

# Climate Dysfunction: The Facts of Global Warming. Political Science or Science Fiction ?

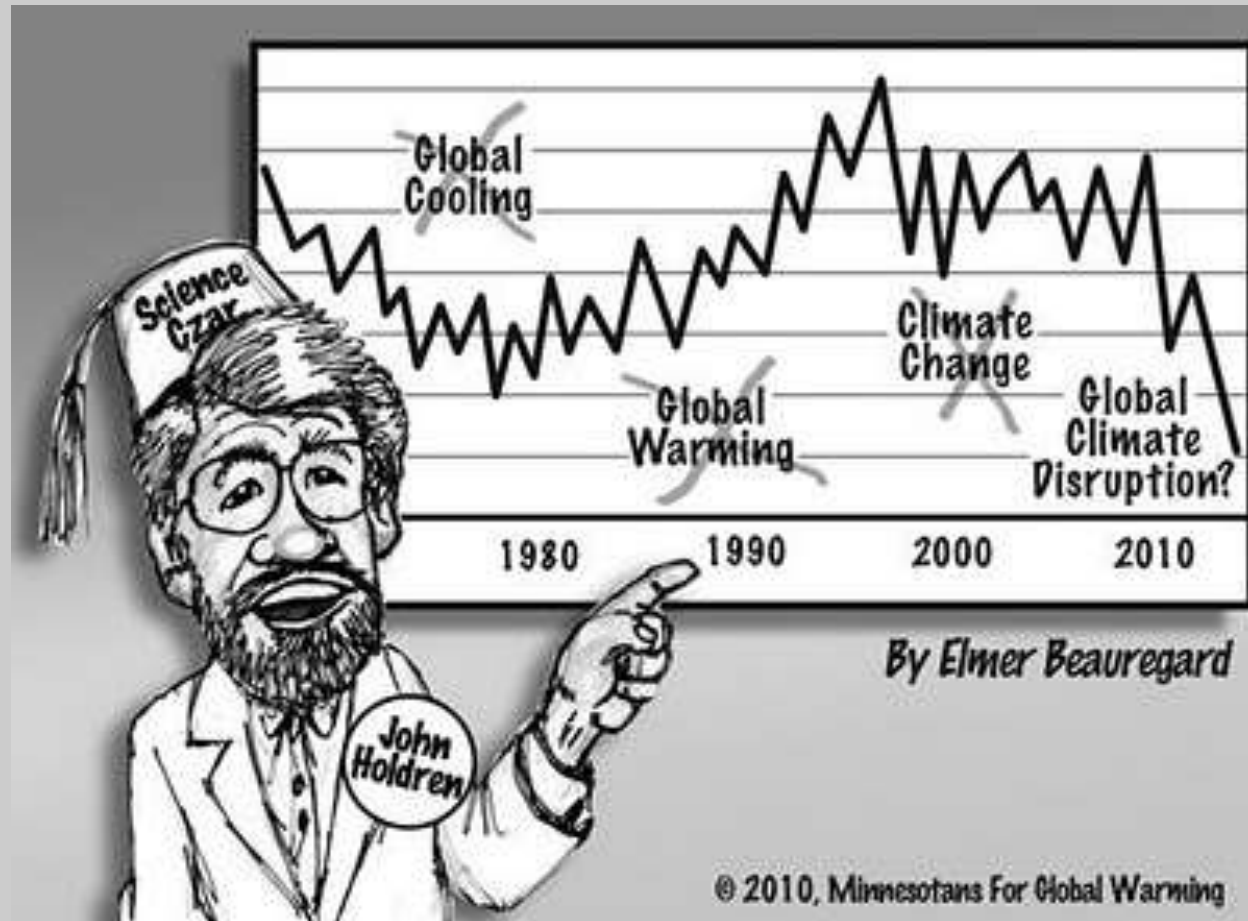
**Dr. Richard A. Keen**

**University of Colorado,  
Boulder (Emeritus/Ret.)**

**Weather observer,  
Coal Creek Canyon, CO**

**richard2keen@gmail.com**

**Good Neighbor Forum  
Castle Rock, CO  
September 2012**



**My thoughts on climate are tainted  
by my background as a...**

**Climate researcher**

**Astronomer**

**Reporter & Author**

**Photographer**

**Mountaineer & Glaciologist**

**Storm chaser**

**Army Met guy**

**Weather observer**

**Weather “historian”**

**Talking Head**

**IPCC WG1 AR5 Expert Reviewer**

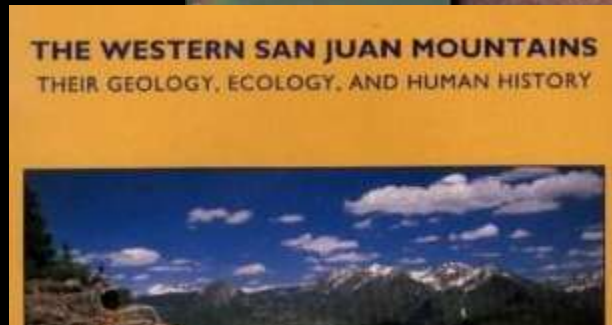
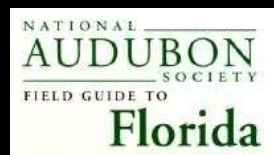
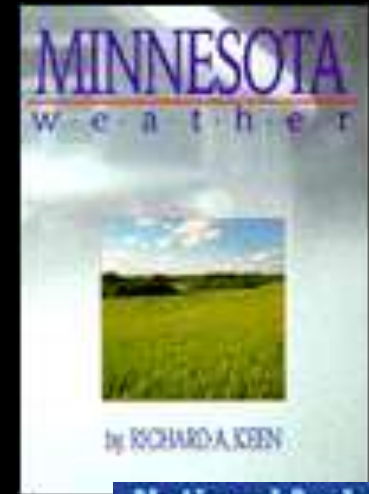
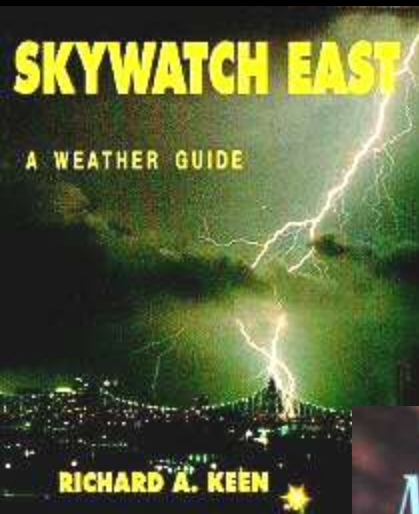
**Taxpayer**

**I’ve also done some climate modeling,  
but that was in my reckless youth.**

**I prefer working with data.**



I write books, too. About weather.



**And a PhD thesis about climate change in the Arctic.  
Conclusion: jet stream winds and storm tracks are the major factors.**

