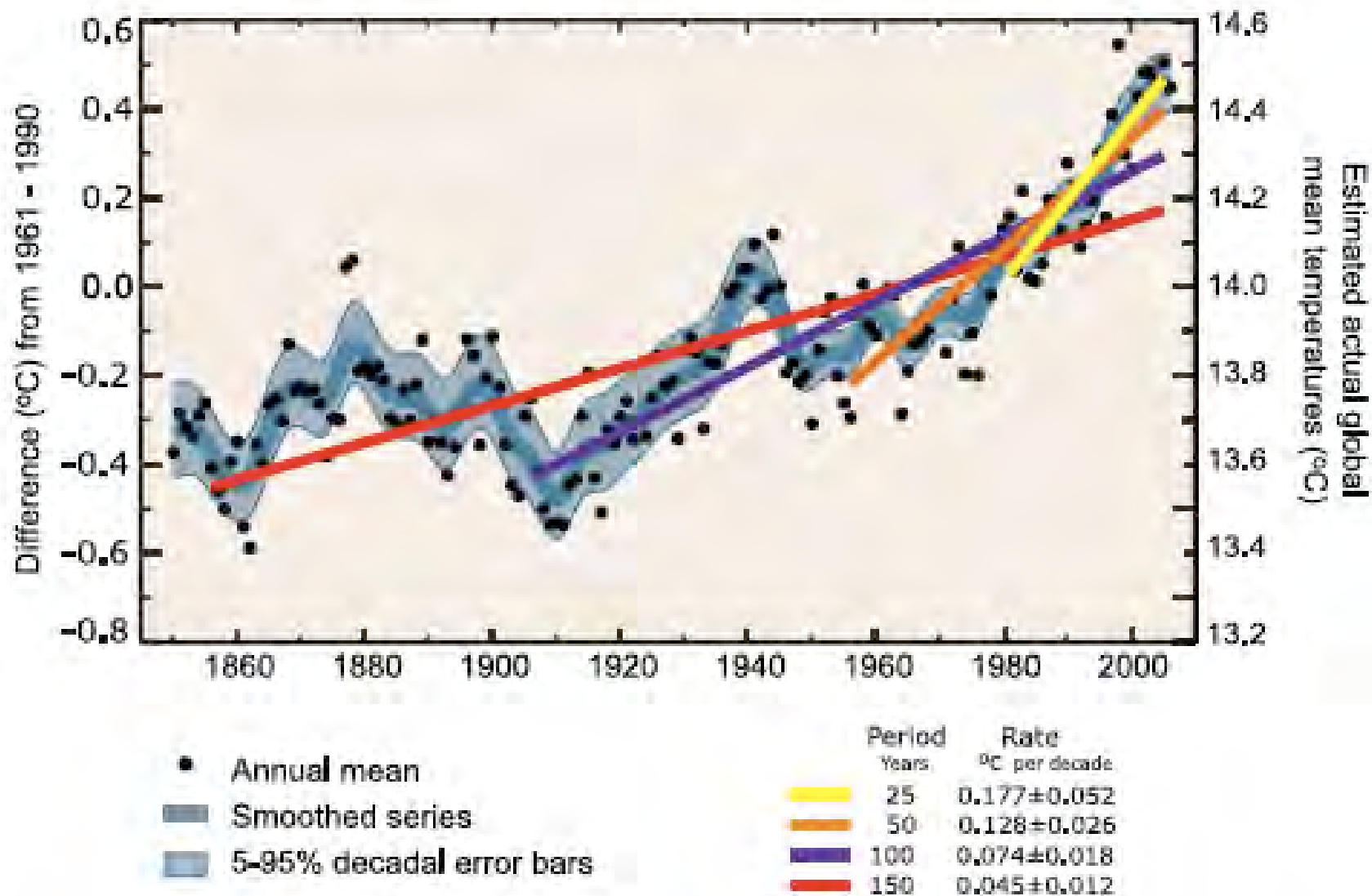
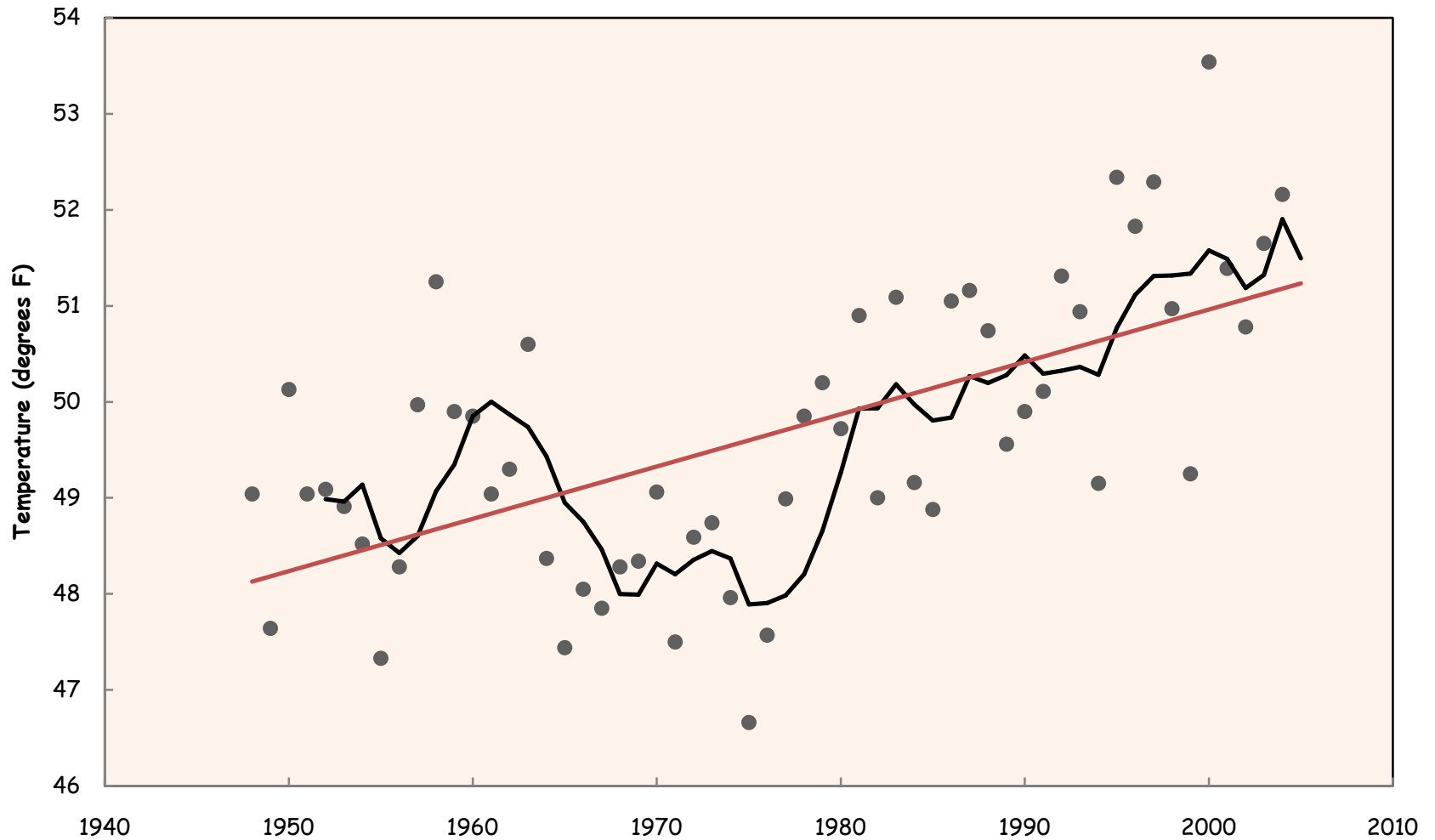


