

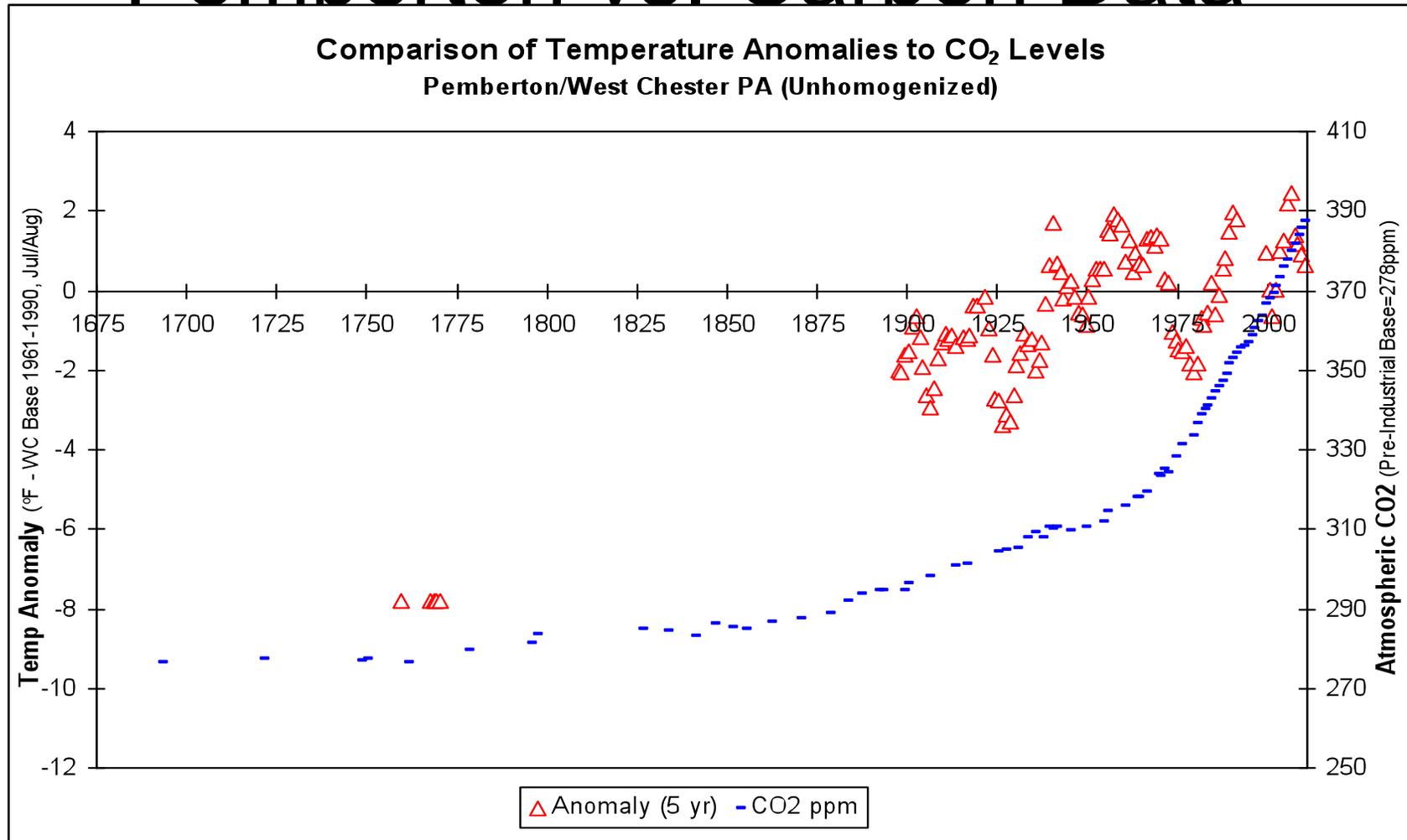
# **ACRE – 3<sup>rd</sup> Annual Meeting**

