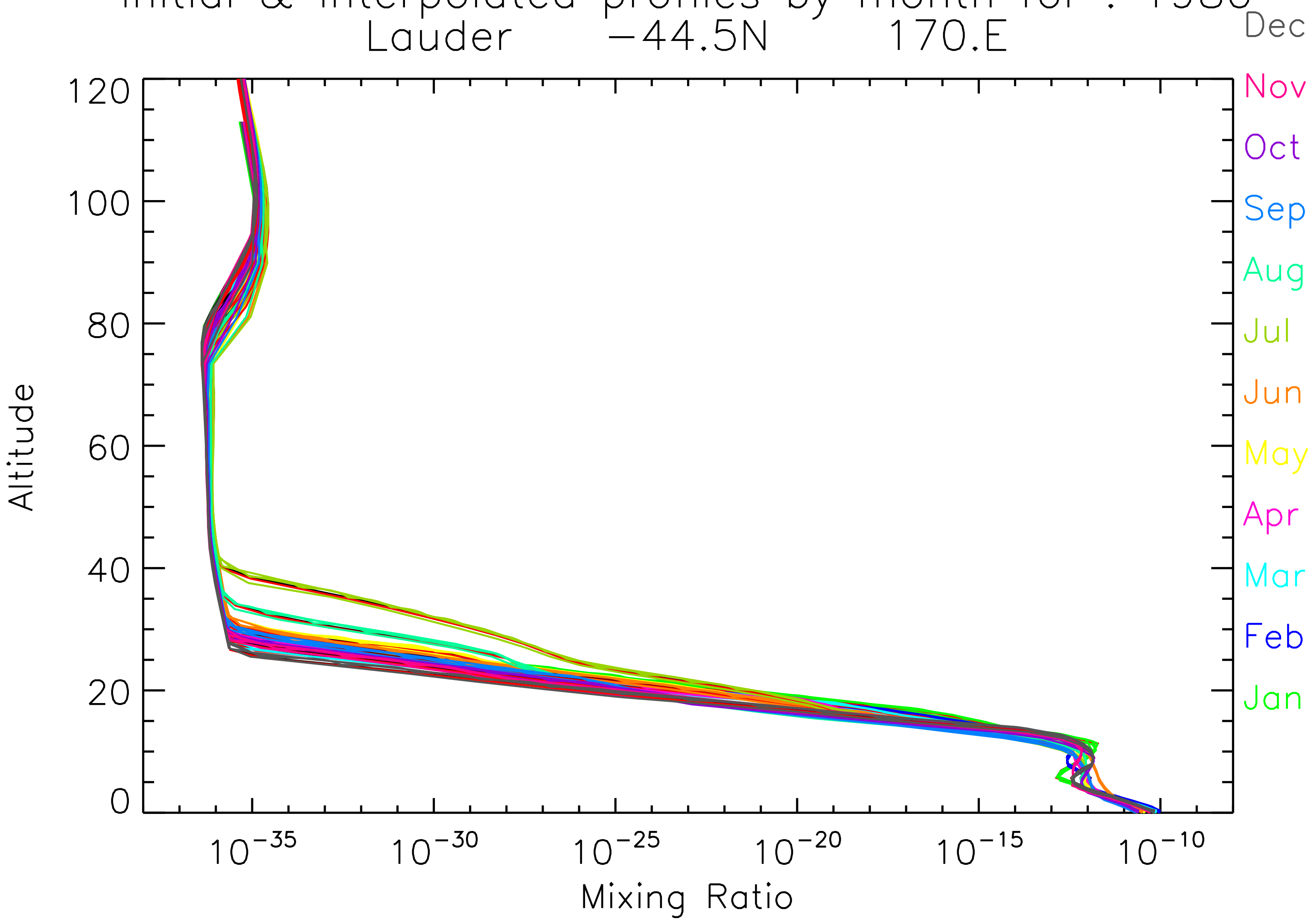
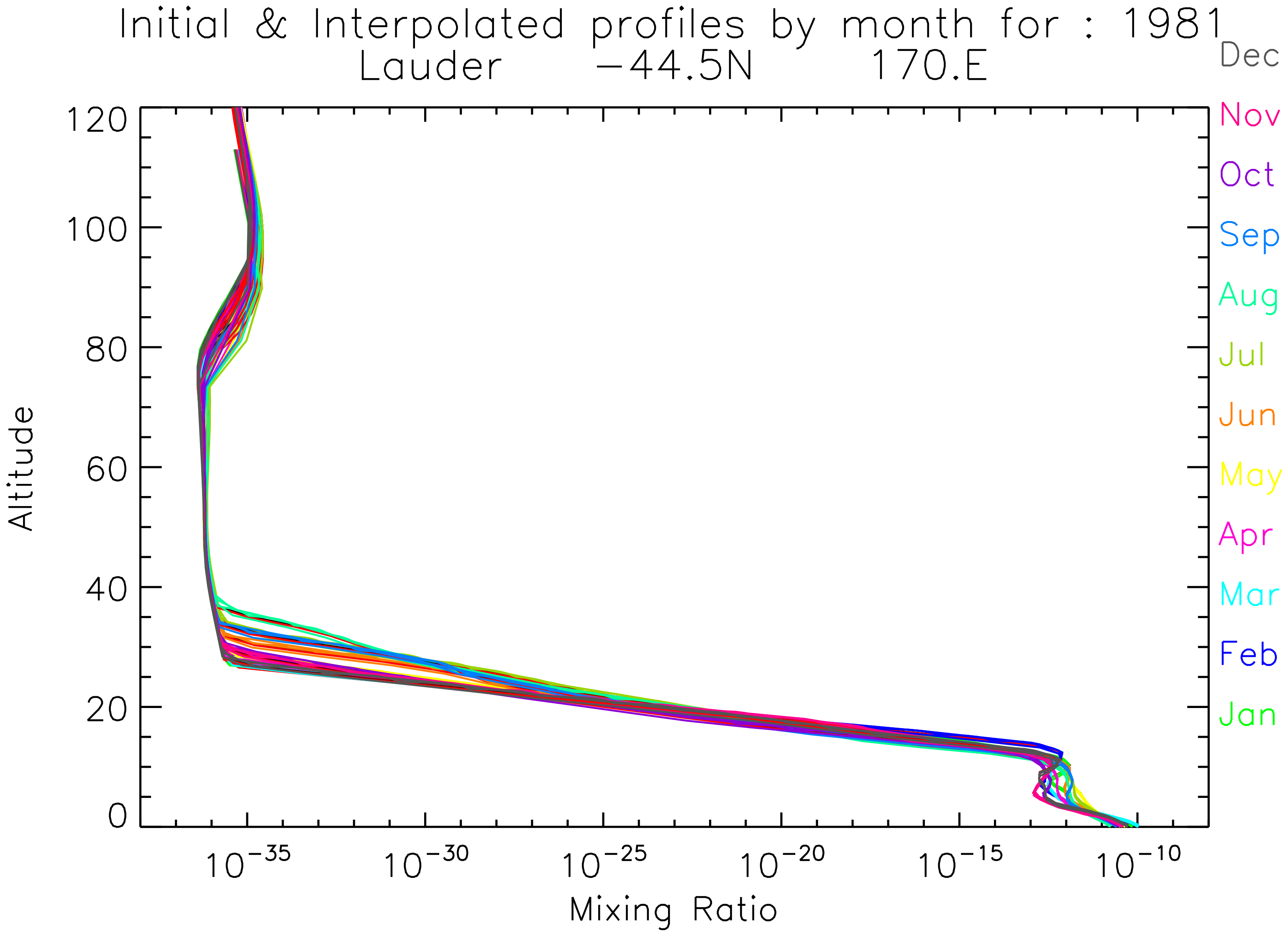
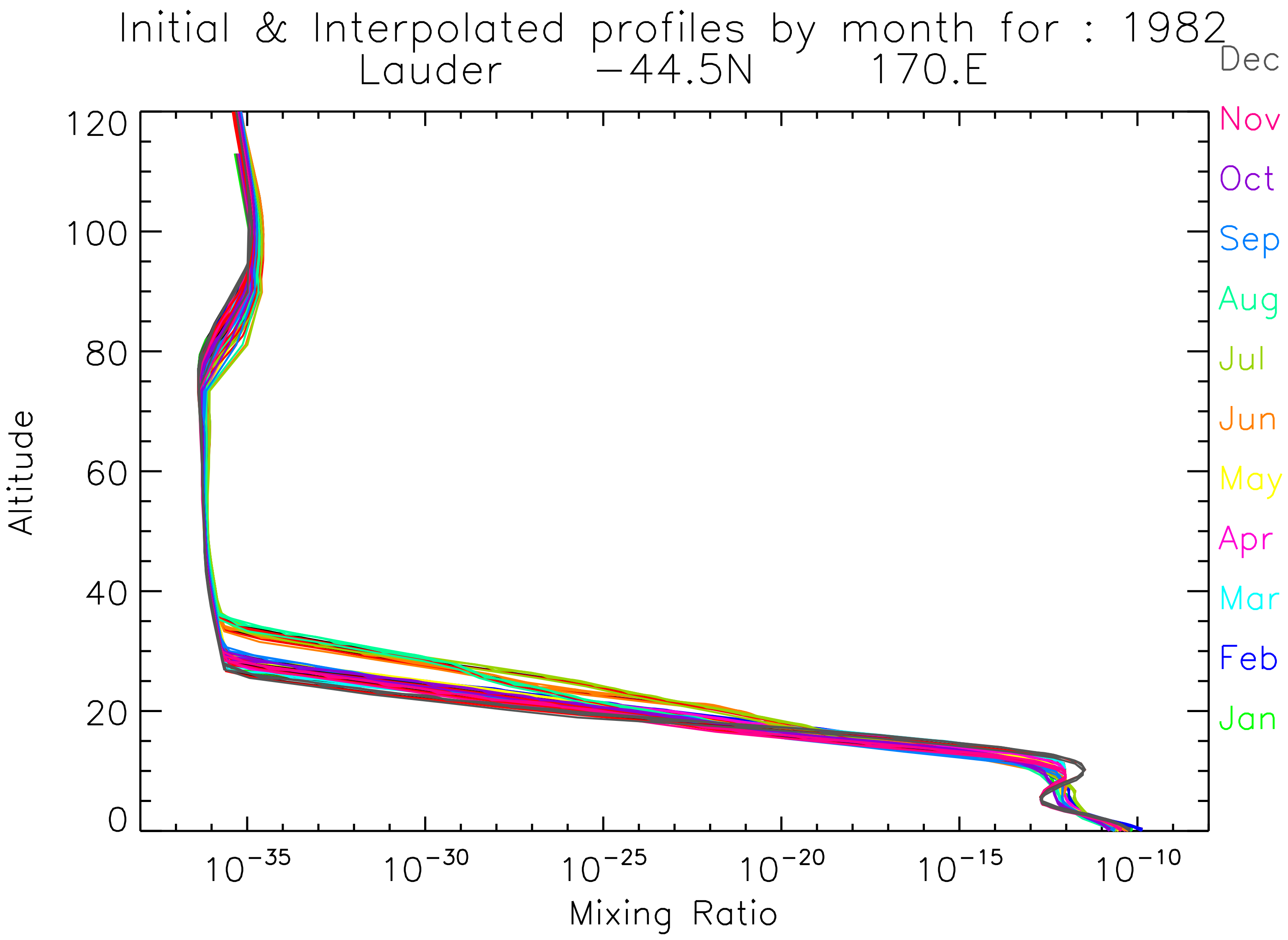
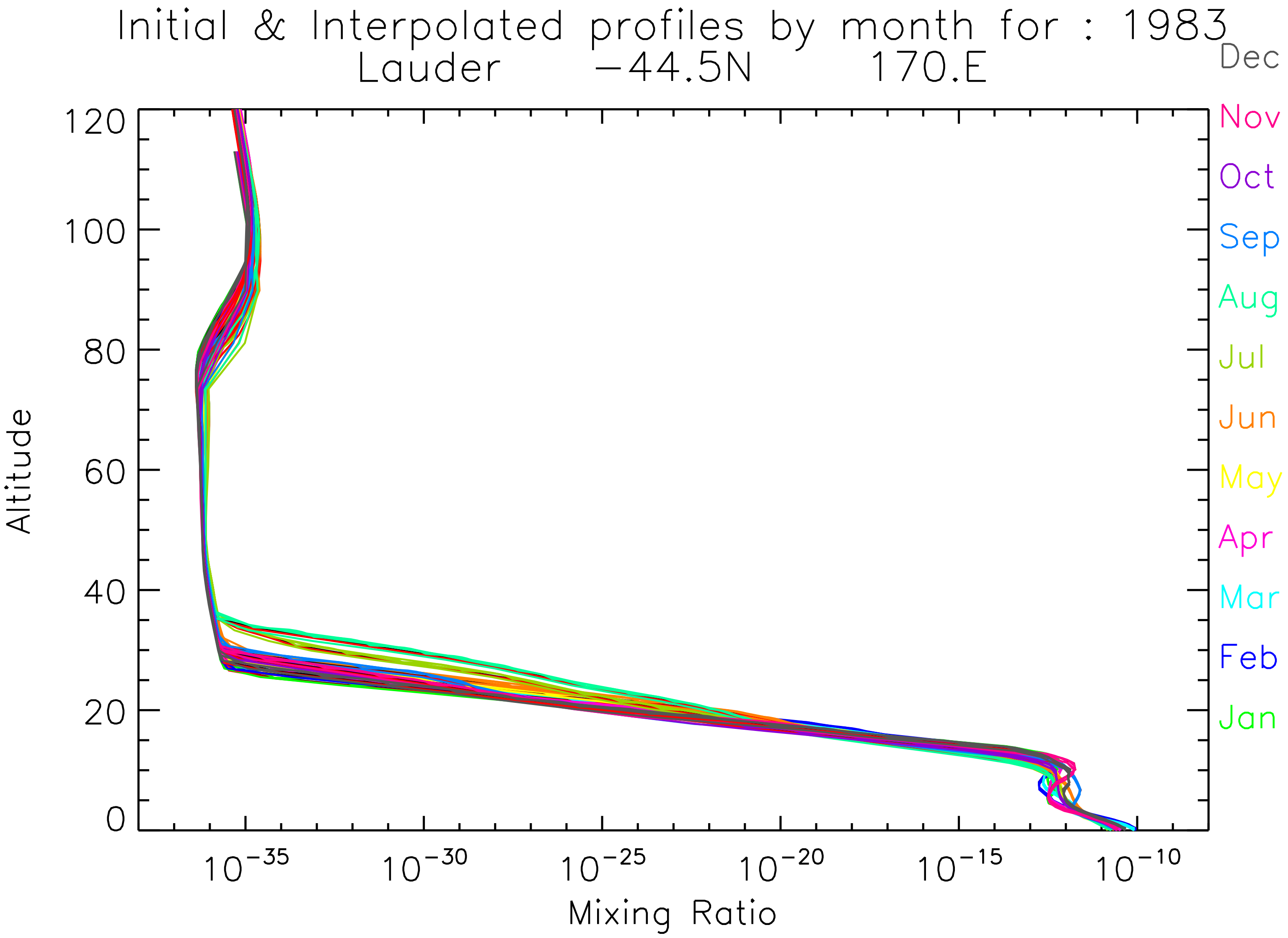
Initial & Interpolated profiles by month for : 1980
Lauder −44.5N 170.E



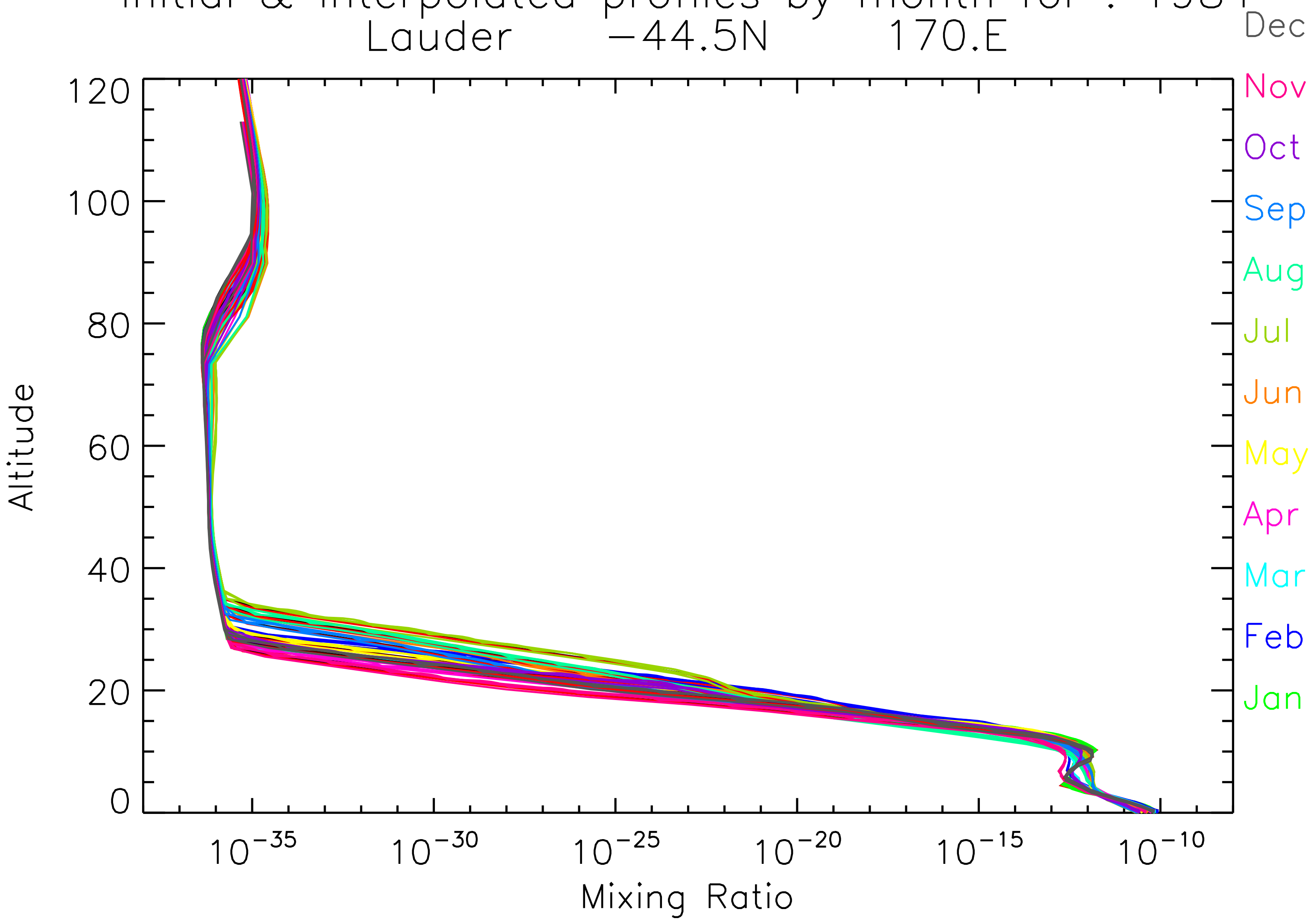

Initial & Interpolated profiles by month for : 1981
Lauder −44.5N 170.E
Altitude
120
100
80
60
40
20
0
10^{-35}
10^{-30}
10^{-25}
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan

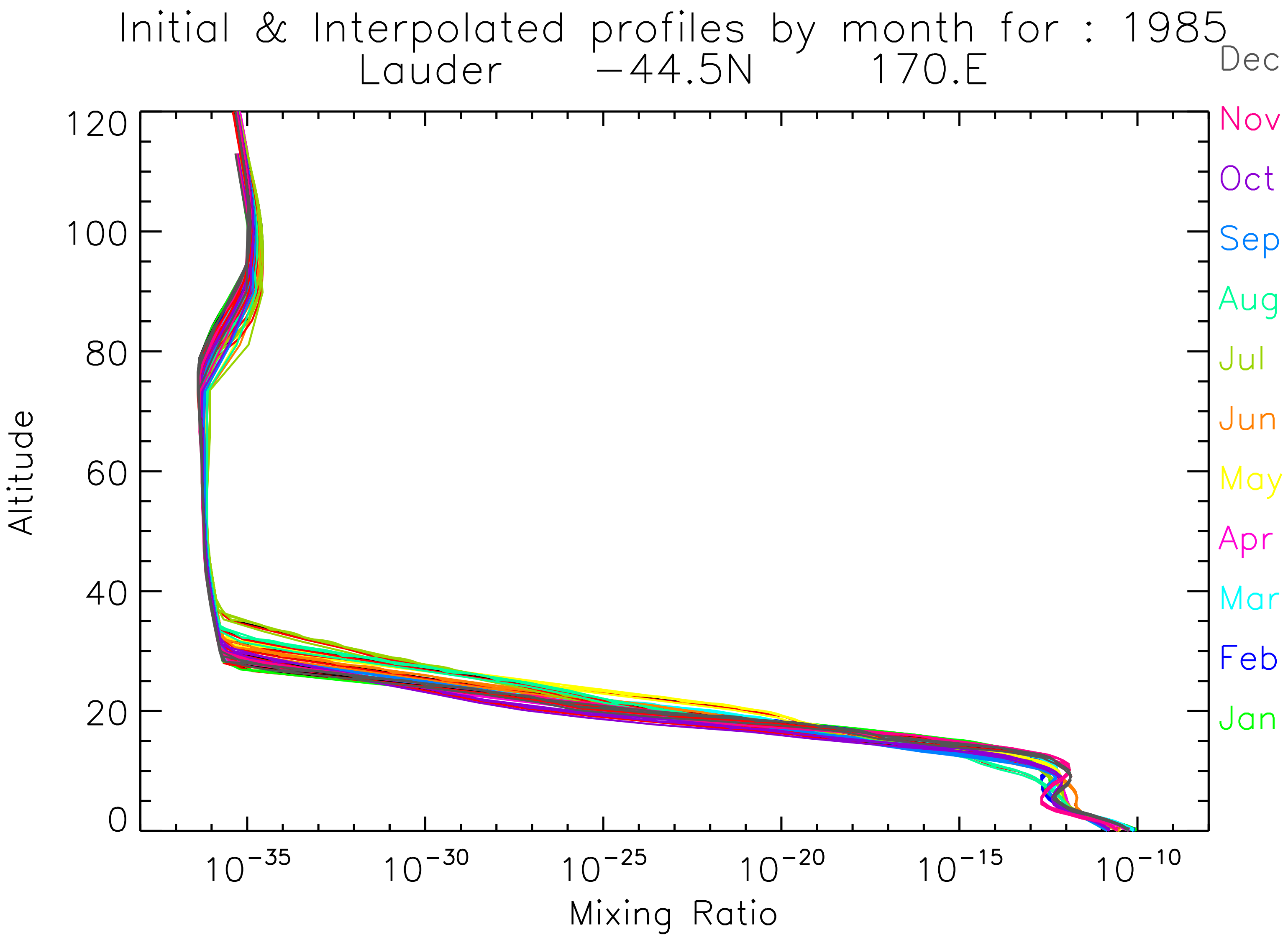

Initial & Interpolated profiles by month for : 1982
Lauder −44.5N 170.E



Initial & Interpolated profiles by month for : 1983
Lauder −44.5N 170.E

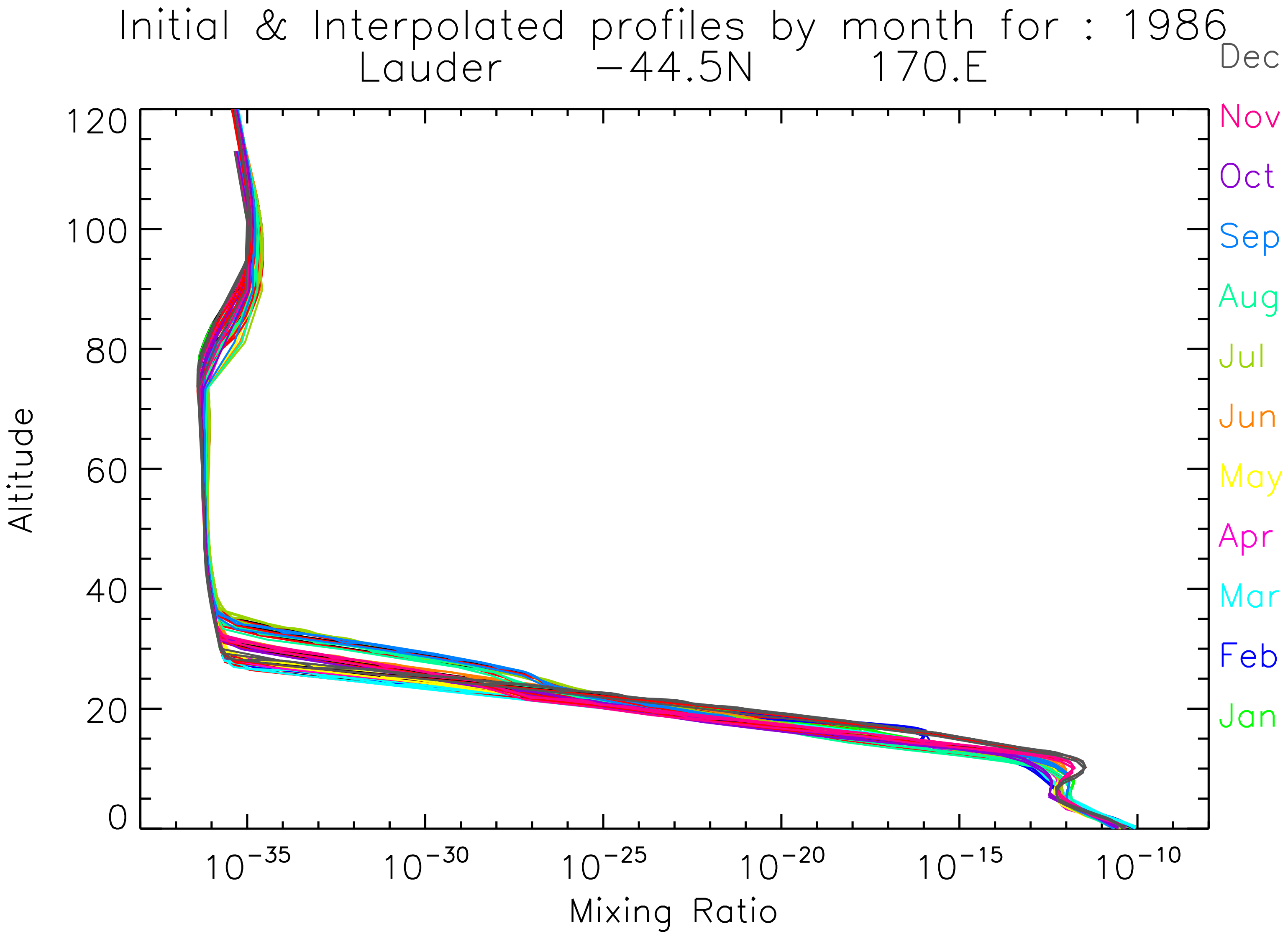
Initial & Interpolated profiles by month for : 1984
Lauder −44.5N 170.E

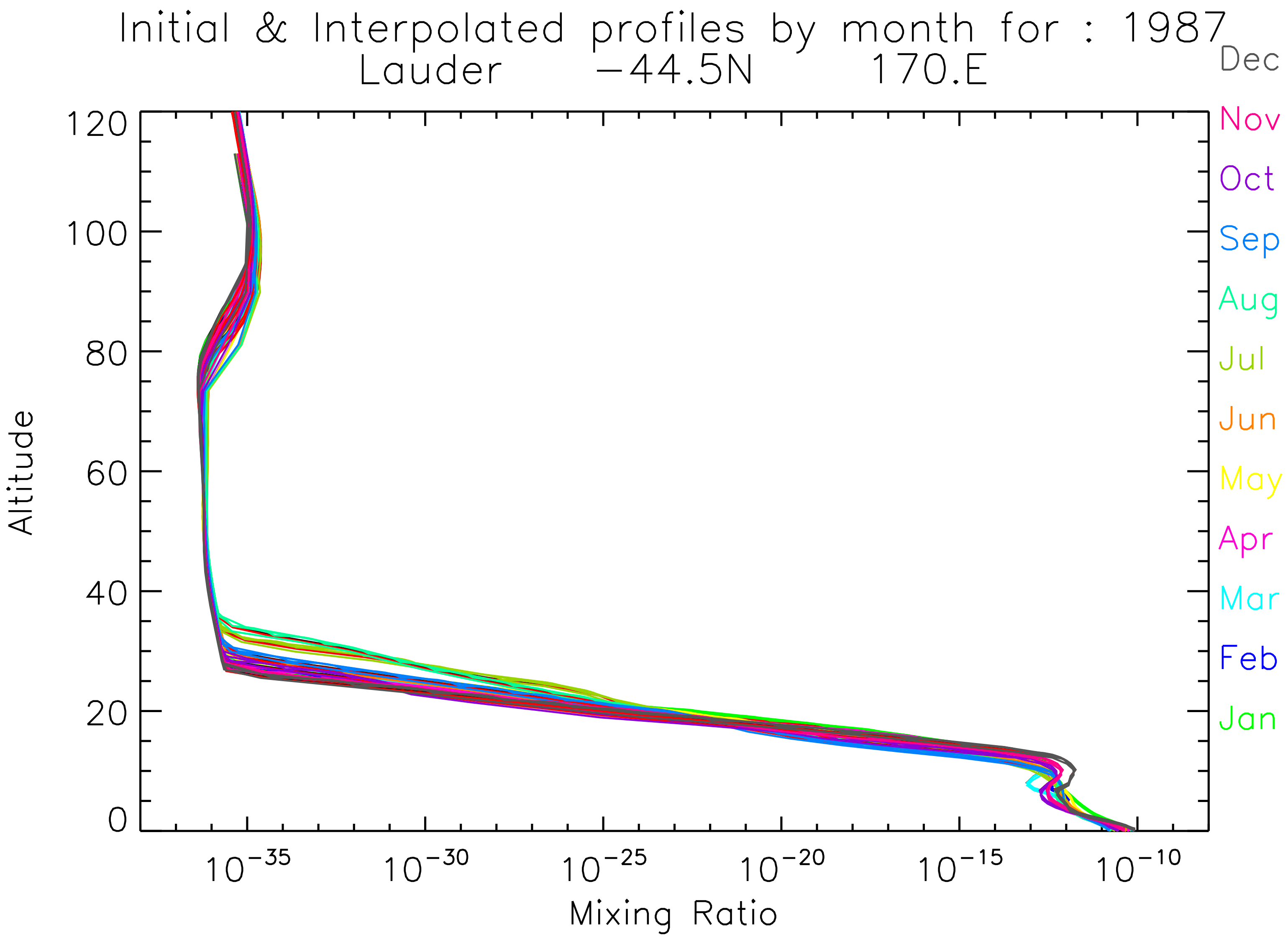




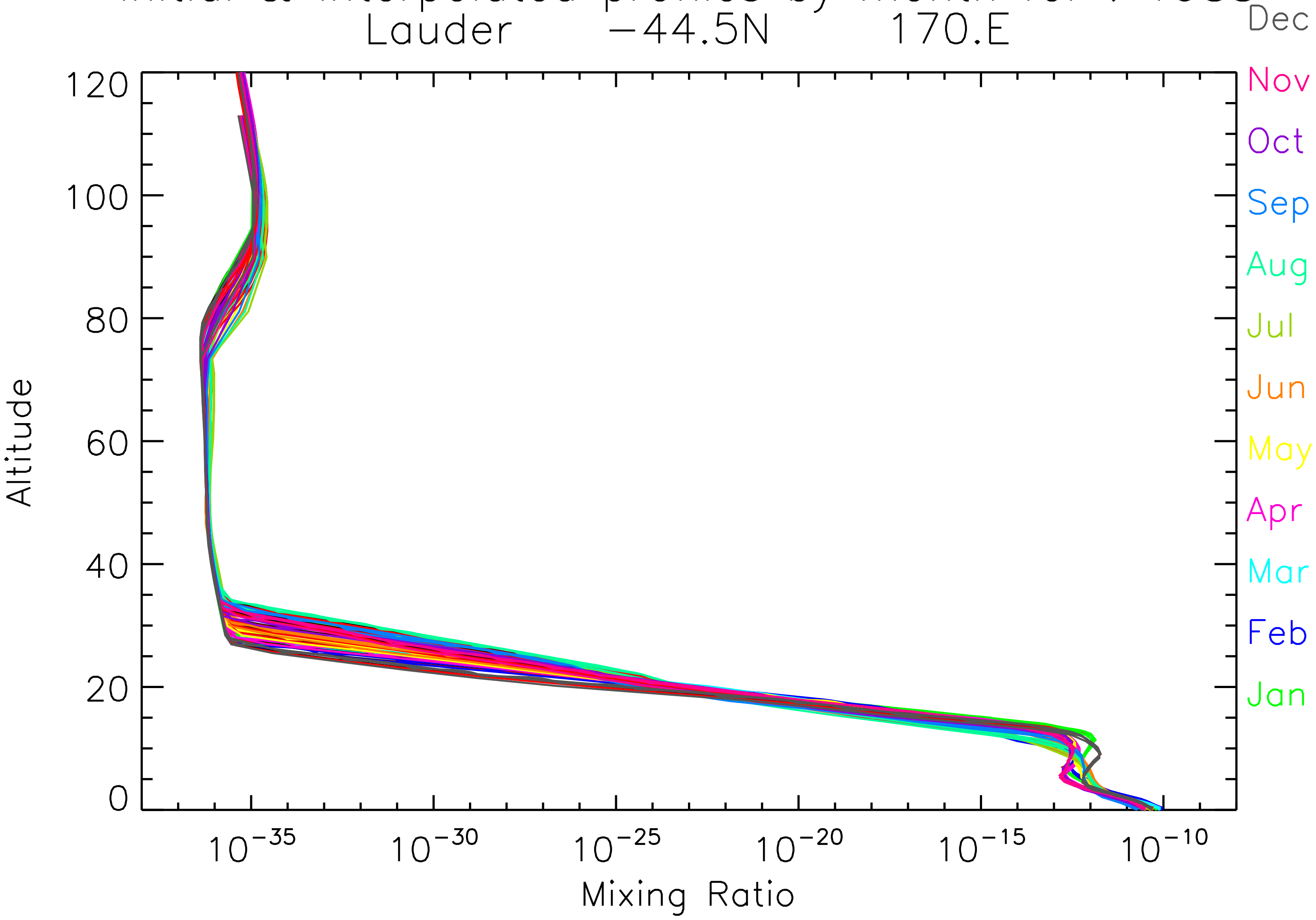
Initial & Interpolated profiles by month for : 1985

Lauder −44.5N 170.E

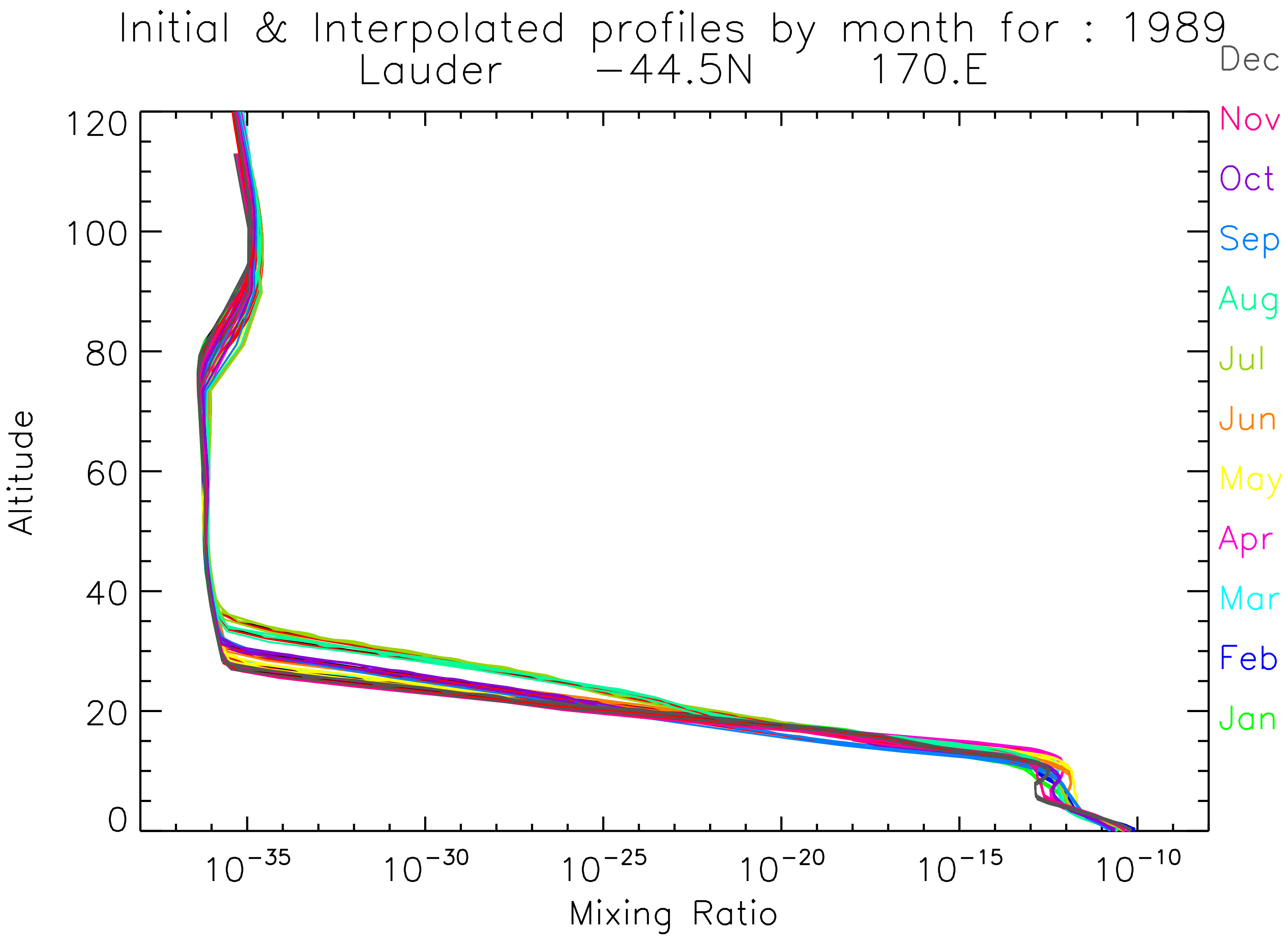

Initial & Interpolated profiles by month for : 1986
Lauder −44.5N 170.E
Altitude
0
20
40
60
80
100
120
Mixing Ratio
10^{-35}
10^{-30}
10^{-25}
10^{-20}
10^{-15}
10^{-10}
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan

