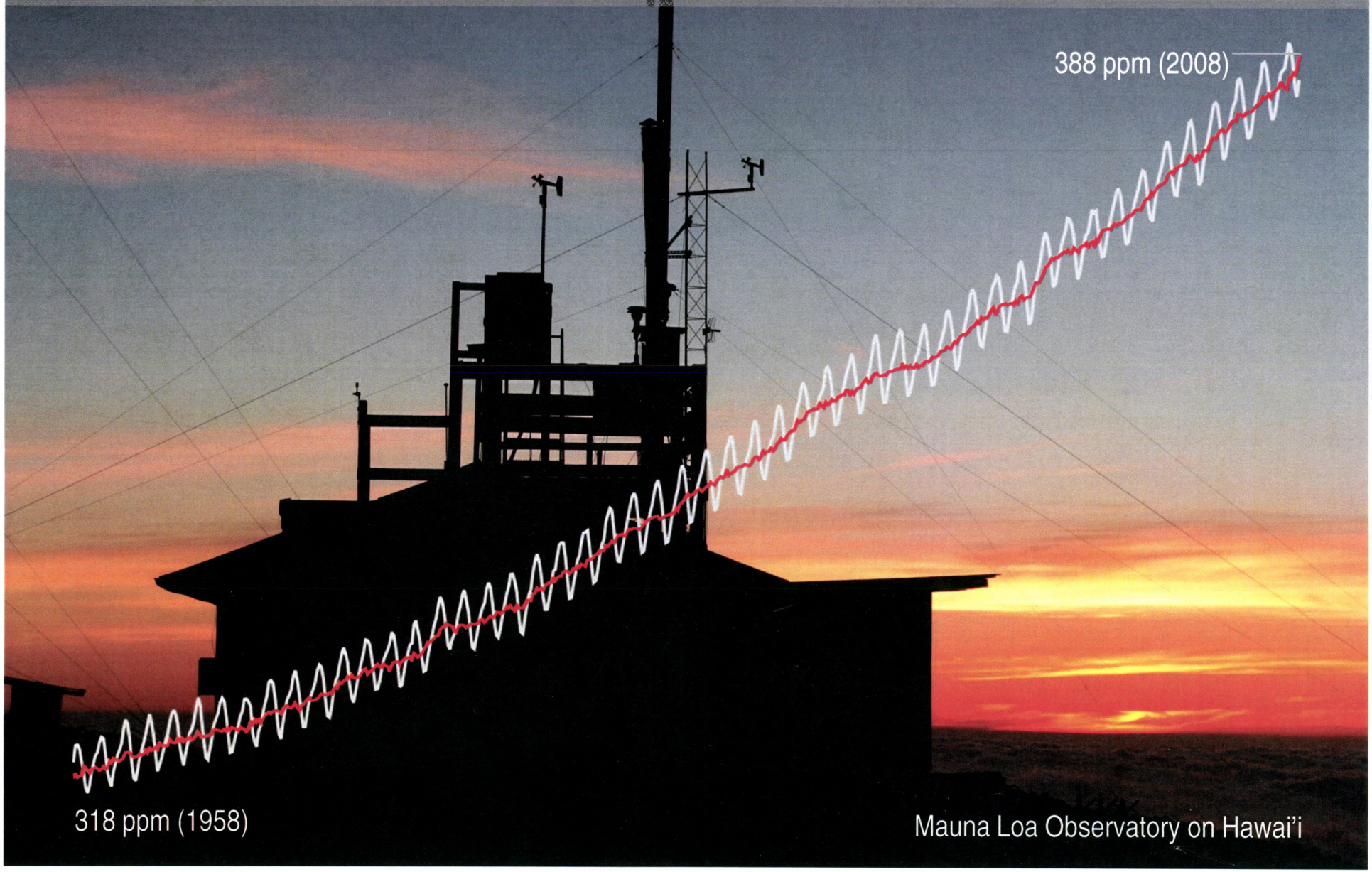
