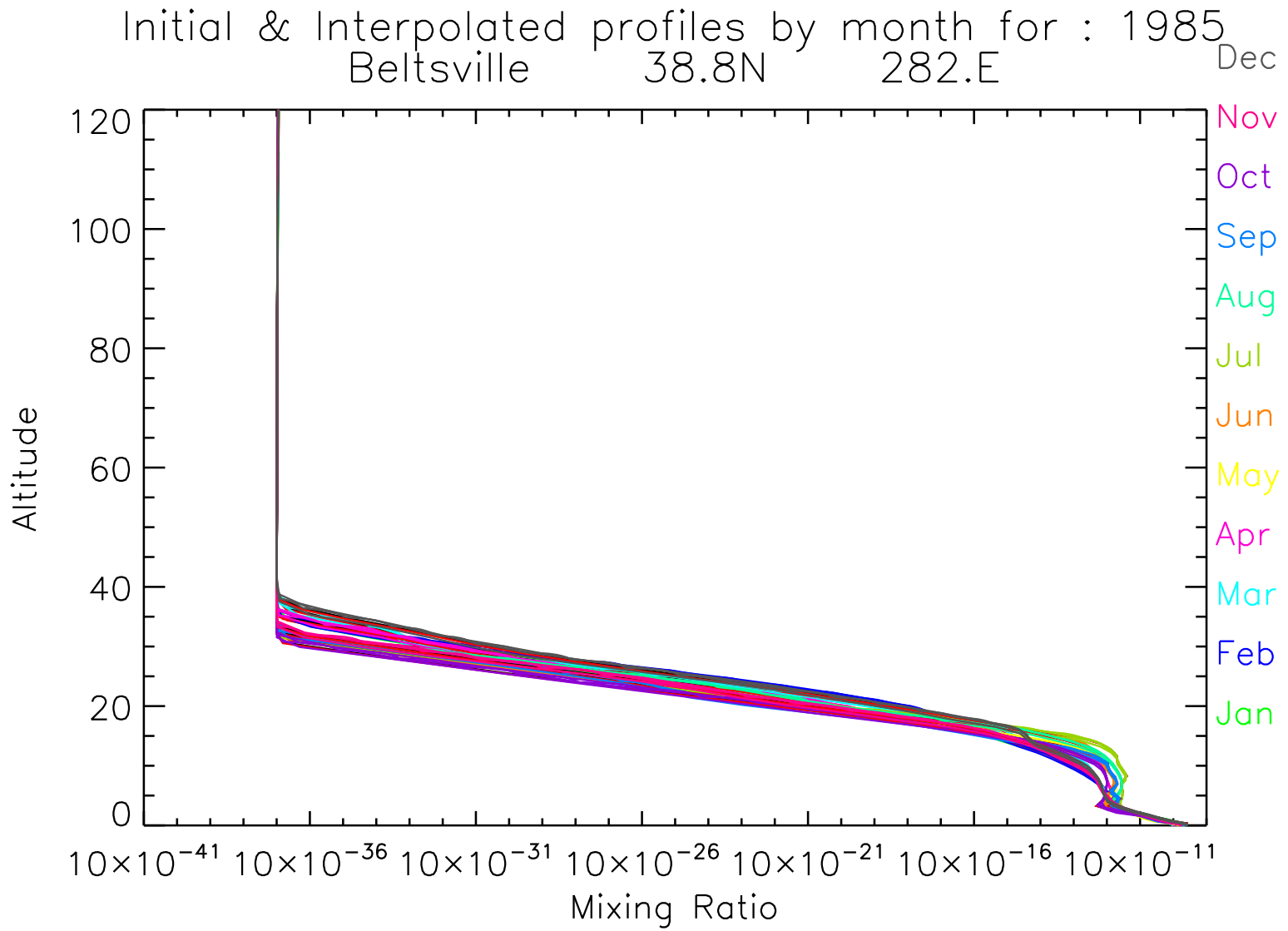

Initial & Interpolated profiles by month for : 1980
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

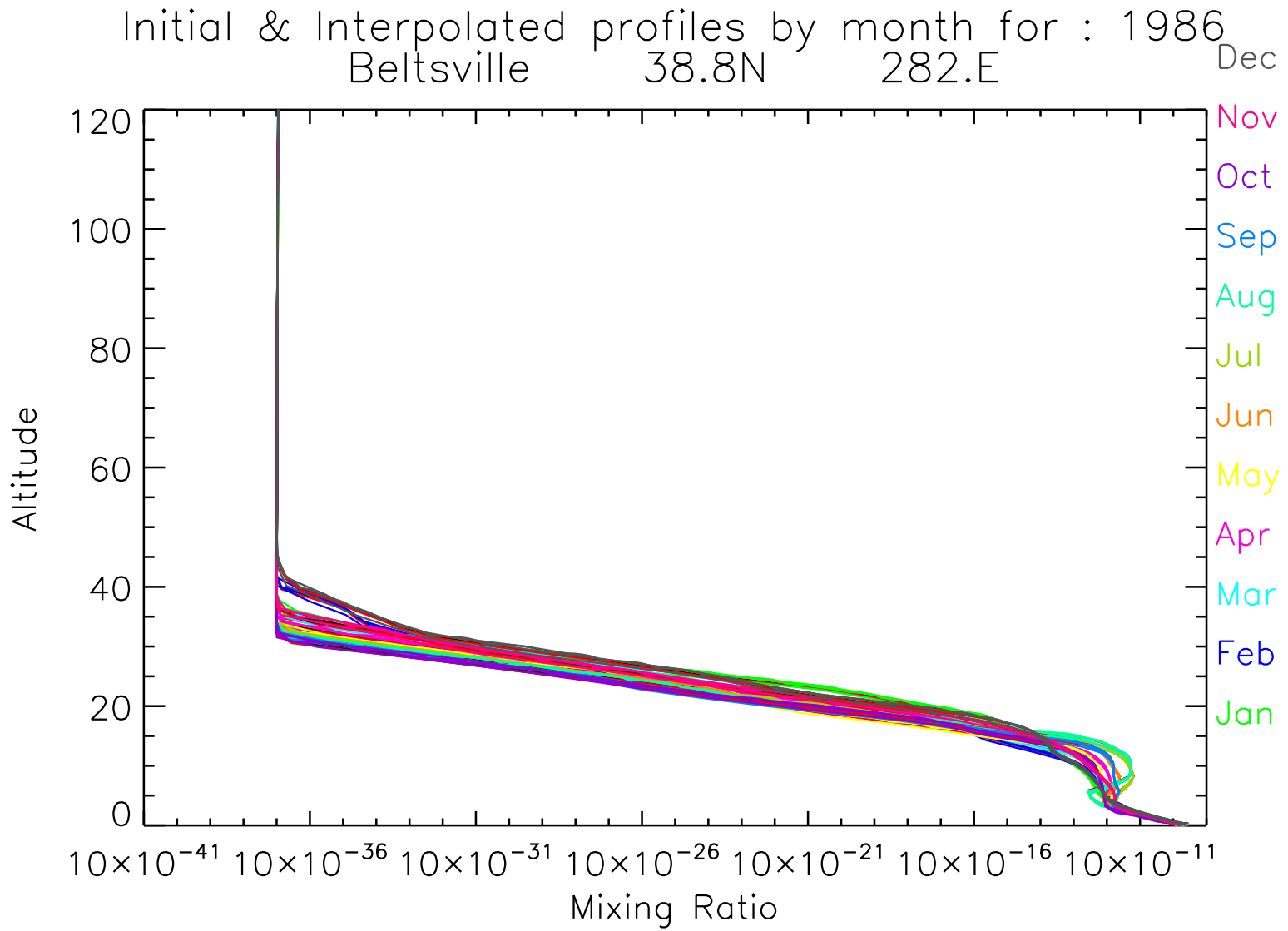

Initial & Interpolated profiles by month for : 1981
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

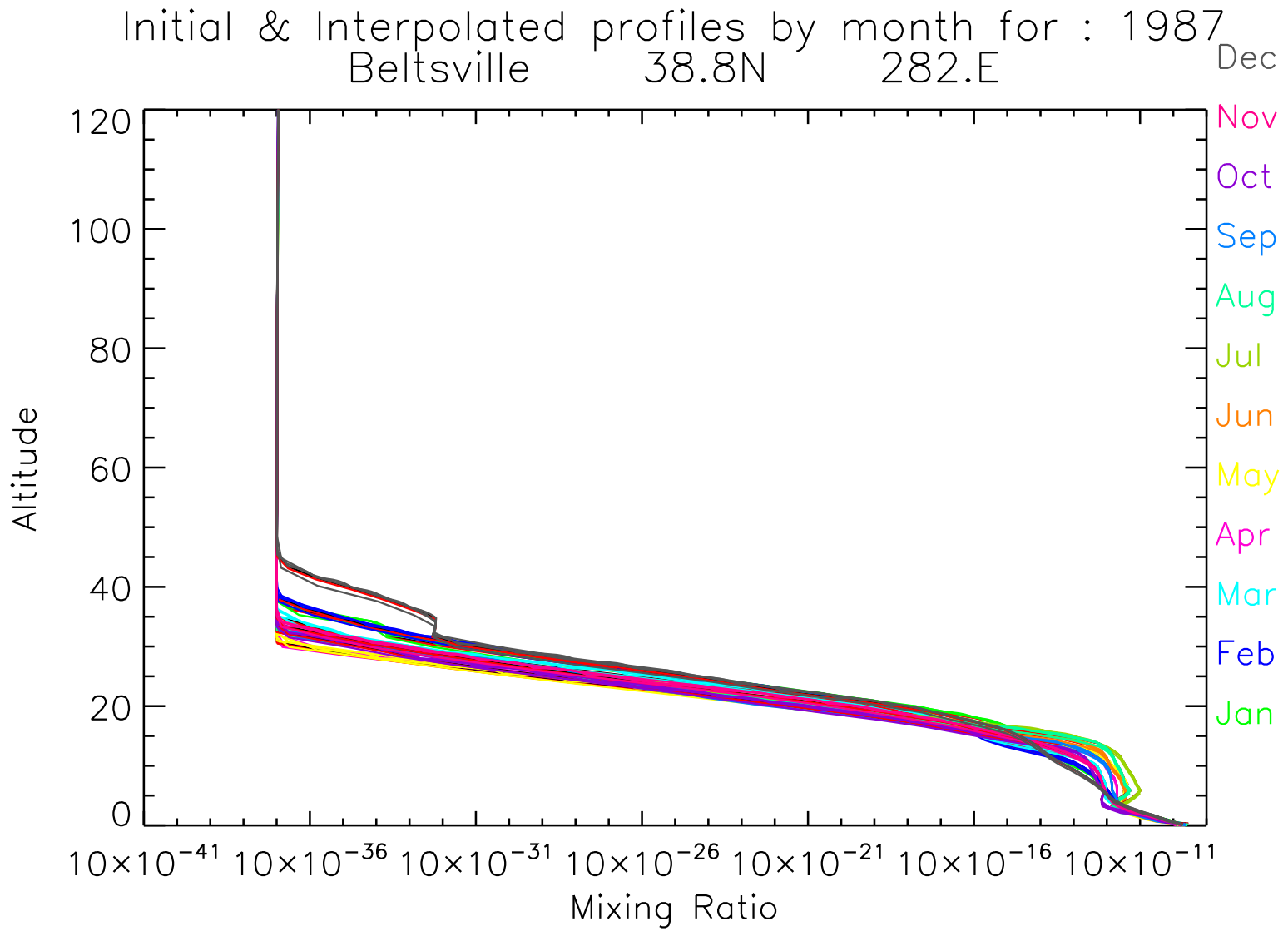

Initial & Interpolated profiles by month for : 1982
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

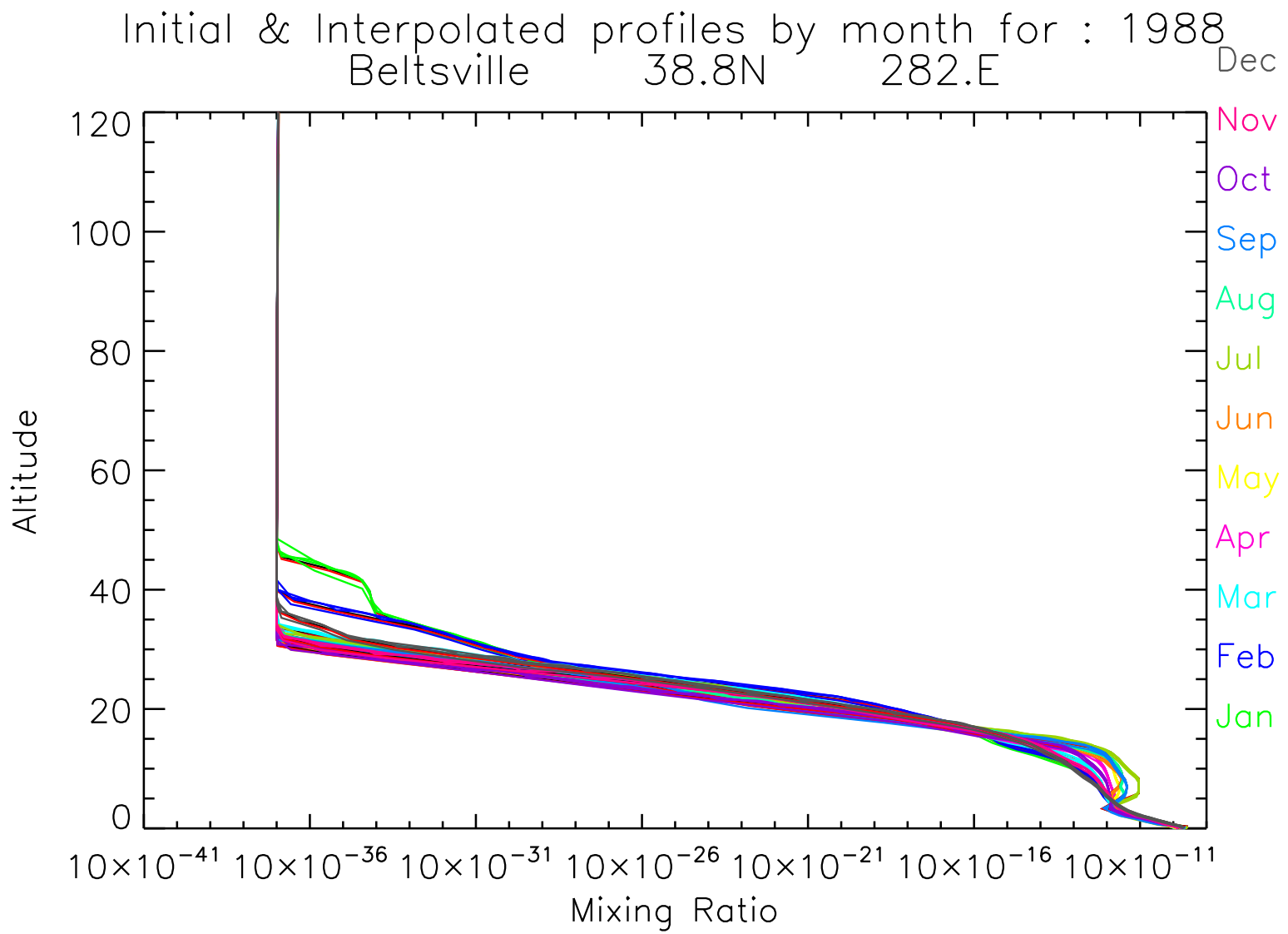

Initial & Interpolated profiles by month for : 1983
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

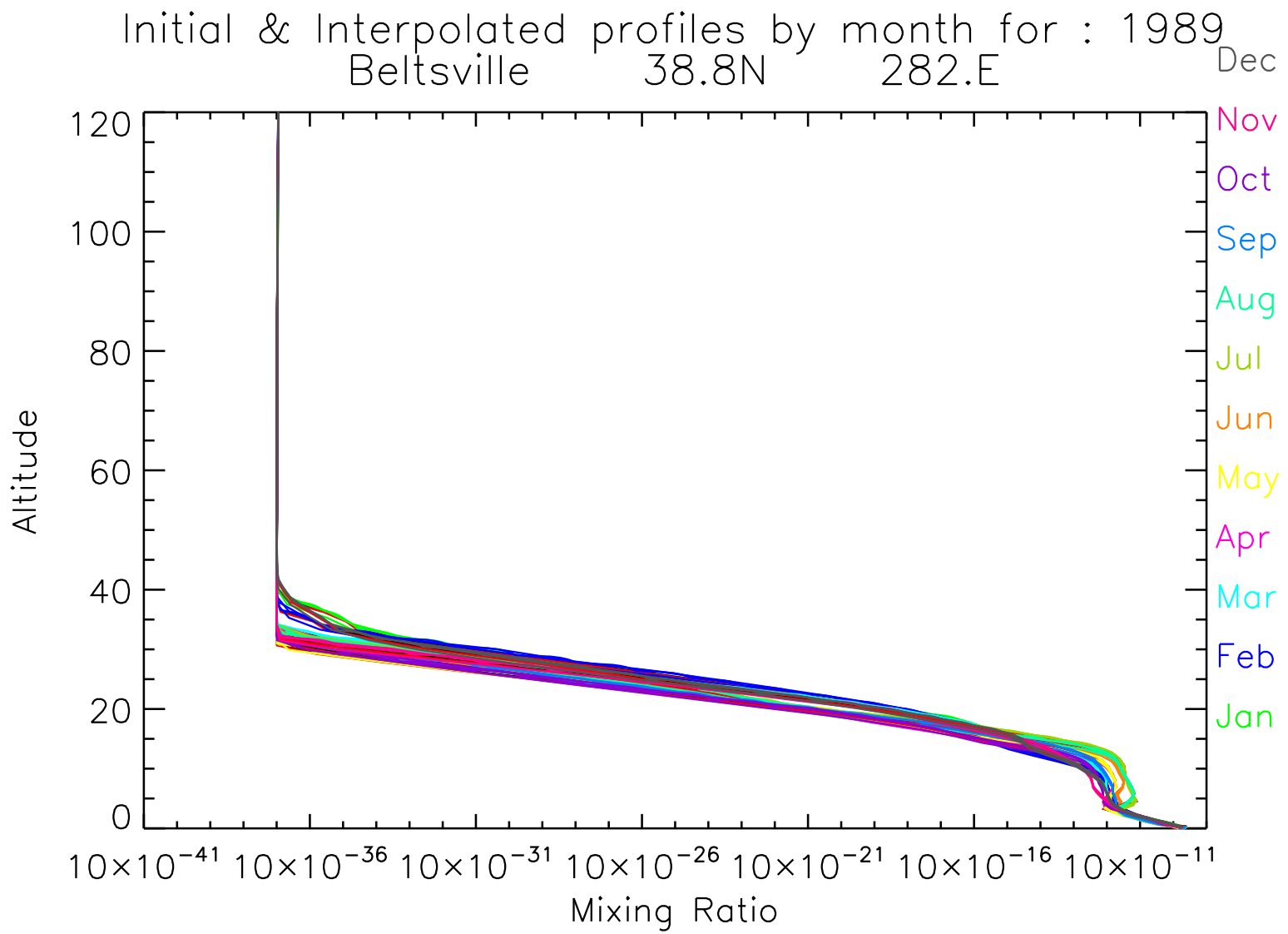

Initial & Interpolated profiles by month for : 1984
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