**TEMPERATURE AND CIRCULATION ANOMALIES  
IN THE EASTERN CANADIAN ARCTIC  
SUMMER 1946-76**

Richard A. Keen



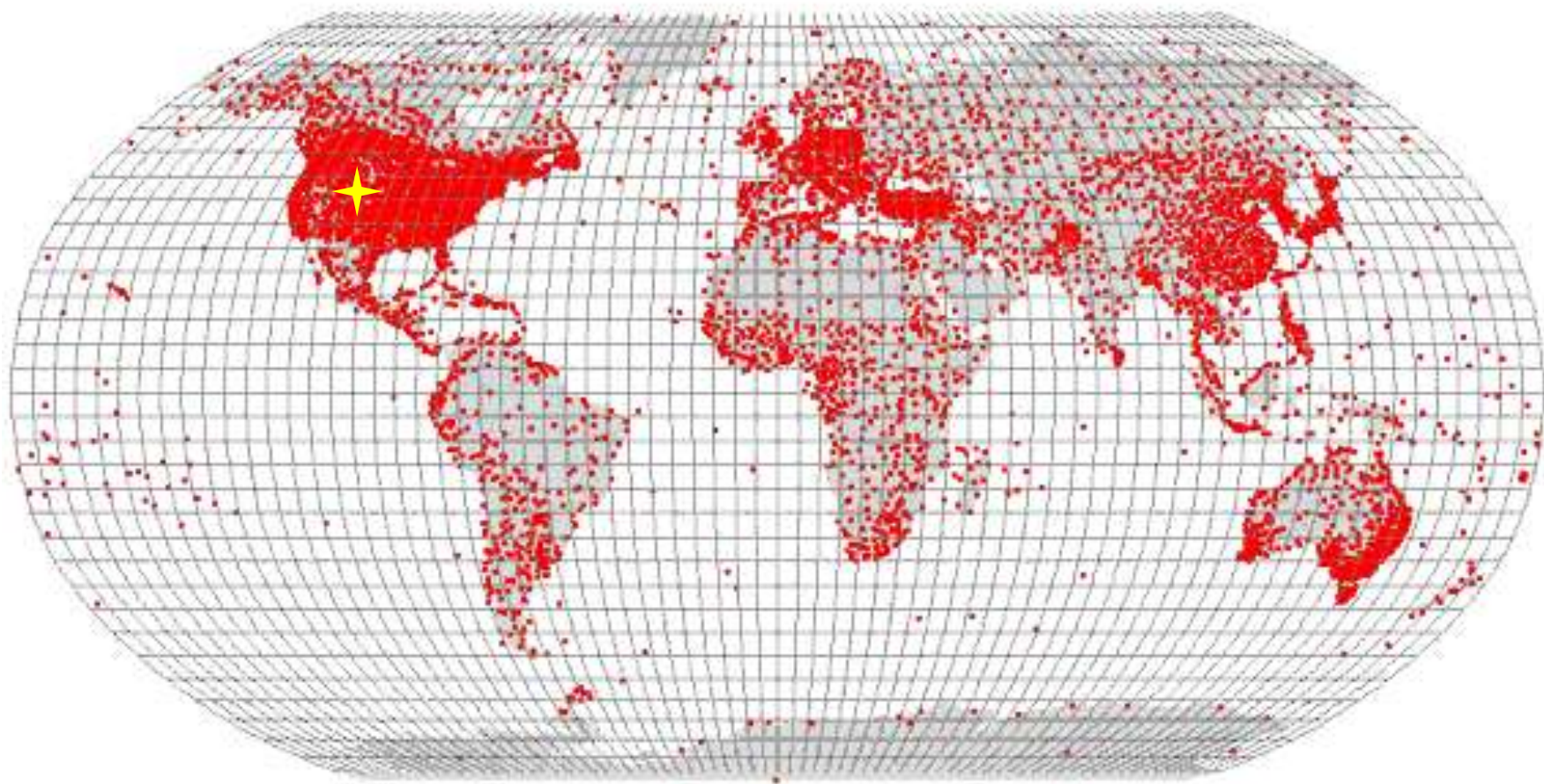
**Occasional Paper No. 34  
1980**

INSTITUTE OF ARCTIC AND ALPINE RESEARCH • UNIVERSITY OF CALIFORNIA



**Global temperatures are not global.  
Only a third of the globe is sampled, leaving lots of  
blanks to fill with created “data”.**

### **GHCN Temperature Data Set Station Locations**



**Station locations are indicated by the individual red circles that are superimposed on top of the 5° latitude by 5° longitude grid boxes to which they belong.**

**“Global” temperatures are a fantasy.**

**Let’s take a different approach.**

**Like doctors, find some “sweet spots” that are particularly sensitive to AGW\* and which have reasonably good data.**



**Then look at their record.**

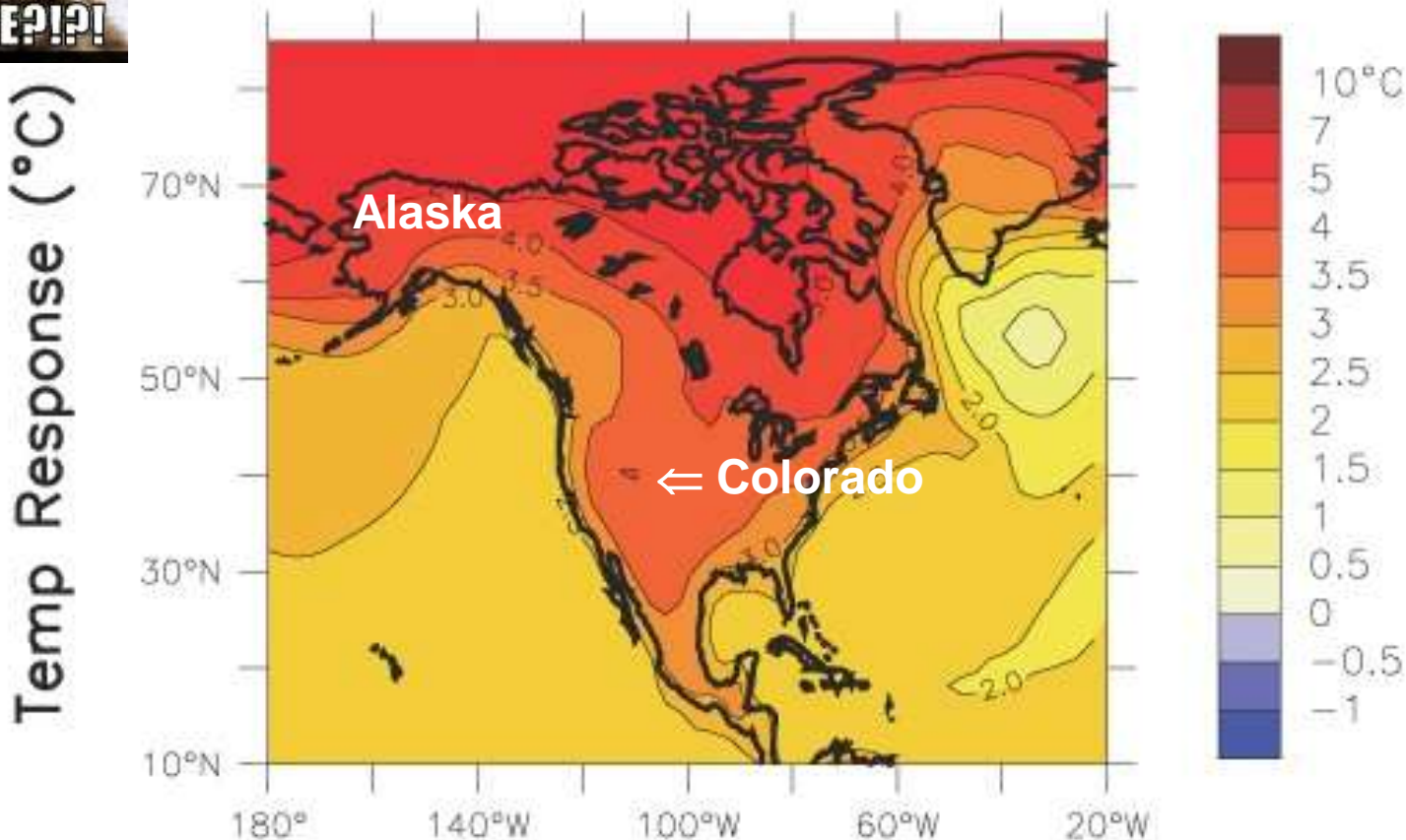
**\*AGW = Anthropogenic Global Warming**





# Two sweet spots – Alaska and Colorado Both predicted to warm 4°C (7°F) by 2099

Annual



IPCC fig-11-12

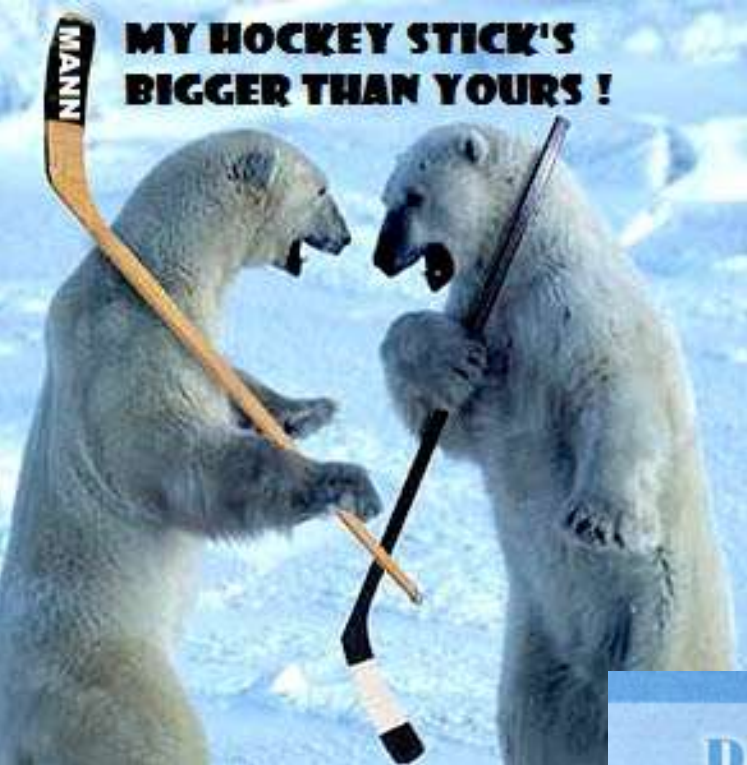
*Temperature changes over North America from the MMD-A1B simulations. Annual mean temperature change between 1980 to 1999 and 2080 to 2099, averaged over 21 models*