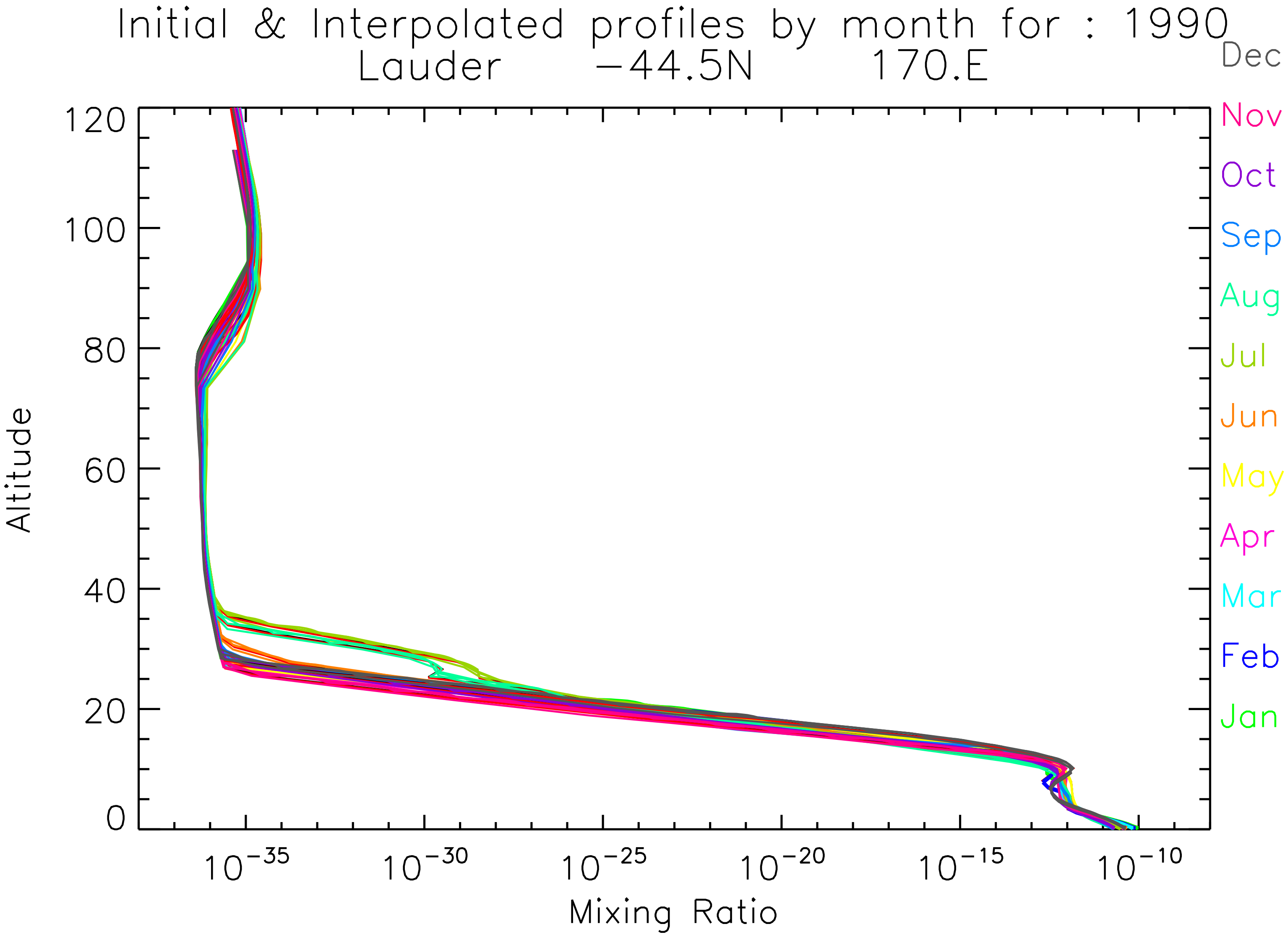


Initial & Interpolated profiles by month for : 1987
Lauder −44.5N 170.E

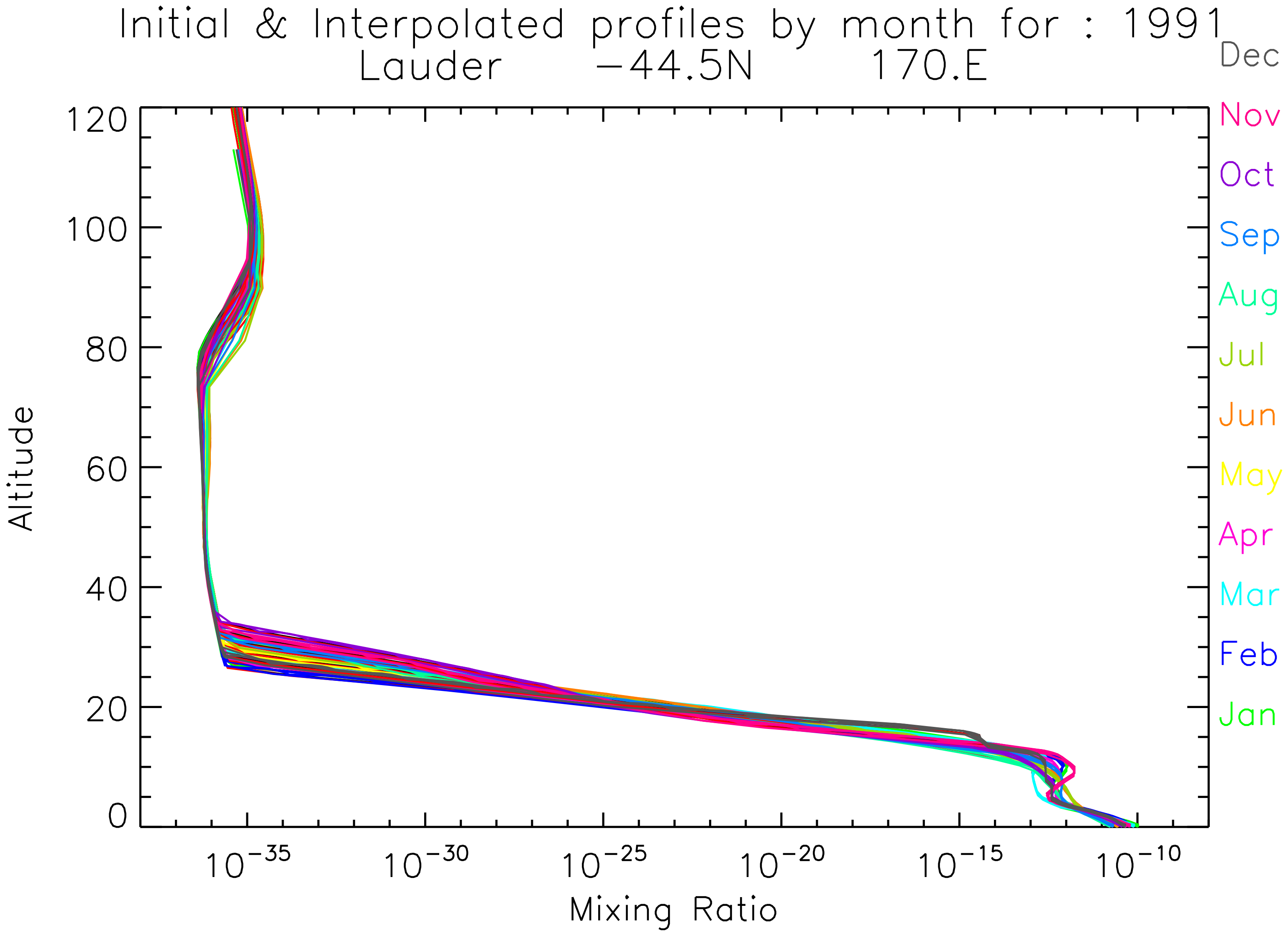


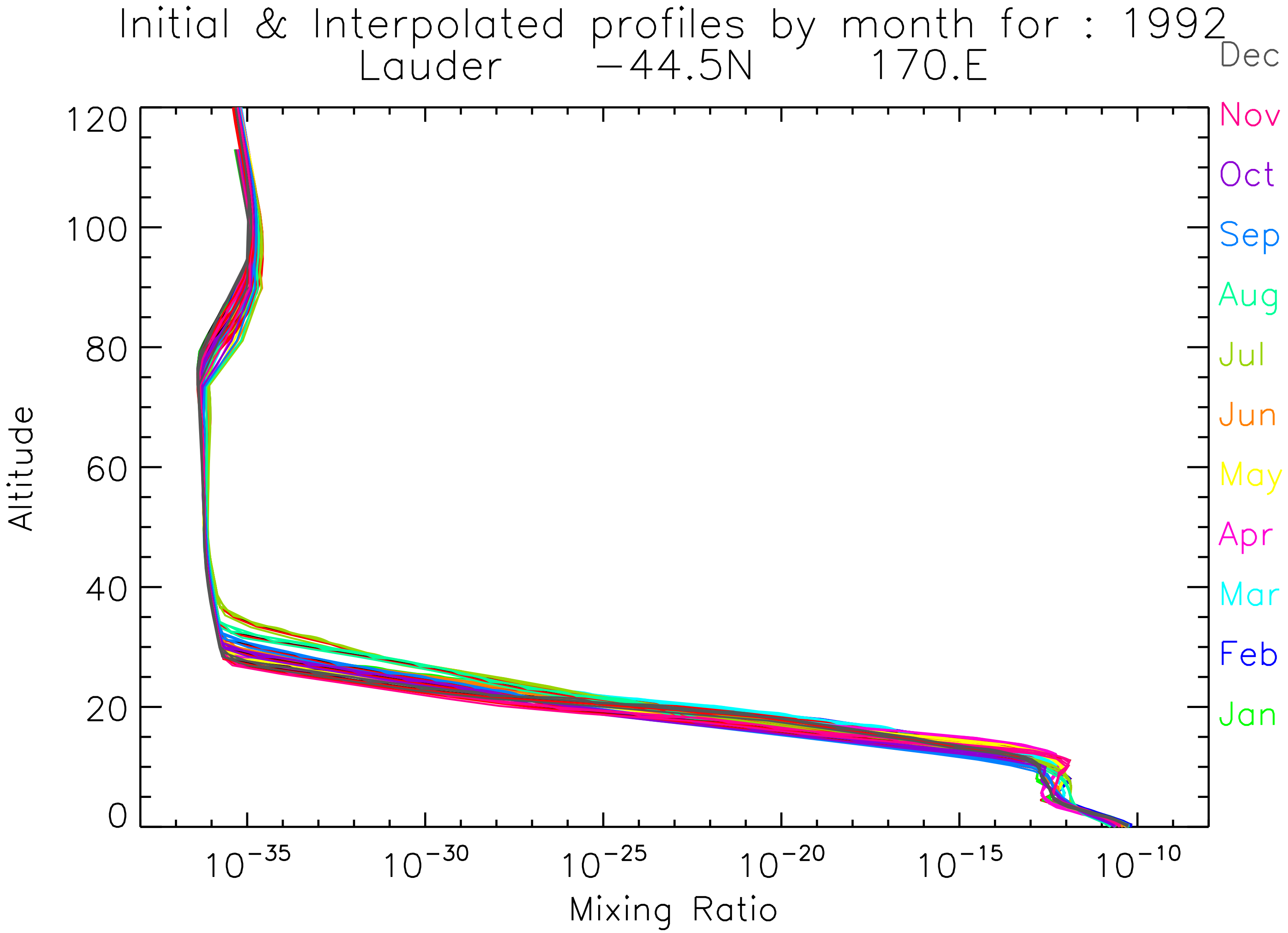
Initial & Interpolated profiles by month for : 1988
Lauder −44.5N 170.E


Initial & Interpolated profiles by month for : 1989
Lauder −44.5N 170.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
0
20
40
60
80
100
120
Mixing Ratio
10^{-35}
10^{-30}
10^{-25}
10^{-20}
10^{-15}
10^{-10}

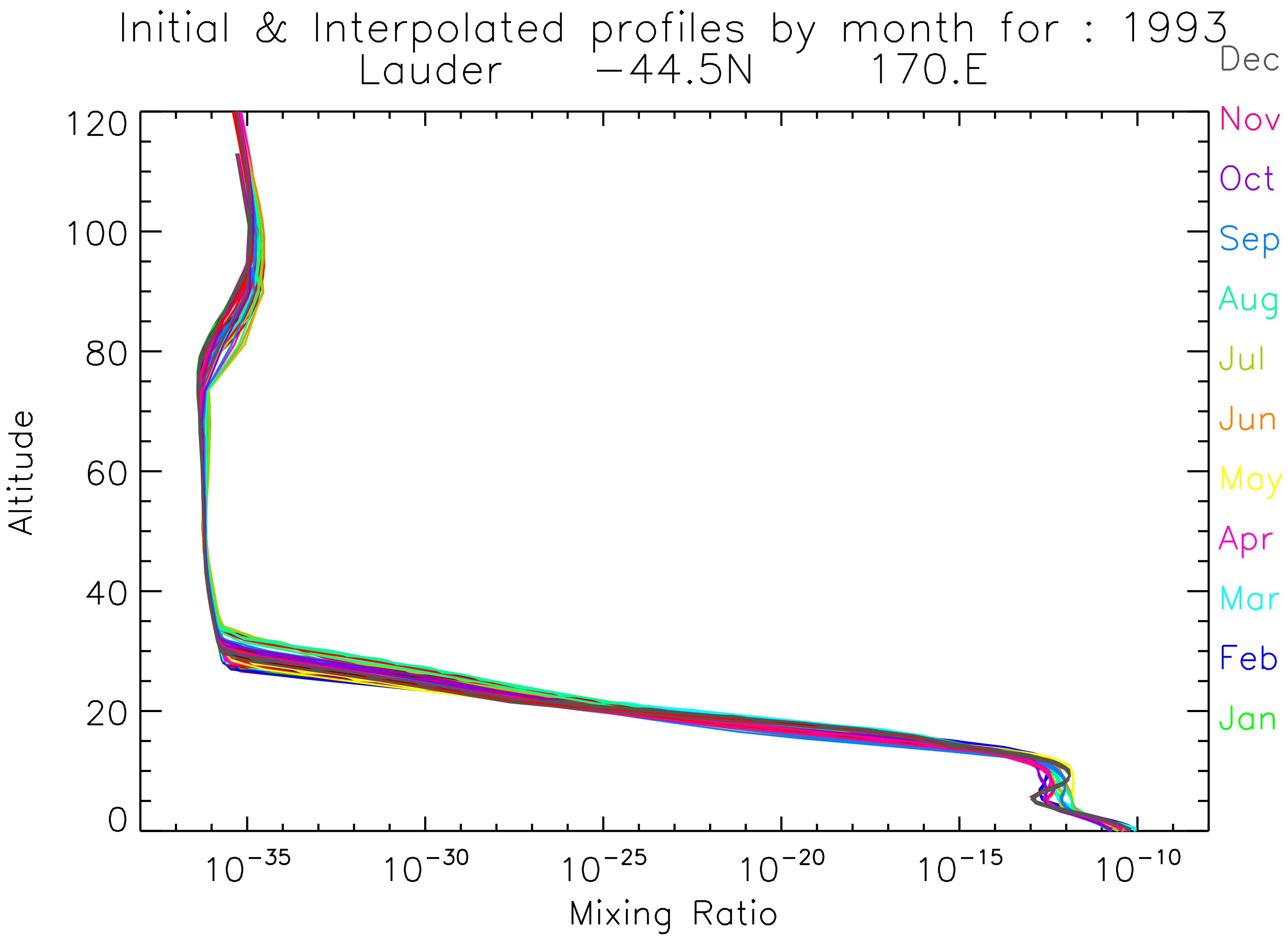


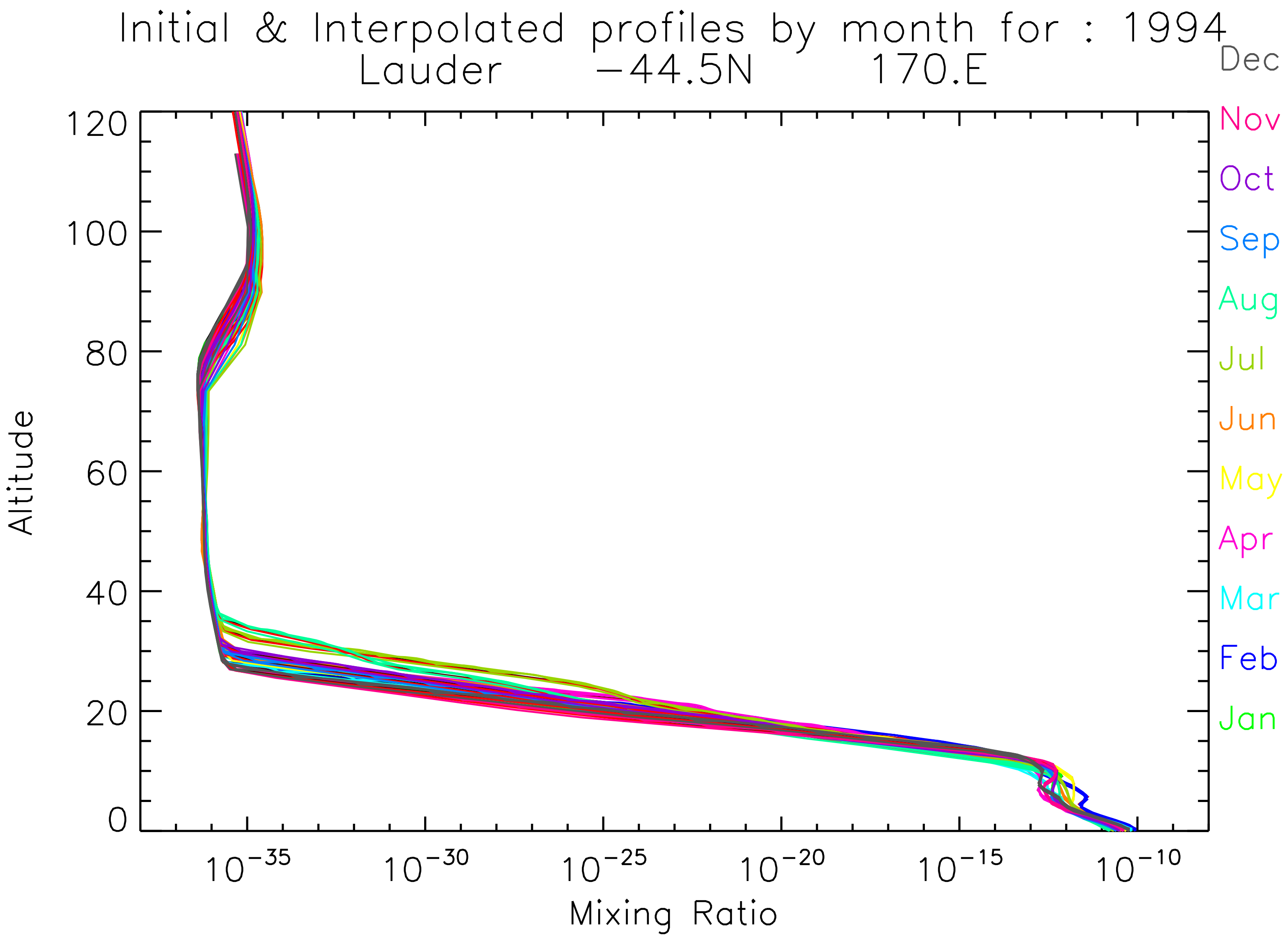
Initial & Interpolated profiles by month for : 1990
Lauder −44.5N 170.E

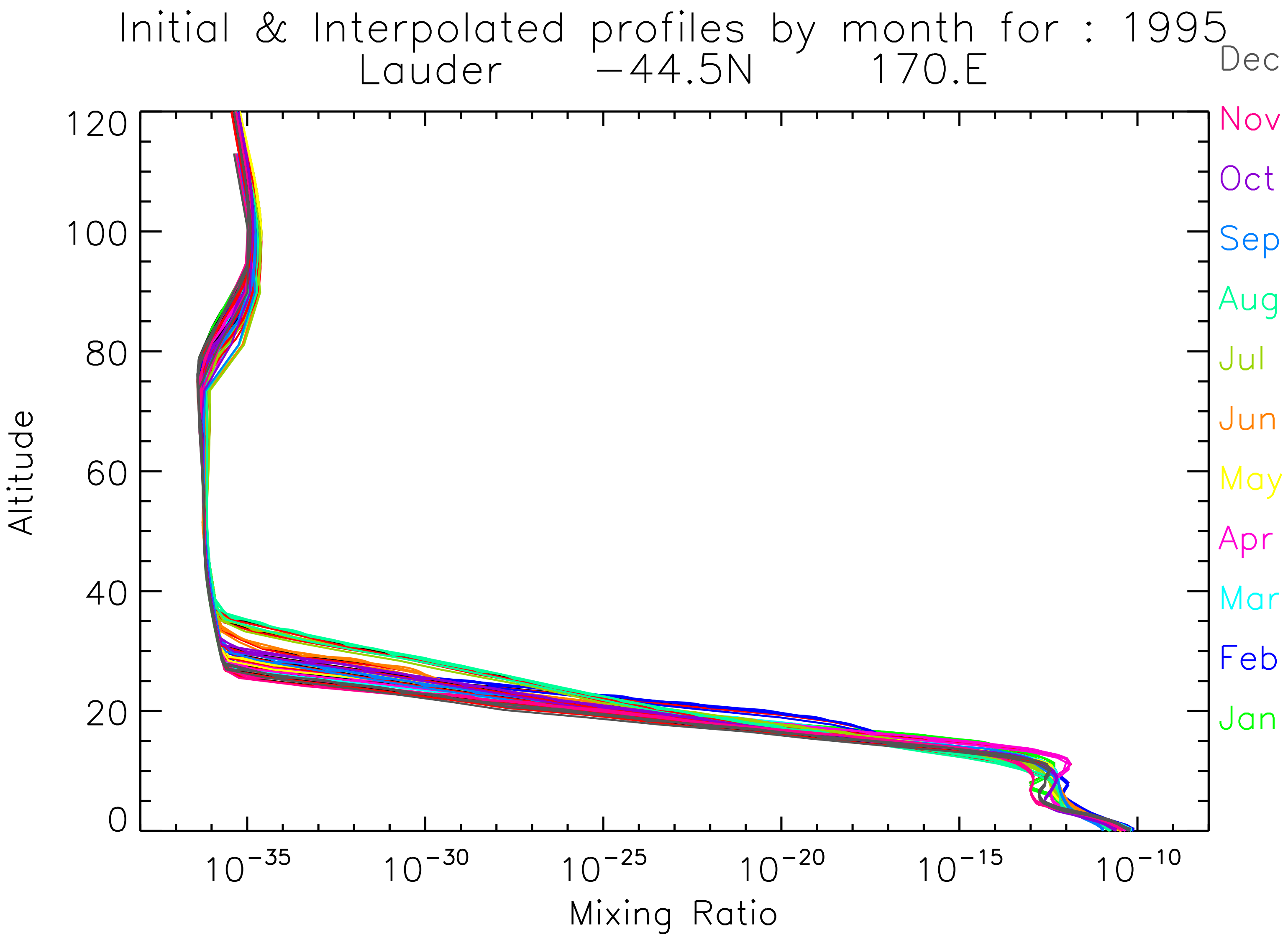

Initial & Interpolated profiles by month for : 1991
Lauder -44.5N 170.E
Altitude
Mixing Ratio
0
20
40
60
80
100
120
10^{-35}
10^{-30}
10^{-25}
10^{-20}
10^{-15}
10^{-10}
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan



Initial & Interpolated profiles by month for : 1992
Lauder −44.5N 170.E


Initial & Interpolated profiles by month for : 1993
Lauder −44.5N 170.E
Altitude
0
20
40
60
80
100
120
Mixing Ratio
10^{-35}
10^{-30}
10^{-25}
10^{-20}
10^{-15}
10^{-10}
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan

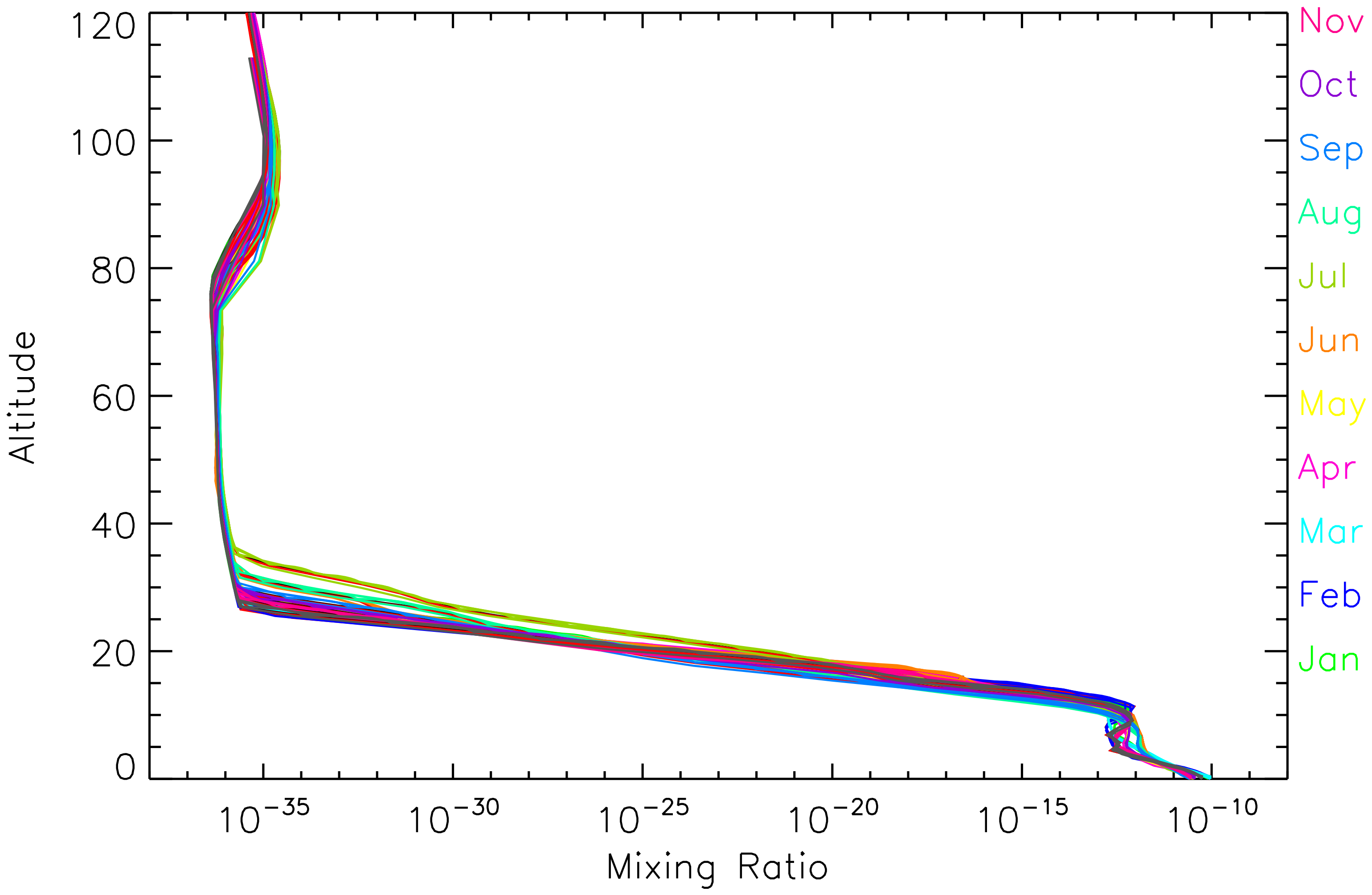

Initial & Interpolated profiles by month for : 1994
Lauder −44.5N 170.E
Altitude
0
20
40
60
80
100
120
10^{-35}
10^{-30}
10^{-25}
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan

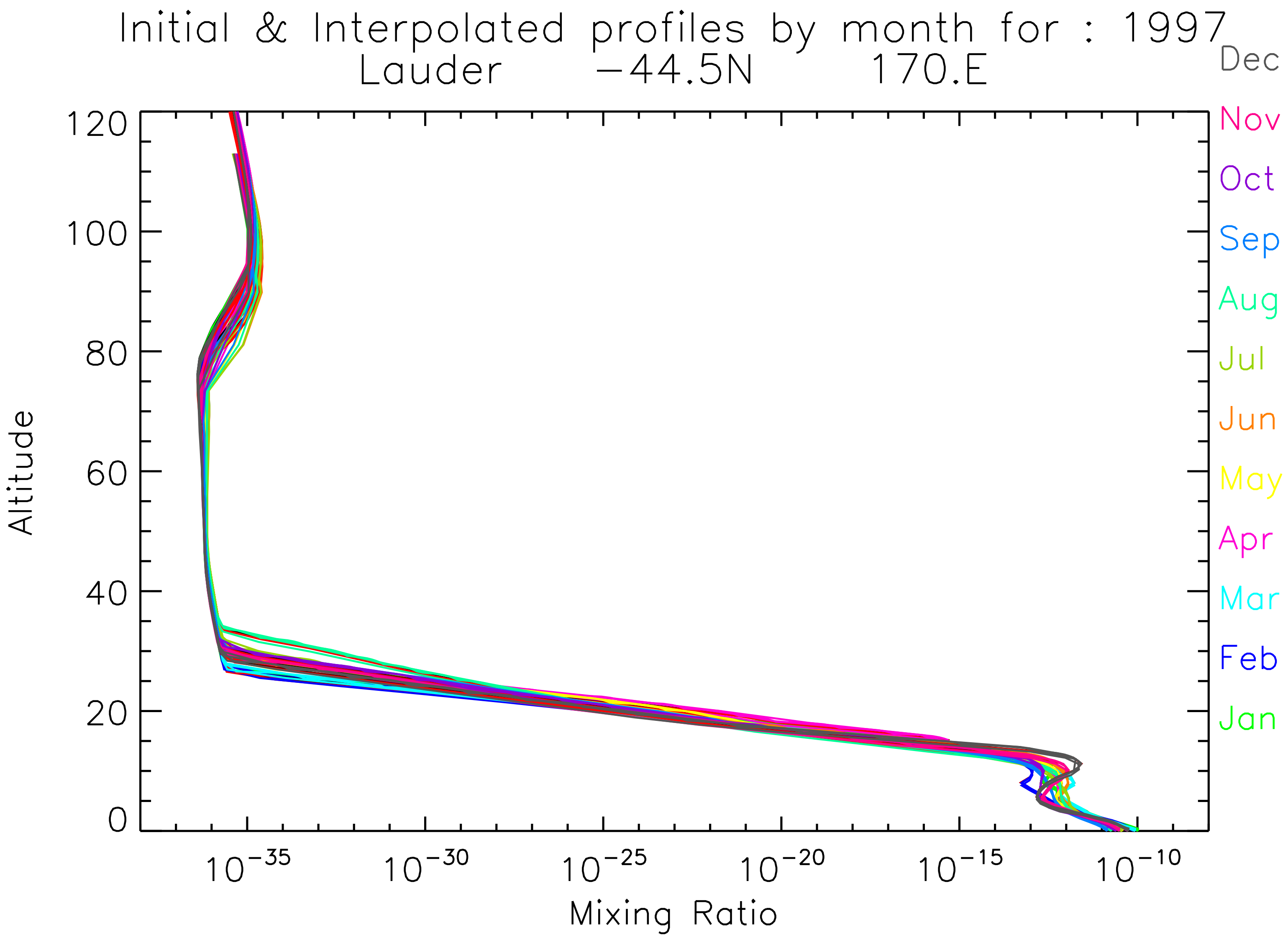


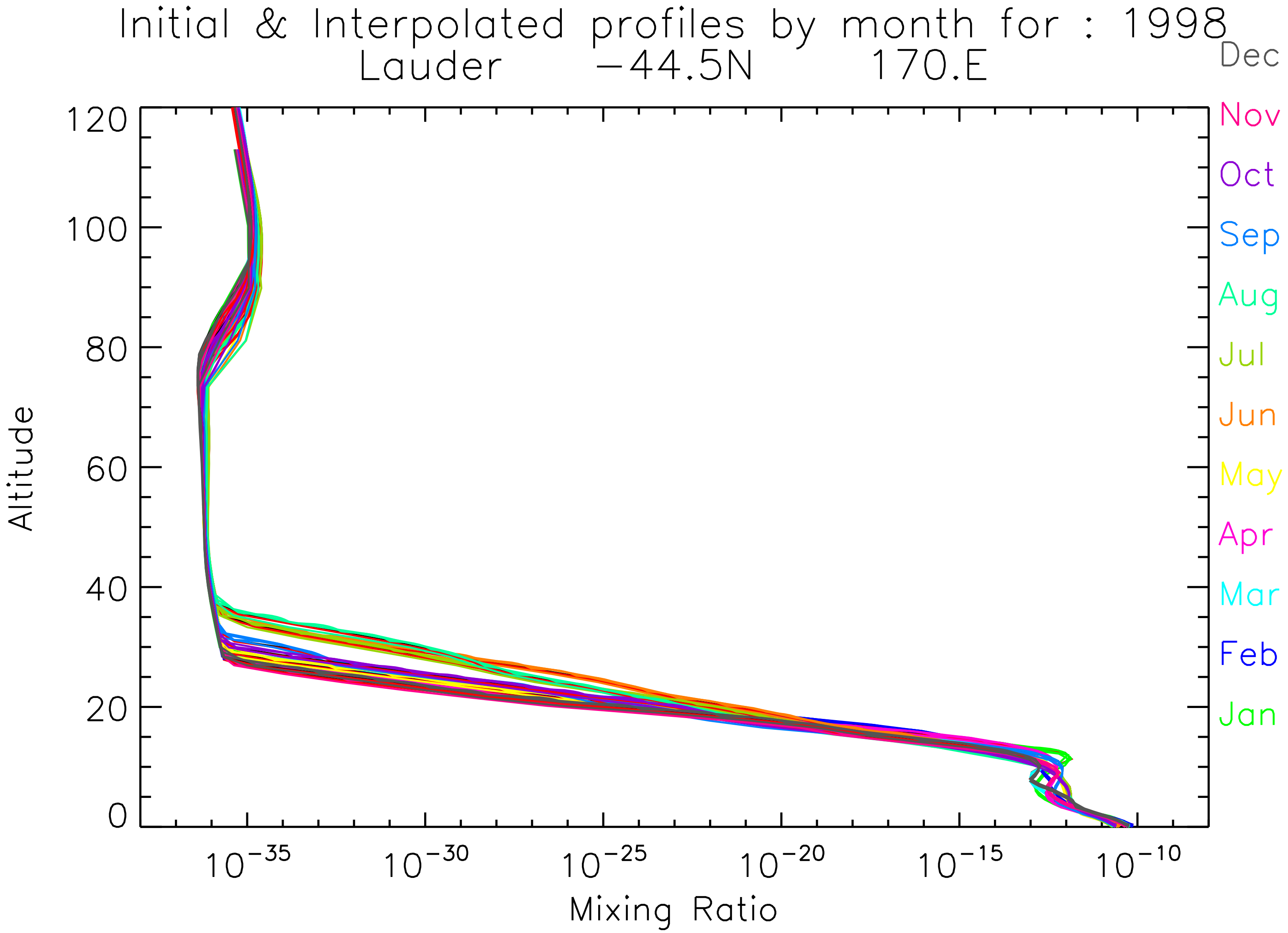
Initial & Interpolated profiles by month for : 1995

Lauder −44.5N 170.E

Initial & Interpolated profiles by month for : 1996
Lauder −44.5N 170.E




Initial & Interpolated profiles by month for : 1997
Lauder −44.5N 170.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 : 1998
Lauder −44.5N 170.E
Altitude
0
20
40
60
80
100
120
10^{-35}
10^{-30}
10^{-25}
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio
Dec
Nov
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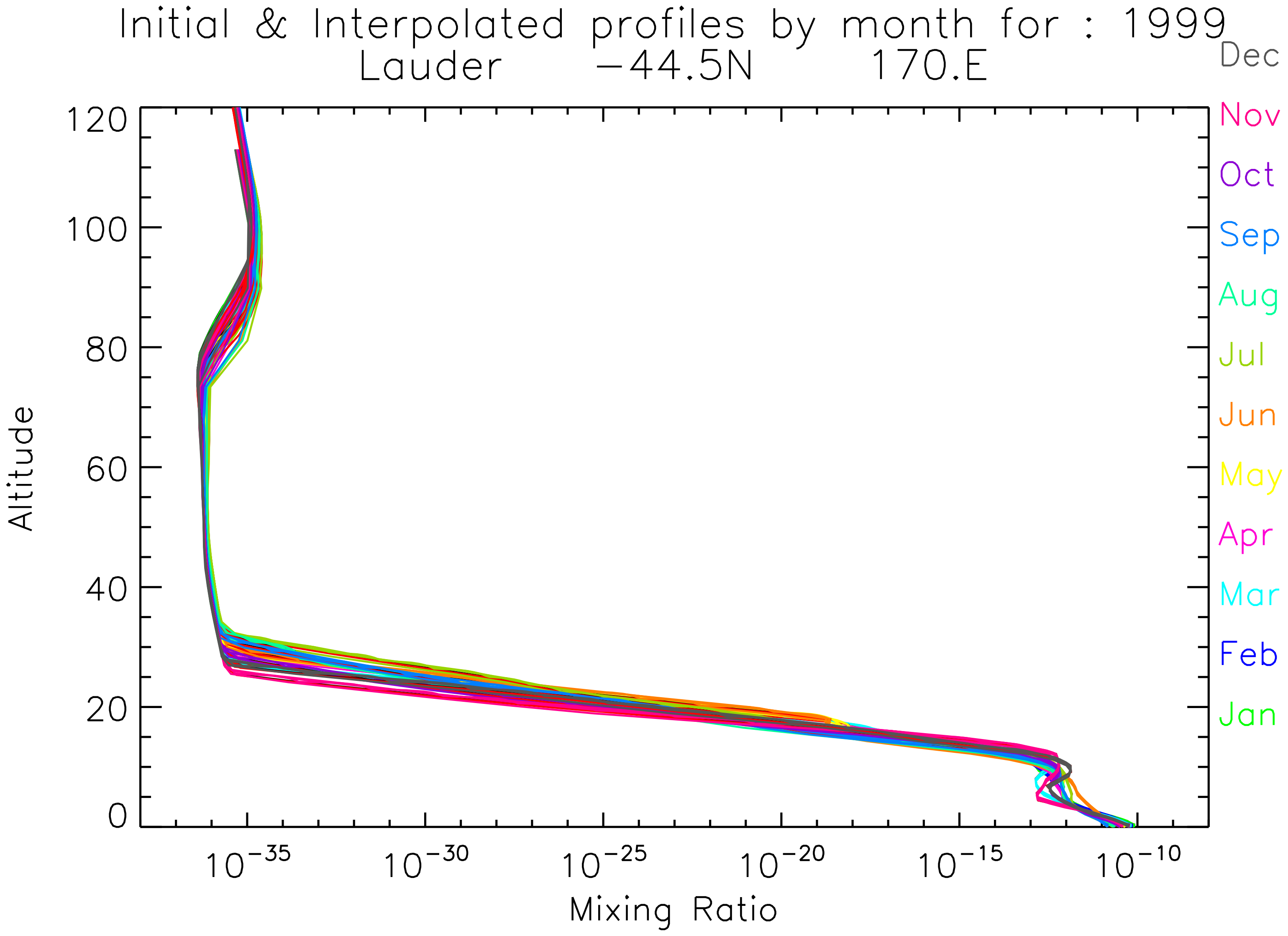
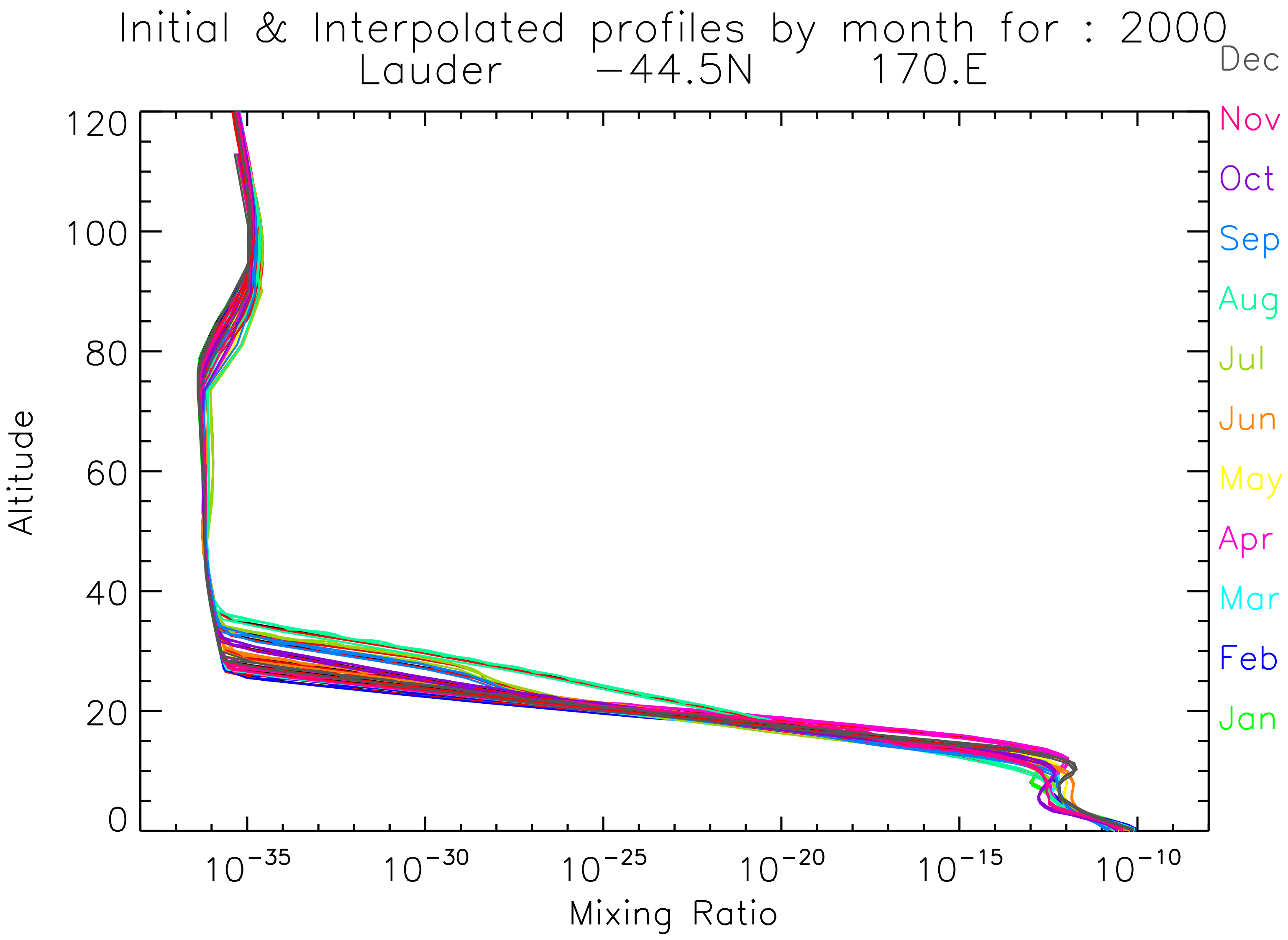
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan

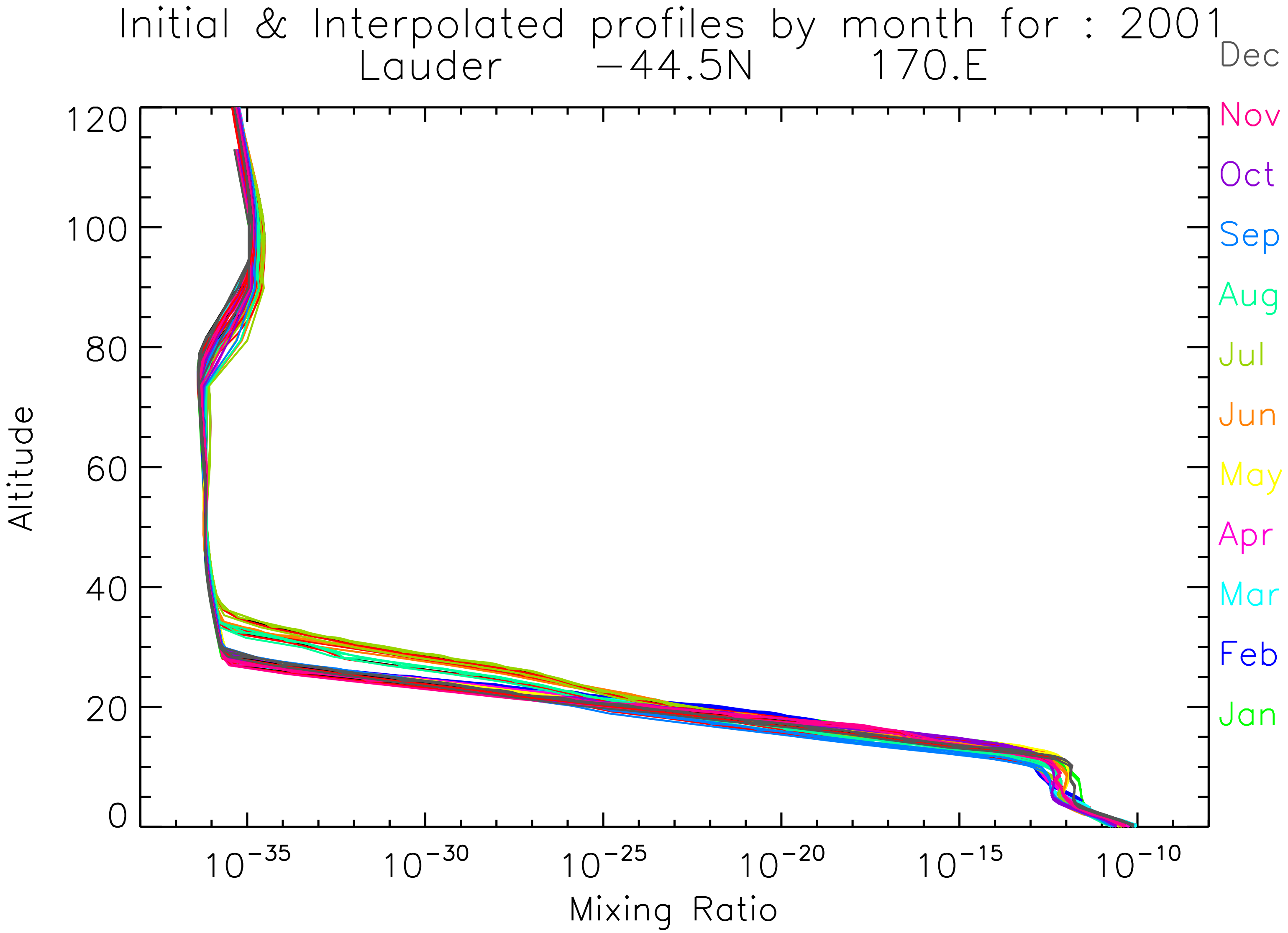


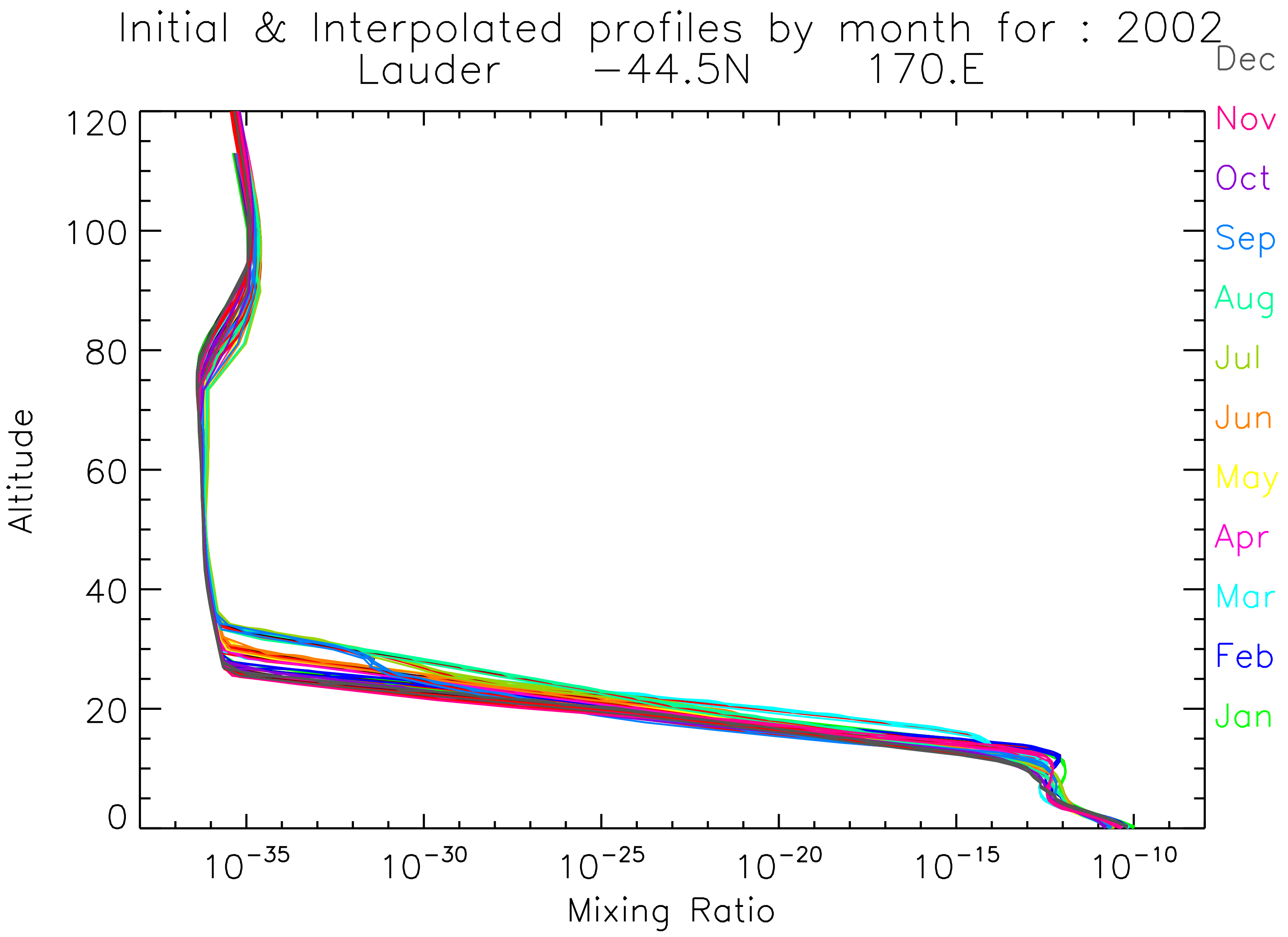
Initial & Interpolated profiles by month for : 1999