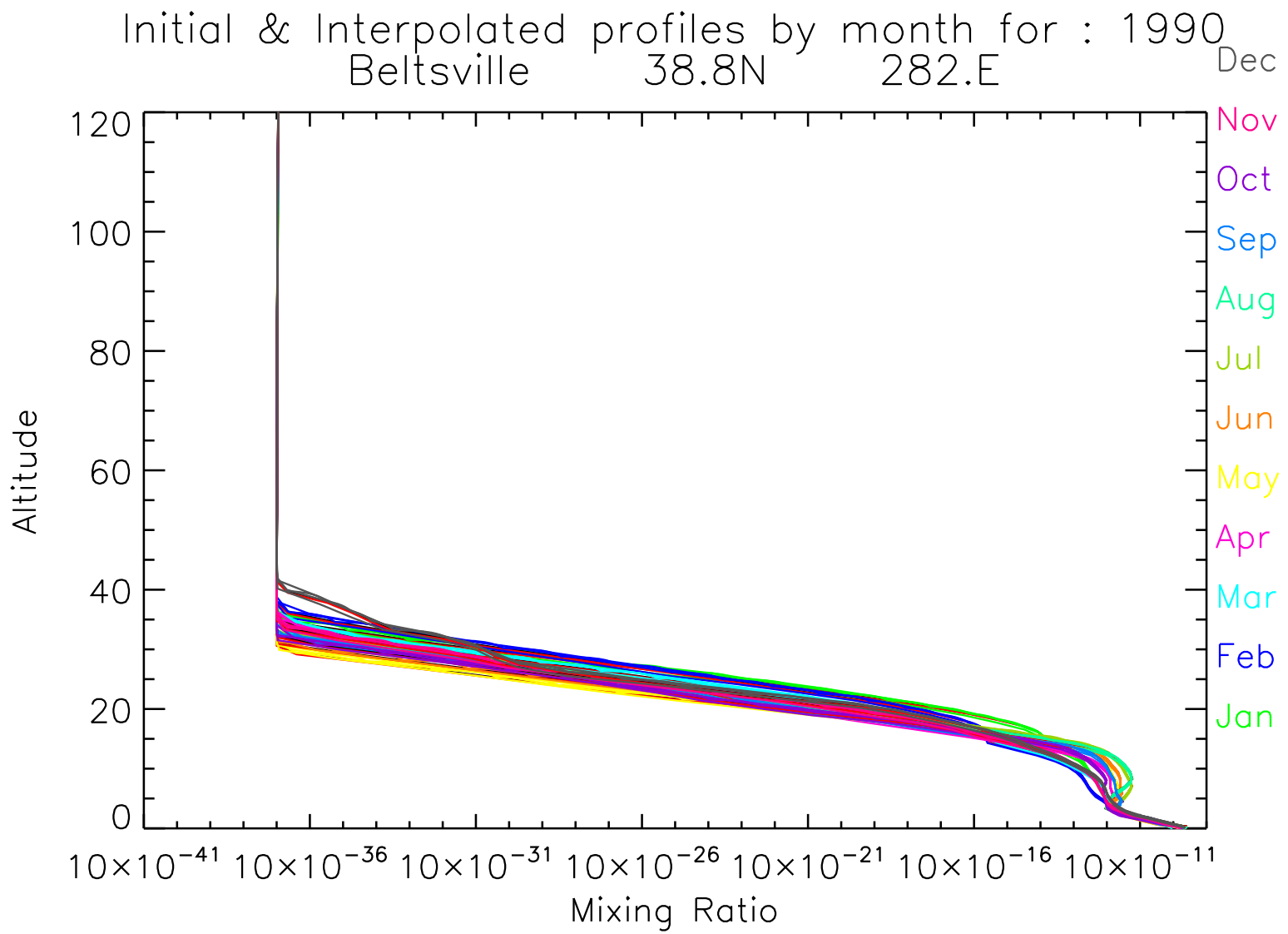

Initial & Interpolated profiles by month for : 1985
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

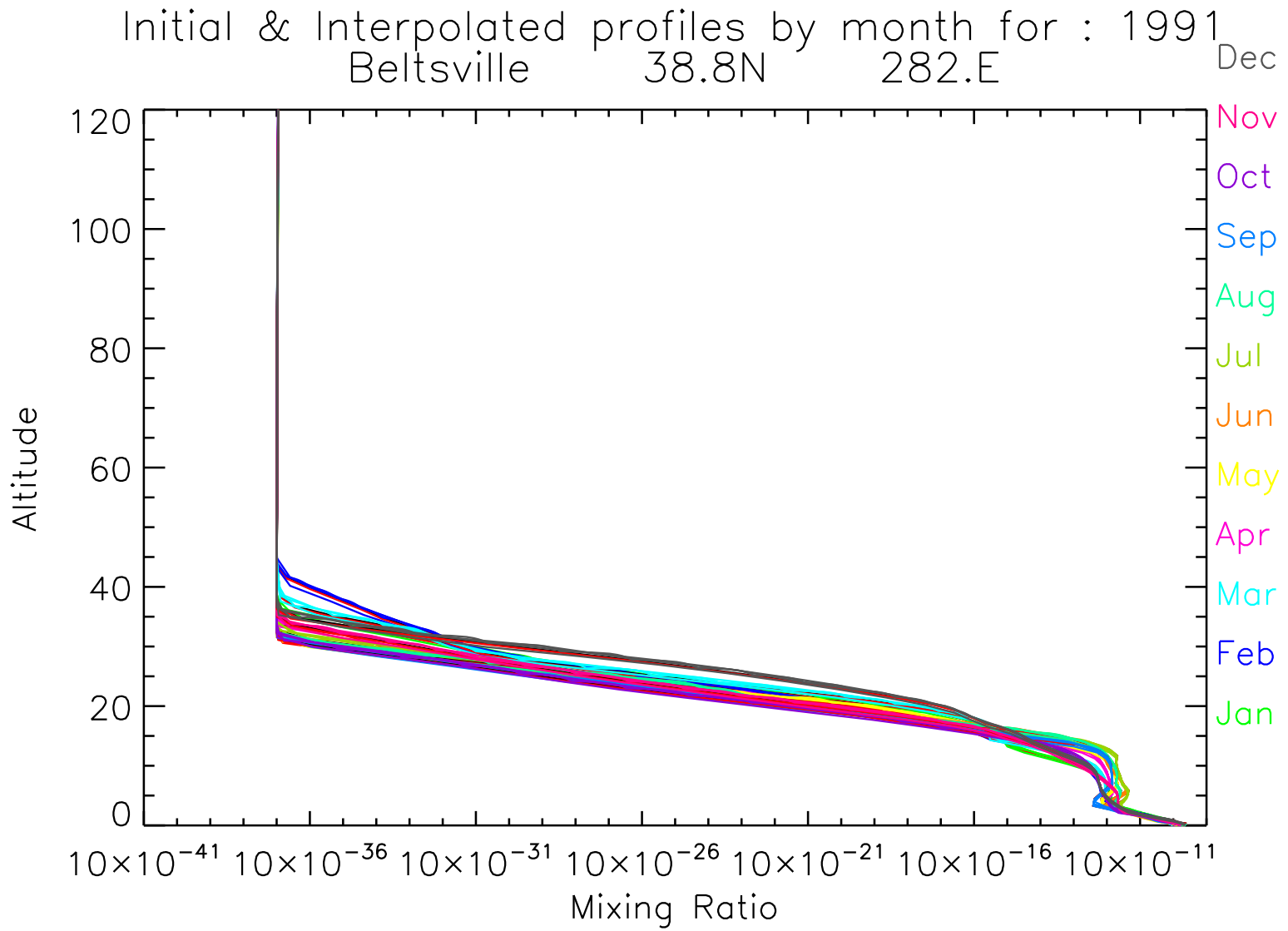

Initial & Interpolated profiles by month for : 1986
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

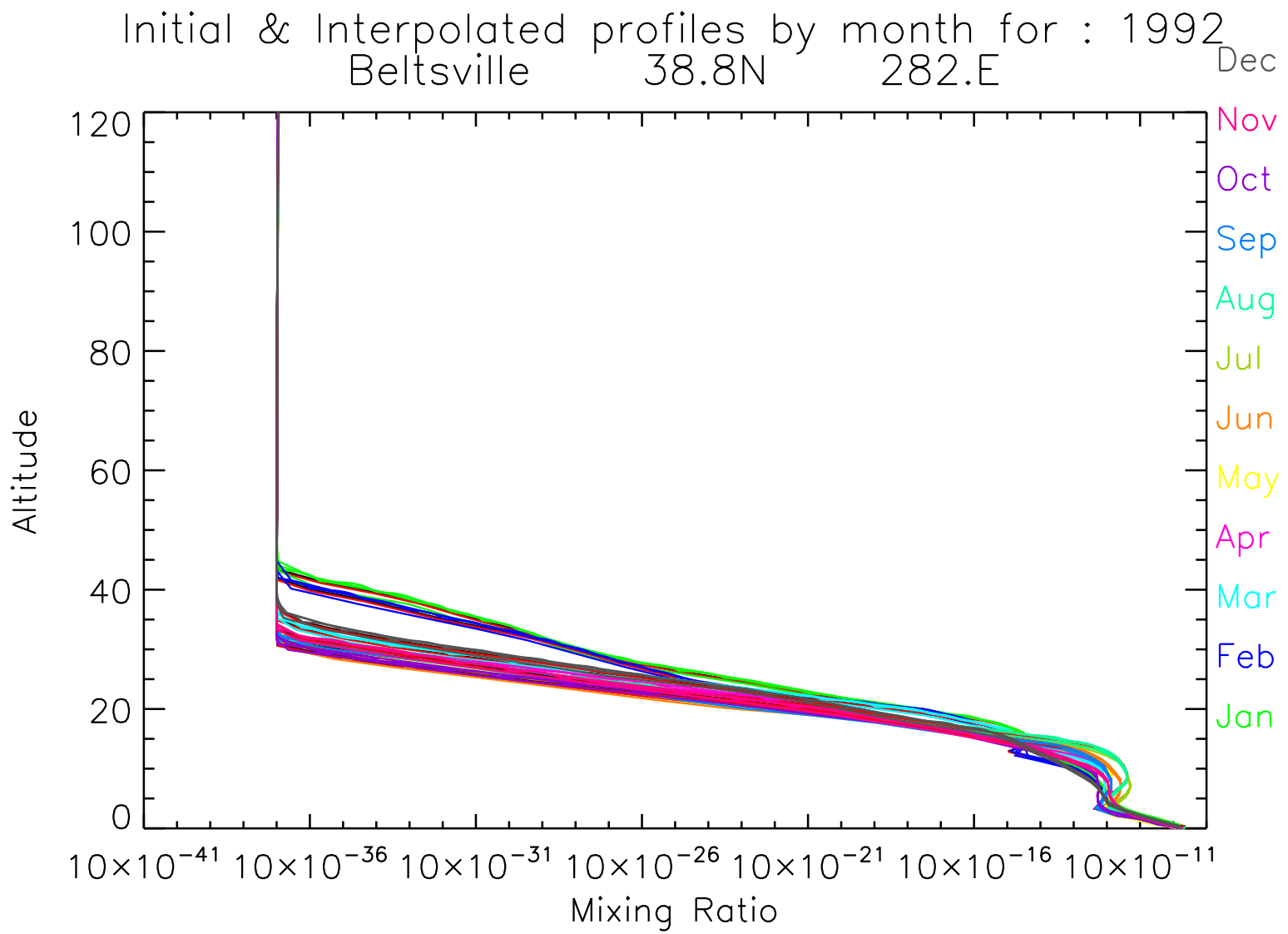

Initial & Interpolated profiles by month for : 1987
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

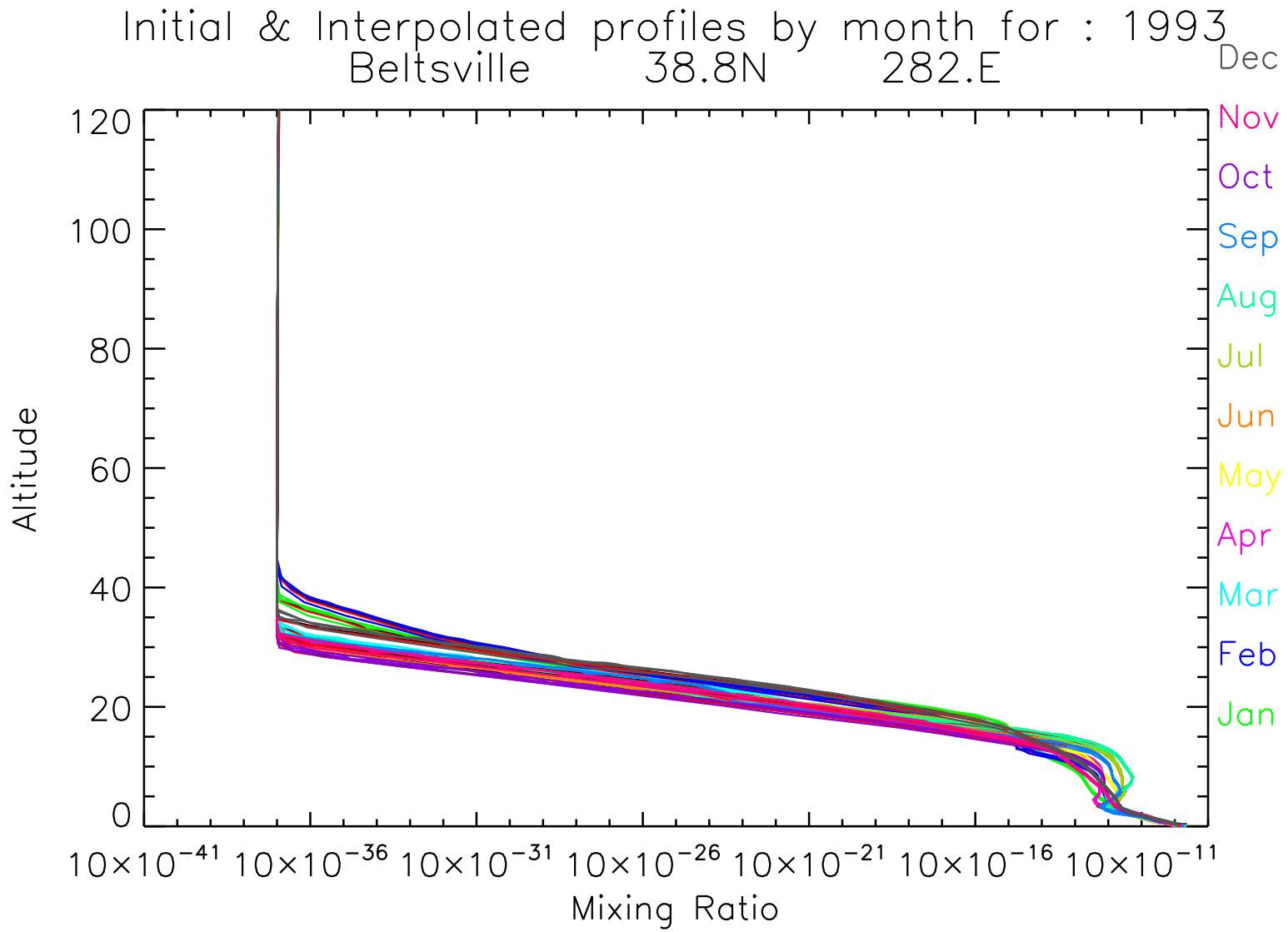

Initial & Interpolated profiles by month for : 1988
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

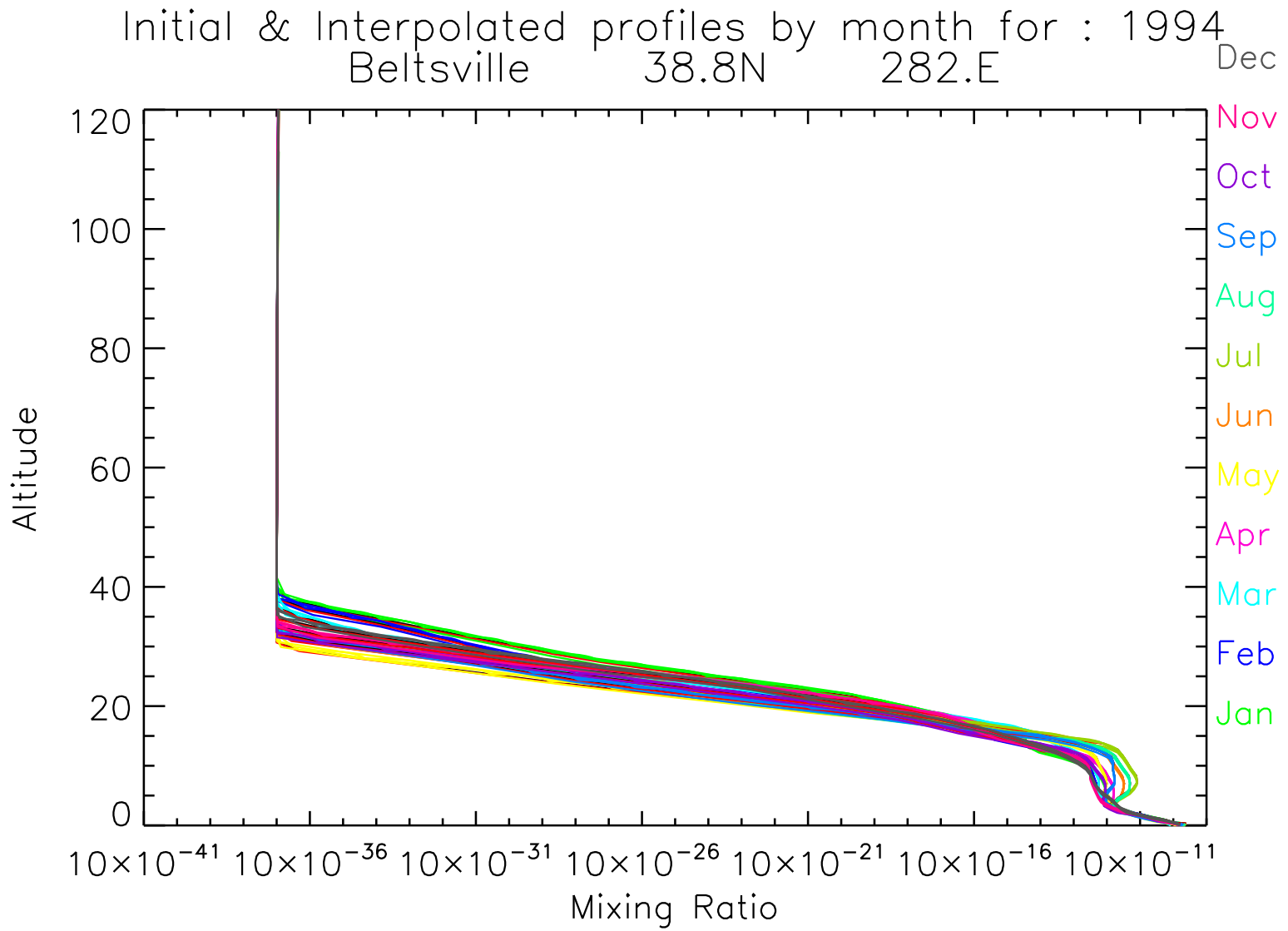

Initial & Interpolated profiles by month for : 1989
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