# Alaska



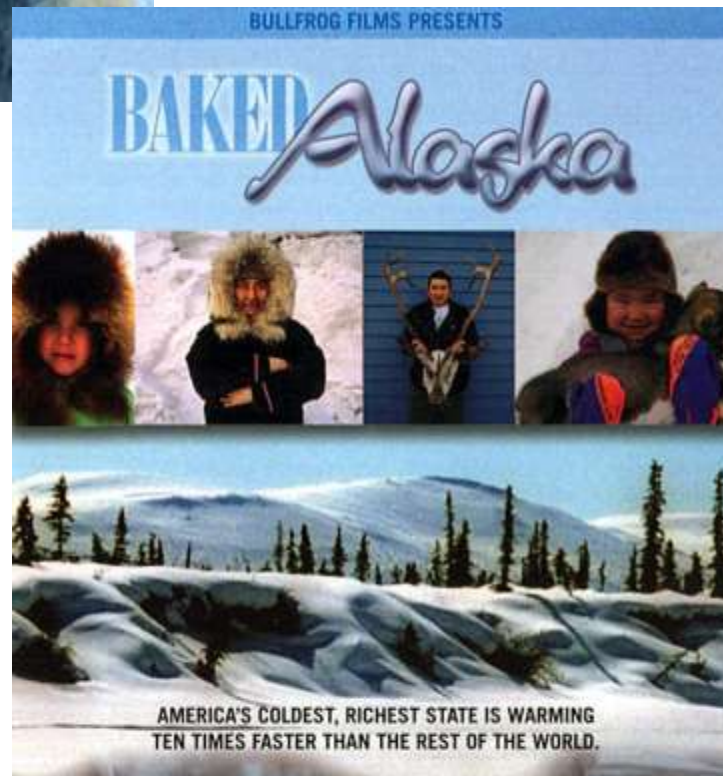
*Gilkey Glacier, Juneau Ice Field, Alaska*  
Photo: Richard Keen





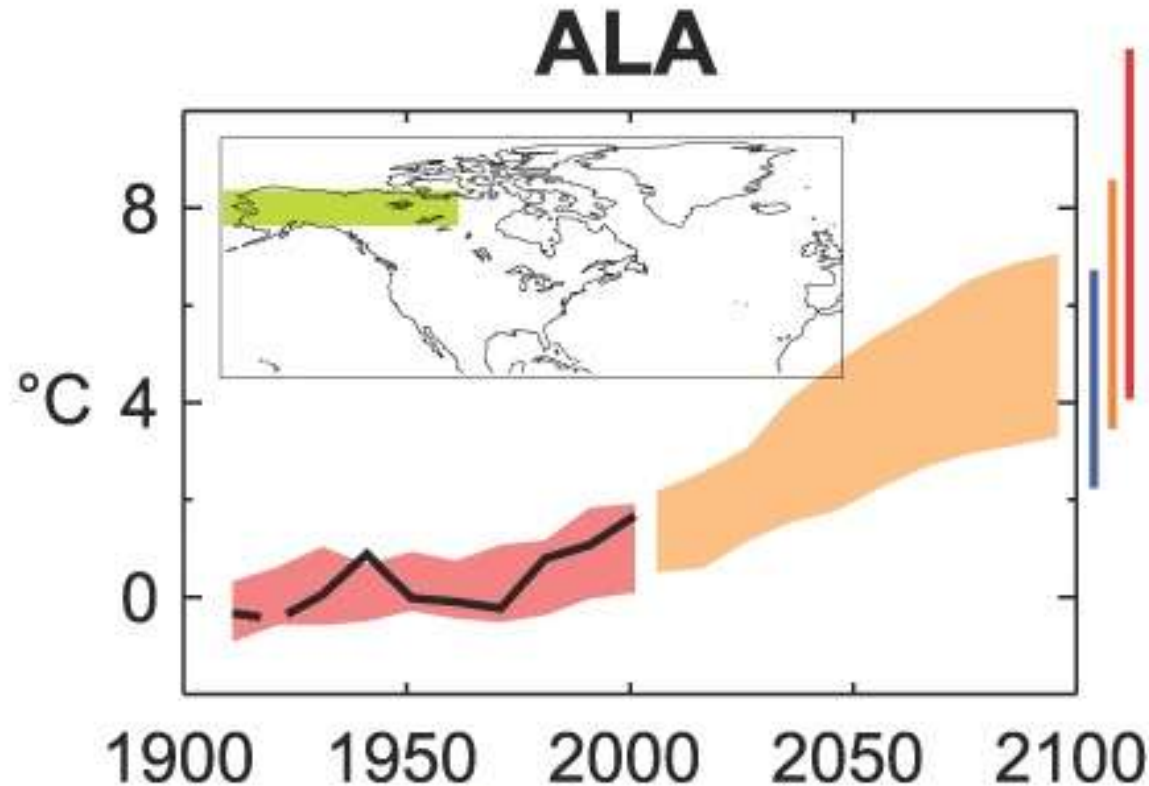
**Alaska is a  
Global Warming  
poster child.**

**Is it melting?**



**IPCC would like to think so.**

**Alaska: 4°C (7°F) warming by 2100  
1°C (2°F) has already happened, says IPCC**



**IPCC fig-11-11**

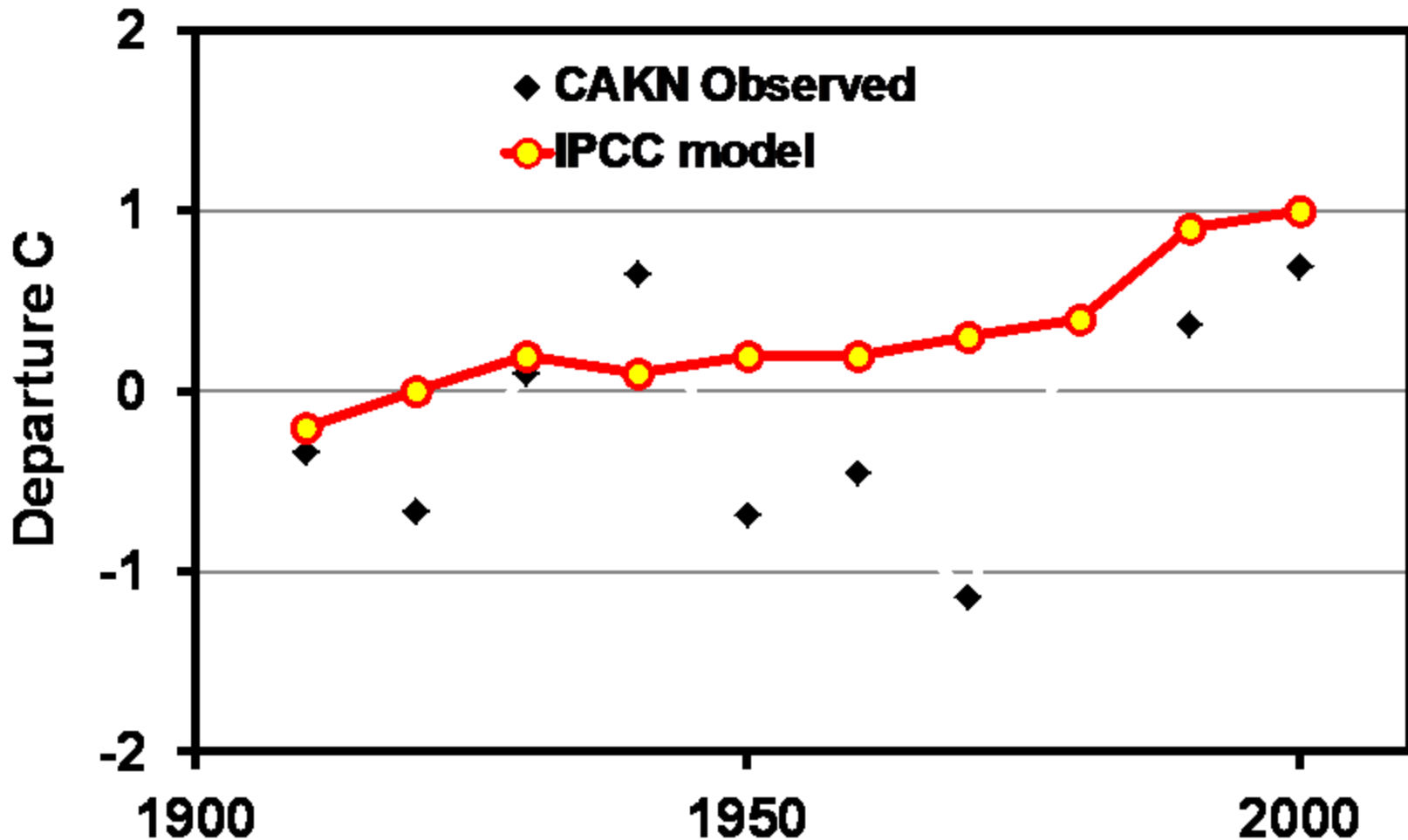
**Alaska climate: past century (black line)**