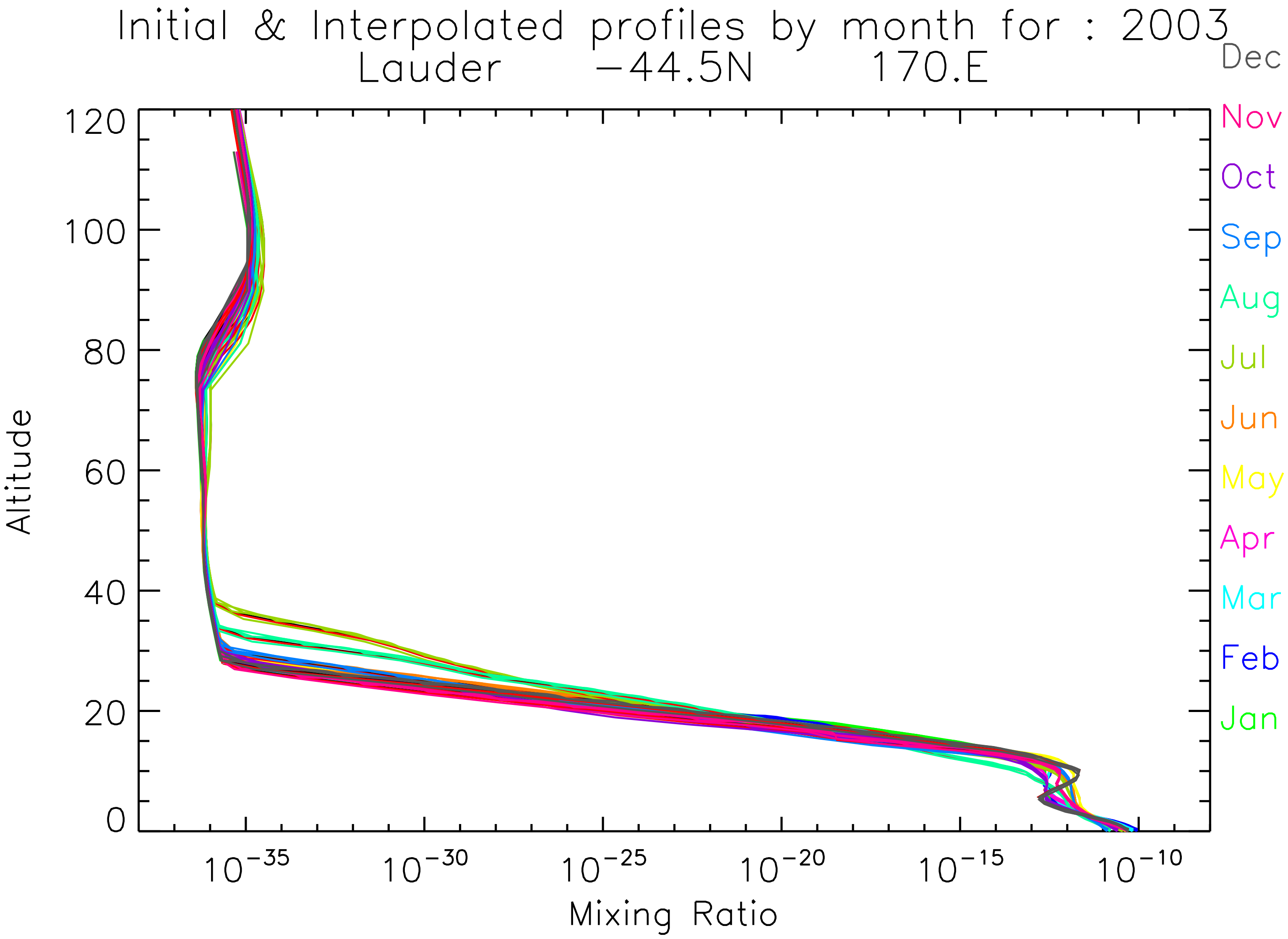
Lauder −44.5N 170.E

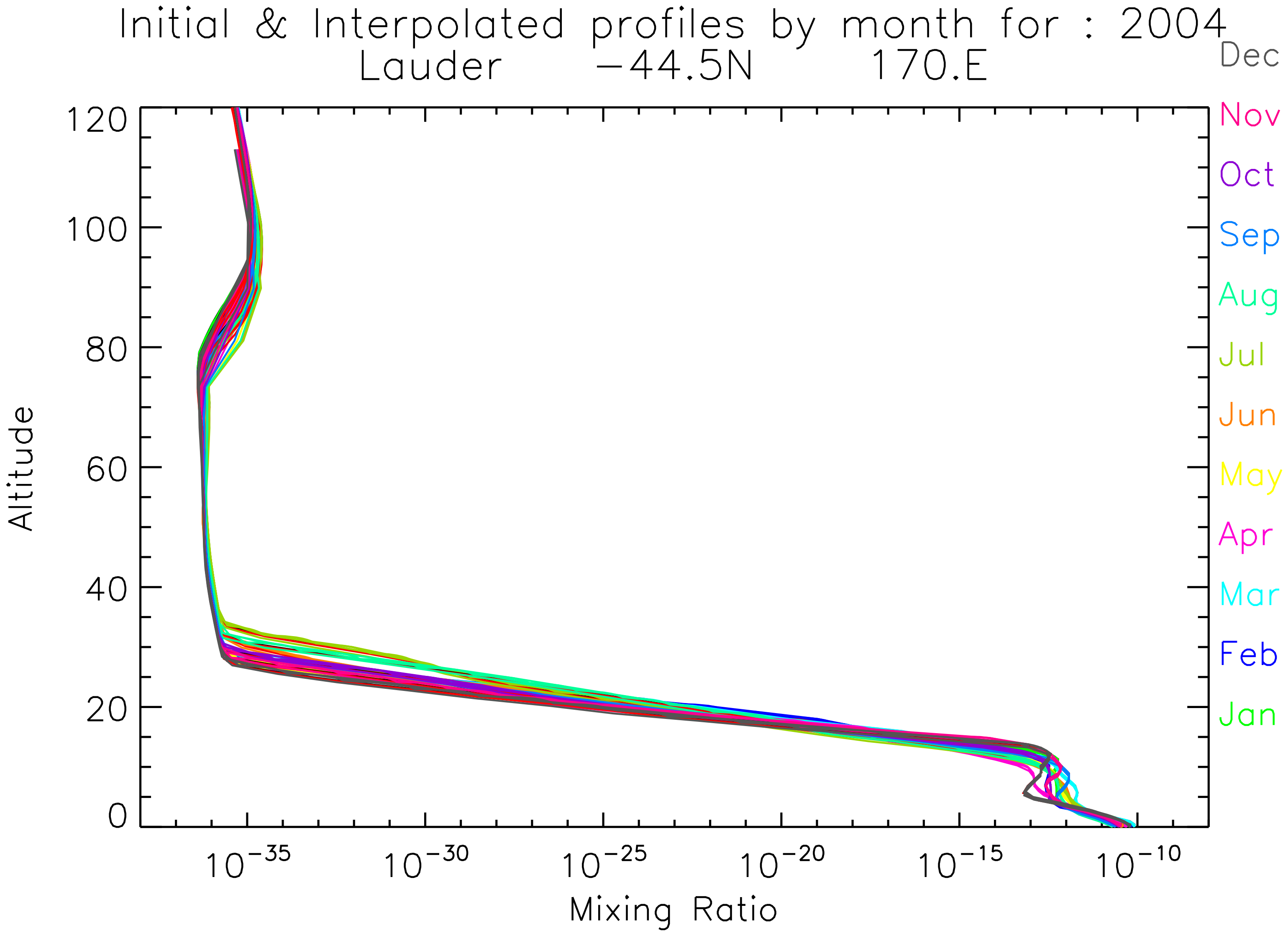


Initial & Interpolated profiles by month for : 2000
Lauder −44.5N 170.E

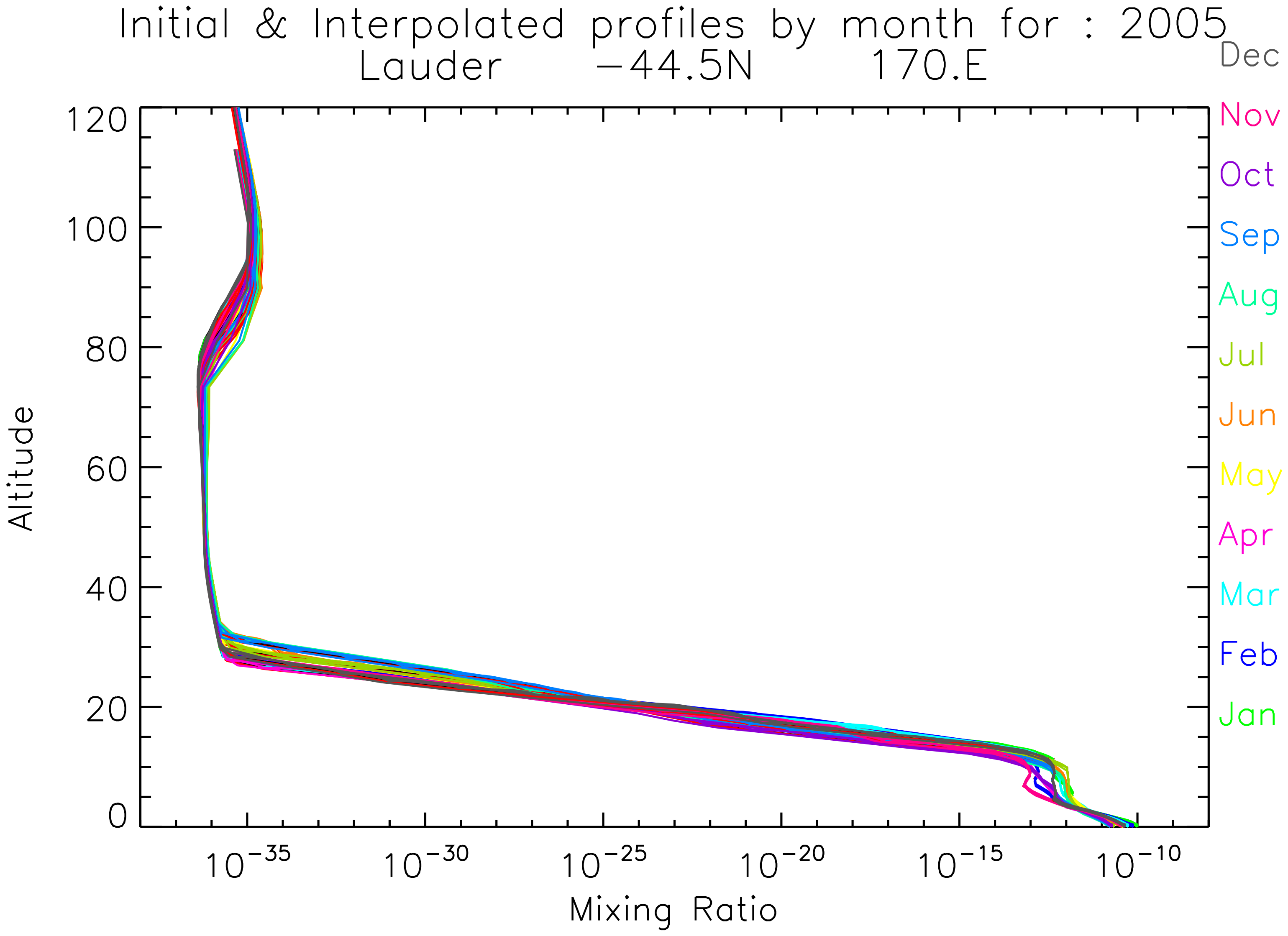

Initial & Interpolated profiles by month for : 2001
Lauder −44.5N 170.E
Altitude
0
20
40
60
80
100
120
10^{-35}
10^{-30}
10^{-25}
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan


Initial & Interpolated profiles by month for : 2002
Lauder −44.5N 170.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

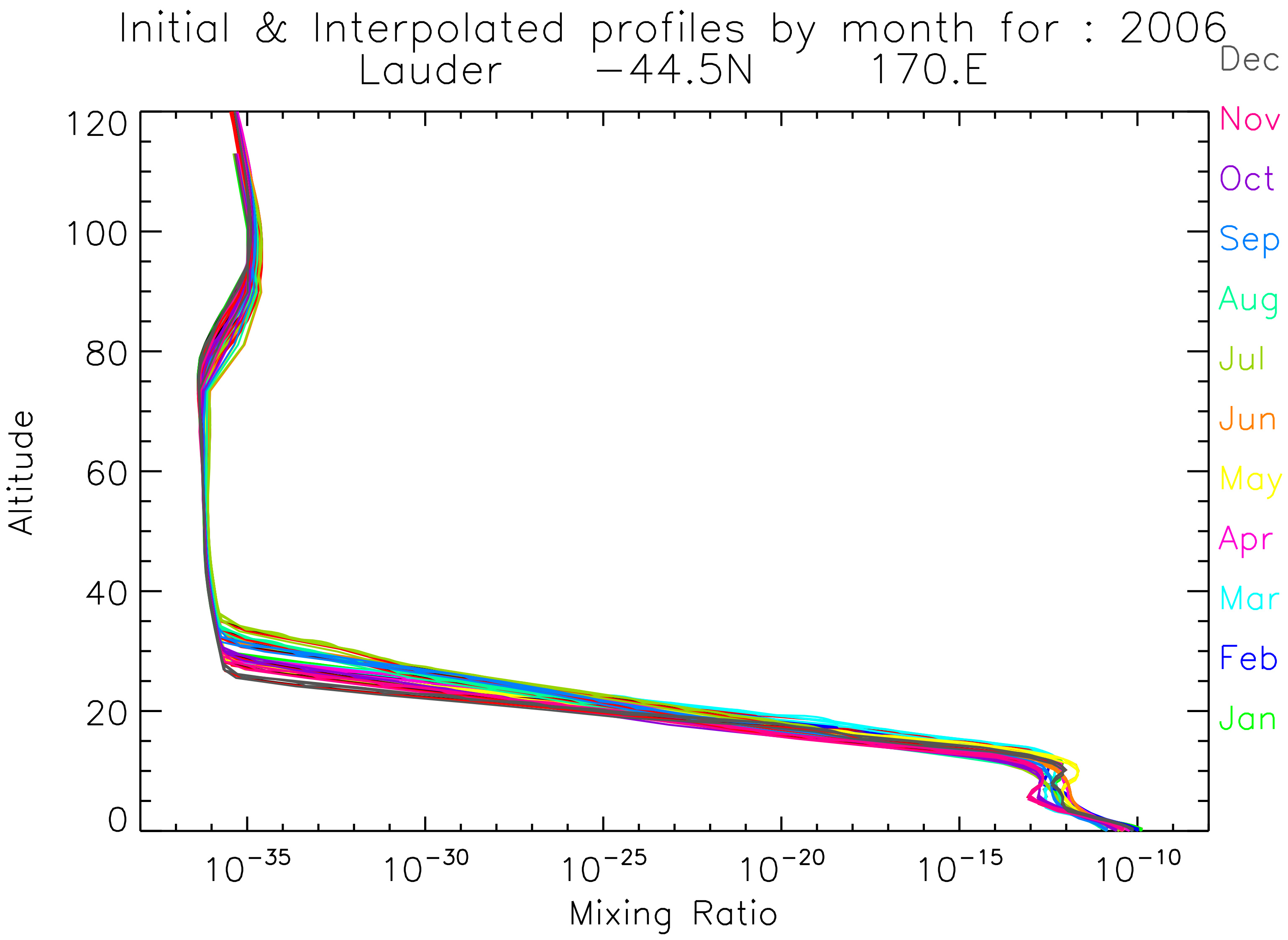

Initial & Interpolated profiles by month for : 2003
Lauder −44.5N 170.E
Altitude
0
20
40
60
80
100
120
10^{-35}
10^{-30}
10^{-25}
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan

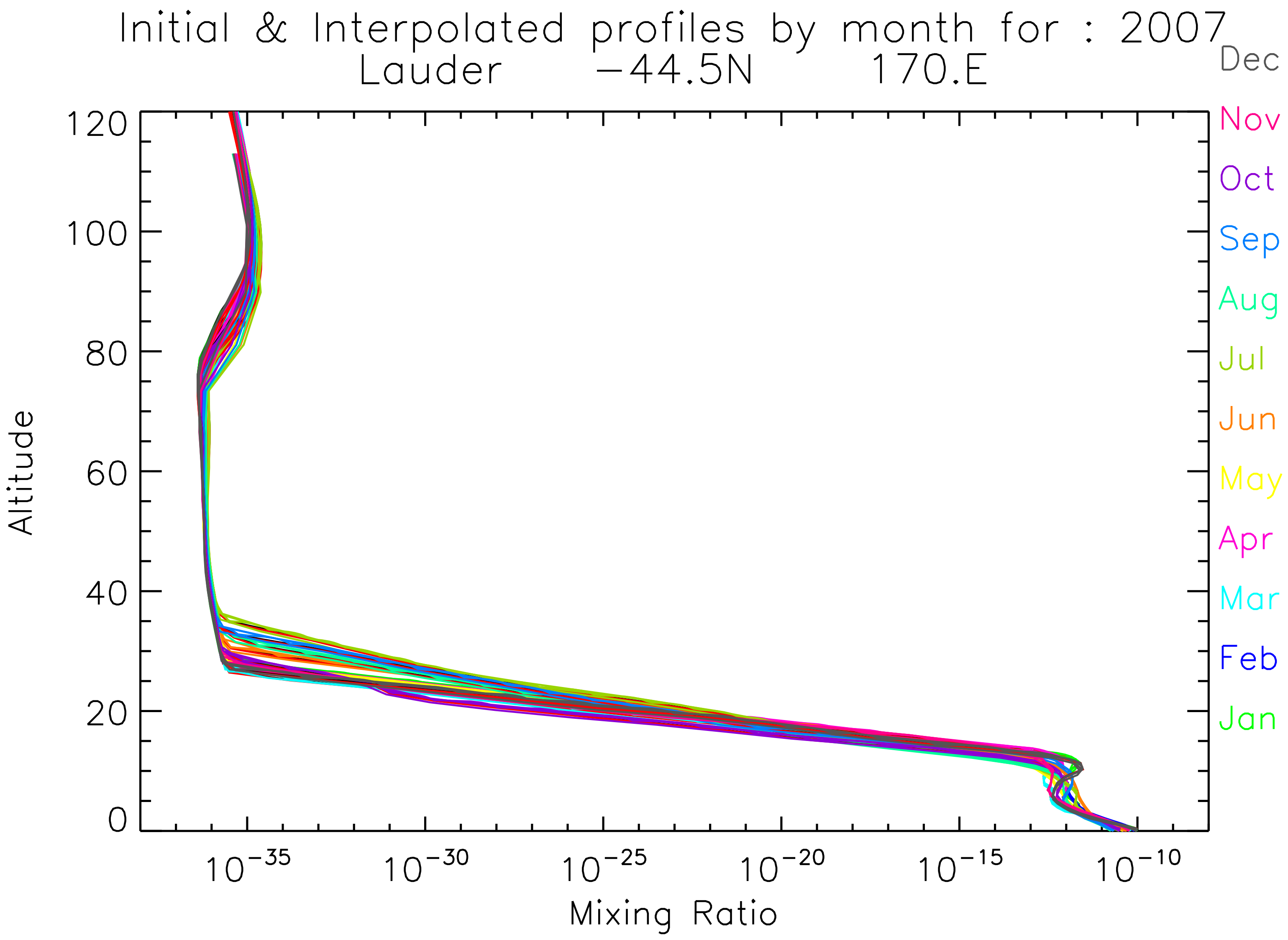


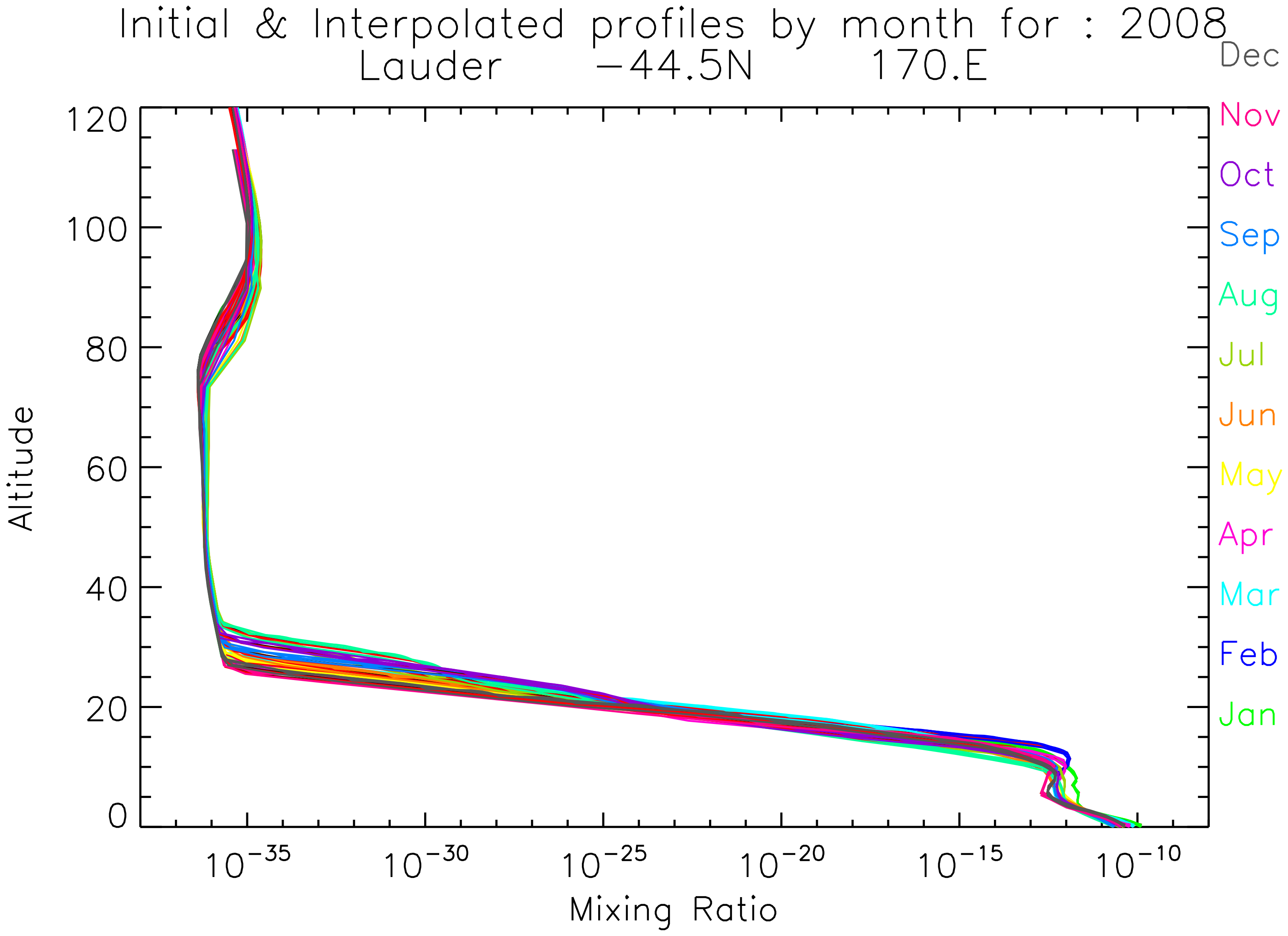
Initial & Interpolated profiles by month for : 2004
Lauder −44.5N 170.E