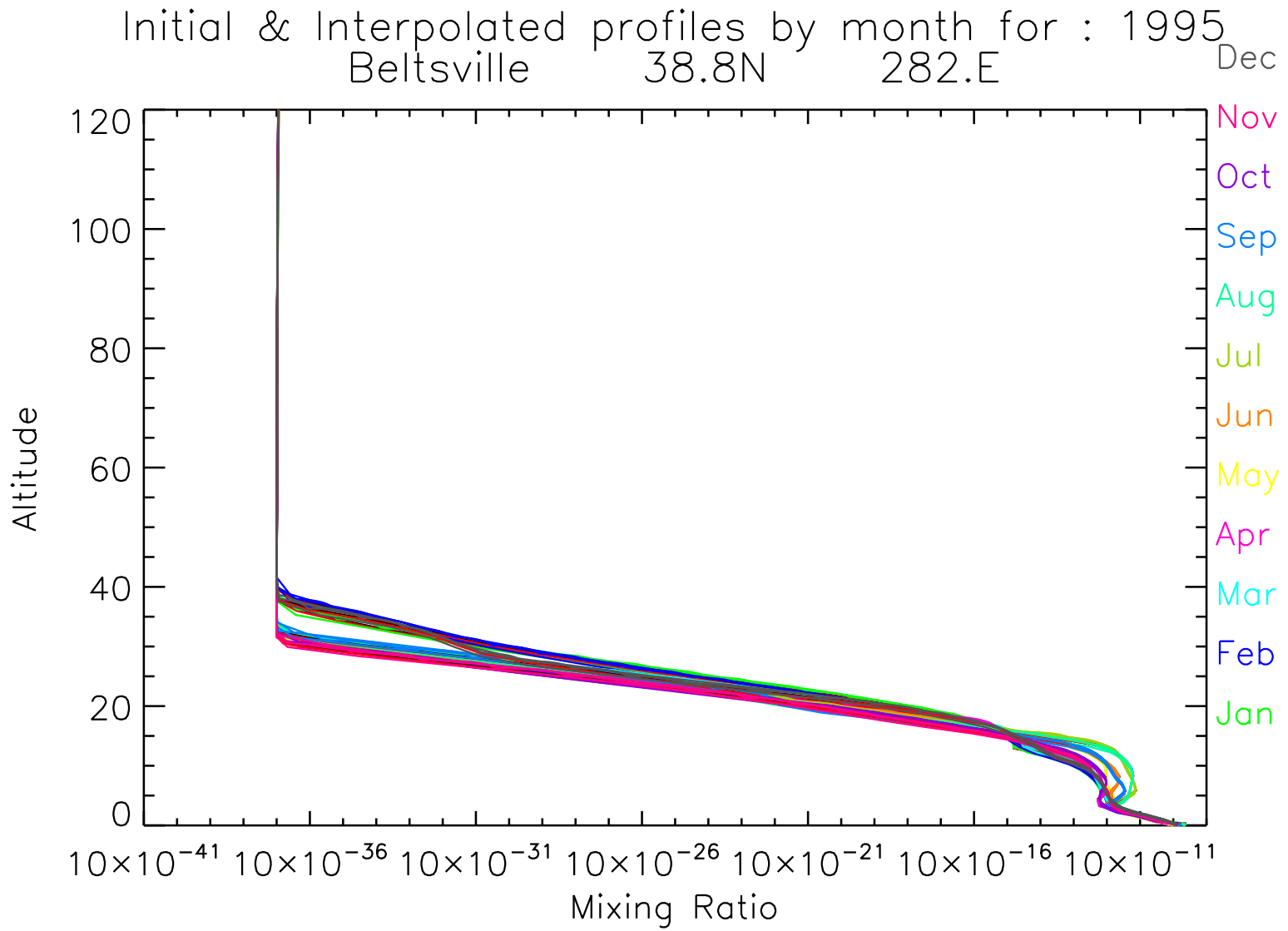

Initial & Interpolated profiles by month for : 1990
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

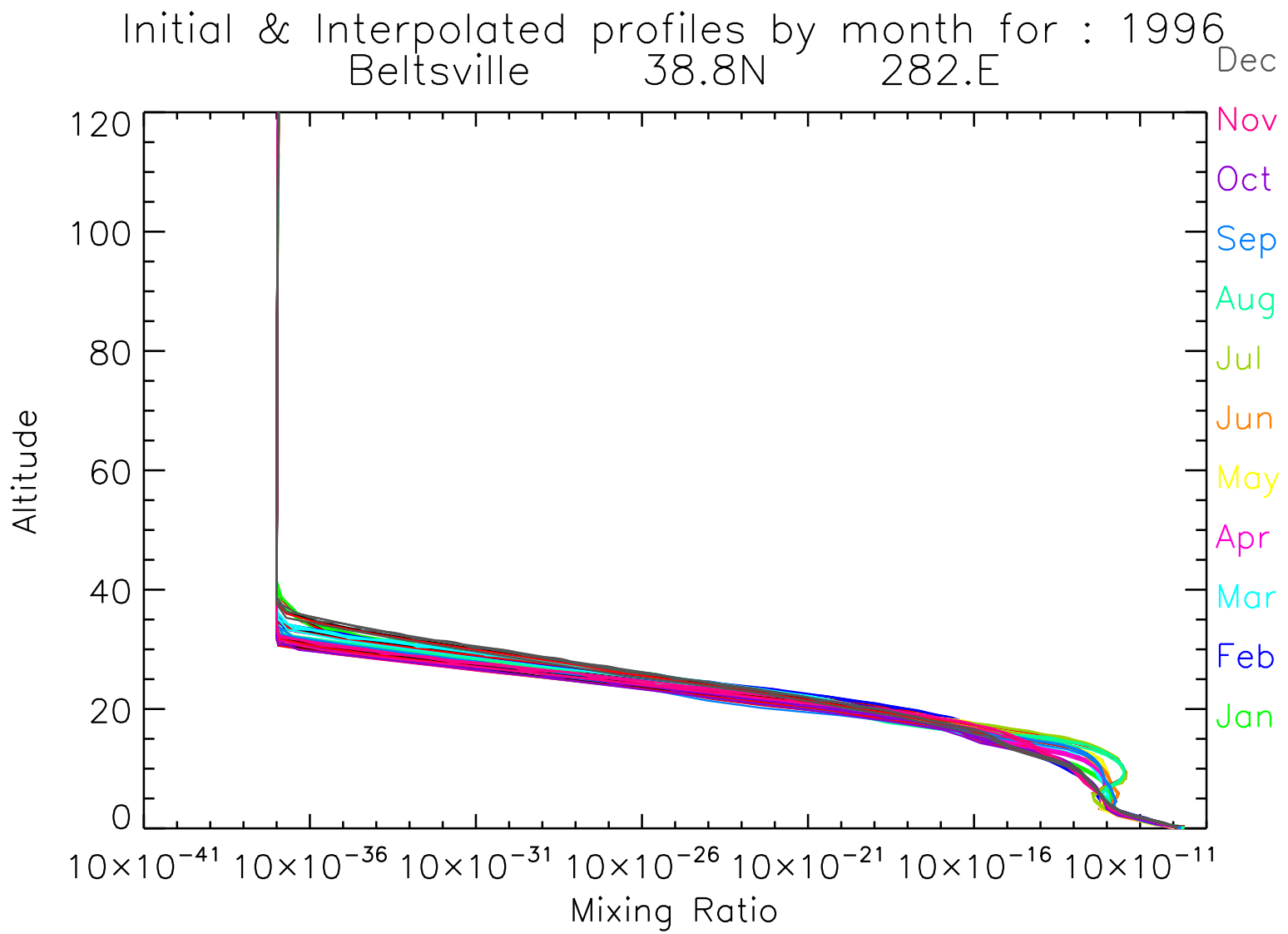

Initial & Interpolated profiles by month for : 1991
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

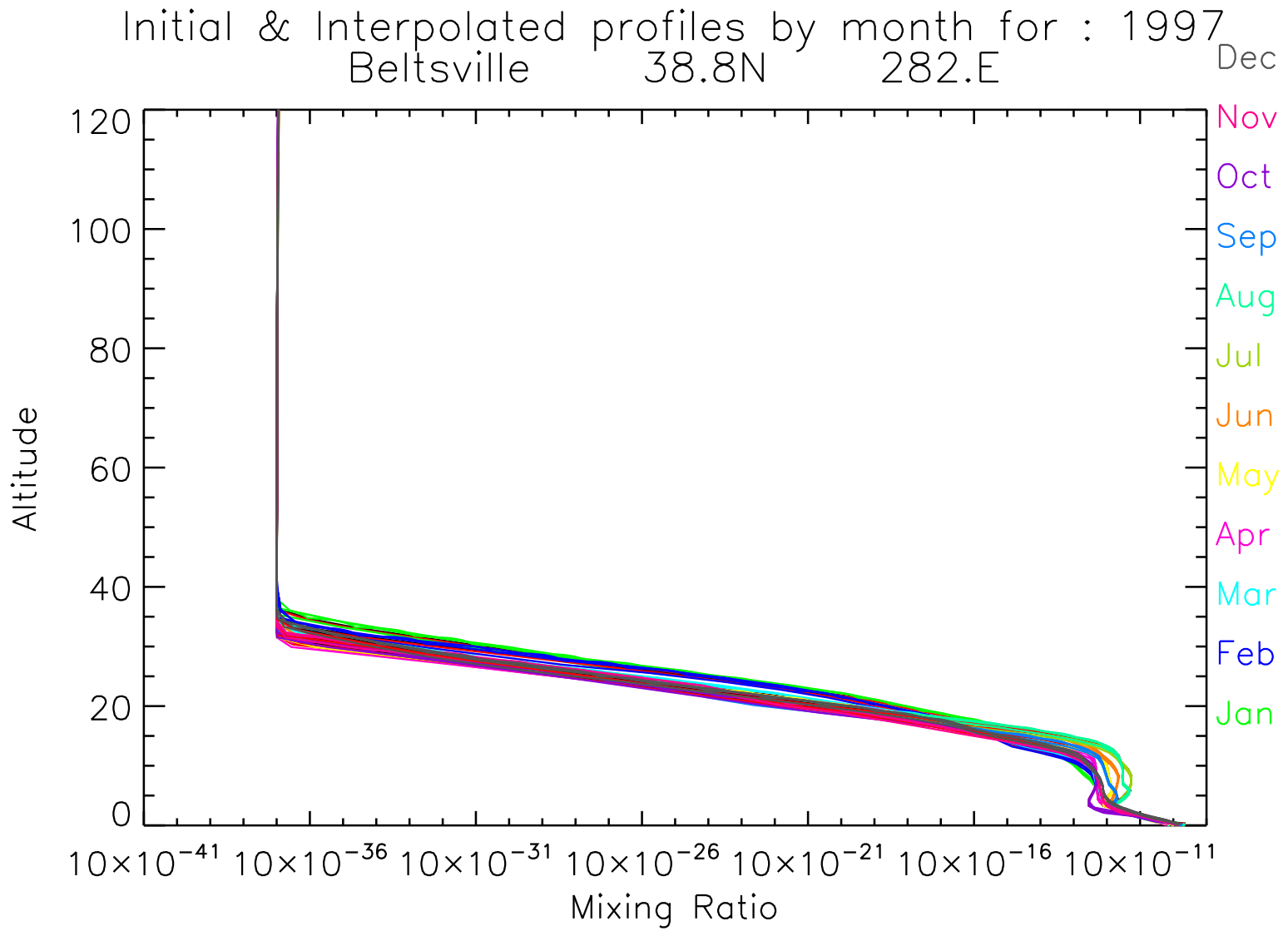

Initial & Interpolated profiles by month for : 1992
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

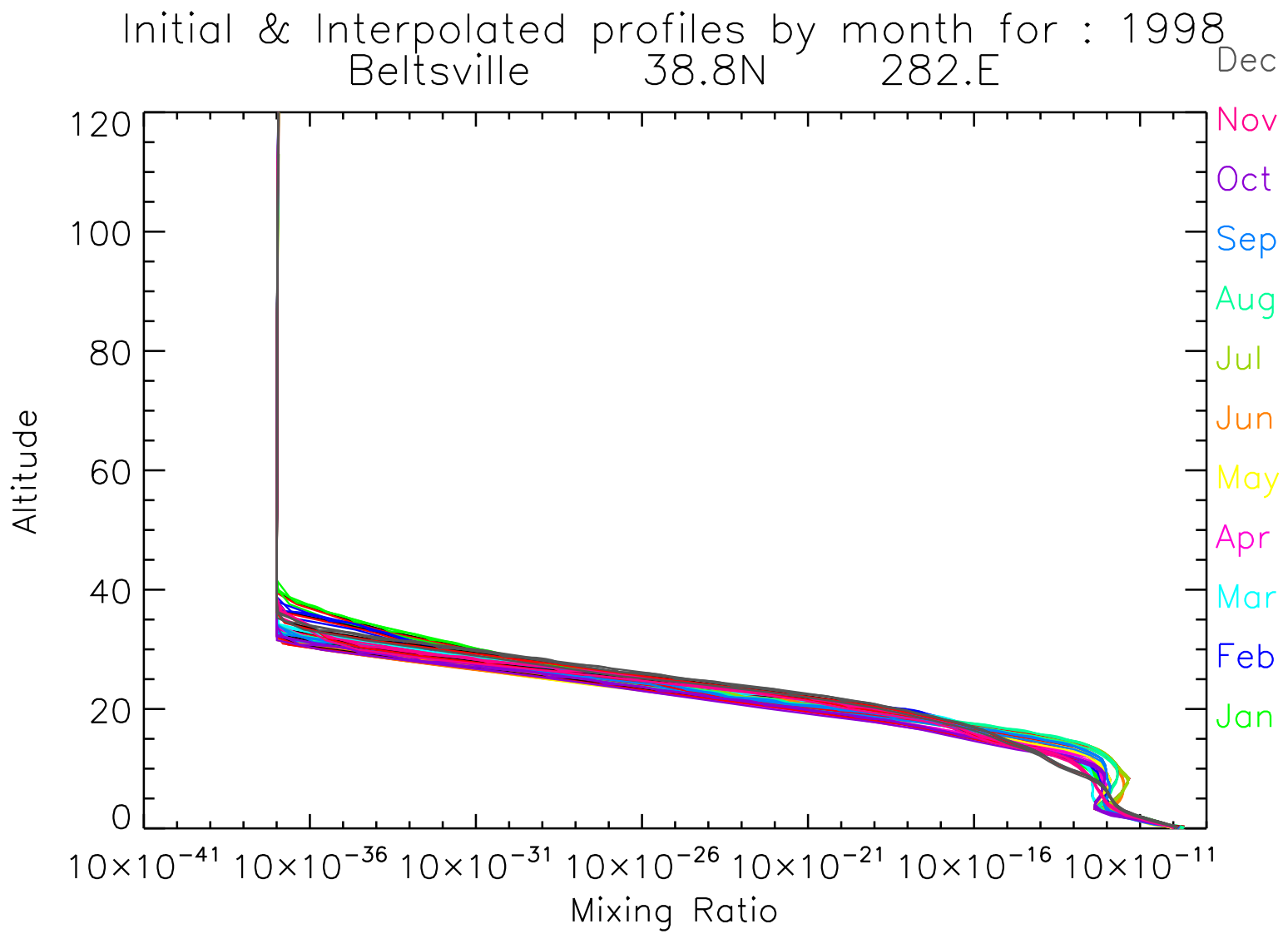

Initial & Interpolated profiles by month for : 1993
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

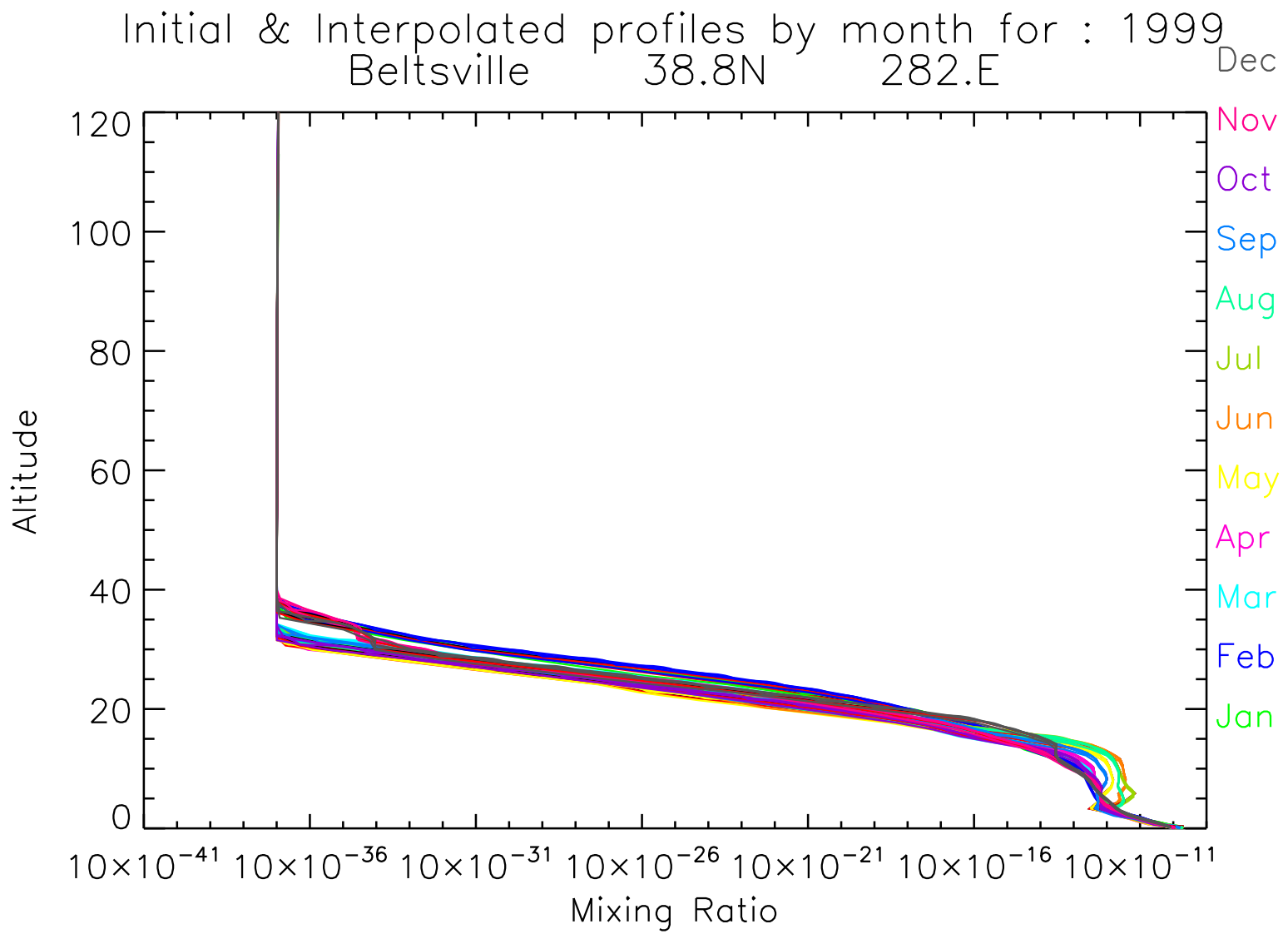

Initial & Interpolated profiles by month for : 1994
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

