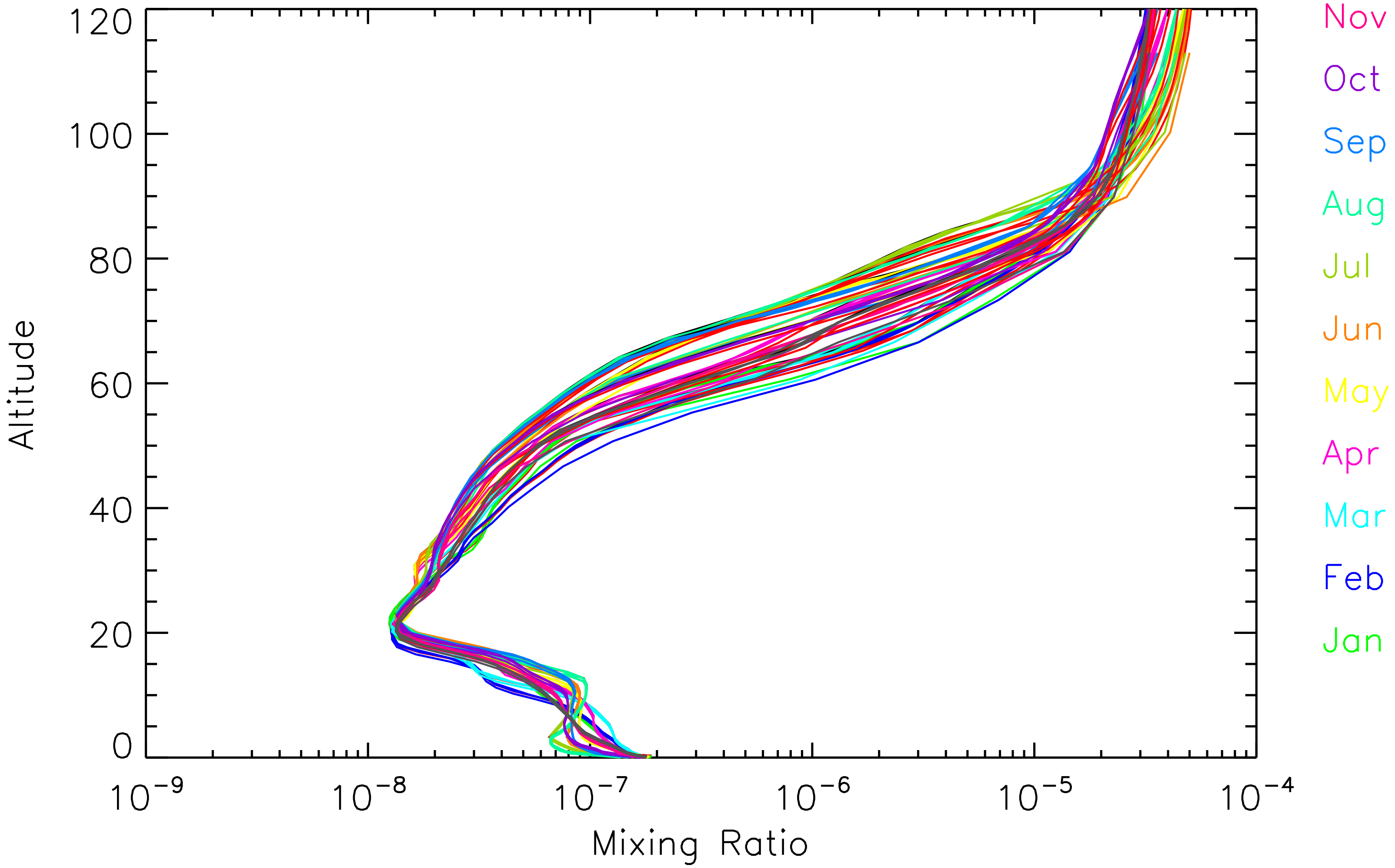
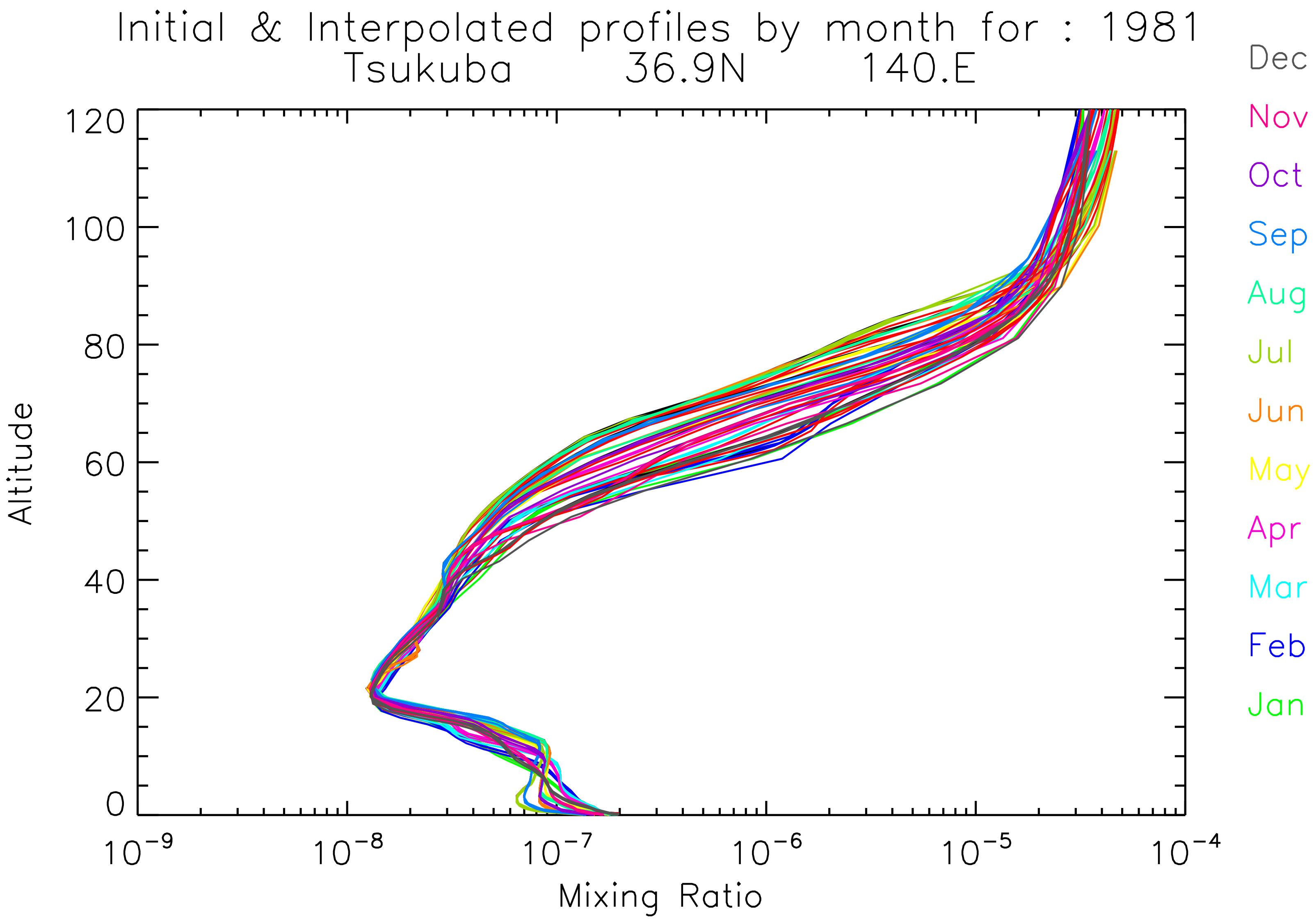
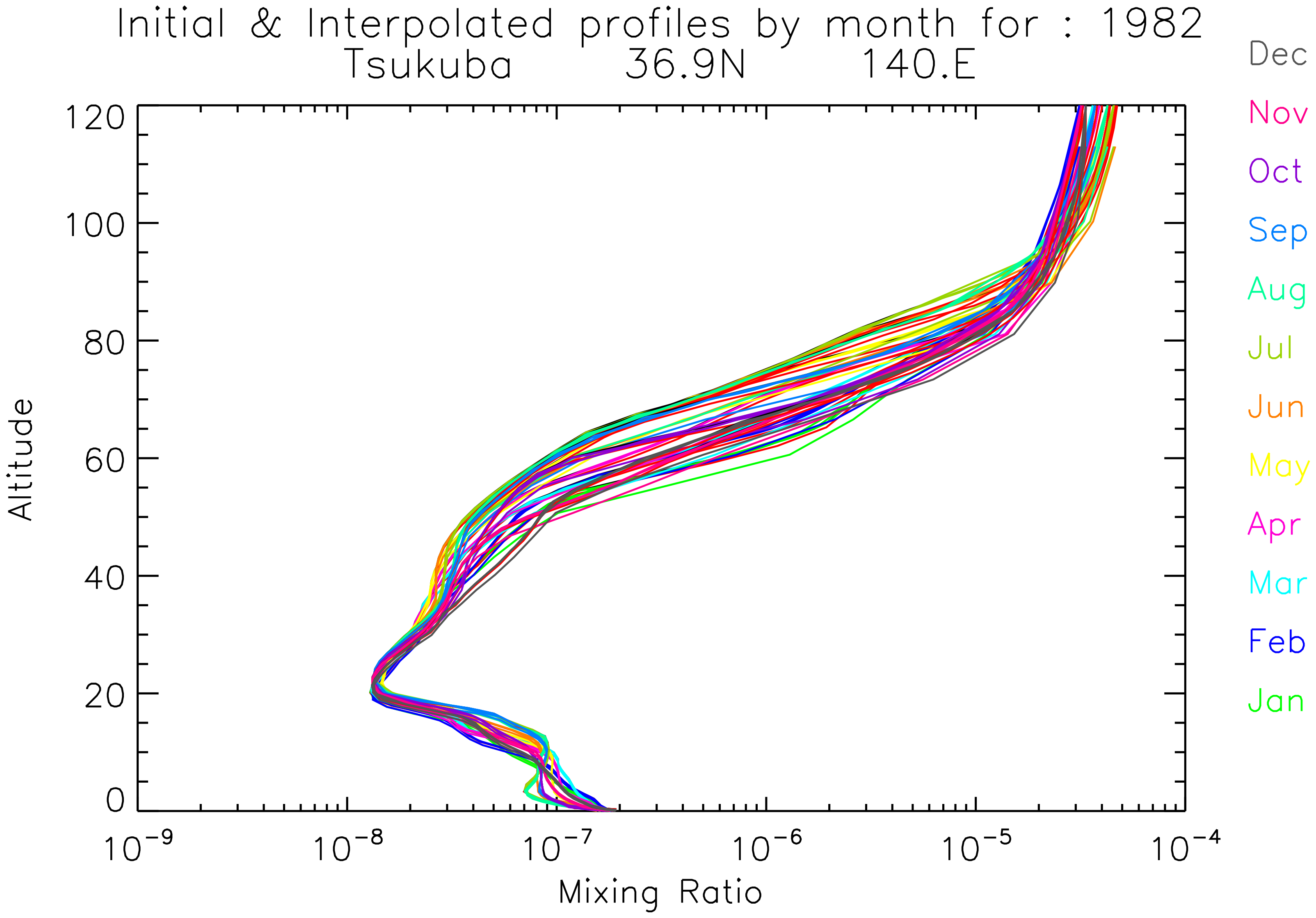
Initial & Interpolated profiles by month for : 1980
Tsukuba 36.9N 140.E

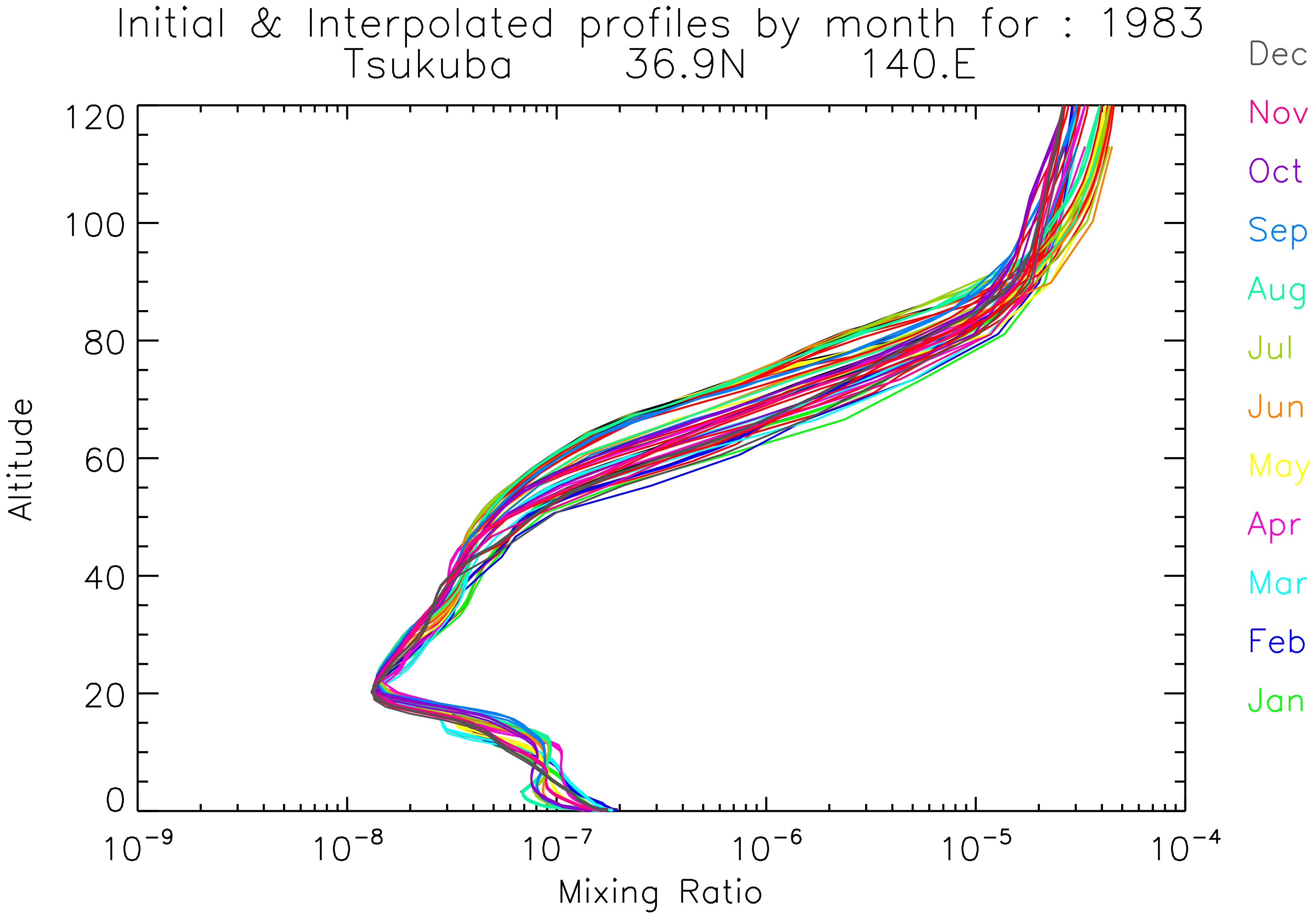


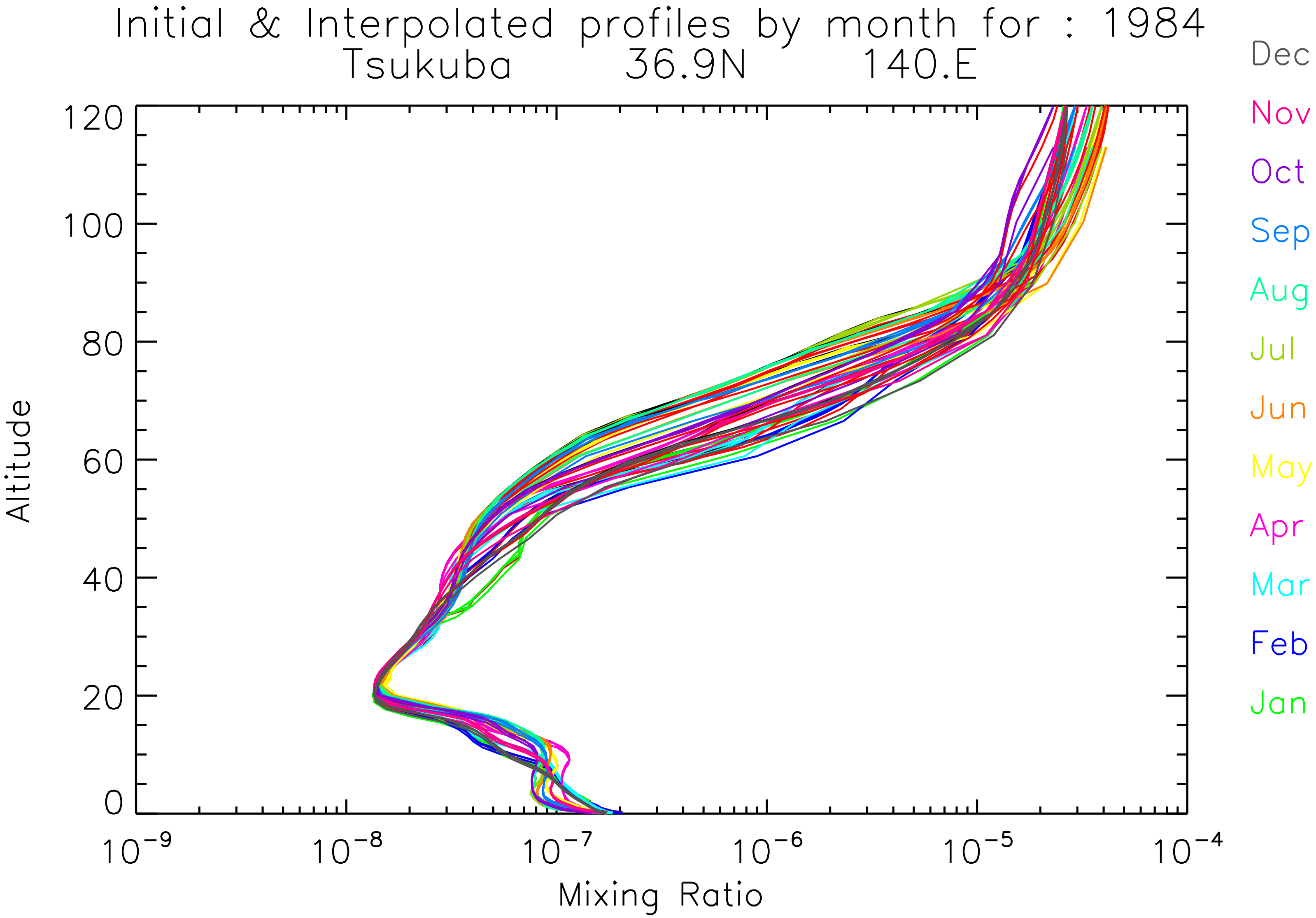


Initial & Interpolated profiles by month for : 1981
Tsukuba 36.9N 140.E



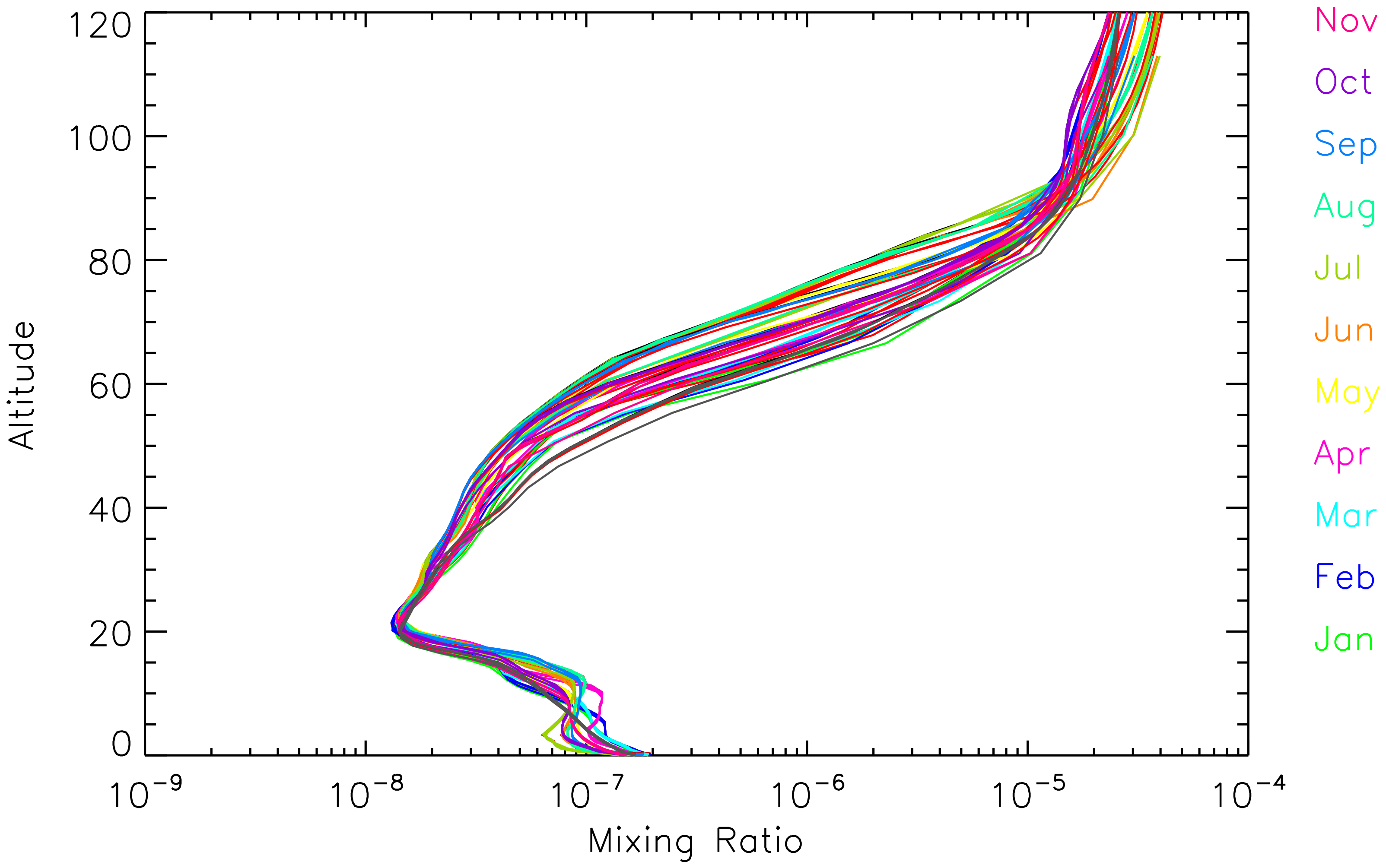
Initial & Interpolated profiles by month for : 1982
Tsukuba 36.9N 140.E