**Model past & future (color band)**

**IPCC = Intergovernmental Panel on Climate Change (UN)**

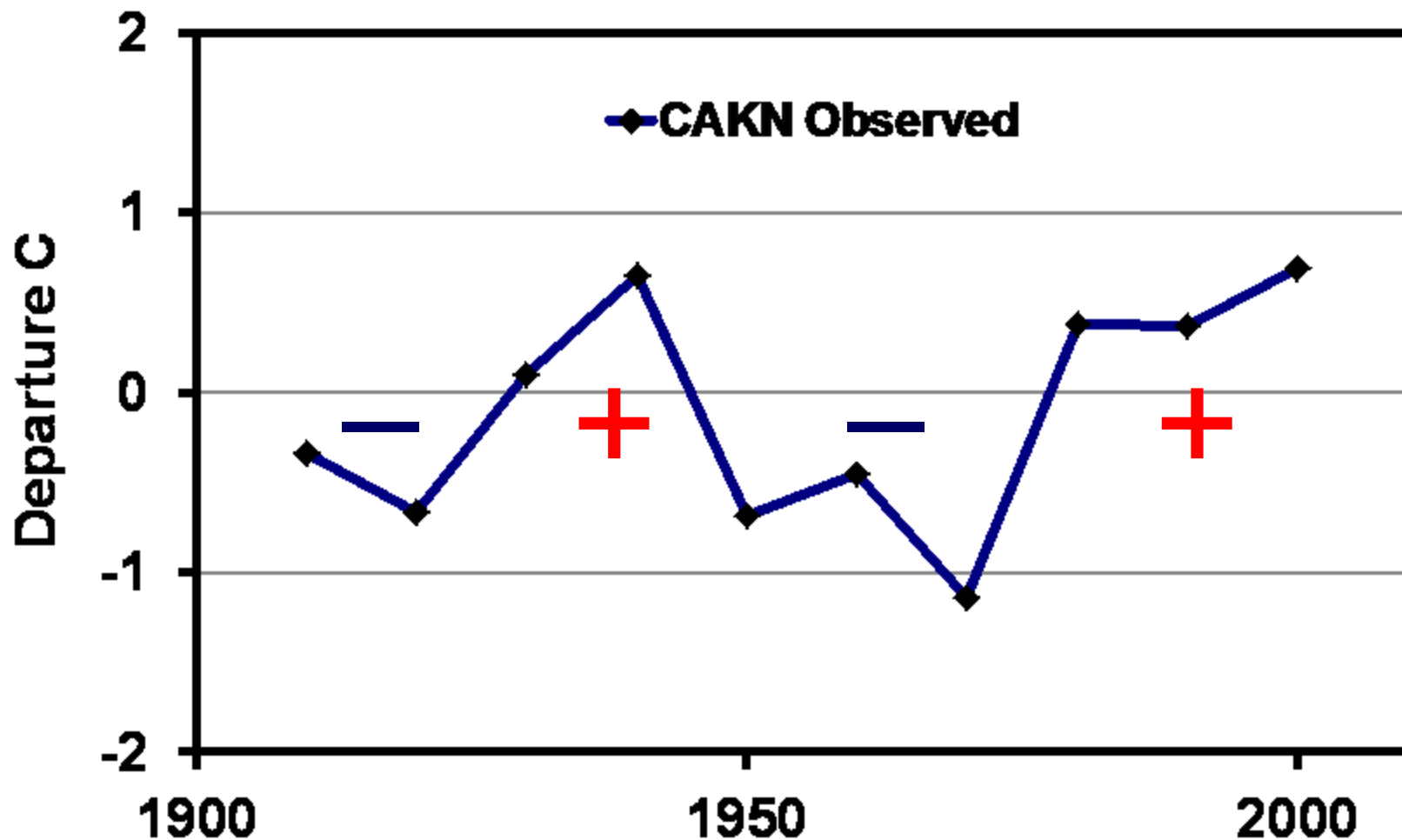
# IPCC's models show a 1°C warming since 1900.