Baltimore - 11/5/2010

Initial User Needs Ideas

John Buchanan

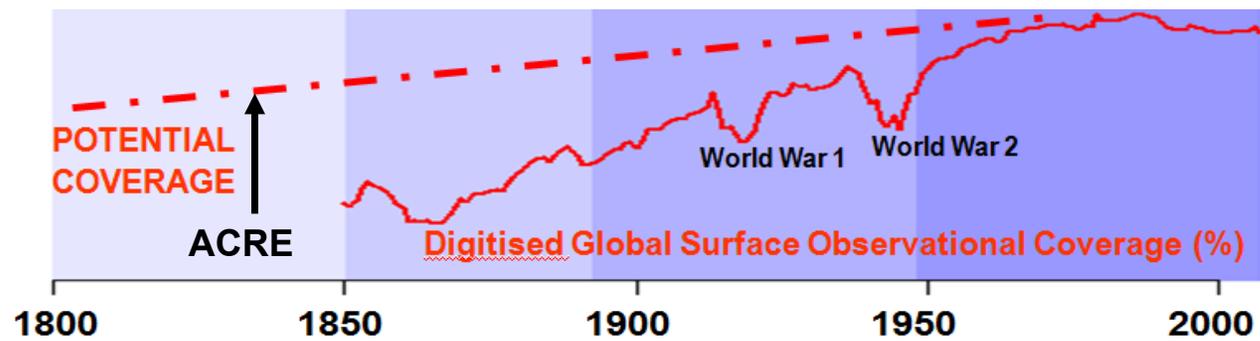
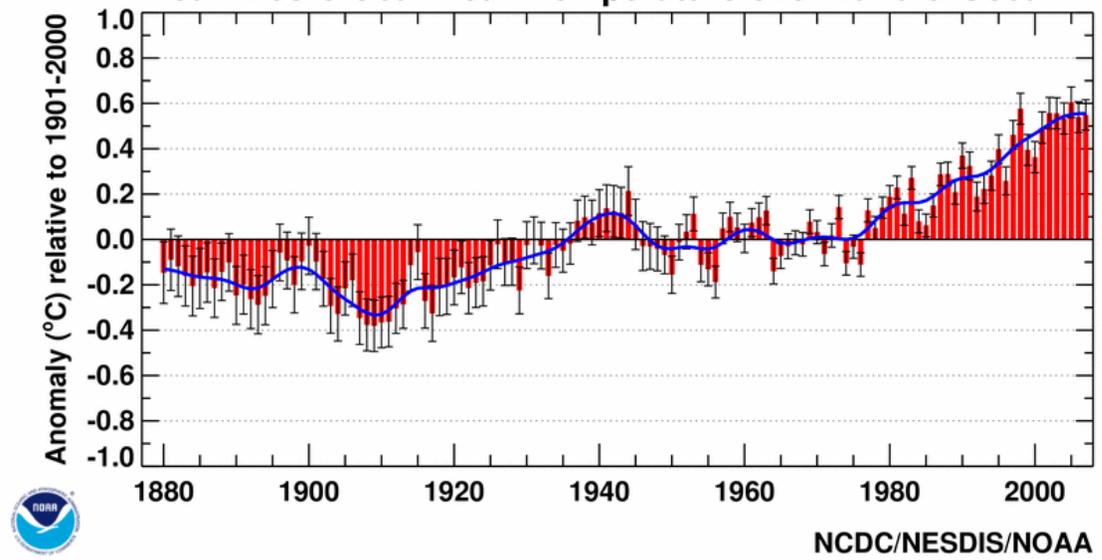
# Pemberton vs. Carbon Data