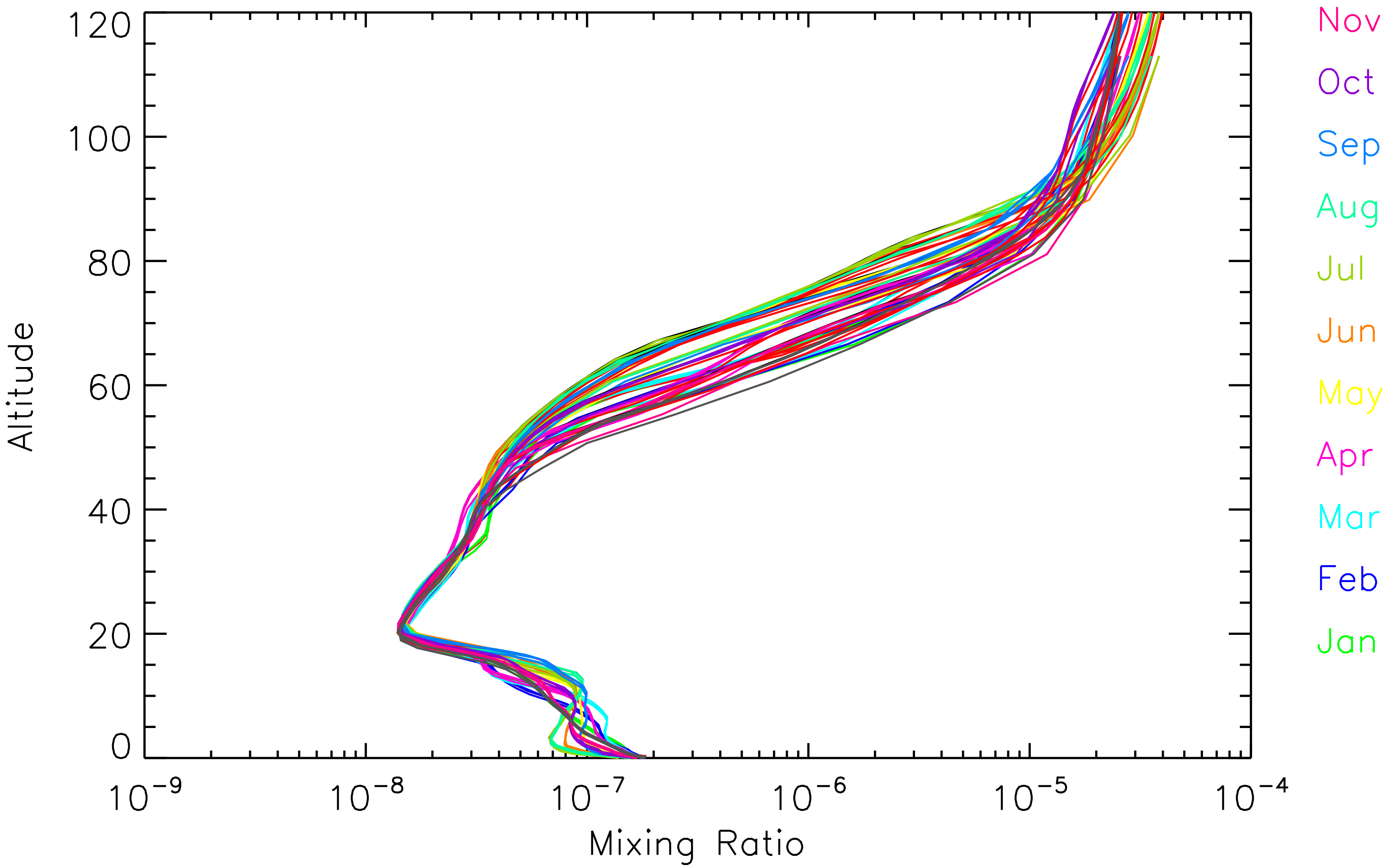


Initial & Interpolated profiles by month for : 1984
Tsukuba 36.9N 140.E

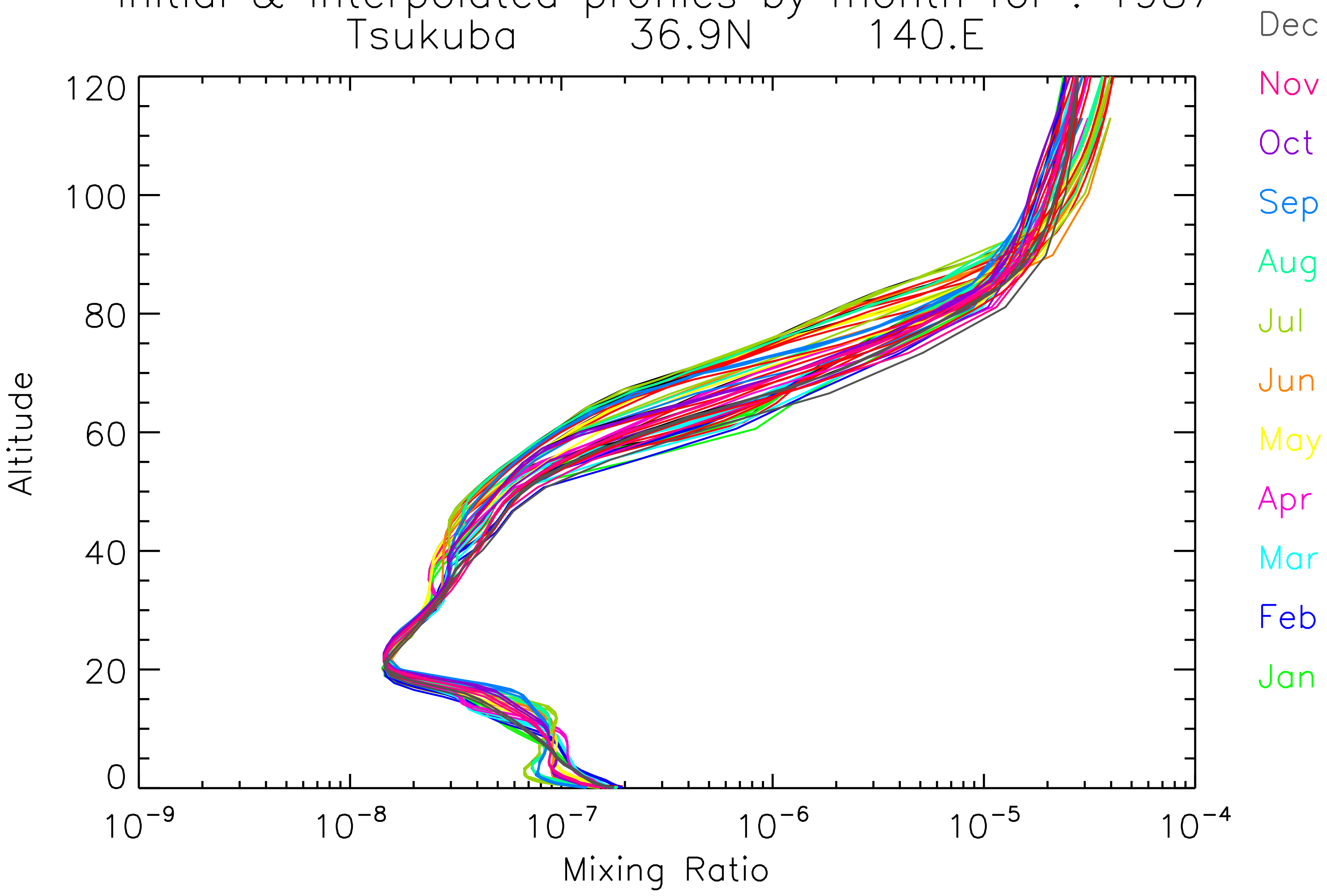
Initial & Interpolated profiles by month for : 1985
Tsukuba 36.9N 140.E