Central Alaska Decadal Temperatures  
Average of 9 long-term rural stations

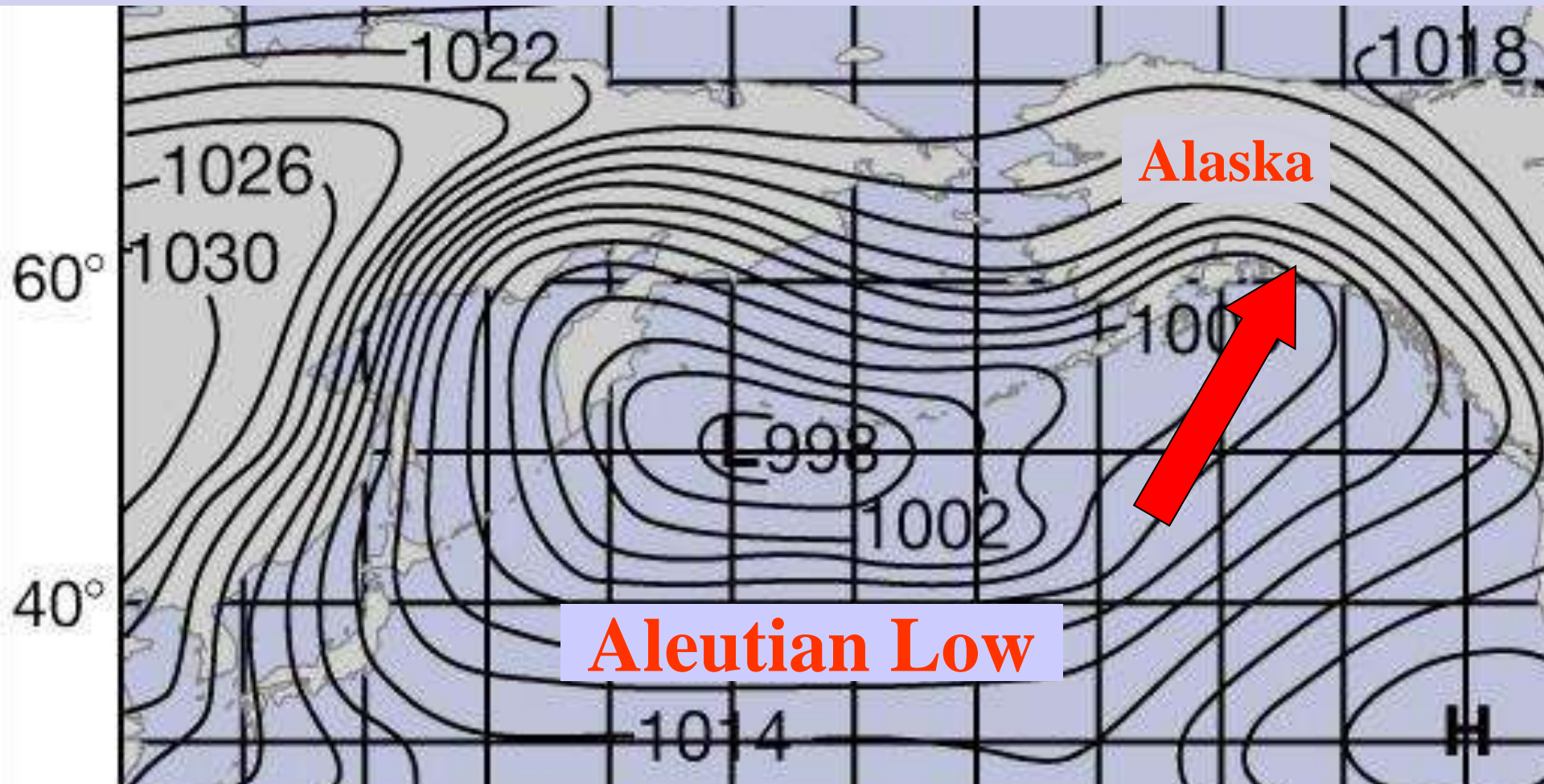


# Actual data for Alaska shows 30-year cycles, but no change overall. What causes the cycles?

Central Alaska Decadal Temperatures  
Average of 9 long-term rural stations

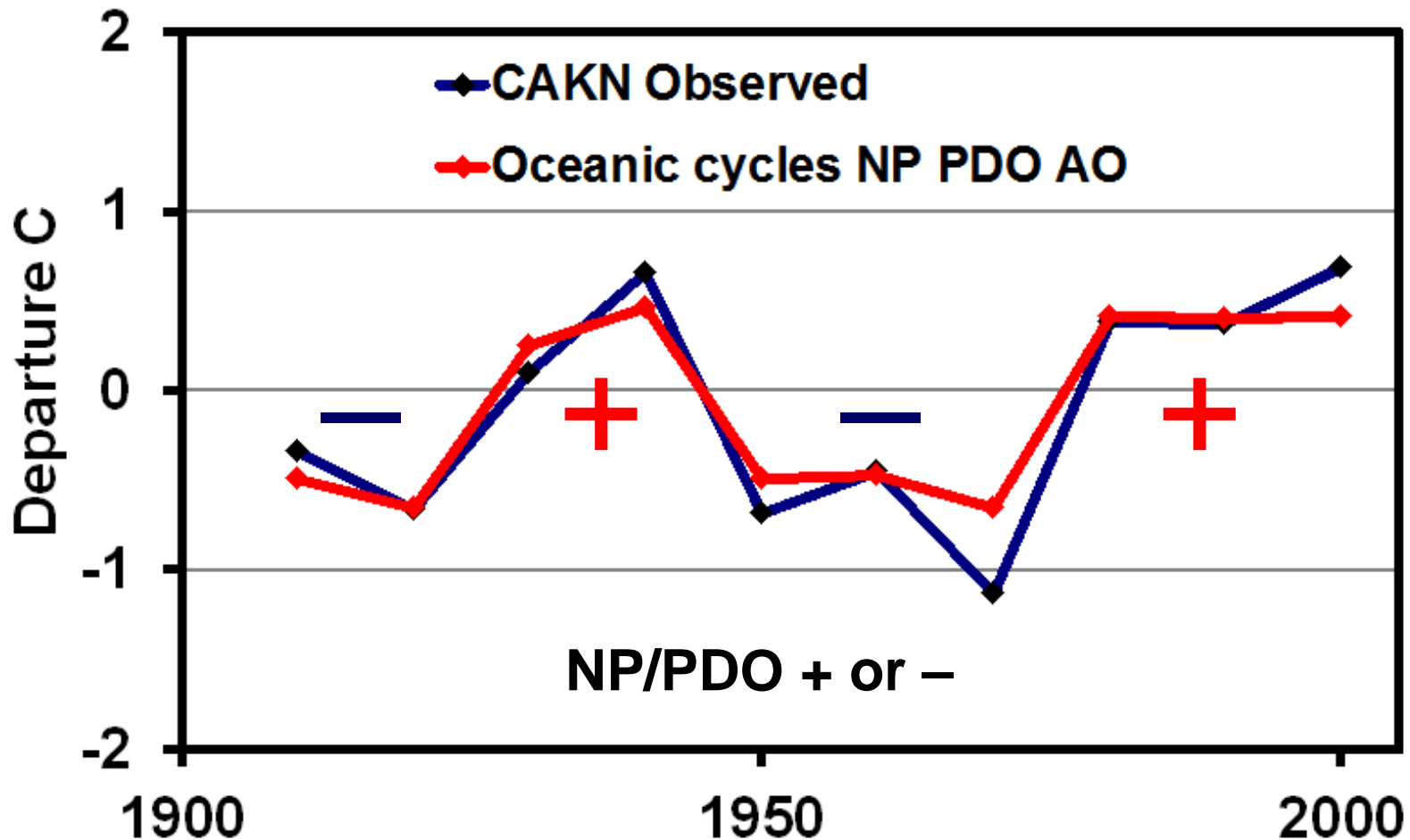


**The PDO = Pacific Decadal Oscillation, or NP = North Pacific index, a measure of the atmospheric pressure over the North Pacific Ocean. When pressure goes down, the Low is stronger, and Alaska gets warm southerly winds.**

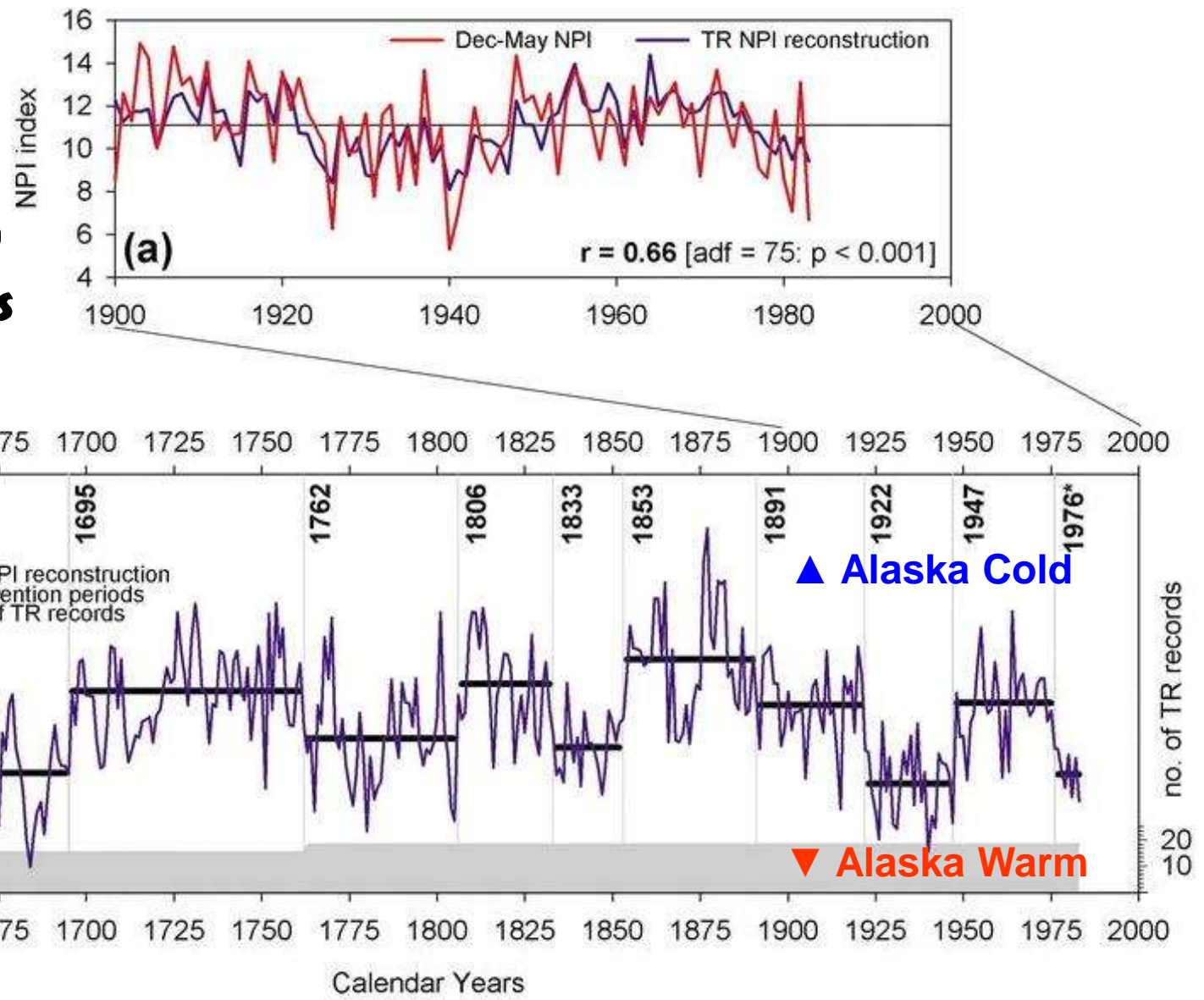


# Alaska's climate variations follow the PDO cycle closely. The models do not.

Central Alaska Decadal Temperatures  
Average of 9 long-term CAKN stations compared to  
Oceanic cycles



