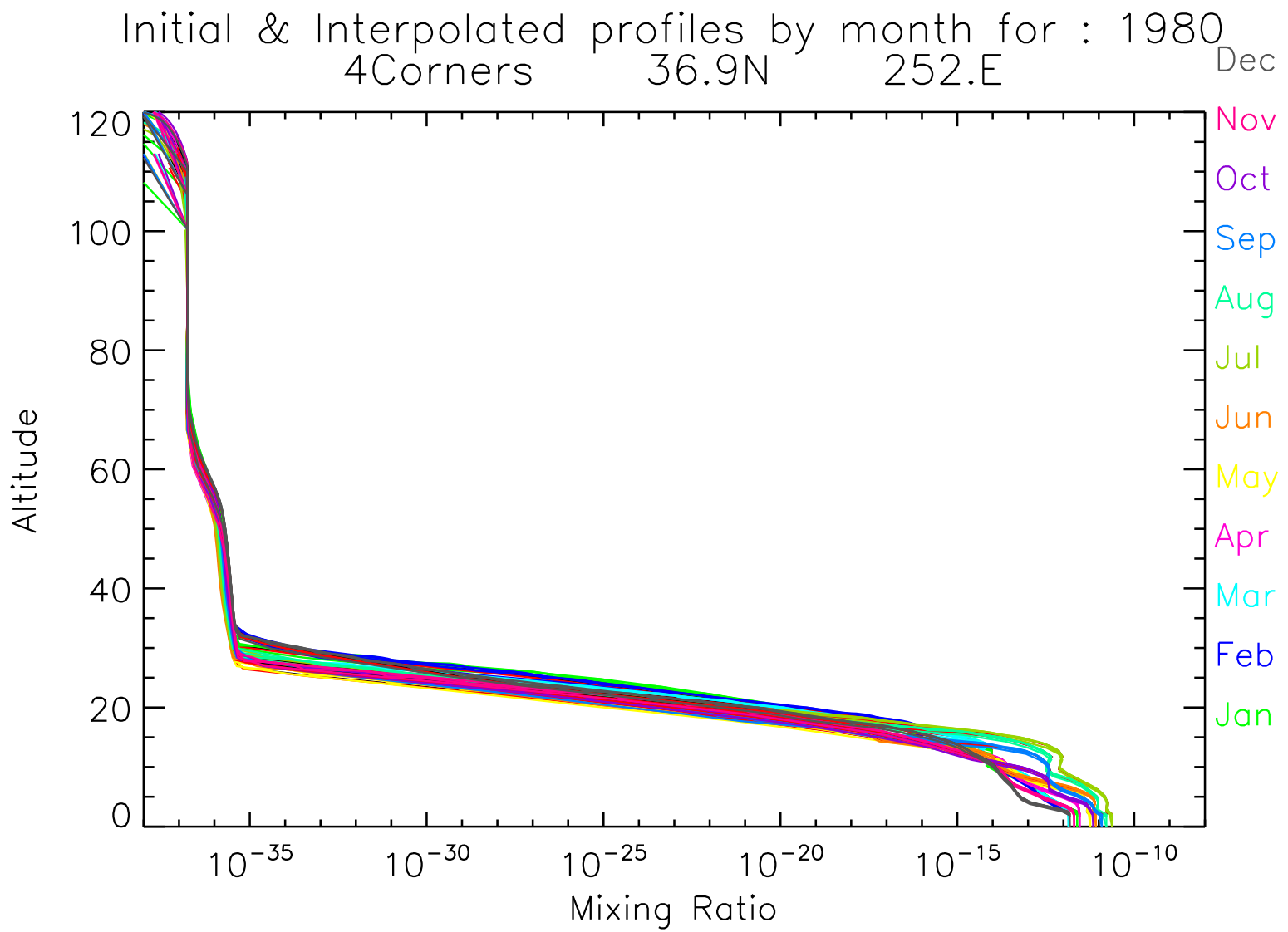
Initial & Interpolated profiles by month for : 1980
4Corners 36.9N 252.E
Dec
Nov
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Altitude
120
100
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$10^{-20}$
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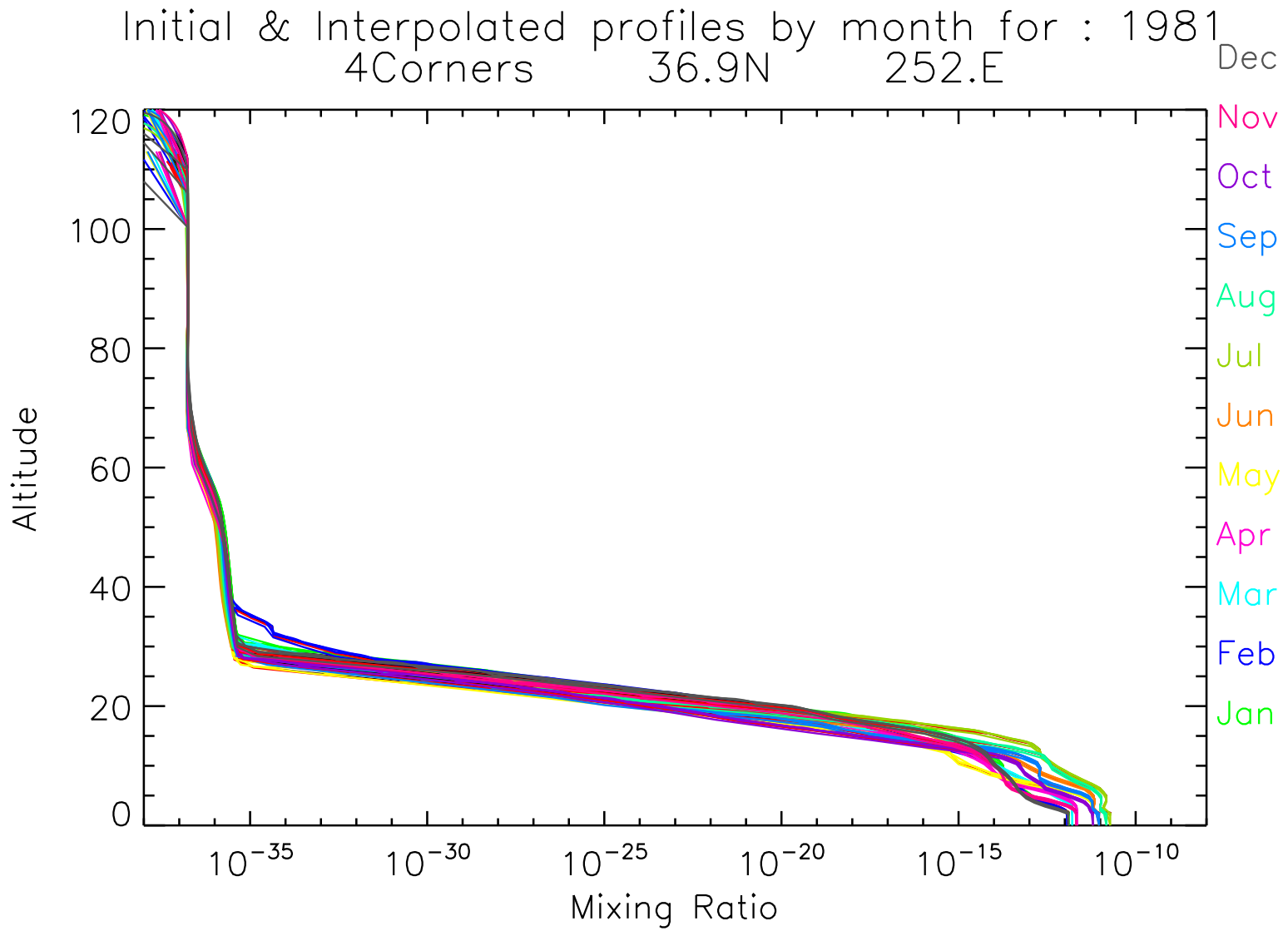
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1981
4Corners 36.9N 252.E
Dec
Nov
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Aug
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Apr
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Feb
Jan
Altitude
120
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0
$10^{-35}$
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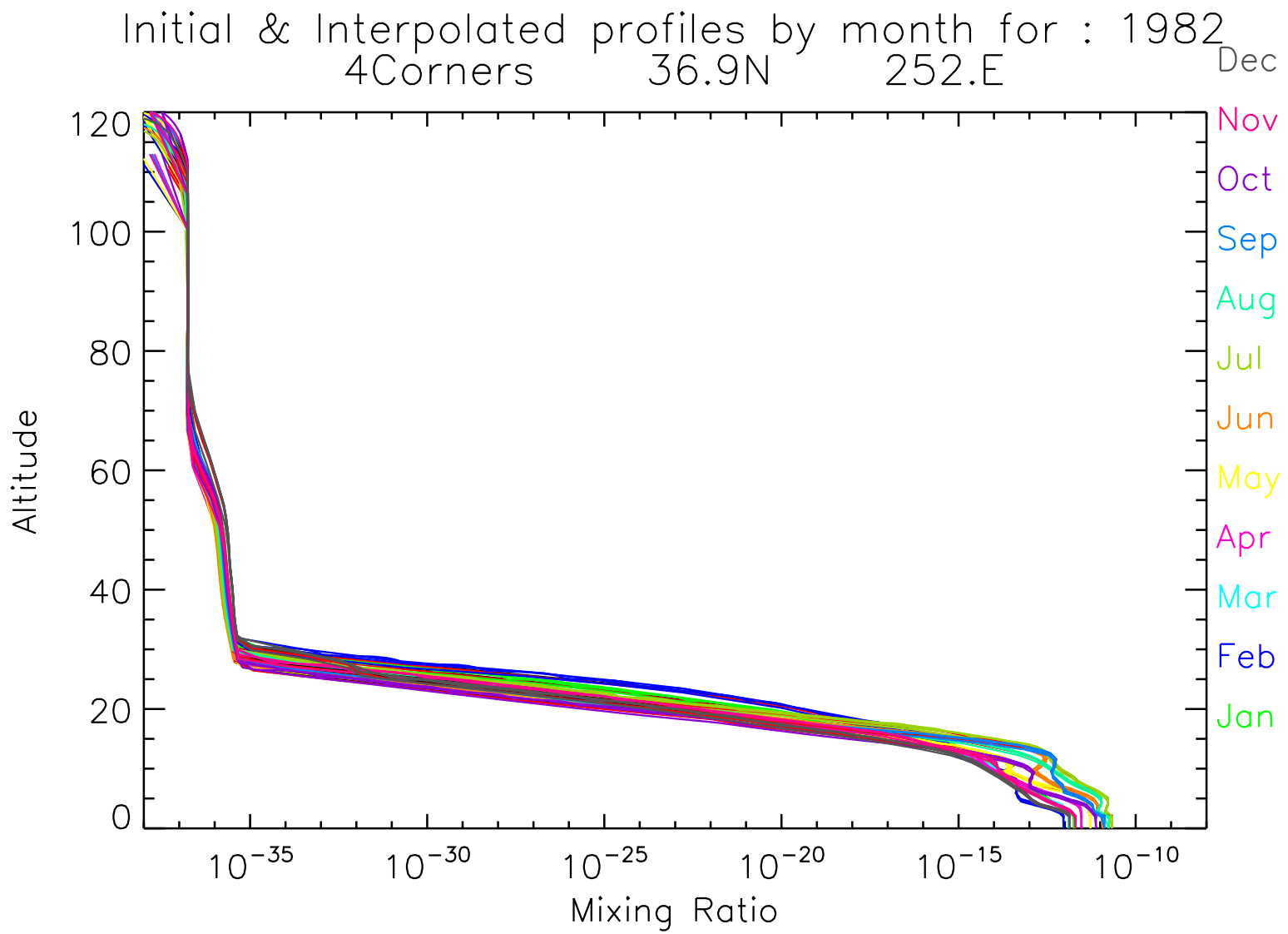
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1982
4Corners 36.9N 252.E
Dec
Nov
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Aug
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Apr
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Feb
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Altitude
120
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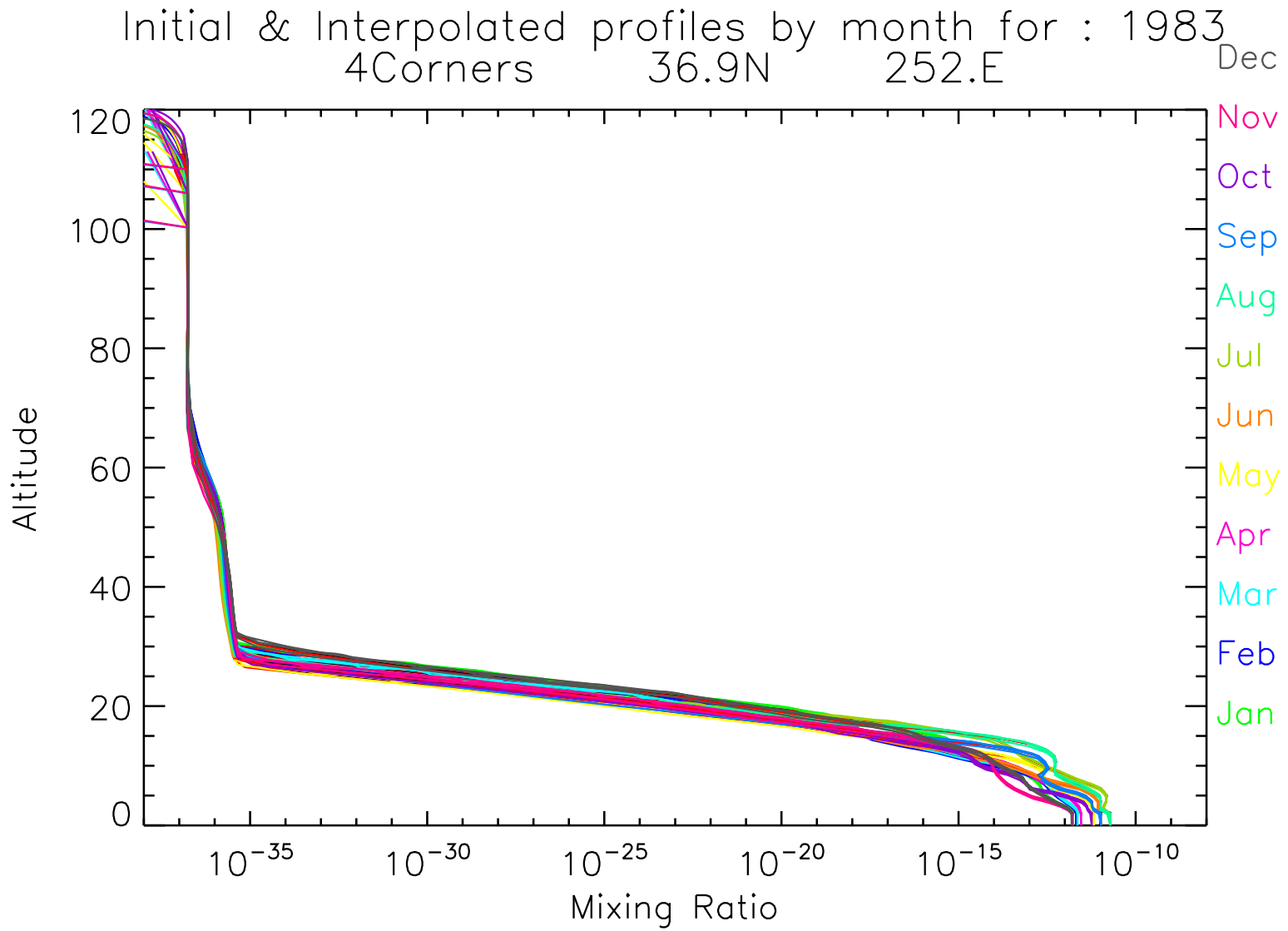
0
$10^{-35}$
$10^{-30}$
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1983
4Corners 36.9N 252.E
Dec
Nov
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Altitude
120
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$10^{-35}$
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$10^{-25}$
$10^{-20}$
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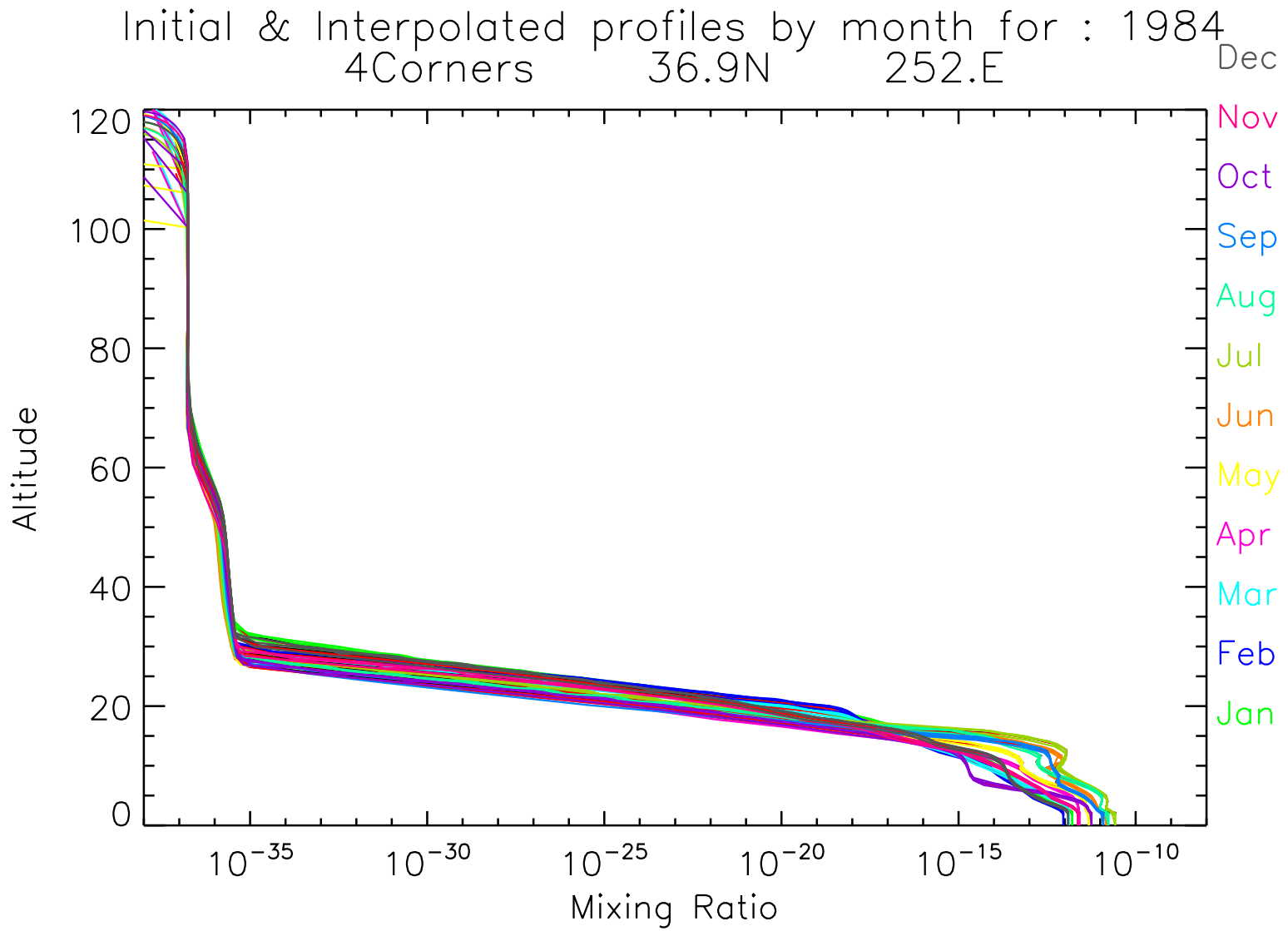
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1984
4Corners 36.9N 252.E
Dec
Nov
Oct
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Altitude
120
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$10^{-35}$
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$10^{-25}$
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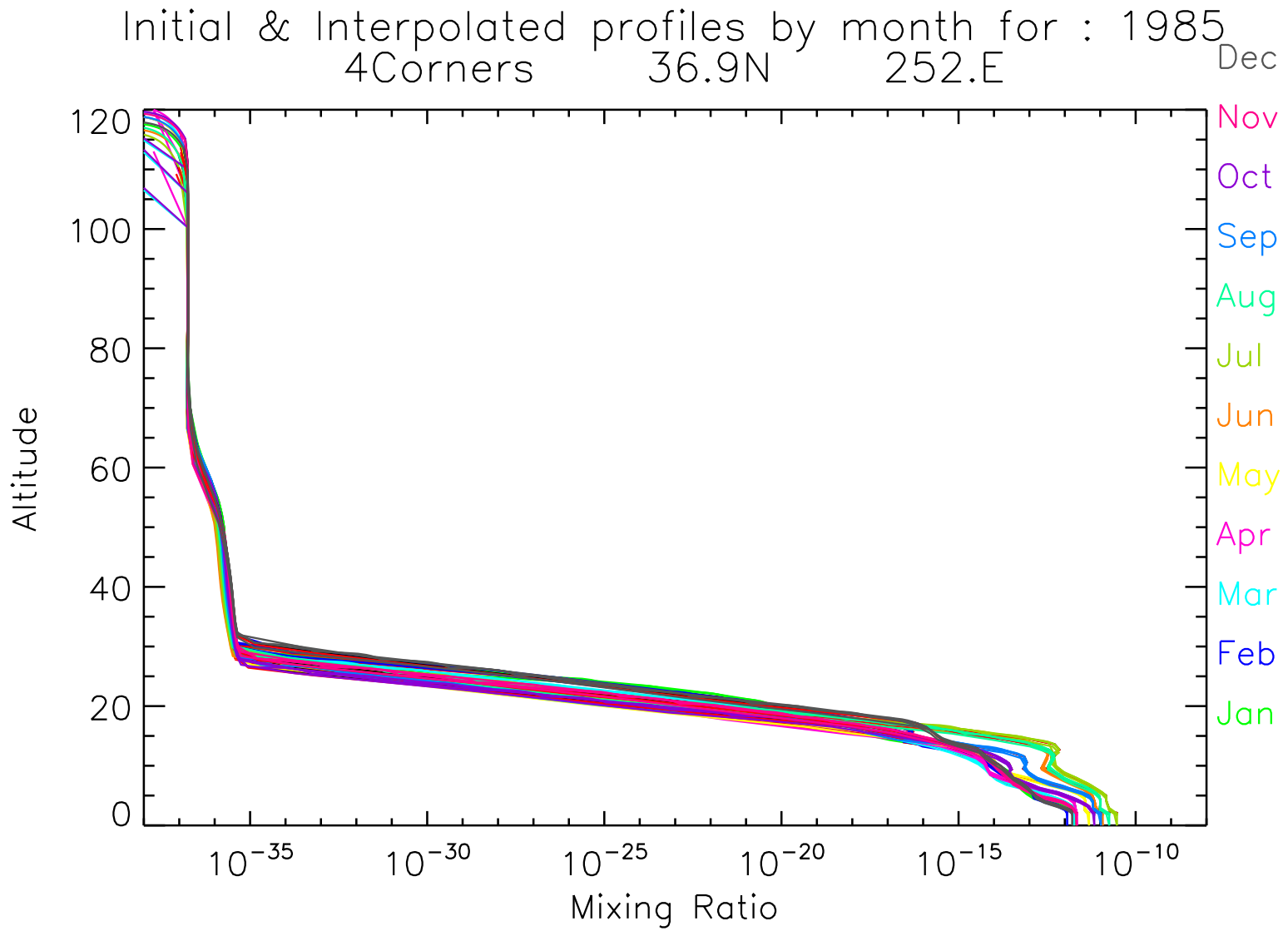
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1985
4Corners 36.9N 252.E
Dec
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Feb
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Altitude
120
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$10^{-35}$
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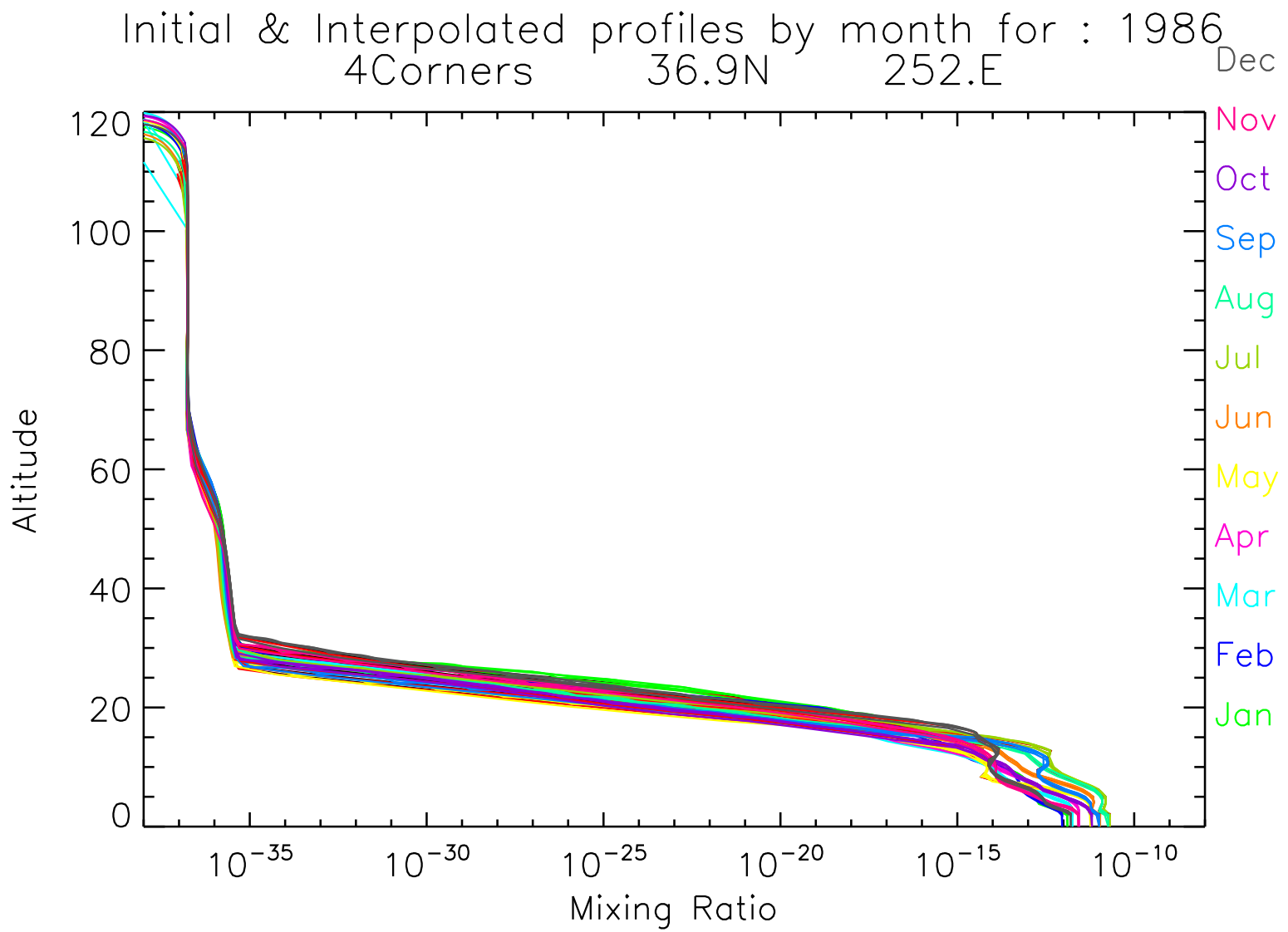
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1986
4Corners 36.9N 252.E
Dec
Nov
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Altitude
120
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$10^{-35}$
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$10^{-25}$
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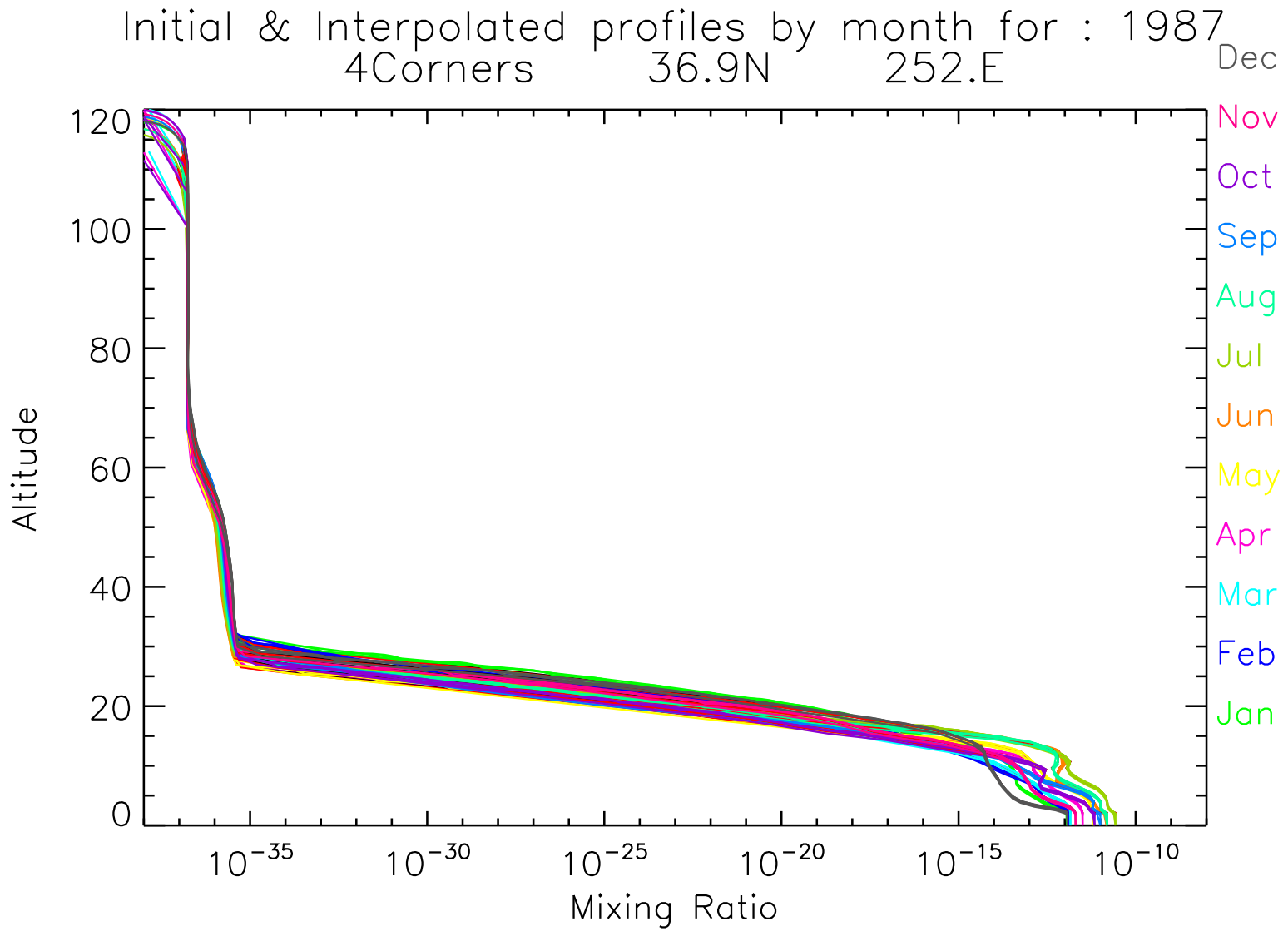
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1987
4Corners 36.9N 252.E
Dec
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Altitude
120
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$10^{-35}$
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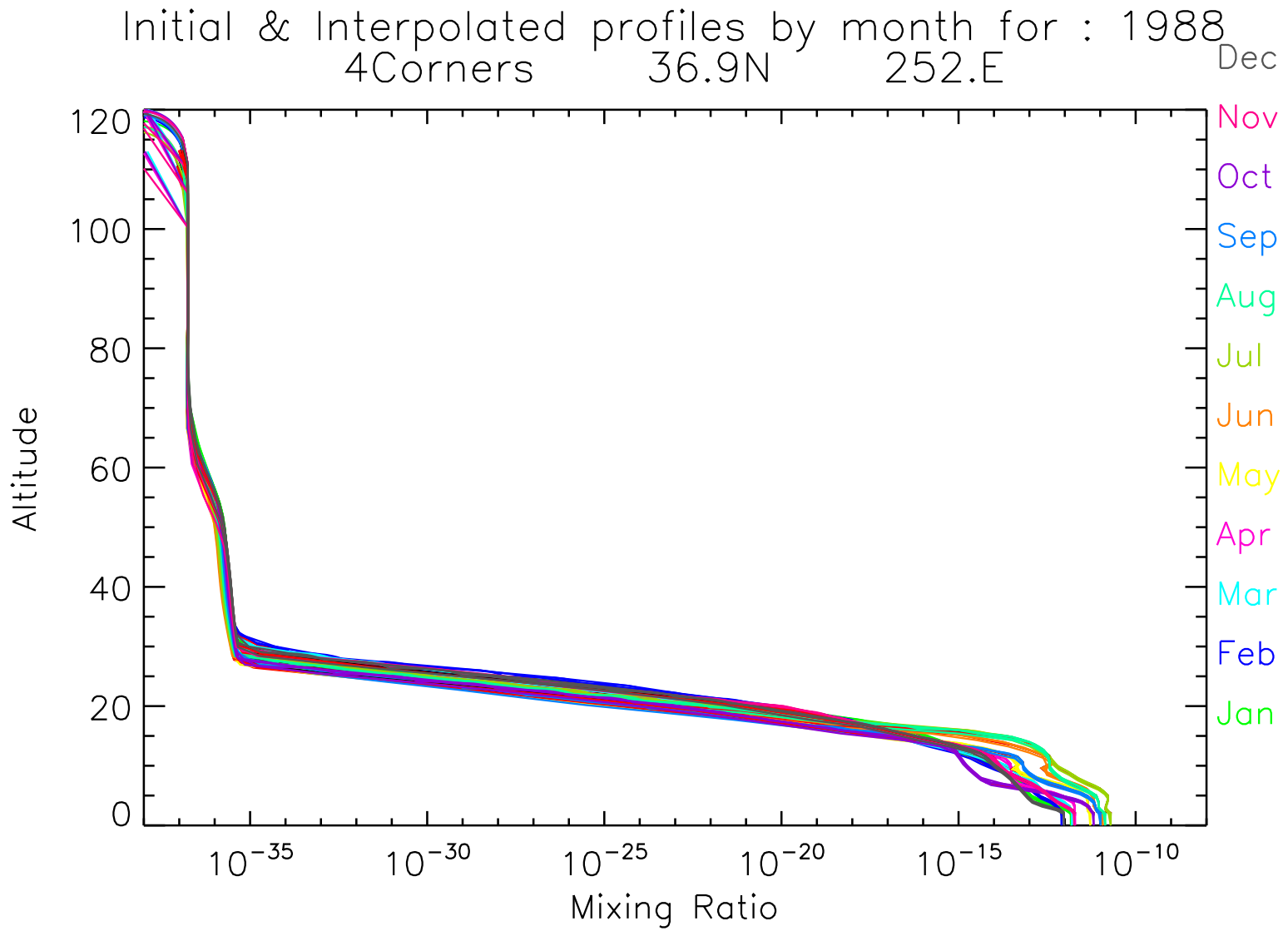
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1988
4Corners 36.9N 252.E
Dec
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Altitude
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$10^{-35}$
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$10^{-25}$
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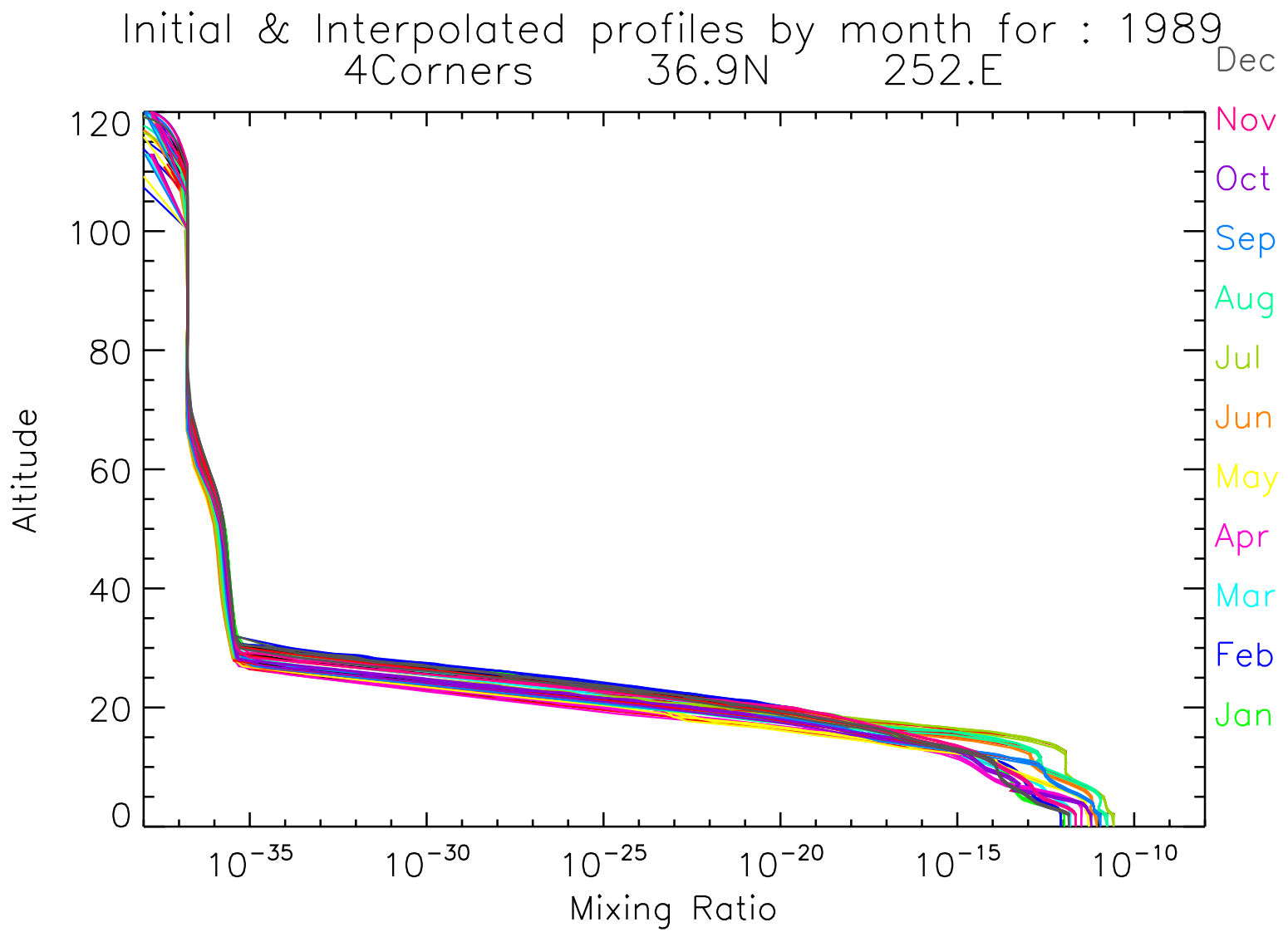
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1989
4Corners 36.9N 252.E
Dec
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Altitude
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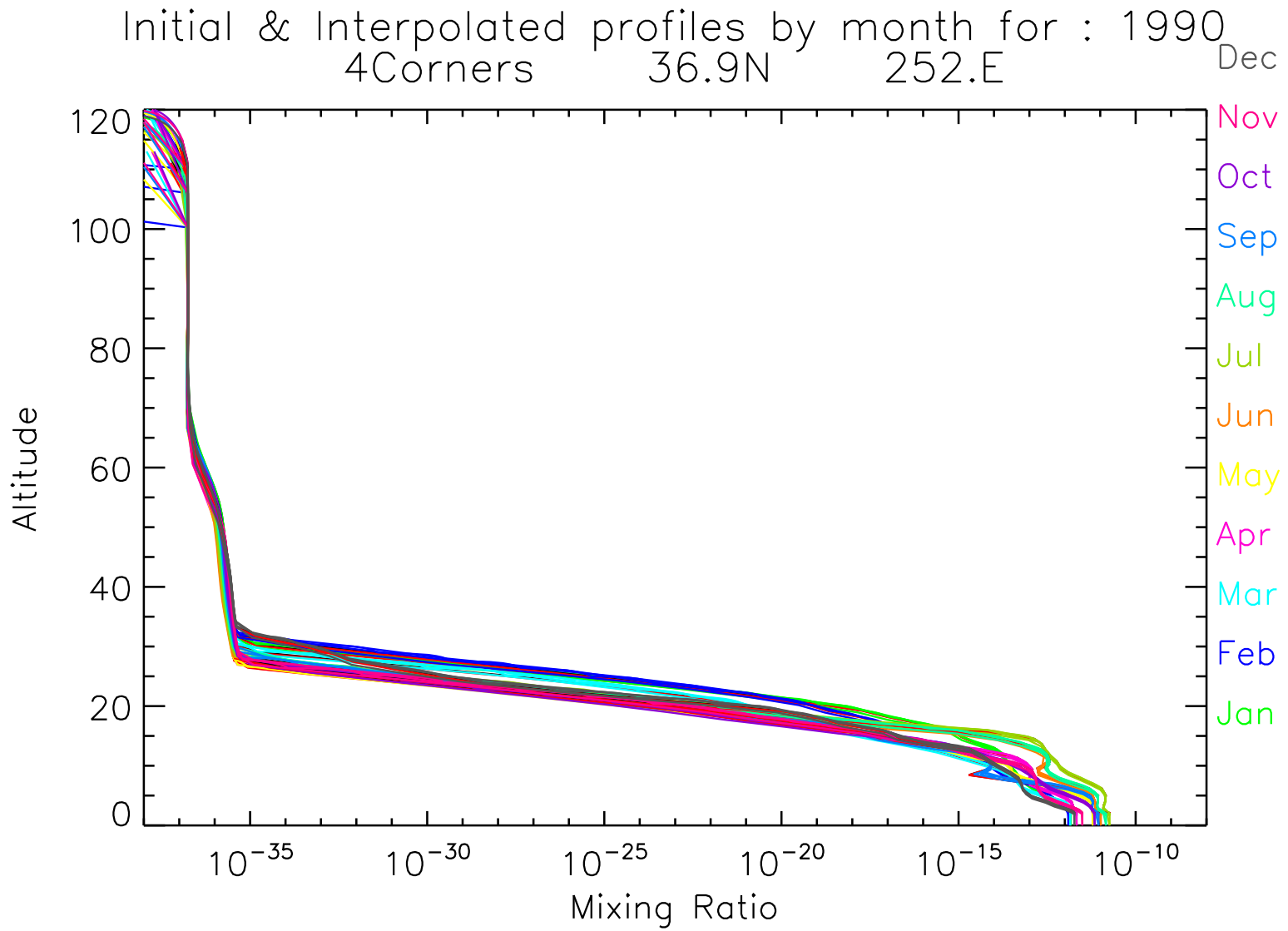
Mixing Ratio