# Annual Global Mean Temperature

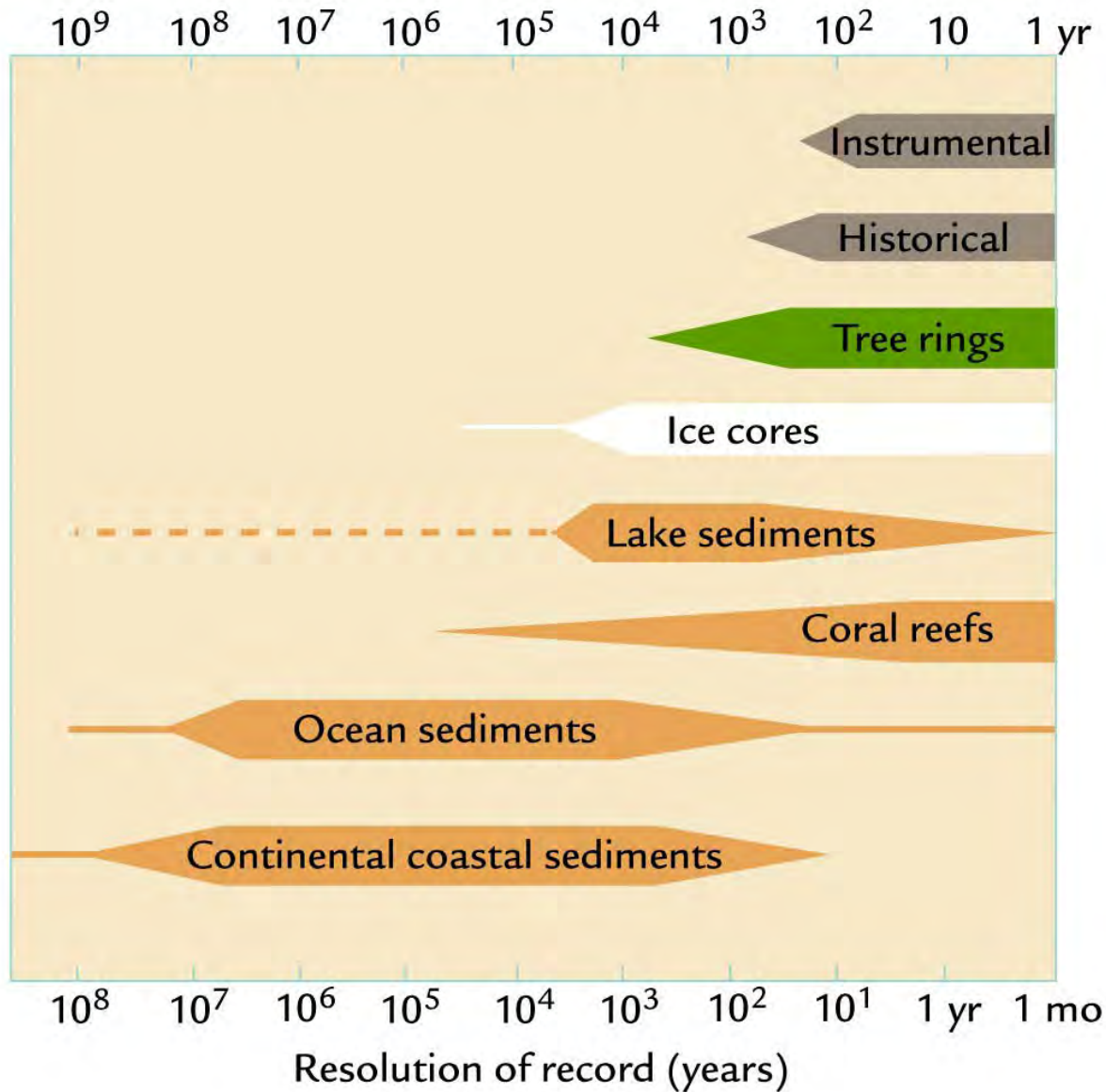


# Annual Mean Temperature - San Jose

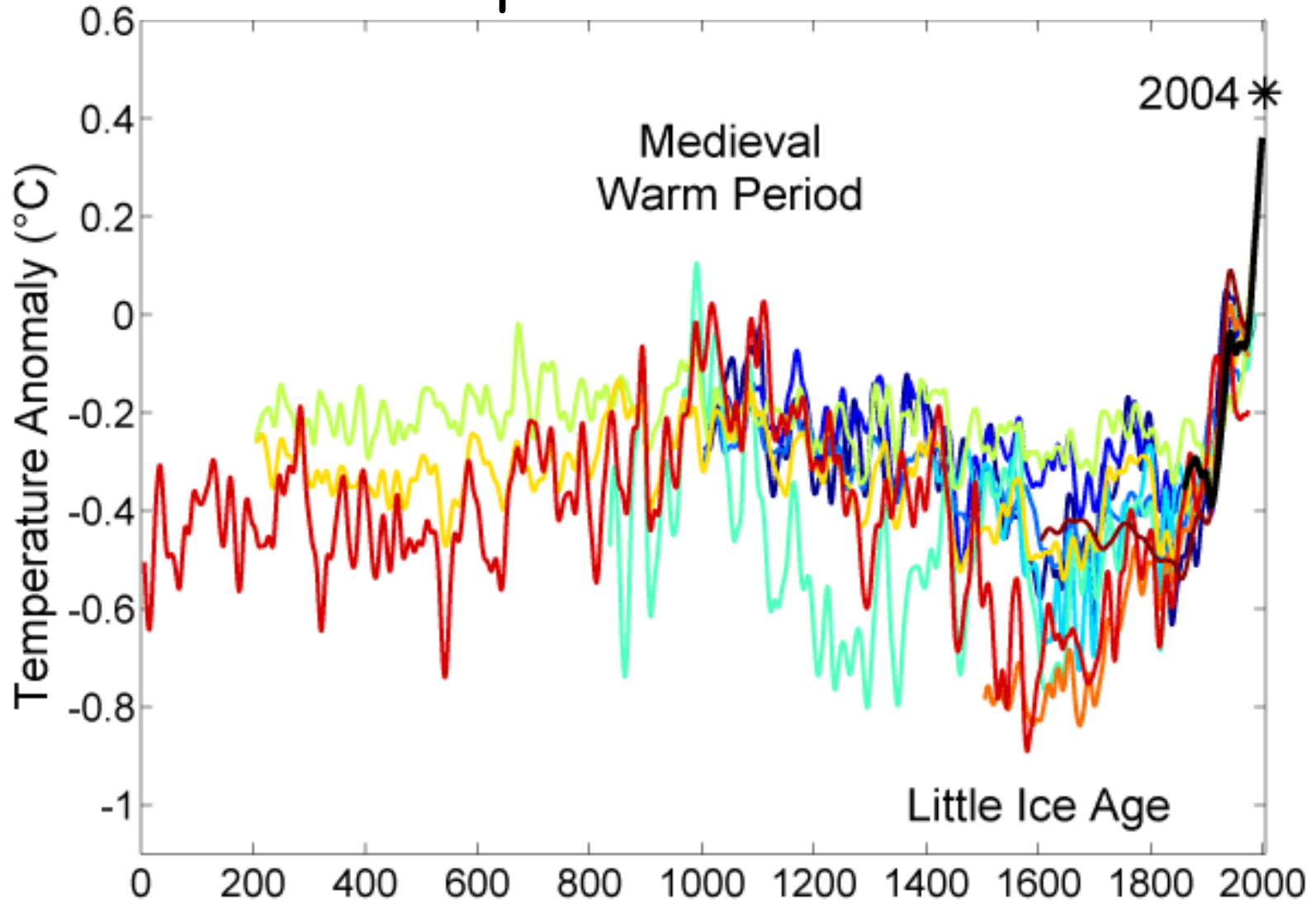