**PDO/NP cycles are natural, lasting 20 - 66 years, typically around 30 years since 1600.**



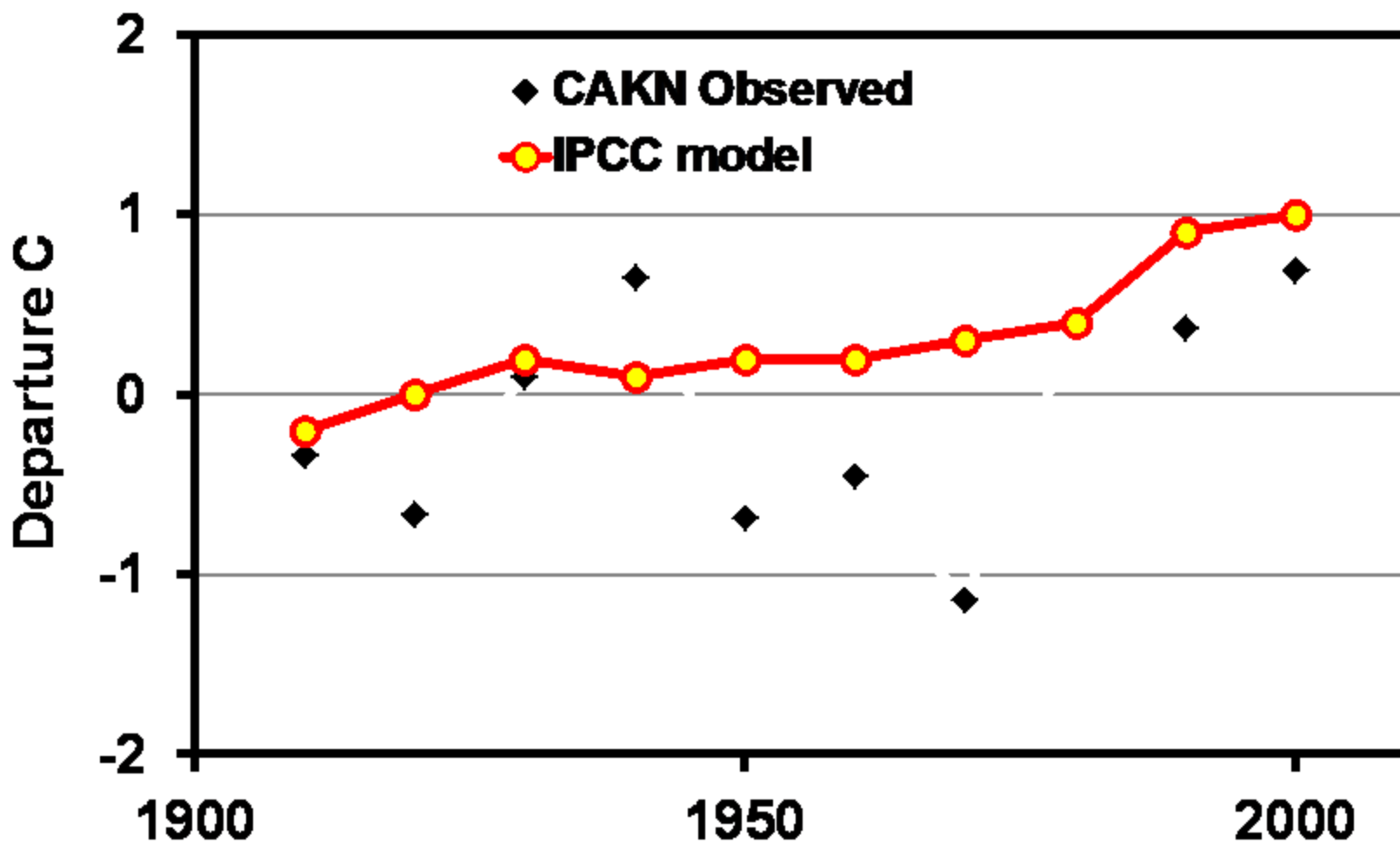
**Fig. 2. Tree-ring based NPI reconstruction. (a) Actual and estimated Dec–May NPI for the 1900–83 calibration period: (b) Reconstruction of Dec–May NPI from 1600–1983 based on North Pacific tree-ring data. Highlighted phase shifts identified using intervention analysis (significant at the 90% confidence limit).**

Journal of Climate Volume 18, Issue 24 (December 2005): pp. 5253–5265 Tropical–North Pacific Climate Linkages over the Past Four Centuries  
 Rosanne D’Arrigo, Rob Wilson, Clara Deser, Gregory Wiles, Edward Cook, Ricardo Villalba, Alexander Tudhope, Julia Cole, and Braddock Linsley  
 Tree-Ring Laboratory, Lamont-Doherty Earth Observatory, Palisades, New York

**Models do not forecast the PDO and other cycles, which are the largest influences on regional climate.**

**How do IPCC modelers get around this ?**

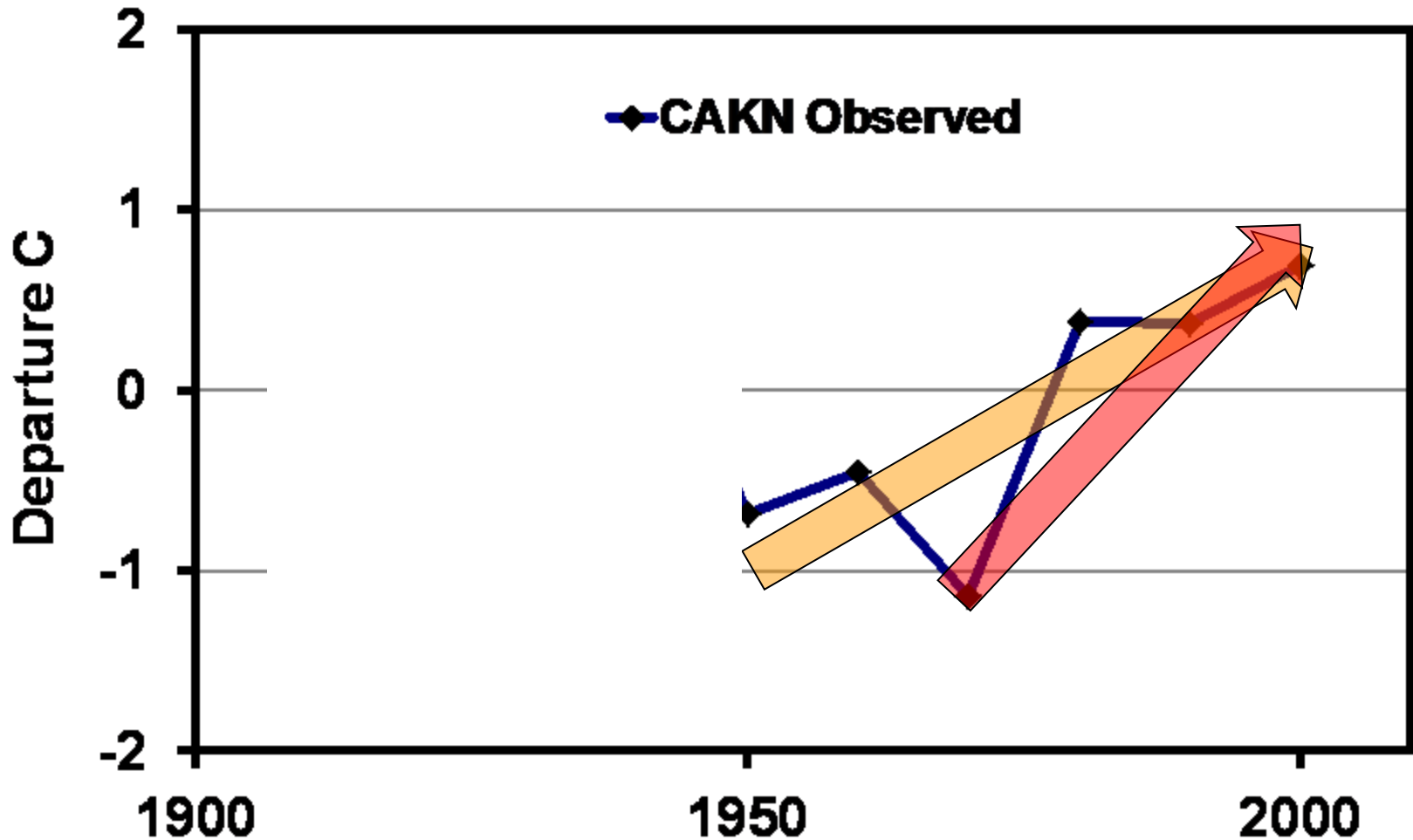
**Central Alaska Decadal Temperatures  
Average of 9 long-term rural stations**