Initial & Interpolated profiles by month for : 1990
4Corners 36.9N 252.E
Dec
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Altitude
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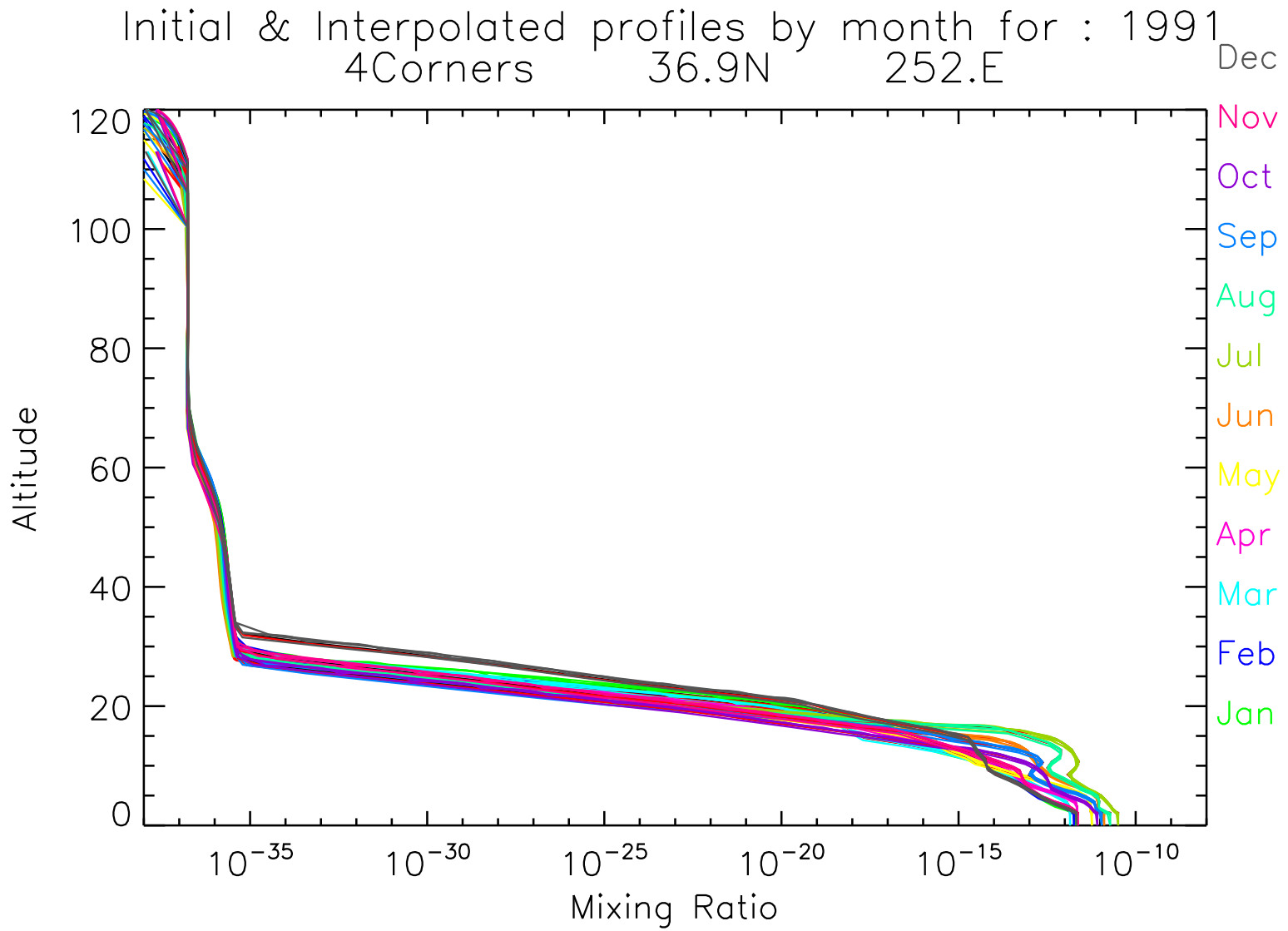
Mixing Ratio