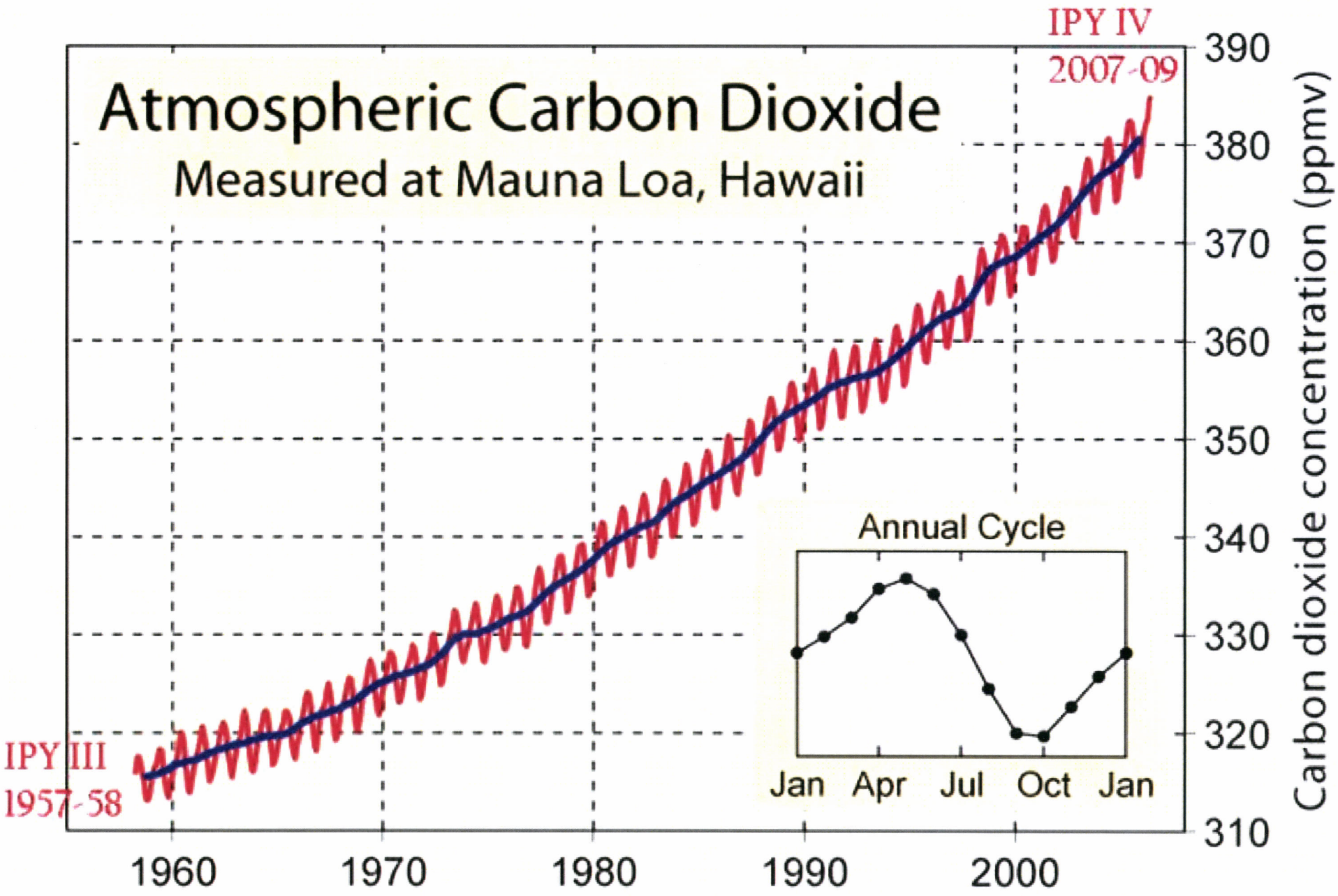
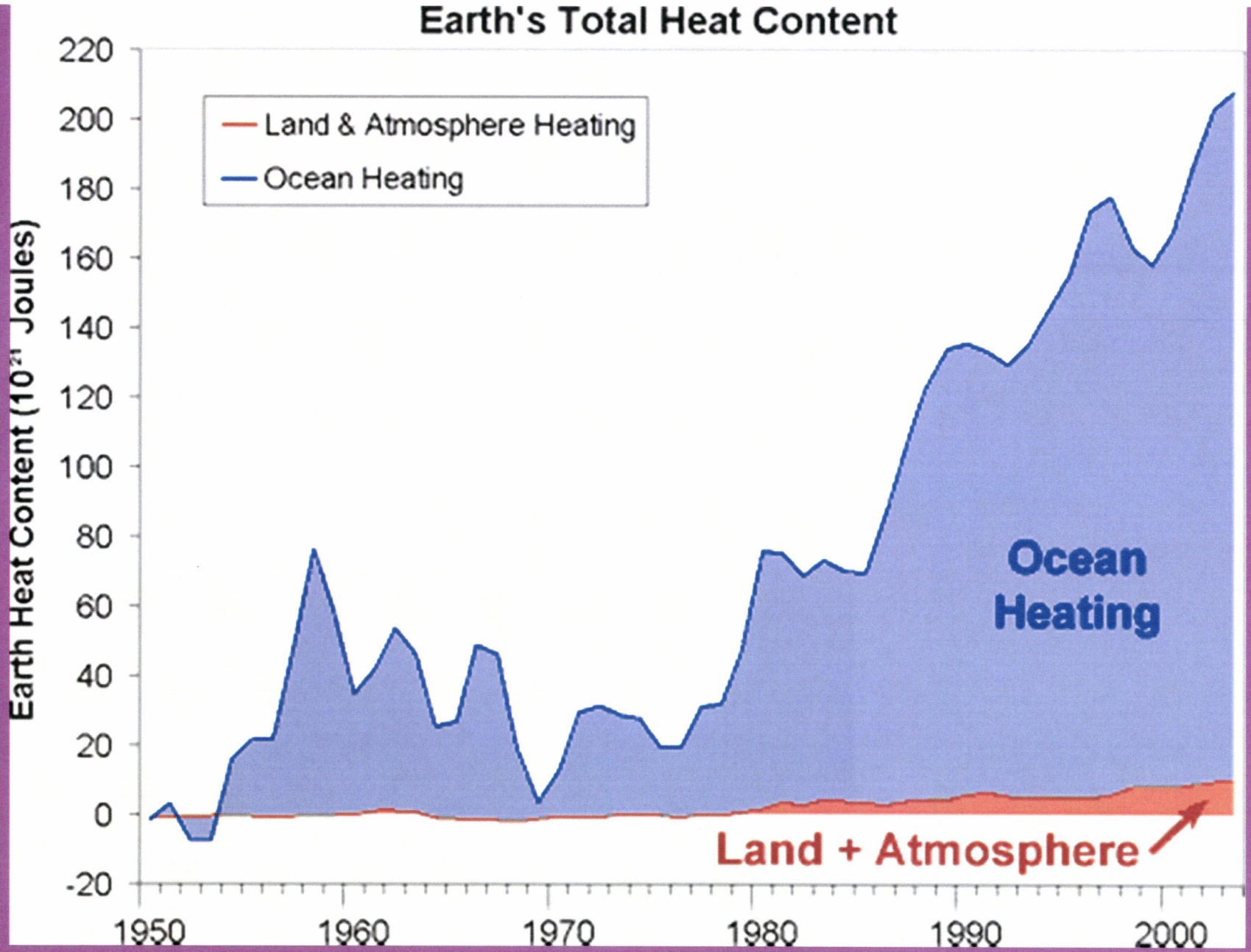
EXHIBIT NO. 2
DATE 2.18.13
BILL NO. SB 281