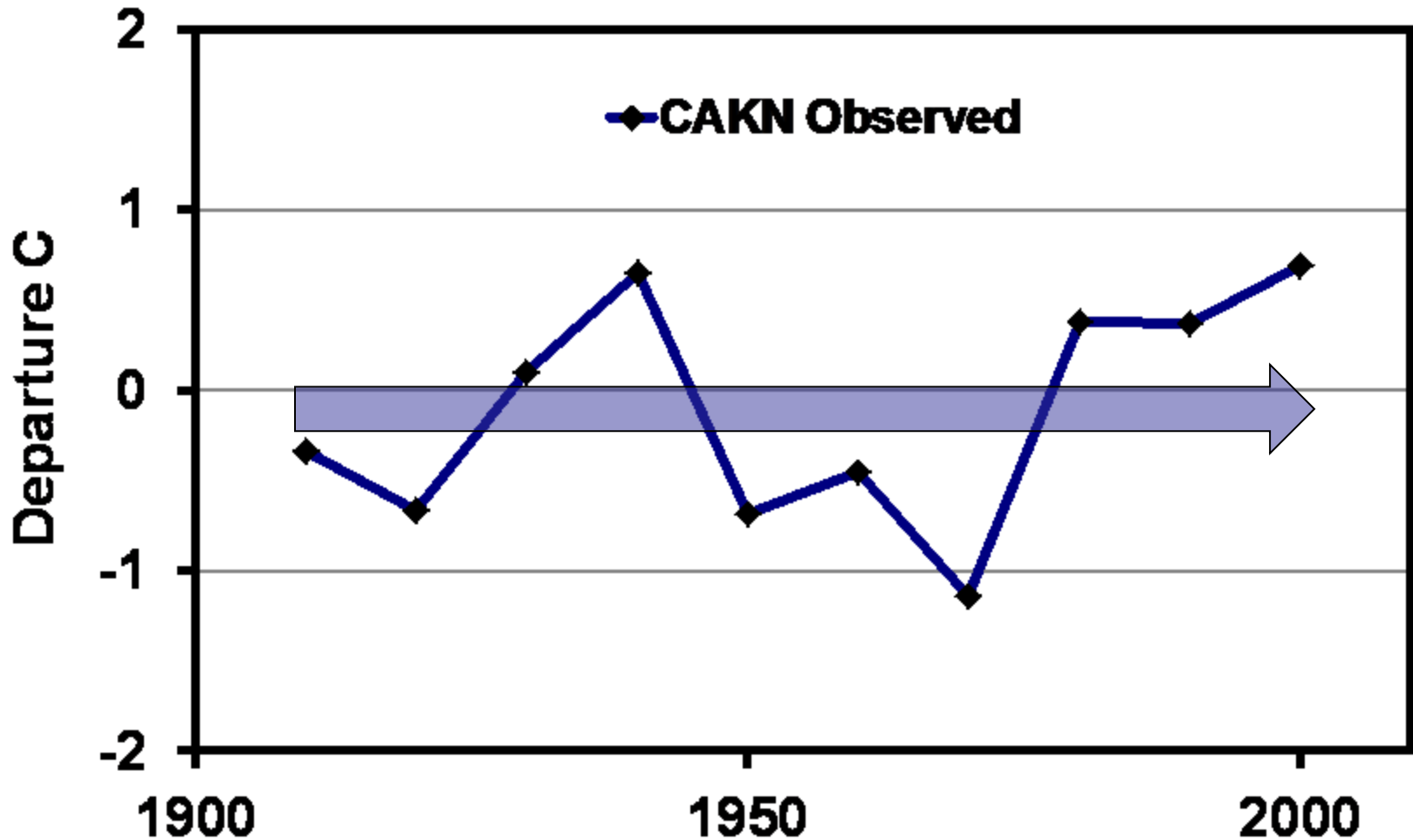
# Easy: Ignore, or erase, climate history prior to 1950-1970

Central Alaska Decadal Temperatures  
Average of 9 long-term rural stations



# The warmers would call it “cherry picking” if you used data before 1950.

Central Alaska Decadal Temperatures  
Average of 9 long-term rural stations



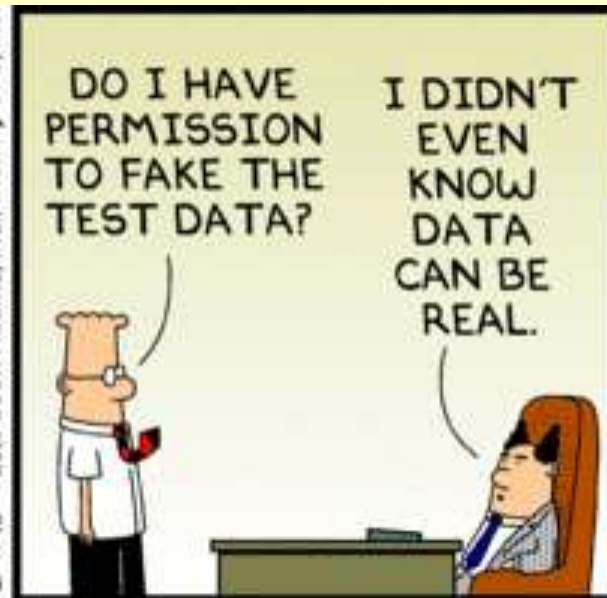
# Dilbert would understand, too.



Dilbert.com DilbertCartoonist@gmail.com



8-11-10 © 2010 Scott Adams, Inc./Dist. by UFS, Inc.



# How are Polar Bears doing these days ?

**Ursus Maritimus (Sea Bear) enjoy swimming, and are doing just fine, just as they did with thin ice 70 and 250 and 1000 and 8,000 years ago, thank you!**