Source: California Climate Data Archive

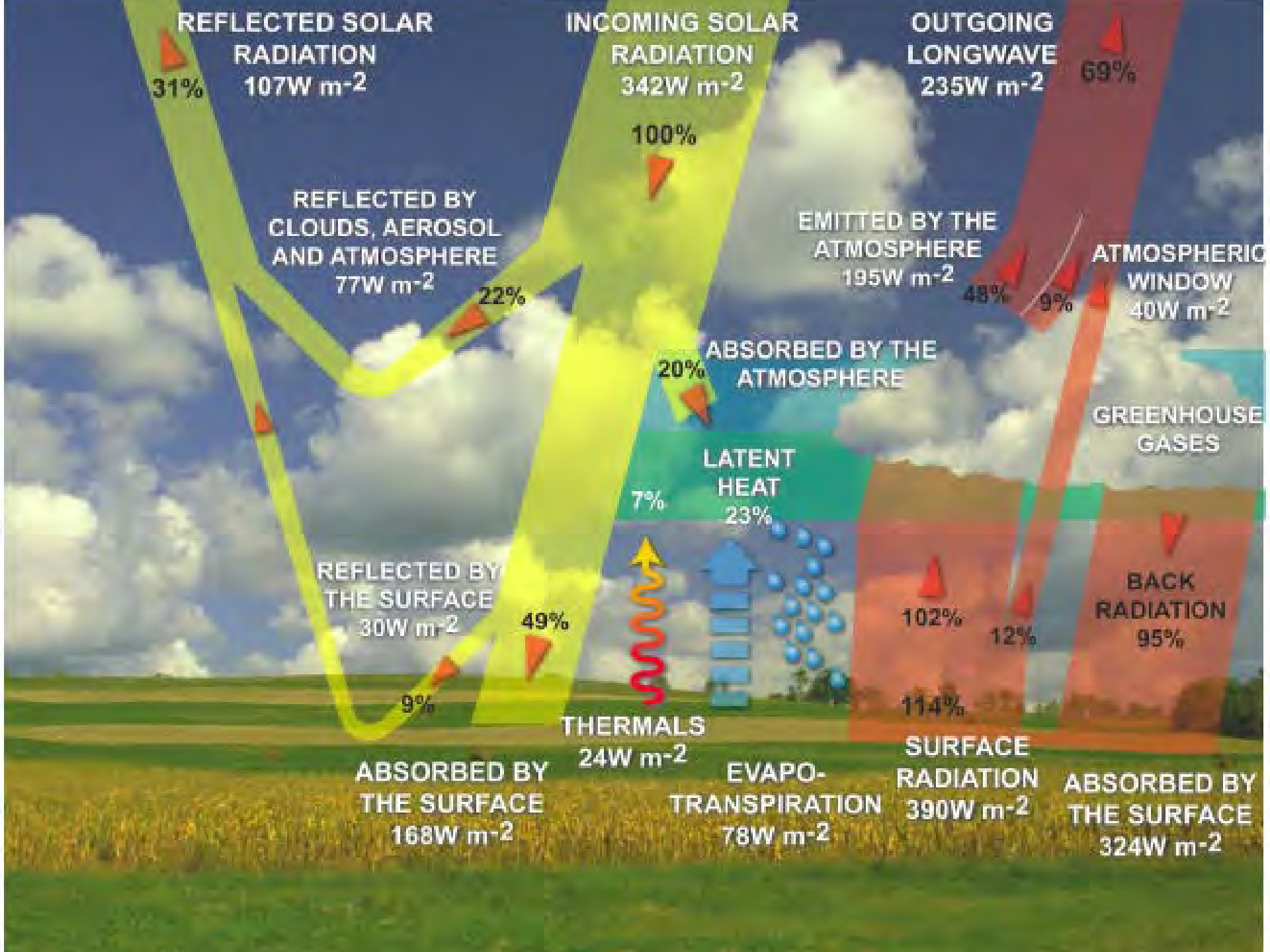
# Proxy Temperature Records



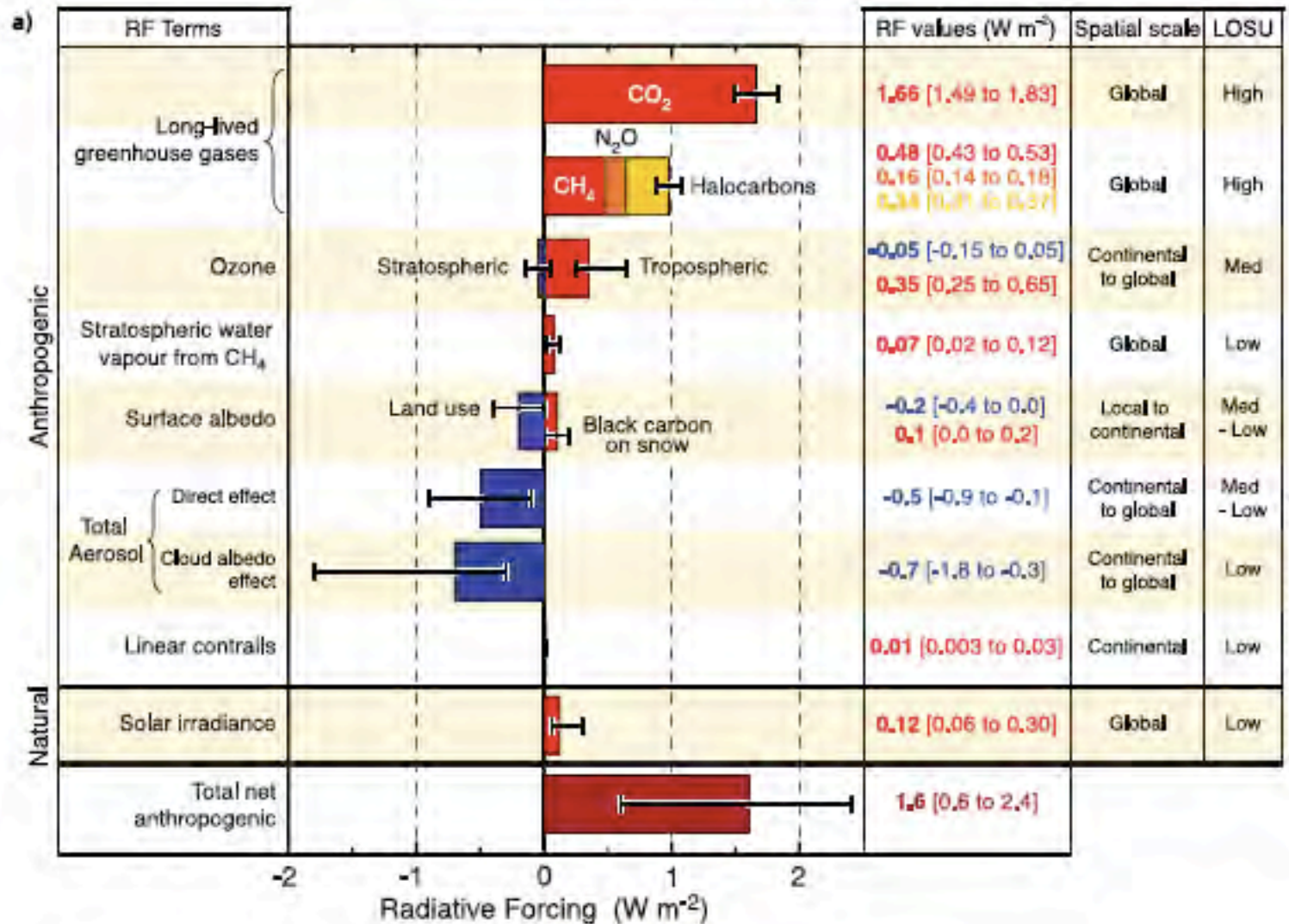