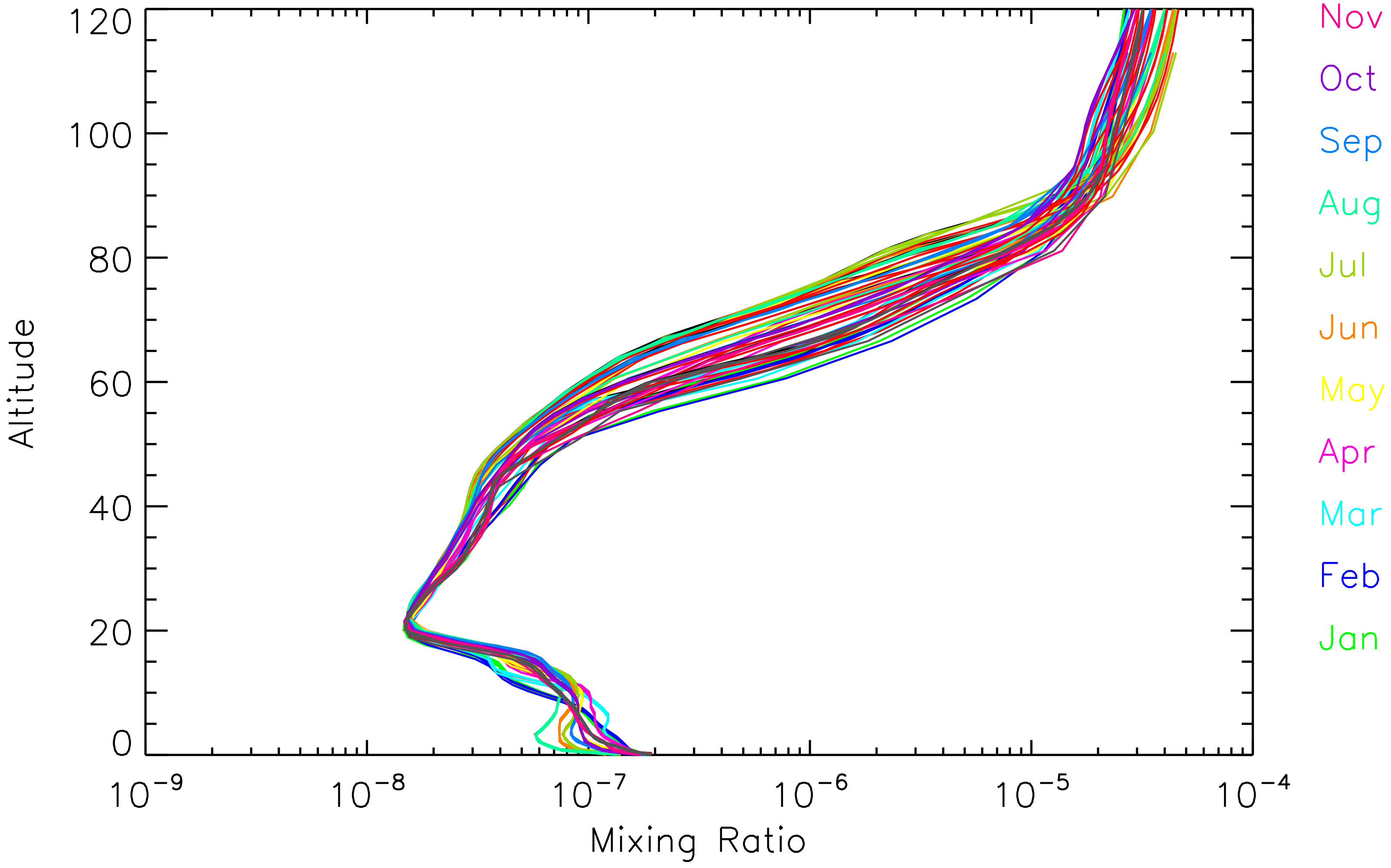


Initial & Interpolated profiles by month for : 1986
Tsukuba 36.9N 140.E

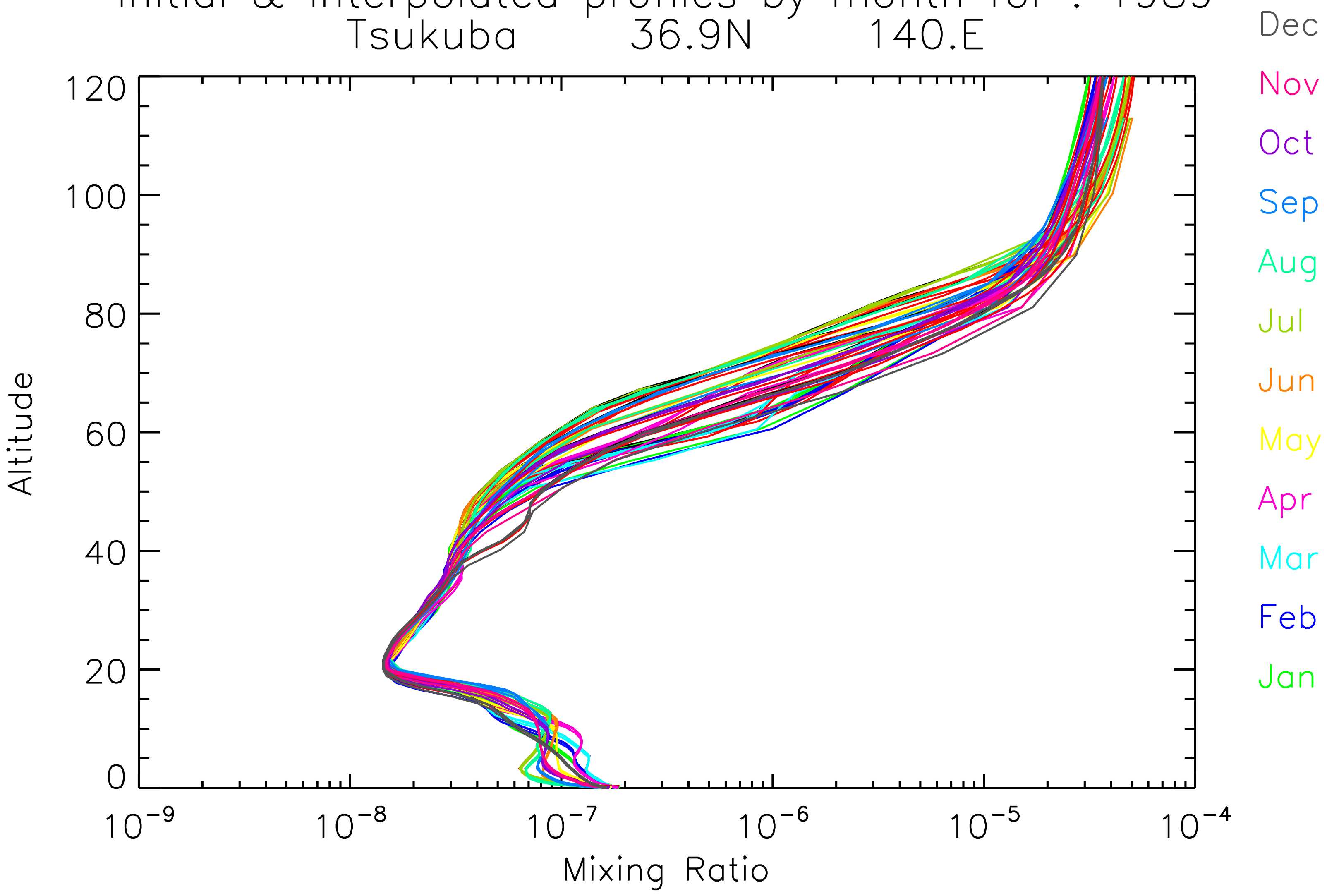


Initial & Interpolated profiles by month for : 1987
Tsukuba 36.9N 140.E



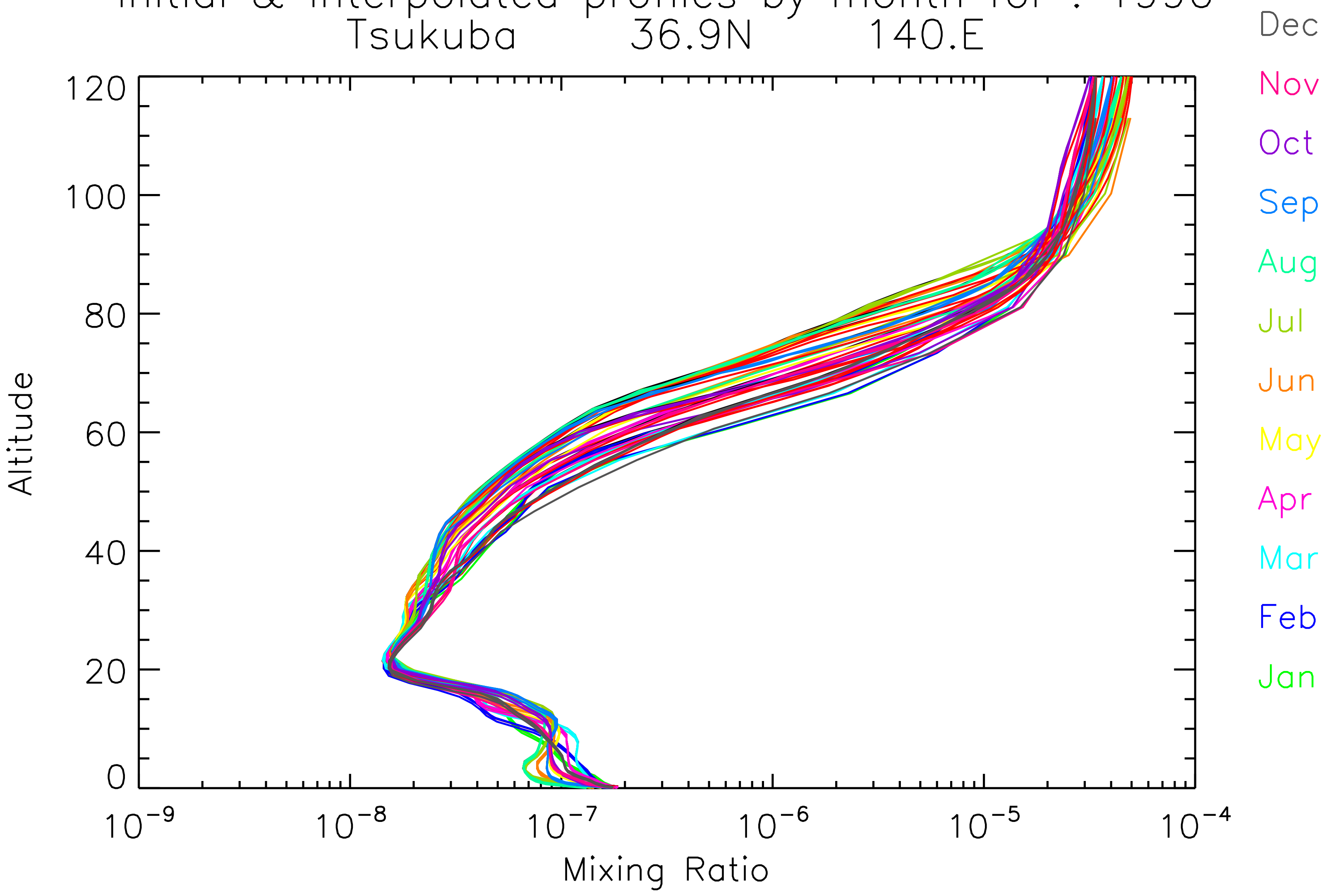


Initial & Interpolated profiles by month for : 1988
Tsukuba 36.9N 140.E

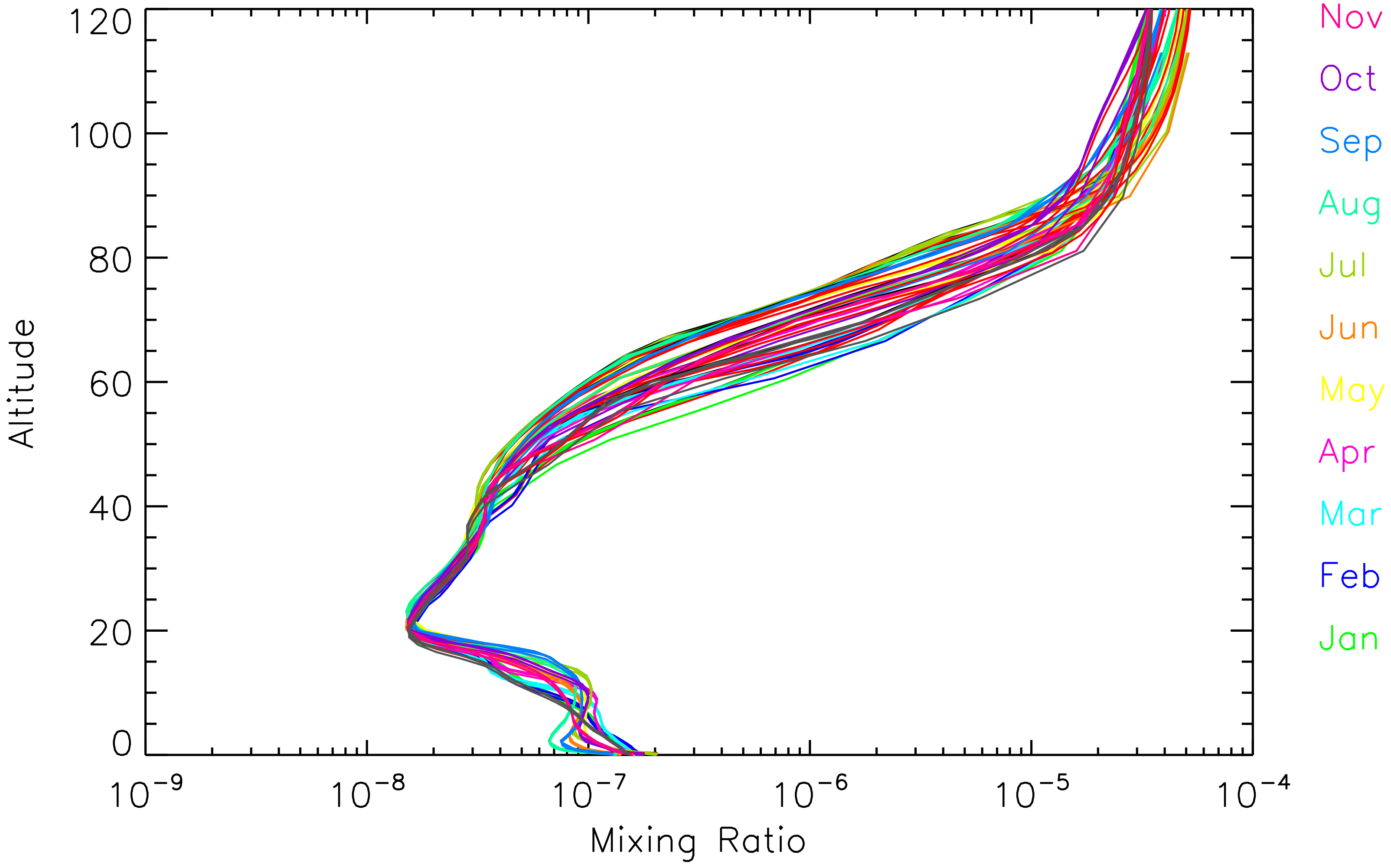


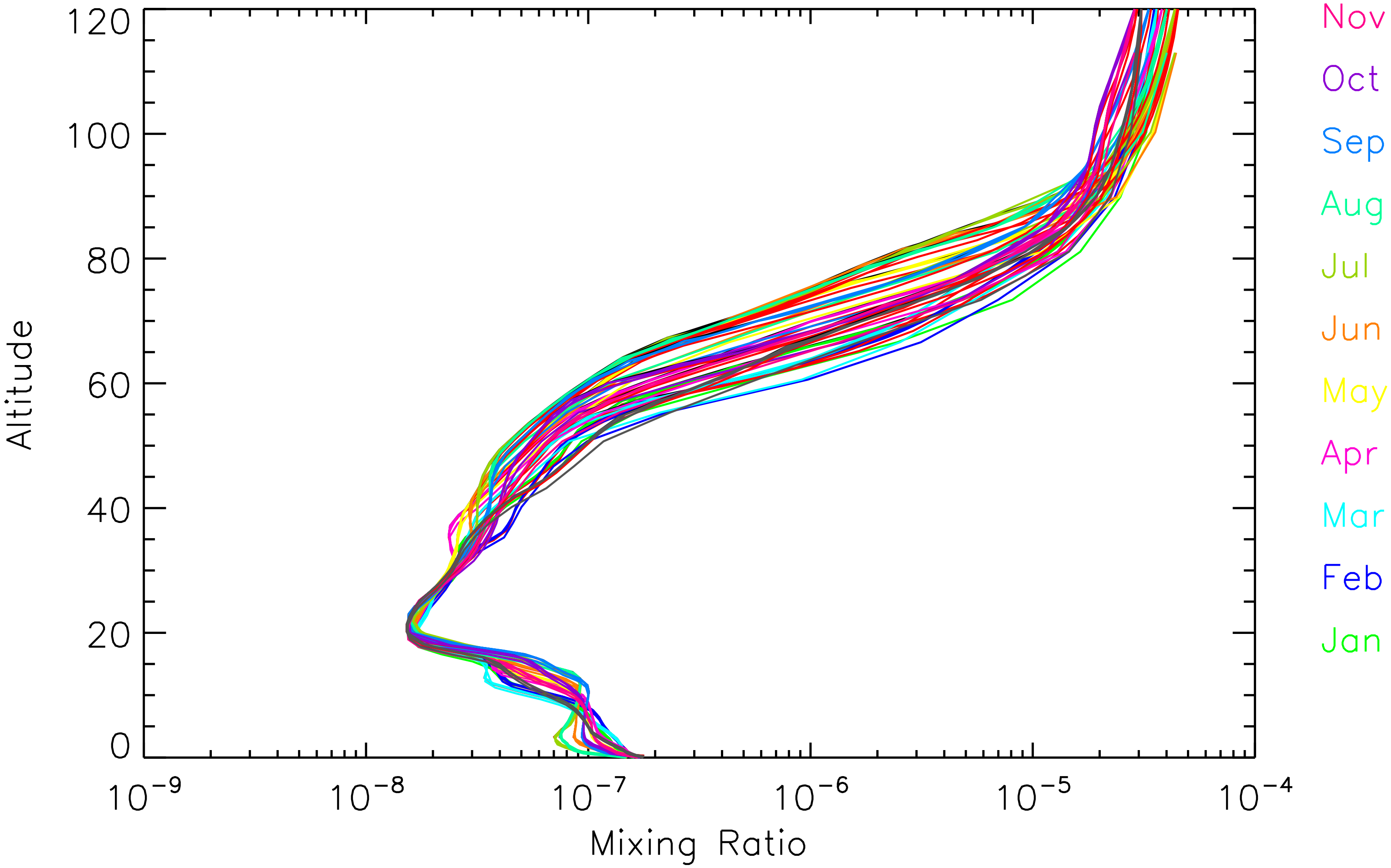
Initial & Interpolated profiles by month for : 1989
Tsukuba 36.9N 140.E

Initial & Interpolated profiles by month for : 1990
Tsukuba 36.9N 140.E

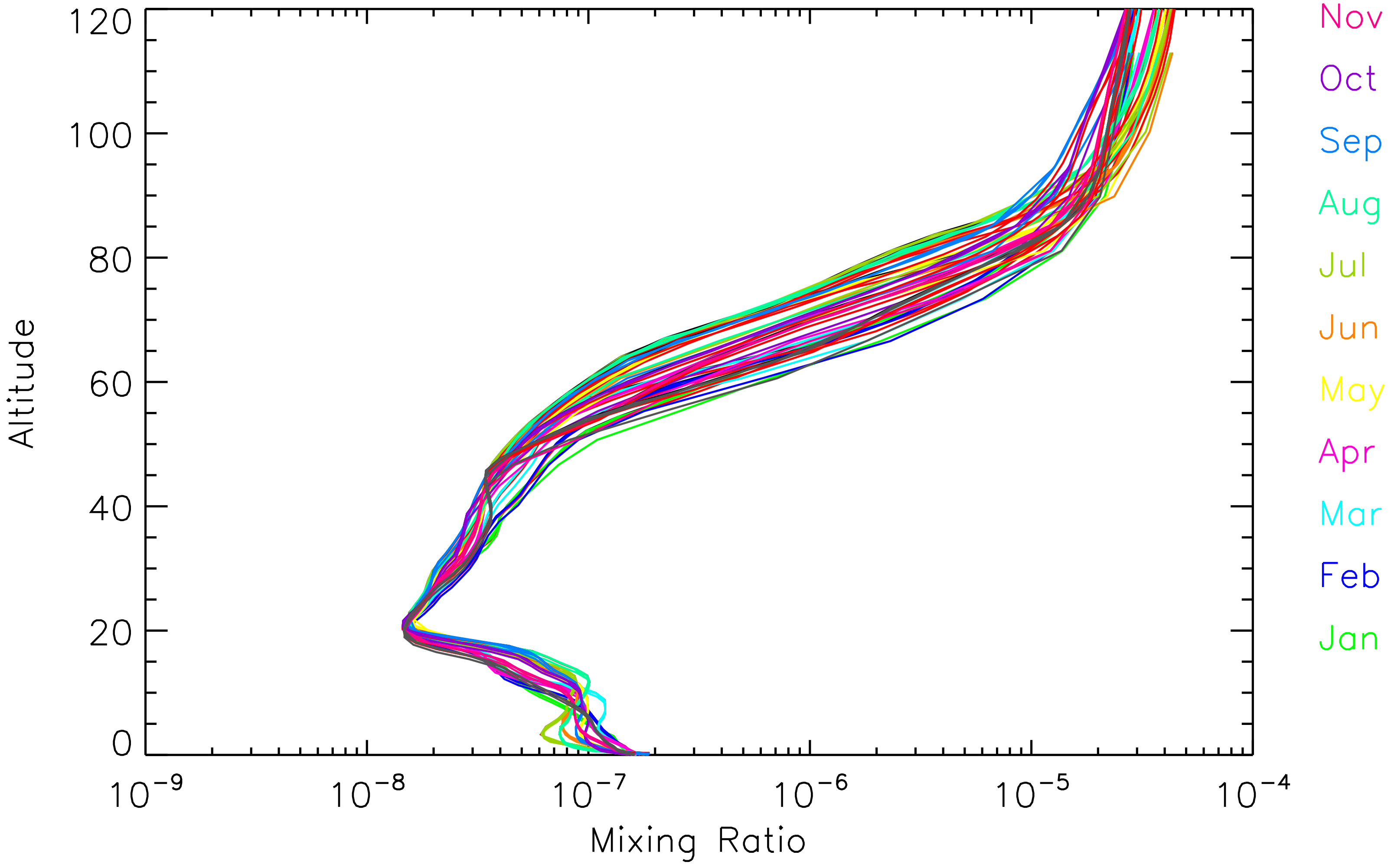


Initial & Interpolated profiles by month for : 1991
Tsukuba 36.9N 140.E

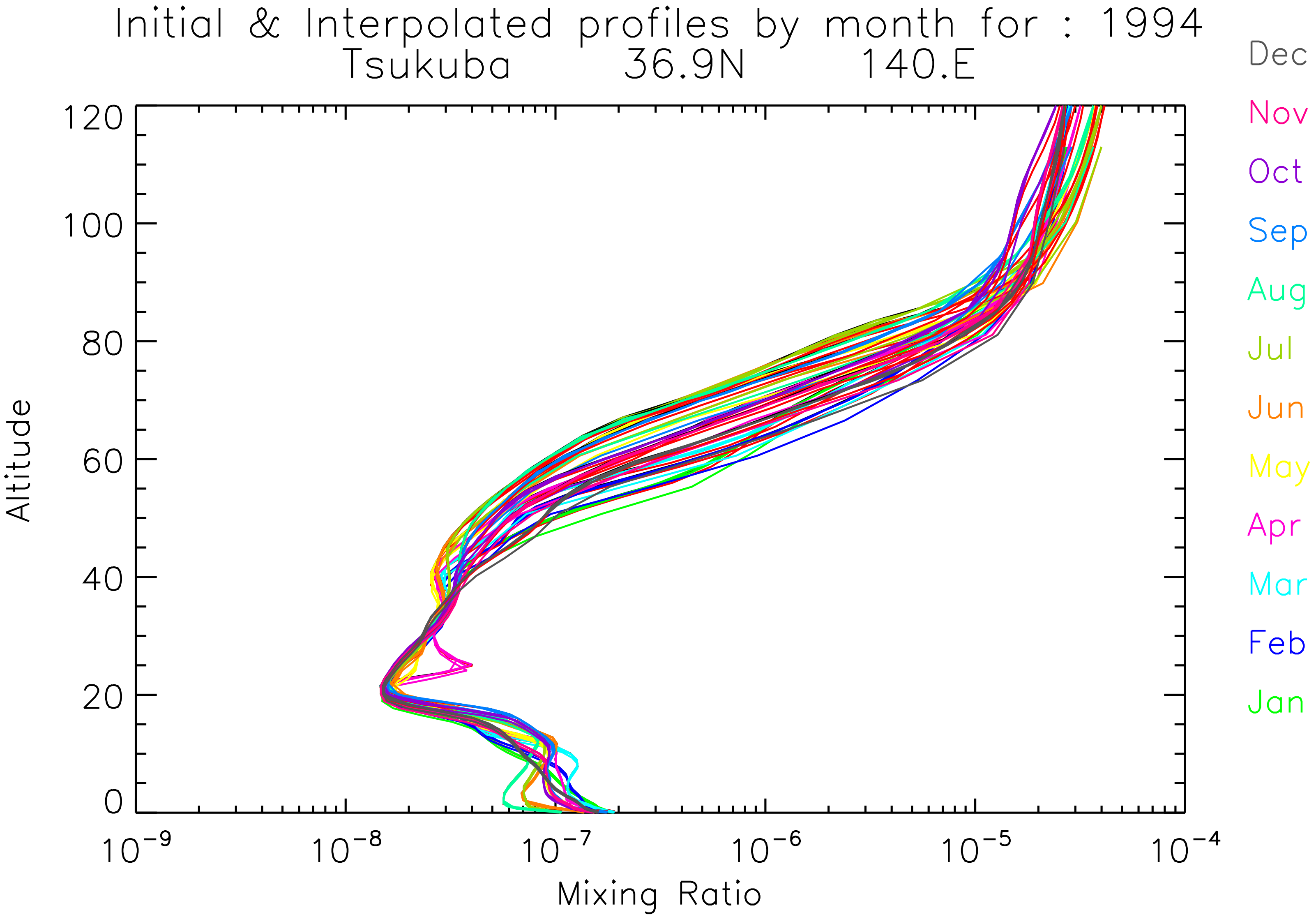




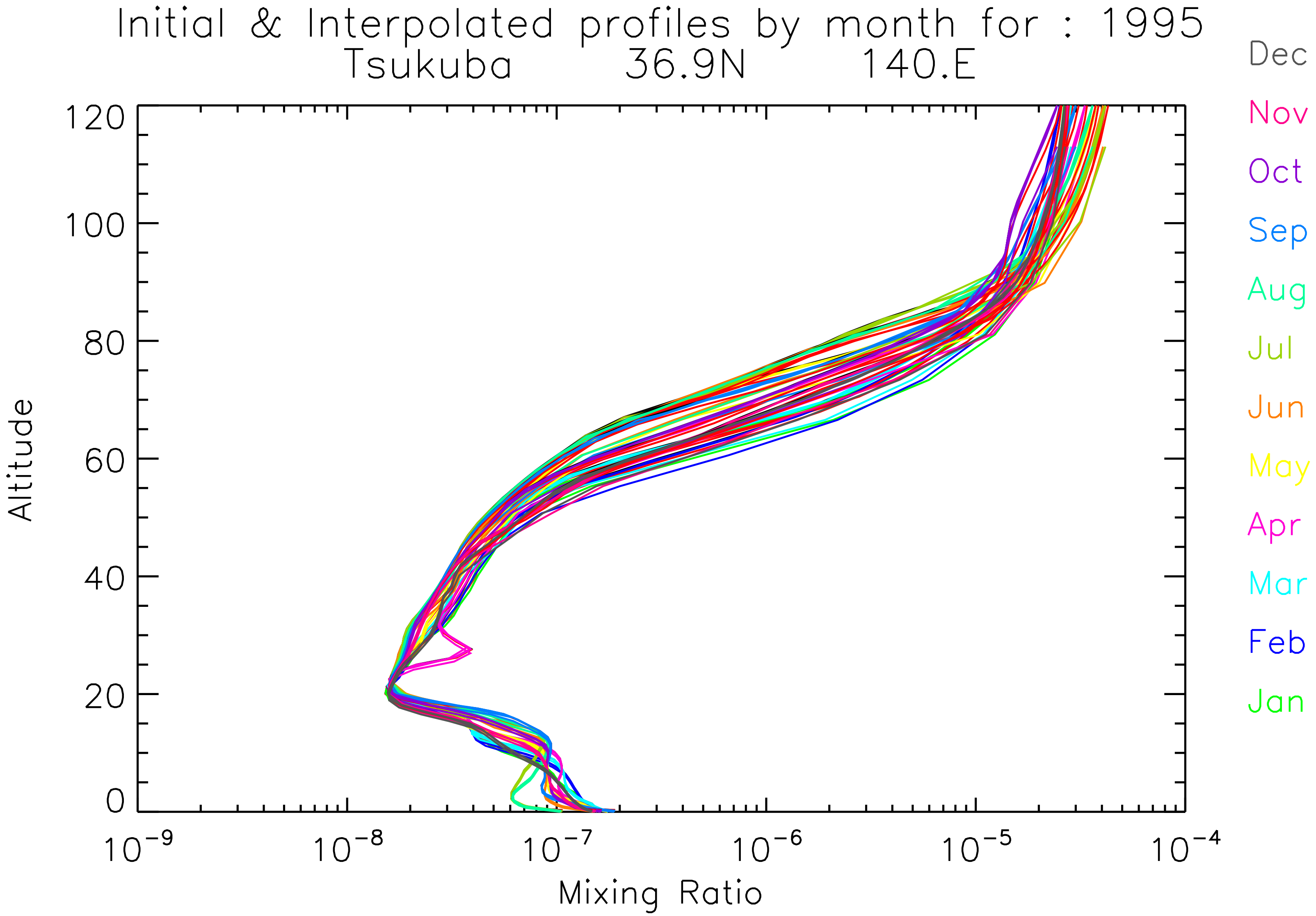
Initial & Interpolated profiles by month for : 1992
Tsukuba 36.9N 140.E

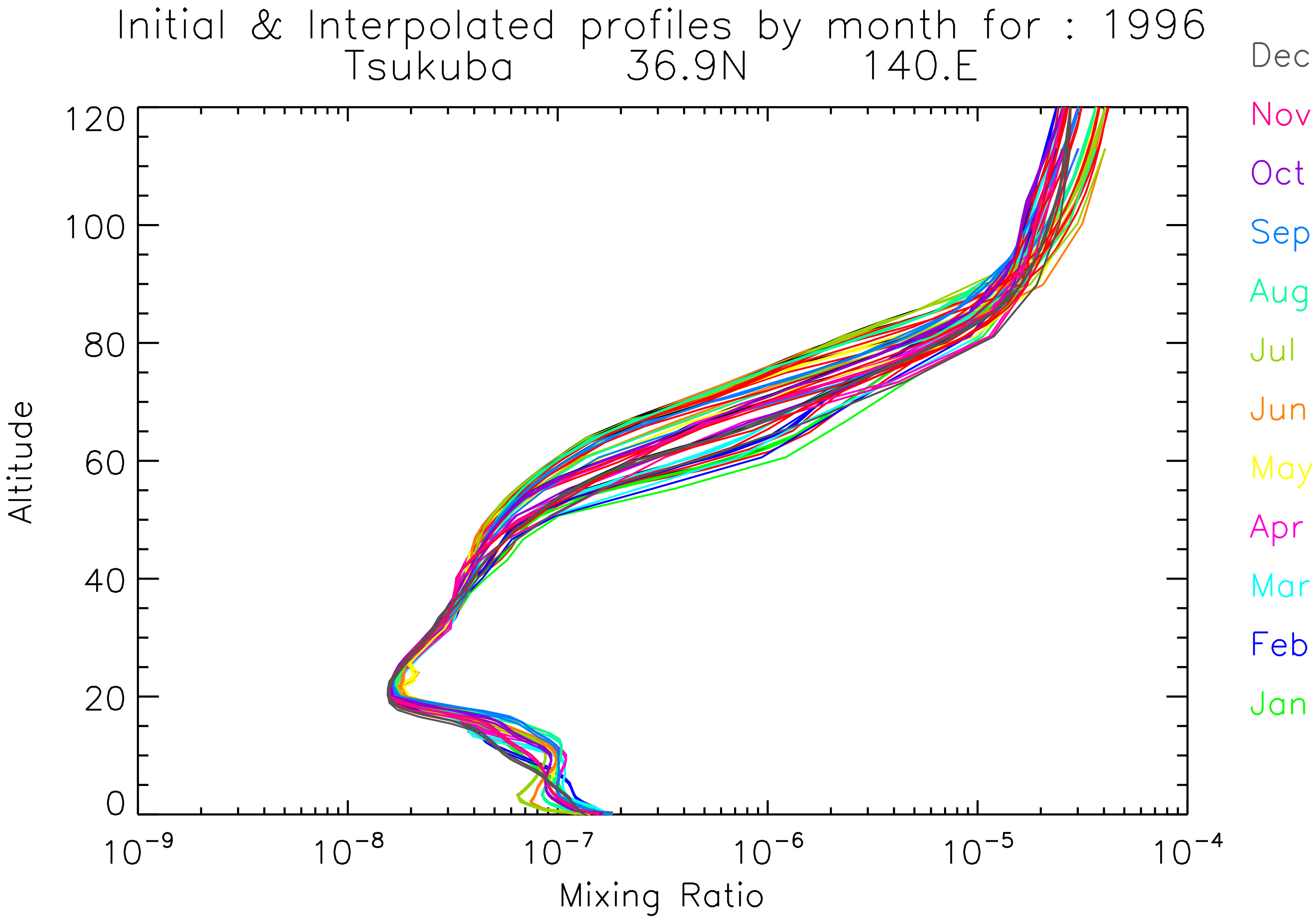


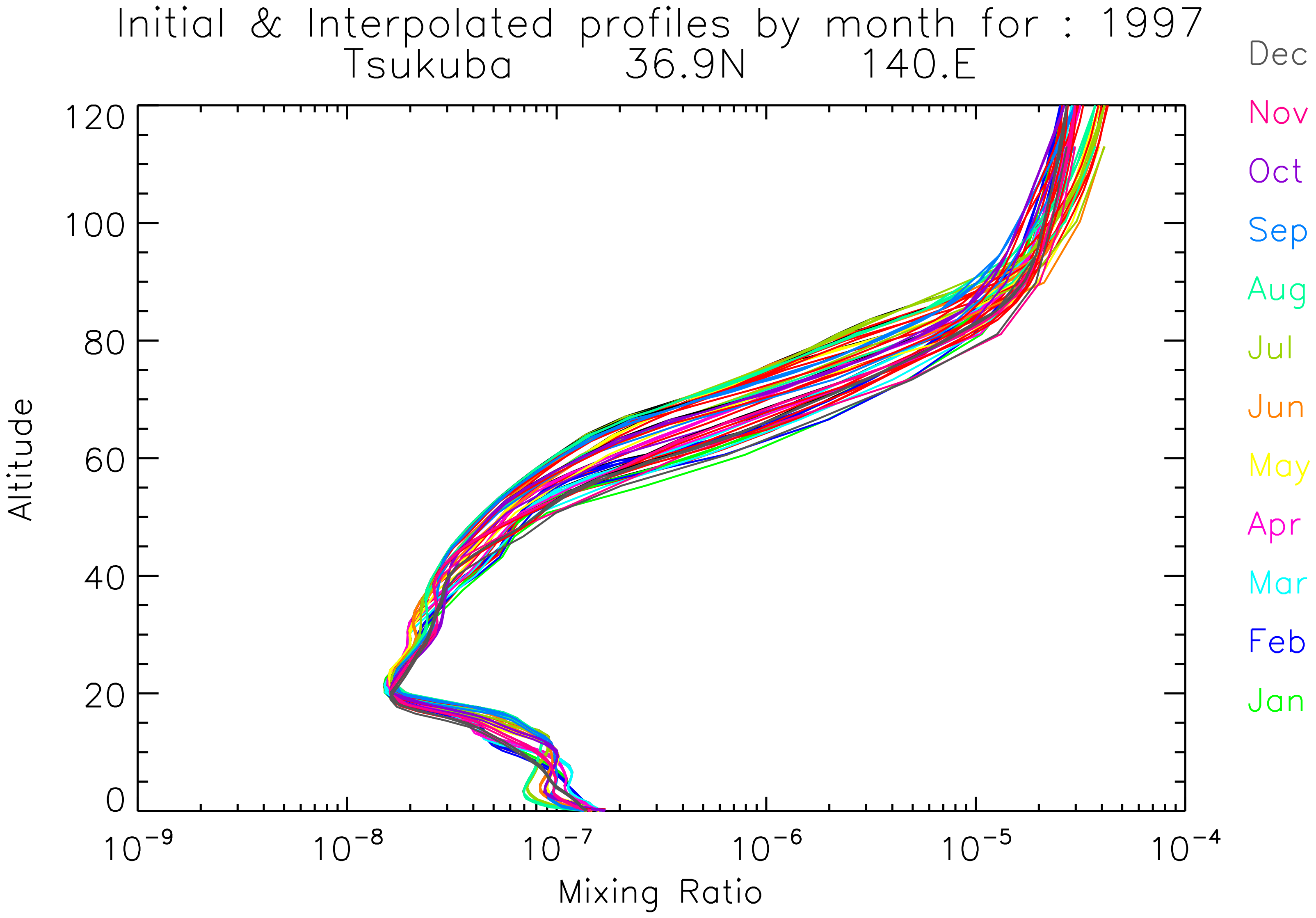
Initial & Interpolated profiles by month for : 1993
Tsukuba 36.9N 140.E