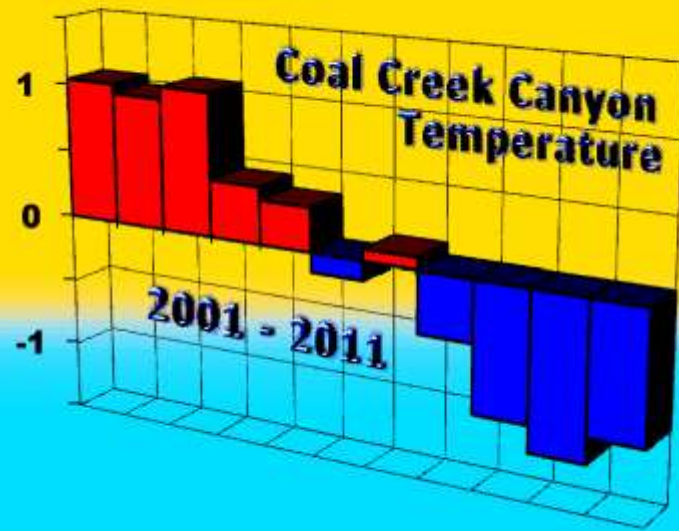
**Another Hot Spot:  
Colorado.**

**Coal Creek Canyon  
co-op station,  
aka Home.**

**IPCC: 2°F warming  
over 30 years.**



# Bumper sticker science



**COLORADO**  
**COOLING**

**Down 2°F in 12 years. Colorado, and the rest of the world, hasn't warmed in 15 years (since 1998).**

**Not to worry, IPCC now says we need 17 years of cooling!**

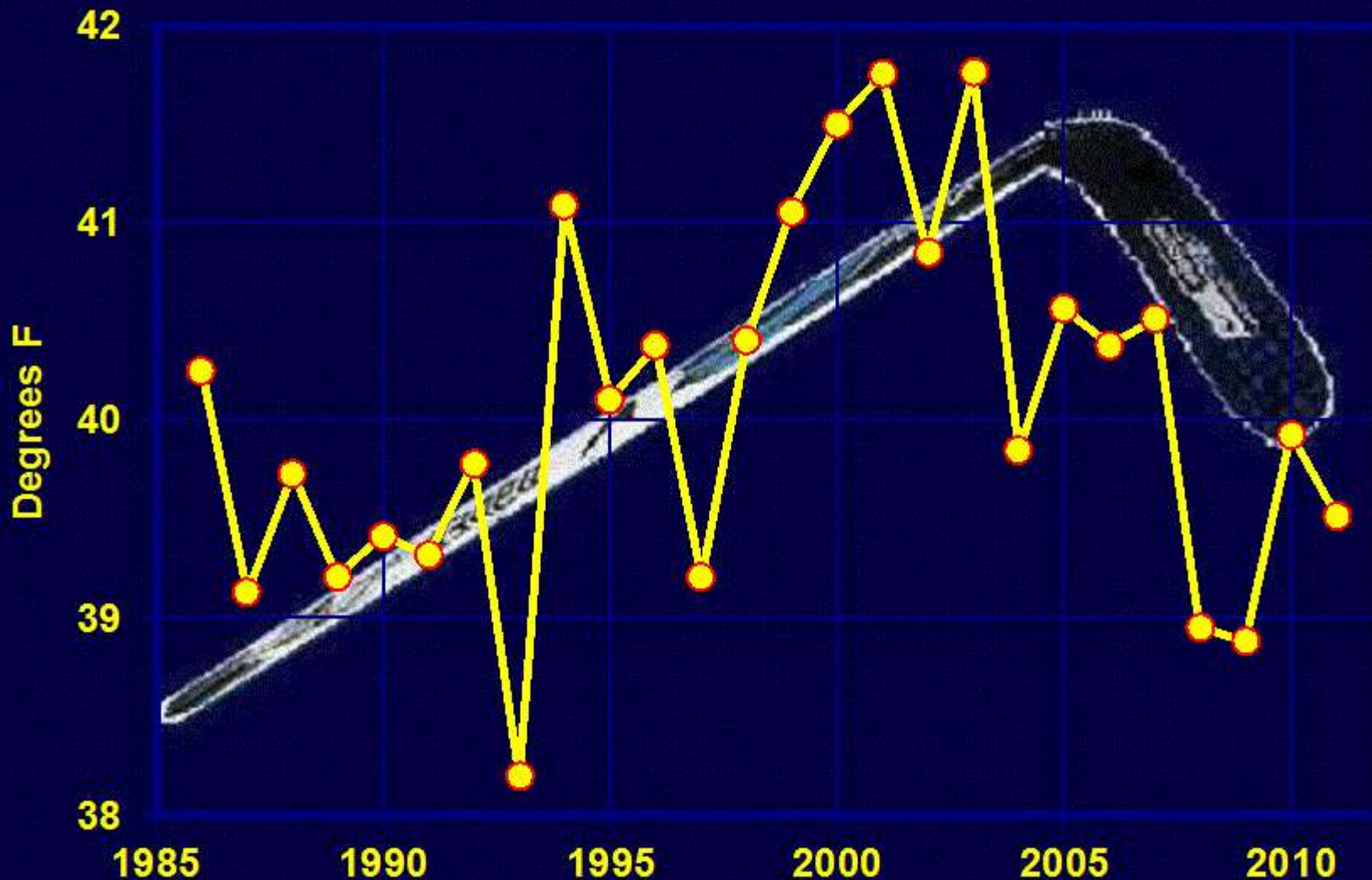
IPCC Santer et al. (2011):

“To separate human-caused global warming from the “noise” of purely natural climate fluctuations, temperature records must be **at least 17 years** long.”

**OK, how about 28 years?**  
**0.5°F warming, 1/4 of IPCC's guess**  
**Coal Creek Annual Temperatures**



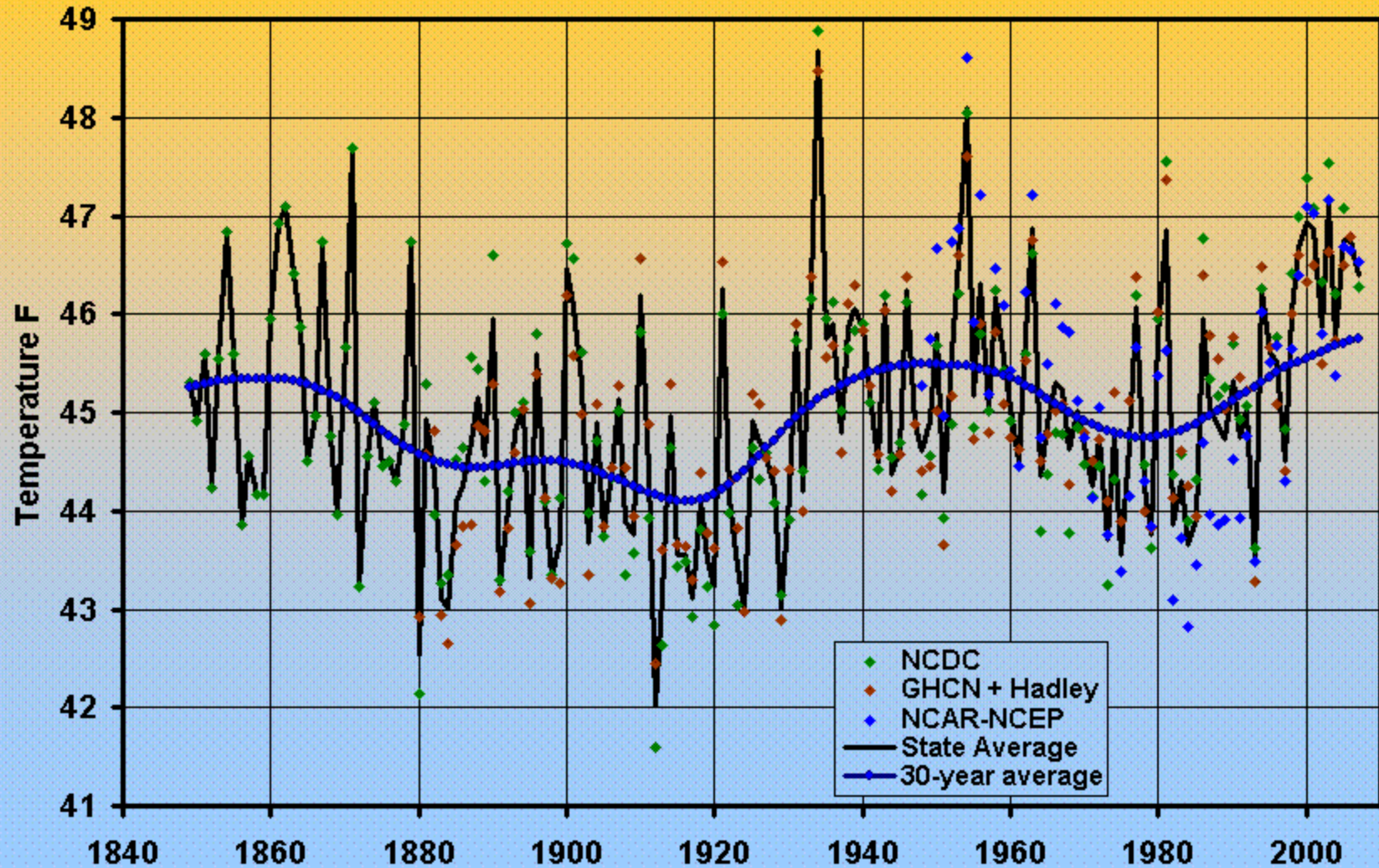
**OK, how about 28 years?**  
**0.5°F warming, 1/4 of IPCC's guess**  
**Coal Creek Annual Temperatures**





# Is 160 years enough? Colorado: PDO cycles, but only 1/4-degree warming since 1849!

**Colorado Annual Mean Temperature, 1849-2007**  
Average of four different sources



**“People underestimate the power of models.  
Observational evidence is not very useful.”**

**-- John Mitchell, Chief Scientist UK Met Office  
& IPCC**



**The power of models, indeed.  
Rolling dice simulates the past climate  
better than the taxpayer's billion \$\$ models.**

**Dr. Keen's Advanced Climate Simulation Model  
(101 rolls of dice)**