# Global Temperature Reconstruction



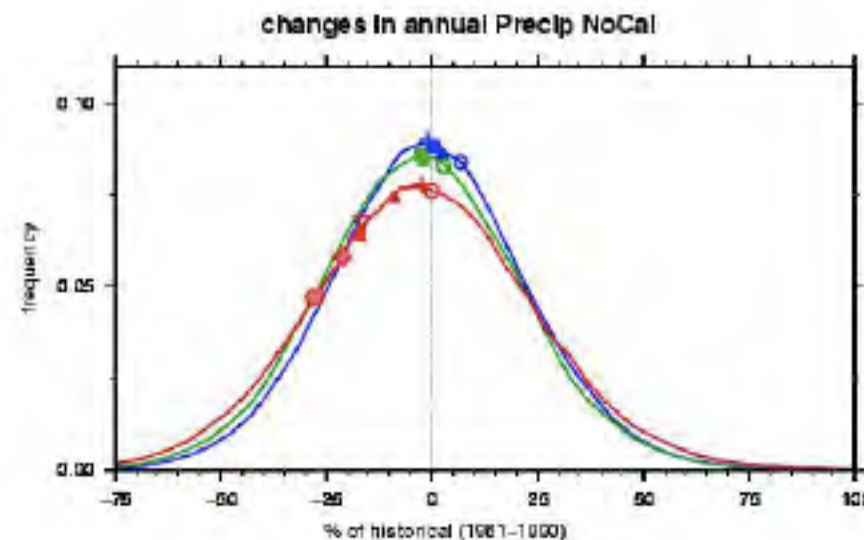
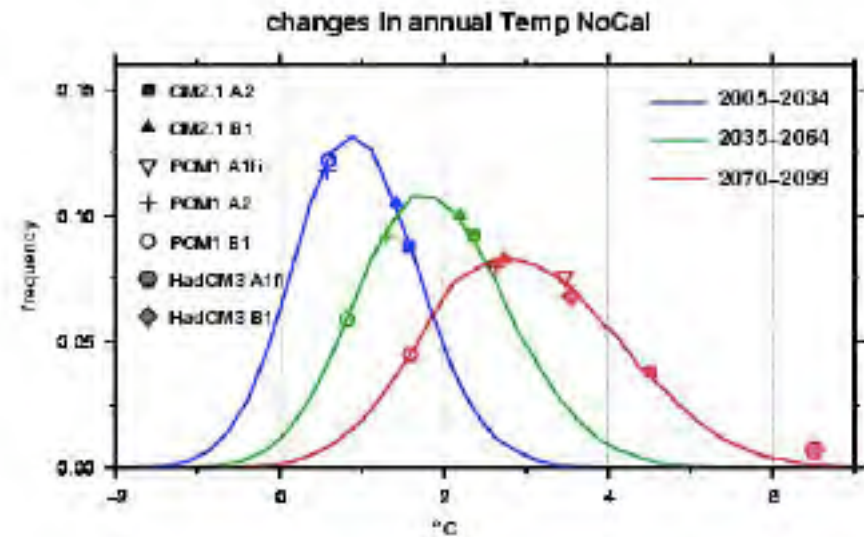
Source: National Research Council 2006