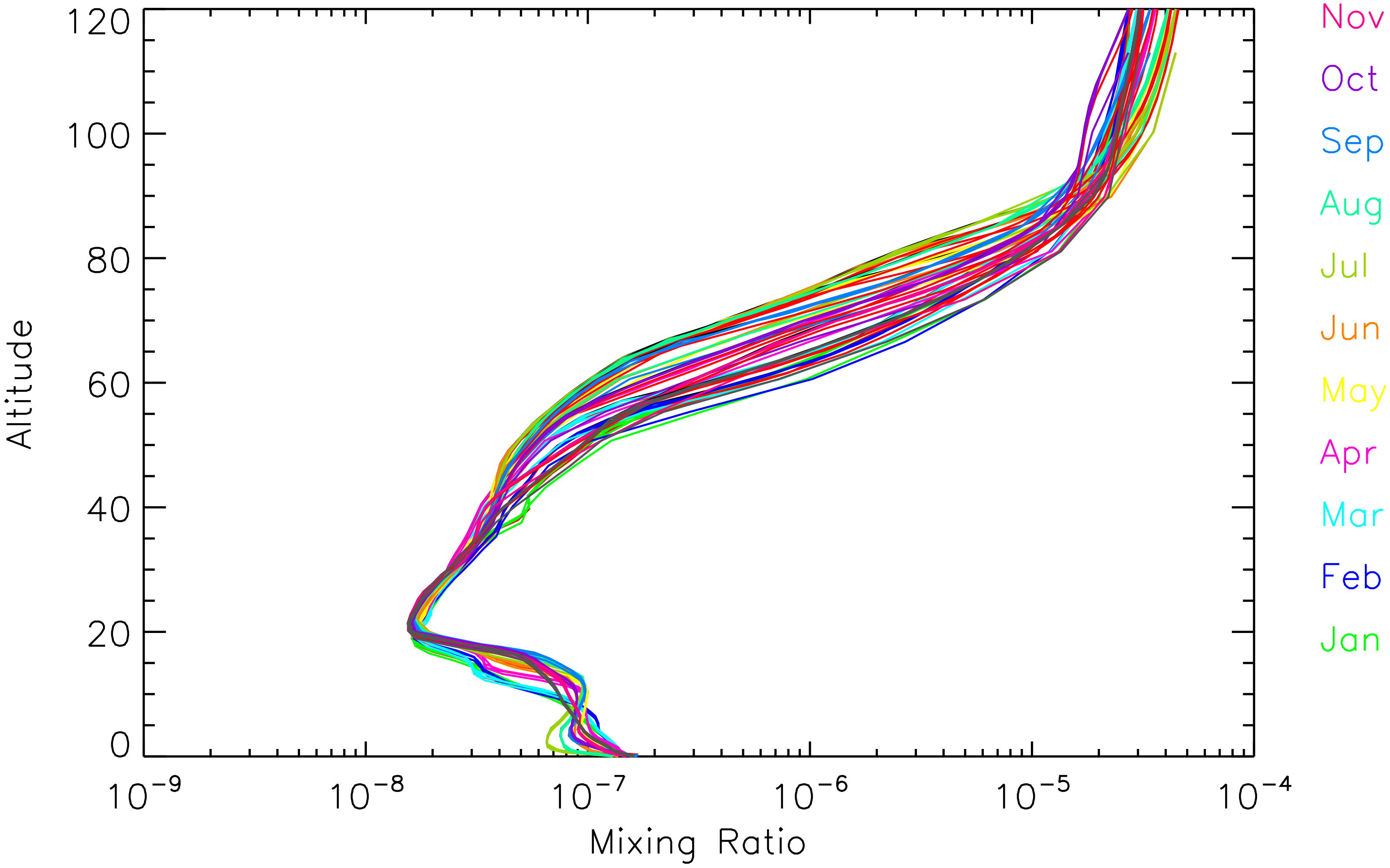
Initial & Interpolated profiles by month for : 1994
Tsukuba 36.9N 140.E


Initial & Interpolated profiles by month for : 1995
Tsukuba 36.9N 140.E
Altitude
0
20
40
60
80
100
120
Mixing Ratio
10^{-9}
10^{-8}
10^{-7}
10^{-6}
10^{-5}
10^{-4}
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan

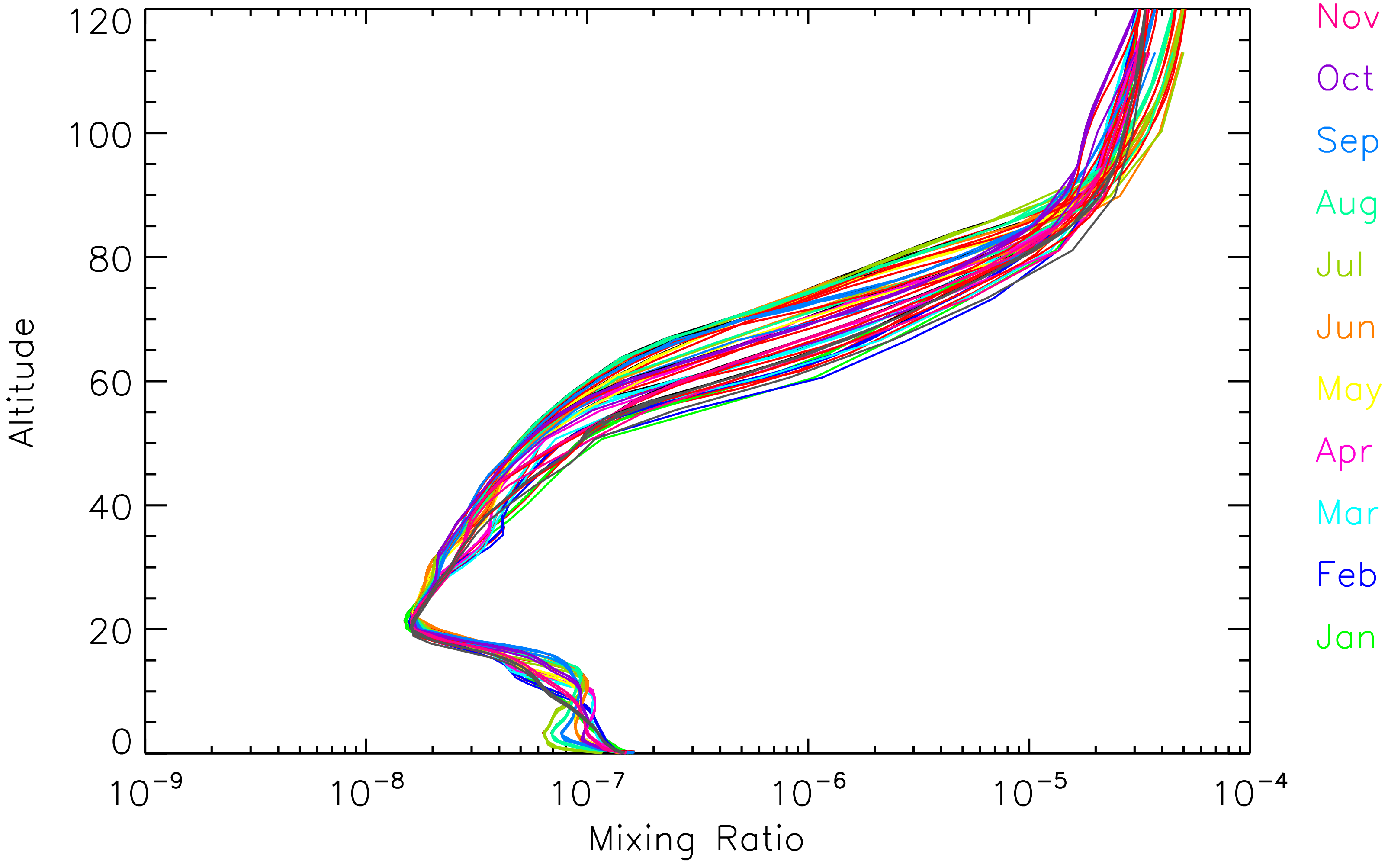
Initial & Interpolated profiles by month for : 1996
Tsukuba 36.9N 140.E
Altitude
0
20
40
60
80
100
120
Mixing Ratio
10^{-9}
10^{-8}
10^{-7}
10^{-6}
10^{-5}
10^{-4}
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan

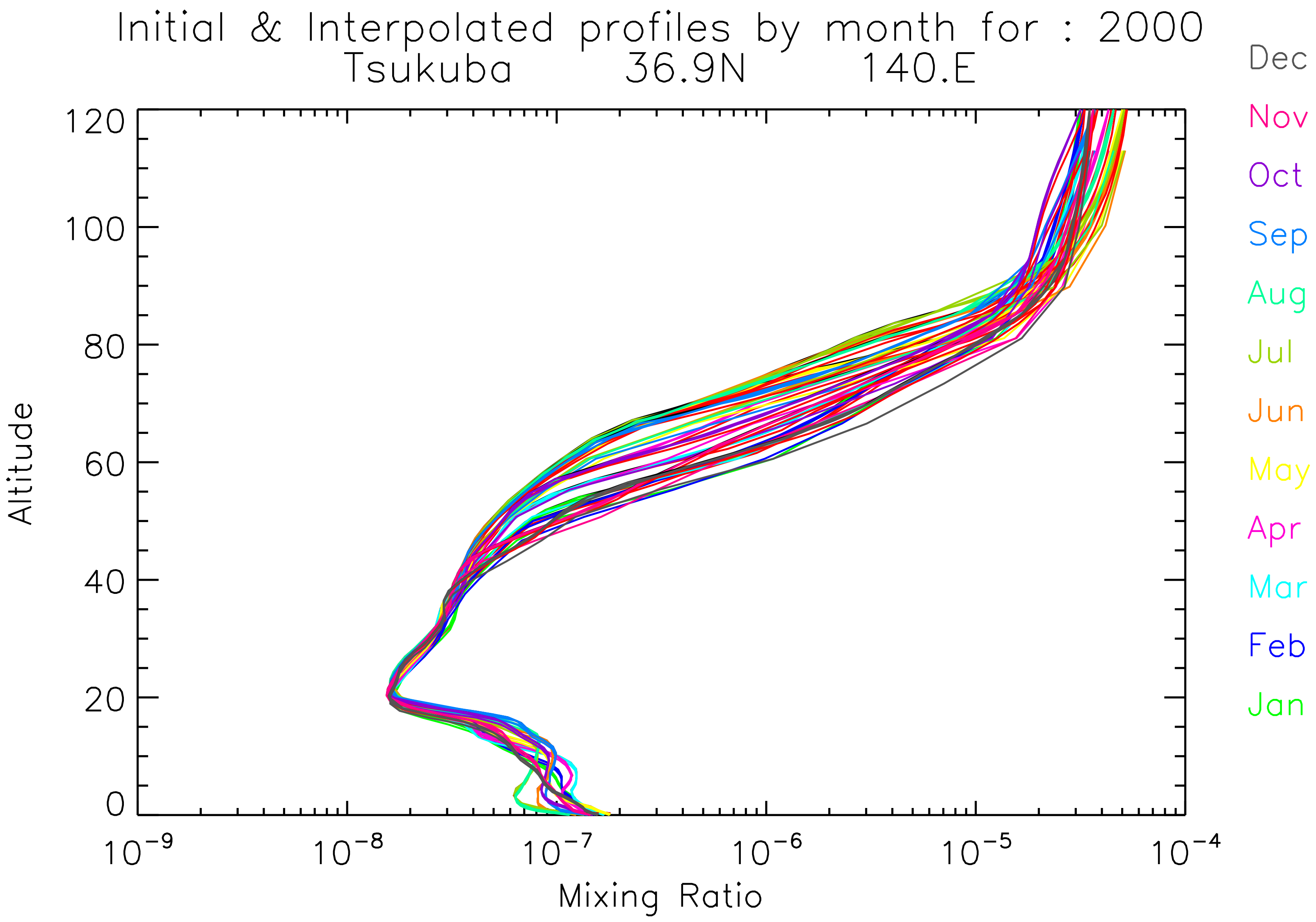

Initial & Interpolated profiles by month for : 1997
Tsukuba 36.9N 140.E
Altitude
0
20
40
60
80
100
120
10^{-9}
10^{-8}
10^{-7}
10^{-6}
10^{-5}
10^{-4}
Mixing Ratio
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan

Initial & Interpolated profiles by month for : 1998
Tsukuba 36.9N 140.E

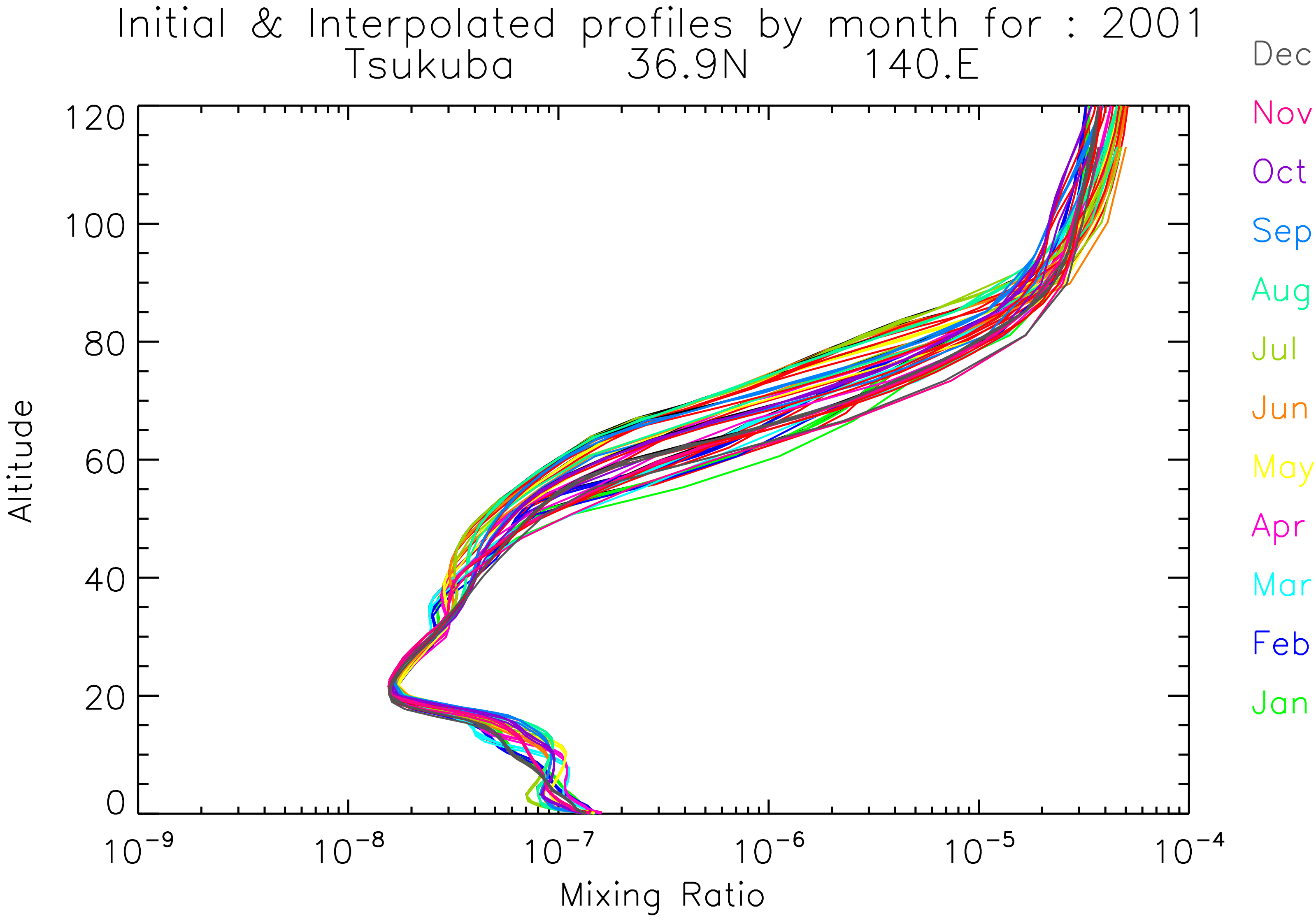


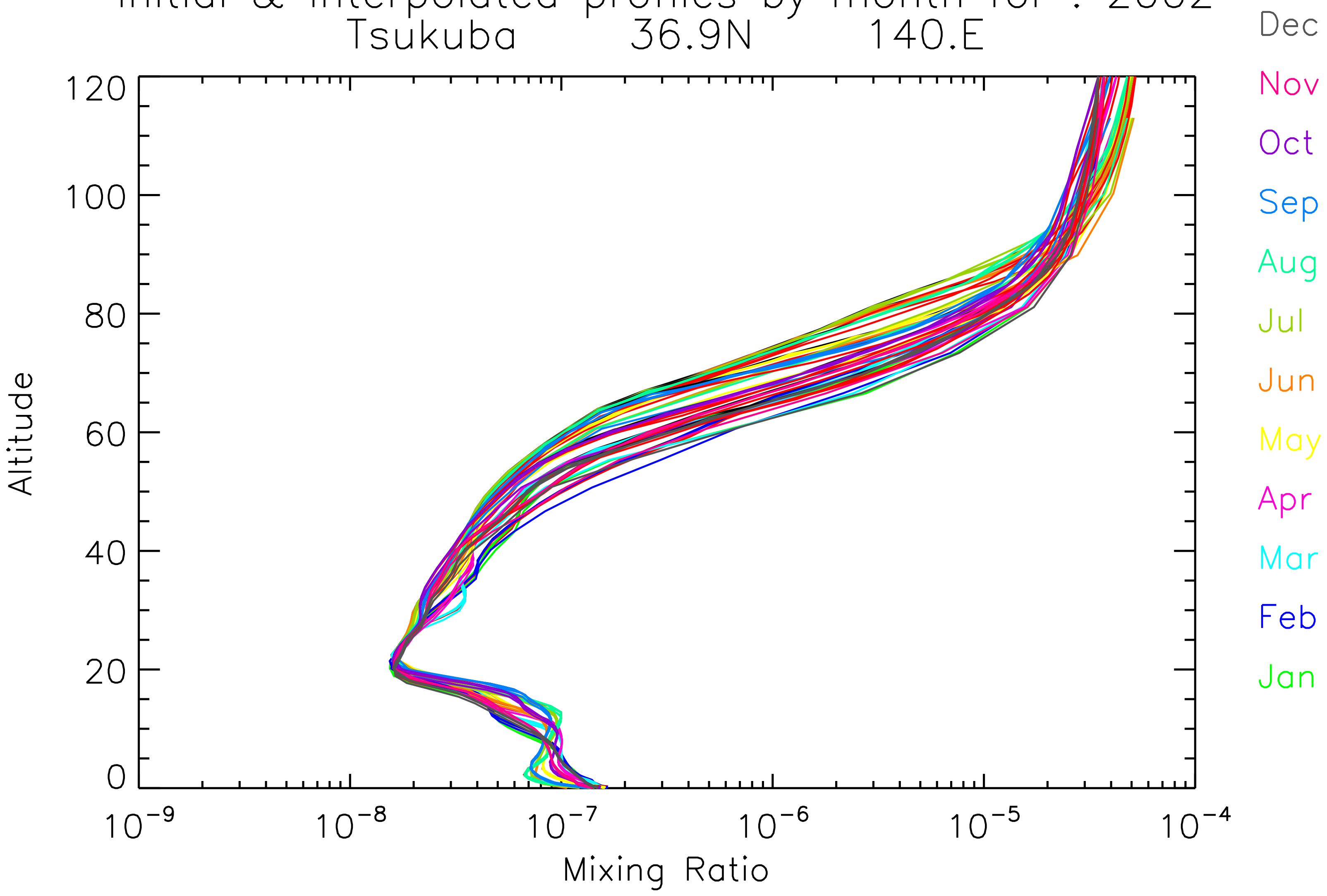
Initial & Interpolated profiles by month for : 1999
Tsukuba 36.9N 140.E