Initial & Interpolated profiles by month for : 1991
4Corners 36.9N 252.E
Dec
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Altitude
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$10^{-35}$
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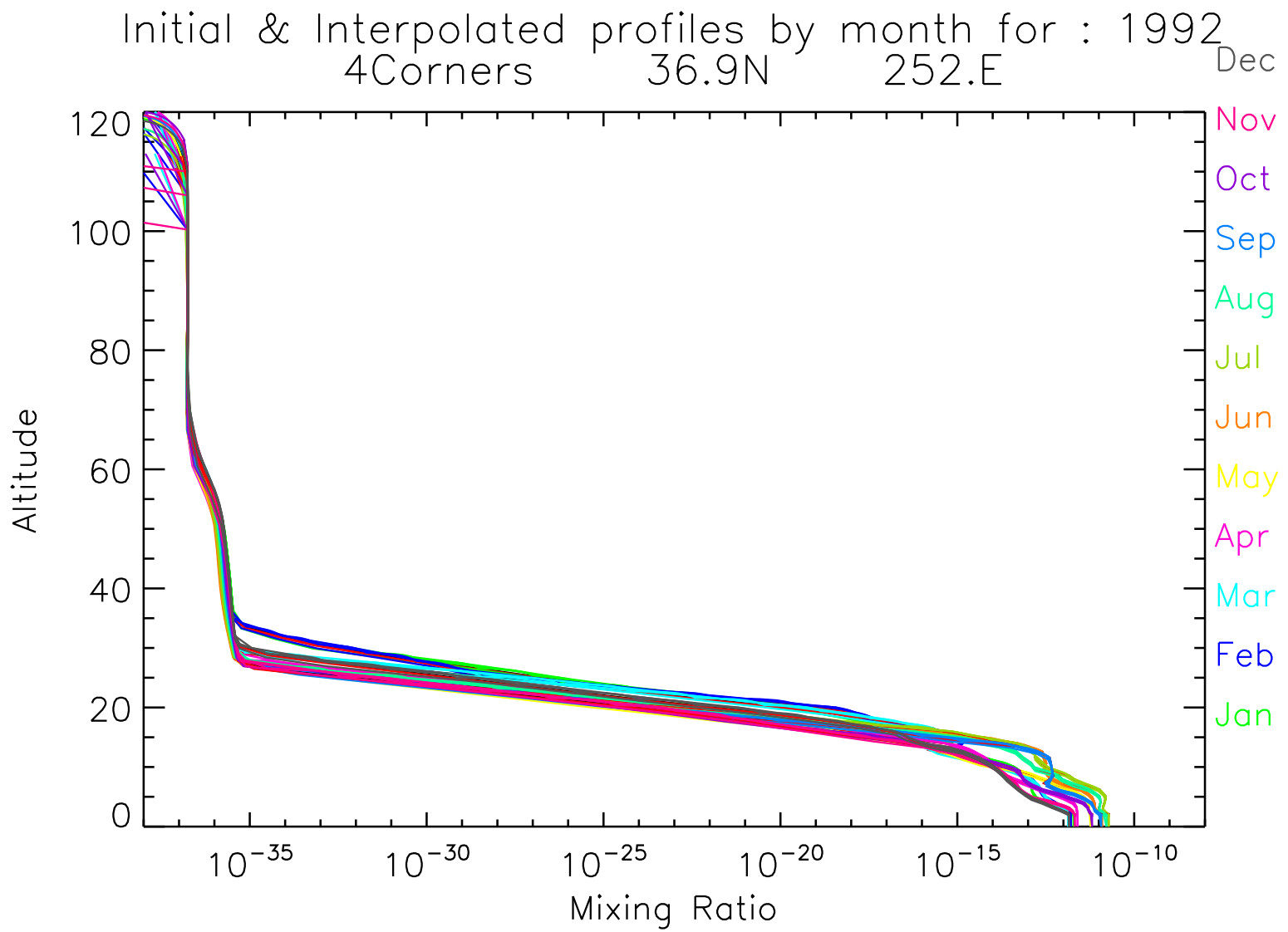
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1992
4Corners 36.9N 252.E
Dec
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Altitude
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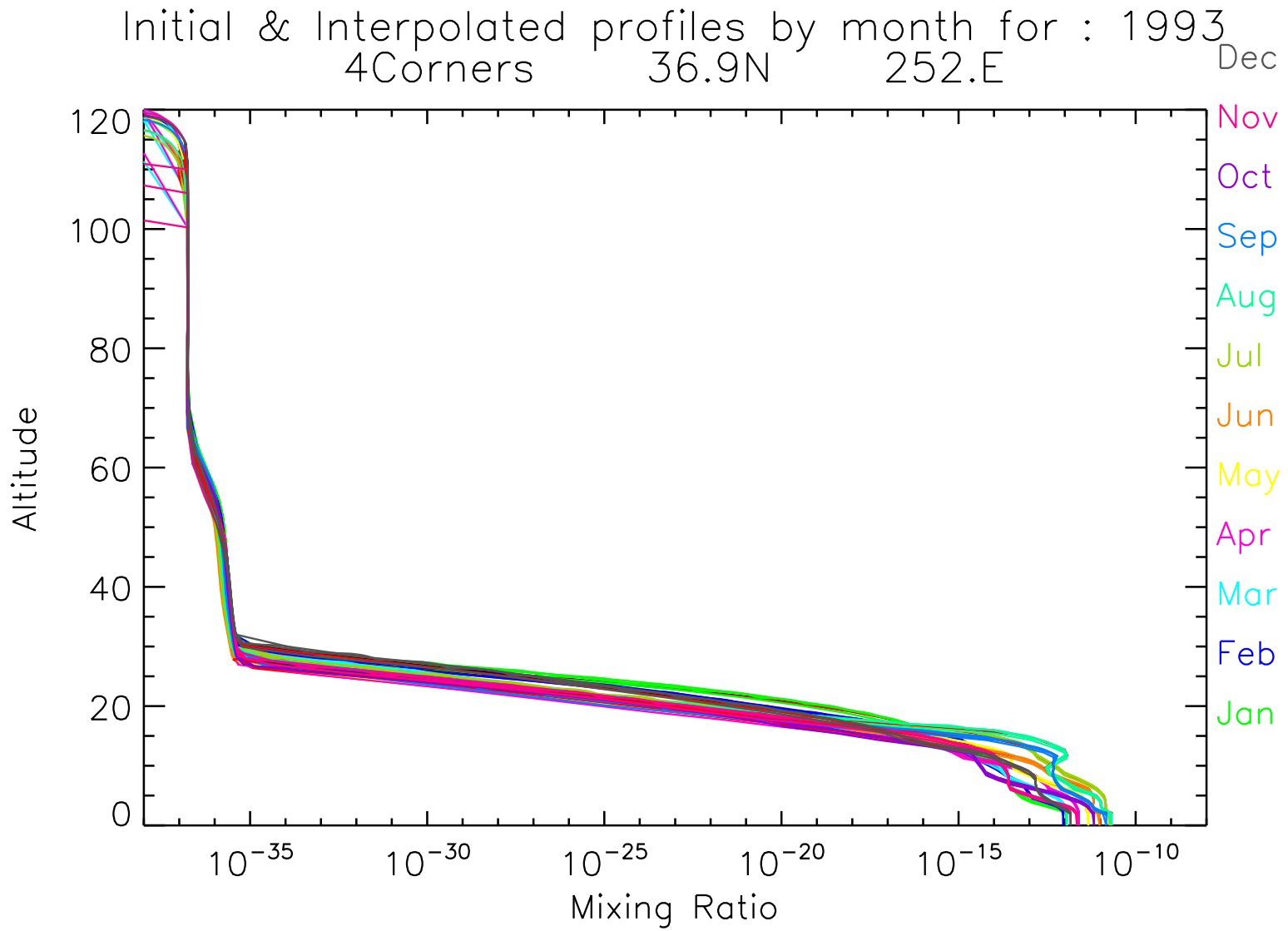
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1993
4Corners 36.9N 252.E
Dec
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Altitude
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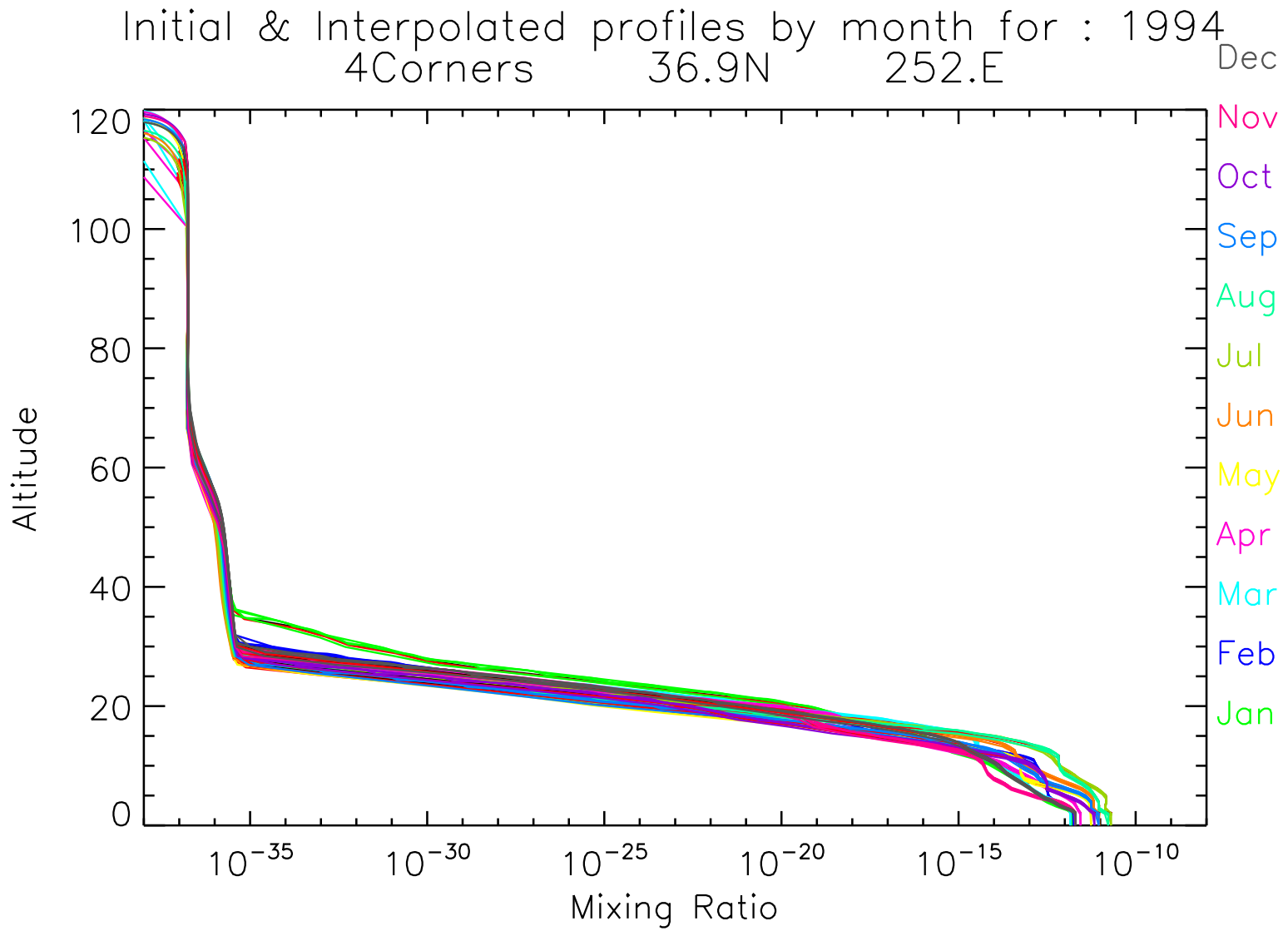
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1994
4Corners 36.9N 252.E
Dec
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Altitude
120
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$10^{-35}$
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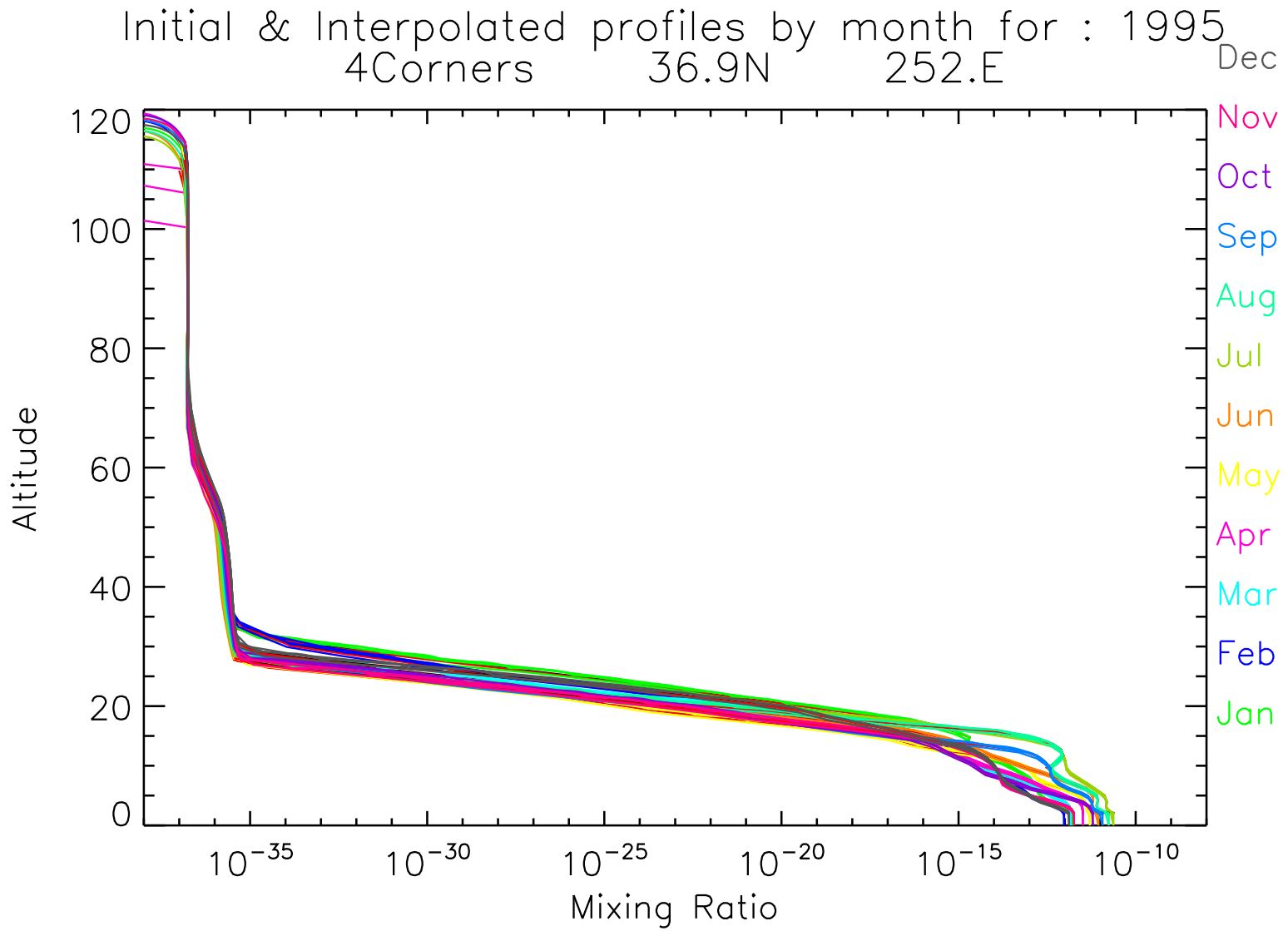
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1995
4Corners 36.9N 252.E
Dec
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Altitude
120
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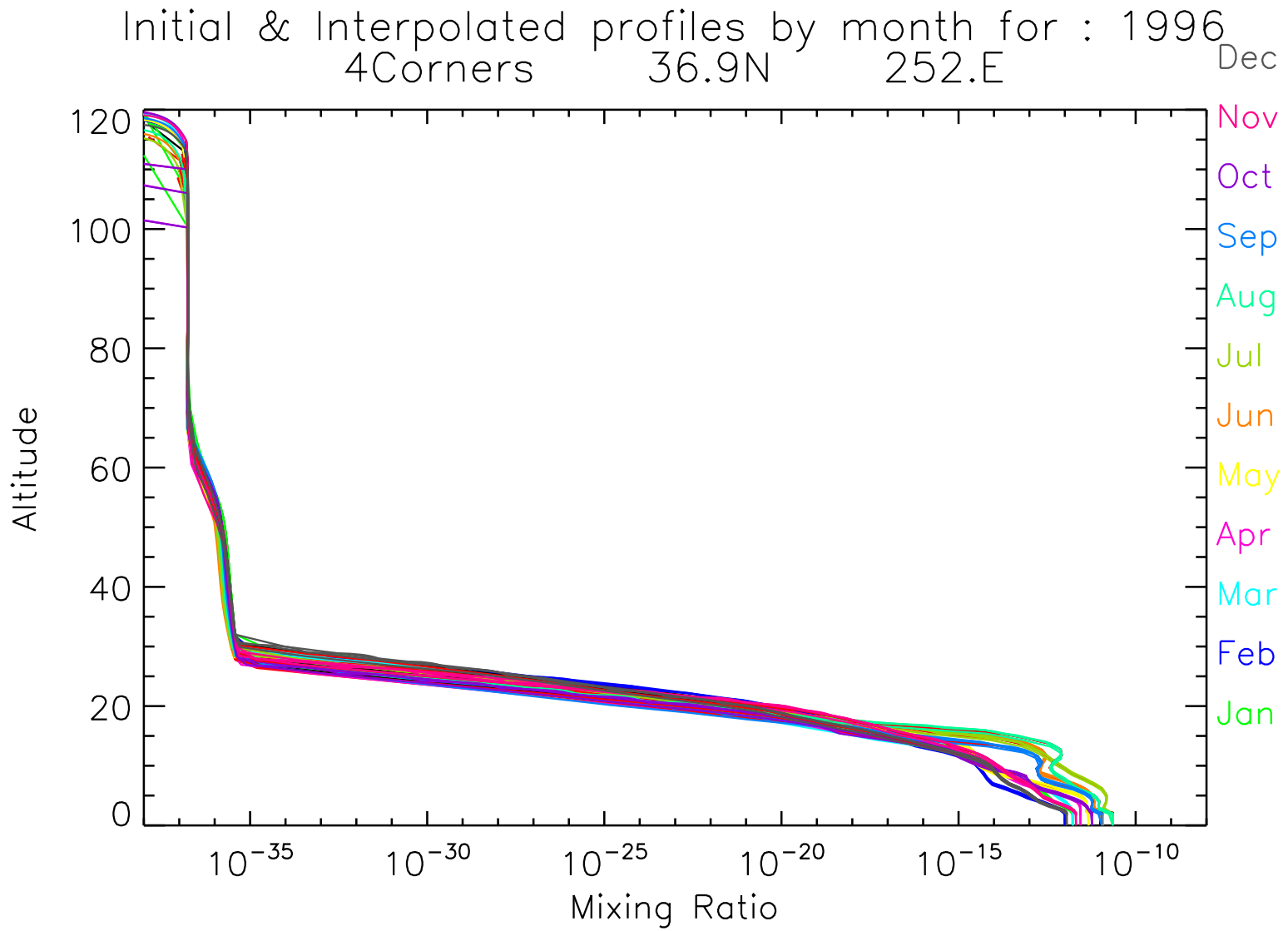
$10^{-35}$
$10^{-30}$
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1996
4Corners 36.9N 252.E
Dec
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Altitude
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$10^{-35}$
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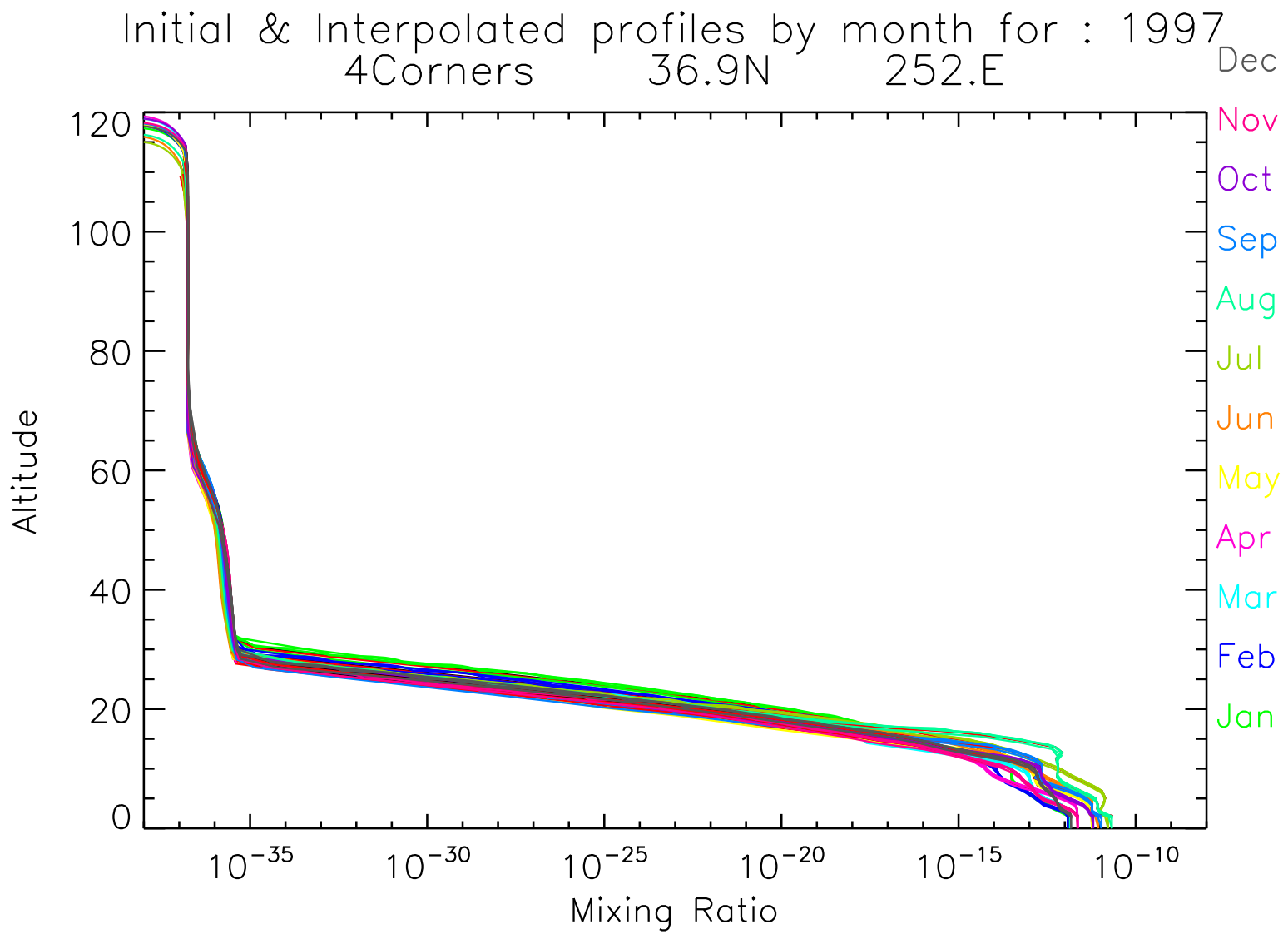
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1997
4Corners 36.9N 252.E
Dec
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Feb
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Altitude
120
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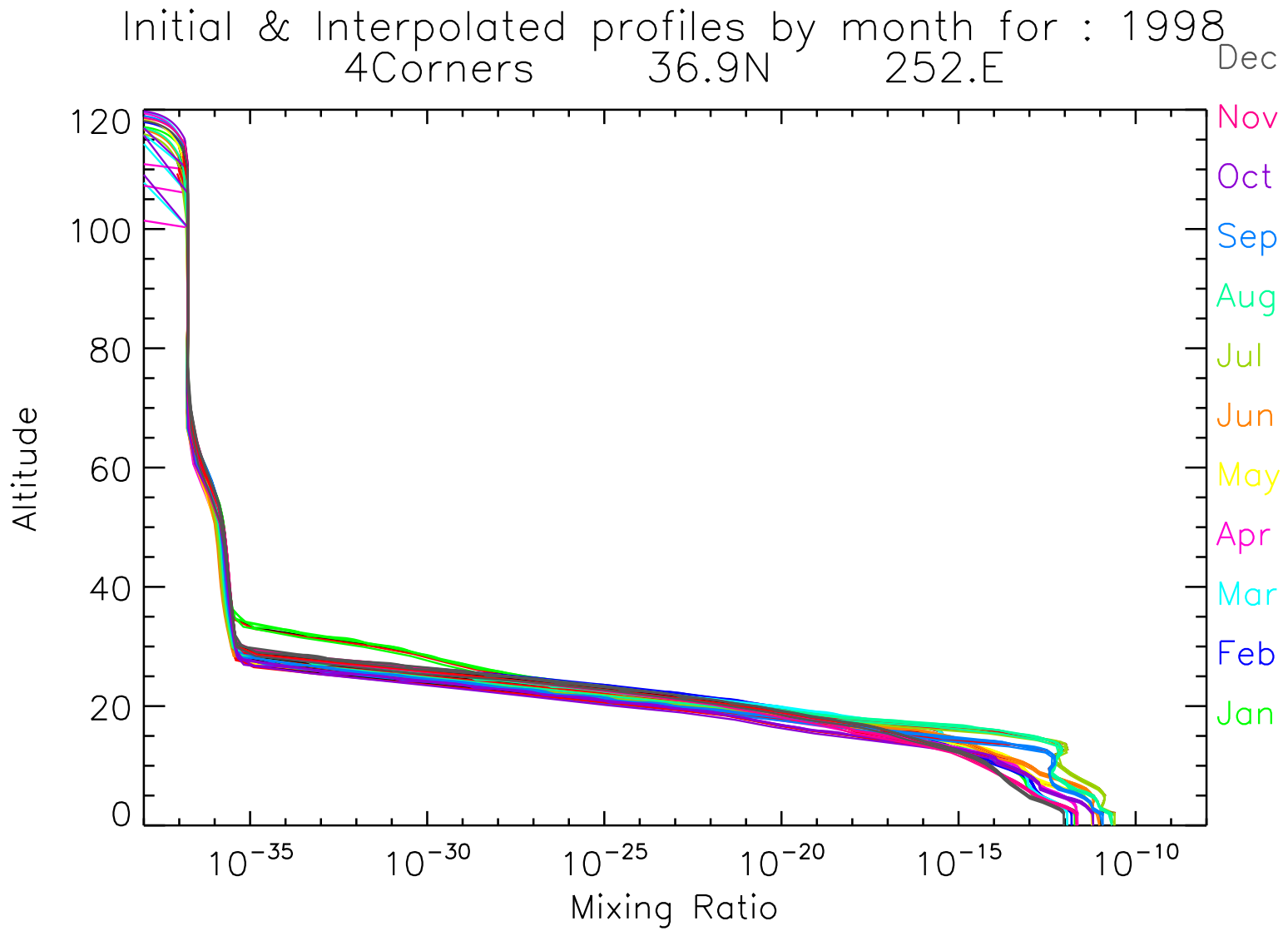
$10^{-35}$
$10^{-30}$
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1998
4Corners 36.9N 252.E
Dec
