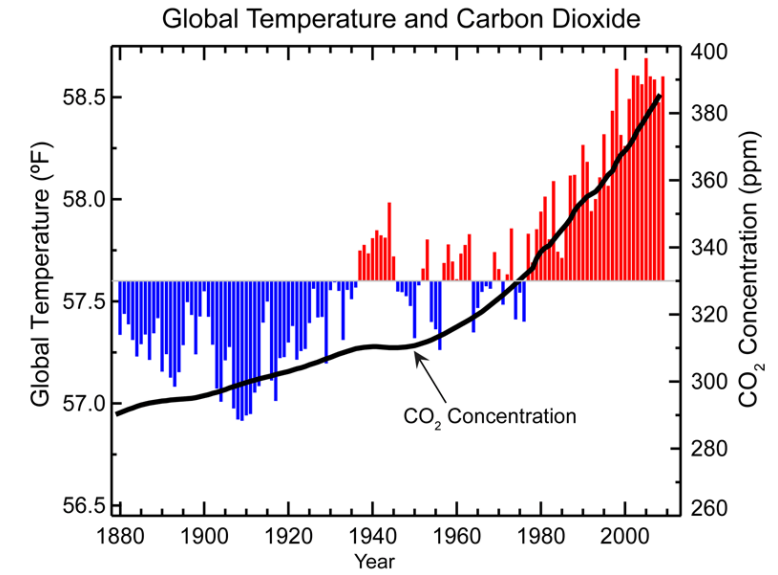
How fast is the earth warming?

Bruce Parker May 18, 2014

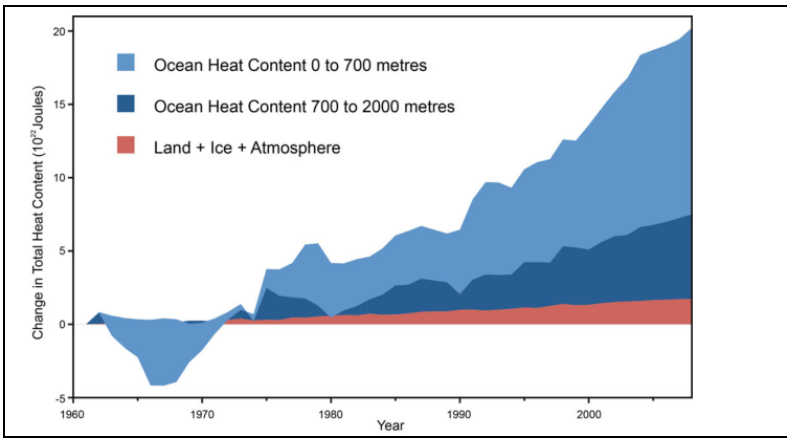


Since pre-industrial times (1870) the Earth has warmed about 0.8° C (1.4° F)

Over the last 50 years the Earth has warmed at an average of 0.017 ° C /year (0.031° F /year)

(http://www1.ncdc.noaa.gov/pub/data/cmb/images/indicators/global-temp-and-co2-1880-2009.gif)

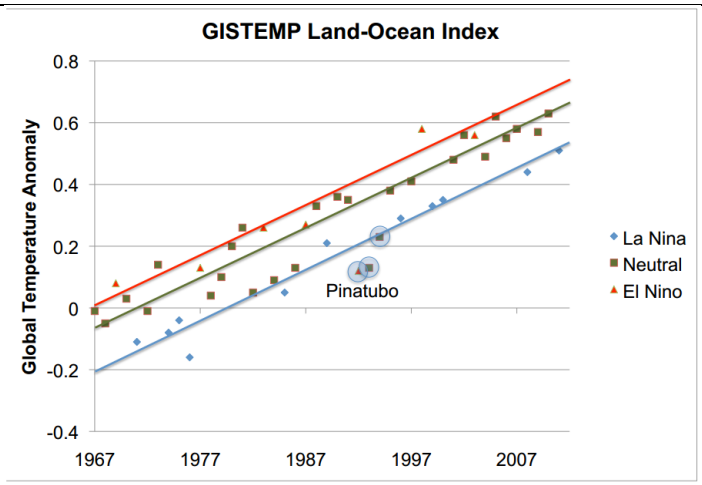
http://tamino.wordpress.com/2011/01/20/how-fast-is-earth-warming/



Most of the global warming has been absorbed by the oceans

About .78 x 10^{22} joules/year of energy are being absorbed

It takes about 45 x 10^{22} joules to raise the atmospheric temperature 1 degree C



Looking at the Earth's temperature by how it is affected by El Nino/La Nina shows a steady upward trend without recent pause

There aren't that many full-blown El Niño events, but *global temperatures during El Niños* seem to be following a steady upward trend. There are more La Niña events, and *those global temperatures also* clearly follow a steady upward trend. Finally, *the temperatures during* the many neutral years also *show* no sign of departing from a steady upward trend. There's enough scatter in the neutral years that if one had considered the period 1977-1987, or the period 1987-1997, one might be tempted to say that the neutral years had little or no warming. (http://blog.chron.com/climateabyss/2012/04/about-the-lack-of-warming/)

It looks likely that a new El Nino event will occur later this year, and it may be strong enough so that new global temperature record may be set for 2014 and 2015