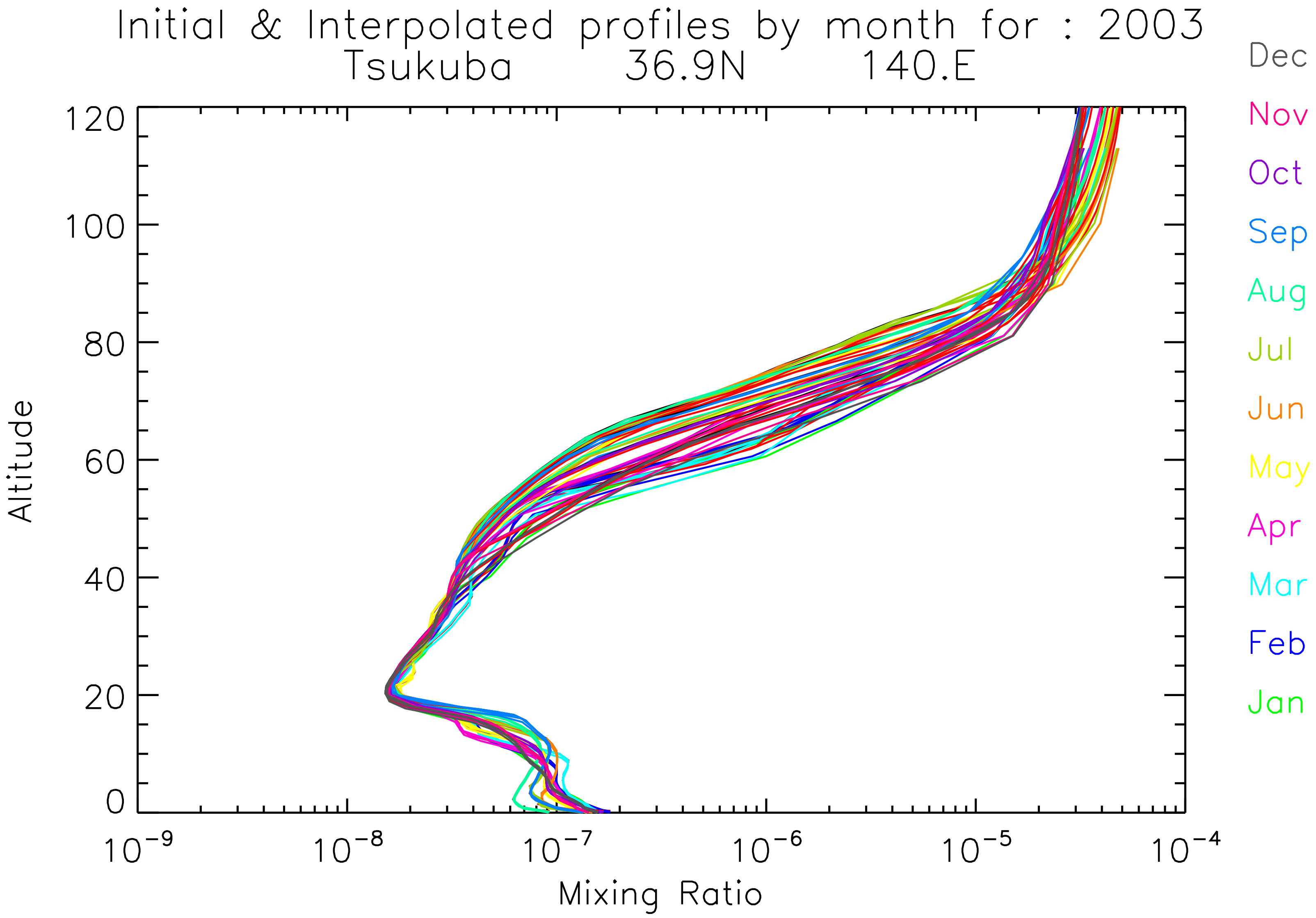


Initial & Interpolated profiles by month for : 2000
Tsukuba 36.9N 140.E

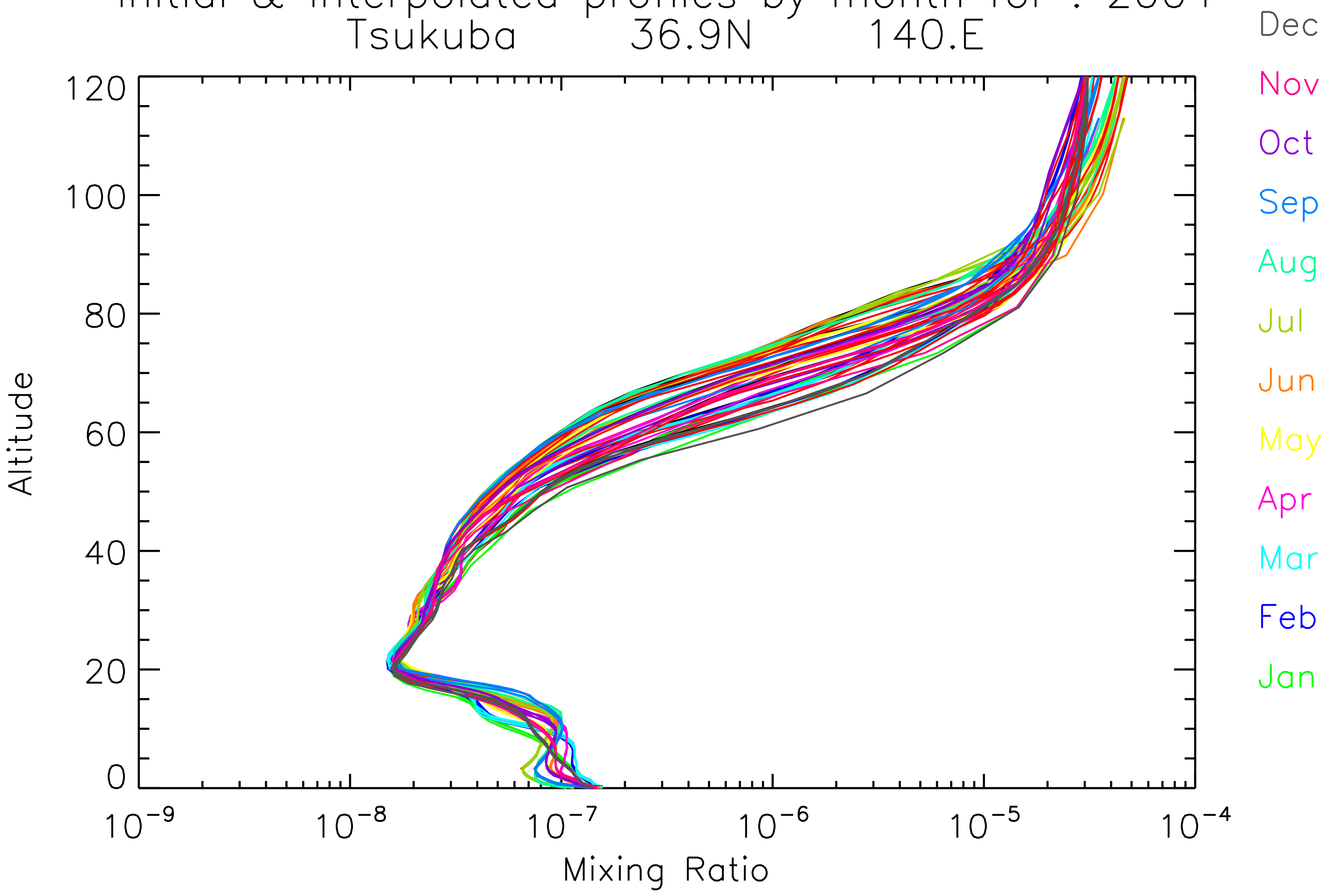

Initial & Interpolated profiles by month for : 2001
Tsukuba 36.9N 140.E
Altitude
0
20
40
60
80
100
120
Mixing Ratio
10^{-9}
10^{-8}
10^{-7}
10^{-6}
10^{-5}
10^{-4}
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan

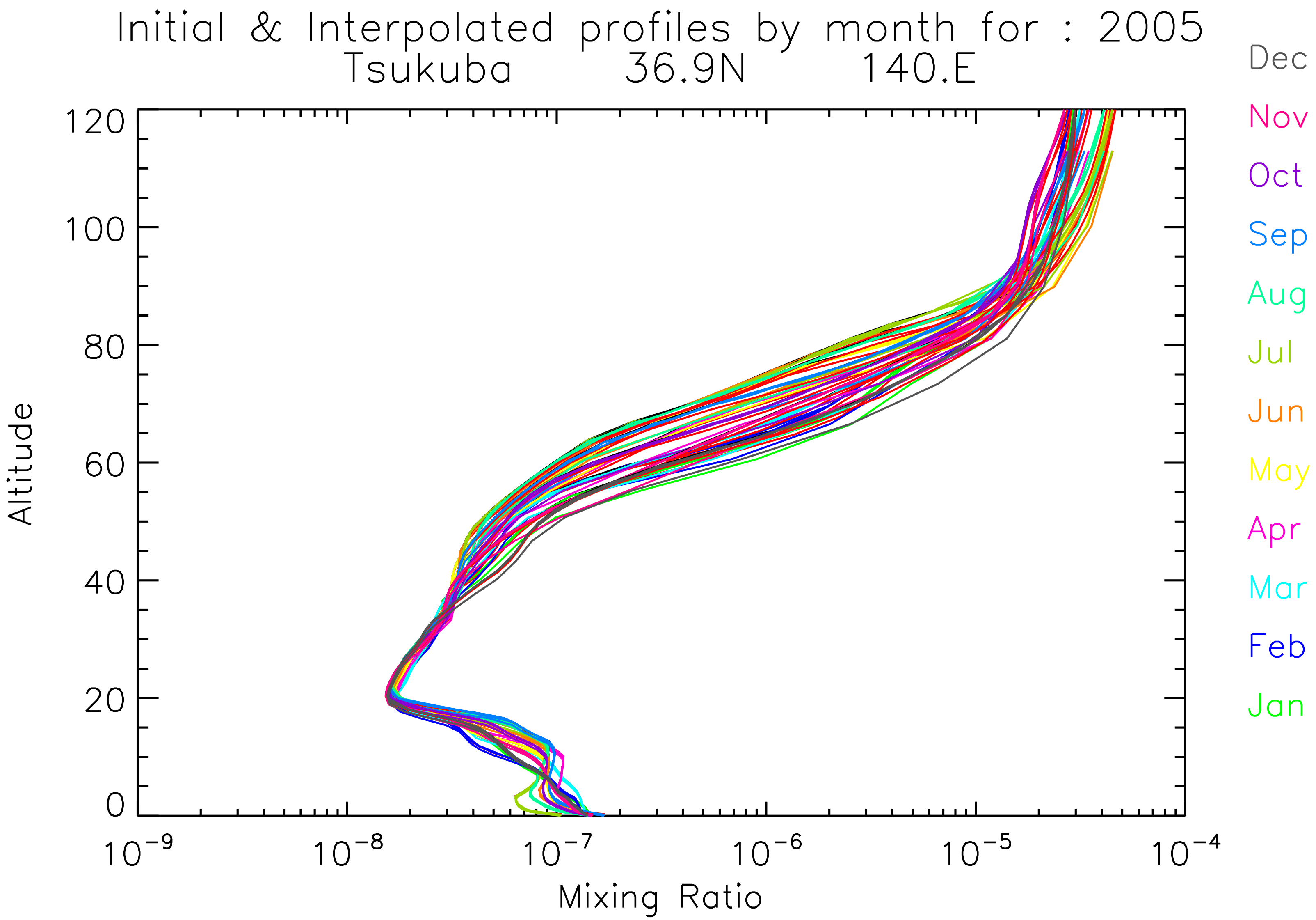

Initial & Interpolated profiles by month for : 2002

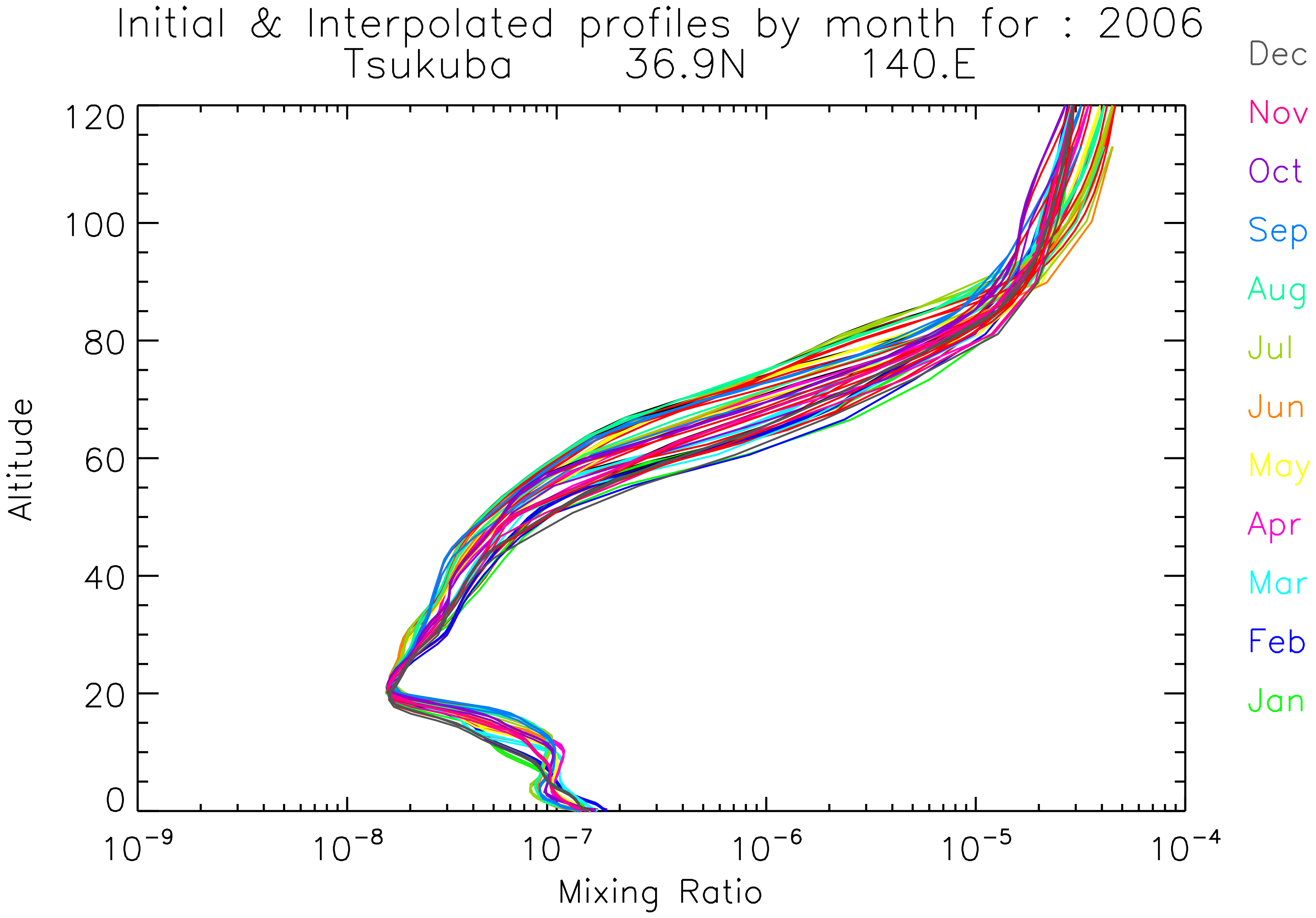
Tsukuba 36.9N 140.E


Initial & Interpolated profiles by month for : 2003
Tsukuba 36.9N 140.E
Altitude
0
20
40
60
80
100
120
10^{-9}
10^{-8}
10^{-7}
10^{-6}
10^{-5}
10^{-4}
Mixing Ratio
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan

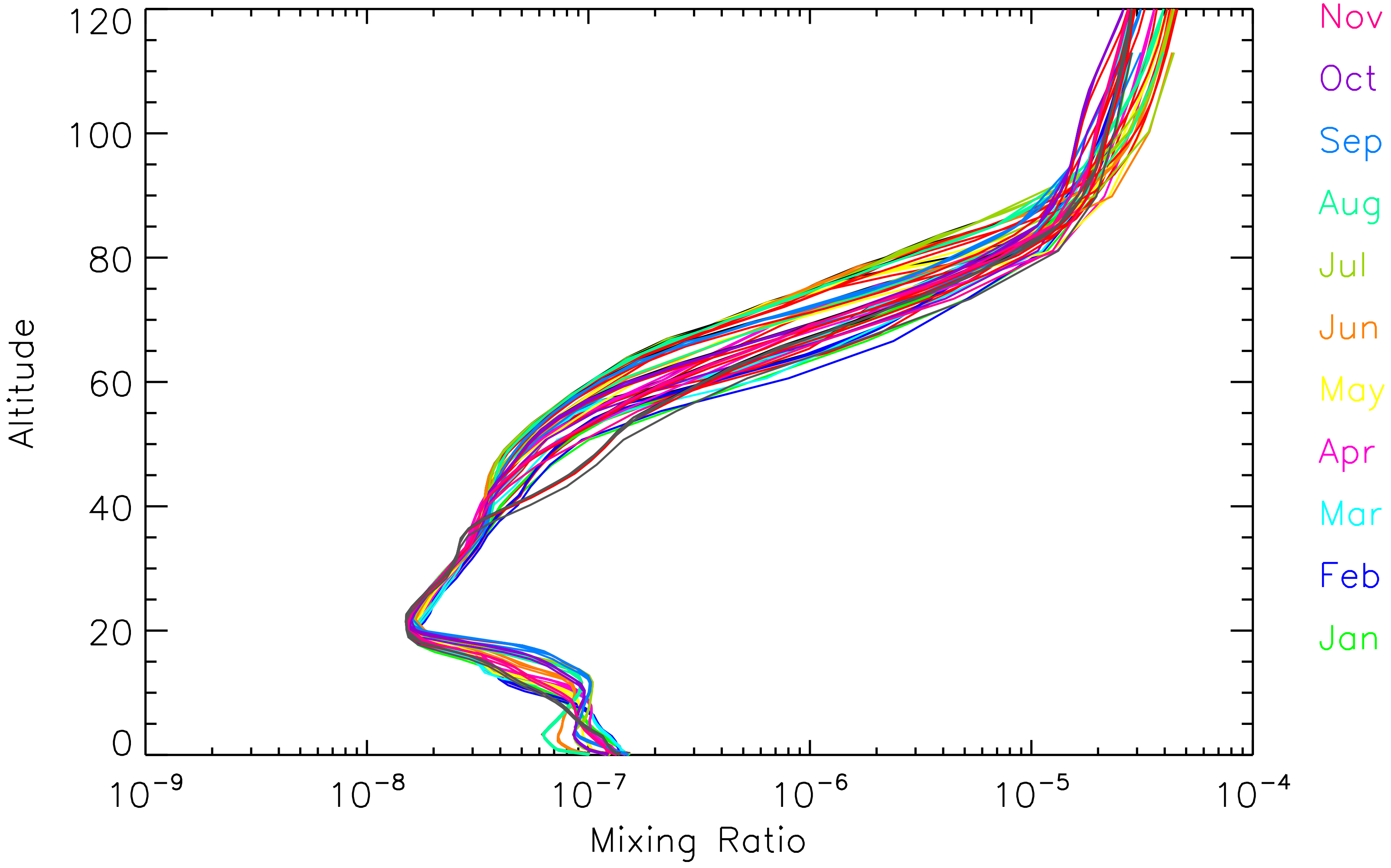
Initial & Interpolated profiles by month for : 2004
Tsukuba 36.9N 140.E

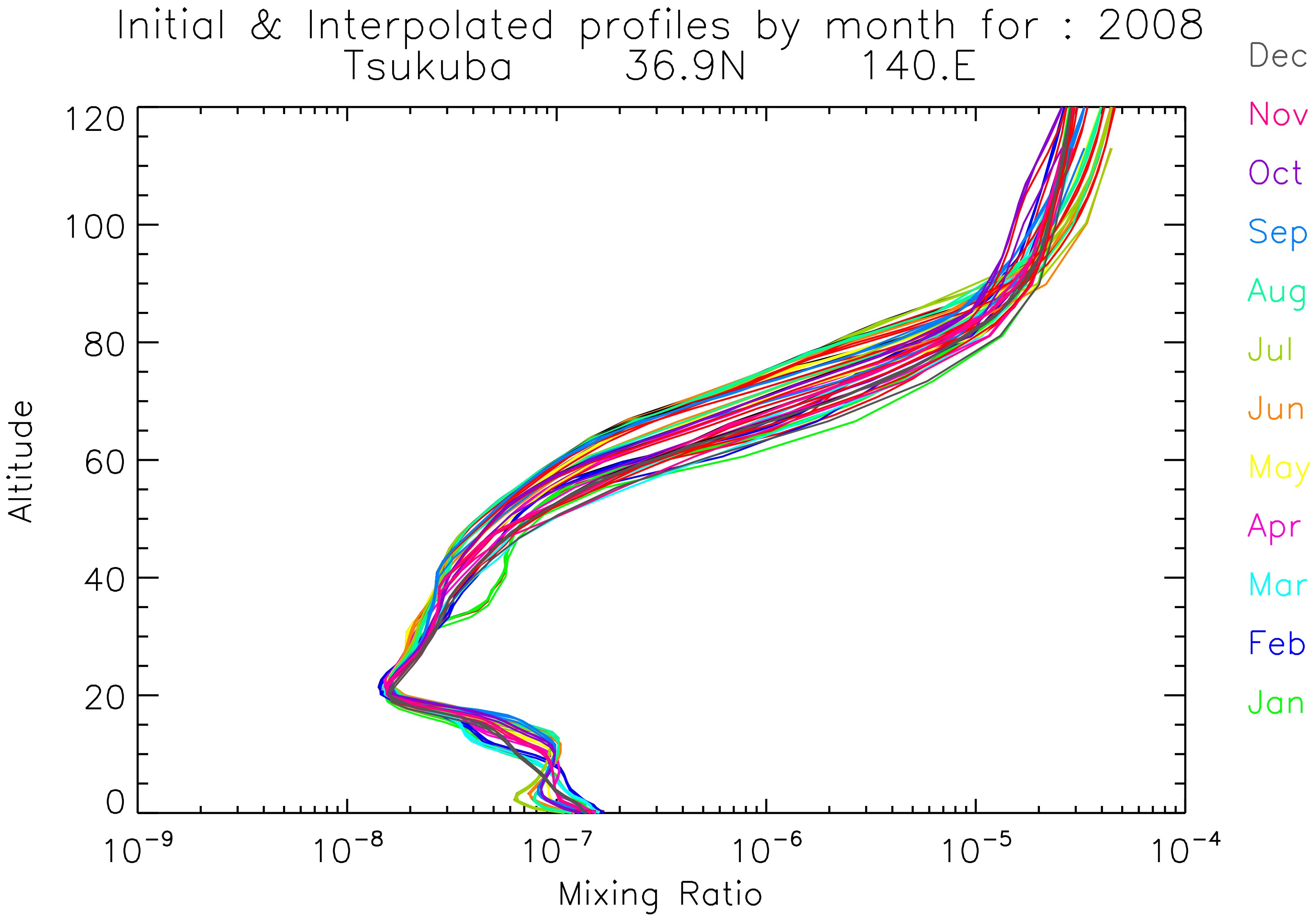


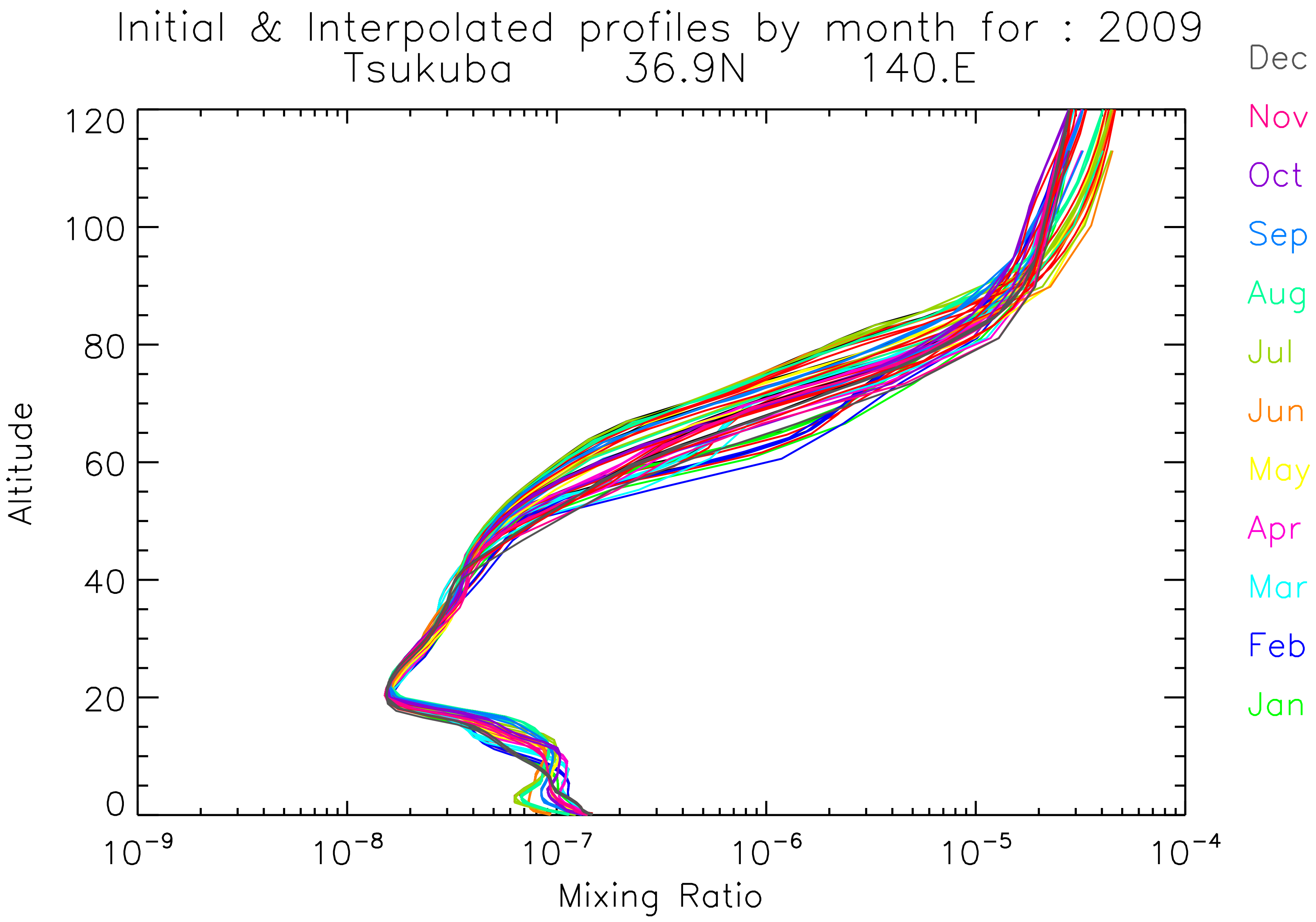

Initial & Interpolated profiles by month for : 2005
Tsukuba 36.9N 140.E
Altitude
120
100
80
60
40
20
0
10^{-9}
10^{-8}
10^{-7}
10^{-6}
10^{-5}
10^{-4}
Mixing Ratio
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan

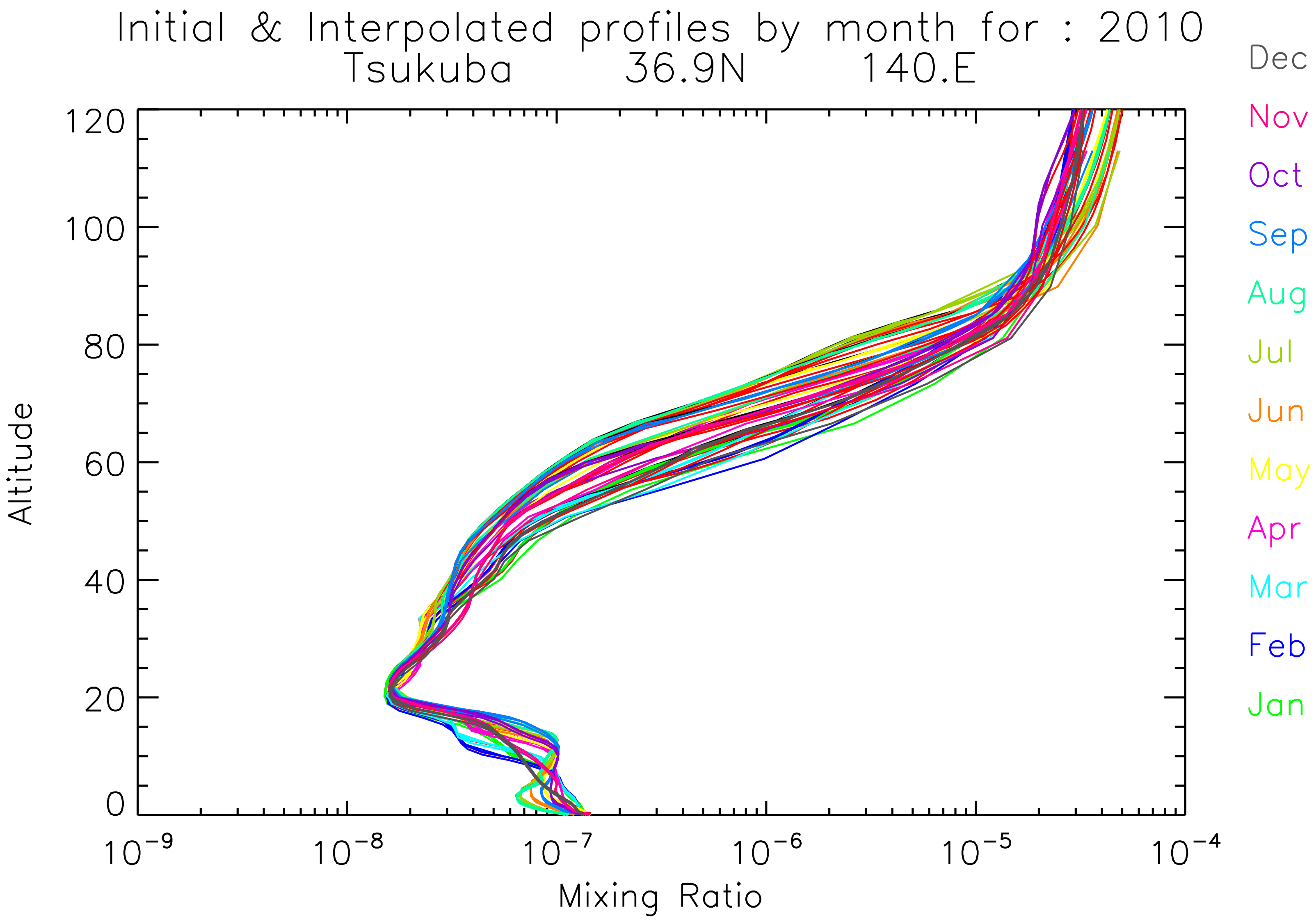

Initial & Interpolated profiles by month for : 2006
Tsukuba 36.9N 140.E
Altitude
0
20
40
60
80
100
120
10^{-9}
10^{-8}
10^{-7}
10^{-6}
10^{-5}
10^{-4}
Mixing Ratio
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan

Initial & Interpolated profiles by month for : 2007
Tsukuba 36.9N 140.E

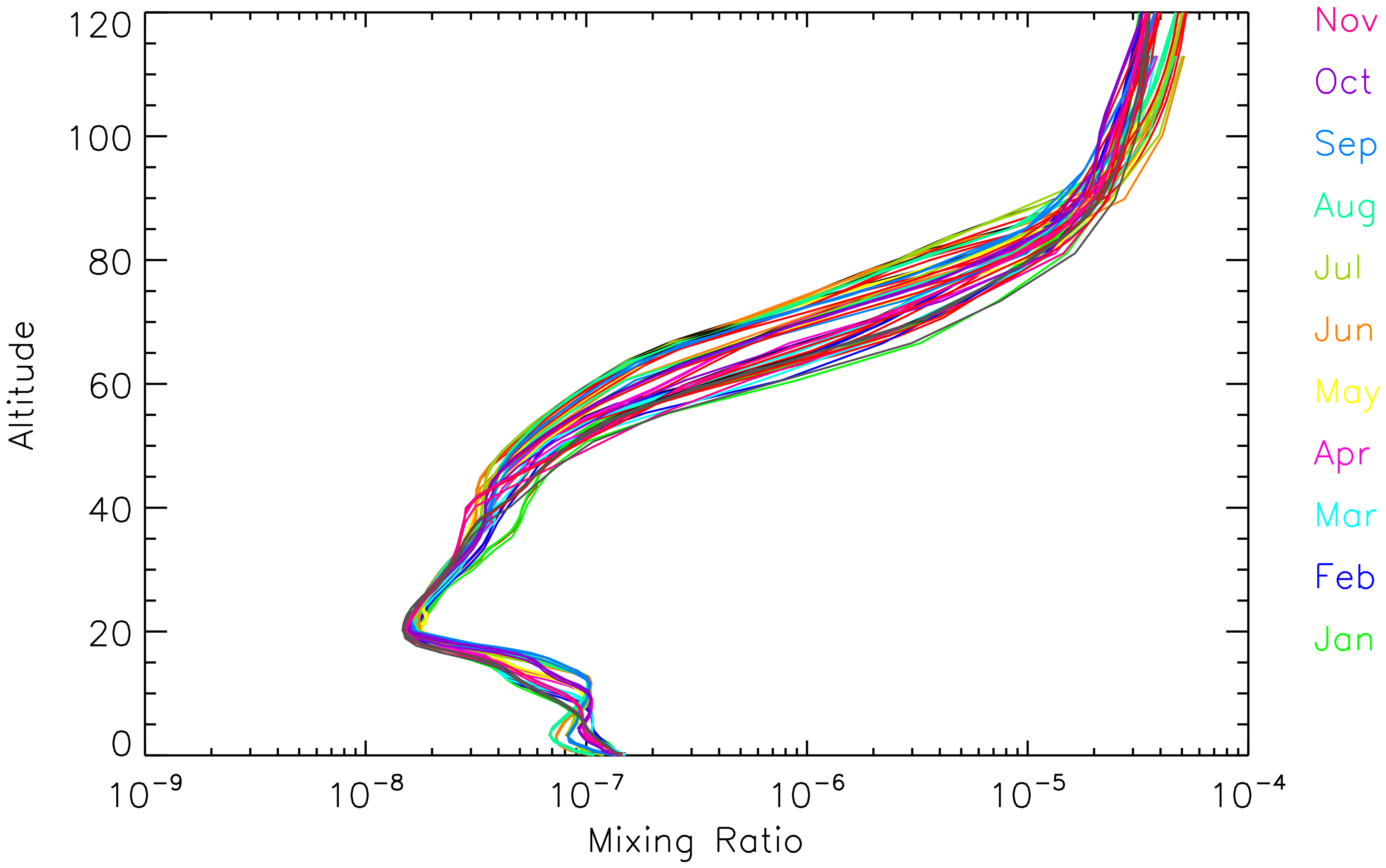


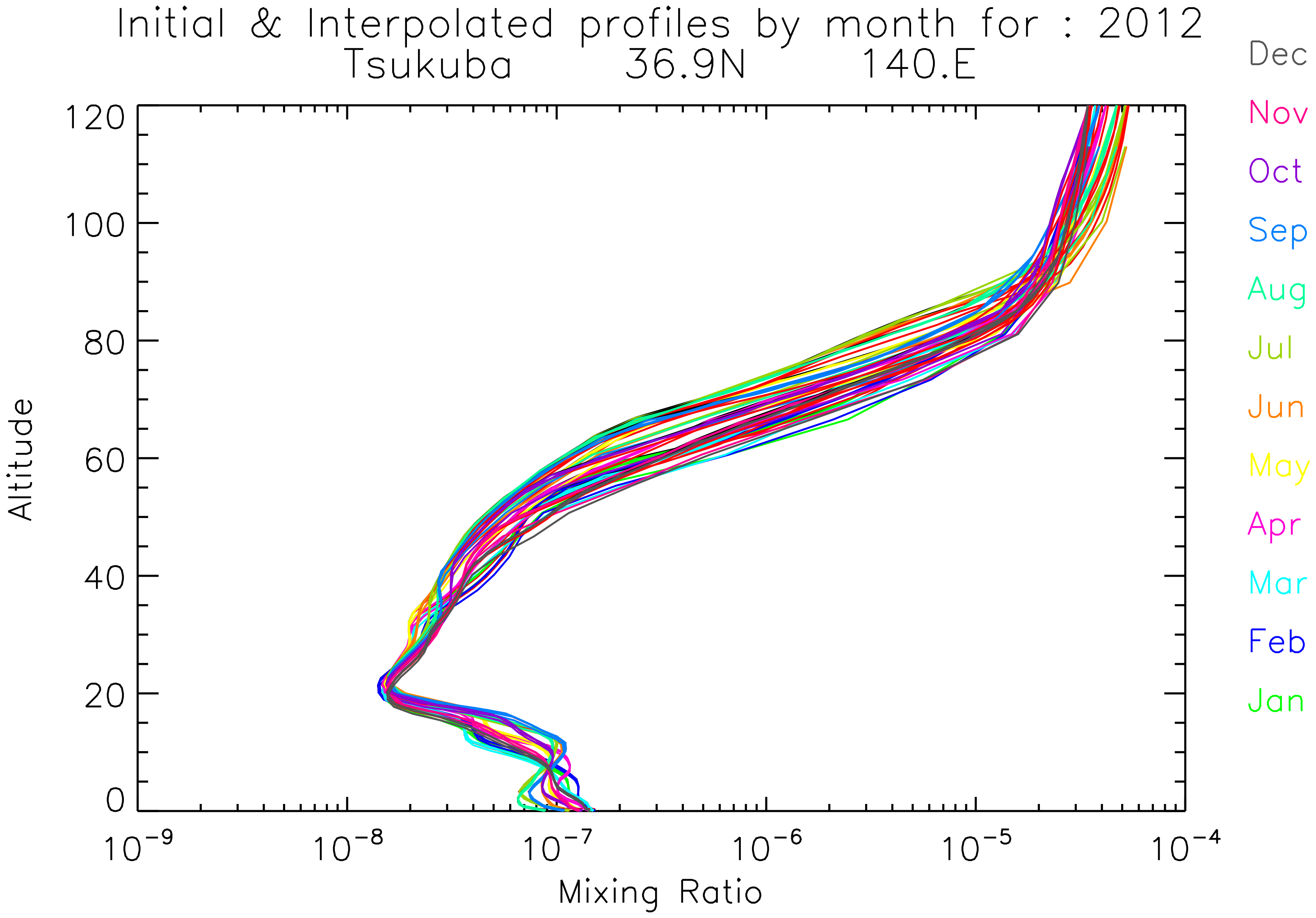

Initial & Interpolated profiles by month for : 2008
Tsukuba 36.9N 140.E
Altitude
0
20
40
60
80
100
120
Mixing Ratio
10^{-9}
10^{-8}
10^{-7}
10^{-6}
10^{-5}
10^{-4}
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan


Initial & Interpolated profiles by month for : 2009
Tsukuba 36.9N 140.E

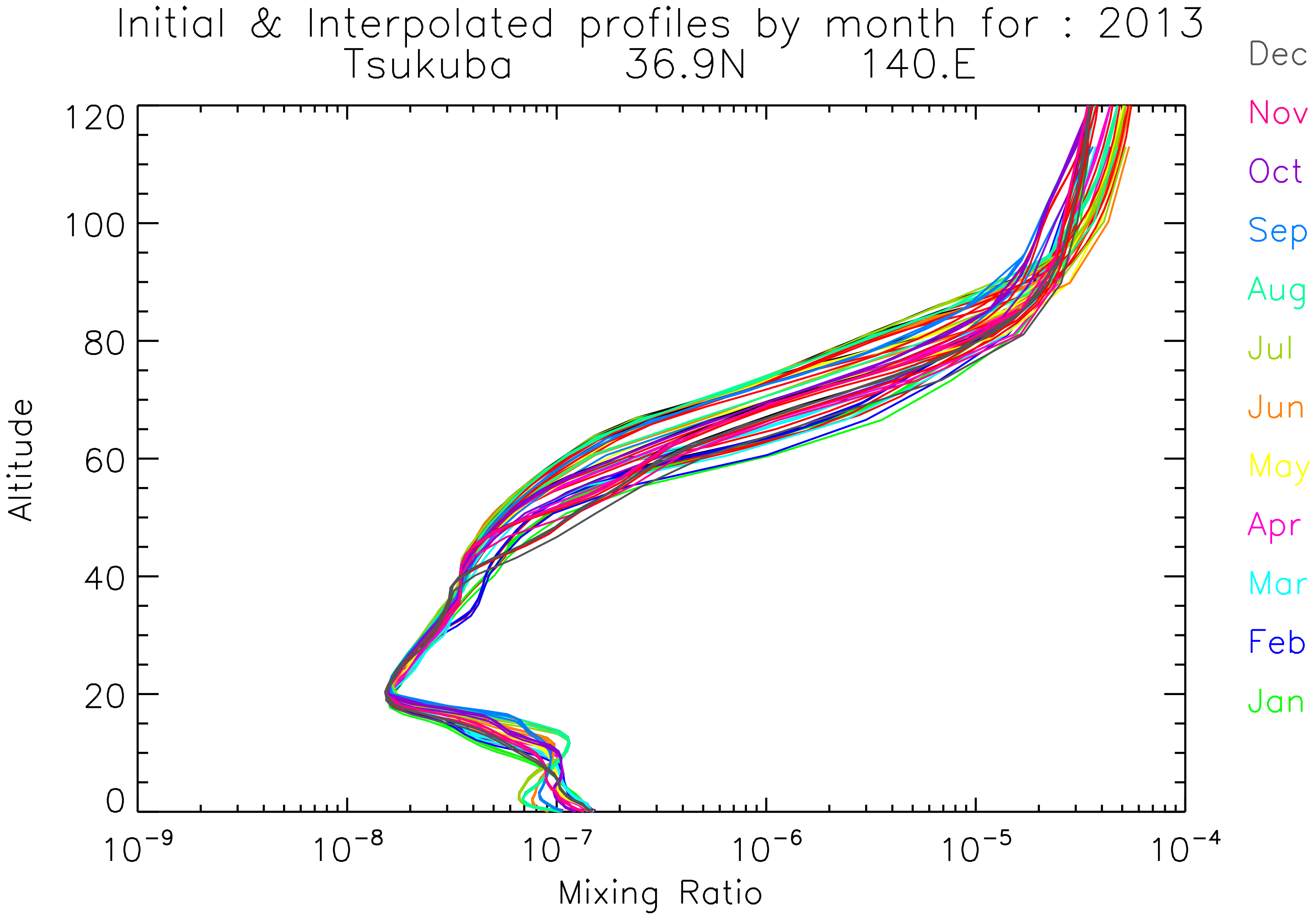

Initial & Interpolated profiles by month for : 2010
Tsukuba 36.9N 140.E
Altitude
0
20
40
60
80
100
120
Mixing Ratio
10^{-9}
10^{-8}
10^{-7}
10^{-6}
10^{-5}
10^{-4}
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan

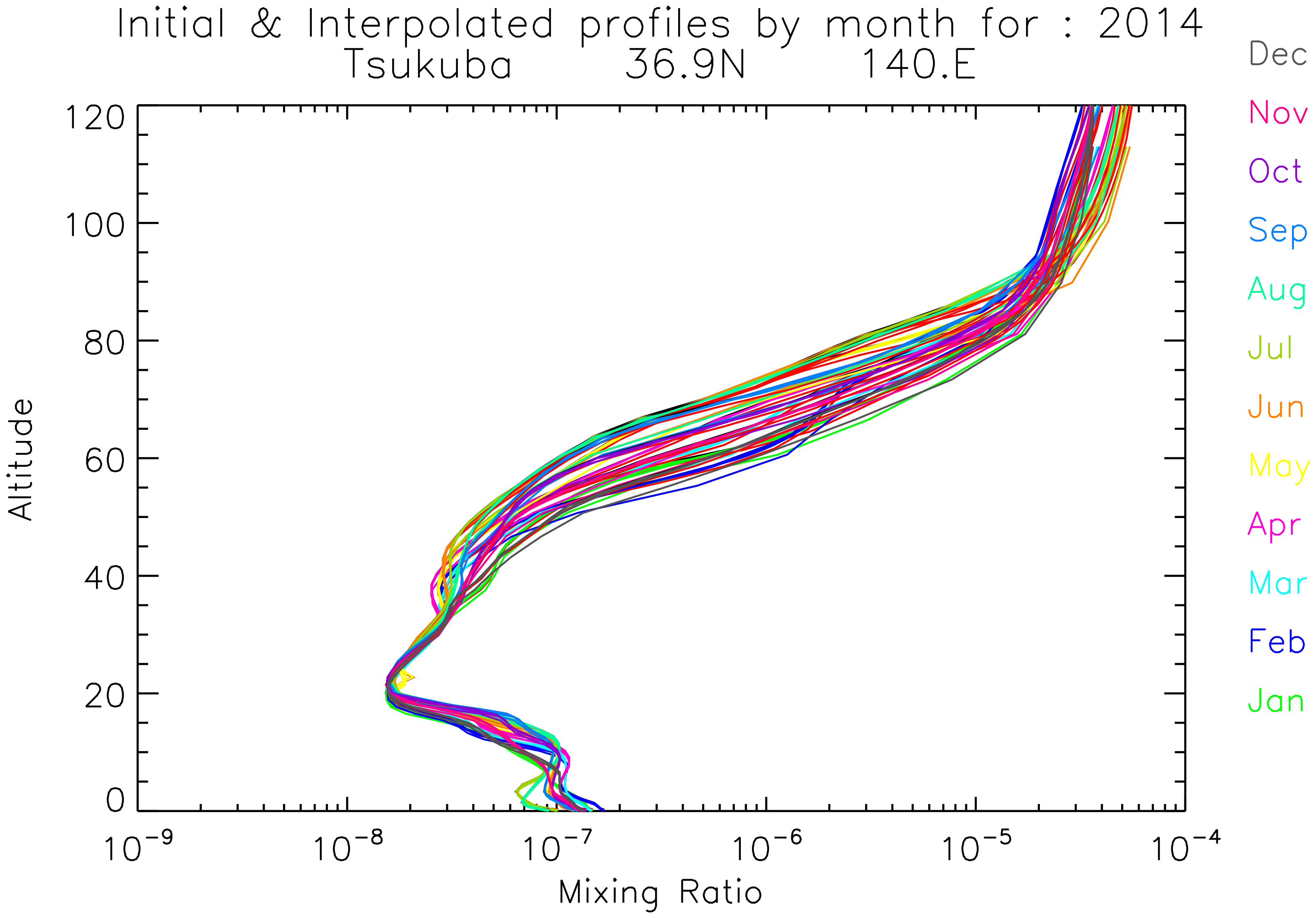
Initial & Interpolated profiles by month for : 2011
Tsukuba 36.9N 140.E