Carbon dioxide has risen by 36% since accurate measurements began in 1958




Atmospheric Carbon Dioxide
Measured at Mauna Loa, Hawaii
IPY IV
2007-09
IPY III
1957-58
Annual Cycle
Jan
Apr
Jul
Oct
Jan
1960
1970
1980
1990
2000
390
380
370
360
350
340
330
320
310
Carbon dioxide concentration (ppmv)

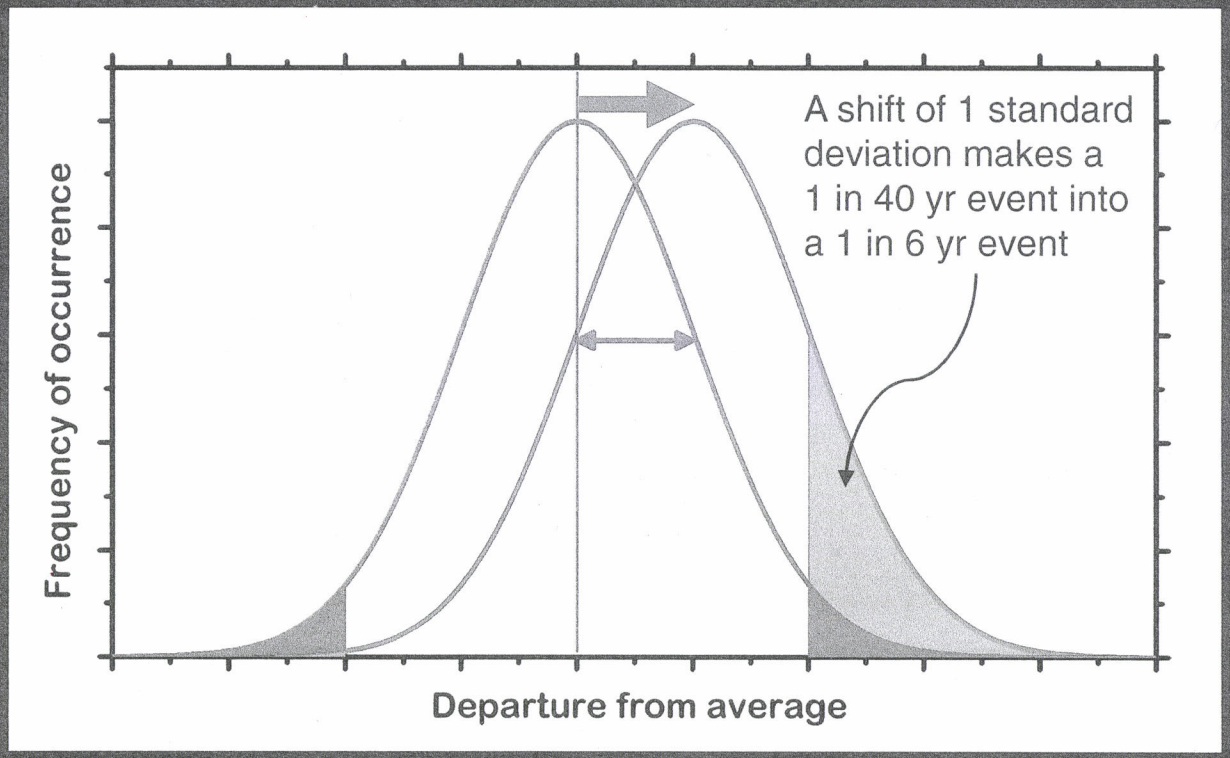


Data From Murphy et al 2009, Domingues et al 2008
Graph from http://www.skepticalscience.com/

Calculus of extremes

The distribution of weather events around the climatic average often follows a 'bell-shaped' curve.

Climate change can involve change in the average, or the spread around the average (standard deviation), or both.