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Feb
Jan
Altitude
120
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$10^{-35}$
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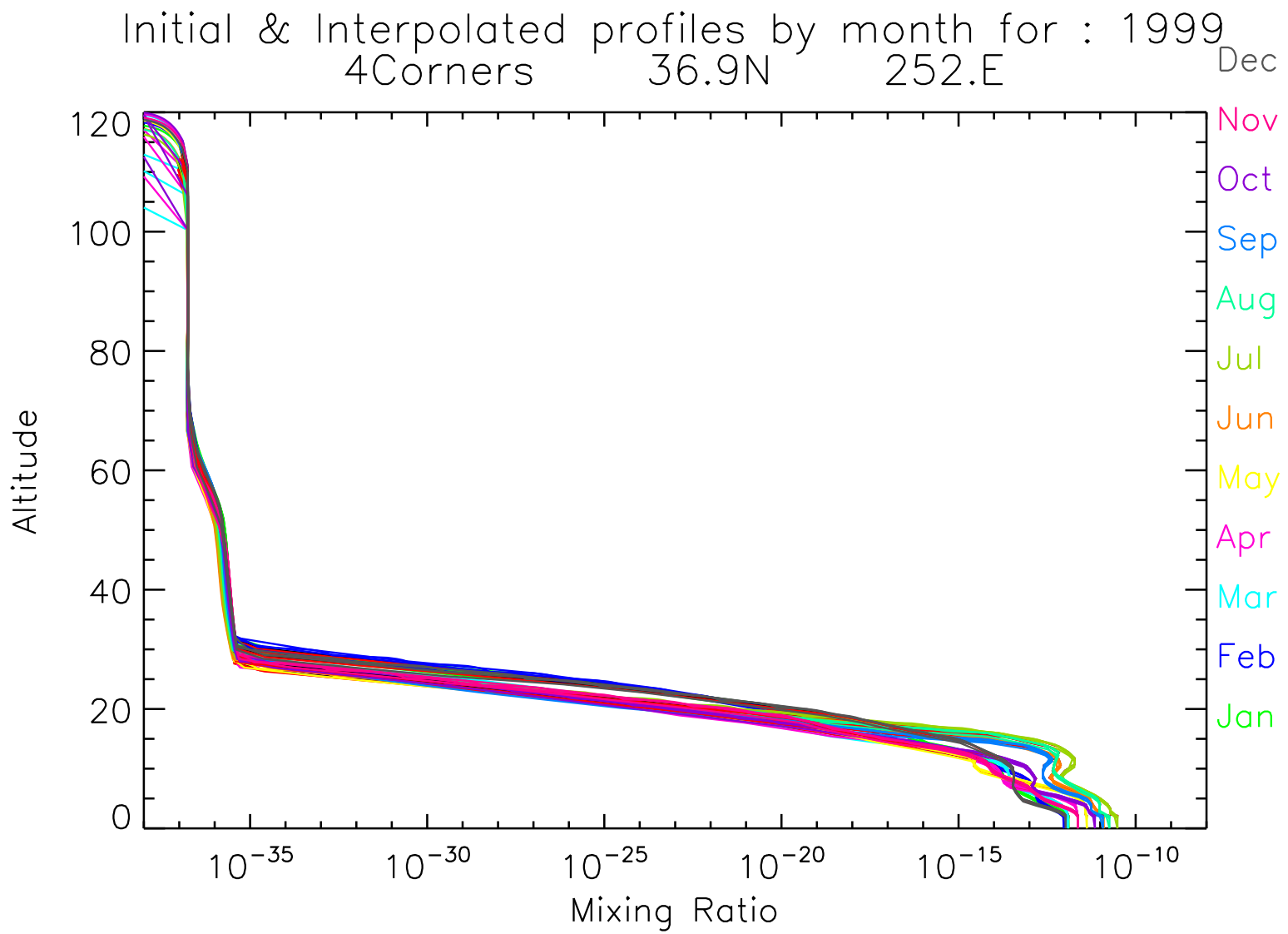
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 1999
4Corners 36.9N 252.E
Dec
Nov
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Feb
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Altitude
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$10^{-35}$
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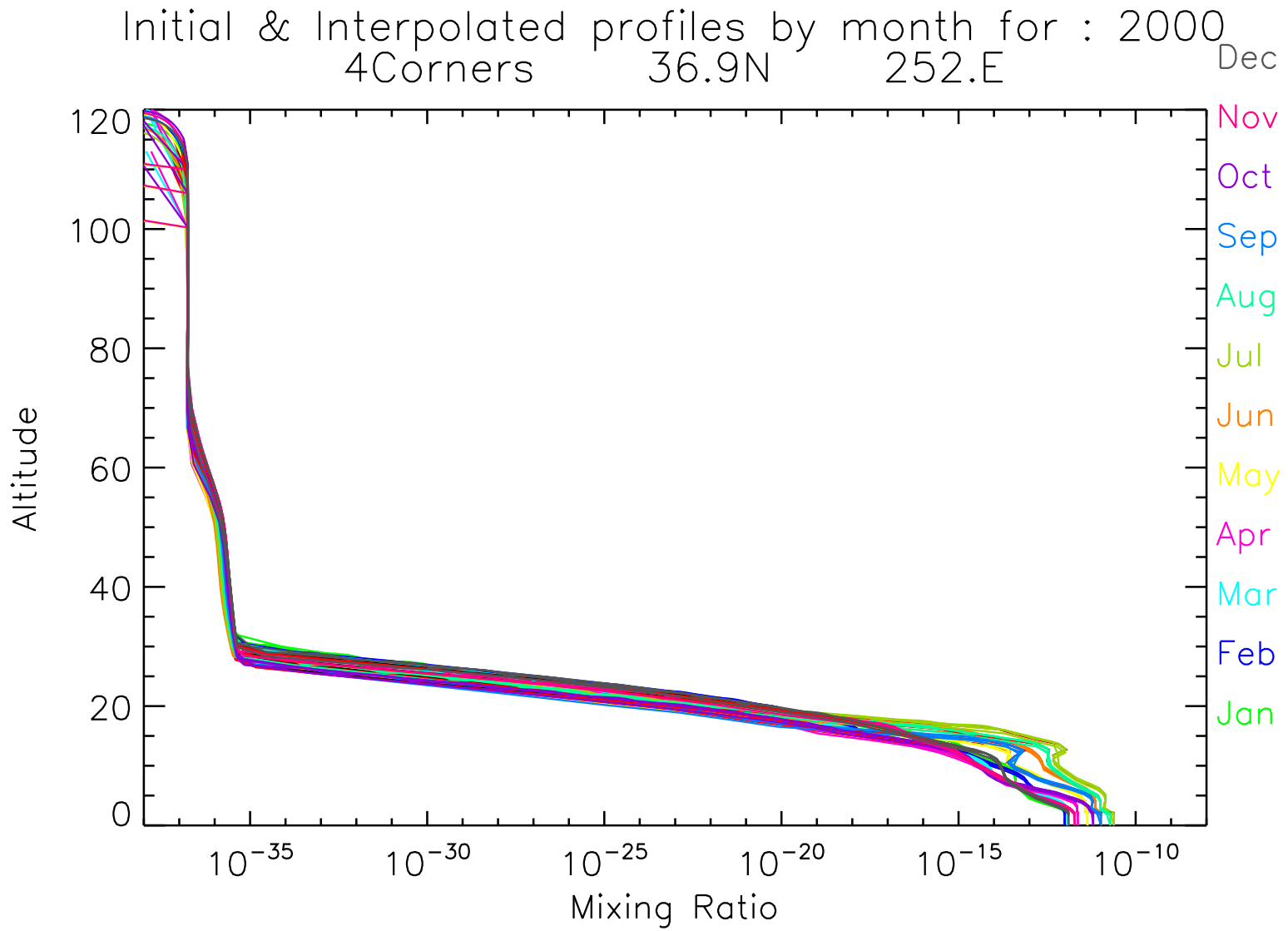
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 2000
4Corners 36.9N 252.E
Dec
Nov
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Feb
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Altitude
120
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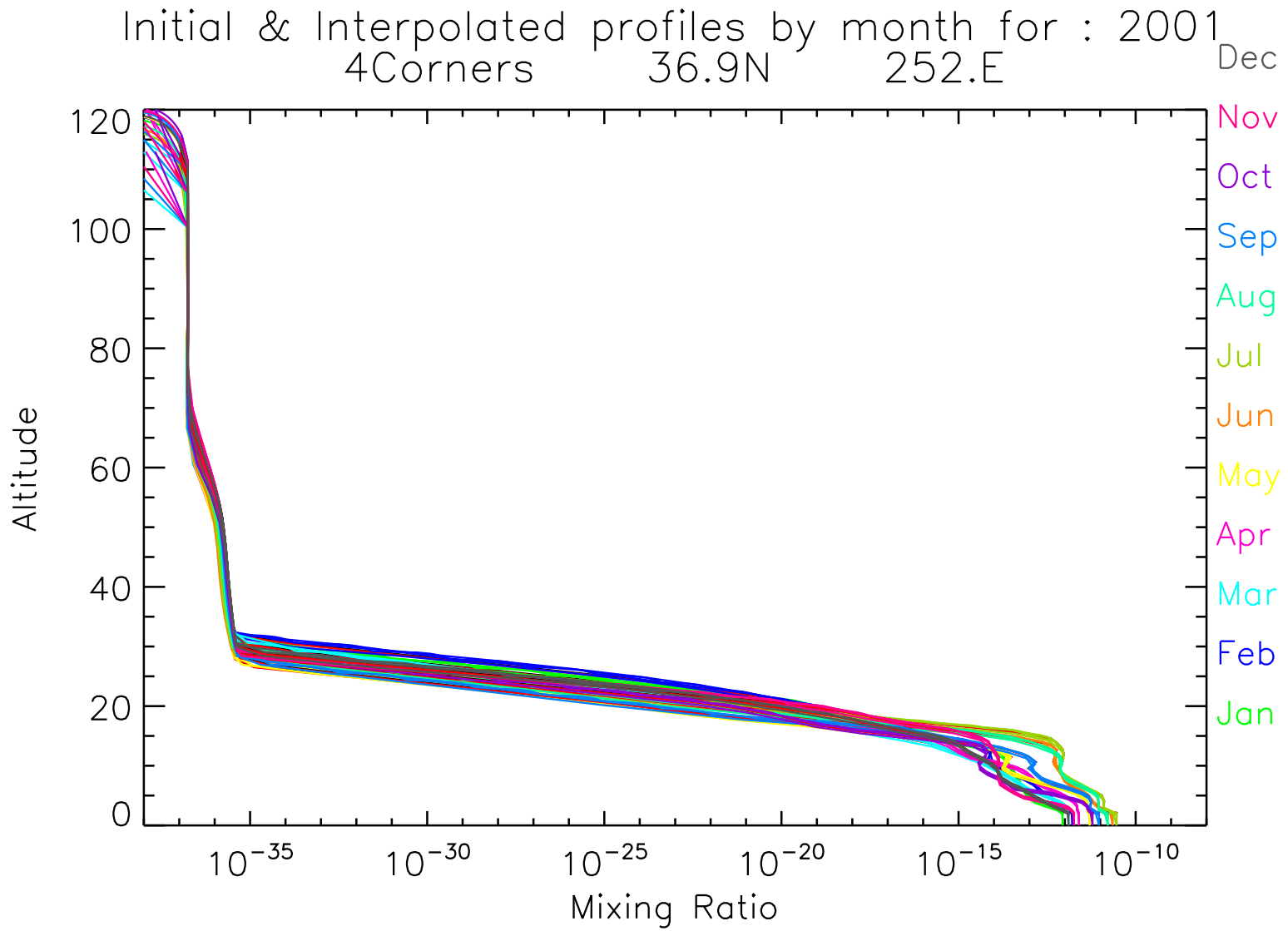
$10^{-35}$
$10^{-30}$
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 2001
4Corners 36.9N 252.E
Dec
Nov
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Feb
Jan
Altitude
120
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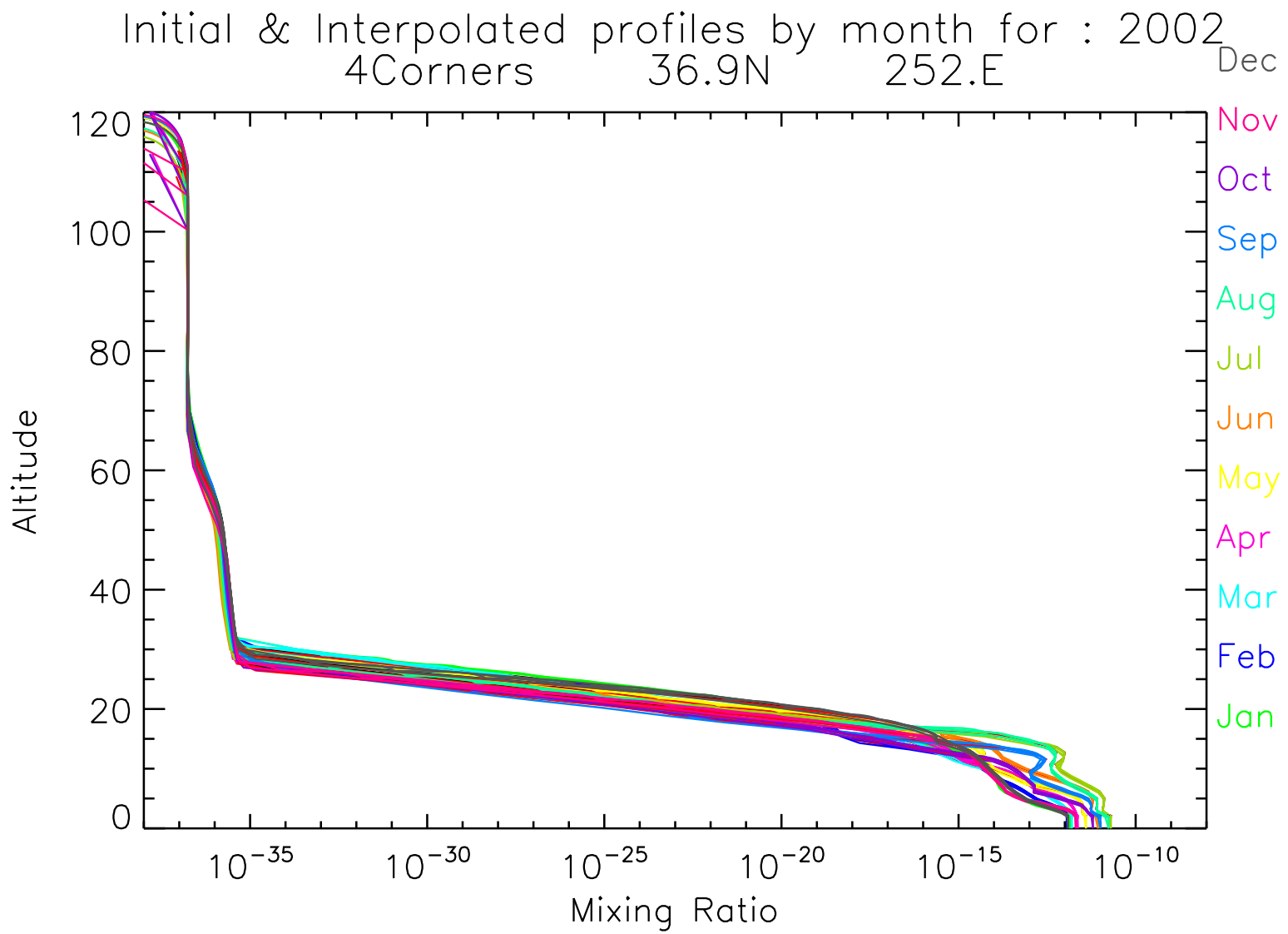
$10^{-35}$
$10^{-30}$
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 2002
4Corners 36.9N 252.E
Dec
Nov
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May
Apr
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Feb
Jan
Altitude
120
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$10^{-35}$
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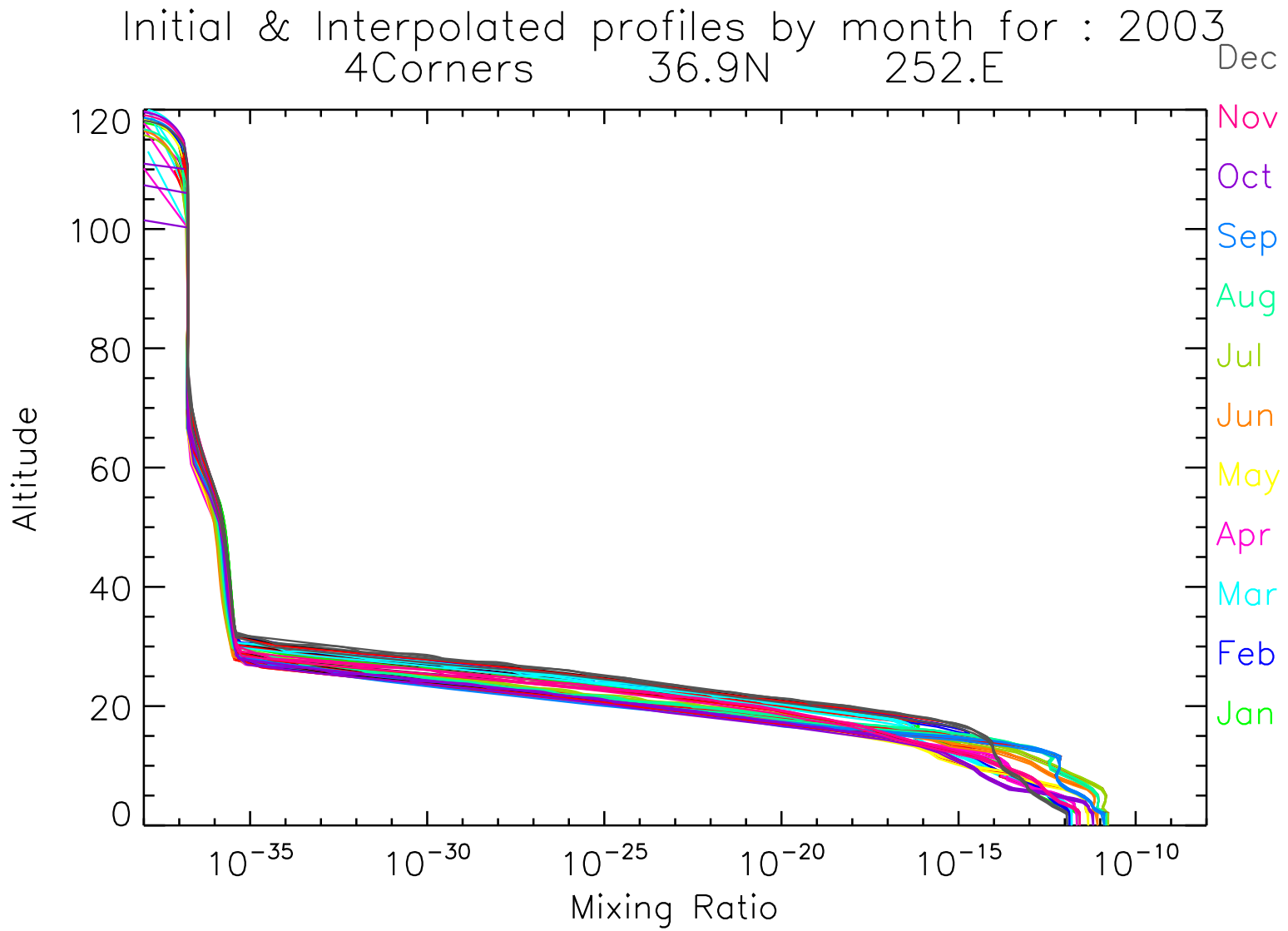
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 2003
4Corners 36.9N 252.E
Dec
Nov
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Apr
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Feb
Jan
Altitude
120
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$10^{-35}$
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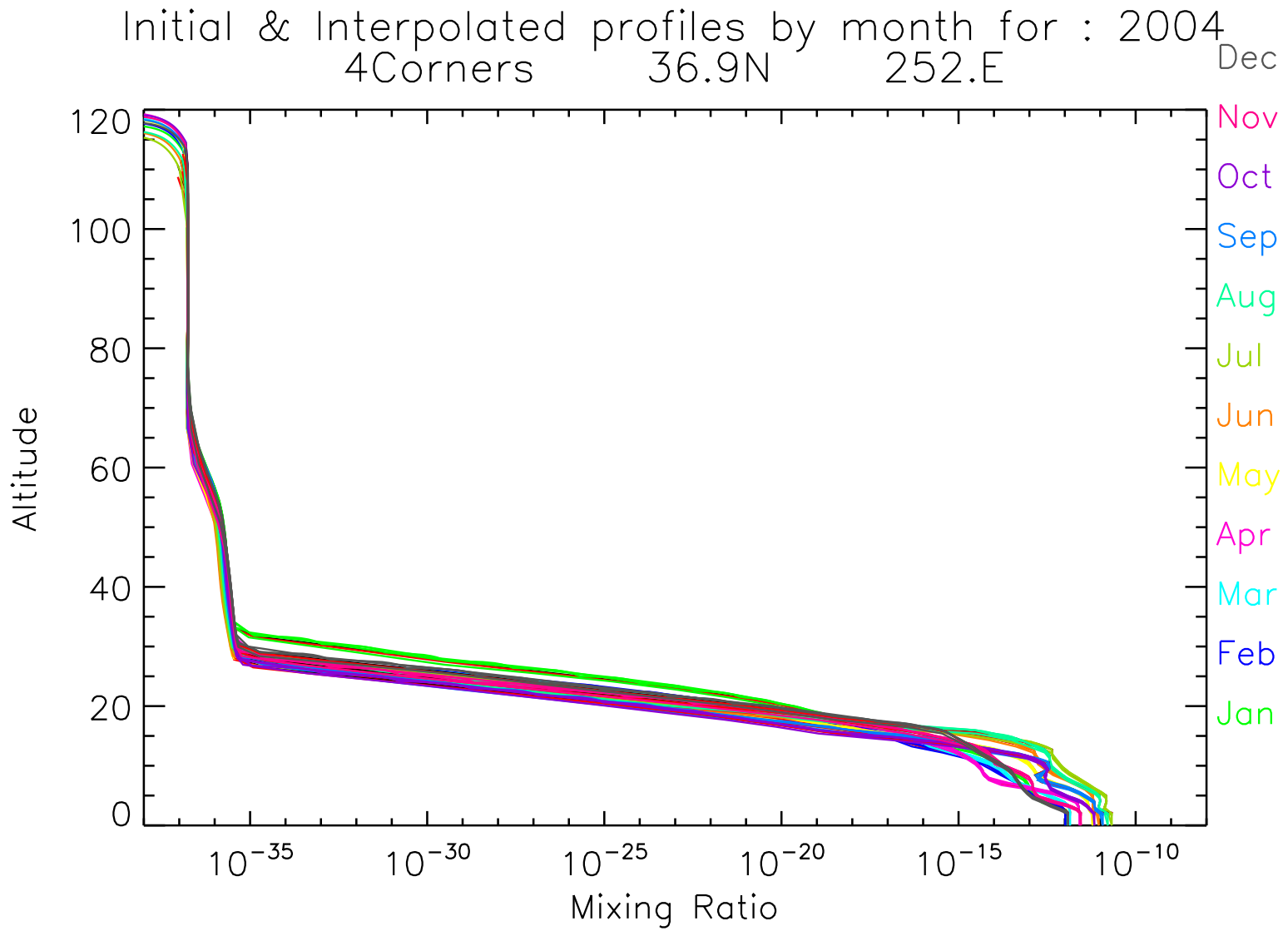
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 2004
4Corners 36.9N 252.E
Dec
Nov