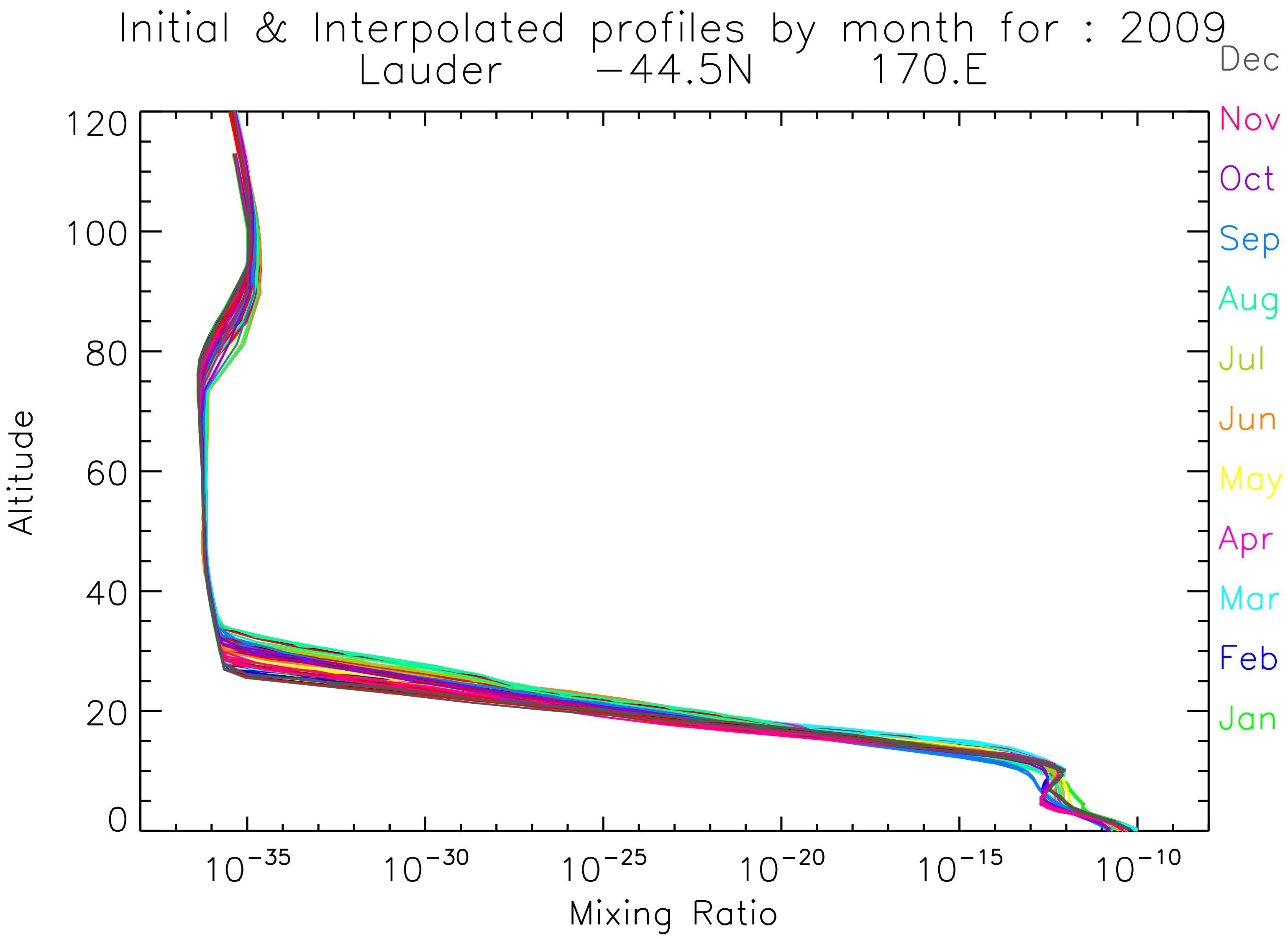


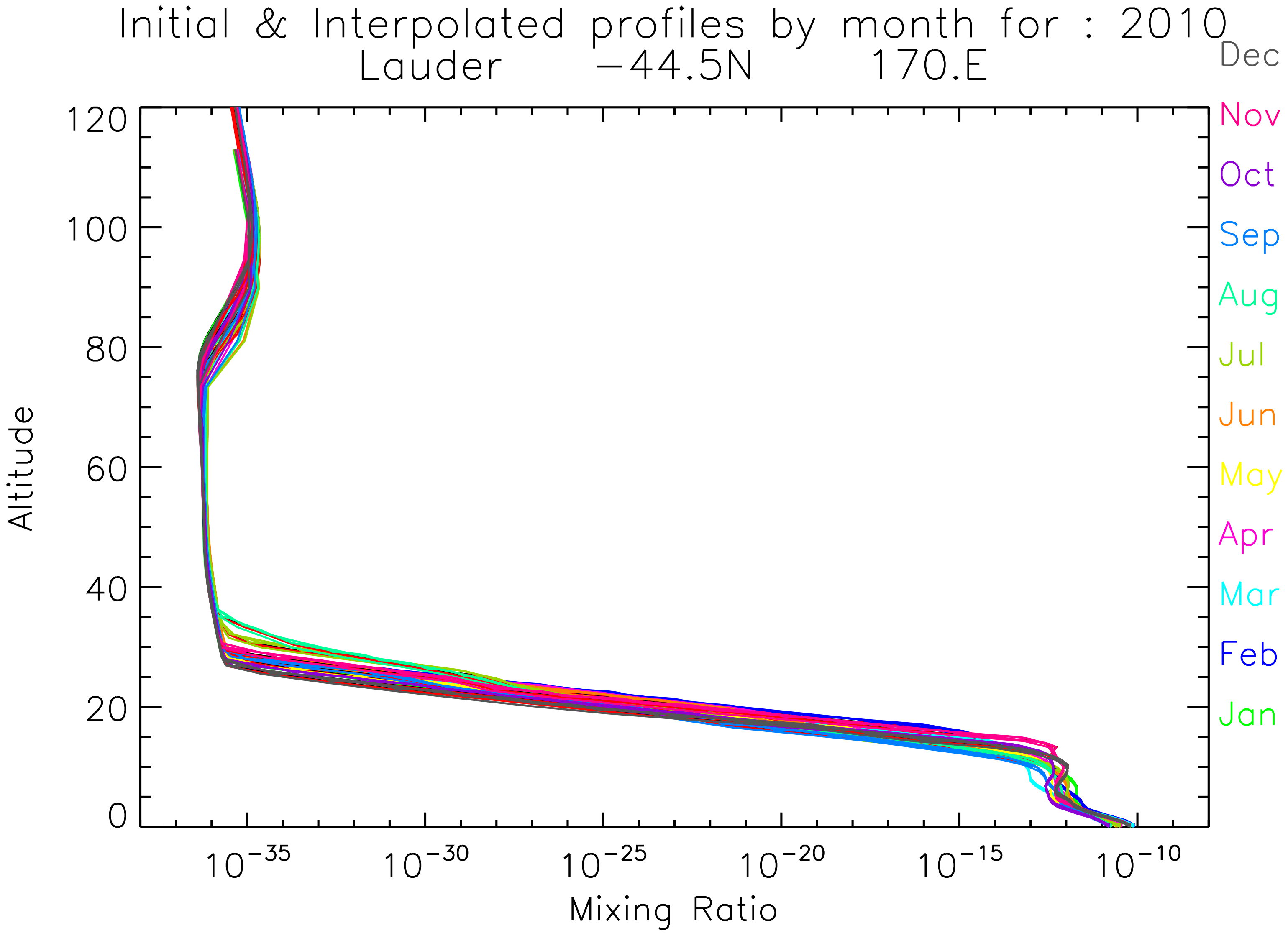
Initial & Interpolated profiles by month for : 2005
Lauder −44.5N 170.E


Initial & Interpolated profiles by month for : 2006
Lauder −44.5N 170.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

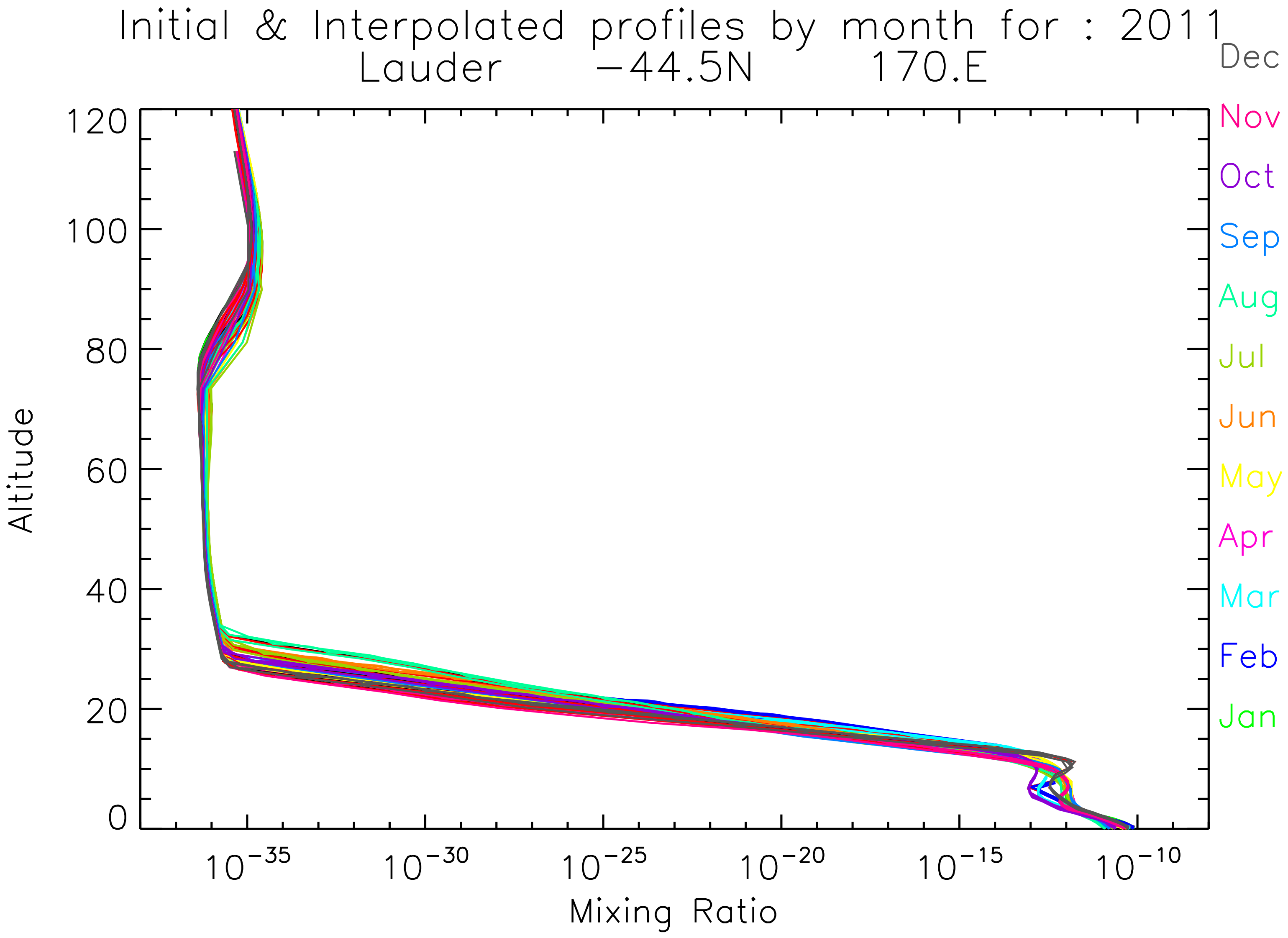

Initial & Interpolated profiles by month for : 2007
Lauder −44.5N 170.E
Altitude
0
20
40
60
80
100
120
Mixing Ratio
10^{-35}
10^{-30}
10^{-25}
10^{-20}
10^{-15}
10^{-10}
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan


Initial & Interpolated profiles by month for : 2008
Lauder −44.5N 170.E

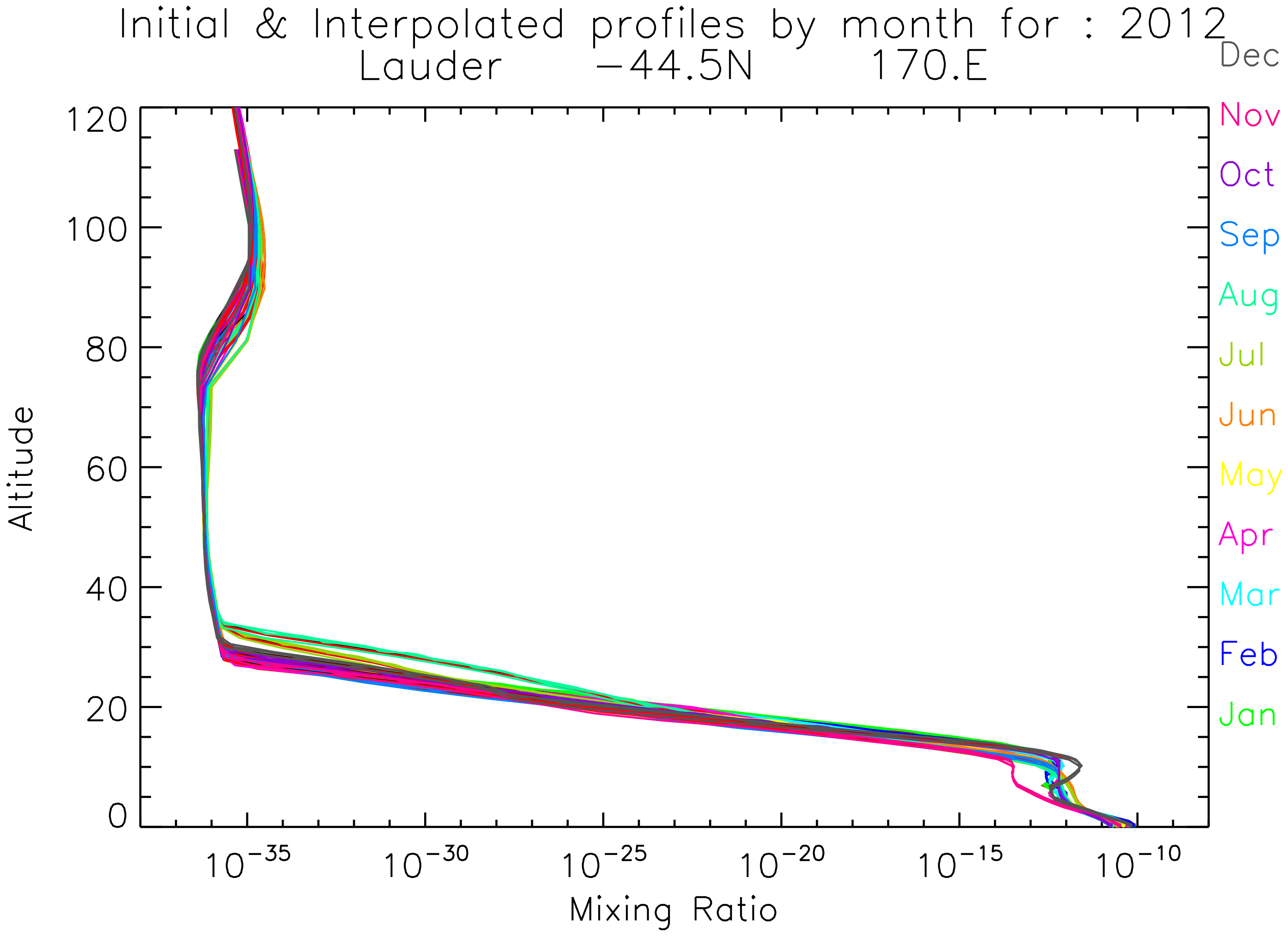

Initial & Interpolated profiles by month for : 2009
Lauder −44.5N 170.E
Altitude
0
20
40
60
80
100
120
10^{-35}
10^{-30}
10^{-25}
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan



Initial & Interpolated profiles by month for : 2010
Lauder −44.5N 170.E

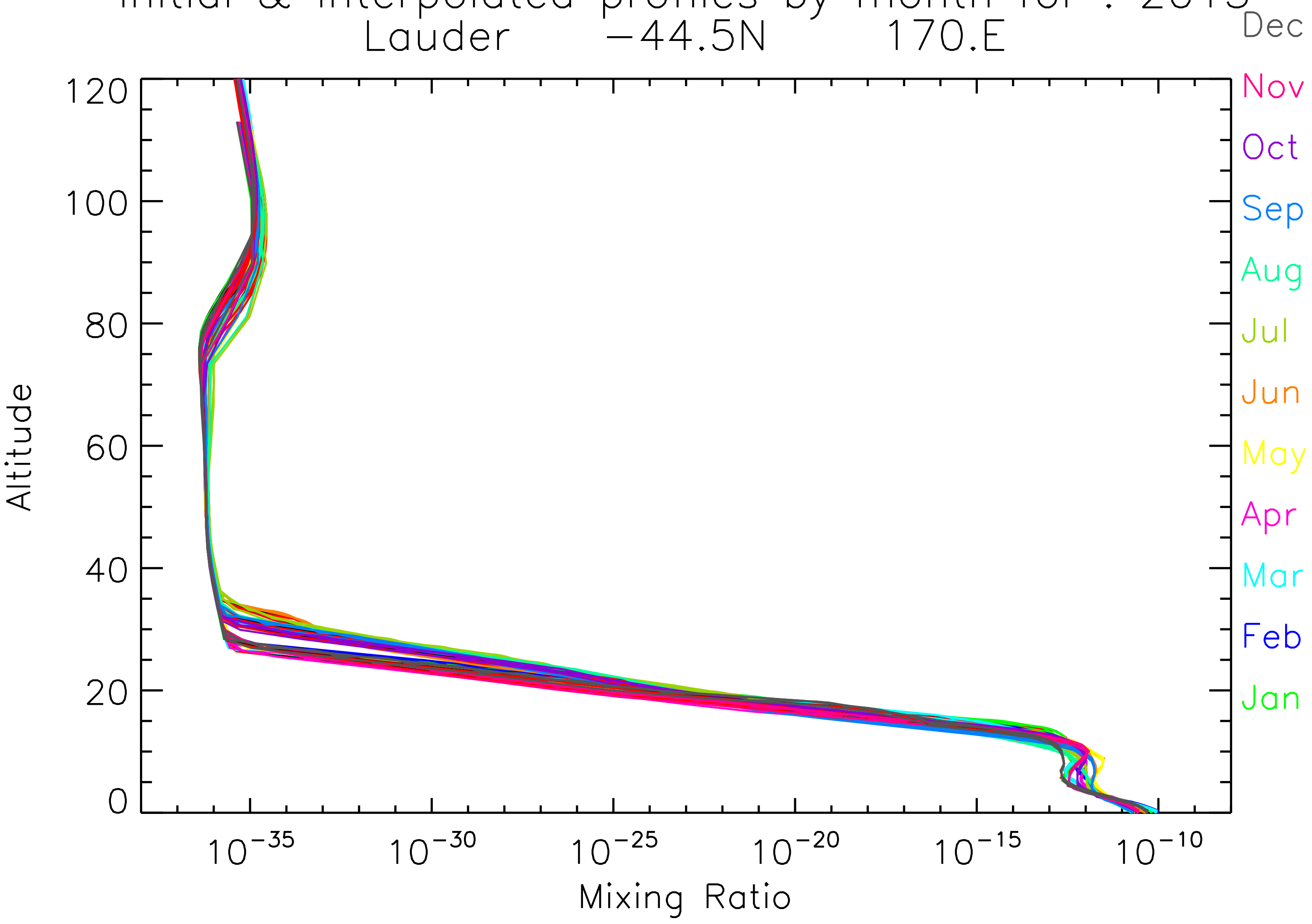


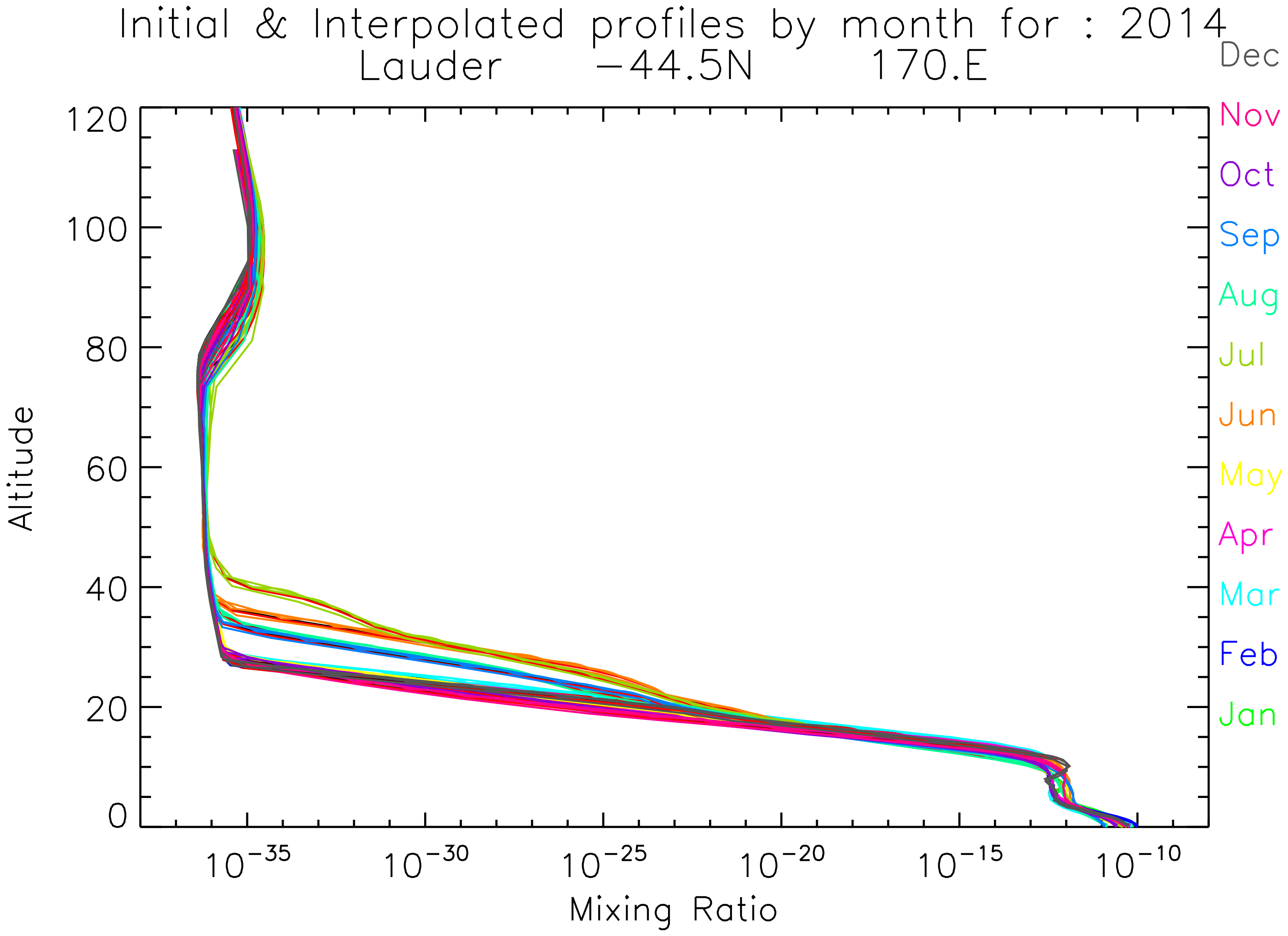
Initial & Interpolated profiles by month for : 2011
Lauder −44.5N 170.E