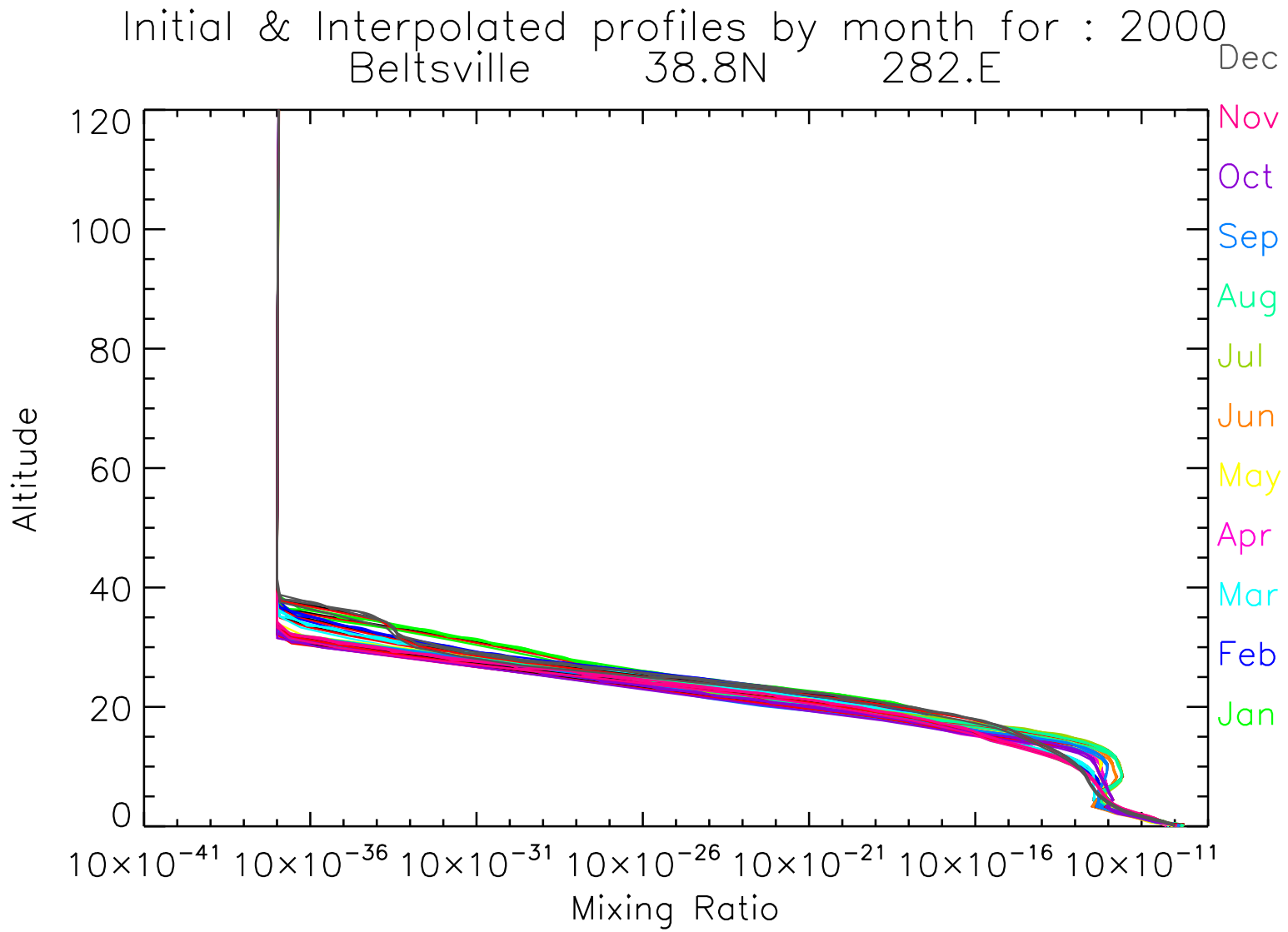

Initial & Interpolated profiles by month for : 1995
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

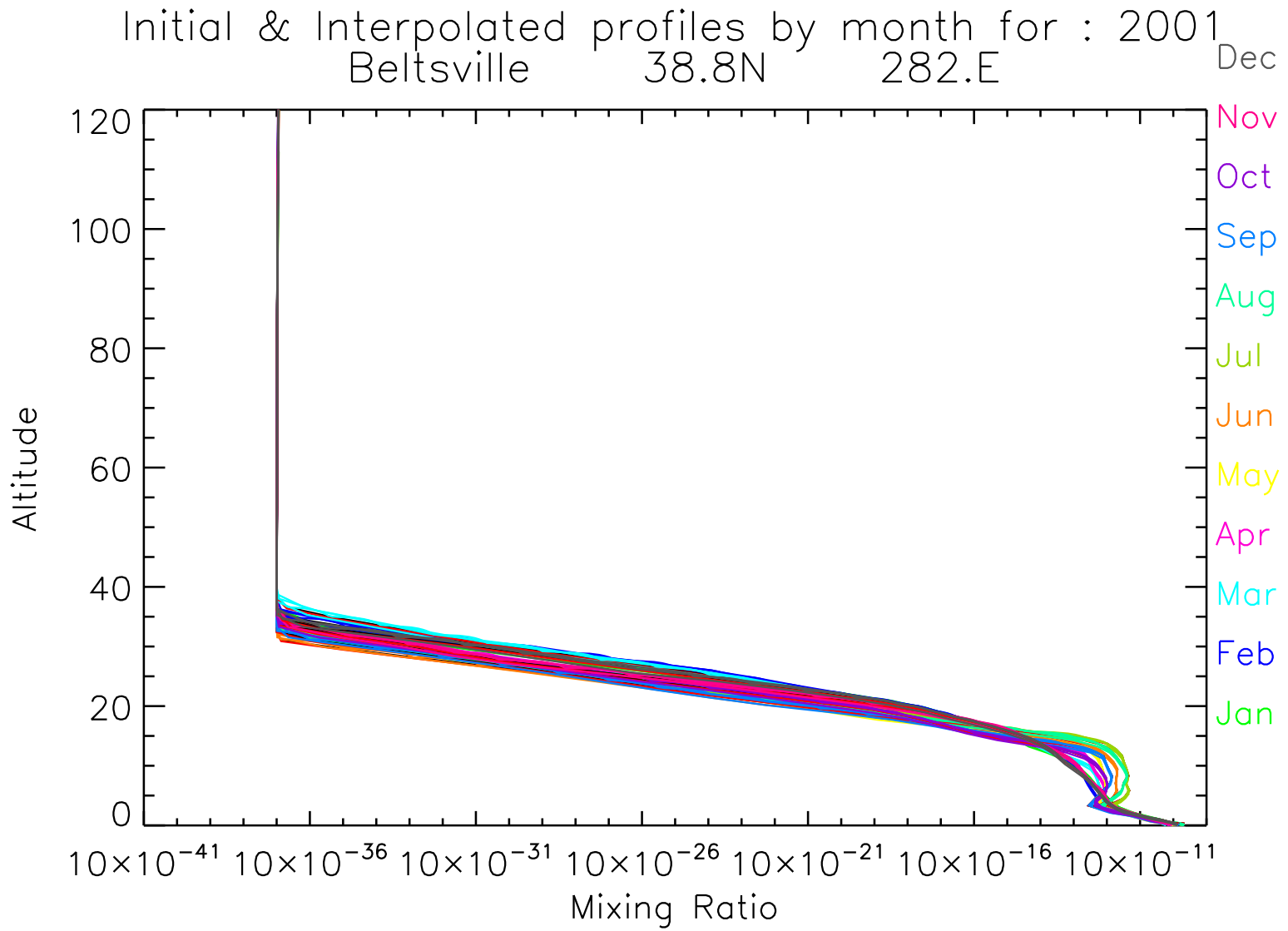

Initial & Interpolated profiles by month for : 1996
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

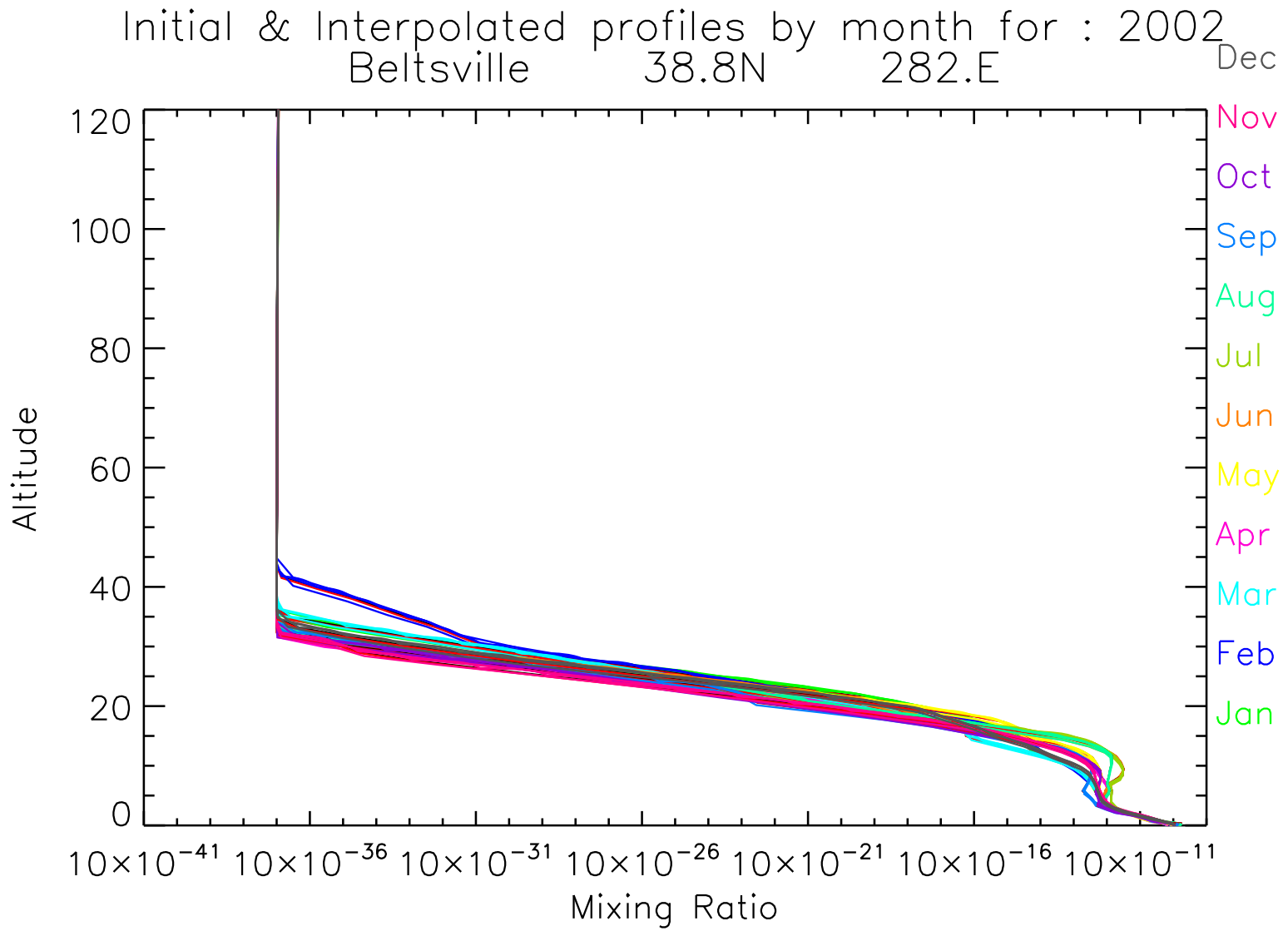

Initial & Interpolated profiles by month for : 1997
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

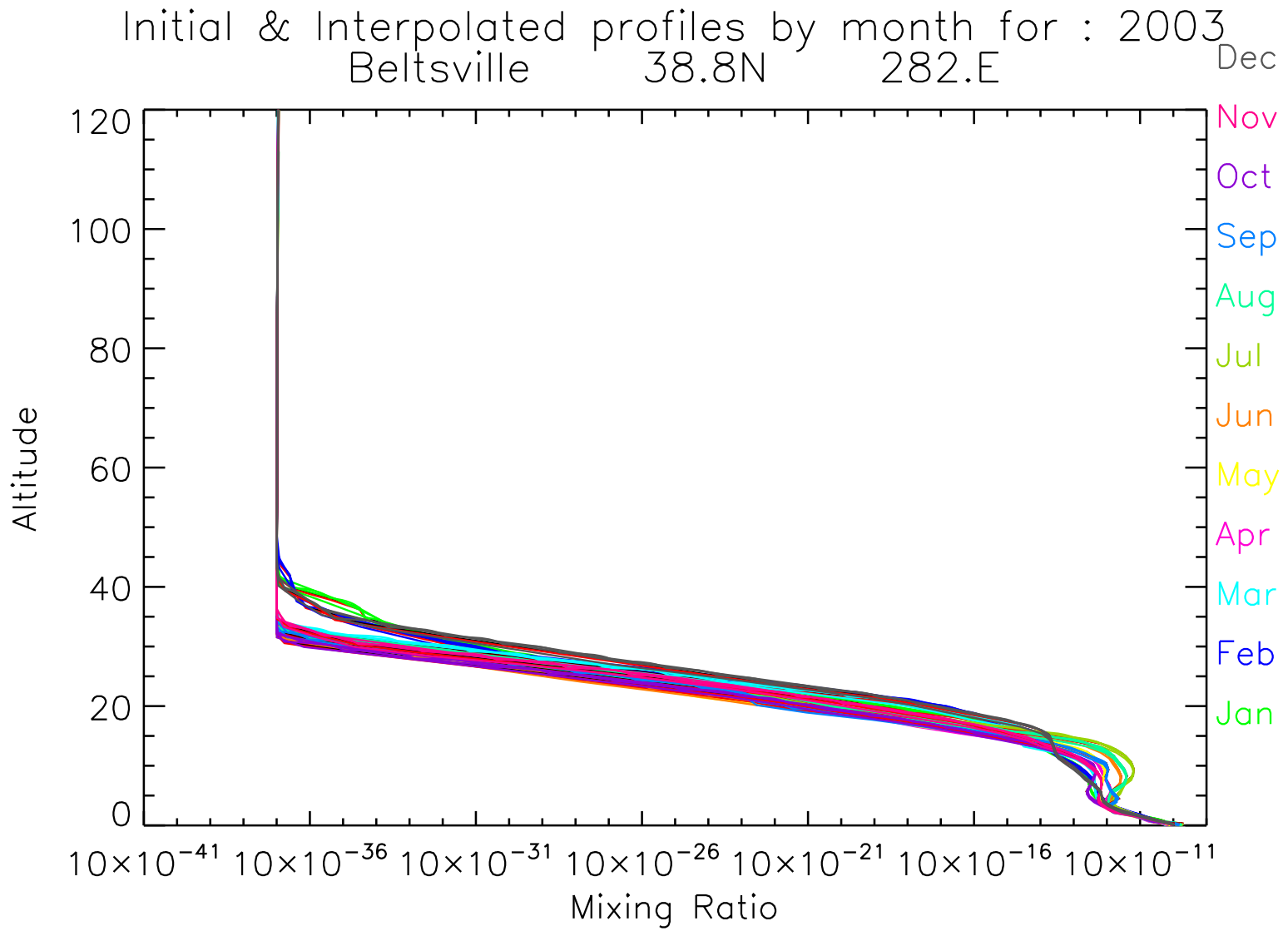

Initial & Interpolated profiles by month for : 1998
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

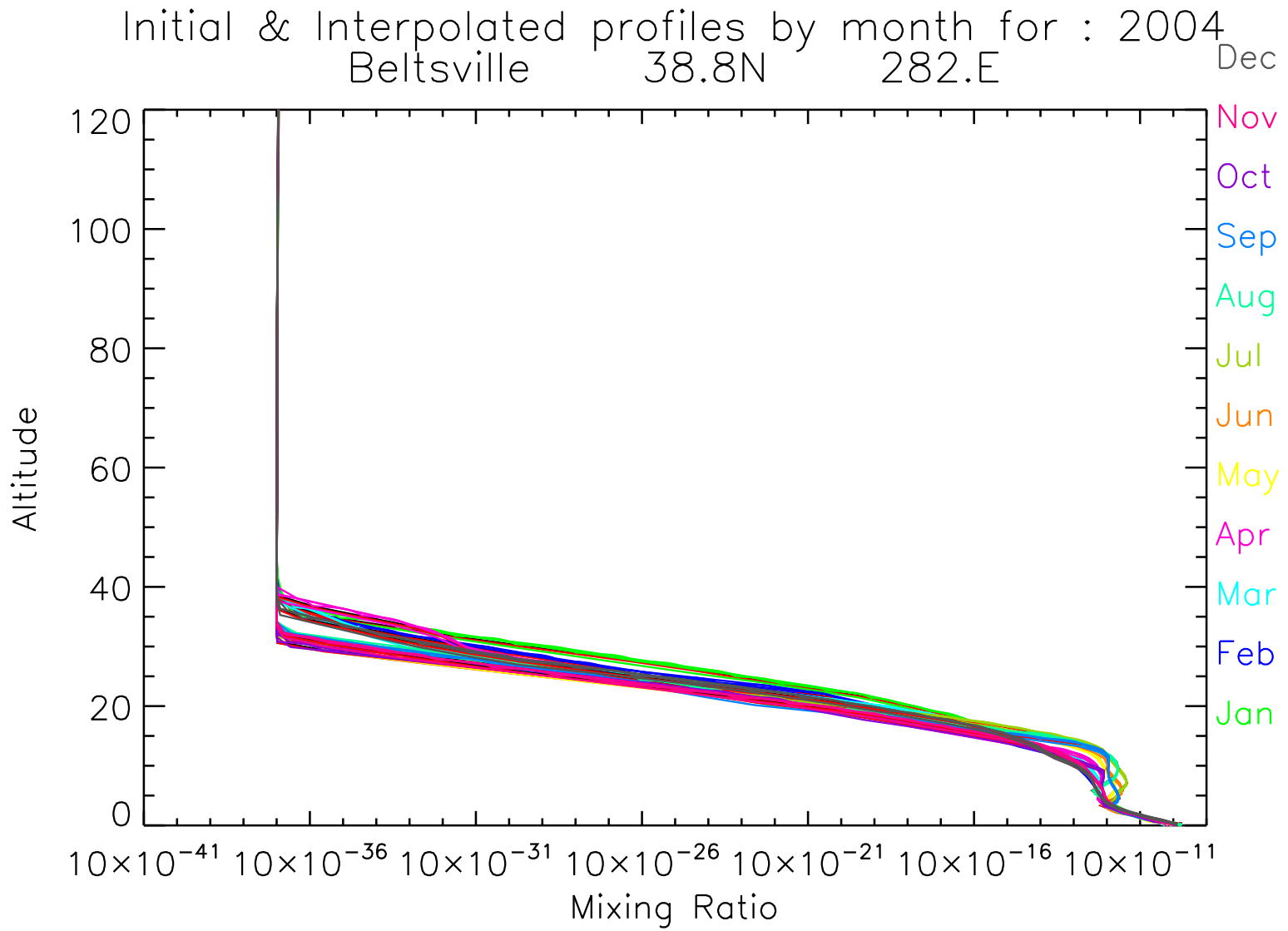

Initial & Interpolated profiles by month for : 1999
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

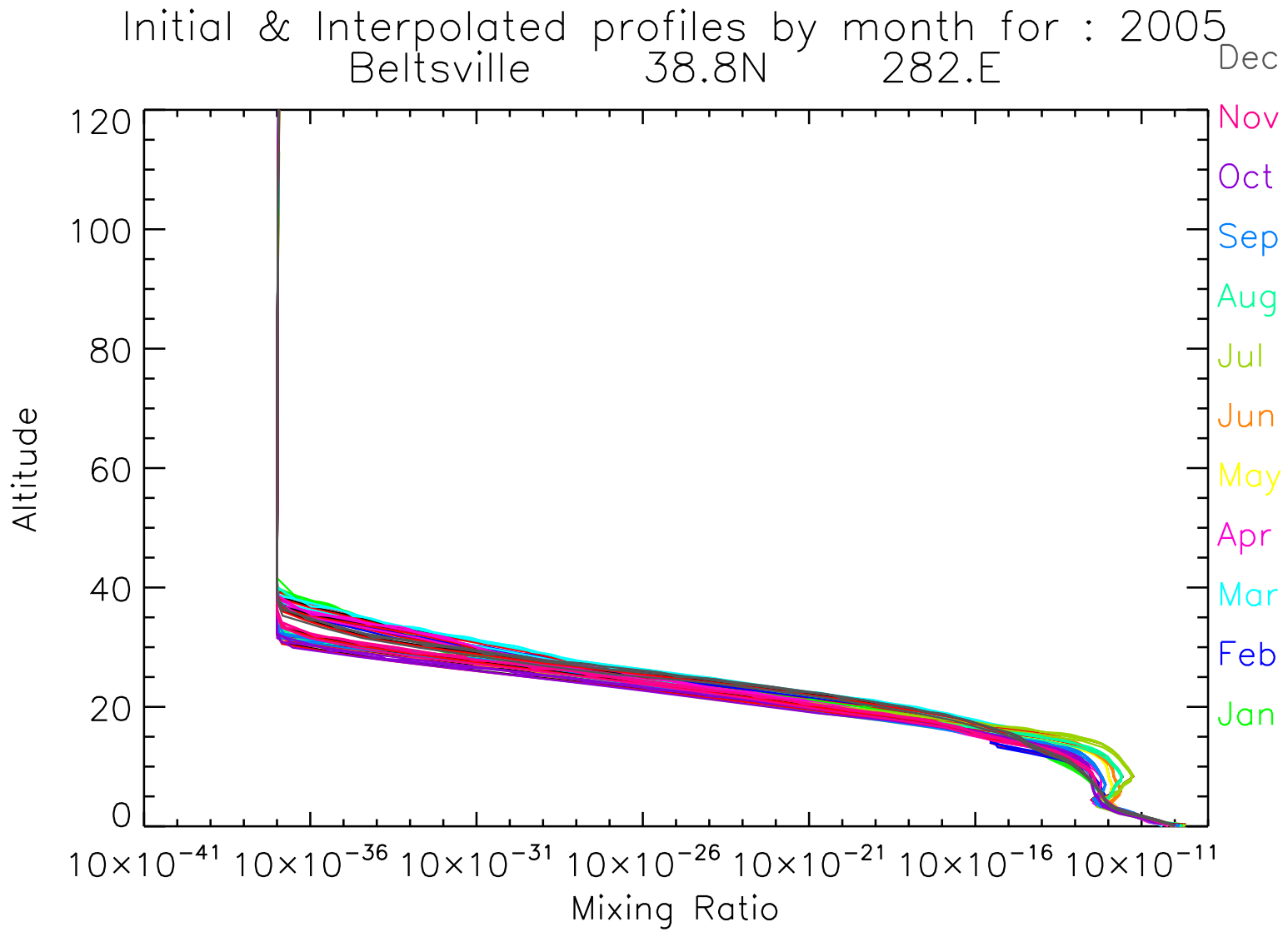

Initial & Interpolated profiles by month for : 2000
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