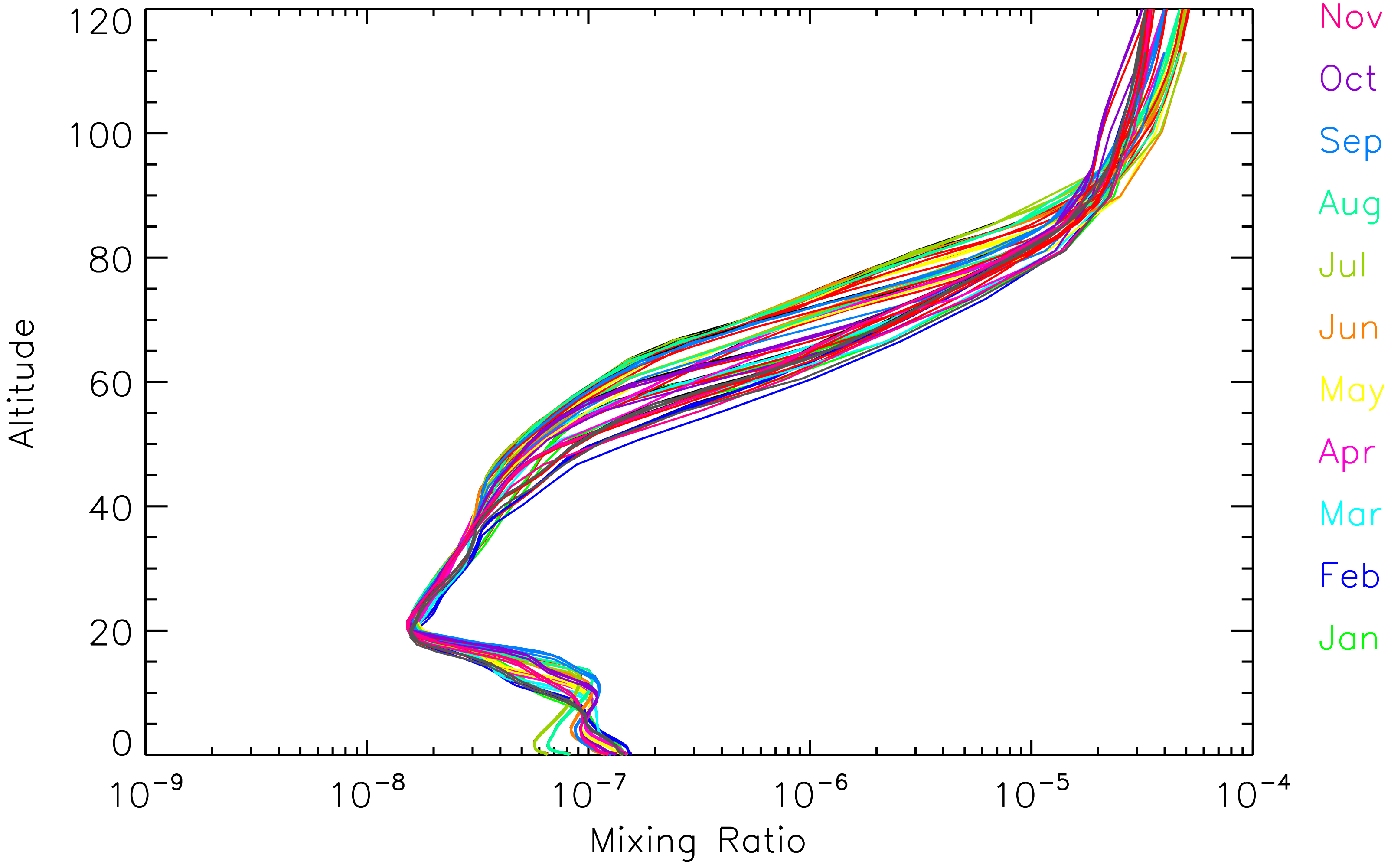


Initial & Interpolated profiles by month for : 2012
Tsukuba 36.9N 140.E

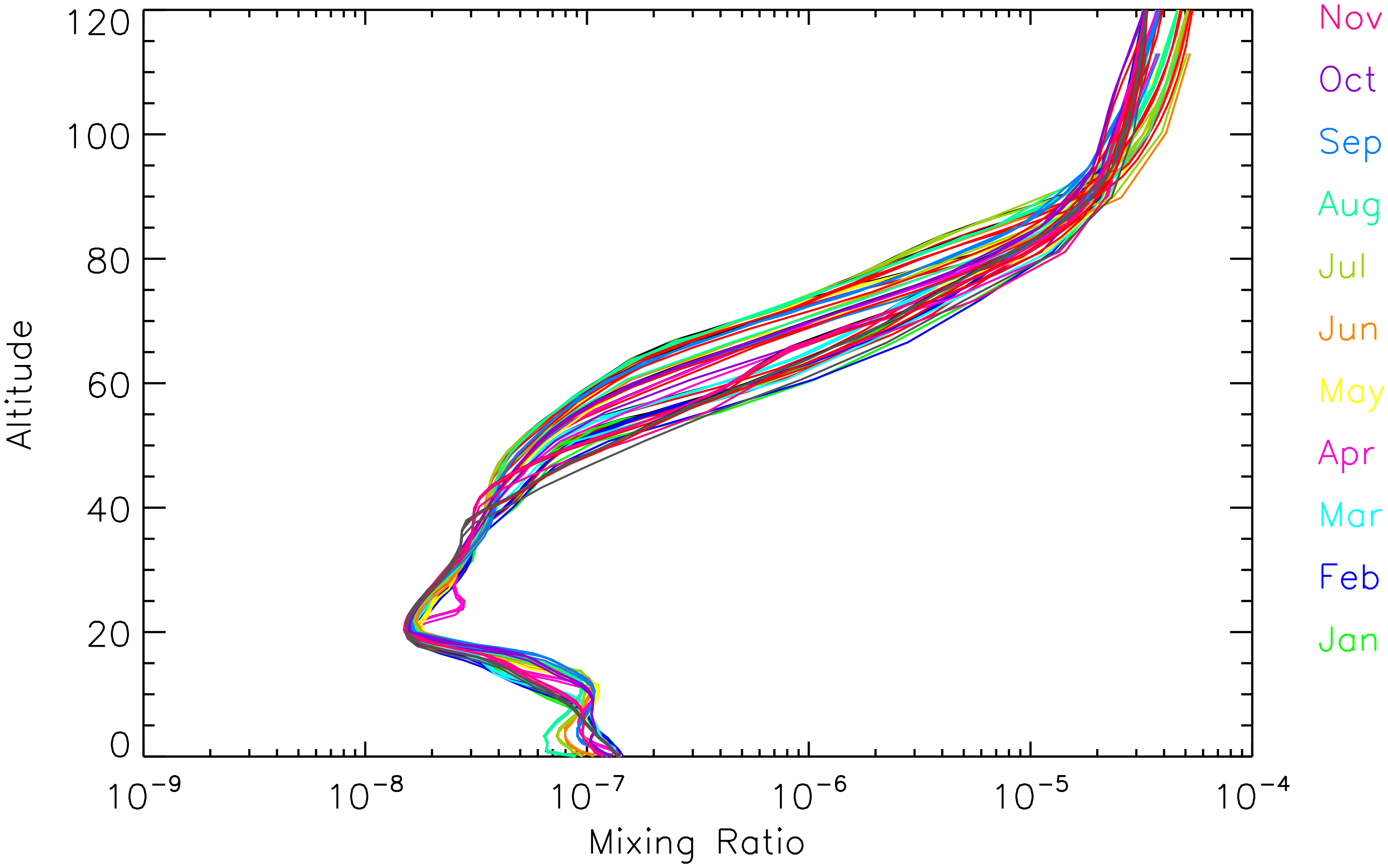

Initial & Interpolated profiles by month for : 2013
Tsukuba 36.9N 140.E



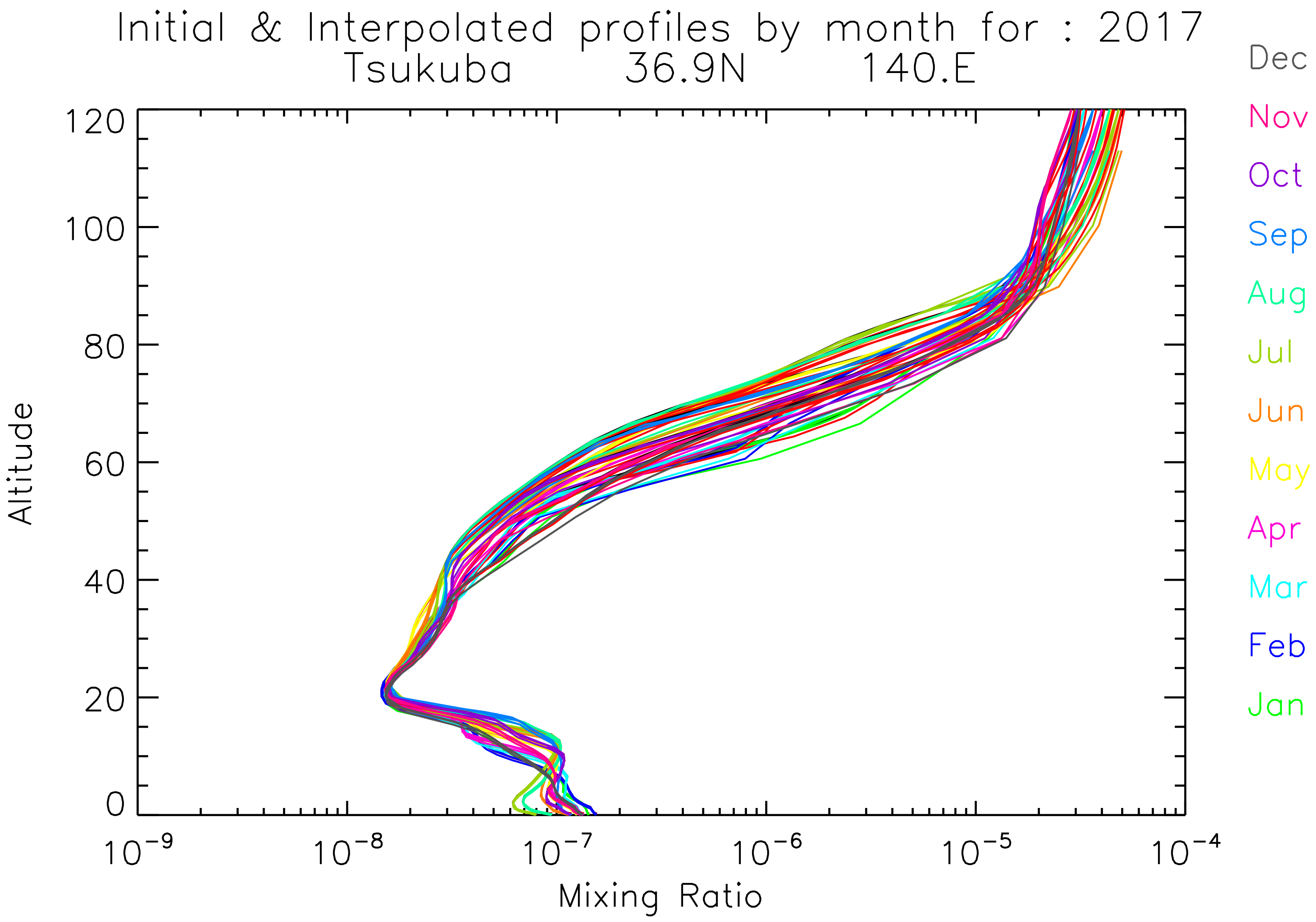
Initial & Interpolated profiles by month for : 2014
Tsukuba 36.9N 140.E

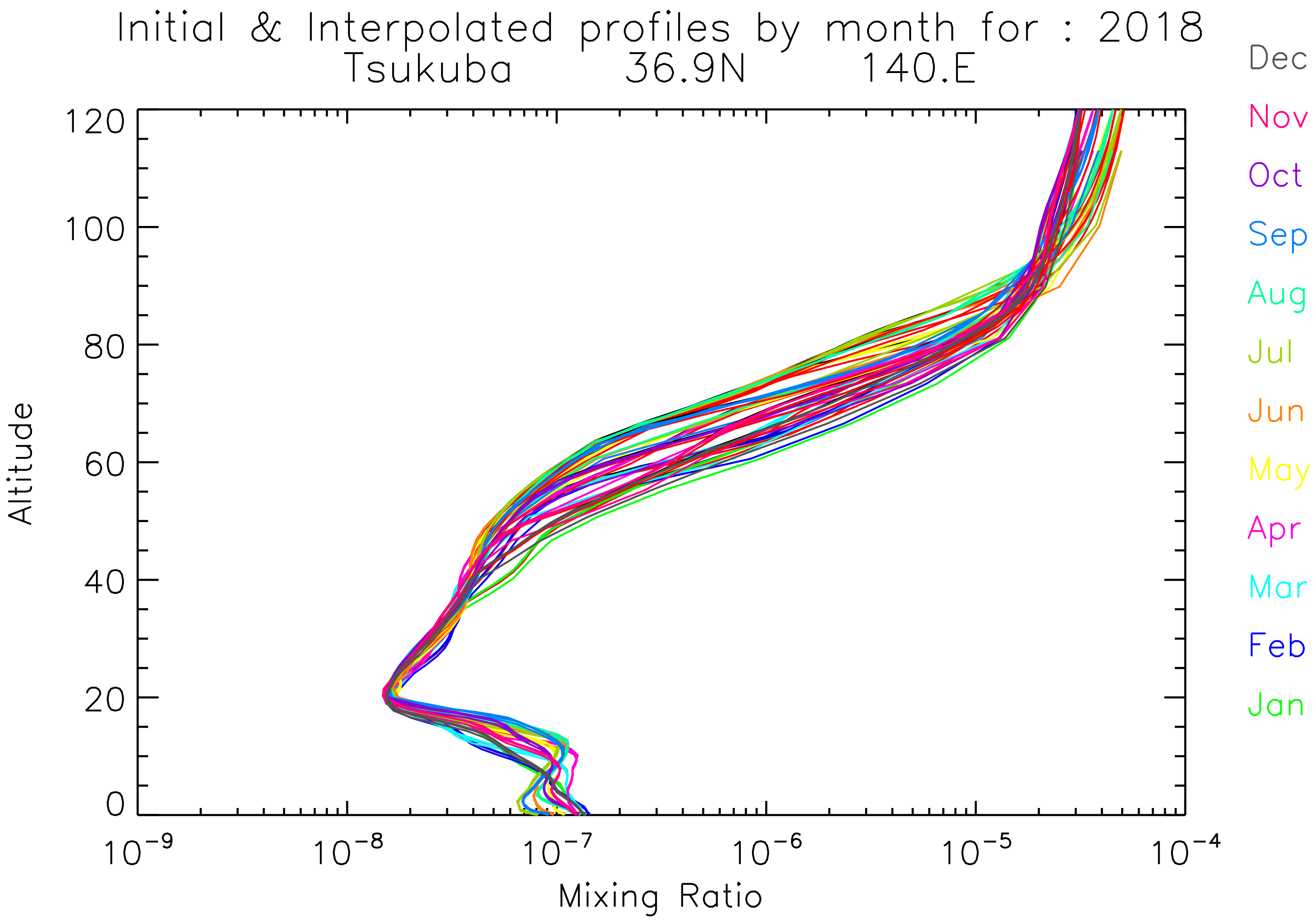


Initial & Interpolated profiles by month for : 2015
Tsukuba 36.9N 140.E

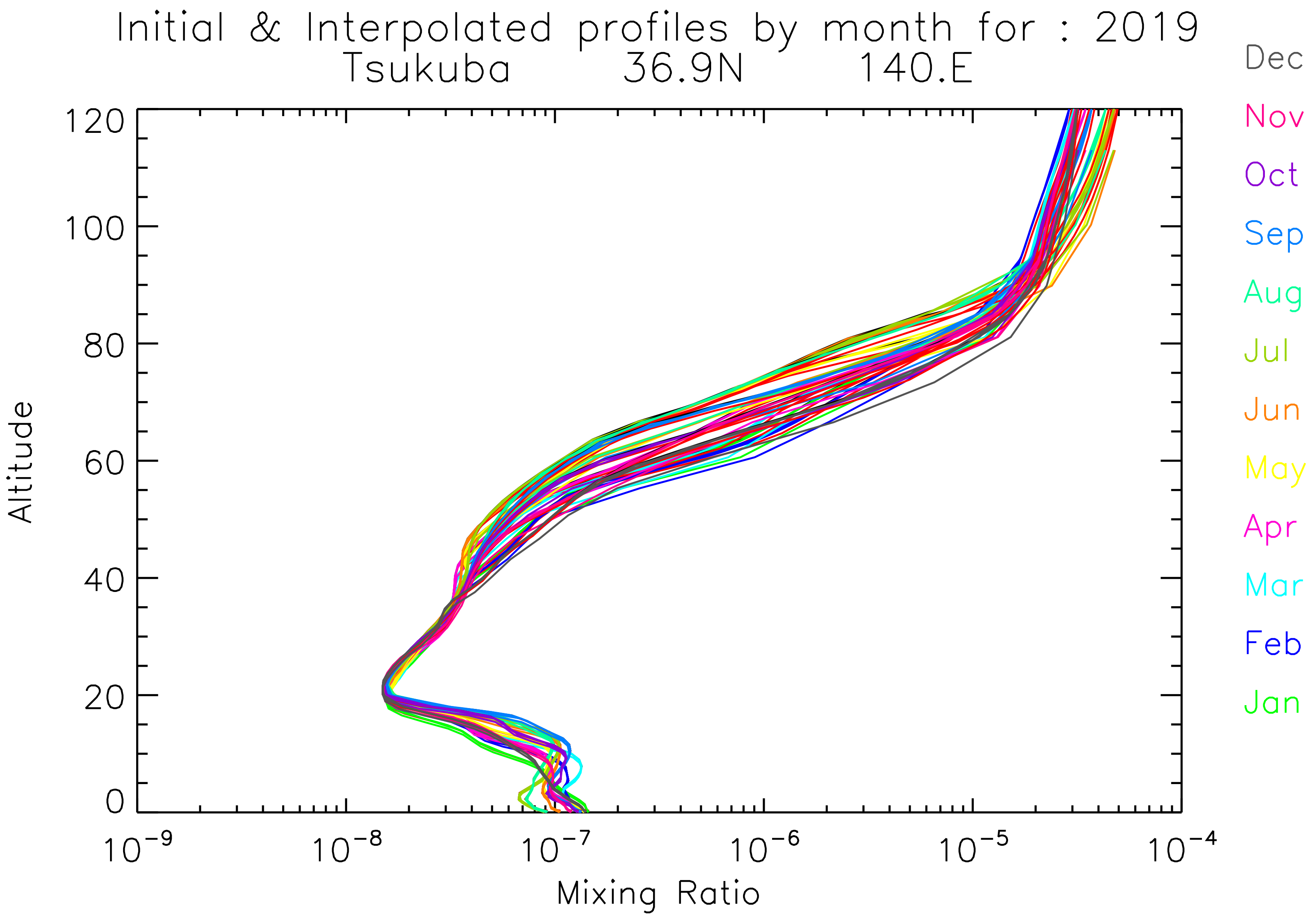


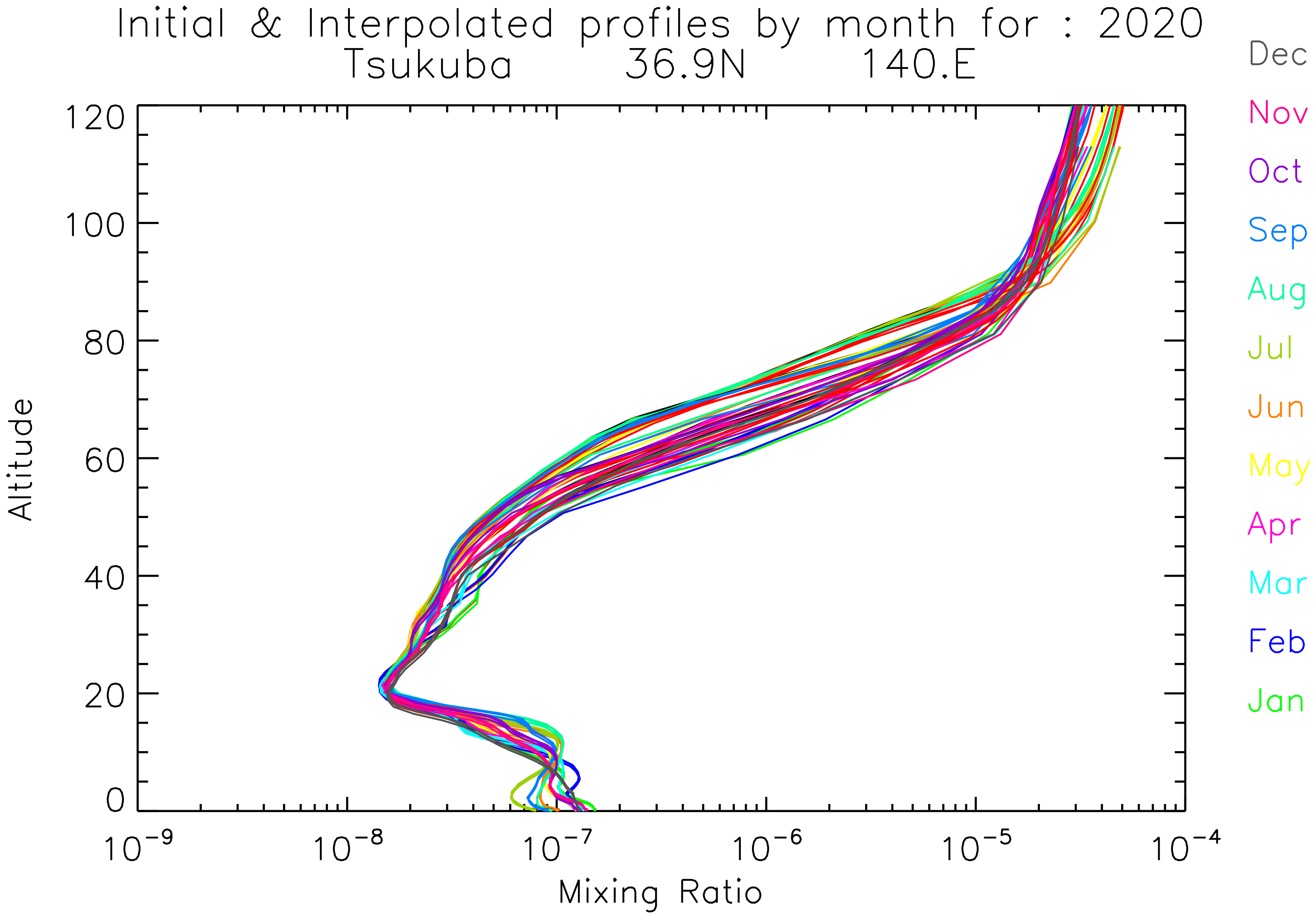
Initial & Interpolated profiles by month for : 2016
Tsukuba 36.9N 140.E


Initial & Interpolated profiles by month for : 2017
Tsukuba 36.9N 140.E
Altitude
0
20
40
60
80
100
120
10^{-9}
10^{-8}
10^{-7}
10^{-6}
10^{-5}
10^{-4}
Mixing Ratio
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan