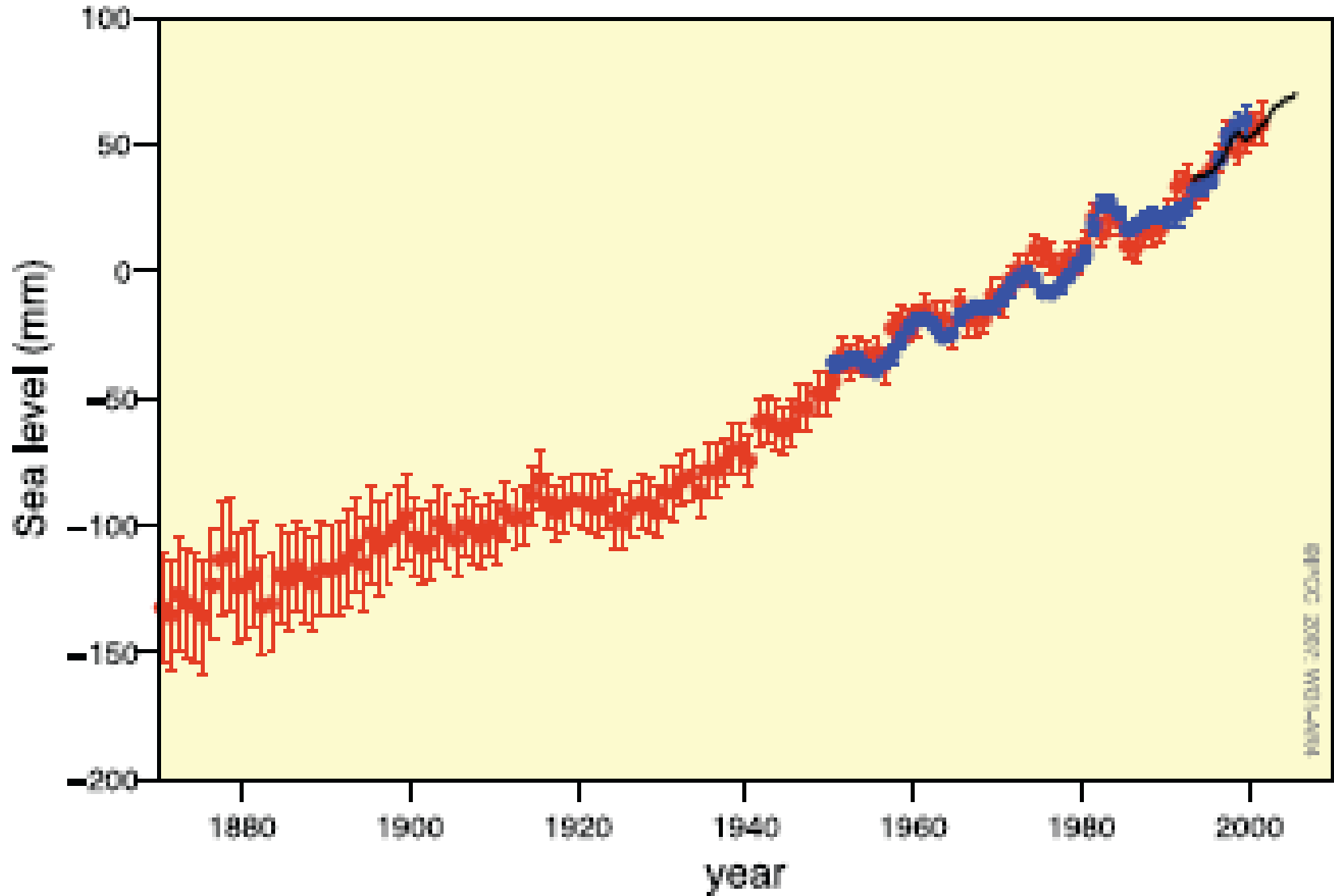
# Global Mean Radiative Forcings



# California Climate Change: Plausible Scenarios