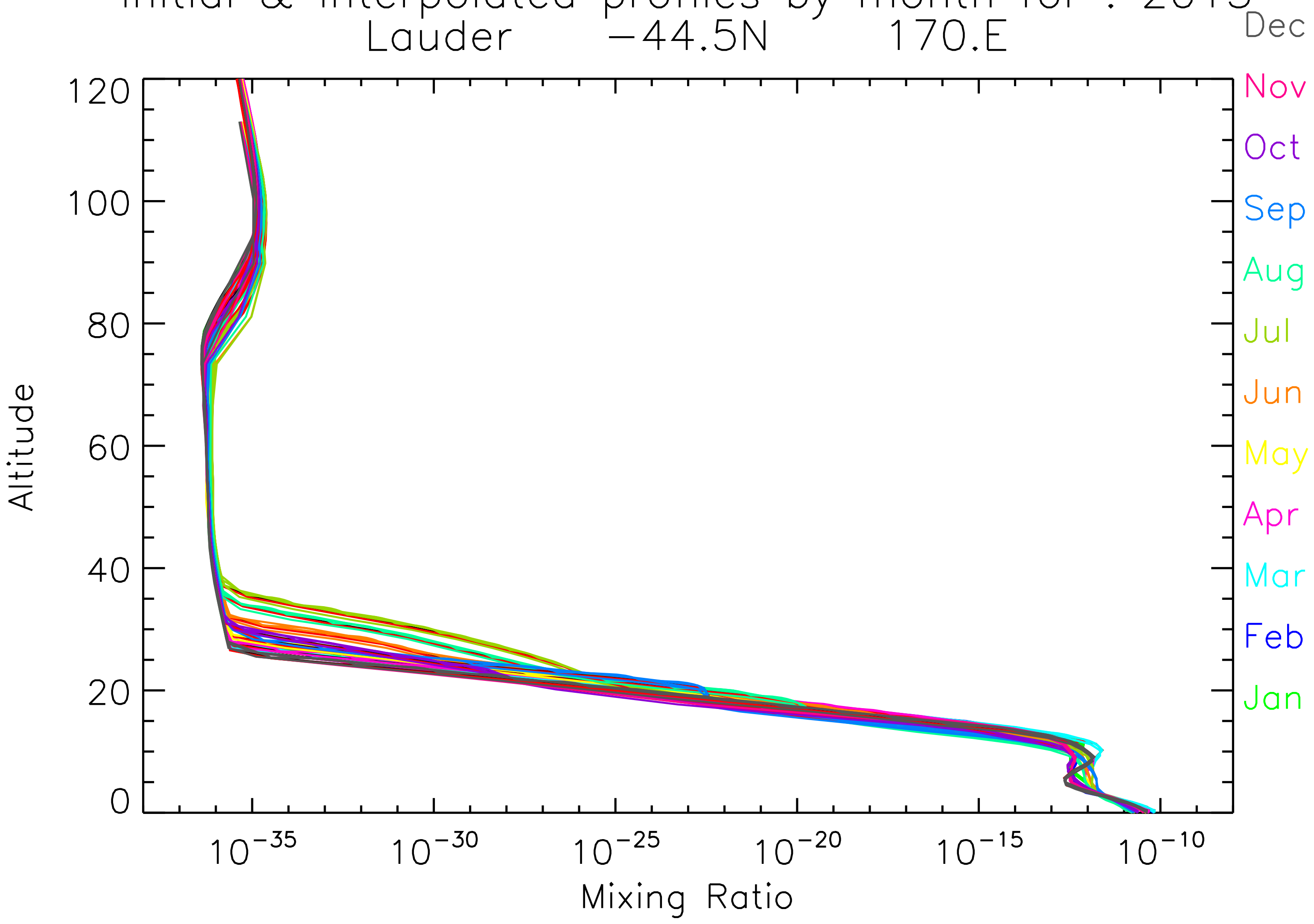


Initial & Interpolated profiles by month for : 2012
Lauder −44.5N 170.E

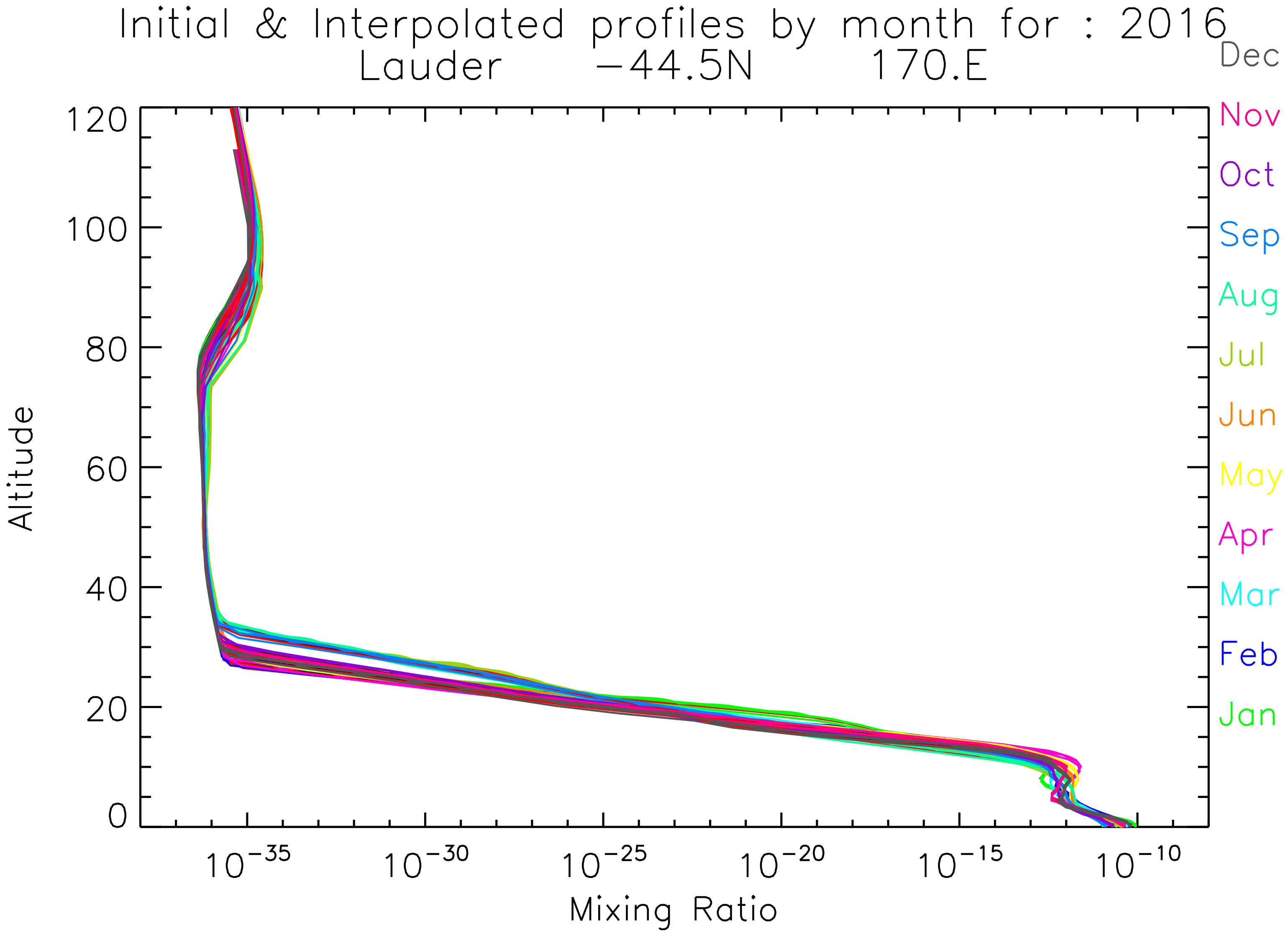
Initial & Interpolated profiles by month for : 2013
Lauder −44.5N 170.E

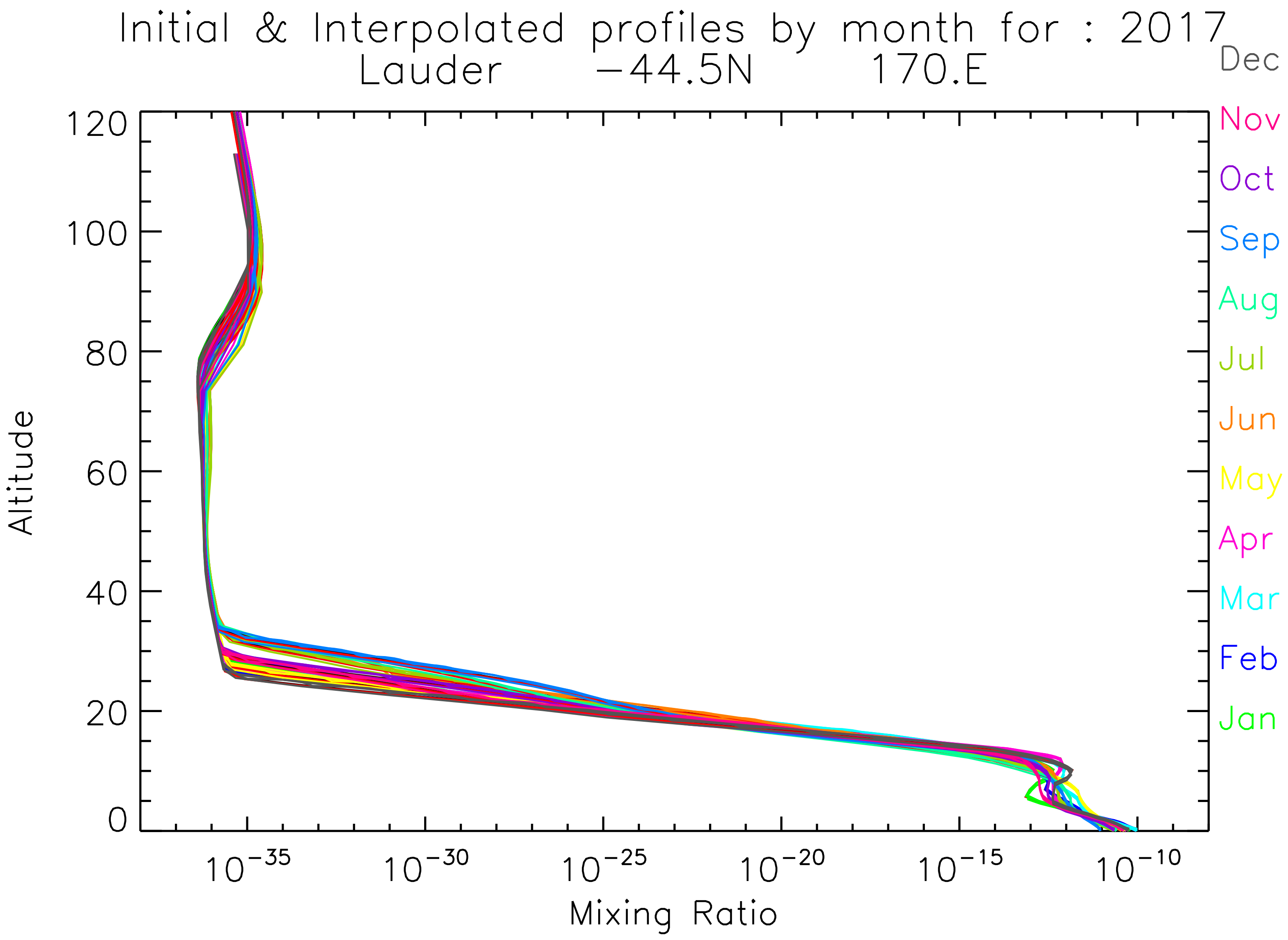



Initial & Interpolated profiles by month for : 2014
Lauder −44.5N 170.E
Altitude
0
20
40
60
80
100
120
10^{-35}
10^{-30}
10^{-25}
10^{-20}
10^{-15}
10^{-10}
Mixing Ratio
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan



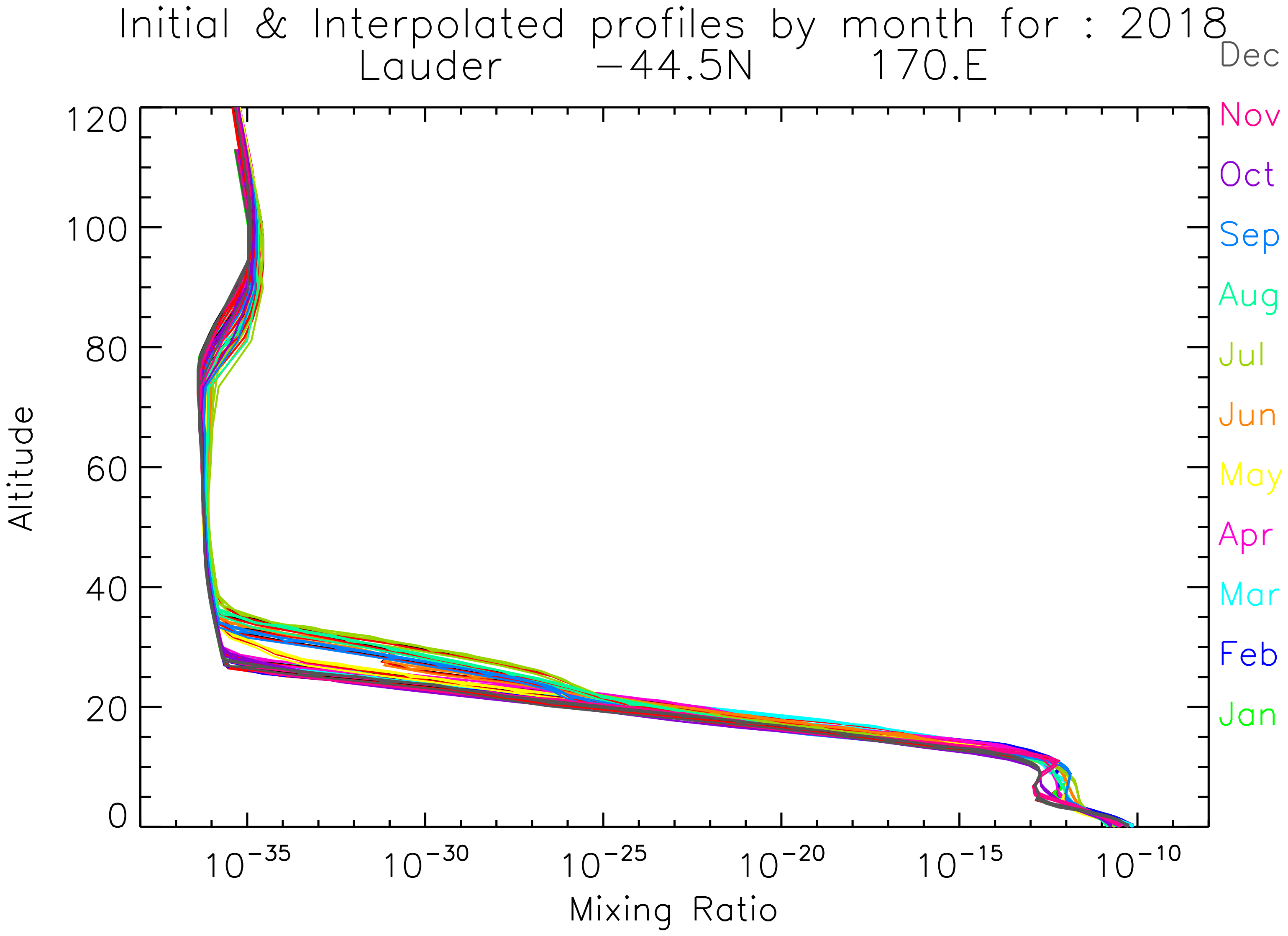
Initial & Interpolated profiles by month for : 2015
Lauder −44.5N 170.E

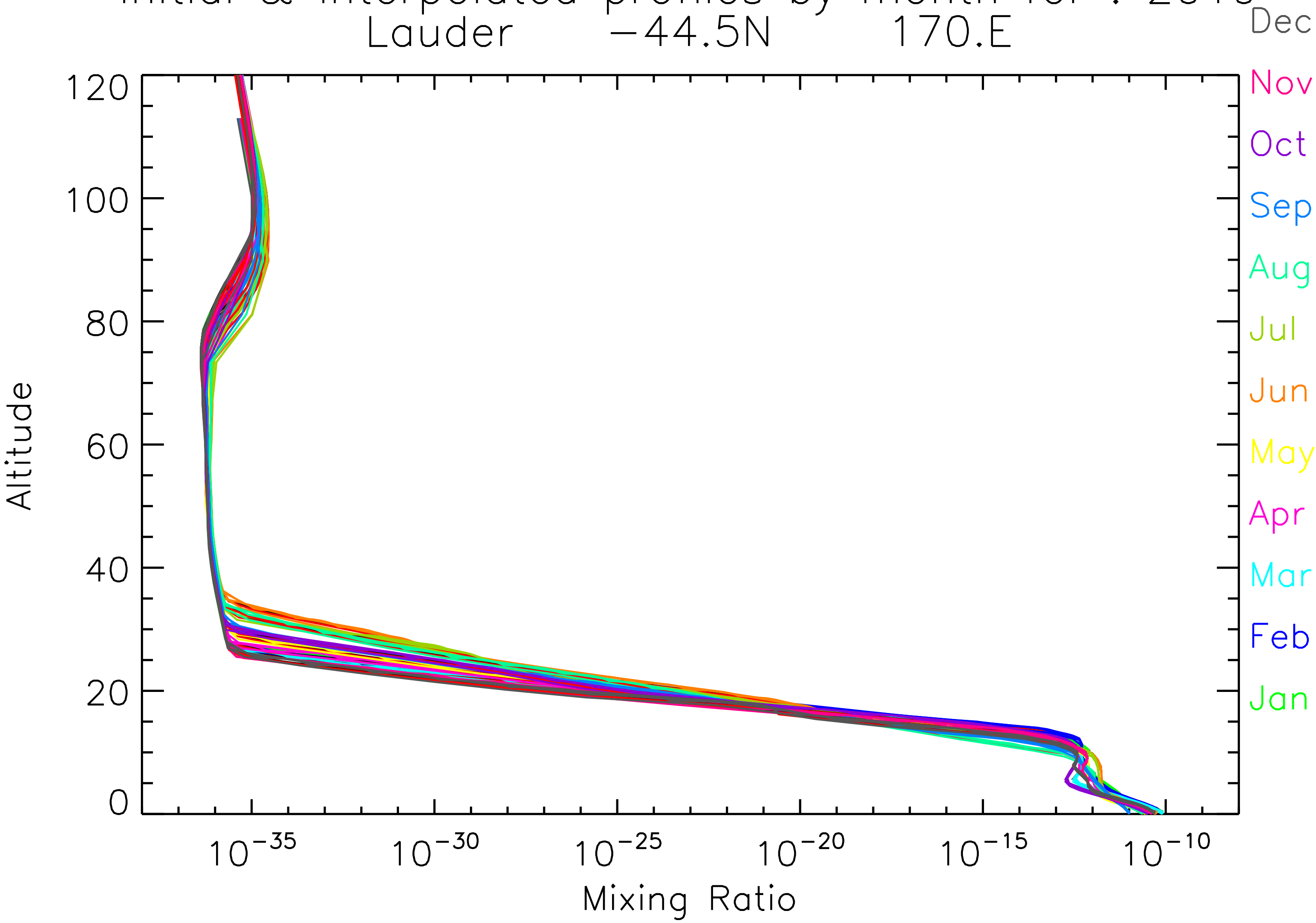

Initial & Interpolated profiles by month for : 2016
Lauder −44.5N 170.E
Altitude
0
20
40
60
80
100
120
Mixing Ratio
10^{-35}
10^{-30}
10^{-25}
10^{-20}
10^{-15}
10^{-10}
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan



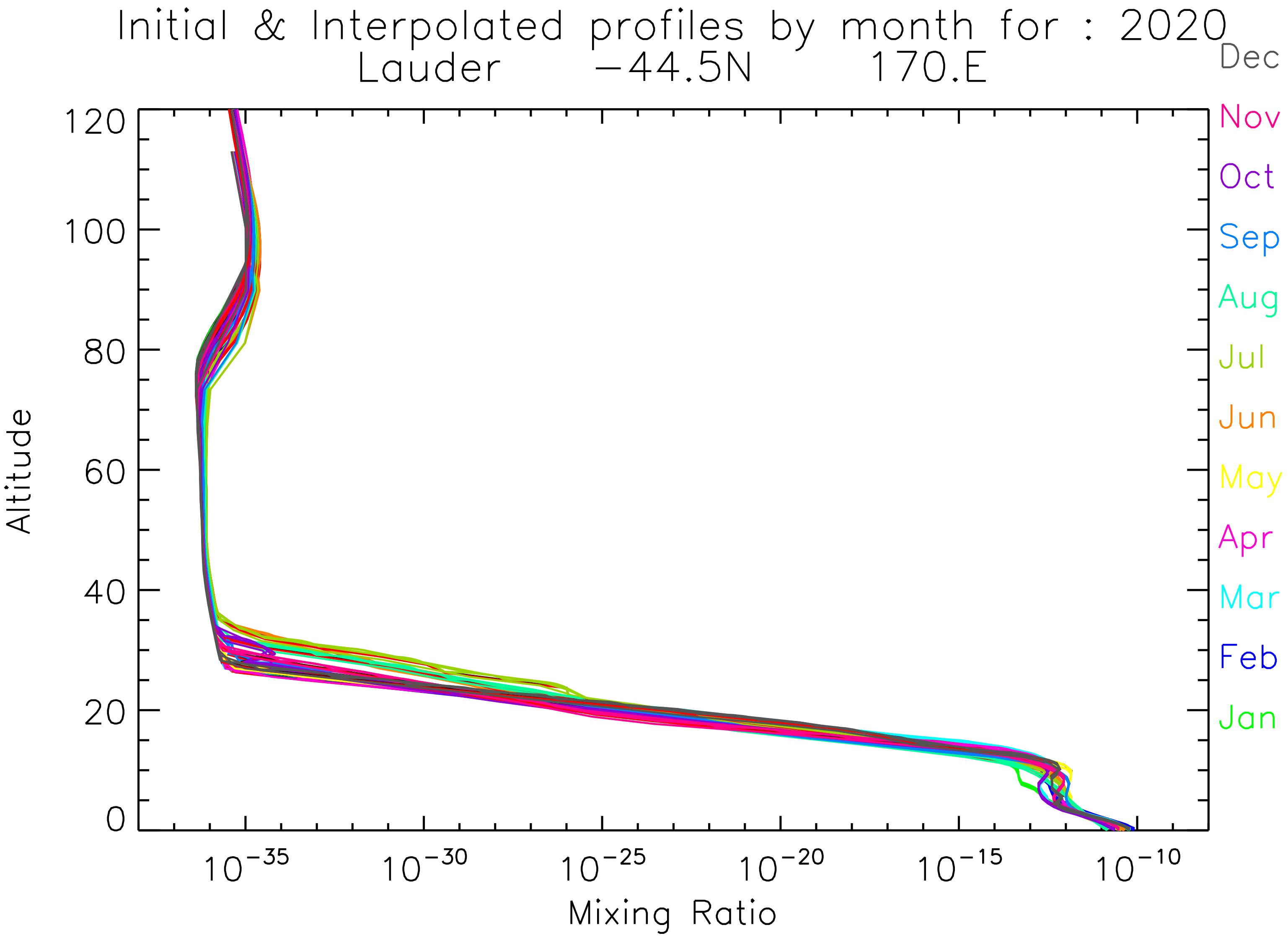
Initial & Interpolated profiles by month for : 2017