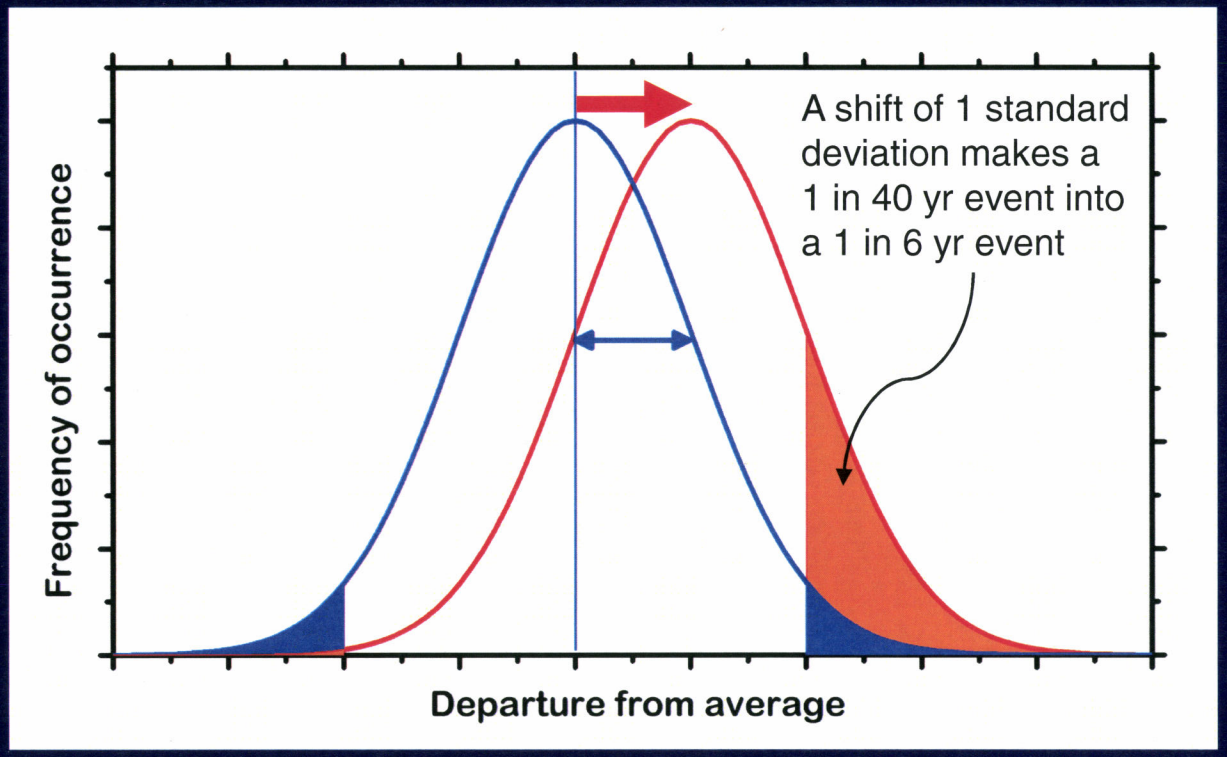


A shift in the distribution of temperatures has a much larger relative effect at the extremes than near the mean.