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May
Apr
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Feb
Jan
Altitude
120
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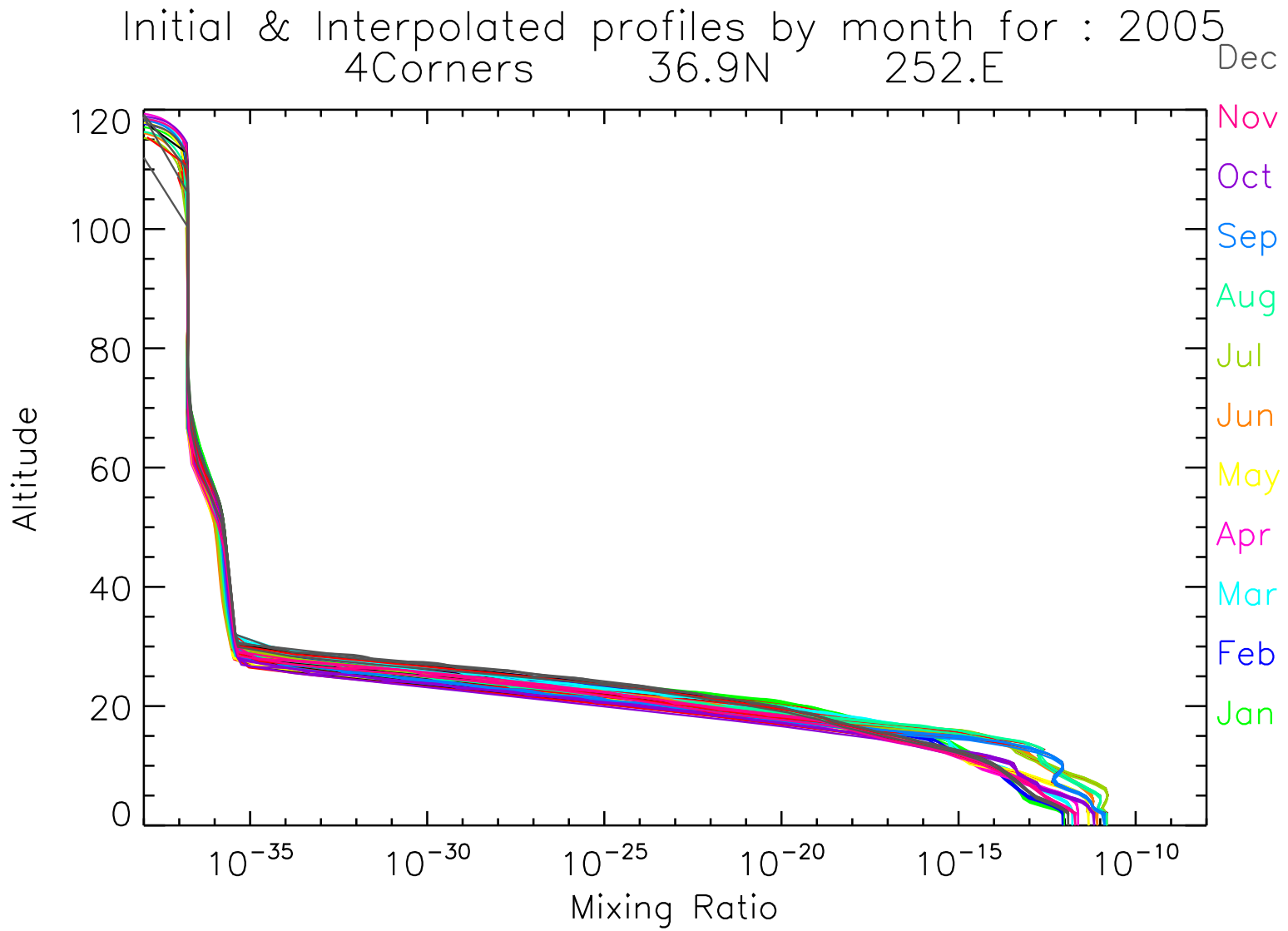
$10^{-35}$
$10^{-30}$
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 2005
4Corners 36.9N 252.E
Dec
Nov
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Feb
Jan
Altitude
120
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$10^{-35}$
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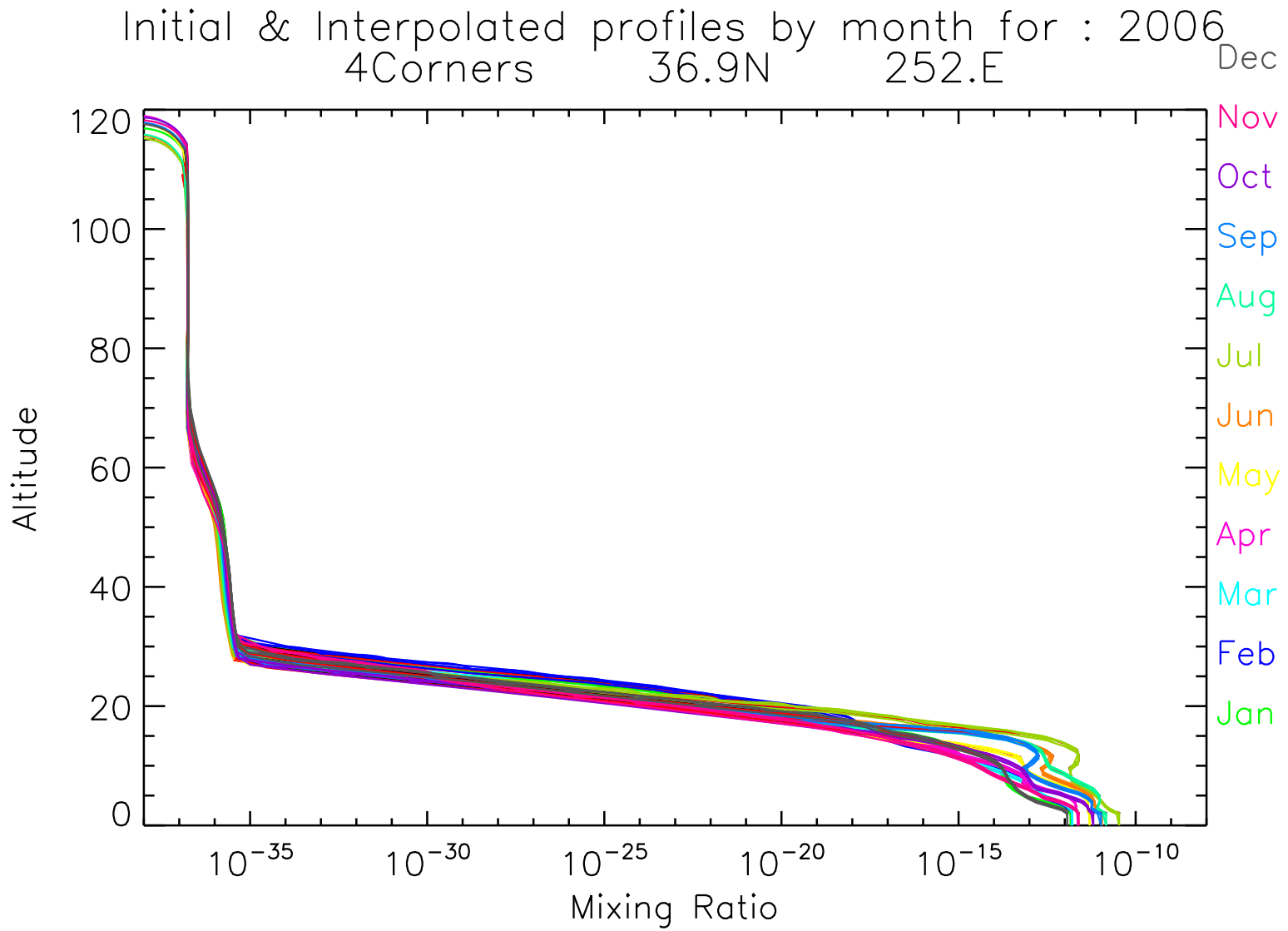
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 2006
4Corners 36.9N 252.E
Dec
Nov
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Apr
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Feb
Jan
Altitude
120
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$10^{-35}$
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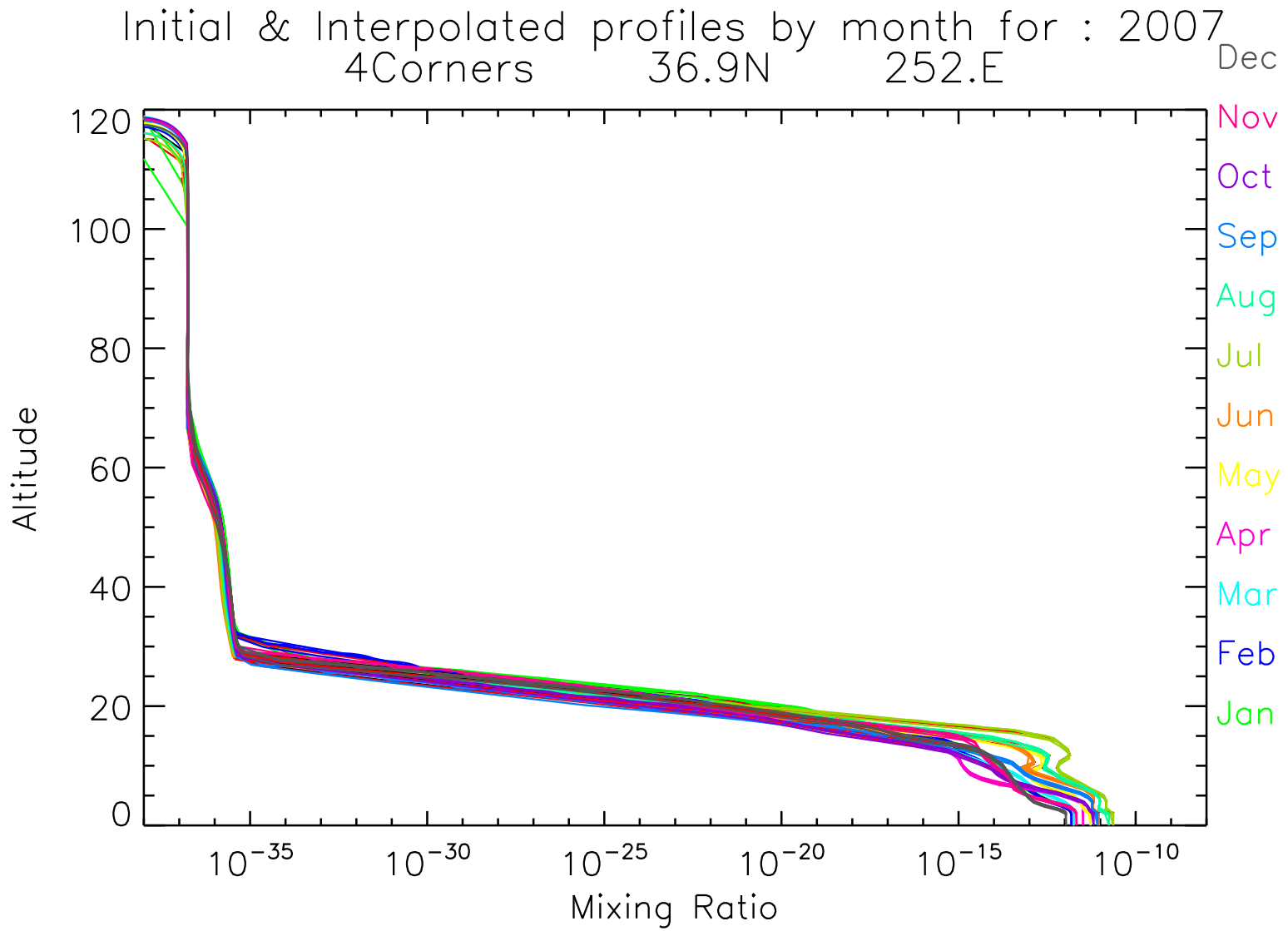
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 2007
4Corners 36.9N 252.E
Dec
Nov
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May
Apr
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Feb
Jan
Altitude
120
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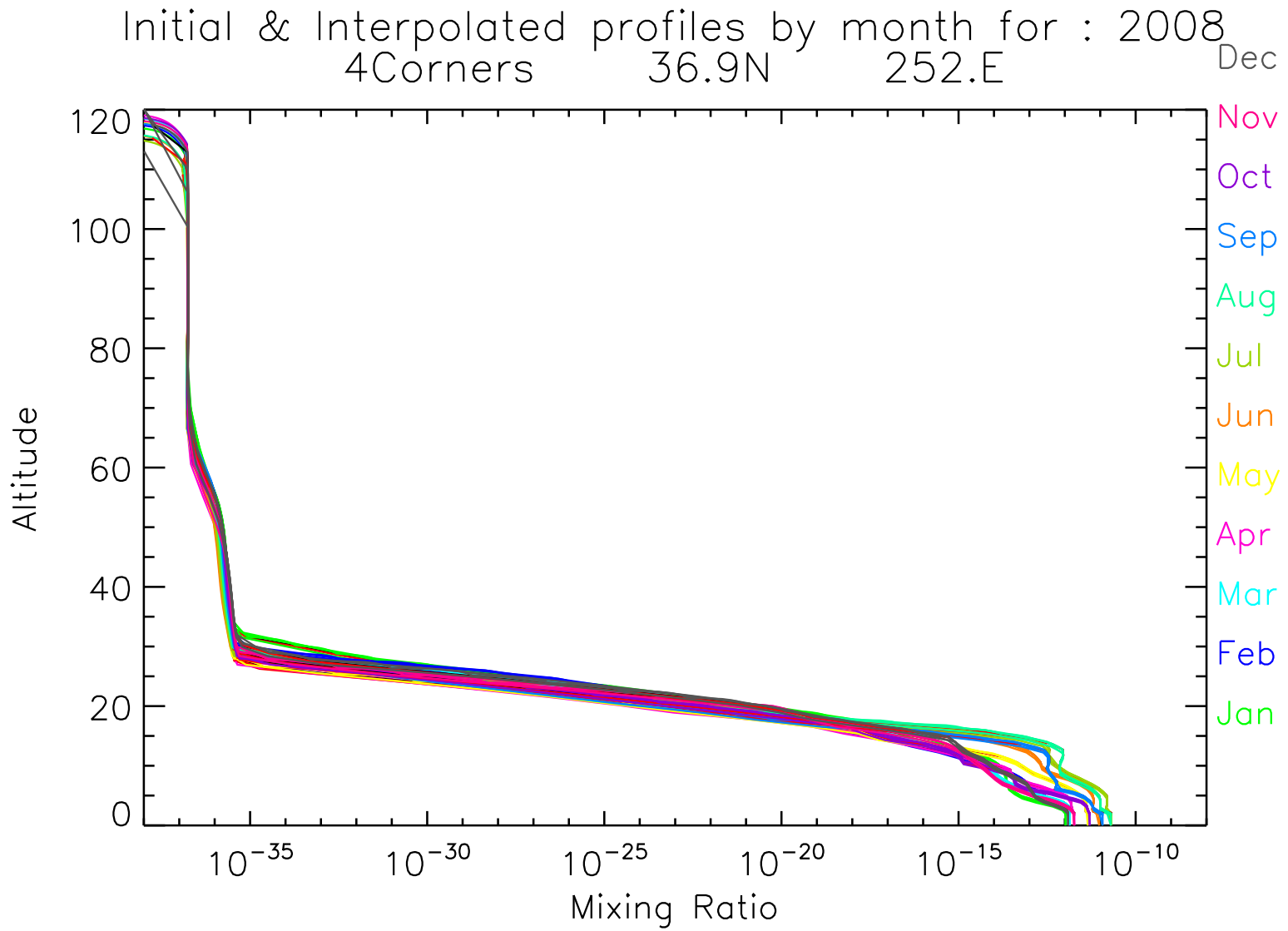
$10^{-35}$
$10^{-30}$
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 2008
4Corners 36.9N 252.E
Dec
Nov
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Feb
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Altitude
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$10^{-35}$
$10^{-30}$
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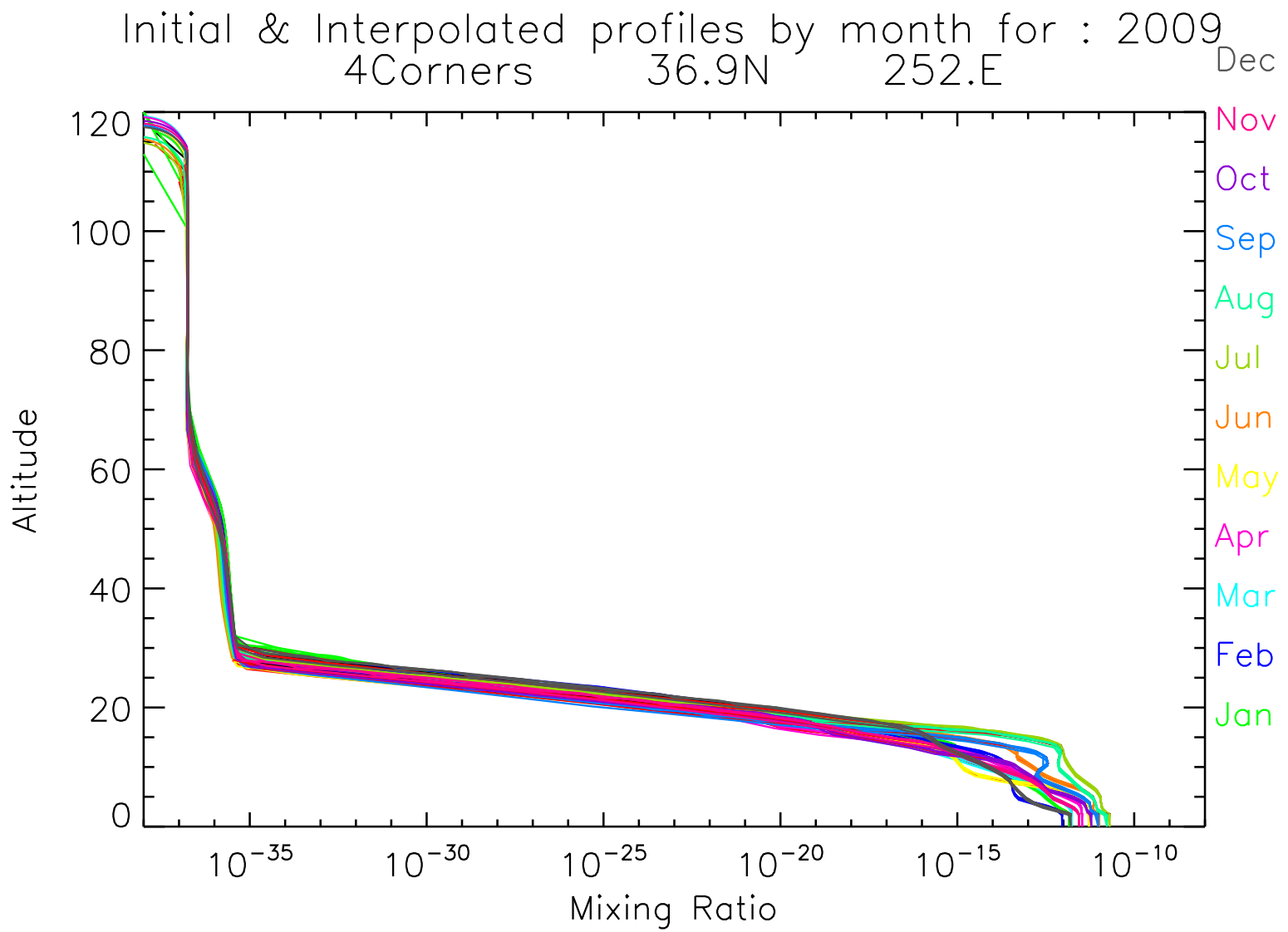
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 2009
4Corners 36.9N 252.E
Dec
Nov
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Feb
Jan
Altitude
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$10^{-35}$
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$10^{-25}$
$10^{-20}$
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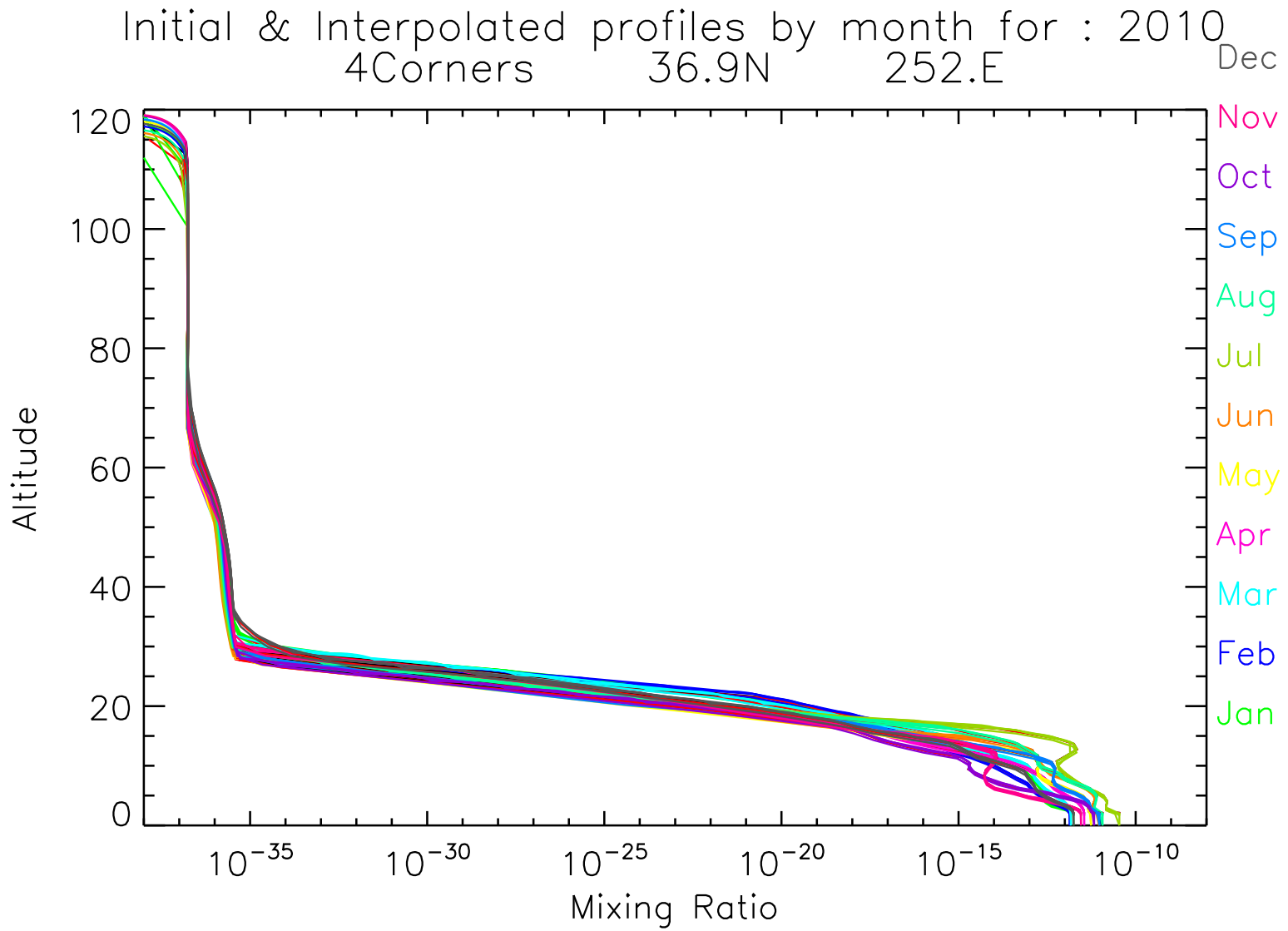
$10^{-10}$
Mixing Ratio


