

Increasing temperatures in the Florida Keys over the last century

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1 Introduction

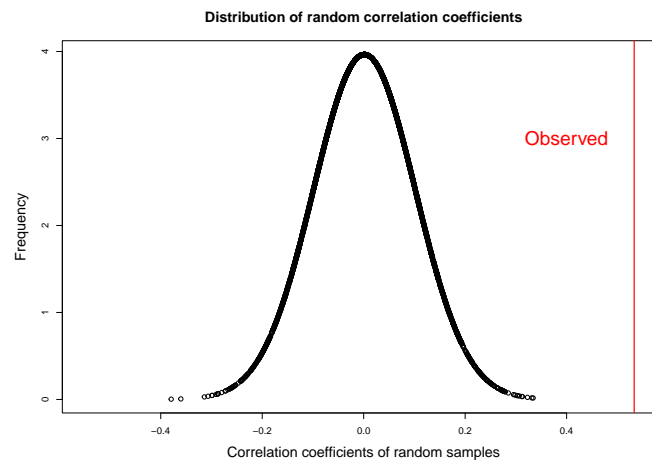
The increasing concentration of green house gases in our atmosphere is understood to produce a warming effect. This paper studies a rise in temperature measured in the Florida keys over the last century, and finds a positive correlation between temperature increase over time. Florida is getting warmer.

2 Method

Temperatures were recorded in Key West, Florida USA annually over the last century. To see the relationship between temperature over time, I conducted a permutation analysis, calculating the pearson's correlation coefficient between observed temperatures and years, and comparing it to a completely random distribution of correlation coefficients, obtained through randomly shuffling the data over 5000 trials.

3 Results

Results revealed a moderate positive correlation between temperature and time ($r(98) = 0.53$). Out of 5000 randomly generated correlation coefficients, none of them were greater than our observed correlation coefficient. Thus, the observed positive correlation between temperature and time has an approximate asymptotic p-value of 0.00.



4 Conclusion

Analysis conducted here suggests that Florida temperatures are increasing, likely a result of the changing atmospheric concentrations of green house gases. Florida is getting warmer.