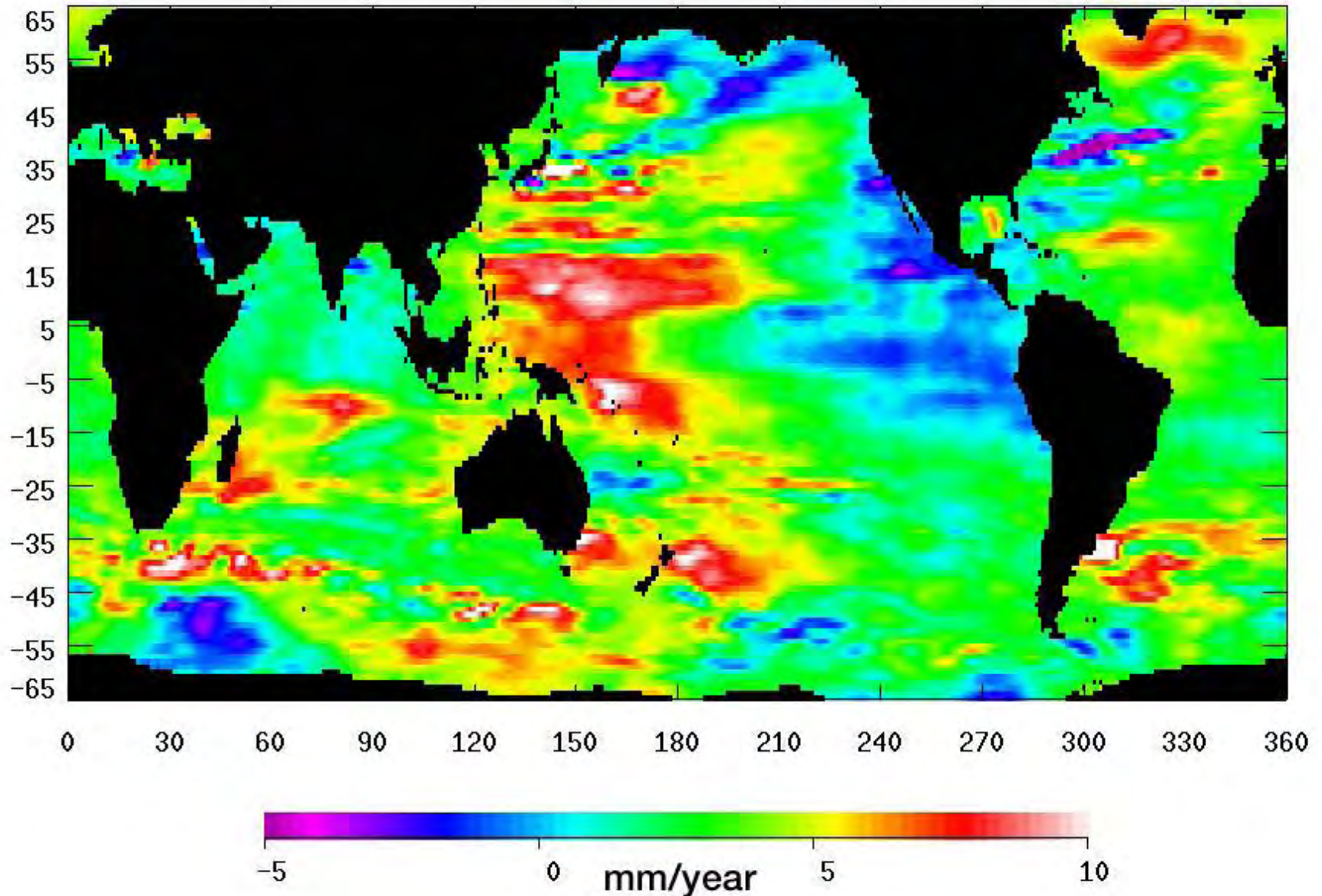
# Global Mean Sea Level



Source: IPCC

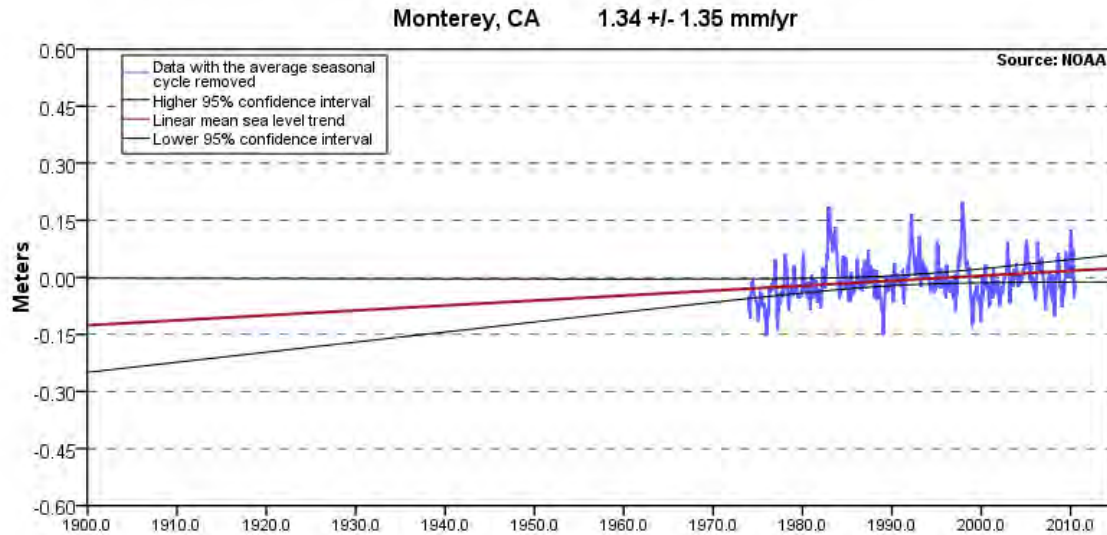
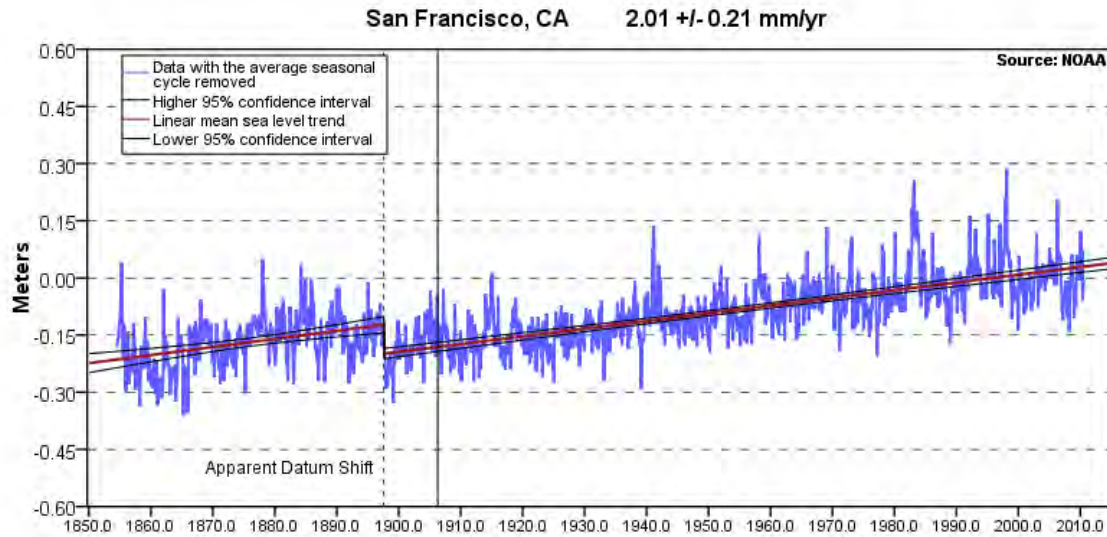