Initial & Interpolated profiles by month for : 2010
4Corners 36.9N 252.E
Dec
Nov
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Feb
Jan
Altitude
120
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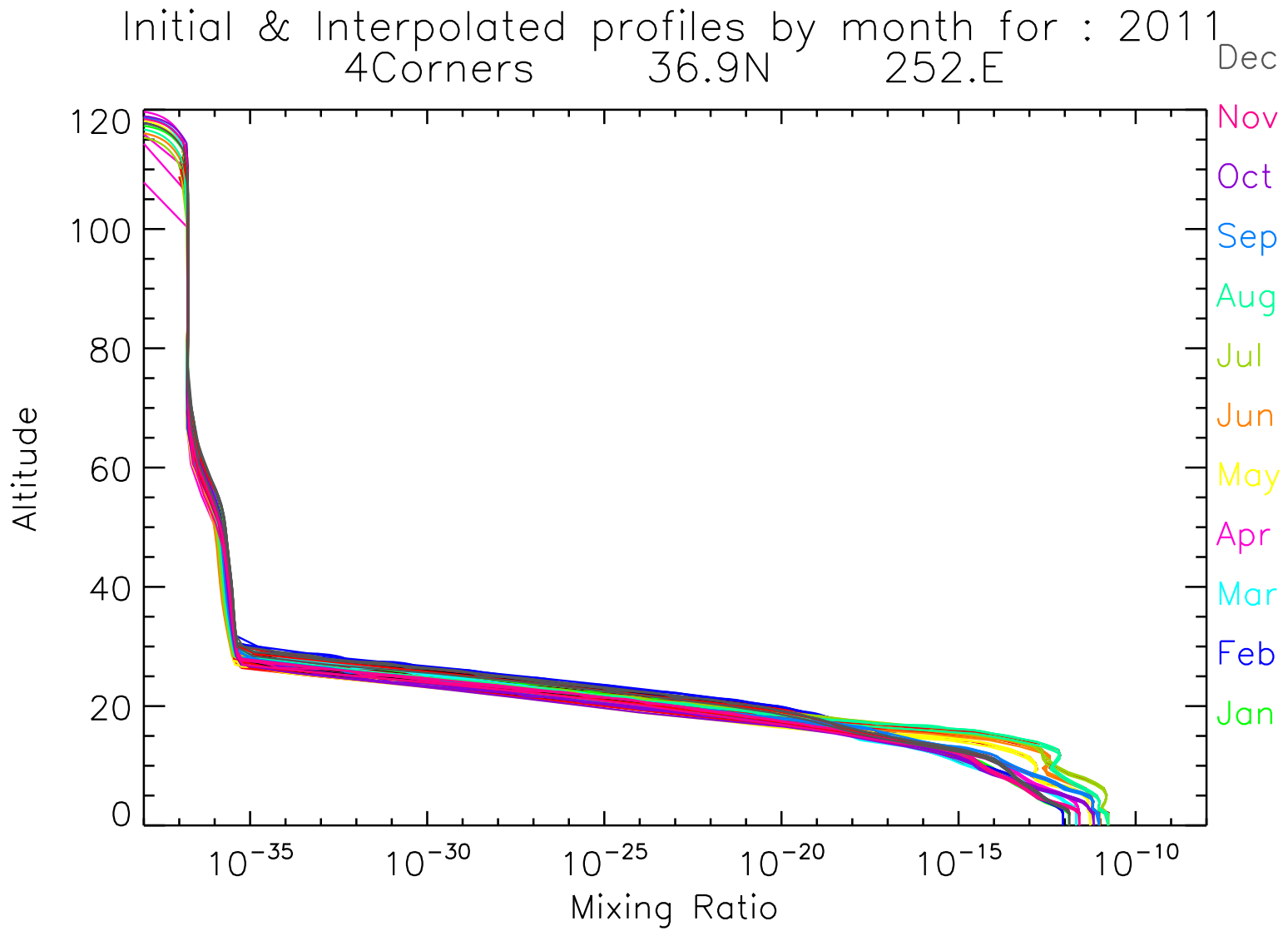
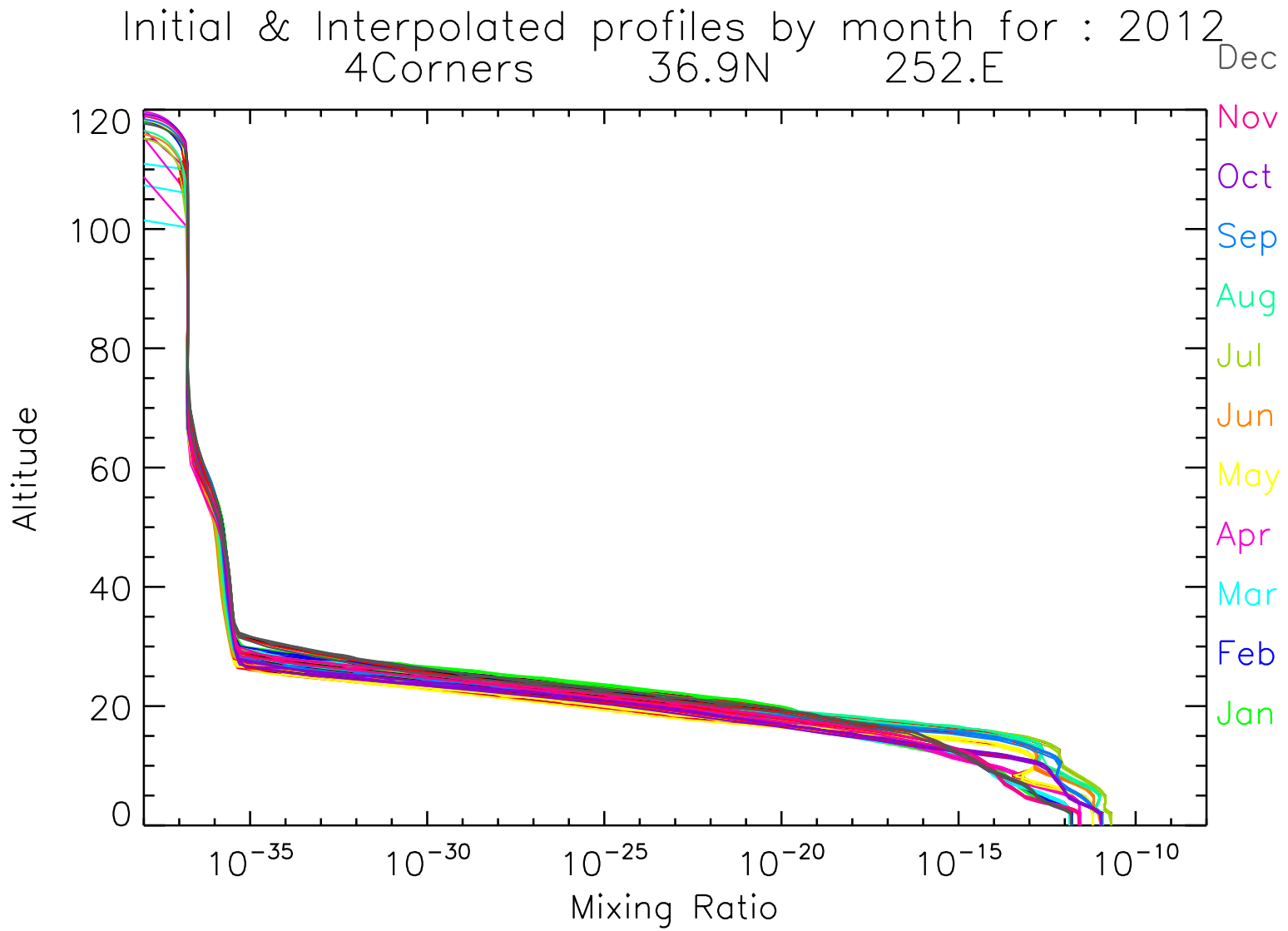
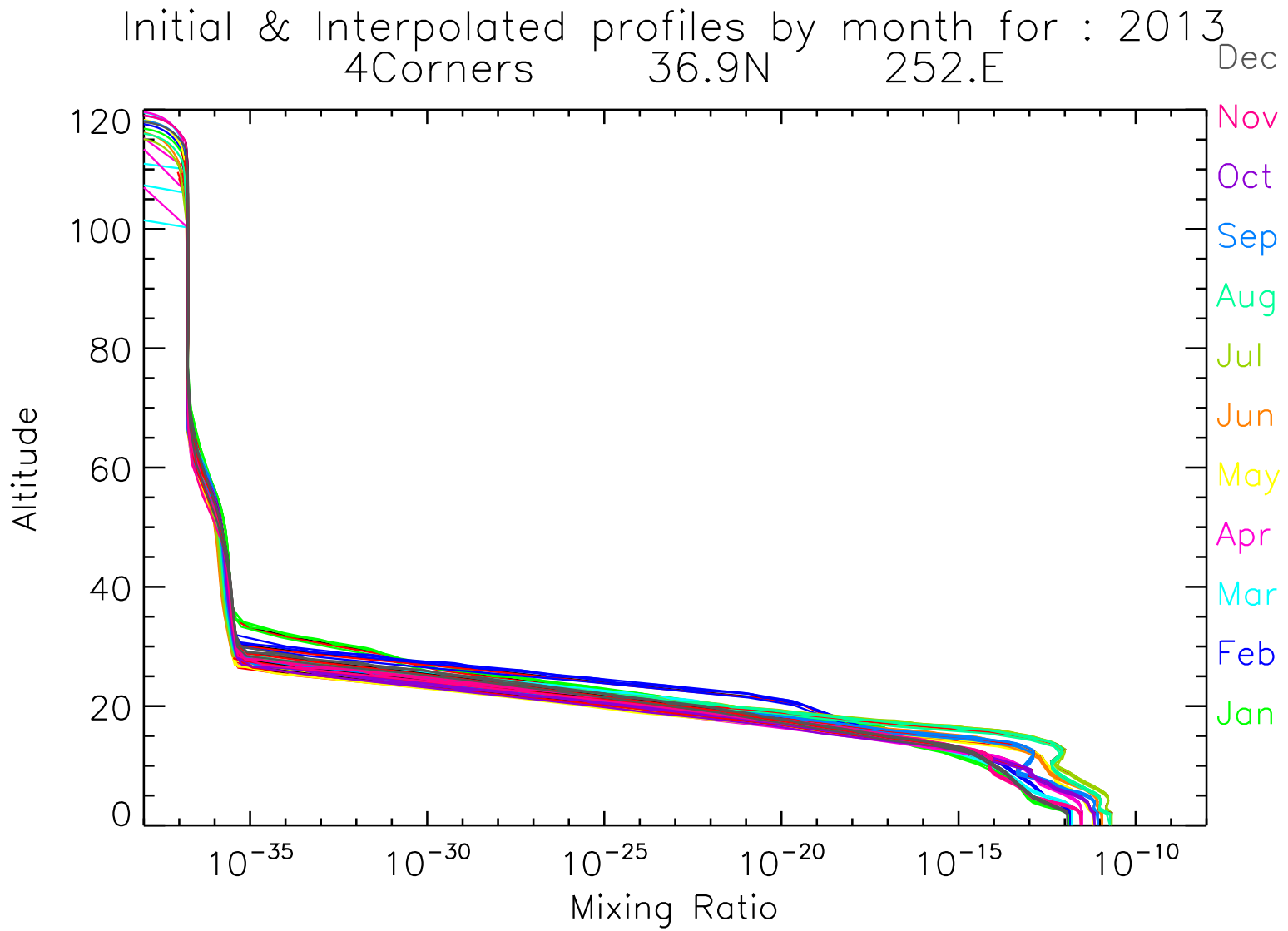
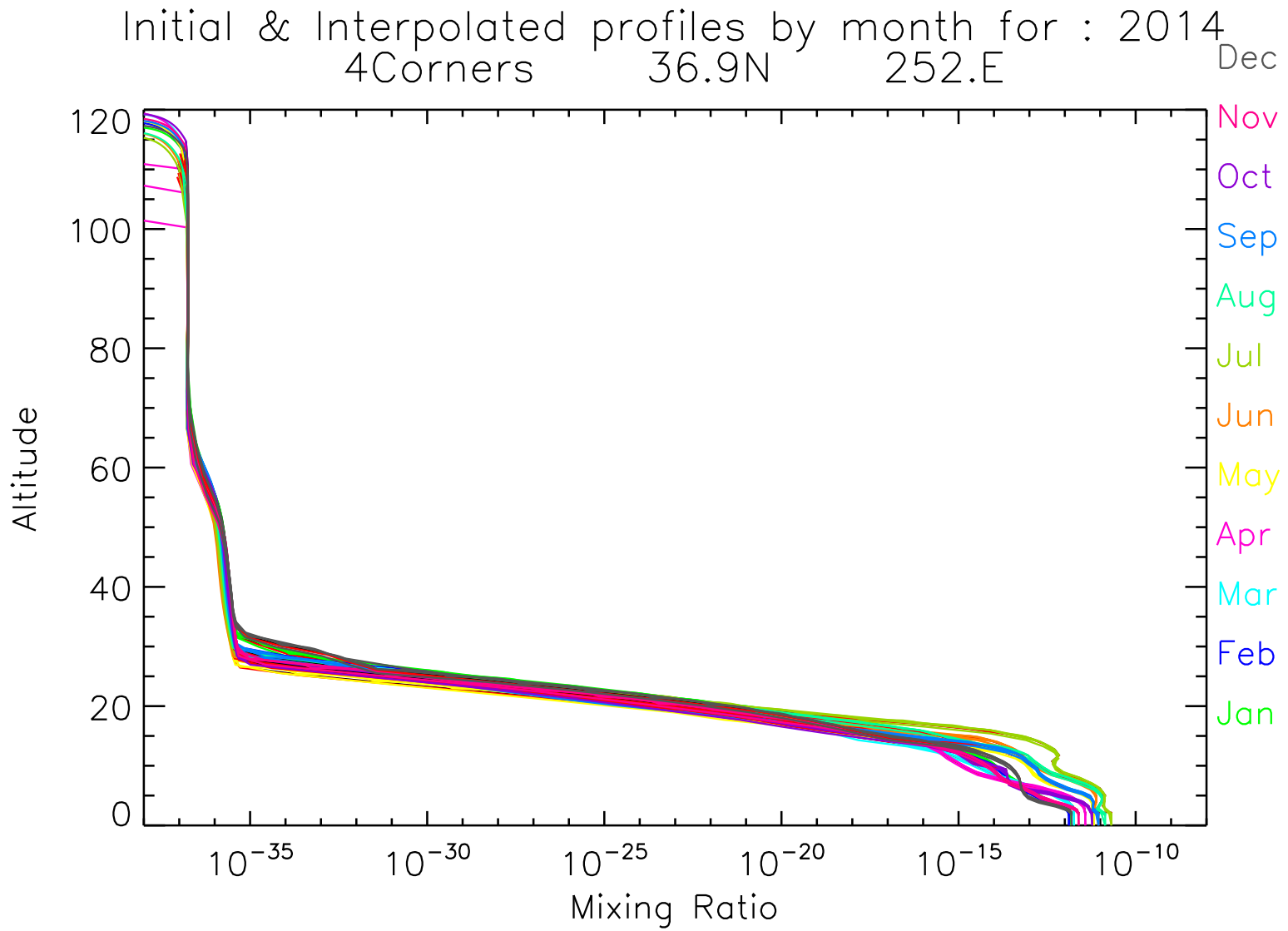
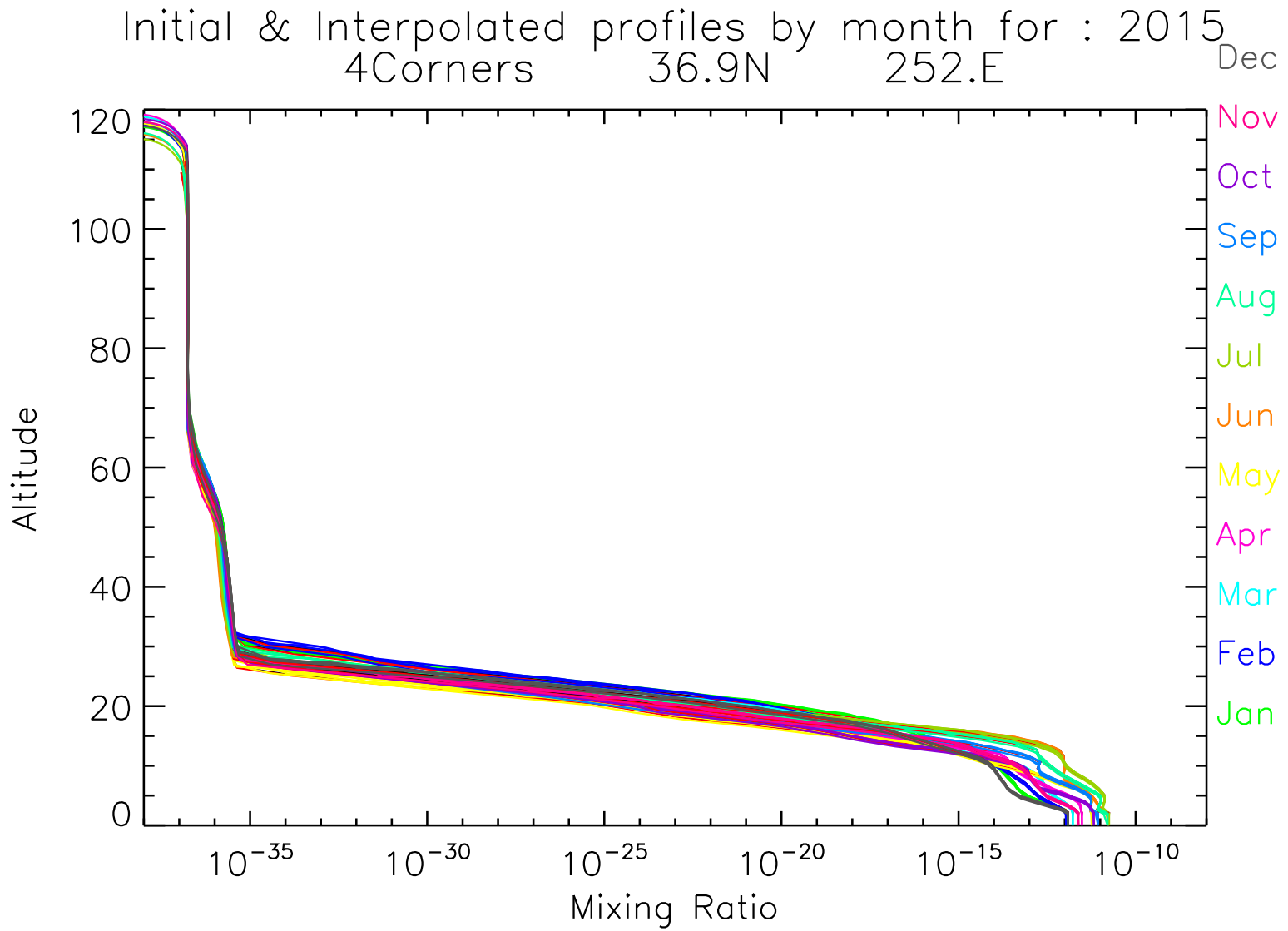
40
20
0
$10^{-35}$
$10^{-30}$
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio