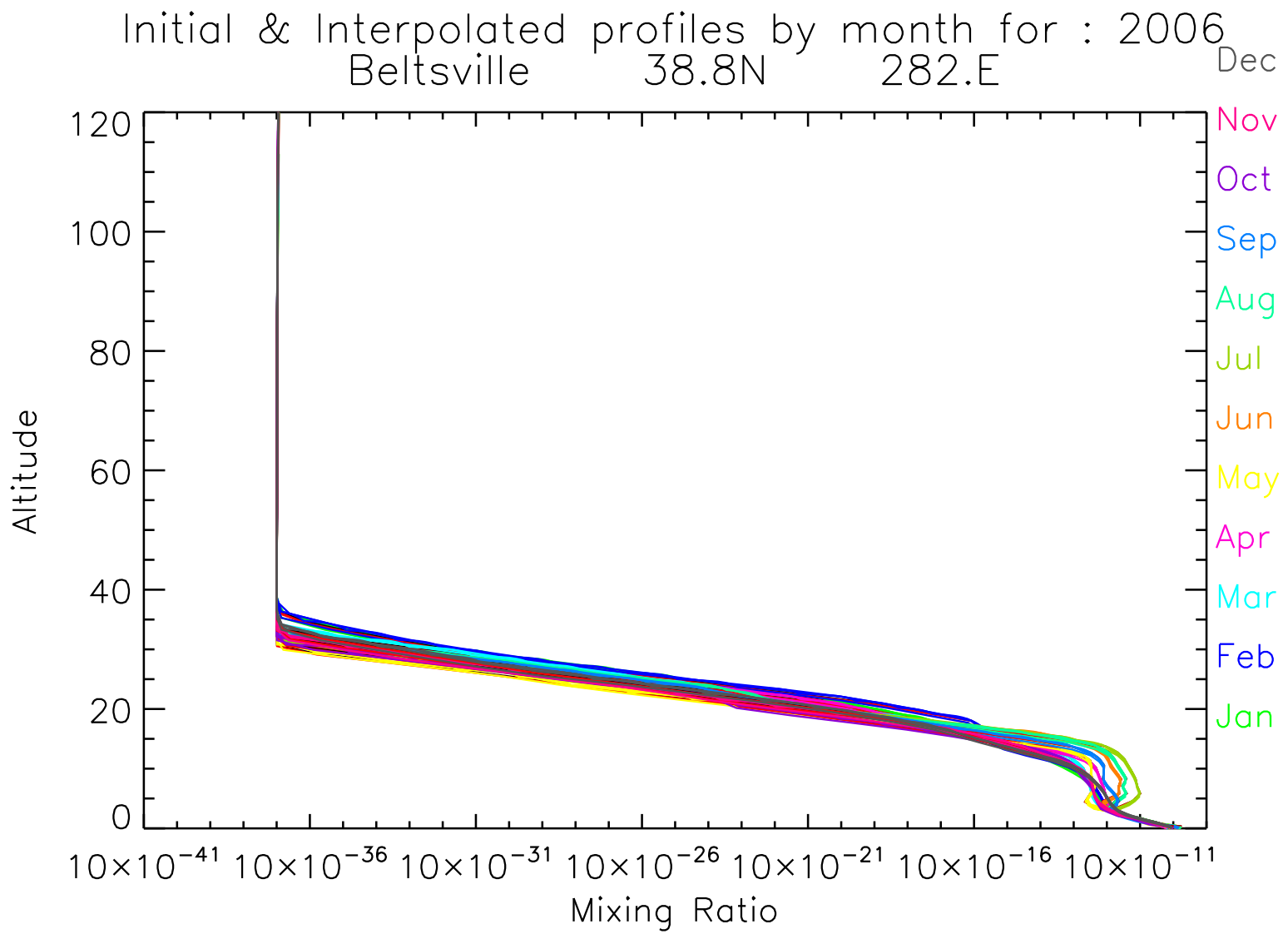

Initial & Interpolated profiles by month for : 2001
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

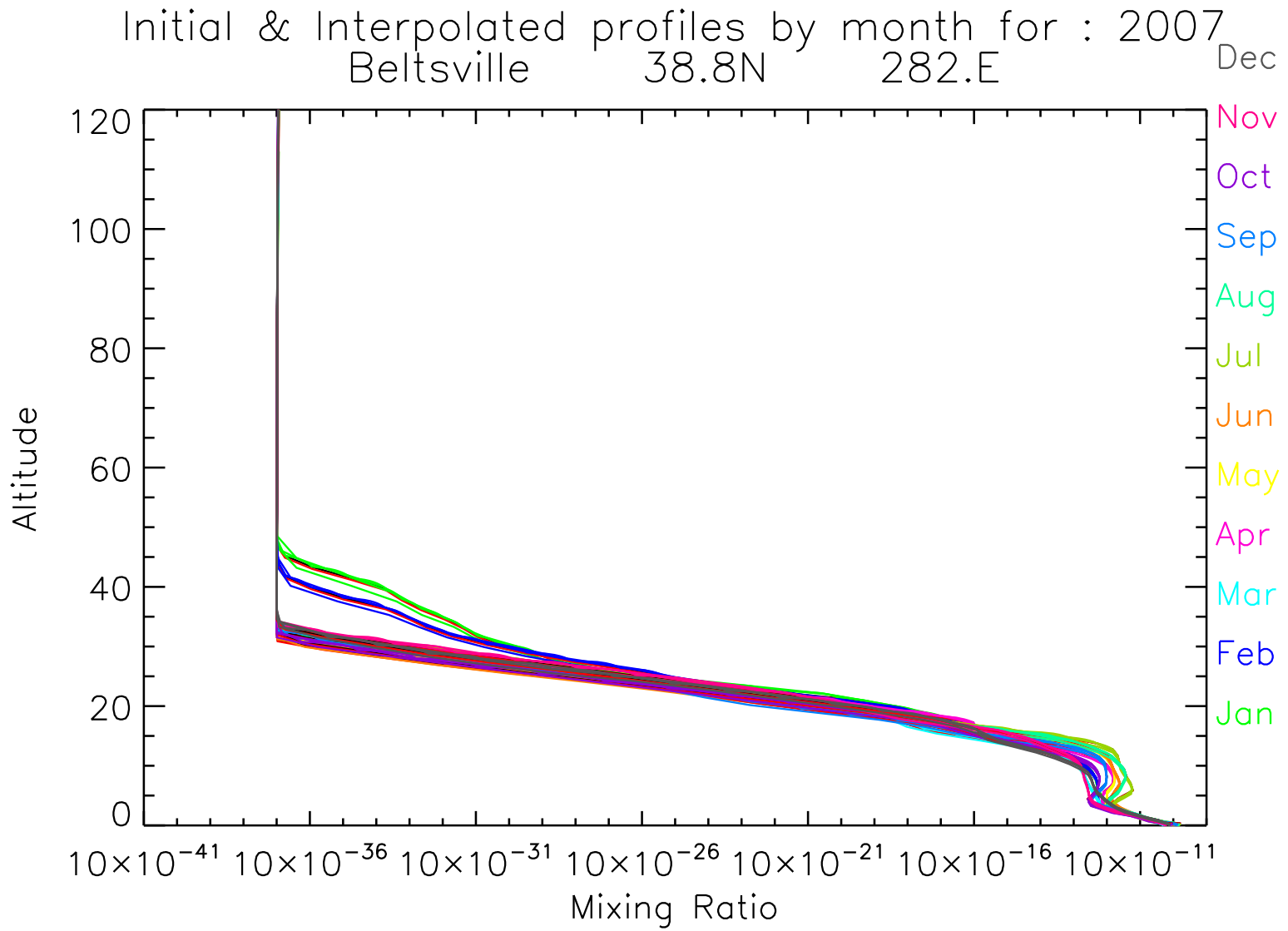

Initial & Interpolated profiles by month for : 2002
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

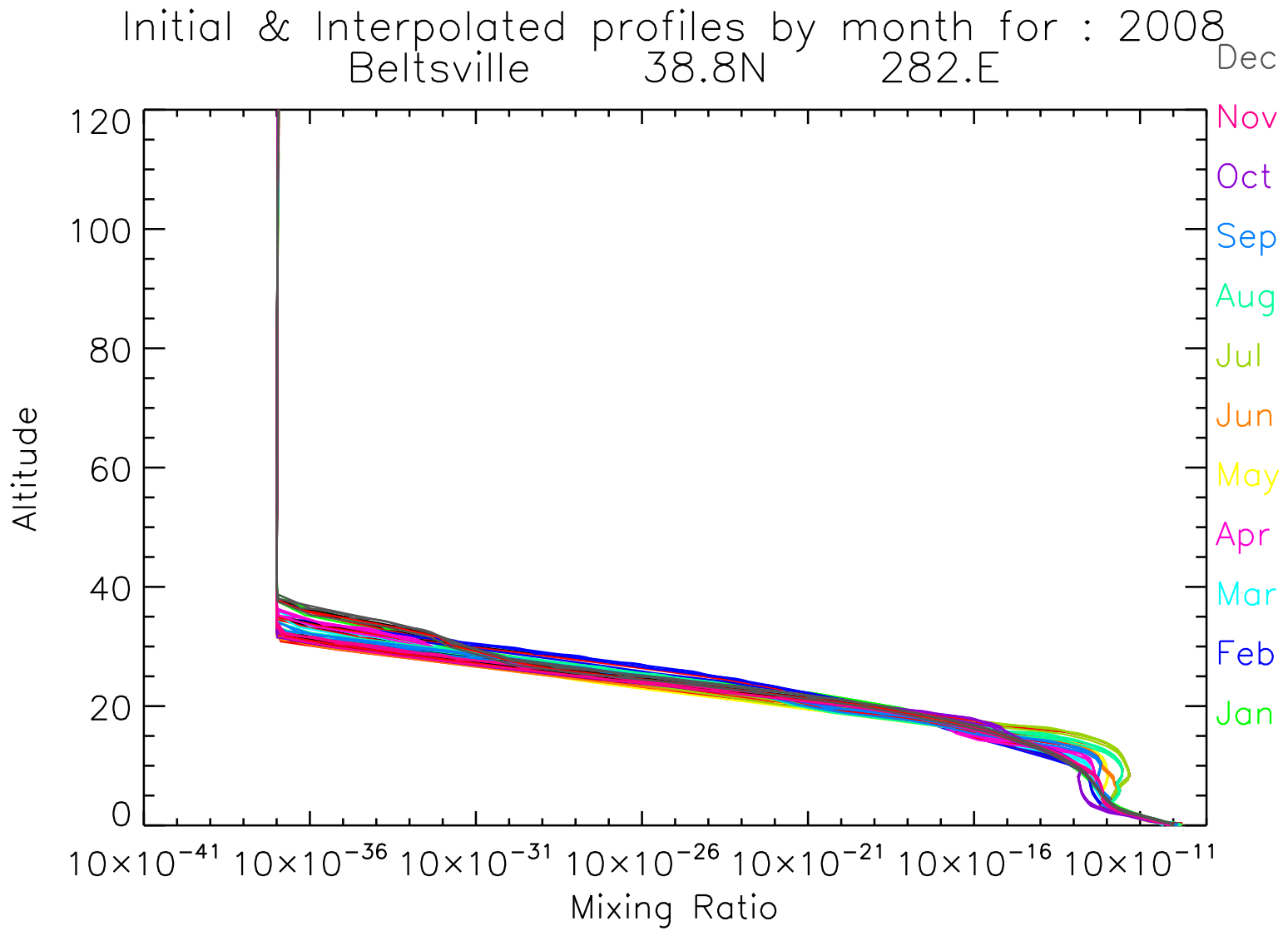

Initial & Interpolated profiles by month for : 2003
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

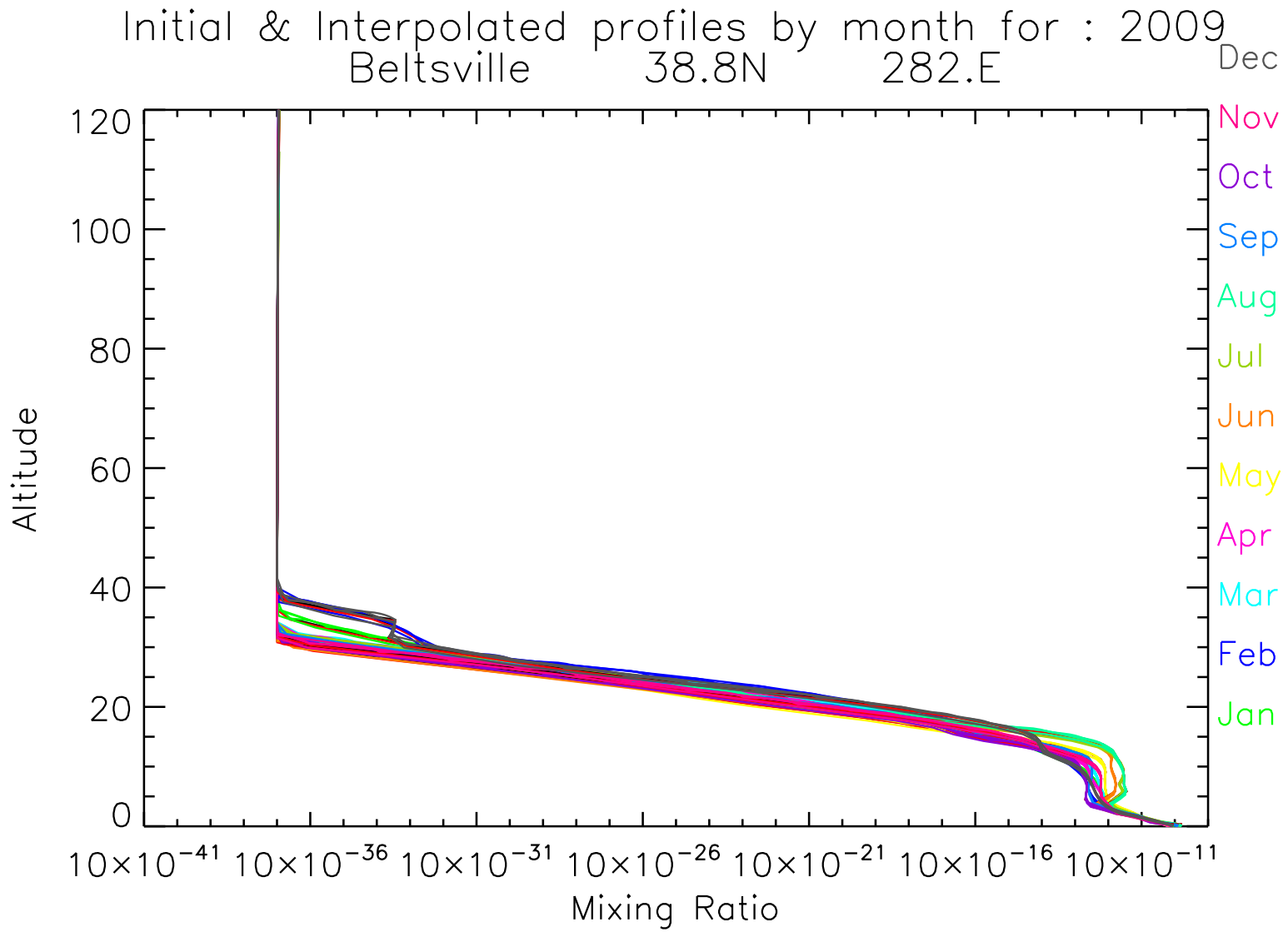

Initial & Interpolated profiles by month for : 2004
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

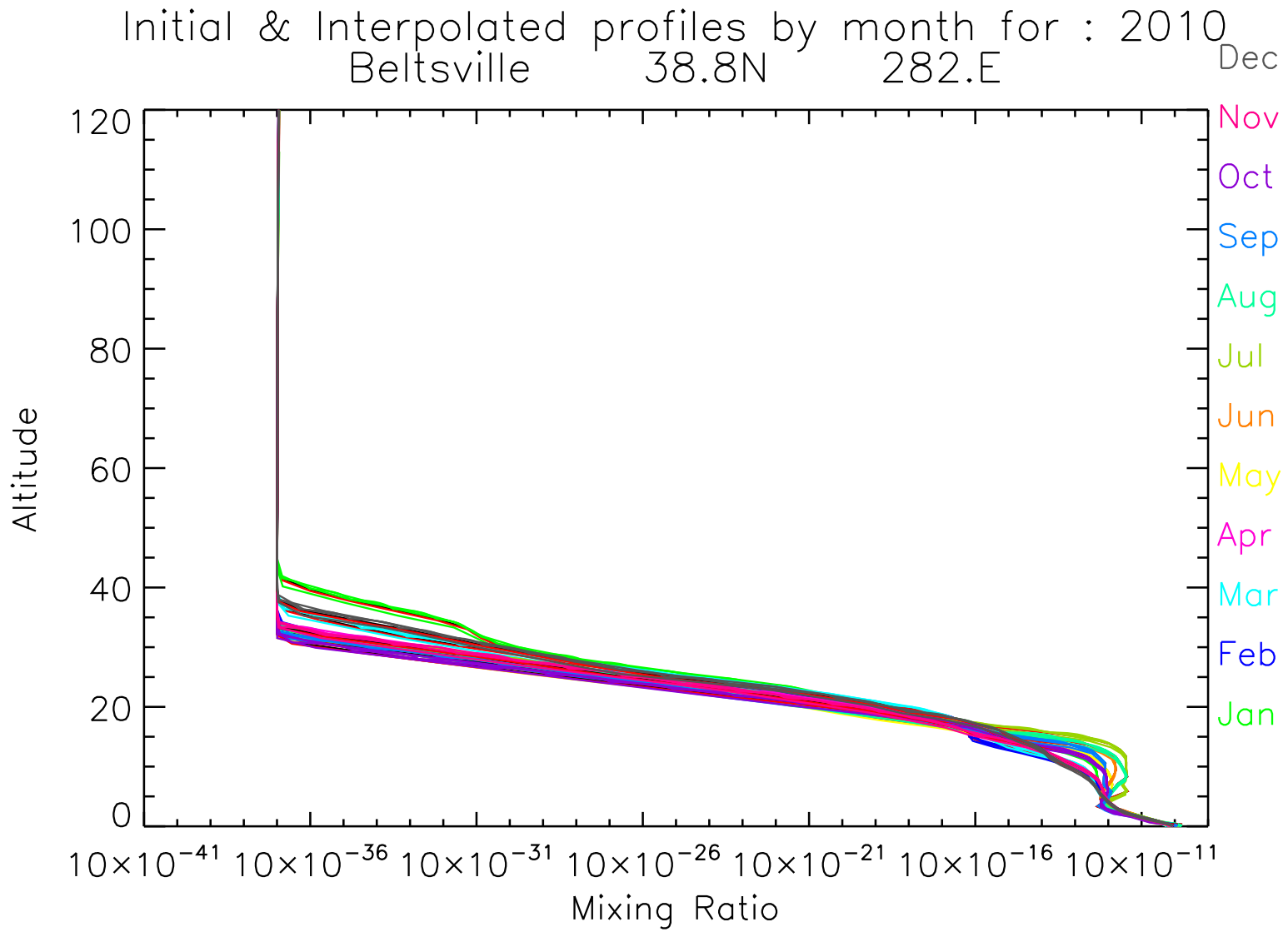

Initial & Interpolated profiles by month for : 2005
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