# Trend of Sea Level Change (1993-2008)



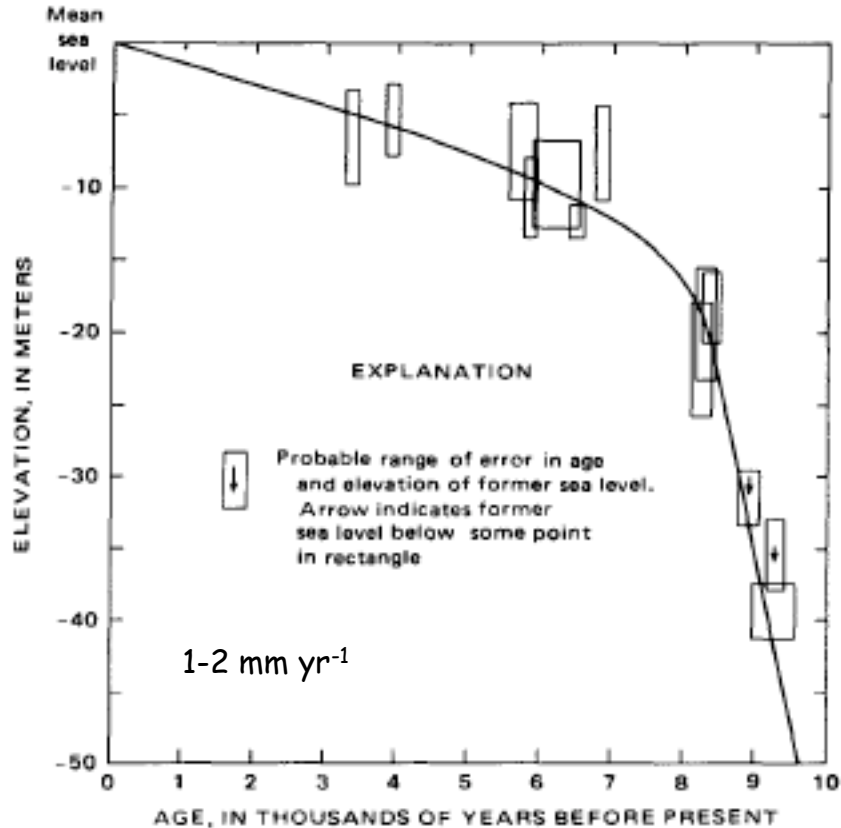
Source: JPL/NASA - Topex/Poseidon & Jason-1