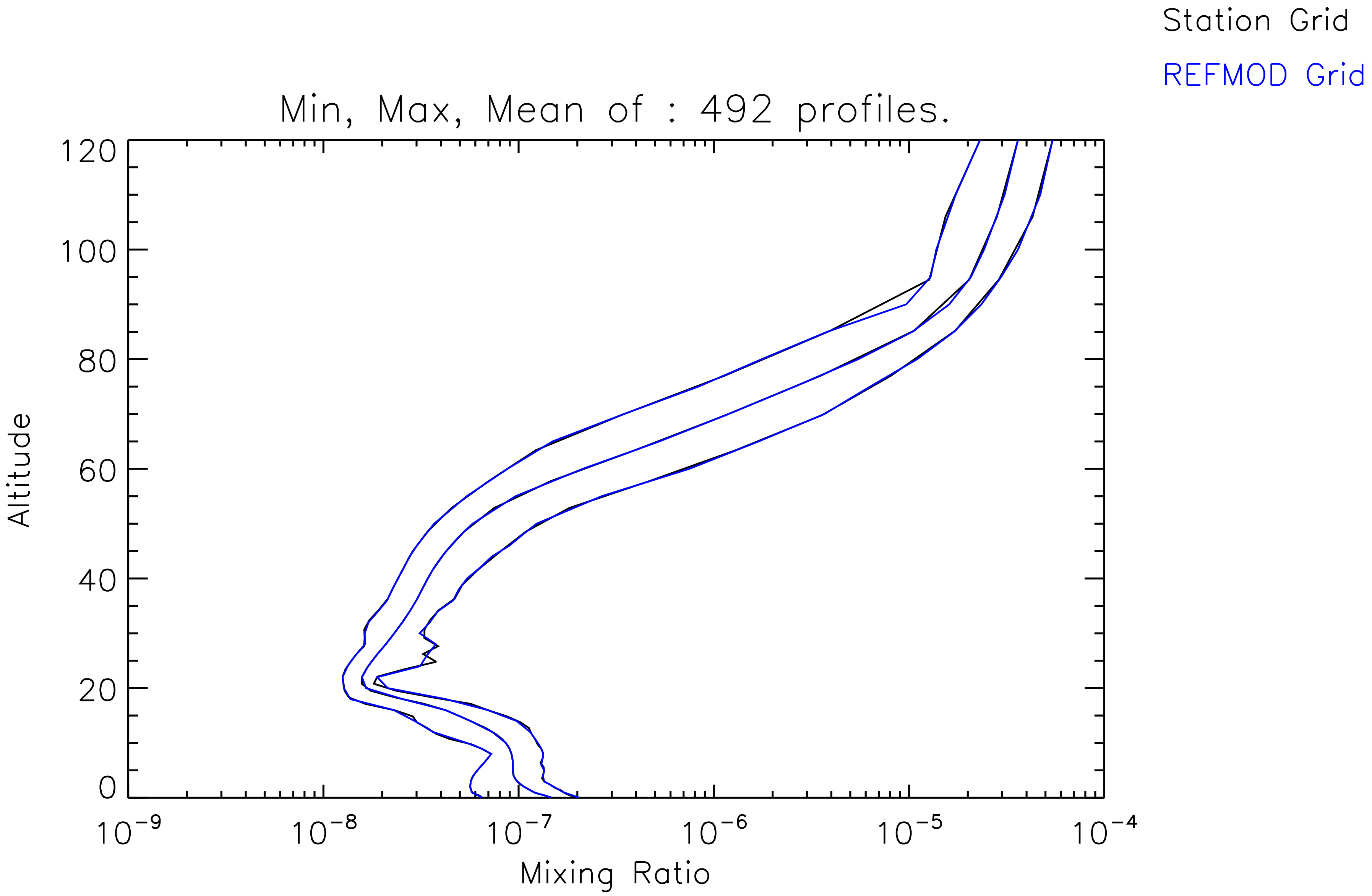


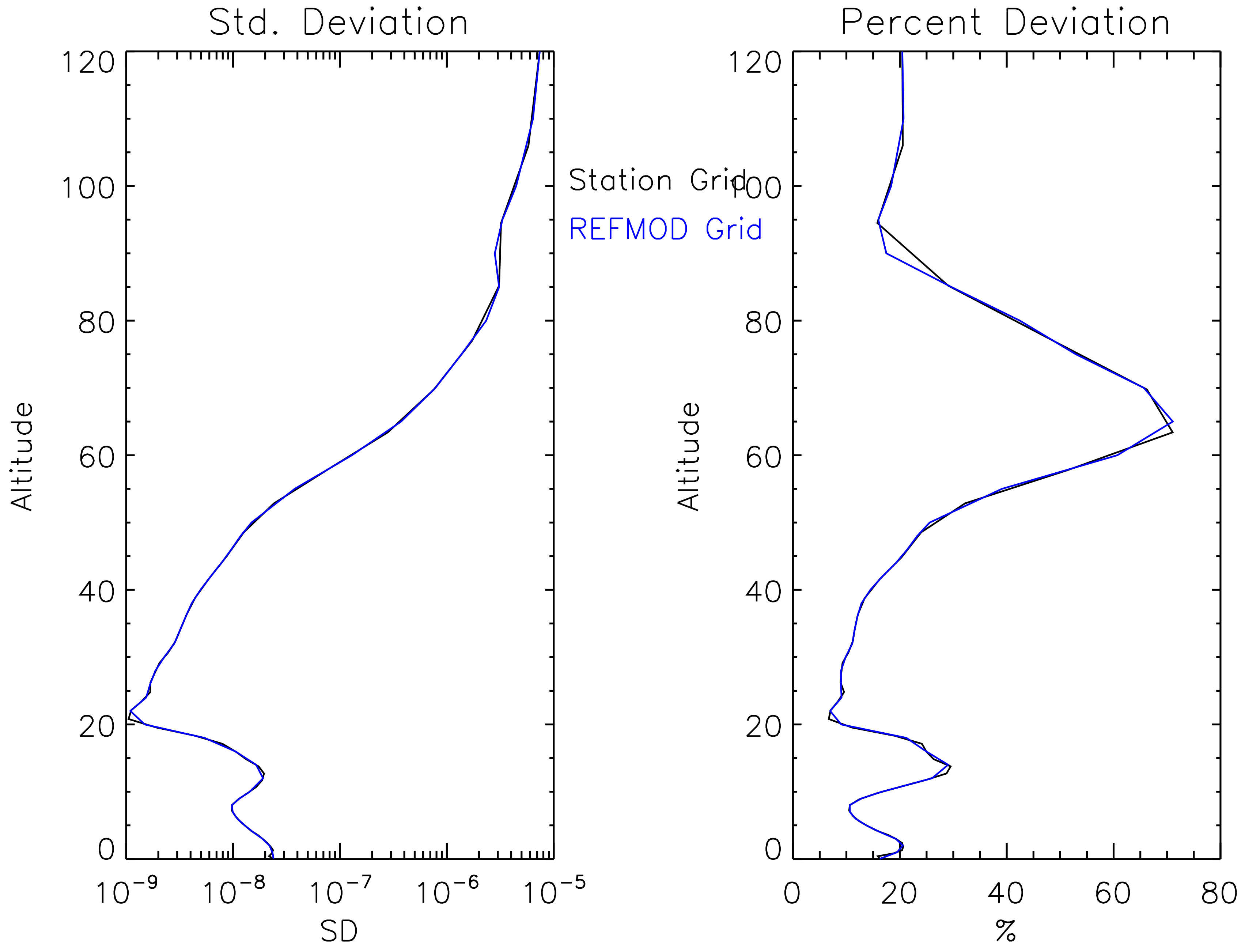
Initial & Interpolated profiles by month for : 2018
Tsukuba 36.9N 140.E

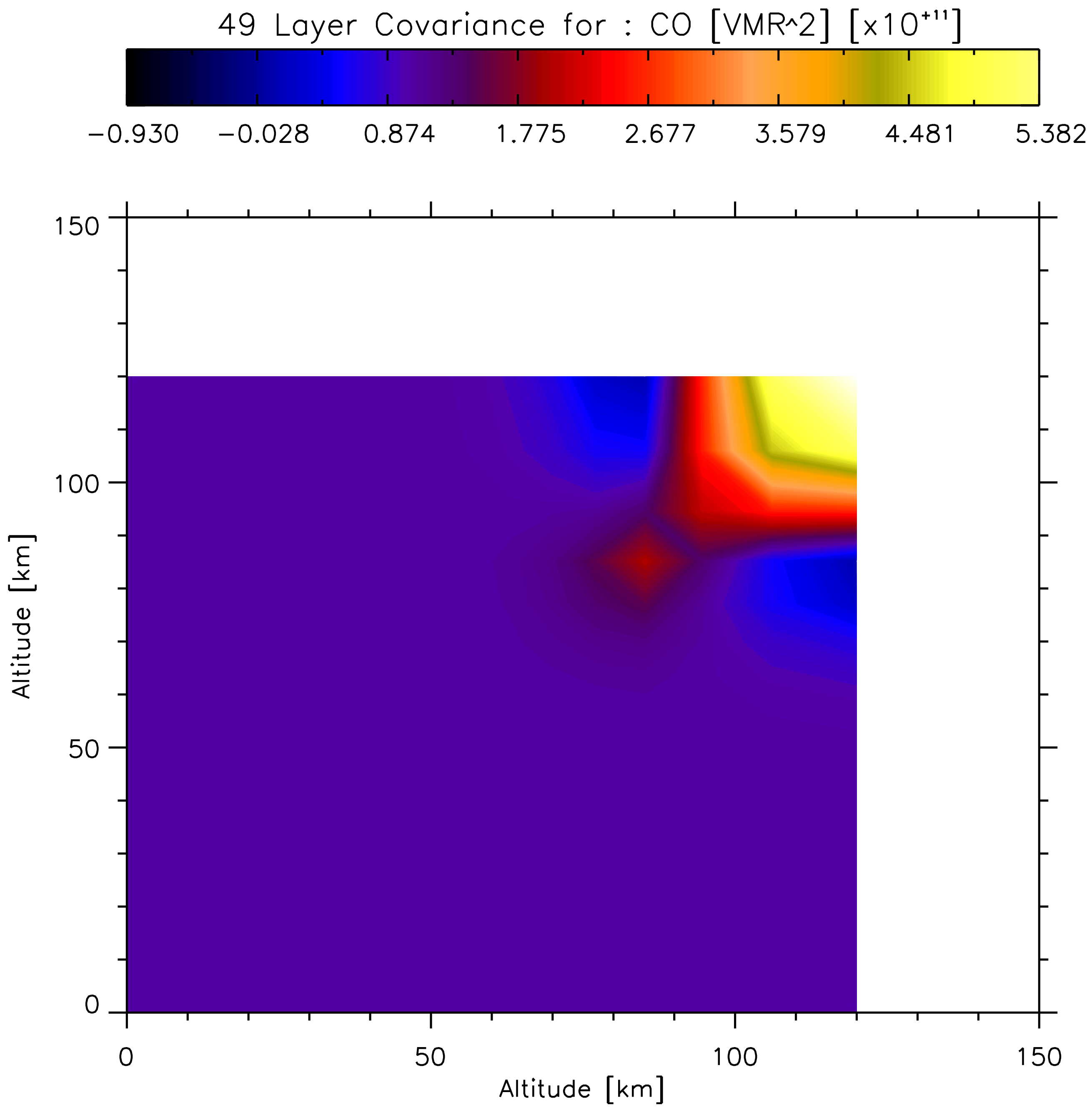

Initial & Interpolated profiles by month for : 2019
Tsukuba 36.9N 140.E
Altitude
0
20
40
60
80
100
120
10^{-9}
10^{-8}
10^{-7}
10^{-6}
10^{-5}
10^{-4}
Mixing Ratio
Dec
Nov
Oct
Sep
Aug
Jul
Jun
May
Apr
Mar
Feb
Jan

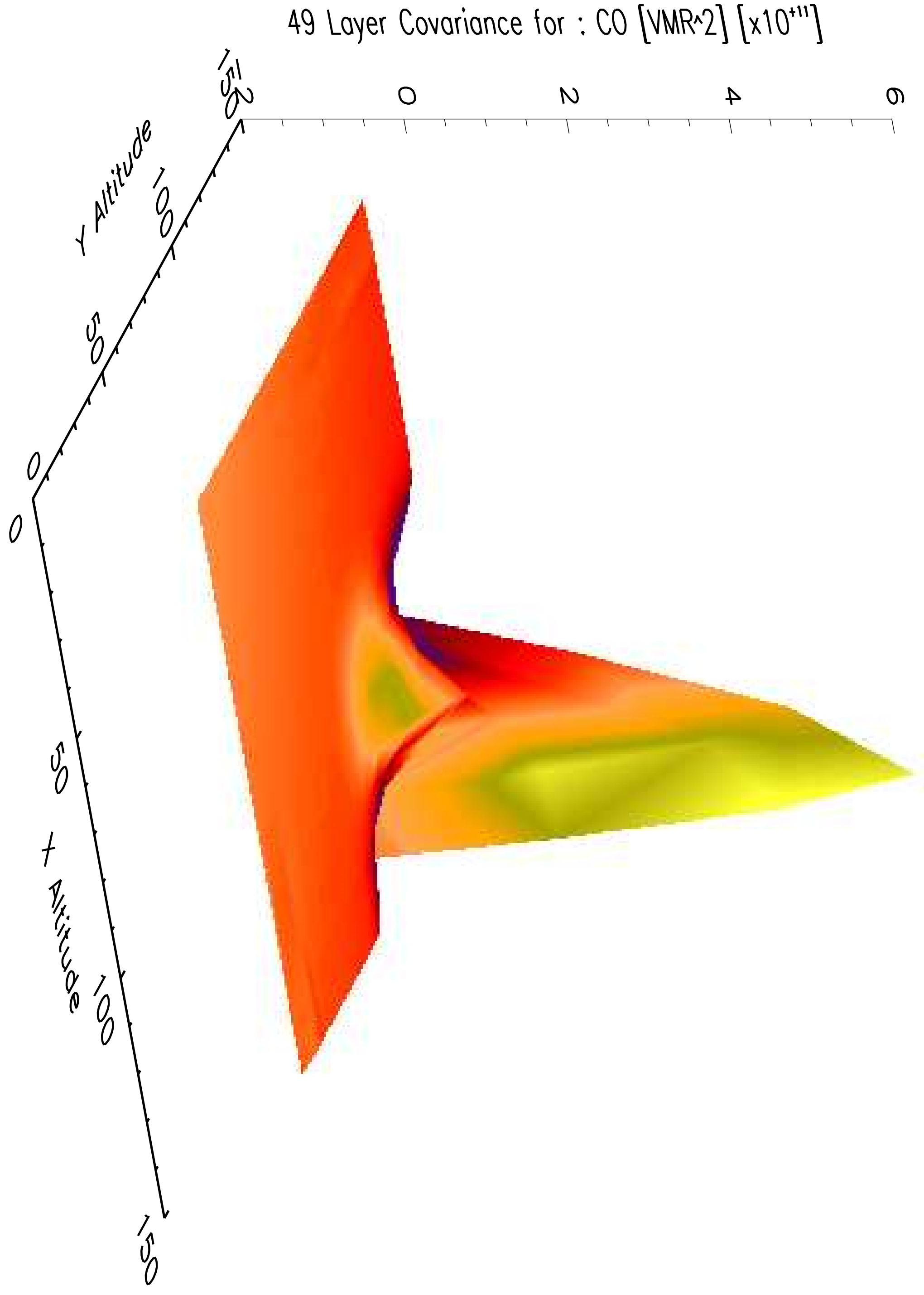


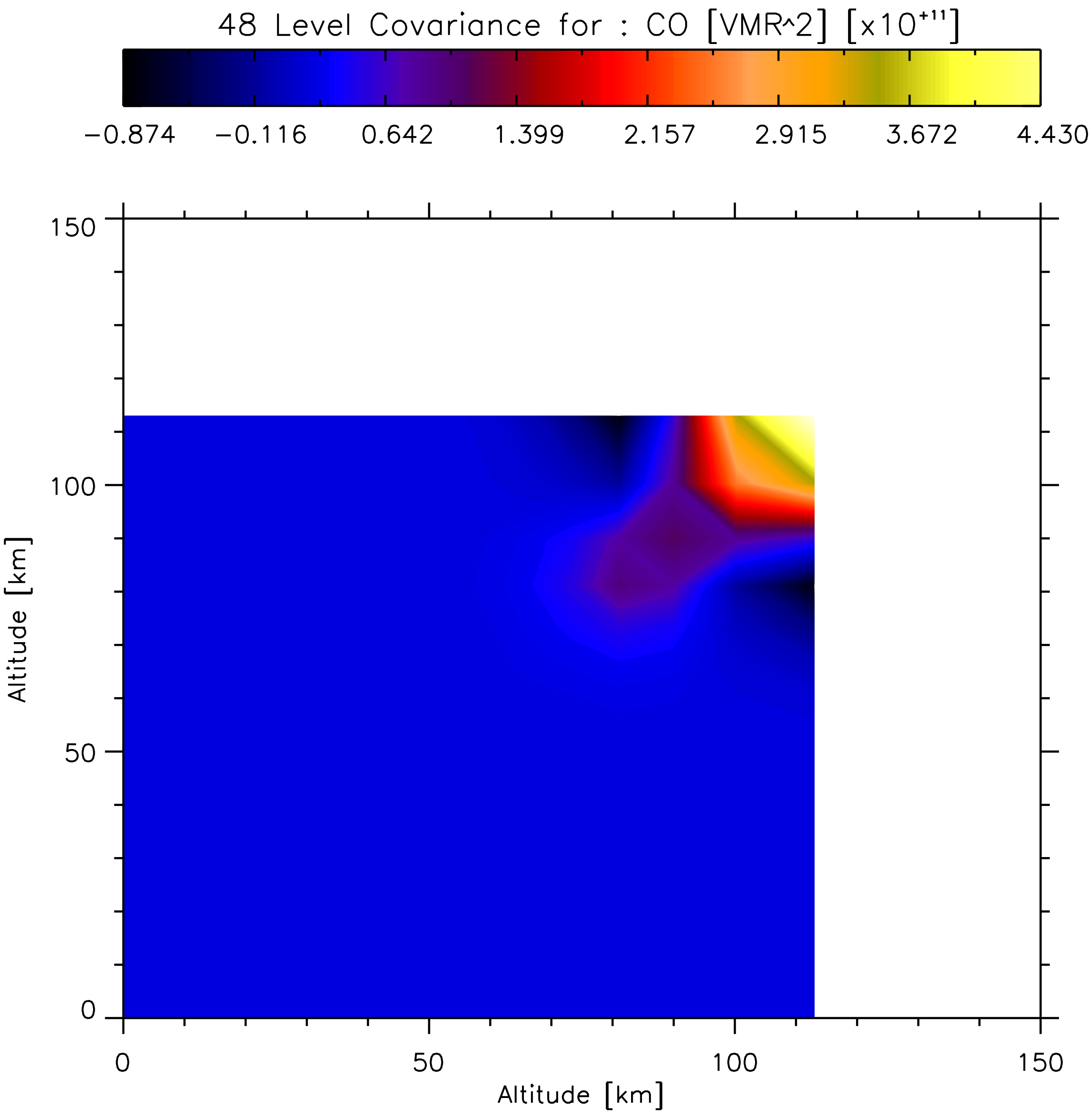
Initial & Interpolated profiles by month for : 2020
Tsukuba 36.9N 140.E

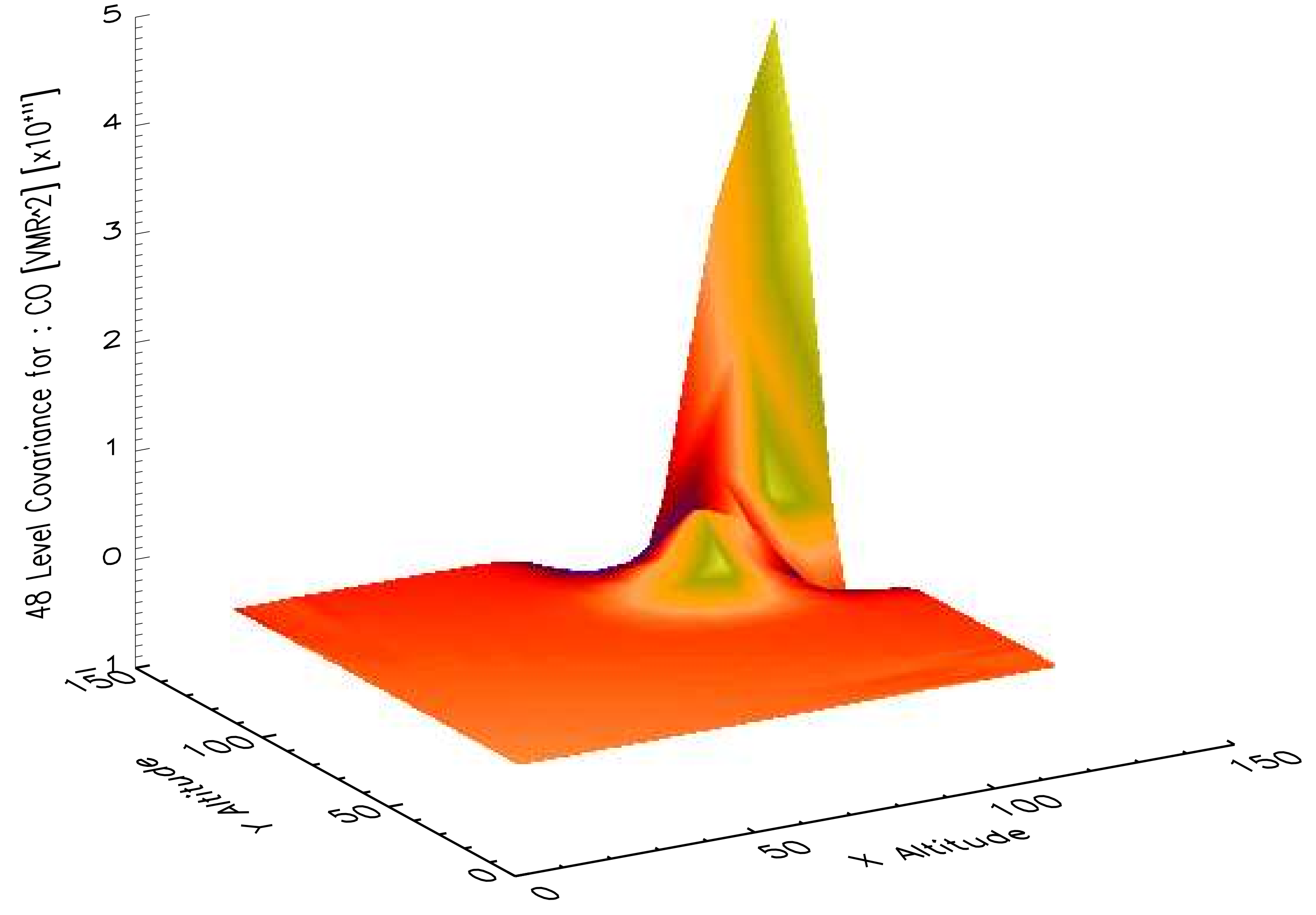

Station Grid
REFMOD Grid
Min, Max, Mean of : 492 profiles.
Altitude
0
20
40
60
80
100
120
10^{-9}
10^{-8}
10^{-7}
10^{-6}
10^{-5}
10^{-4}
Mixing Ratio


Std. Deviation
Percent Deviation
Station Grid
REFMOD Grid
Altitude
Altitude
120
100
80
60
40
20
0
120
100
80
60
40
20
0
10^{-9}
10^{-8}
10^{-7}
10^{-6}
10^{-5}
SD
0
20
40
60
80
%


49 Layer Covariance for : CO [VMR^2] [x10⁺¹¹]
−0.930
−0.028
0.874
1.775
2.677
3.579
4.481
5.382
Altitude [km]
150
100
50
0
0
50
100
150
Altitude [km]


49 Layer Covariance for : CO [VMR^2] [x10^{+11}]
0
2
4
6
Y Altitude
0
50
100
150
X Altitude
0
50
100
150


48 Level Covariance for : CO [VMR^2] [x10⁺¹¹]
−0.874
−0.116
0.642
1.399
2.157
2.915
3.672
4.430
150
100
50
0
Altitude [km]
0
50
100
150
Altitude [km]


48 Level Covariance for : CO [VMR^2] [x10^+11]
5
4
3
2
1
0
-1
150
100
50
0
Y Altitude
0
50
100
150
X Altitude