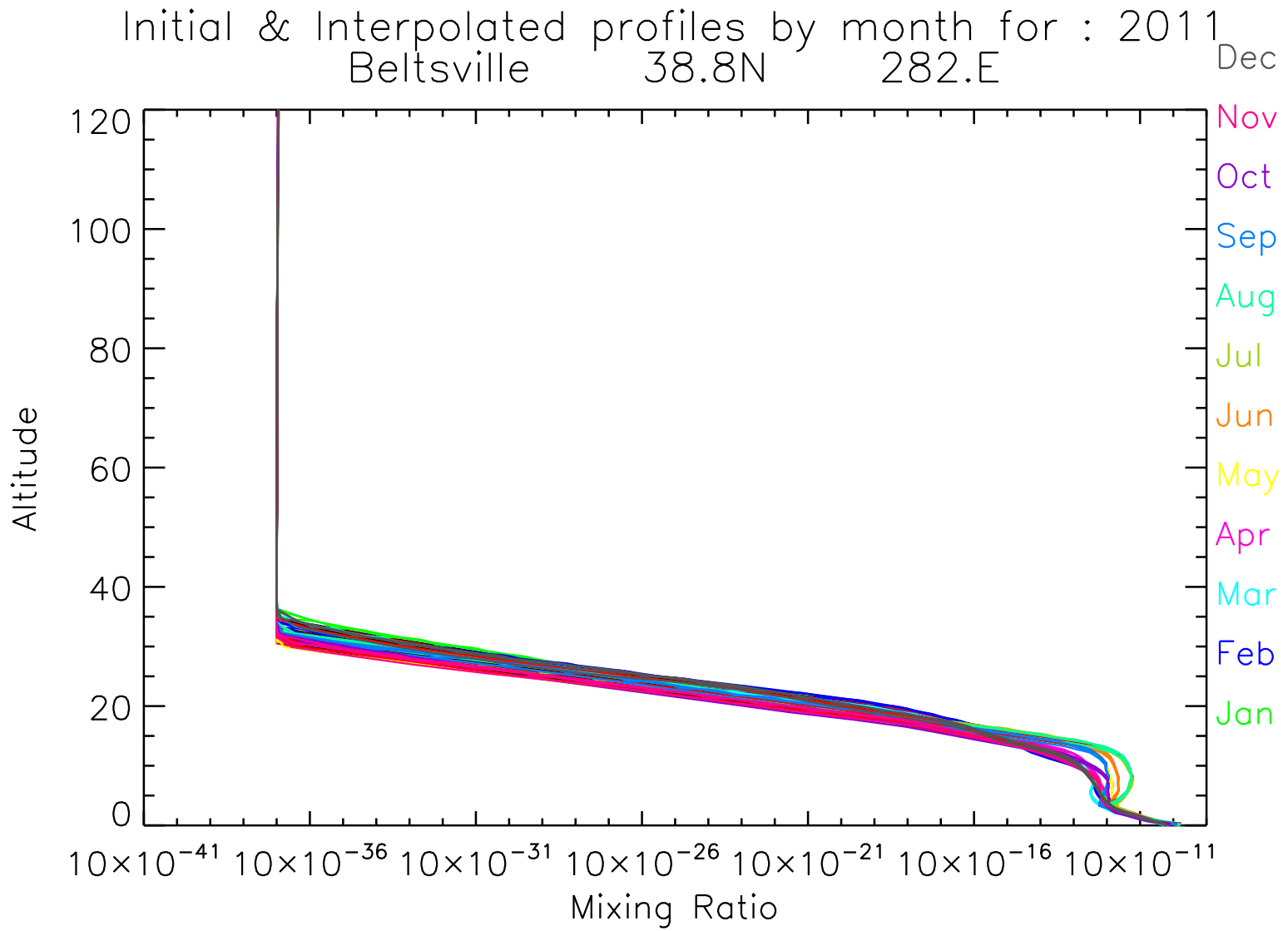

Initial & Interpolated profiles by month for : 2006
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

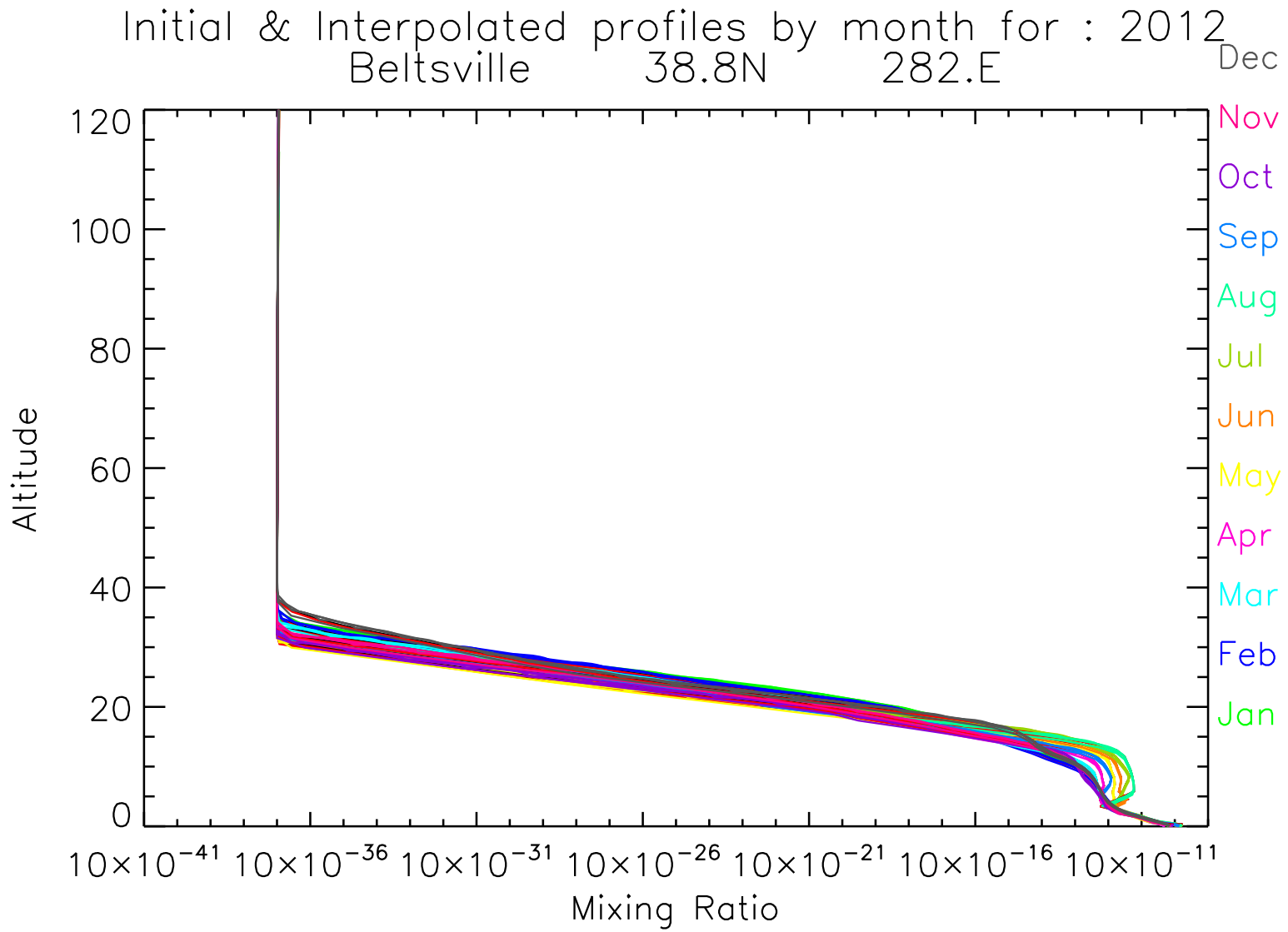

Initial & Interpolated profiles by month for : 2007
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

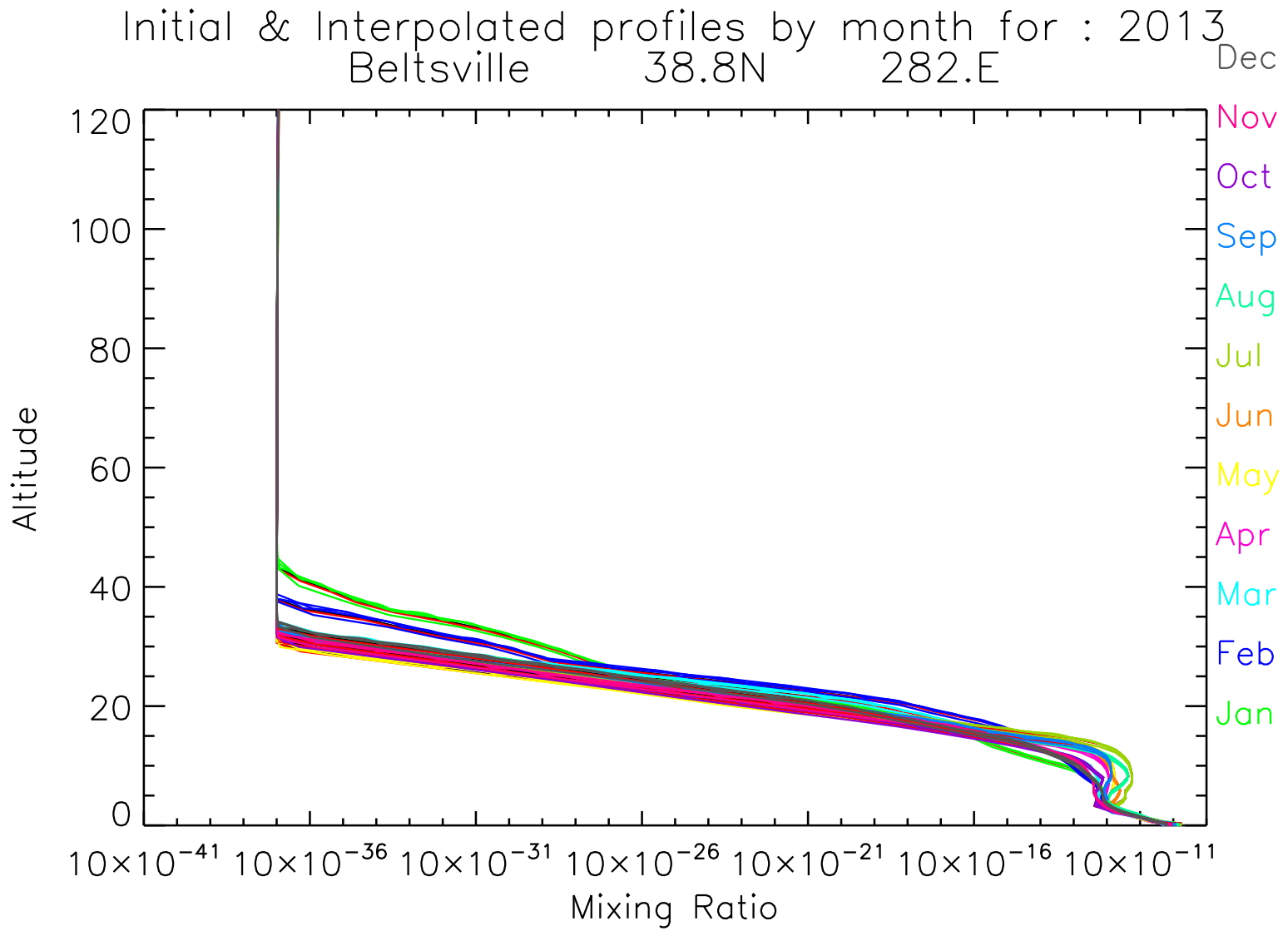

Initial & Interpolated profiles by month for : 2008
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

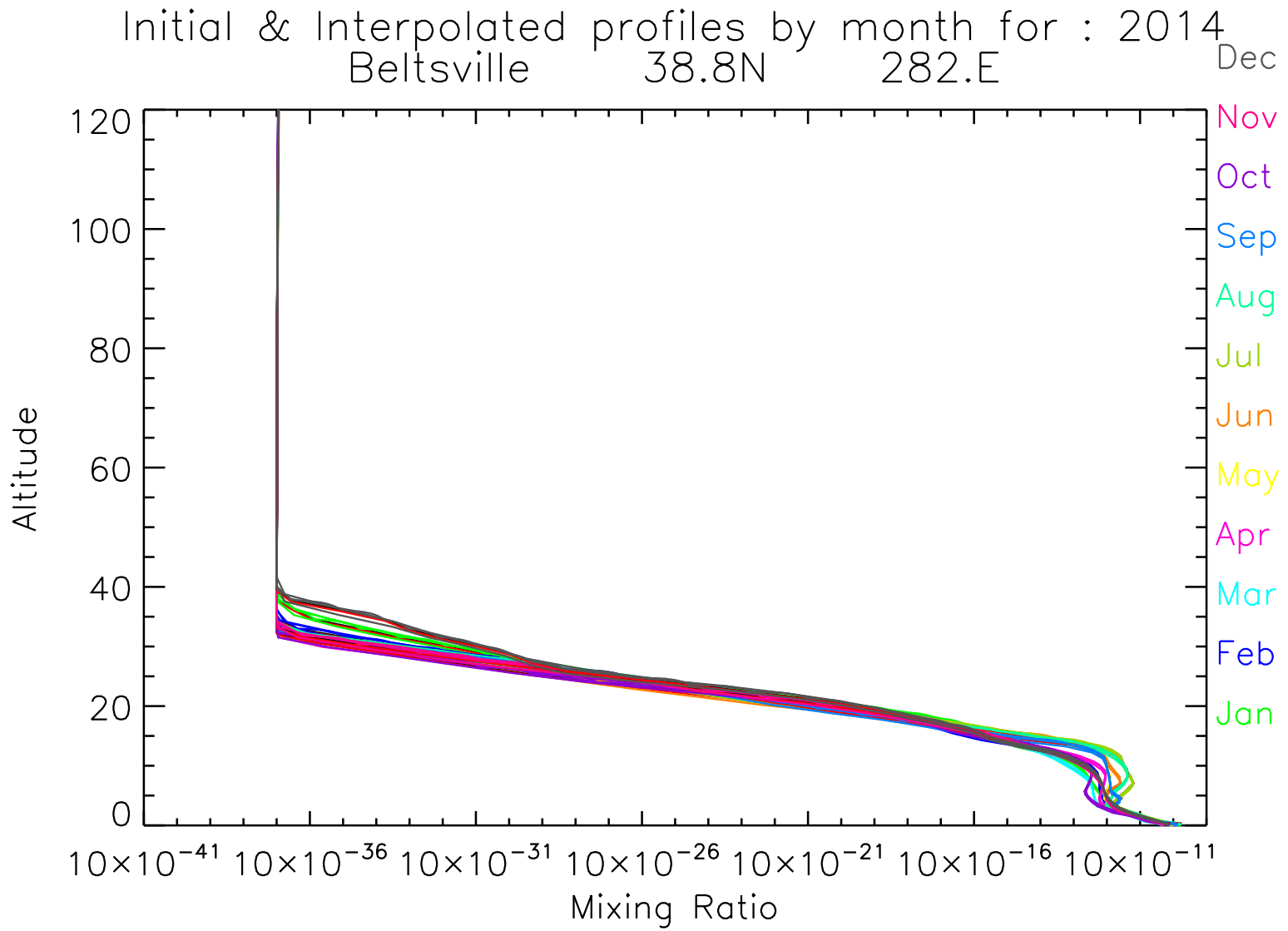

Initial & Interpolated profiles by month for : 2009
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

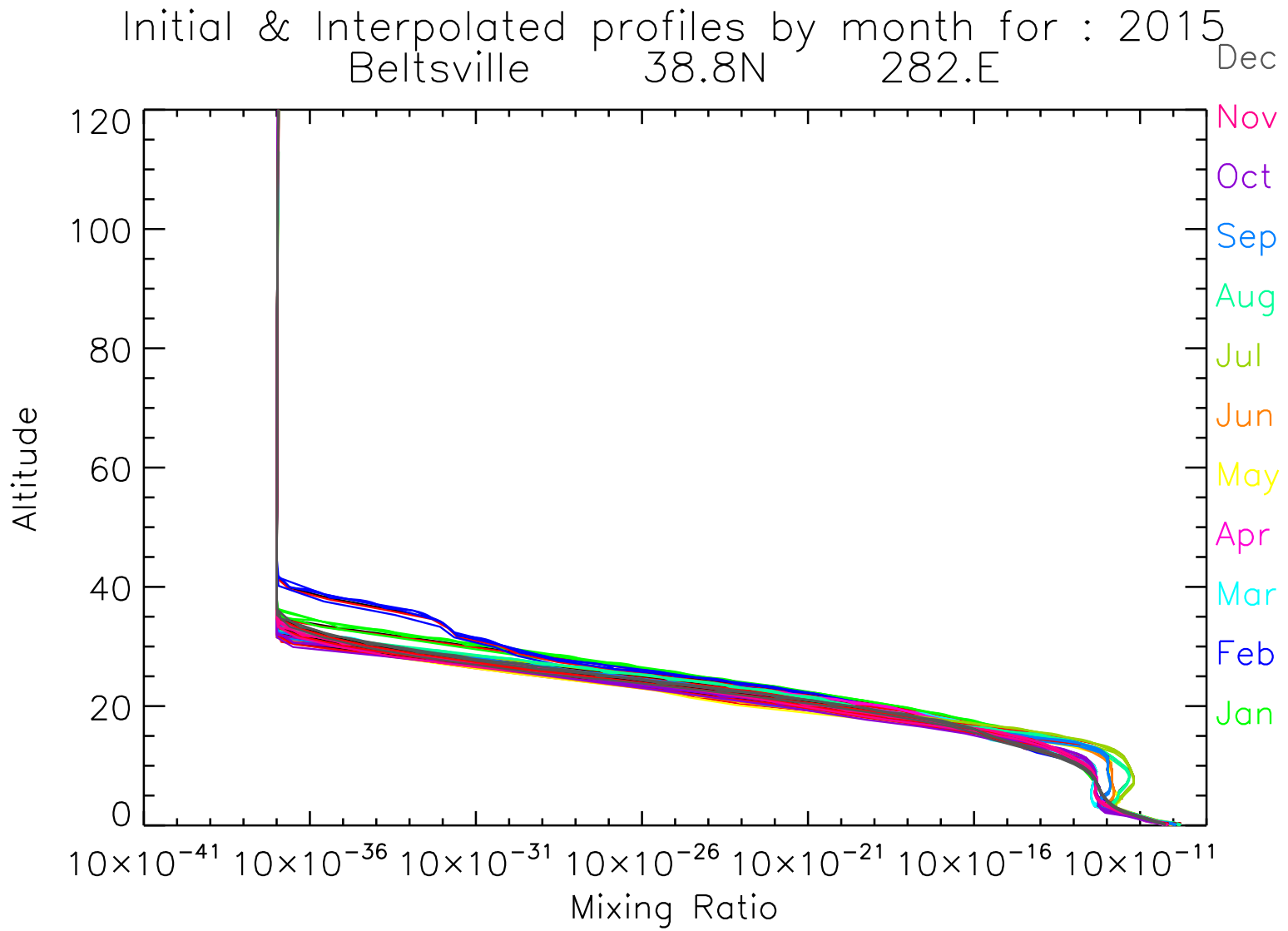

Initial & Interpolated profiles by month for : 2010
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