# Contemporary Central California Sea Level Trends

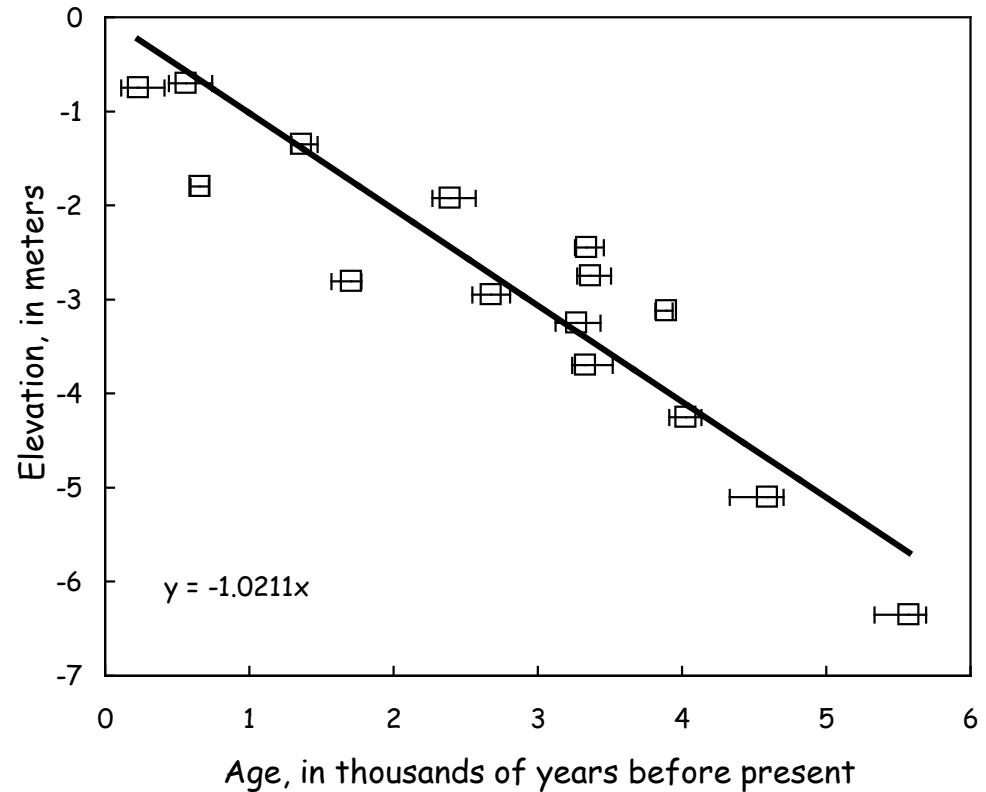


# Pre-Historic Central California Sea Level Trends

## San Francisco Bay



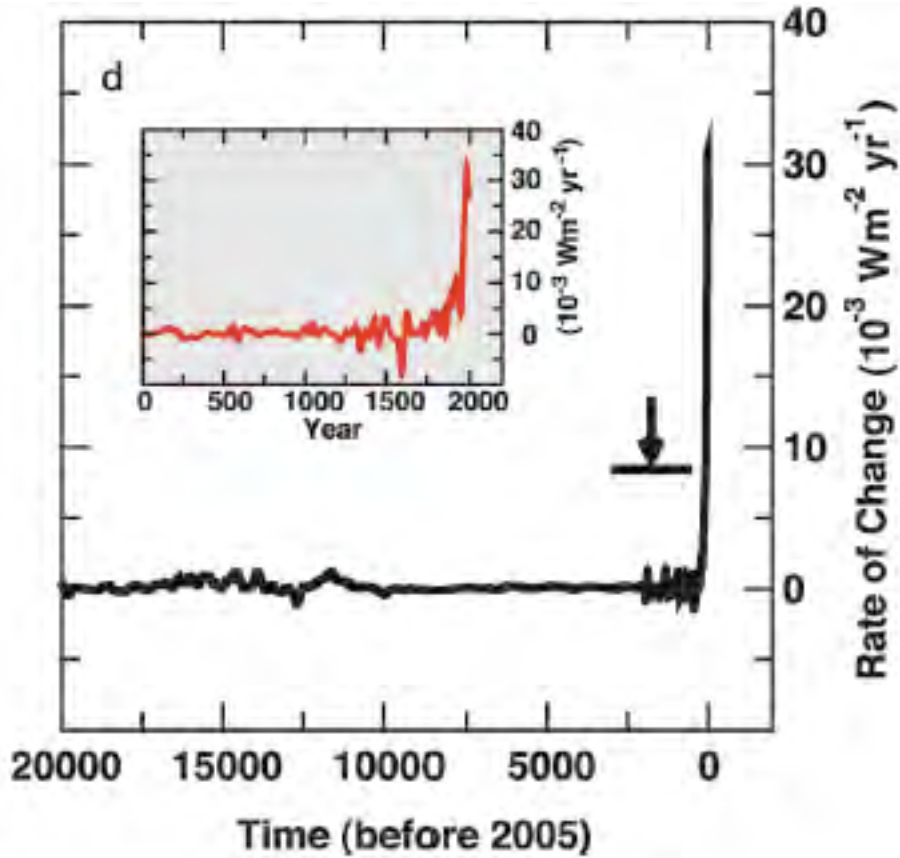
## Elkhorn Slough



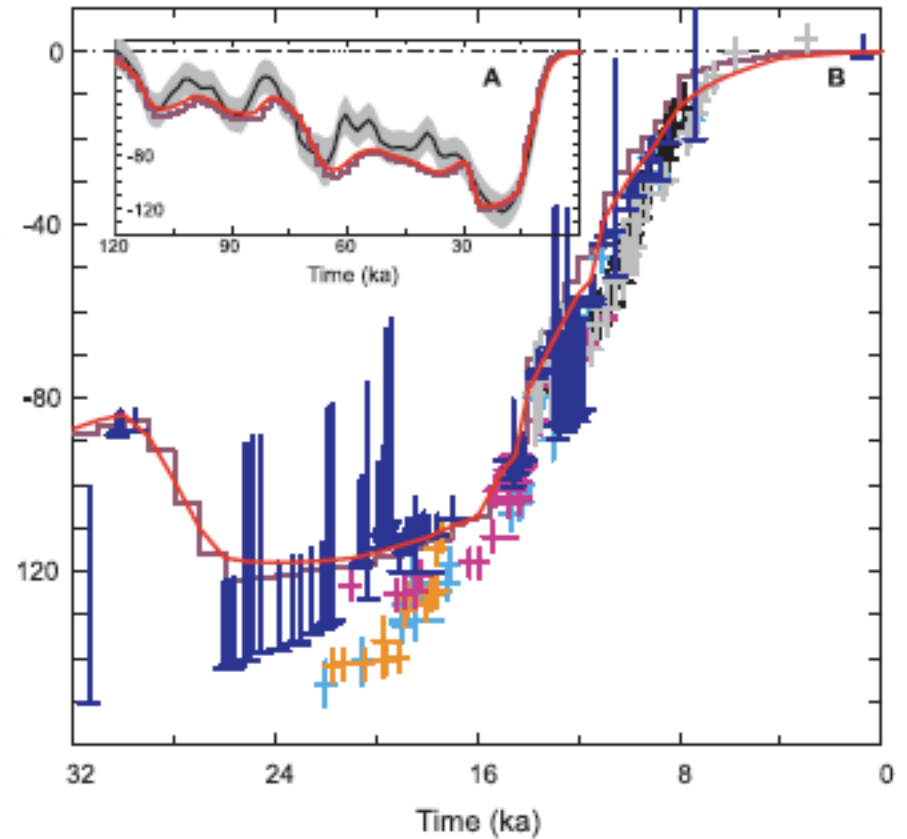
⇒ Late Holocene rates of *relative* sea level rise for C. California ~1 mm yr<sup>-1</sup>

# Rate of Change

## Temperature



## Sea Level



# Conclusions

- ⇒ Anthropogenic forcings are causing myriad changes in the global climate system. These changes sum to a net positive radiative forcing, as a result of greenhouse gas emissions.
- ⇒ This warming appears to be increasing the rate of sea level rise, with the greater rates of increase found in the W. Pacific.
- ⇒ Rates of sea level rise in Central California appear to be less than global averages, measured through satellite altimetry and tide gauge data, with a slight increase over background rates.
- ⇒ The contemporary rate of global temperature increase is much higher than natural rates of change; for sea level rise, more rapid rates were found during deglaciation.