Source: NOAA – James Butler email 9/27/2010

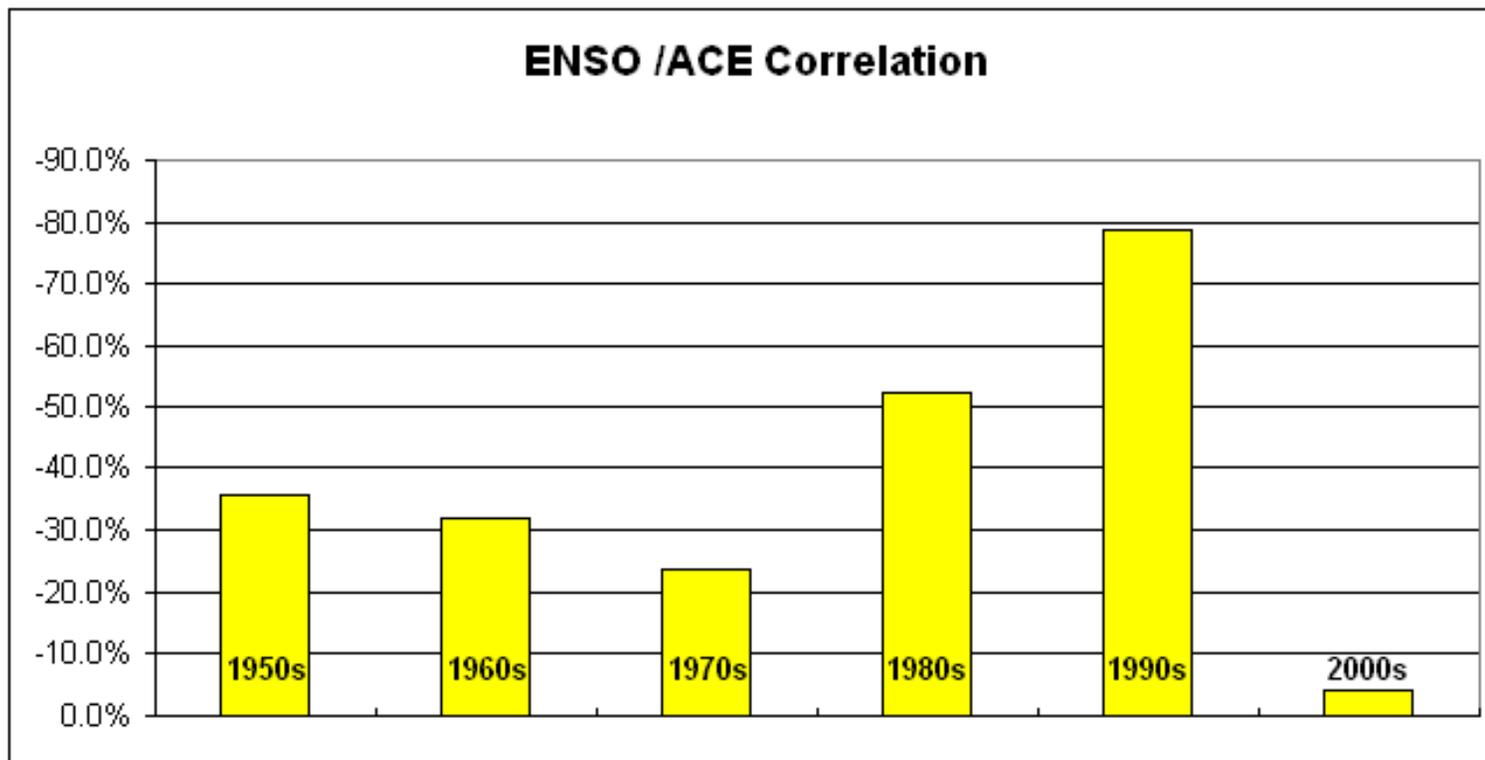
# ACRE fill in Gap back to Industrial Era