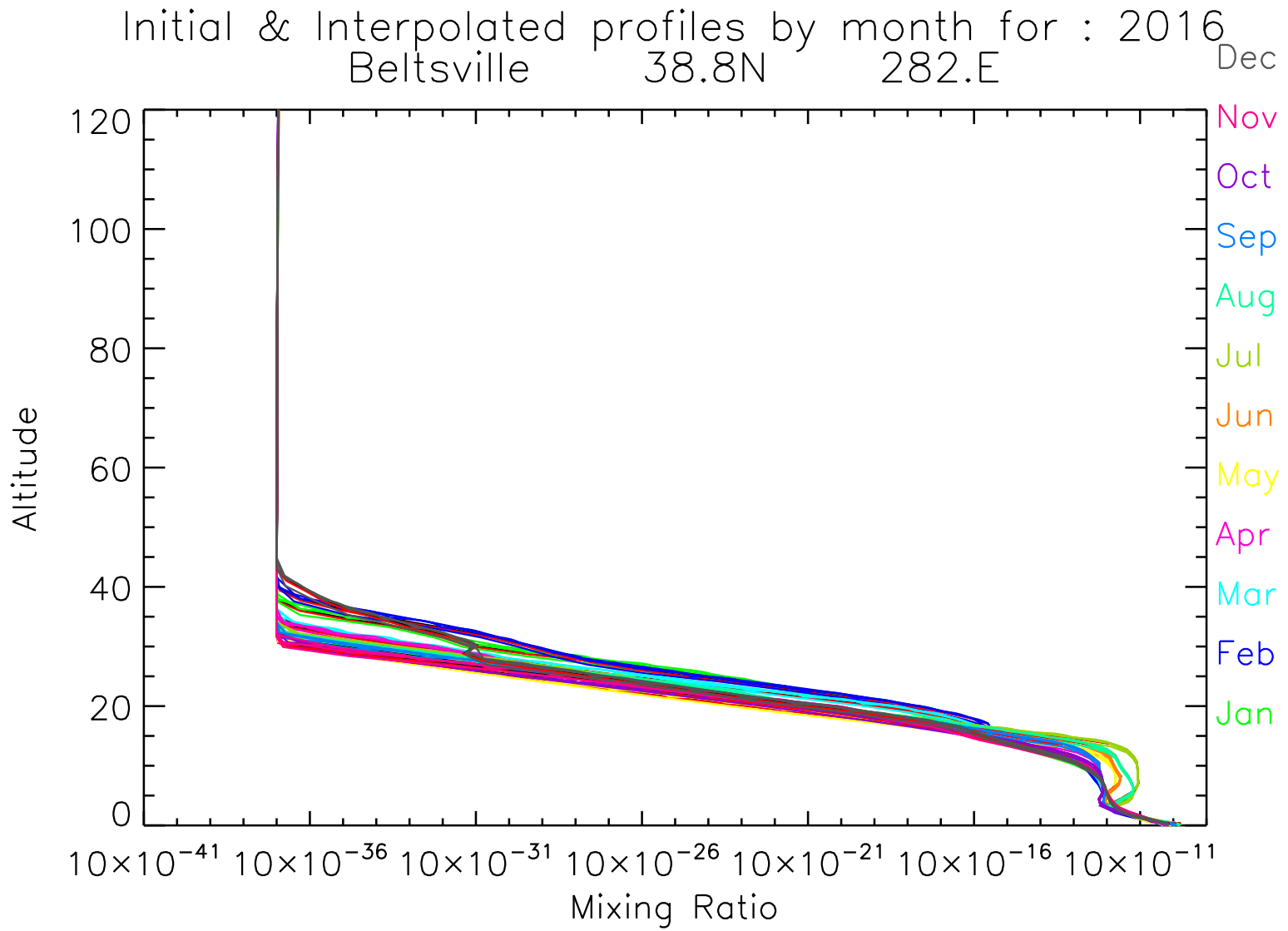

Initial & Interpolated profiles by month for : 2011
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

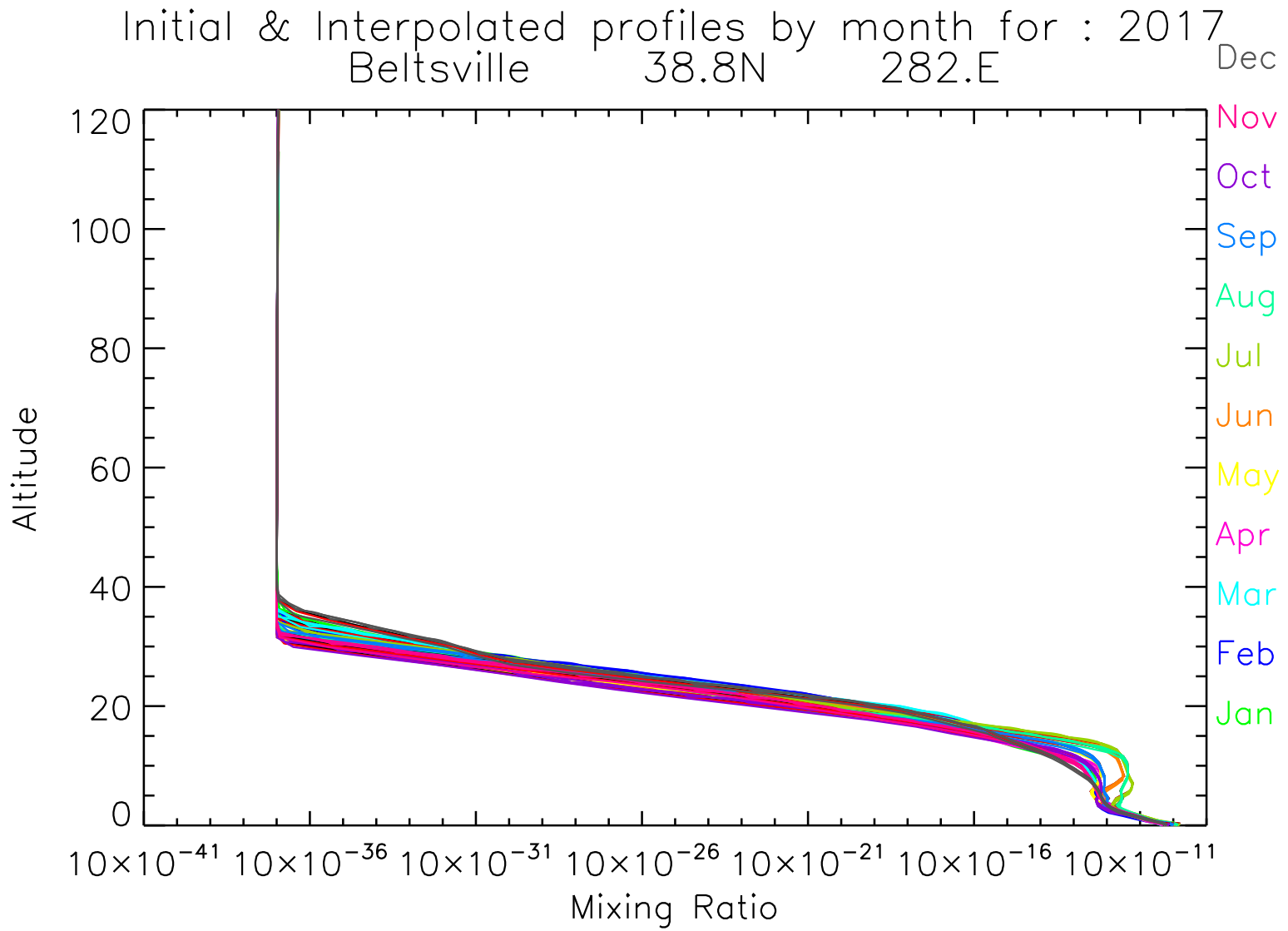

Initial & Interpolated profiles by month for : 2012
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

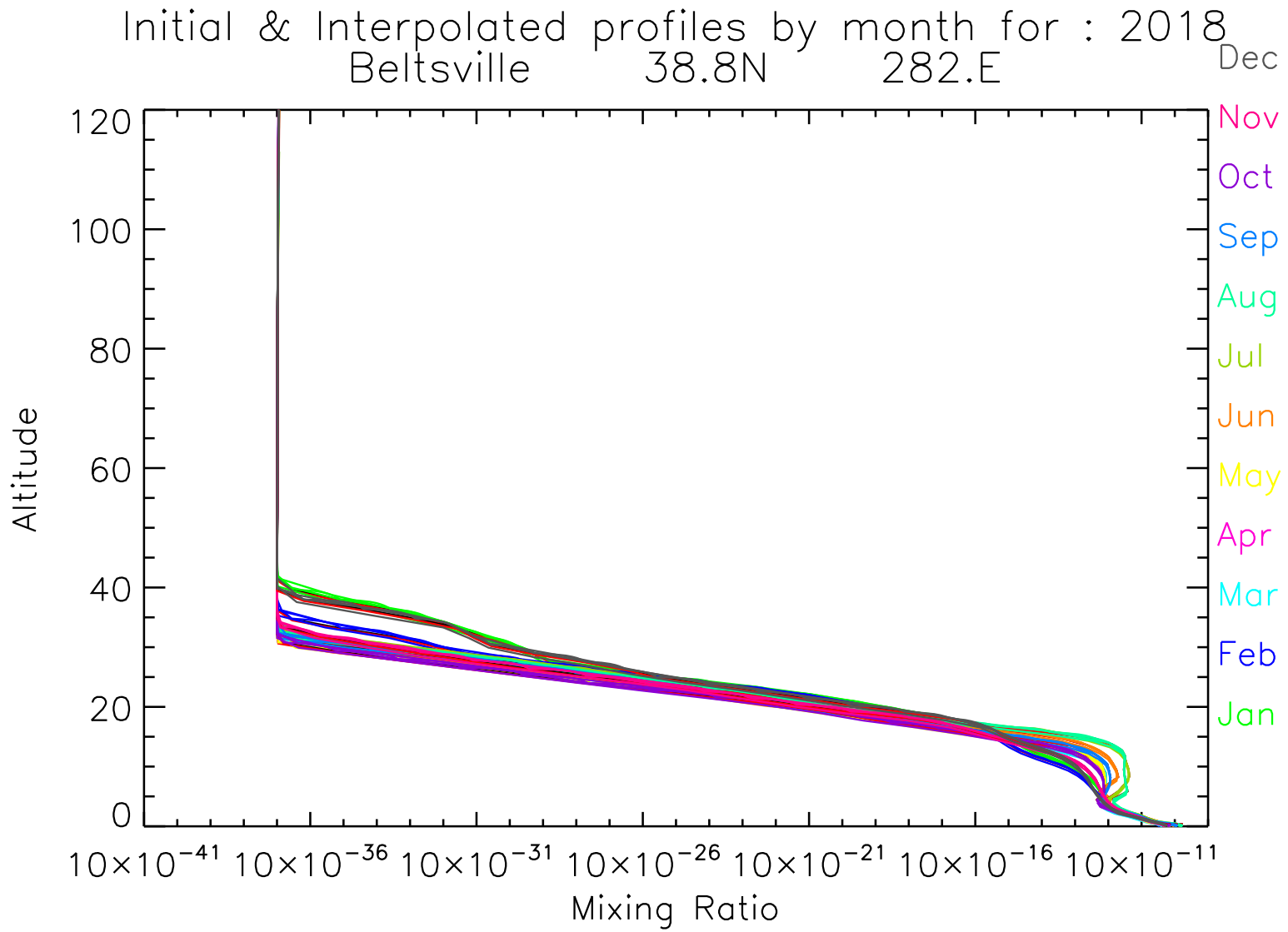

Initial & Interpolated profiles by month for : 2013
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

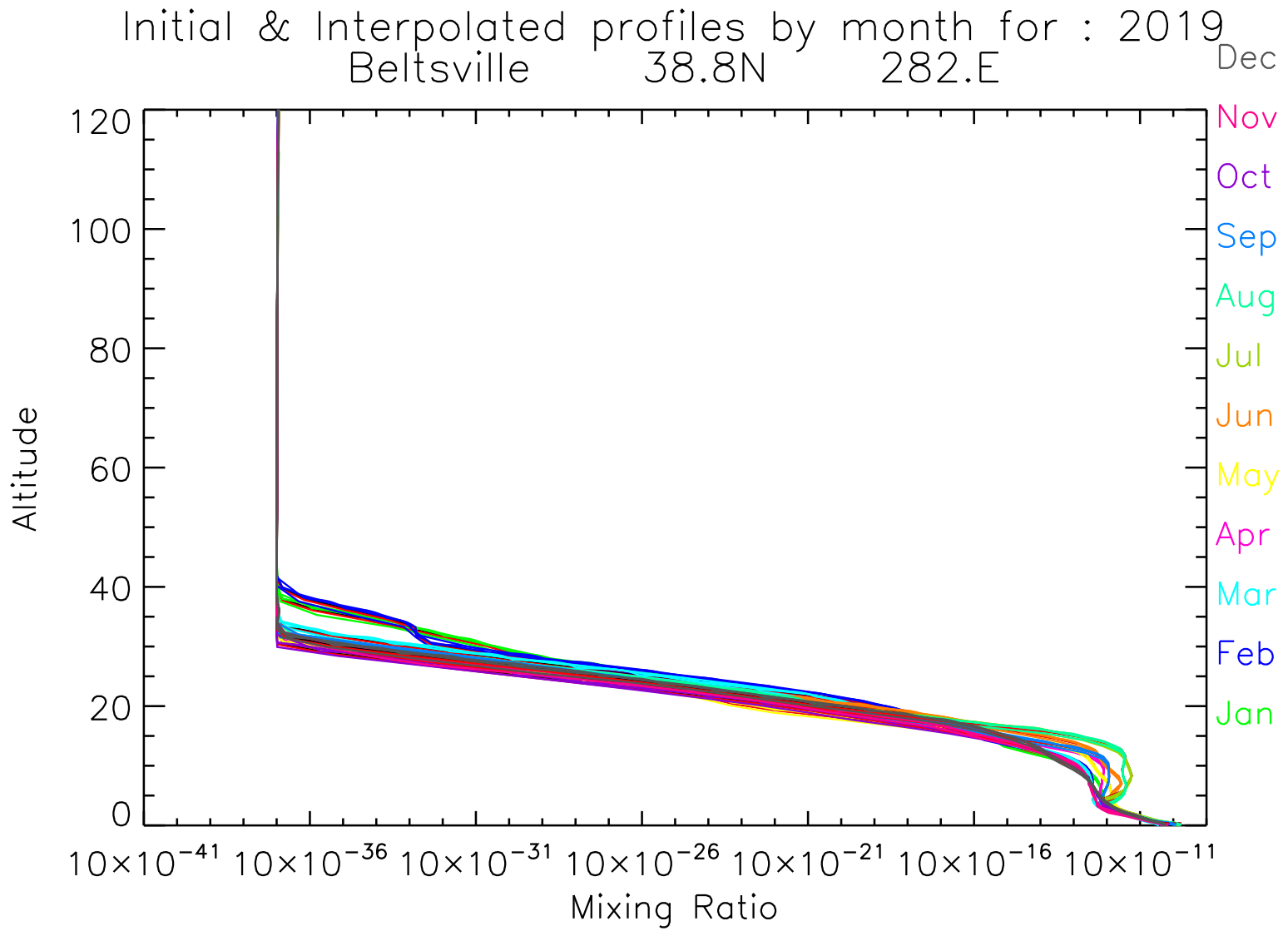

Initial & Interpolated profiles by month for : 2014
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

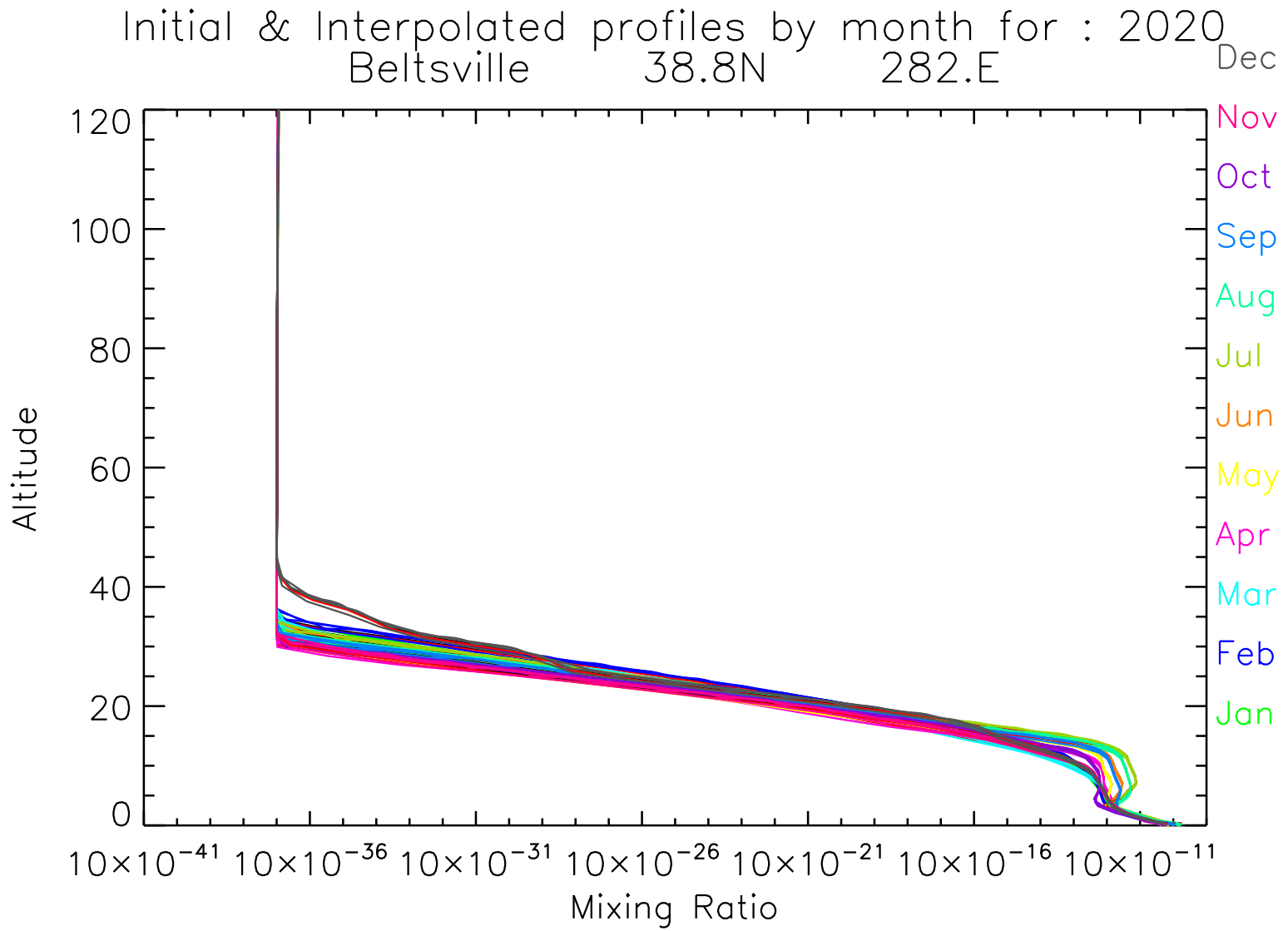

Initial & Interpolated profiles by month for : 2015
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