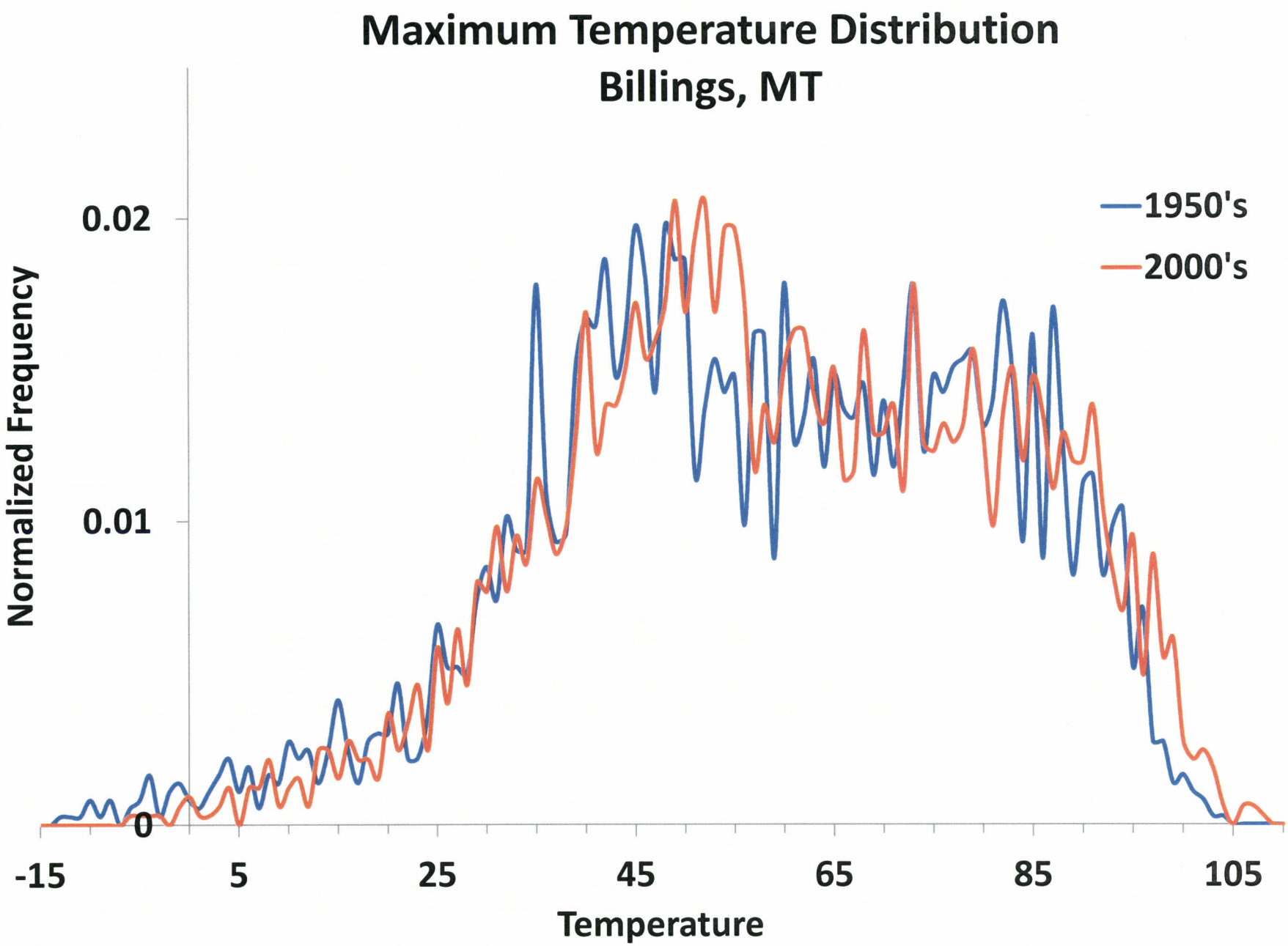
Calculus of extremes

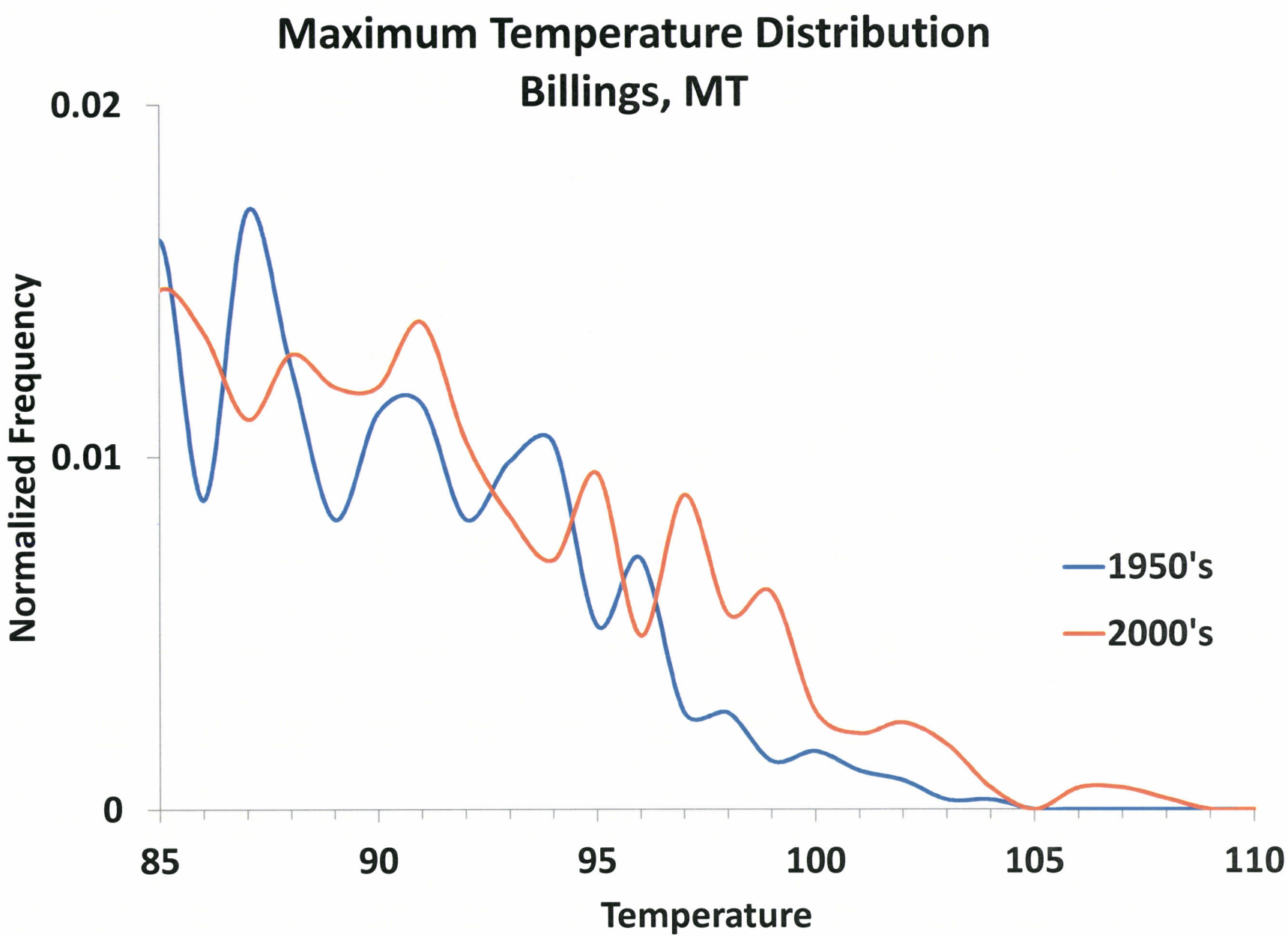
The distribution of weather events around the climatic average often follows a 'bell-shaped' curve.