Jan-Dec Global Mean Temperature over Land & Ocean

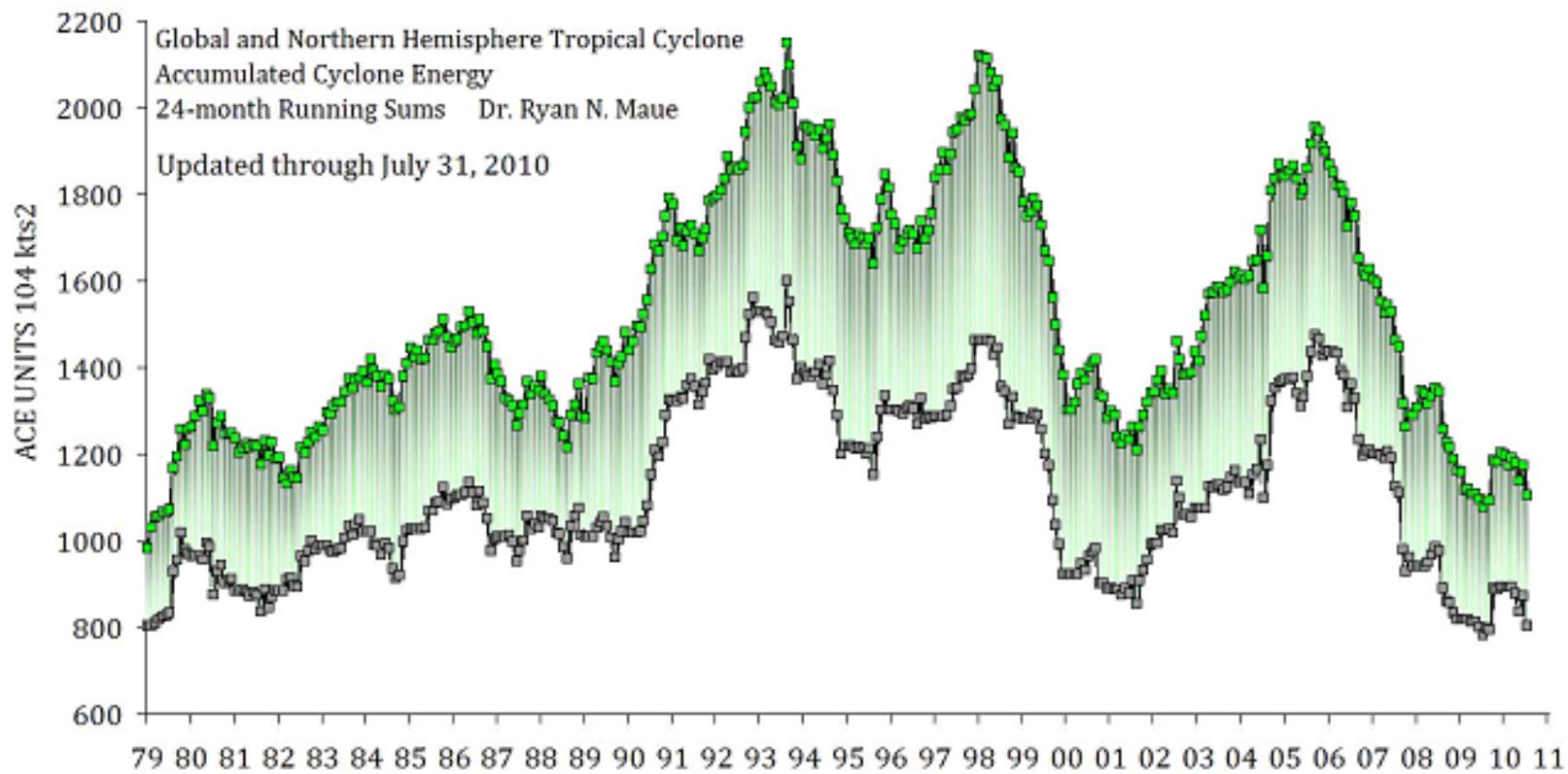


# Why Big Correlation Drop?

## North Atlantic Basin vs. ENSO



# Why Global and NH ACE Drop?





# GLOBE - Franklin Climate Change Poster

## Exploring Climate Connections between the Past and Today

### Sea Surface Temperature



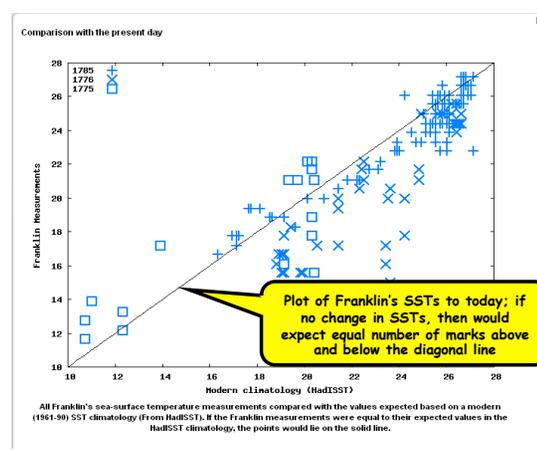
Observations of the warmth of the sea-water, &c. by Fahrenheit's thermometer; with other remarks made on board the Reprisal, Capt. Wycks, bound from Philadelphia to France, in October and November 1776.