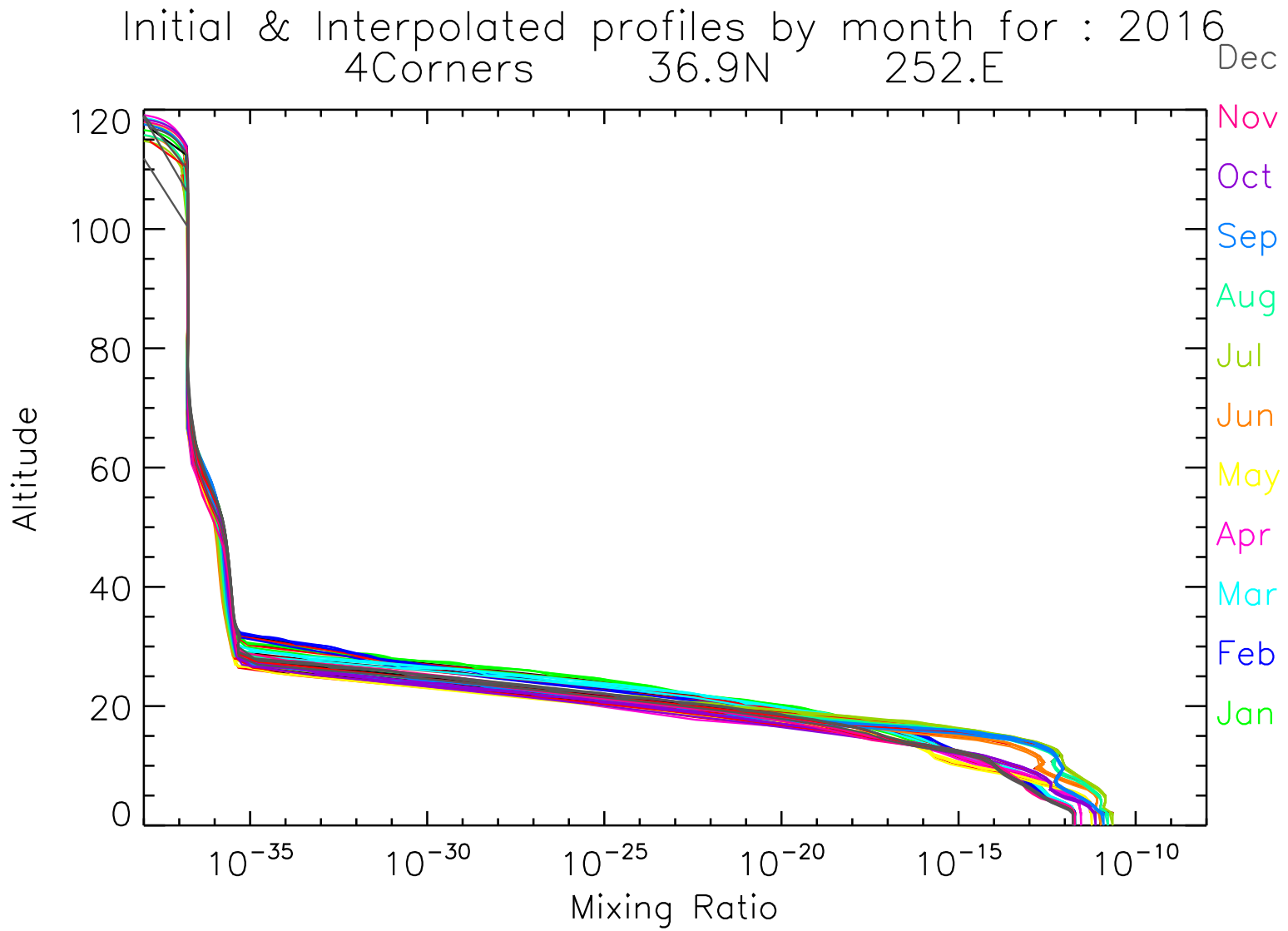

Initial & Interpolated profiles by month for : 2011
4Corners 36.9N 252.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
$10^{-35}$
$10^{-30}$
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio

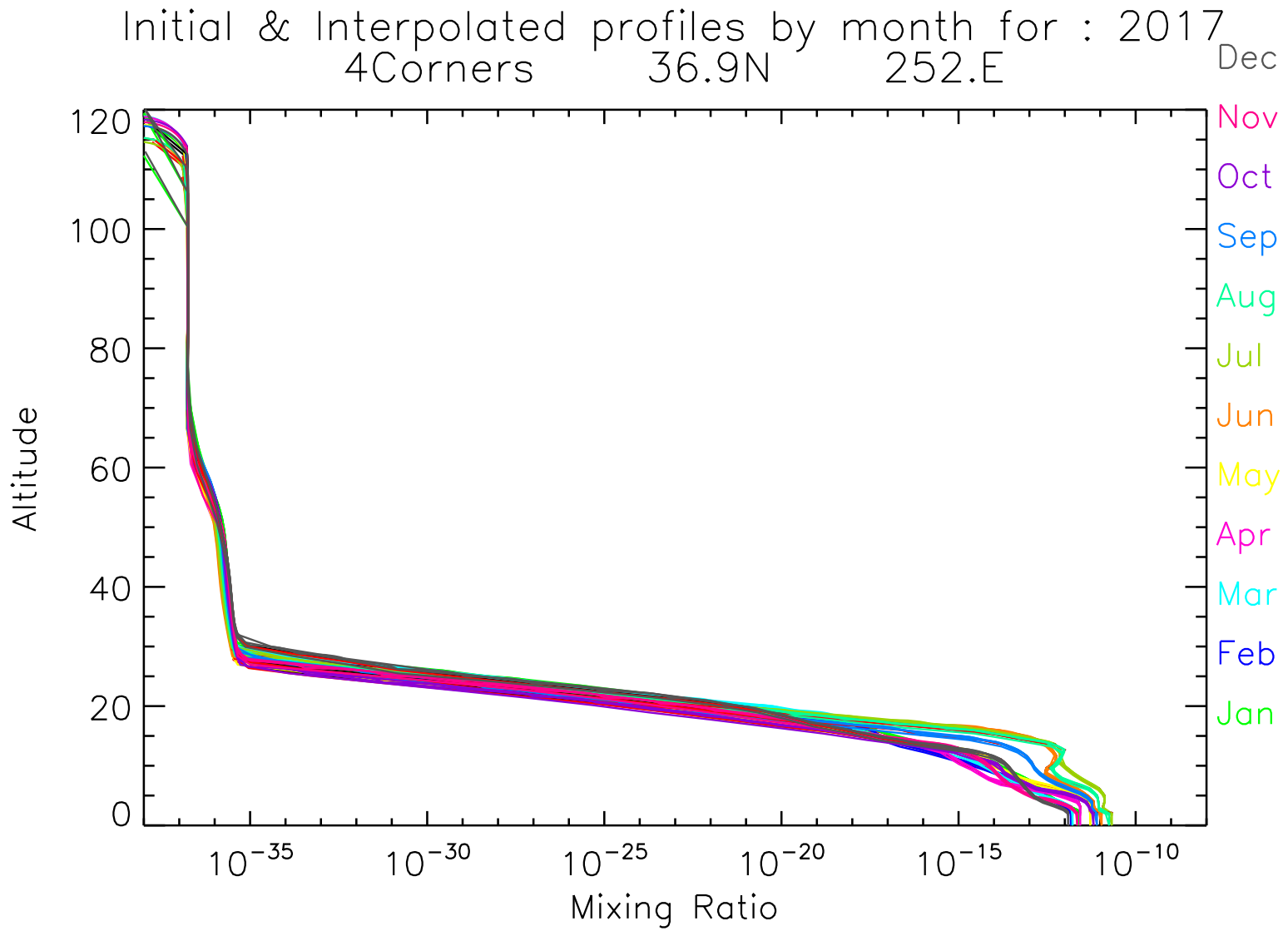

Initial & Interpolated profiles by month for : 2012
4Corners 36.9N 252.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
$10^{-35}$
$10^{-30}$
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio

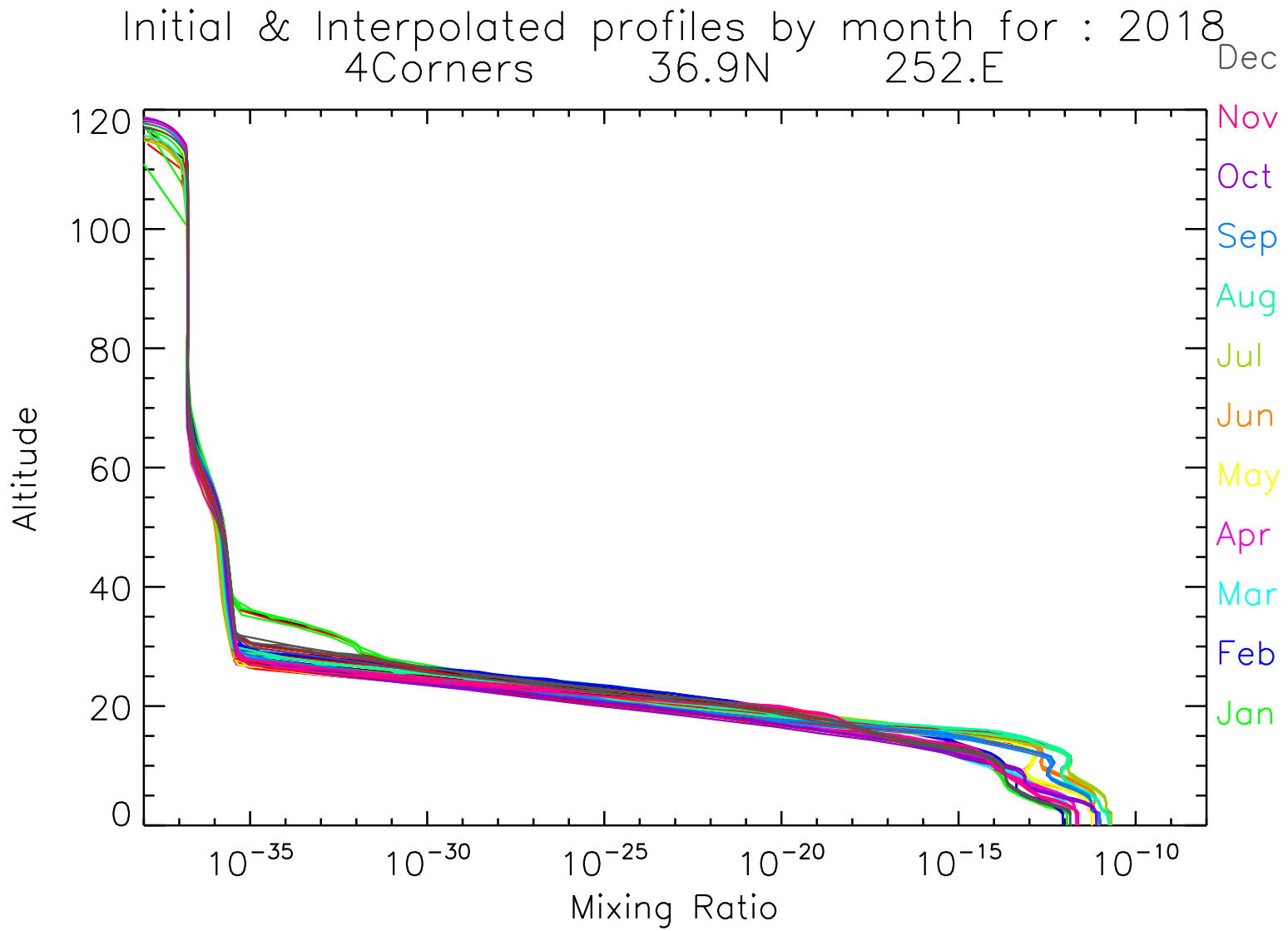

Initial & Interpolated profiles by month for : 2013
4Corners 36.9N 252.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
$10^{-35}$
$10^{-30}$
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio

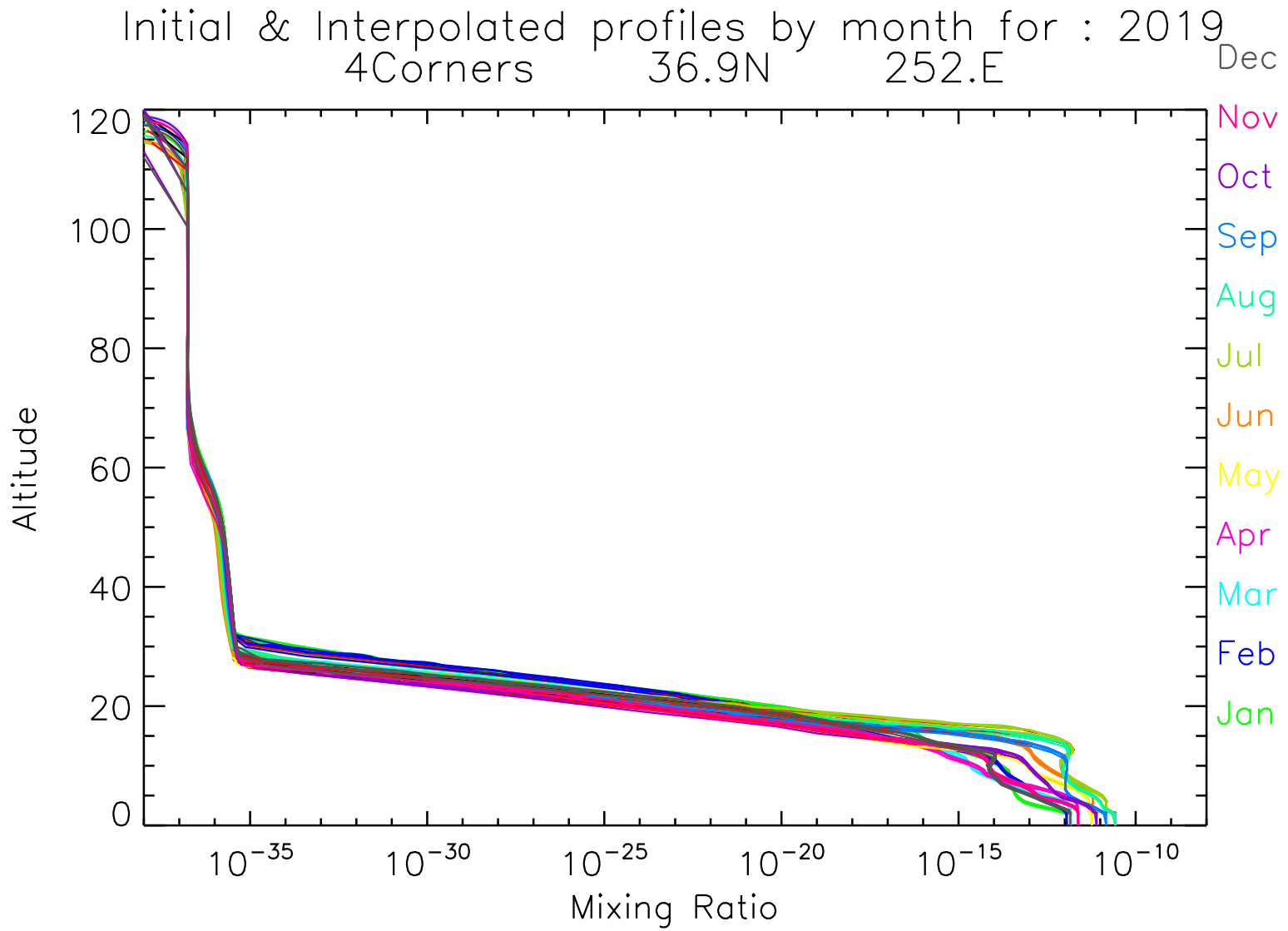

Initial & Interpolated profiles by month for : 2014
4Corners 36.9N 252.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
$10^{-35}$
$10^{-30}$
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio

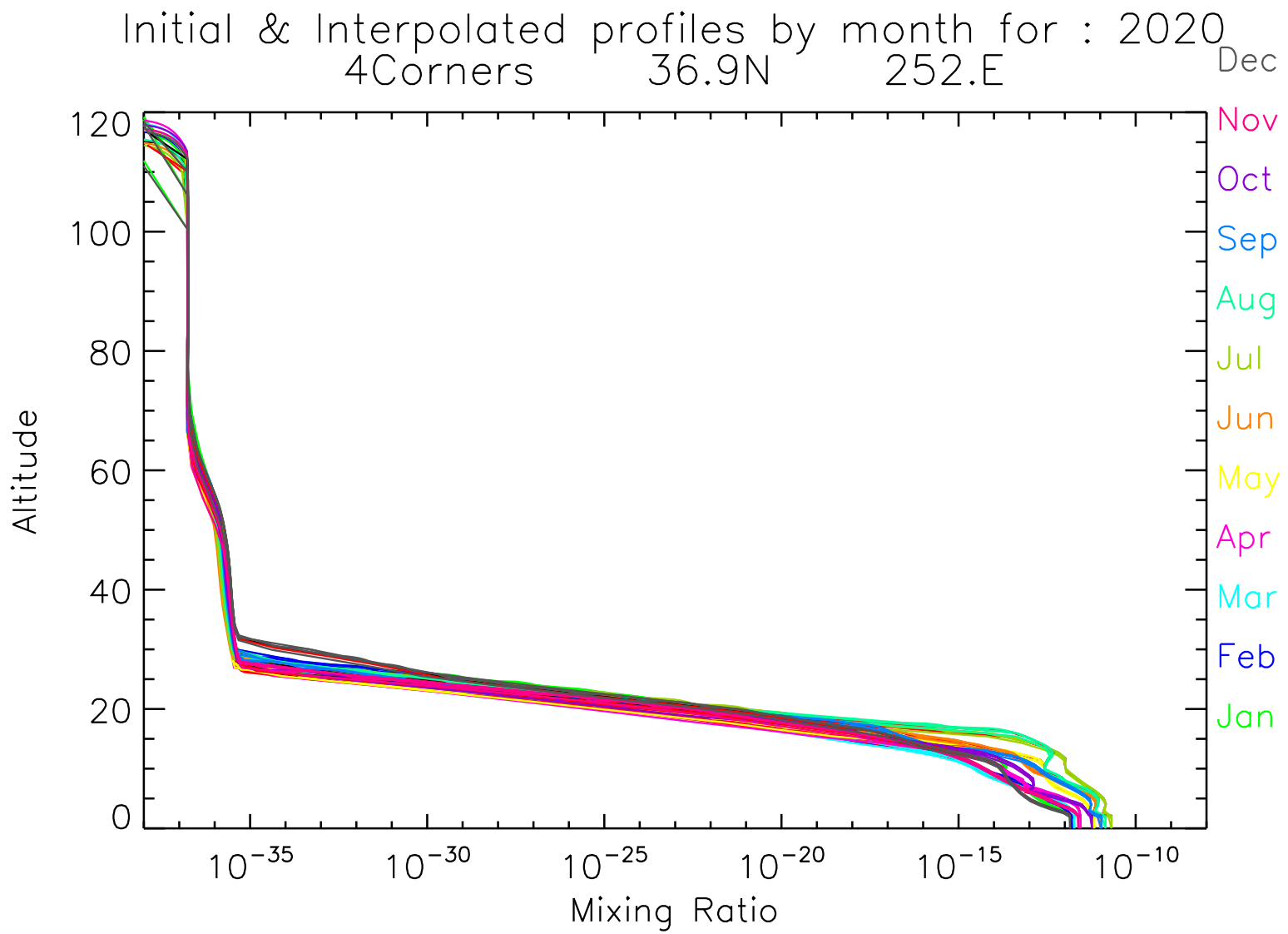

Initial & Interpolated profiles by month for : 2015
4Corners 36.9N 252.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
$10^{-35}$
$10^{-30}$
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio

