

Earth's atmosphere is traveling back in time, and that's a very bad thing

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When future generations think back on the early 21st century, 2016 might stick out as infamous year. Among the climate-based records we've shattered so far? The warmest spring ever recorded at the Greenland ice sheet; the 13 [hottest months ever recorded](#) in a row; a remarkably [severe El Niño](#); and the extinction of the first mammal [due to human-caused climate change](#).

The newest terrifying milestone is a doozy: carbon dioxide levels that Antarctica (and the Earth) hasn't seen in 4 million years were just recorded, making it the last place on the planet to register the astounding concentration of the greenhouse gas.

The South Pole Observatory recorded a carbon dioxide concentration of [400 parts per million](#) on May 23. The last time carbon dioxide was at those levels, modern humans were [but a wink in our ancestors' eyes](#). "The increase of carbon dioxide is everywhere, even as far away as you can get from civilization," climatologist [Pieter Tans](#) told [Scientific American](#).

Back in the Pliocene, the climate was warmer and wetter. Both poles were about [18 degrees Fahrenheit warmer](#) than they are today, and the Arctic was [covered in forests](#) instead of barren tundra. The rest of the world was 5 degrees or hotter on average, and sea levels were 16 to 131 feet higher than at present.

Reaching those levels by 2100, or even 2200, would be catastrophic for the [roughly 44% of humanity](#) that live in coastal communities. Even more disturbing, NASA predicts that while carbon dioxide levels will see short-lived fluctuations, the concentration is expected to [rise even higher](#), to 450 ppm, by 2040.

In this case, returning to humanity's roots is going to be a deadly prospect.