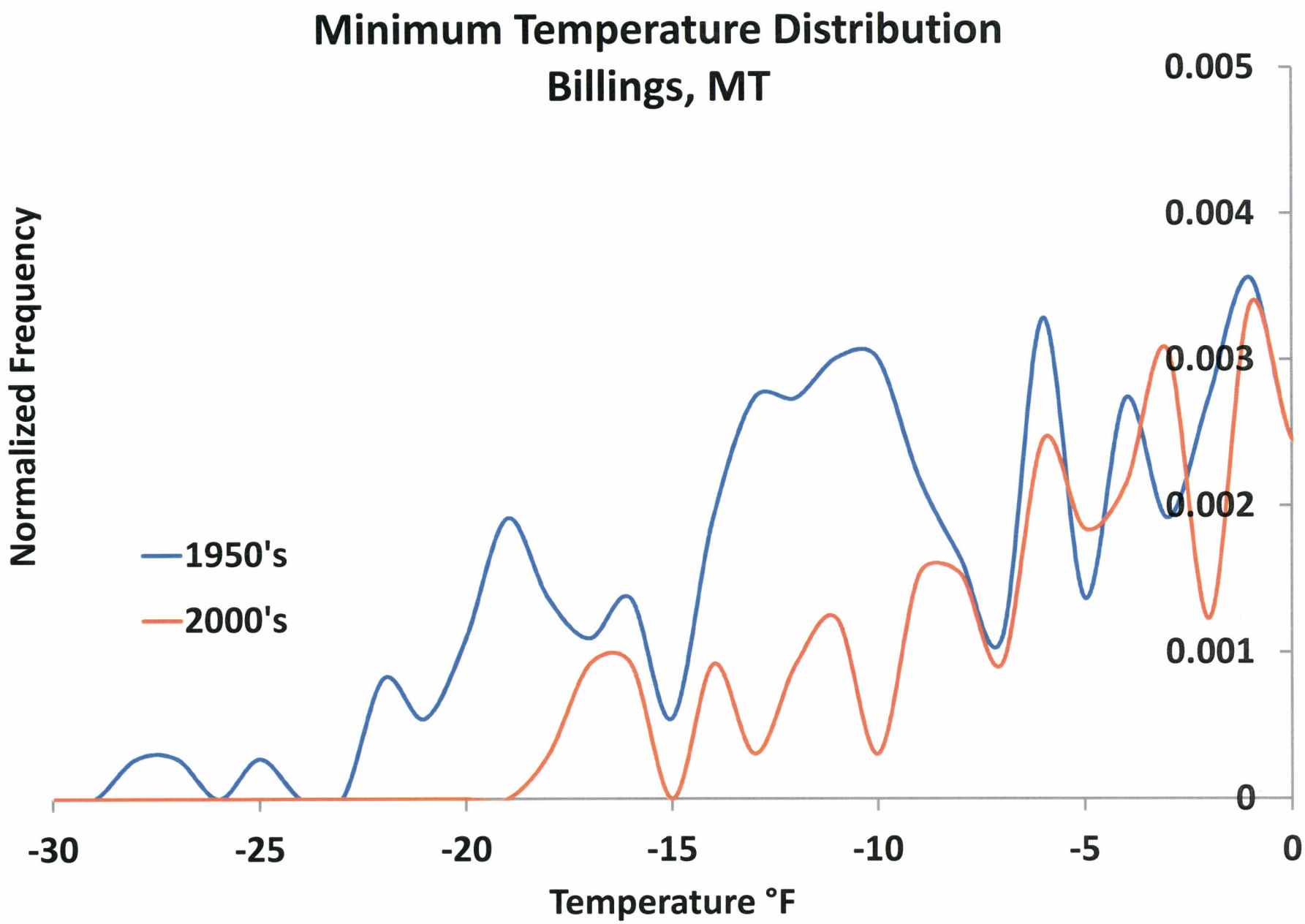
Climate change can involve change in the average, or the spread around the average (standard deviation), or both.



A shift in the distribution of temperatures has a much larger relative effect at the extremes than near the mean.


Maximum Temperature Distribution
Billings, MT
1950's
2000's
Normalized Frequency
0.02
0.01
0
-15
5
25
45
65
85
105
Temperature


Maximum Temperature Distribution
Billings, MT
0.02
0.01
0
Normalized Frequency
85
90
95
100
105
110
Temperature
1950's
2000's


Minimum Temperature Distribution
Billings, MT
Normalized Frequency
0.005
0.004
0.003
0.002
0.001
0
1950's
2000's
-30
-25
-20
-15
-10
-5
0
Temperature °F