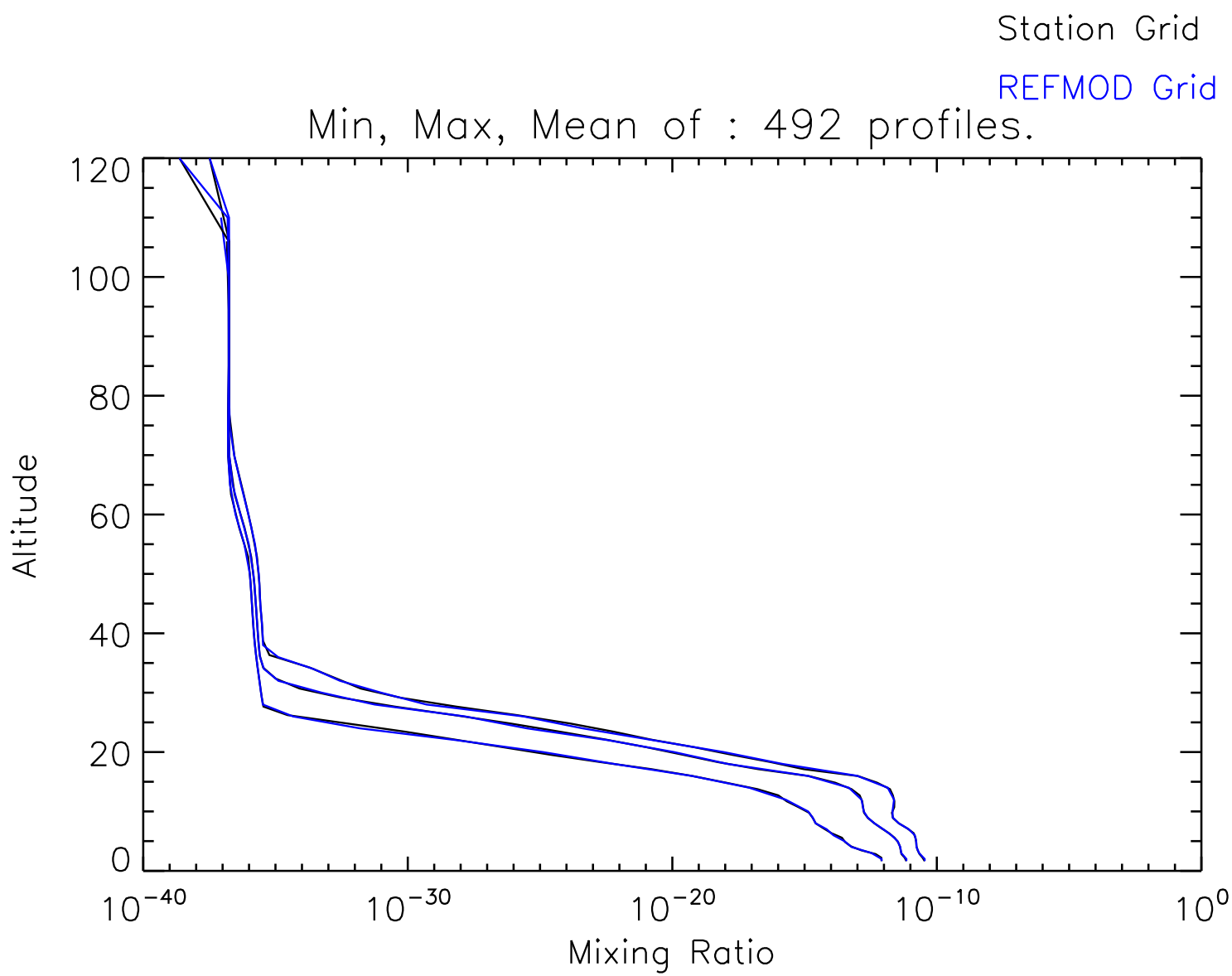

Initial & Interpolated profiles by month for : 2016
4Corners 36.9N 252.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
$10^{-35}$
$10^{-30}$
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio

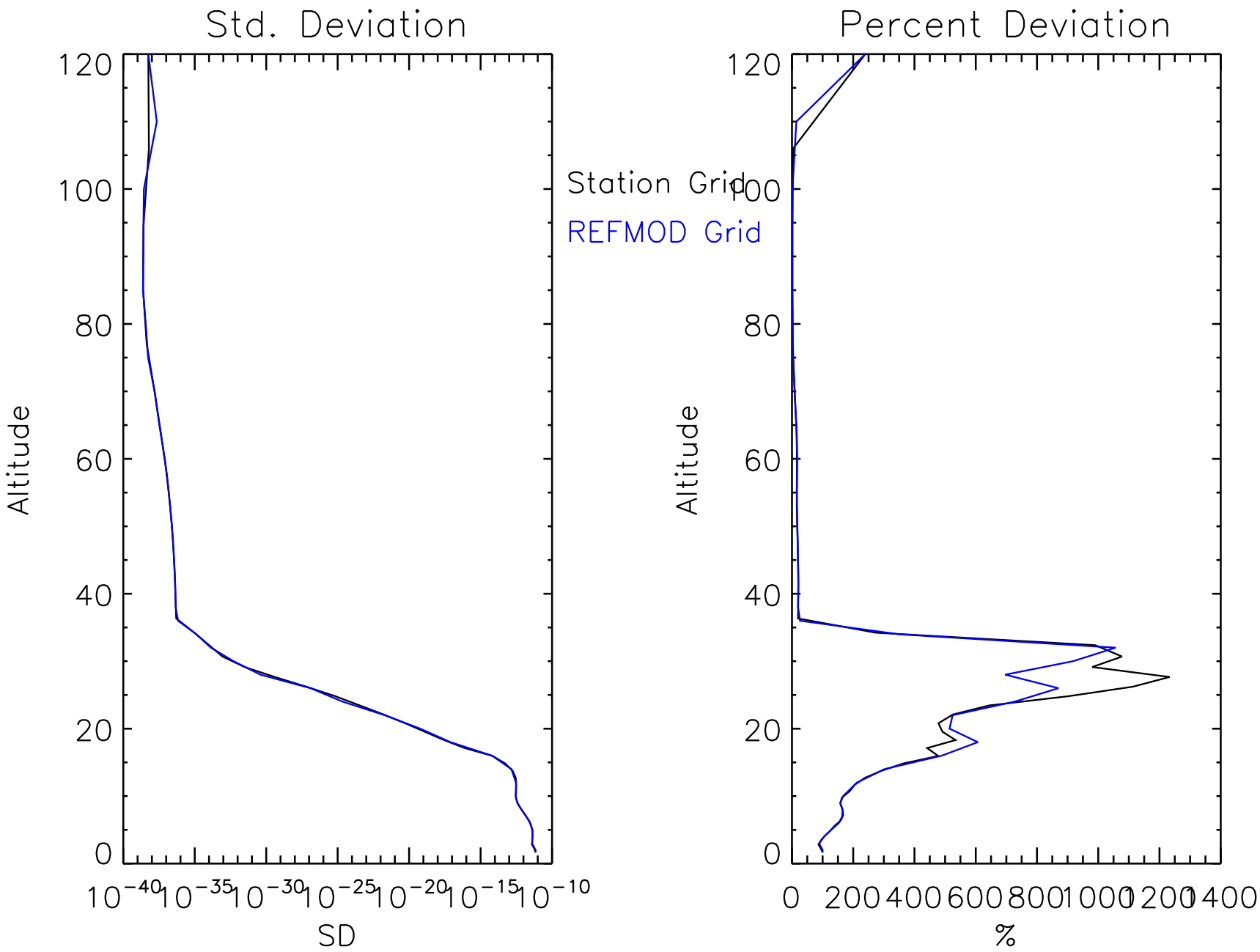

Initial & Interpolated profiles by month for : 2017
4Corners 36.9N 252.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
$10^{-35}$
$10^{-30}$
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio

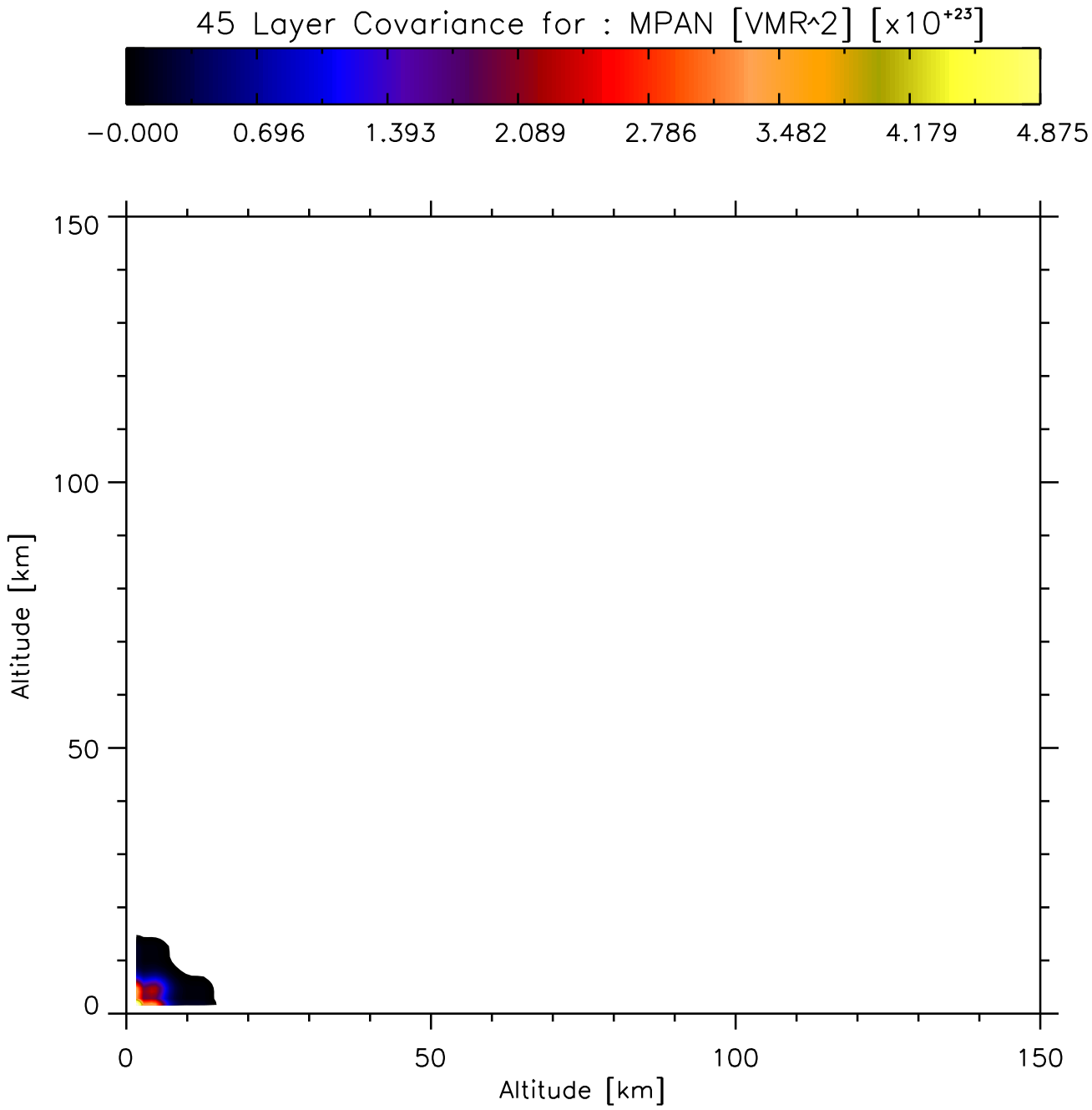

Initial & Interpolated profiles by month for : 2018
4Corners 36.9N 252.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
$10^{-35}$
$10^{-30}$
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio

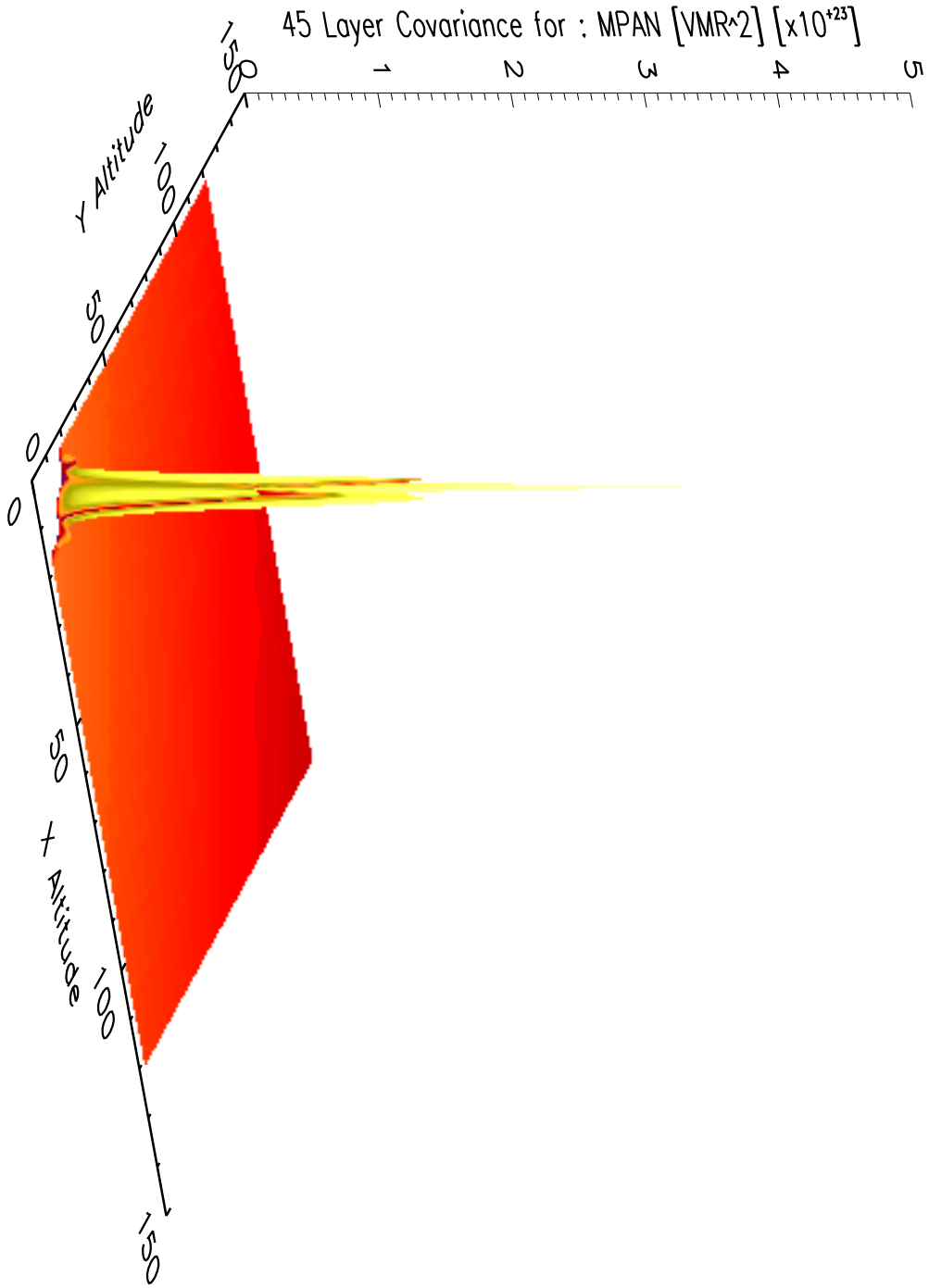

Initial & Interpolated profiles by month for : 2019
4Corners 36.9N 252.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
$10^{-35}$
$10^{-30}$
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio

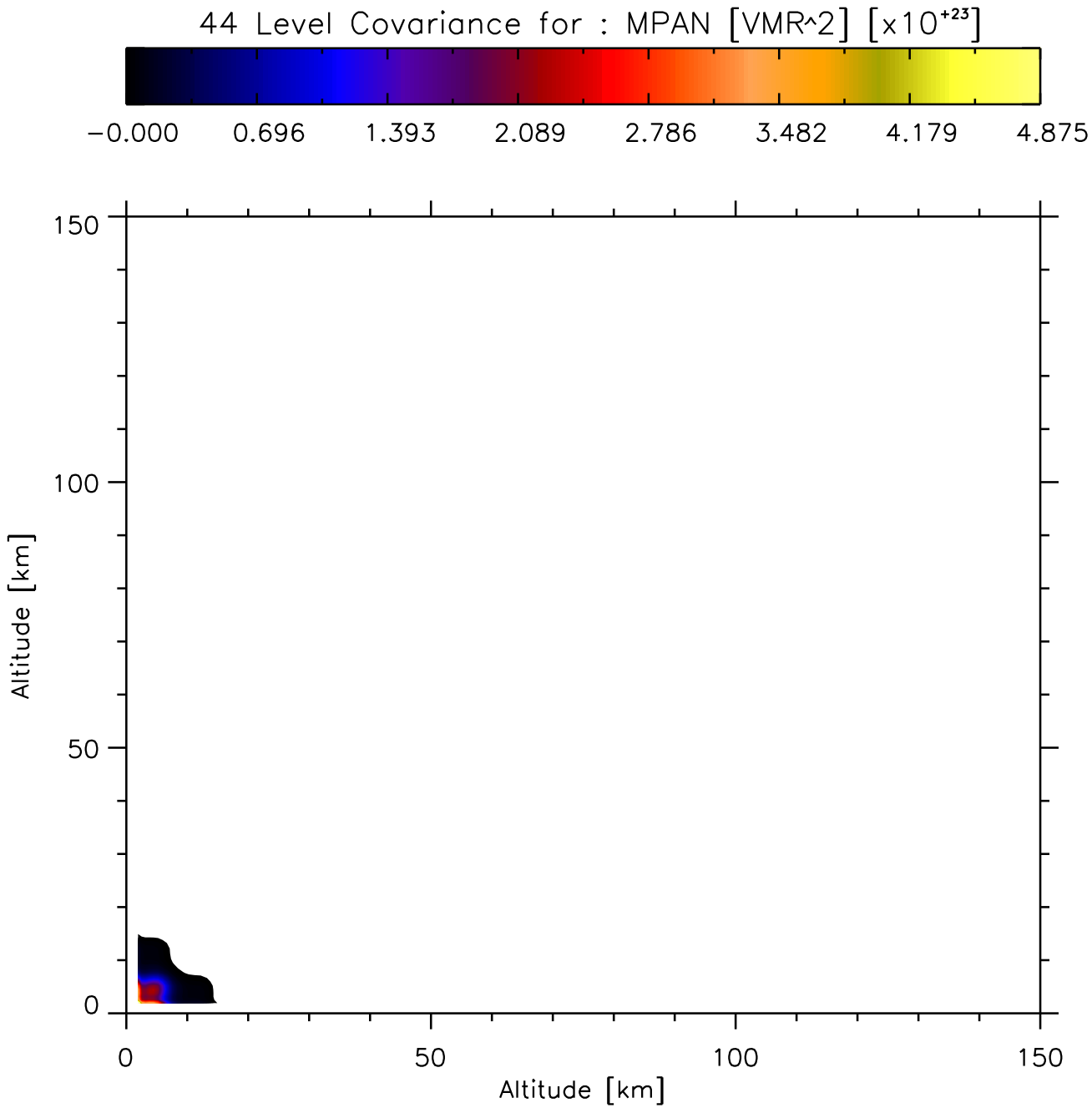

Initial & Interpolated profiles by month for : 2020
4Corners 36.9N 252.E
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan
Altitude
120
100
80
60
40
20
0
$10^{-35}$
$10^{-30}$
$10^{-25}$
$10^{-20}$
$10^{-15}$
$10^{-10}$
Mixing Ratio

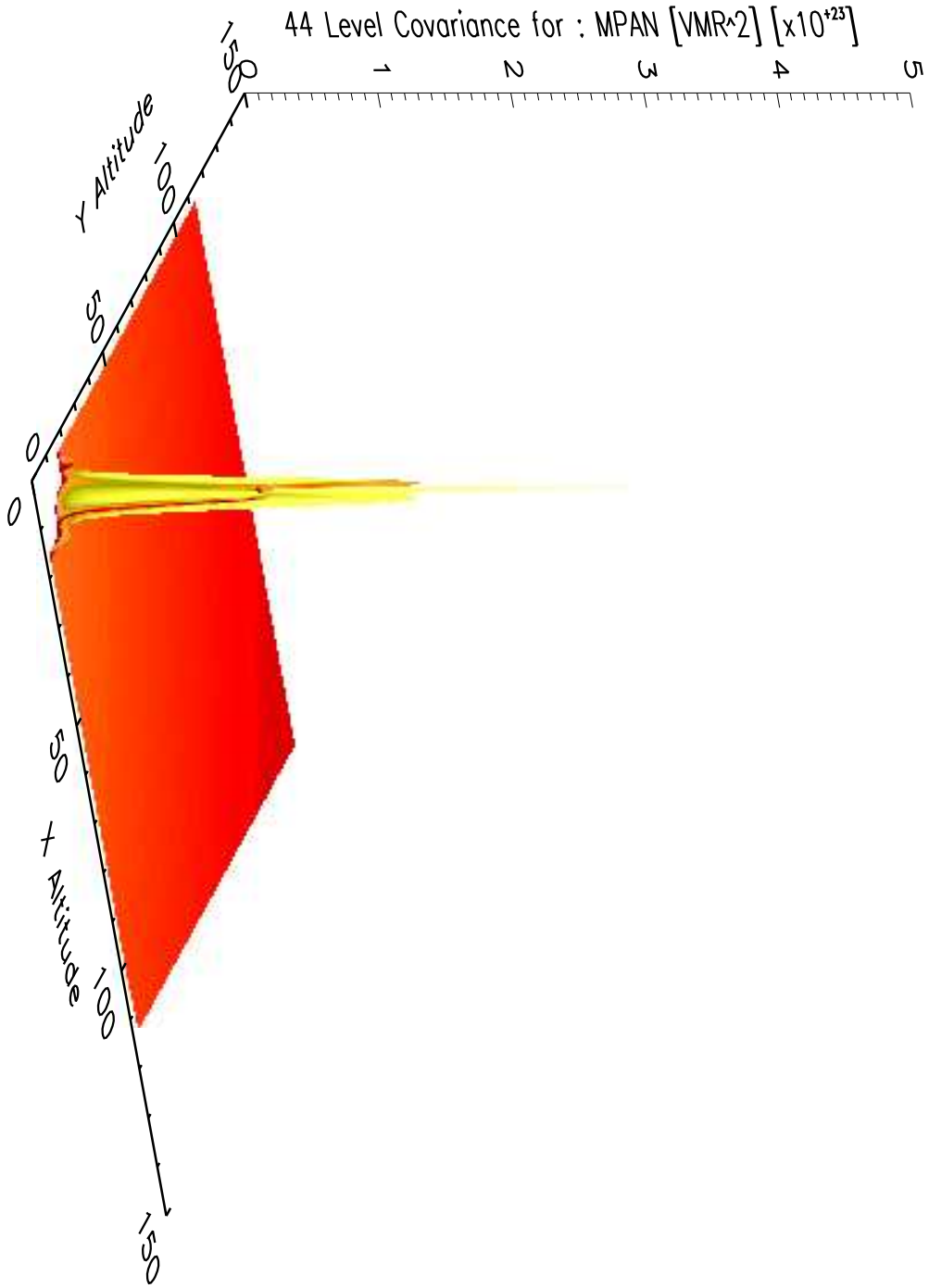

Station Grid
REFMOD Grid
Min, Max, Mean of : 492 profiles.
120
100
80
60
40
20
0
Altitude
$10^{-40}$
$10^{-30}$
$10^{-20}$
$10^{-10}$
$10^{0}$
Mixing Ratio


Std. Deviation
Percent Deviation
Station Grid
REFMOD Grid
Altitude
Altitude
120
100
80
60
40
20
0
$10^{-40}$ $10^{-35}$ $10^{-30}$ $10^{-25}$ $10^{-20}$ $10^{-15}$ $10^{-10}$
SD
0 200 400 600 800 1000 1200 1400
%


45 Layer Covariance for : MPAN [VMR^2] [x10^+23]
−0.000
0.696
1.393
2.089
2.786
3.482
4.179
4.875
150
100
50
0
Altitude [km]
0
50
100
150
Altitude [km]


45 Layer Covariance for : MPAN [VMR^2] [x10^+23]
150
100
50
0
Y Altitude
0
50
100
150
X Altitude
1
2
3
4
5


44 Level Covariance for : MPAN [VMR^2] [x10^+23]
−0.000
0.696
1.393
2.089
2.786
3.482
4.179
4.875
150
100
50
0
Altitude [km]
0
50
100
150
Altitude [km]


44 Level Covariance for : MPAN [VMR^2] [x10^+23]
150
1
2
3
4
5
Y Altitude
100
50
0
0
50
X Altitude
100
150