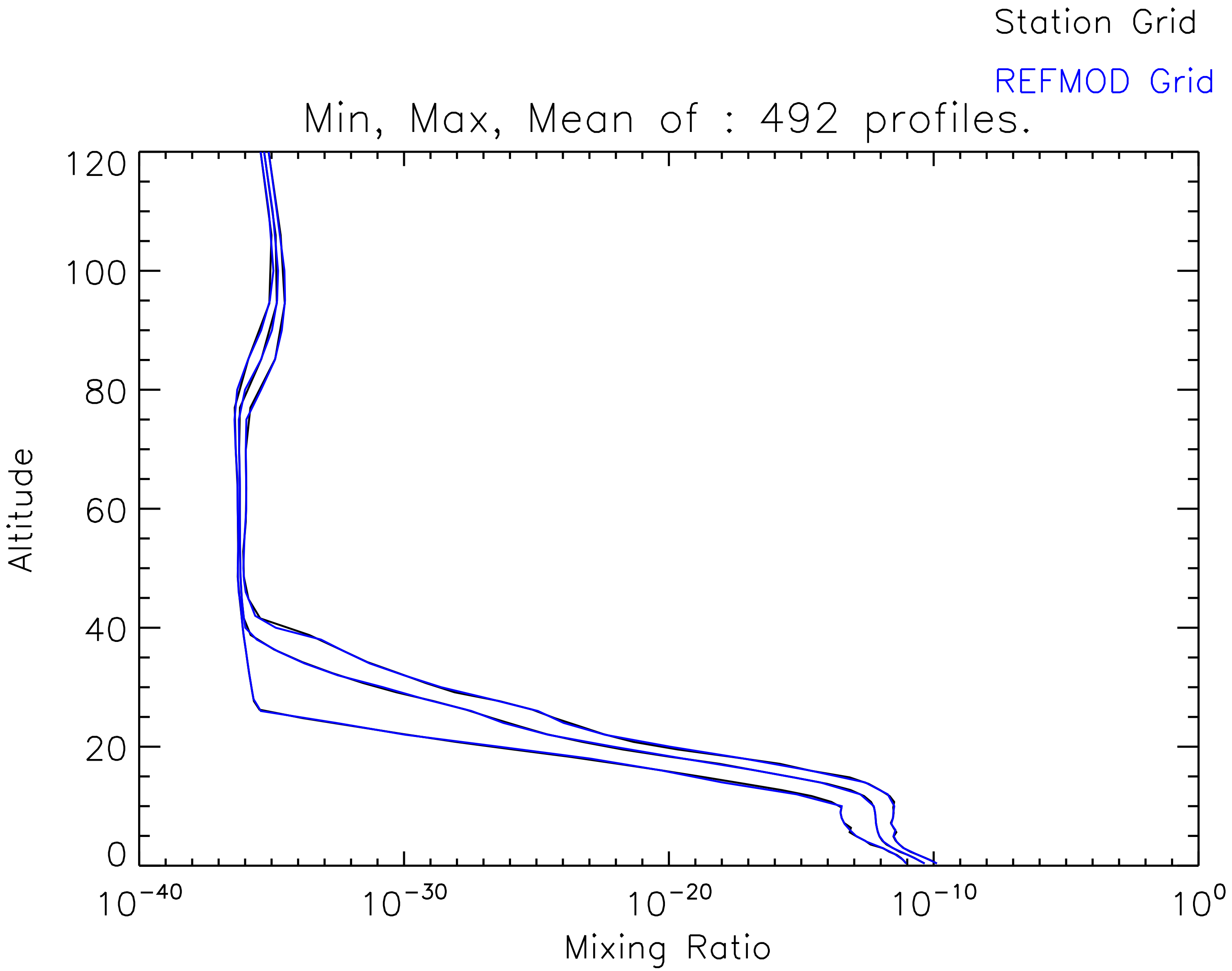
Lauder −44.5N 170.E

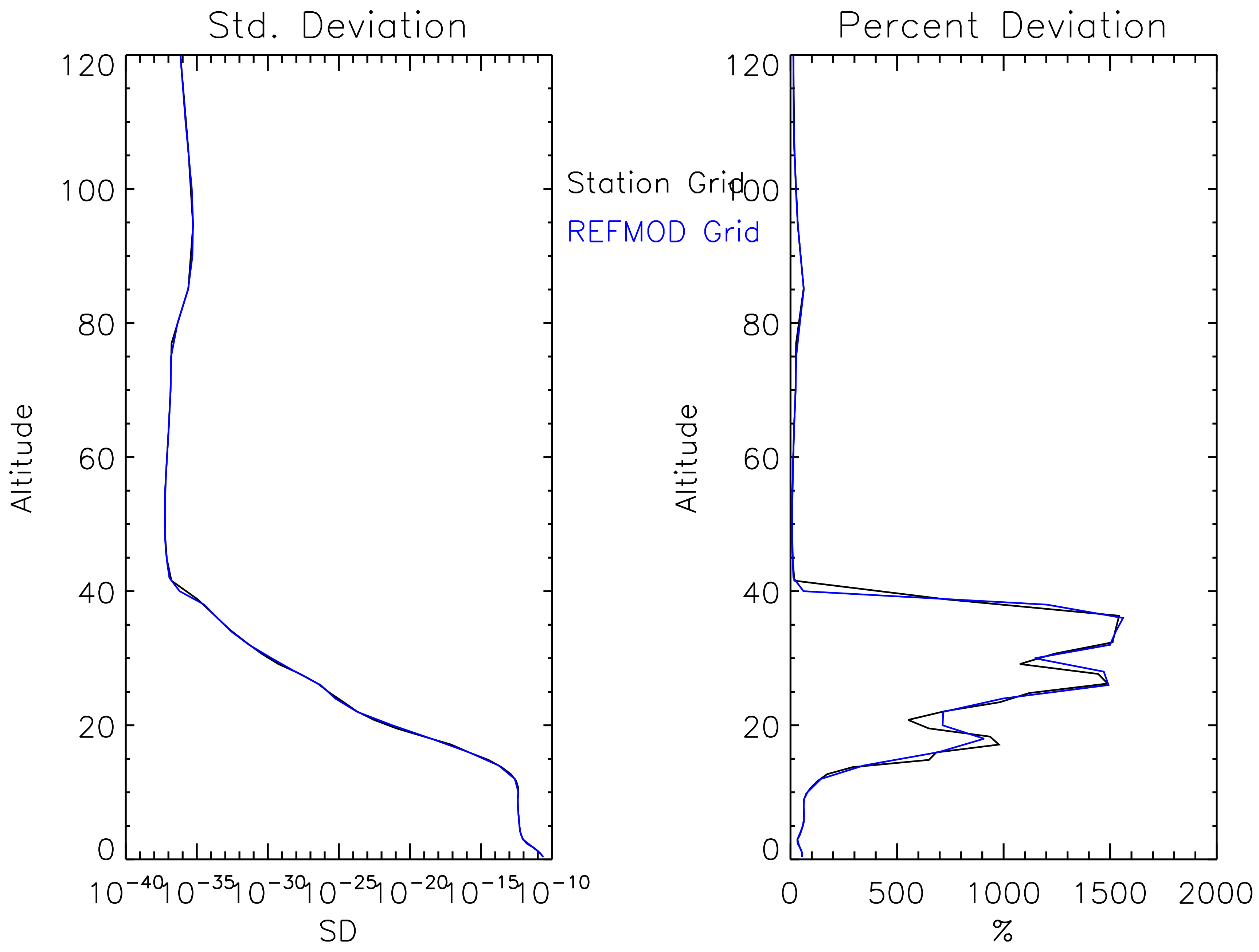

Initial & Interpolated profiles by month for : 2018
Lauder −44.5N 170.E

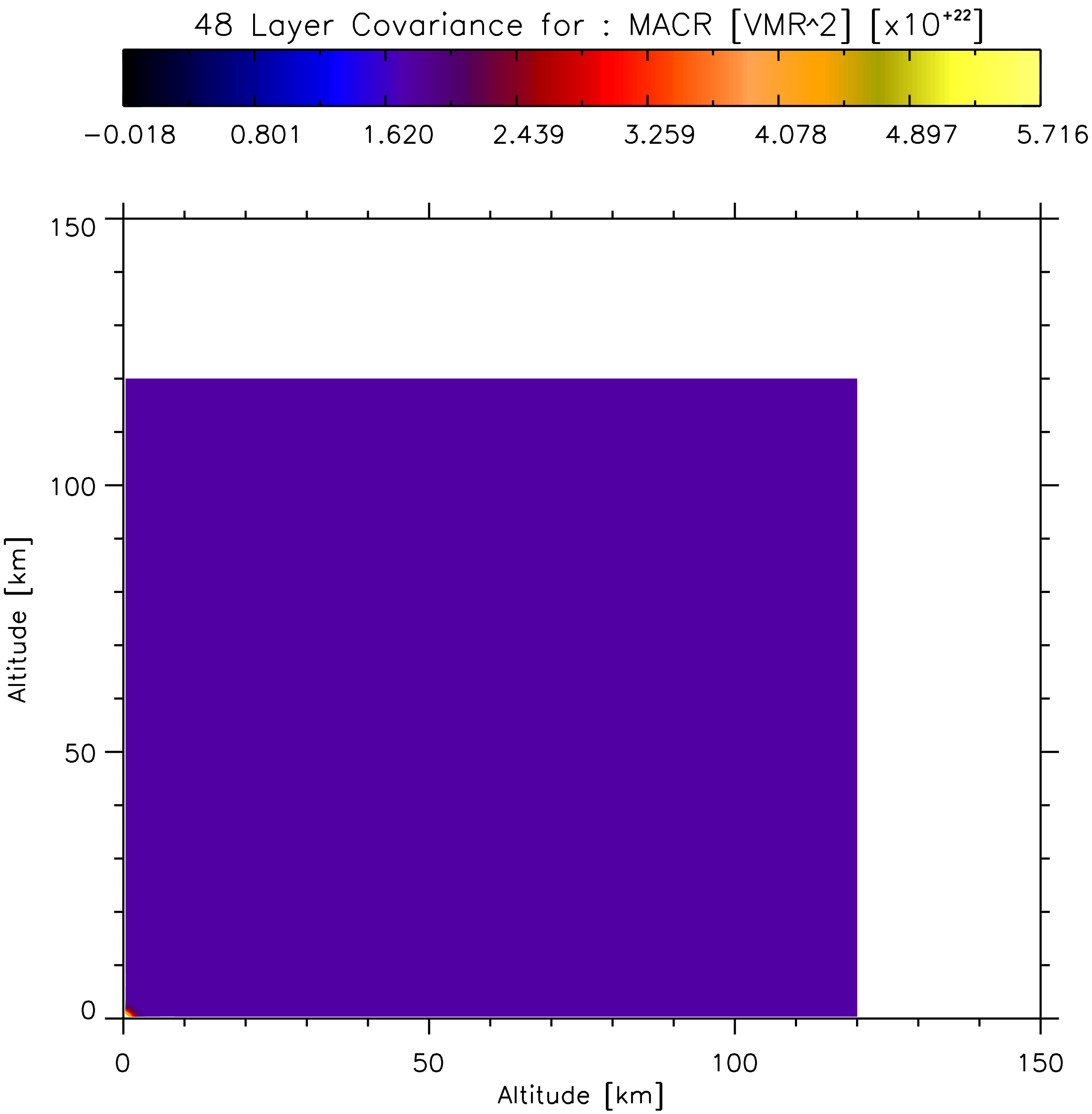


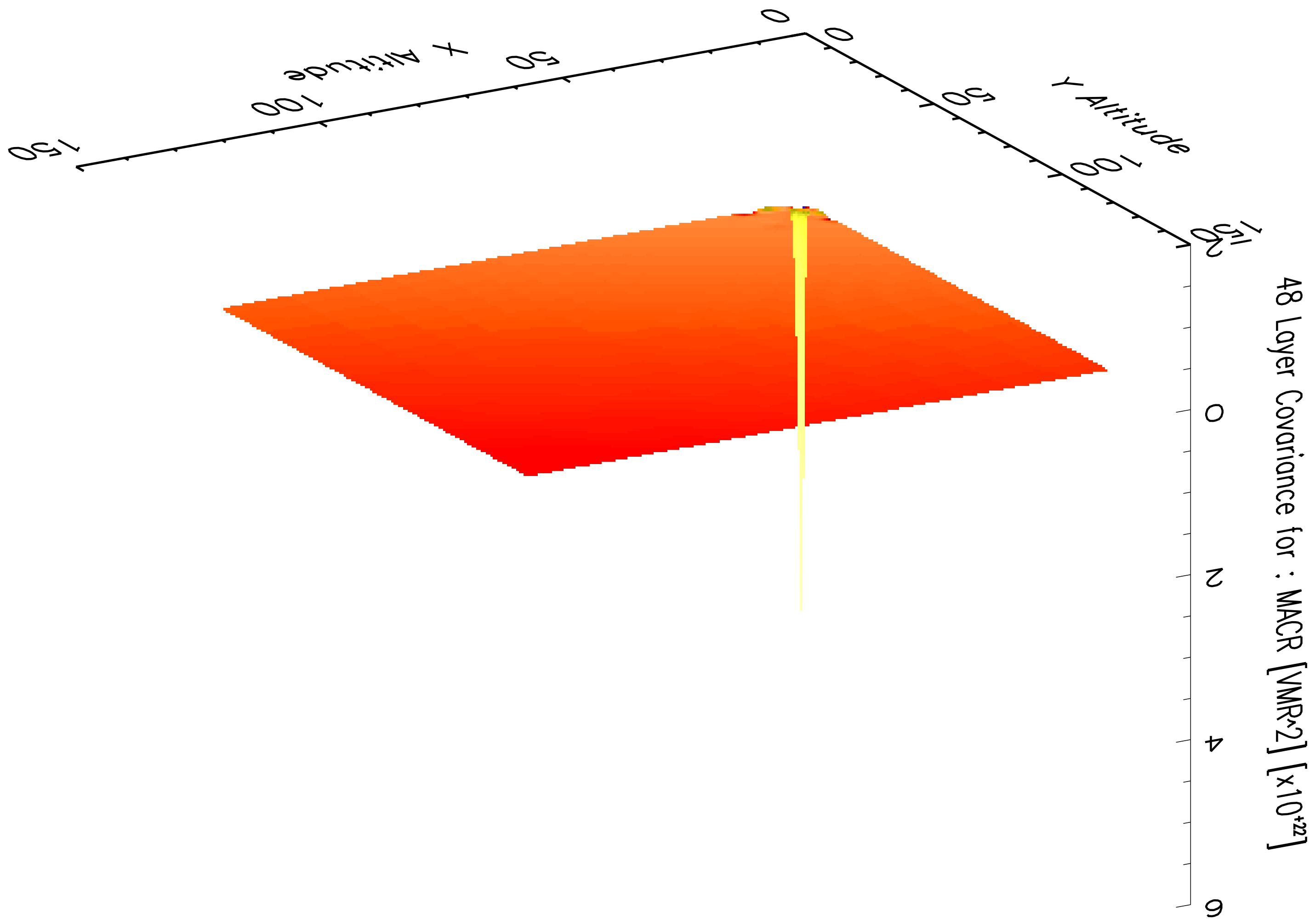
Initial & Interpolated profiles by month for : 2019
Lauder −44.5N 170.E

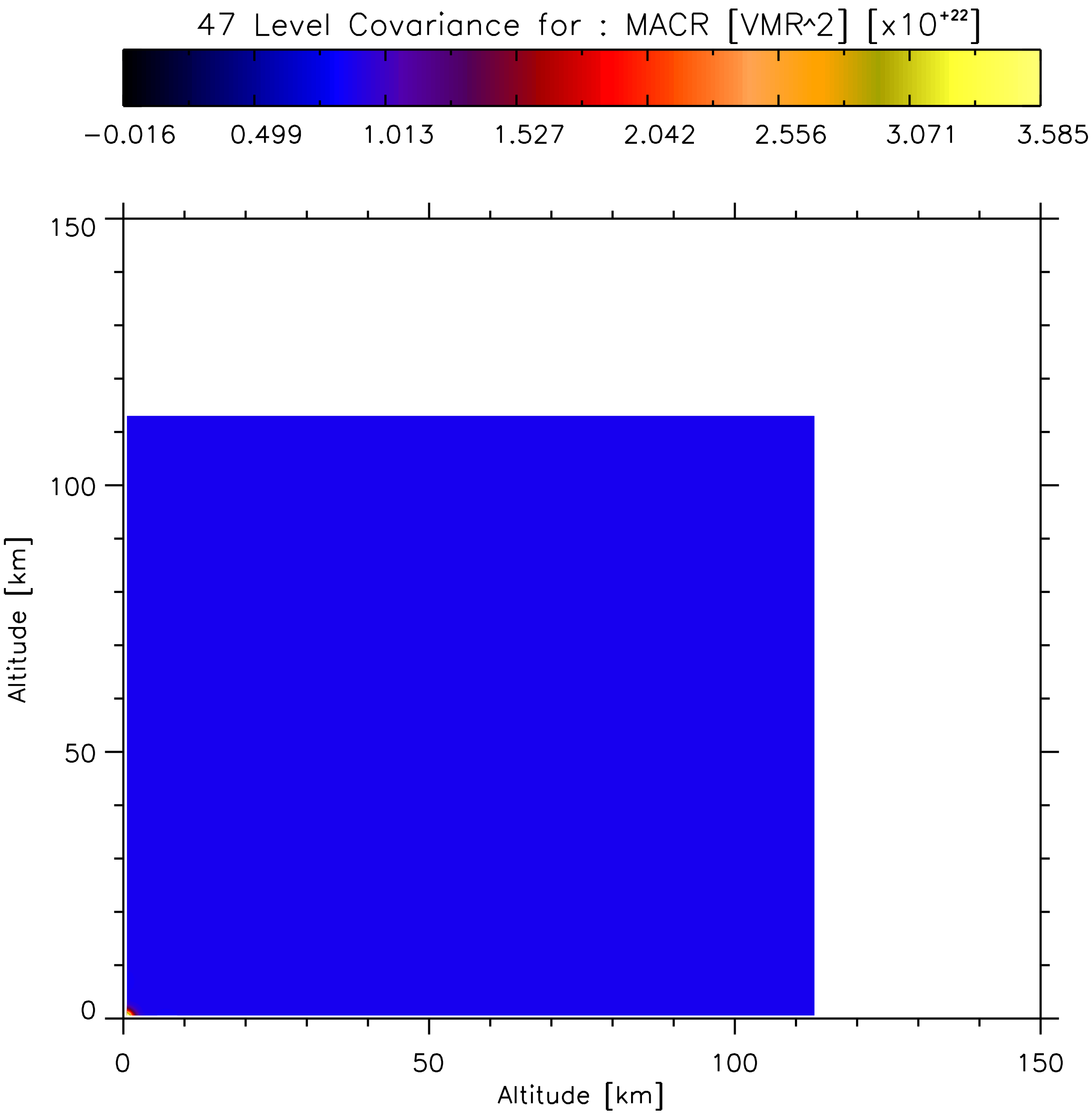

Initial & Interpolated profiles by month for : 2020
Lauder −44.5N 170.E
Altitude
0
20
40
60
80
100
120
Mixing Ratio
10^{-35}
10^{-30}
10^{-25}
10^{-20}
10^{-15}
10^{-10}
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan

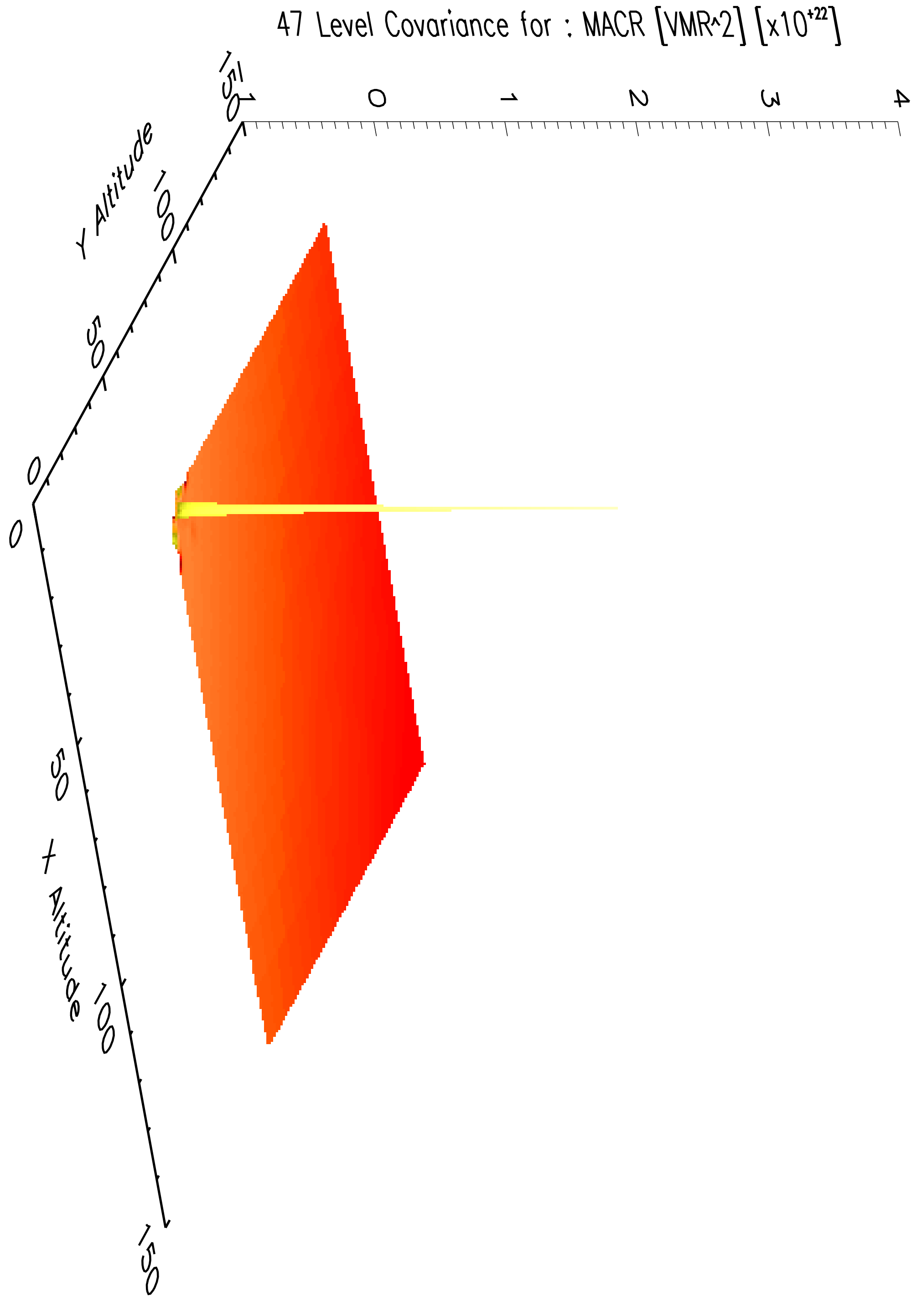

Station Grid
REFMOD Grid
Min, Max, Mean of : 492 profiles.
Altitude
120
100
80
60
40
20
0
10^{-40}
10^{-30}
10^{-20}
10^{-10}
10^{0}
Mixing Ratio


Std. Deviation
Percent Deviation
Station Grid
REFMOD Grid
Altitude
120
100
80
60
40
20
0
10^{-40}
10^{-35}
10^{-30}
10^{-25}
10^{-20}
10^{-15}
10^{-10}
SD
0
500
1000
1500
2000
%


48 Layer Covariance for : MACR [VMR^2] [x10^{+22}]
−0.018
0.801
1.620
2.439
3.259
4.078
4.897
5.716
150
100
50
0
Altitude [km]
0
50
100
150
Altitude [km]


X Altitude
0
50
100
150
Y Altitude
0
50
100
150
48 Layer Covariance for : MACR [VMR^2] [x10^+22]
-2
0
2
4
6


47 Level Covariance for : MACR [VMR^2] [x10⁺²²]
−0.016
0.499
1.013
1.527
2.042
2.556
3.071
3.585
150
100
50
0
Altitude [km]
0
50
100
150
Altitude [km]


47 Level Covariance for : MACR [VMR^2] [x10^{+22}]
-1
0
1
2
3
4
Y Altitude
0
50
100
150
X Altitude
0
50
100
150