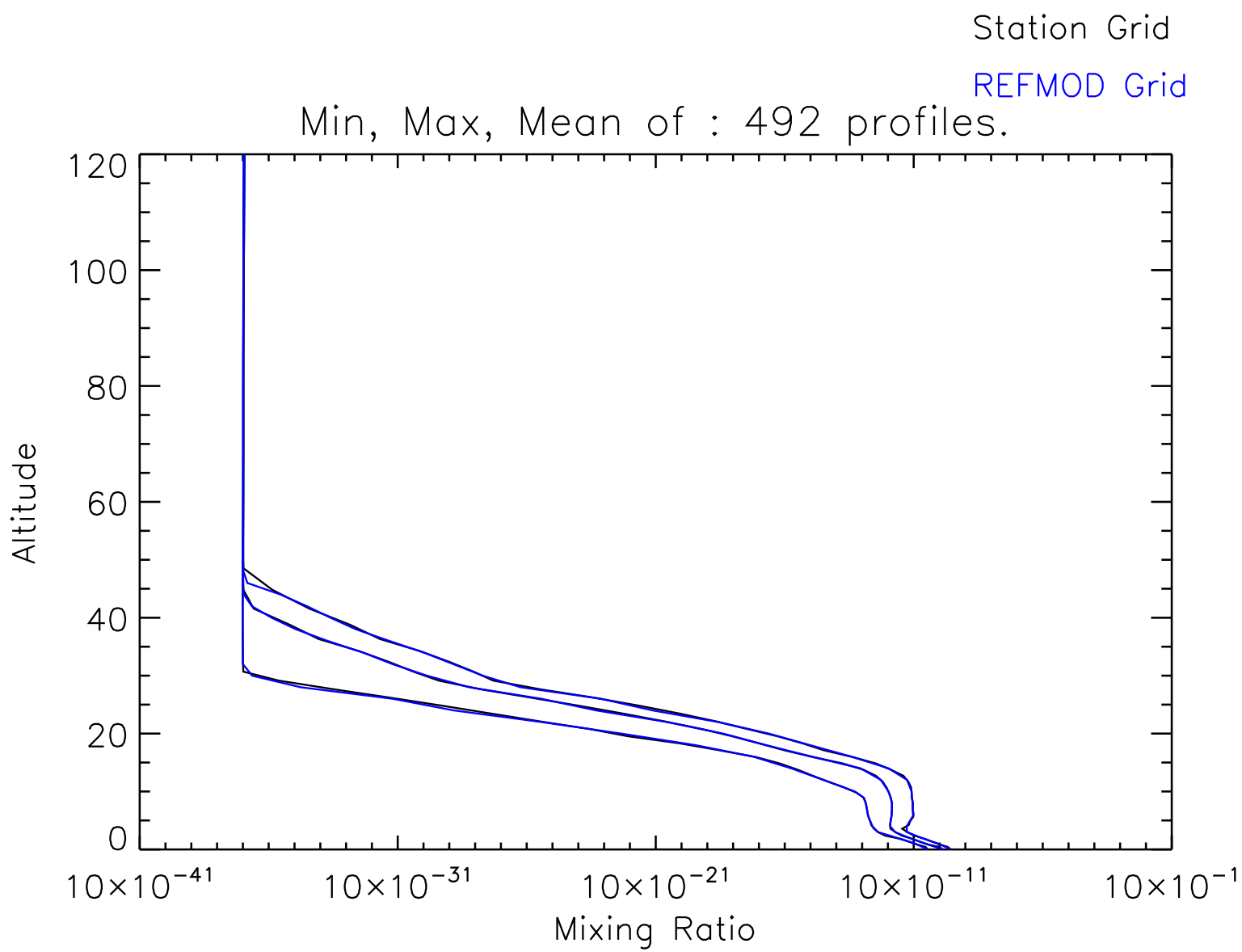

Initial & Interpolated profiles by month for : 2016
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

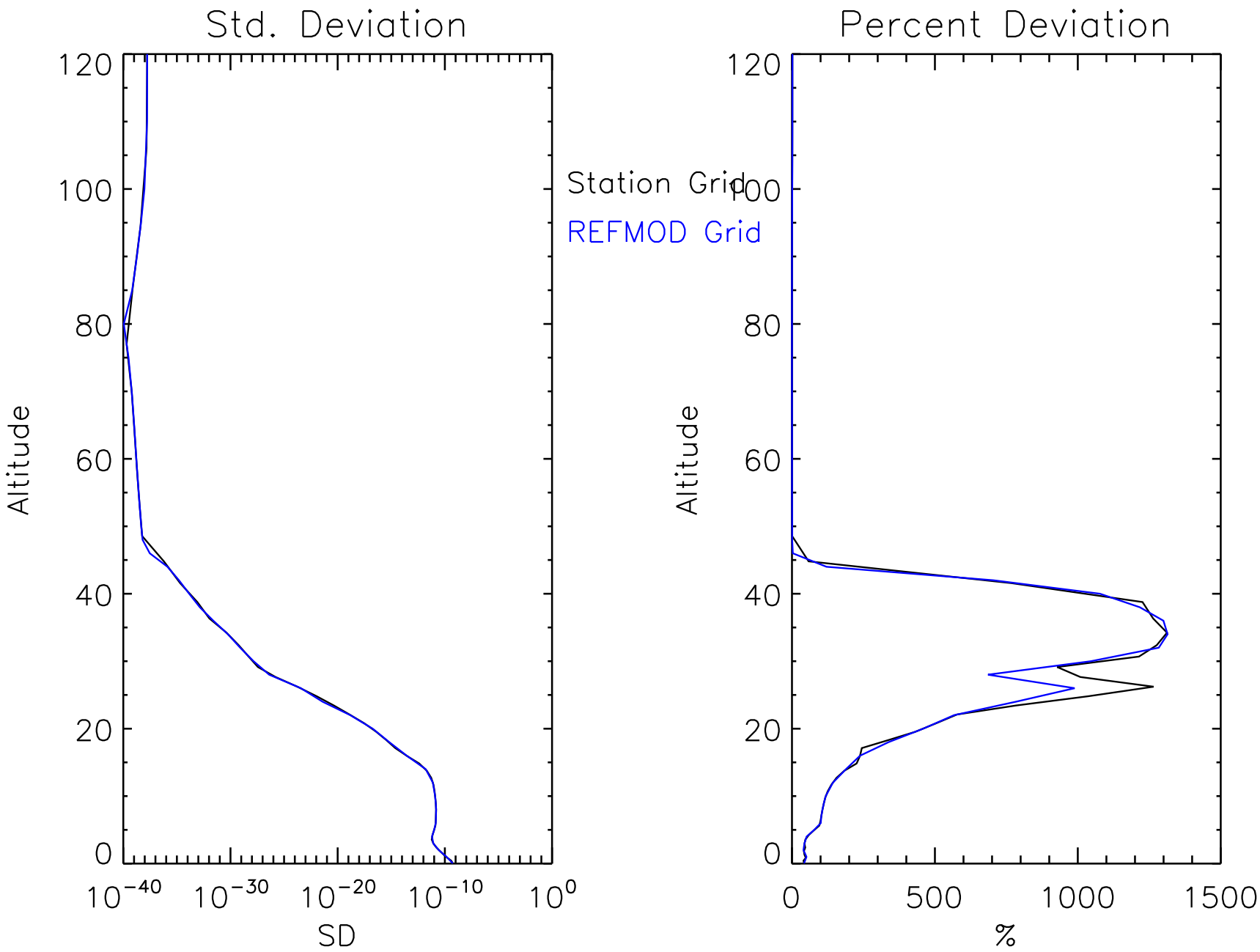

Initial & Interpolated profiles by month for : 2017
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

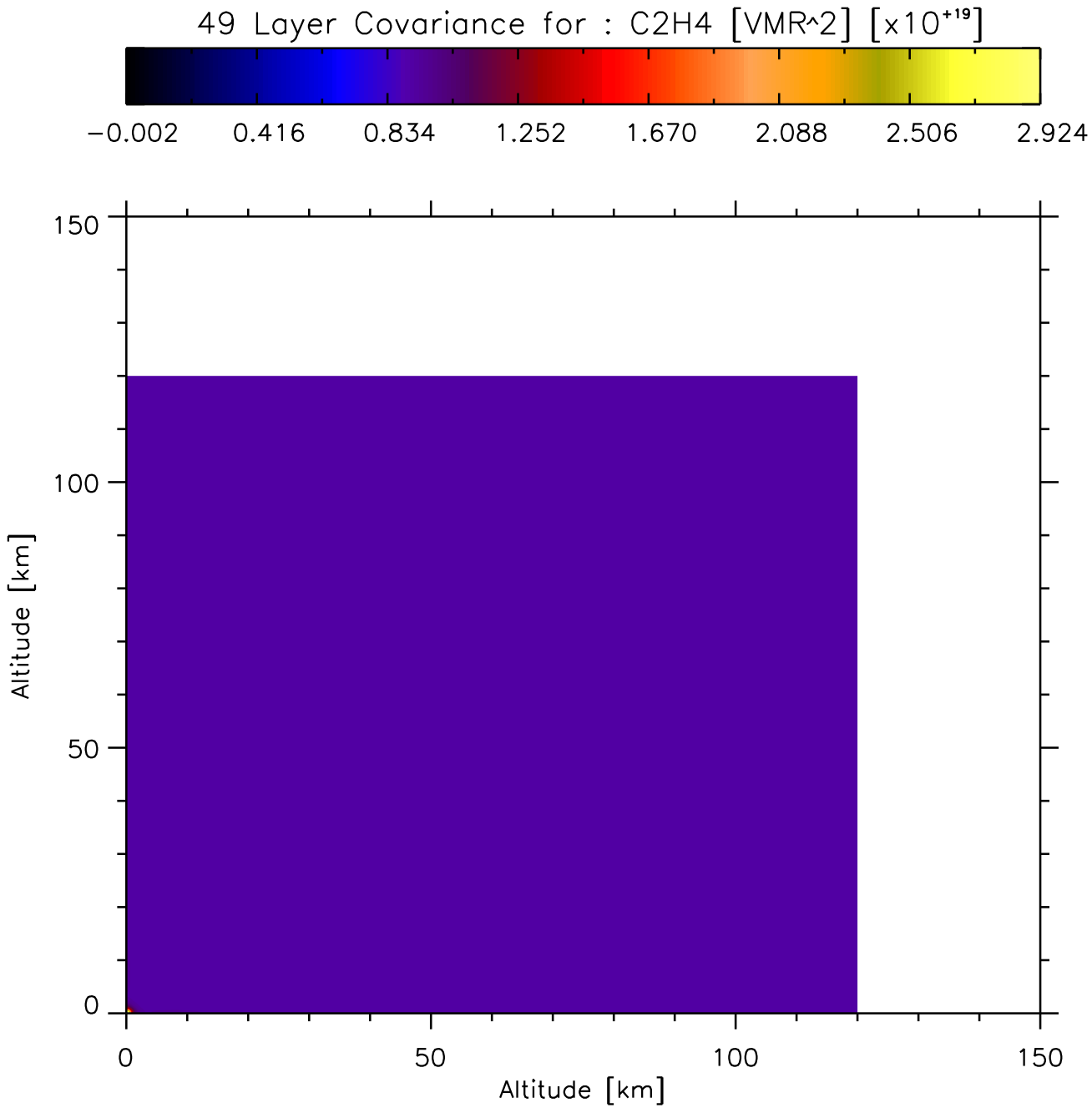

Initial & Interpolated profiles by month for : 2018
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

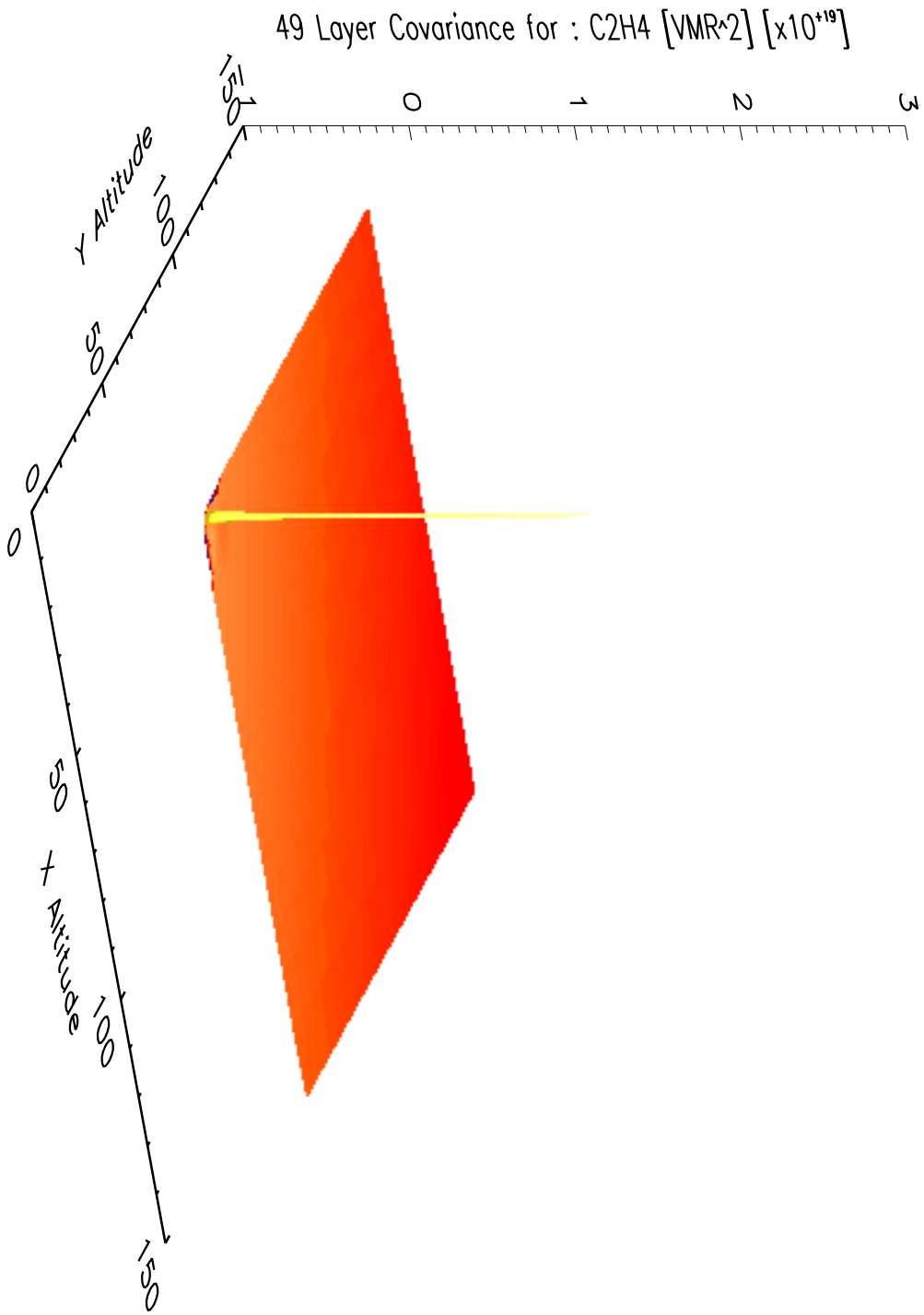

Initial & Interpolated profiles by month for : 2019
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio

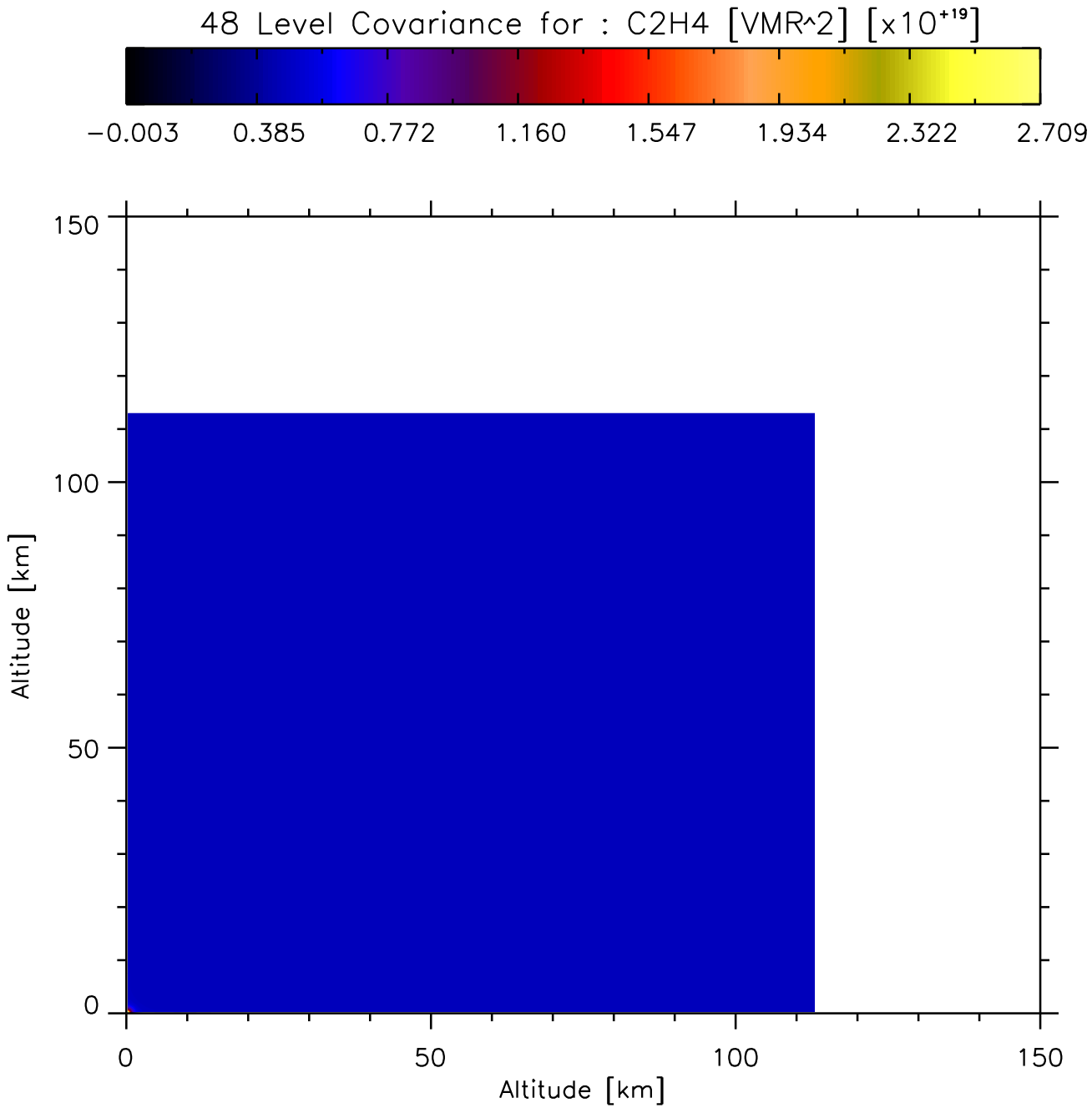

Initial & Interpolated profiles by month for : 2020
Beltsville 38.8N 282.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
10×10^-41 10×10^-36 10×10^-31 10×10^-26 10×10^-21 10×10^-16 10×10^-11
Mixing Ratio


Station Grid
REFMOD Grid
Min, Max, Mean of : 492 profiles.
120
100
80
60
40
20
0
Altitude
10×10^-41
10×10^-31
10×10^-21
10×10^-11
10×10^-1
Mixing Ratio


Std. Deviation
Percent Deviation
Station Grid
REFMOD Grid
Altitude
Altitude
120
100
80
60
40
20
0
10^{-40}
10^{-30}
10^{-20}
10^{-10}
10^{0}
SD
0
500
1000
1500
%


49 Layer Covariance for : C2H4 [VMR^2] [x10^+19]
−0.002
0.416
0.834
1.252
1.670
2.088
2.506
2.924
150
100
50
0
Altitude [km]
0
50
100
150
Altitude [km]


49 Layer Covariance for : C2H4 [VMR^2] [x10^+19]
0
1
2
3
Y Altitude
0
50
100
0
50
100
X Altitude


48 Level Covariance for : C2H4 [VMR^2] [x10^+19]
-0.003
0.385
0.772
1.160
1.547
1.934
2.322
2.709
150
100
50
0
Altitude [km]
0
50
100
150
Altitude [km]

48 Level Covariance for : C2H4 [VMR^2] [x10^+19]
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Y Altitude
0
15
30
45
60
X Altitude
0
50
100
150