Date	Hour A. M.	Hour P. M.	Temp. Air.	Temp. Water.	Wind.	Course.	Distance.	Lat. N.	Long. W.	Remarks.
Oct. 31	10		76	70	SSE	E b S	135	38 12	70 30	Left the coast Thursday night, October 29, 1776.
Nov. 1	10		71	70	WSW	E 3/4 N	109	No ob.	68 12	
2	4		71	70	N		141	dito.	67 23	Some sparks in the water thro' two lat nights.
3	4		67	76	NW	ESE 1/2 E	150	37 0	62 7	Dito.
4	4		70	76		N b E	194	36 26	38 8	Dito.
5	8		68	76				35 21	55 3	Dito.
6	8		71	76	E b N	S 90 E		33 33	53 58	
7	8		71	76	SSE	N 30 W	108	36 6	13 46	
8	4		71	77	S b E	N 49 E	173	38 2	50 1	
9	4		71	77				39 39	46 55	
9	12		75	77	SW	N 33 E	175	39 39	46 55	

Franklin's SSTs



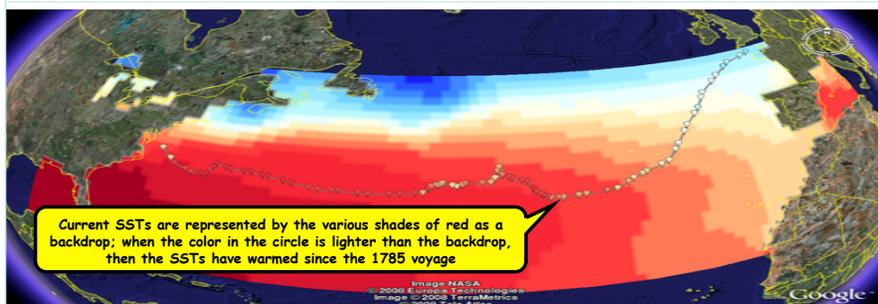
MARITIME OBSERVATIONS.



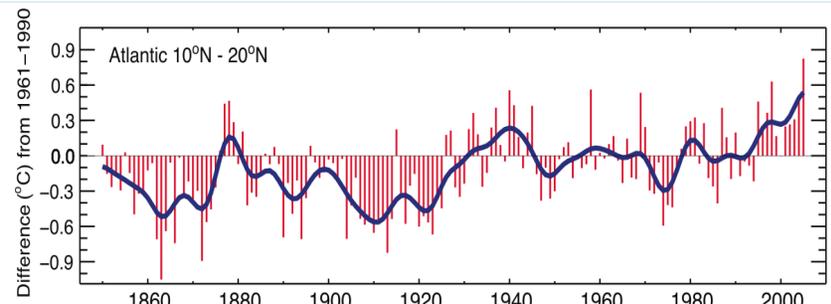
Franklin's Sea Surface Temperature Readings (1776)

The Gulf Stream as Diagrammed by Franklin

Three Franklin Voyages Compared to Current



Visualized Comparison of Sea Surface Temperatures (1785 to Current)



Sea Surface Temperatures have Increased; However More Data is Needed

### GLOBE - Student Climate Research Campaign

Franklin Climate Change Video Sponsors: ACRE, APS, Friends of Franklin, GLOBE (special thanks to NASA/NOAA)

Technical Advisors: ACRE US CEDS, Google-UK

Further Information: [GLOBE.gov/scrc](http://GLOBE.gov/scrc), [OldWeather.org](http://OldWeather.org), [Met-ACRE.org](http://Met-ACRE.org), [Ben1776.com](http://Ben1776.com), [CitizenScienceAlliance.org](http://CitizenScienceAlliance.org), [barrygoldsteinmusic.com](http://barrygoldsteinmusic.com)

GLOBE Help Desk: [Help@GLOBE.gov](mailto:Help@GLOBE.gov)

# **A Climate Record of the Earth**