

BIG NEWS: 3 million year old ice cores flummox researchers — CO2 is irrelevant

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Something Else Used to Drive Climate Changes, Ancient Ice Cores Reveal

ENVIRONMENT 19 March 2026 By JESS COCKERILL



A windy day at Allan Hills in December 2022. (Peter Neff/COLDEX)

[It's a tortured headline in ScienceAlert](#)

By Jo Nova

For the first time Antarctic ice core teams have got hold of ice that is 3 million years old and the results have confounded them

The way CO2 responds in ice cores is canon to “the faith” so this is more important than it seems at first glance. Believers are really struggling.

Three million years ago the world was warmer, and about to cool into the violent ice age cycles. The ice core experts were expecting to confirm that CO2 levels were about 400ppm, as other proxies had shown, and they thought that greenhouse gases might fall and lead the cooling shift. But instead of CO2 being at 400 parts per million, and then leading the cooling, the bubbles trapped in ice were only 250 parts per million to start with and they stayed constant through important temperature swings. Sacre Bleu! CO2 did not appear to have any role in causing the warmth that was, or the cooling that followed. And nor did methane. O’ the dilemma?

Some sacred cows have to be sacrificed. Either CO2 is not a major driver of climate change, or the ice cores are wrong (or both!).

Watch the last few addicts coping with this news. Follow the ‘reasoning’ — it still “might” be worse than we thought, you know! I mean, it’s *possible*, that tiny changes in CO2 that are too small to measure *could* be affecting the Earth...

It’s like the homeopathy of climate science, except homeopathy has more data to support it.

It’s a cult :

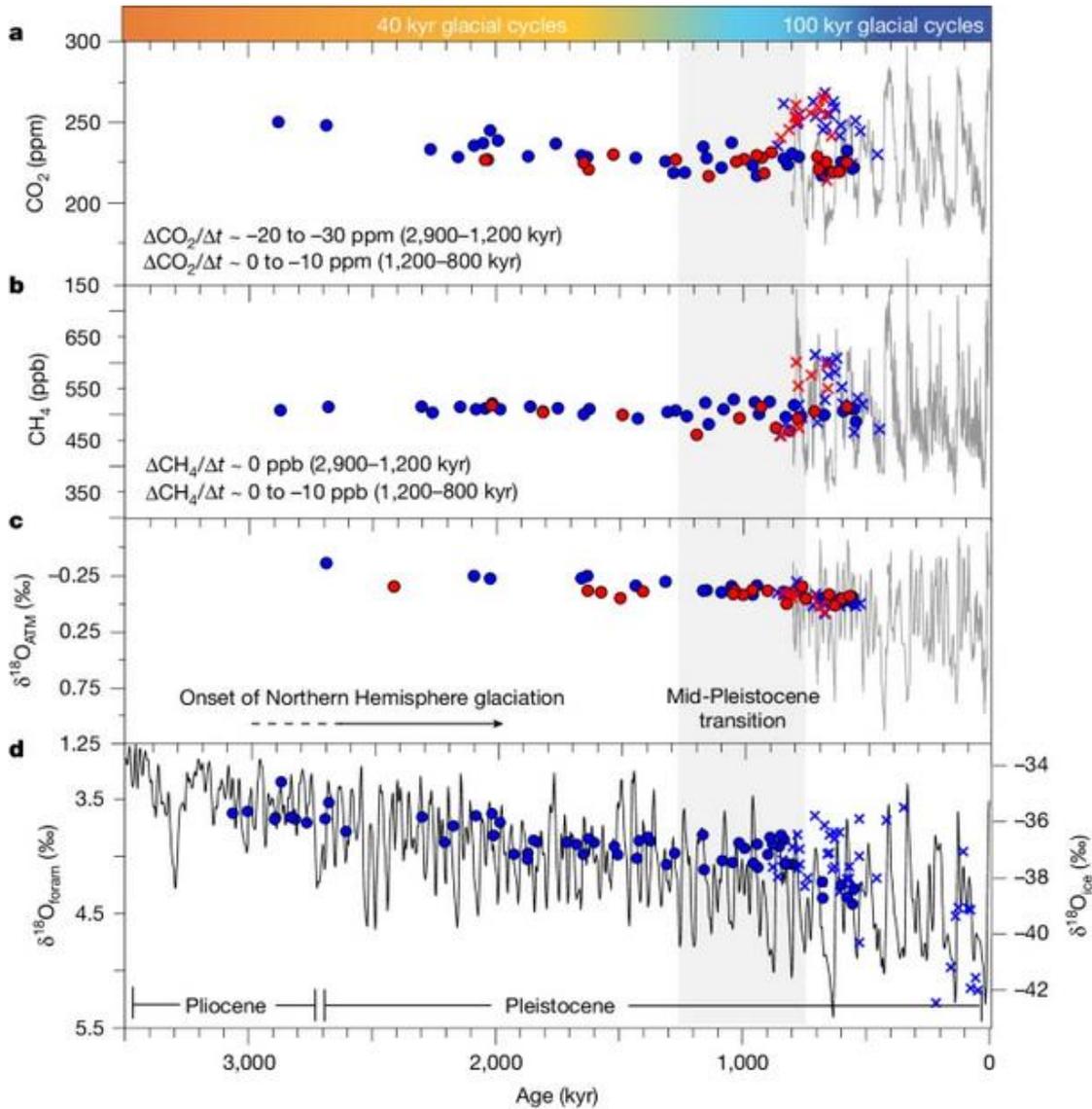
Ice core reveals low CO2 during warm spell 3 million years ago

By Marissa Grunes, *New Scientist*

“We definitely were a bit surprised,” says Marks-Peterson. If correct, the findings may suggest that even small changes to greenhouse gas levels could trigger major shifts in climate. “**Maybe the Earth system is even more sensitive to changes in CO2 than we have understood,**” she says. “That’s a little bit of a scary thought and something that I would say that our record can’t answer yet.”

“Ultimately, any new data that suggests Pliocene CO2 **levels were lower than previously expected means future climate change might be worse than previously expected,**” says [Cristian Proistosescu](#) at the University of Illinois Urbana-Champaign, who was not involved in the study.

Fig. 2: Three-million-year palaeoclimate records from the ALHIC1901 ice core.



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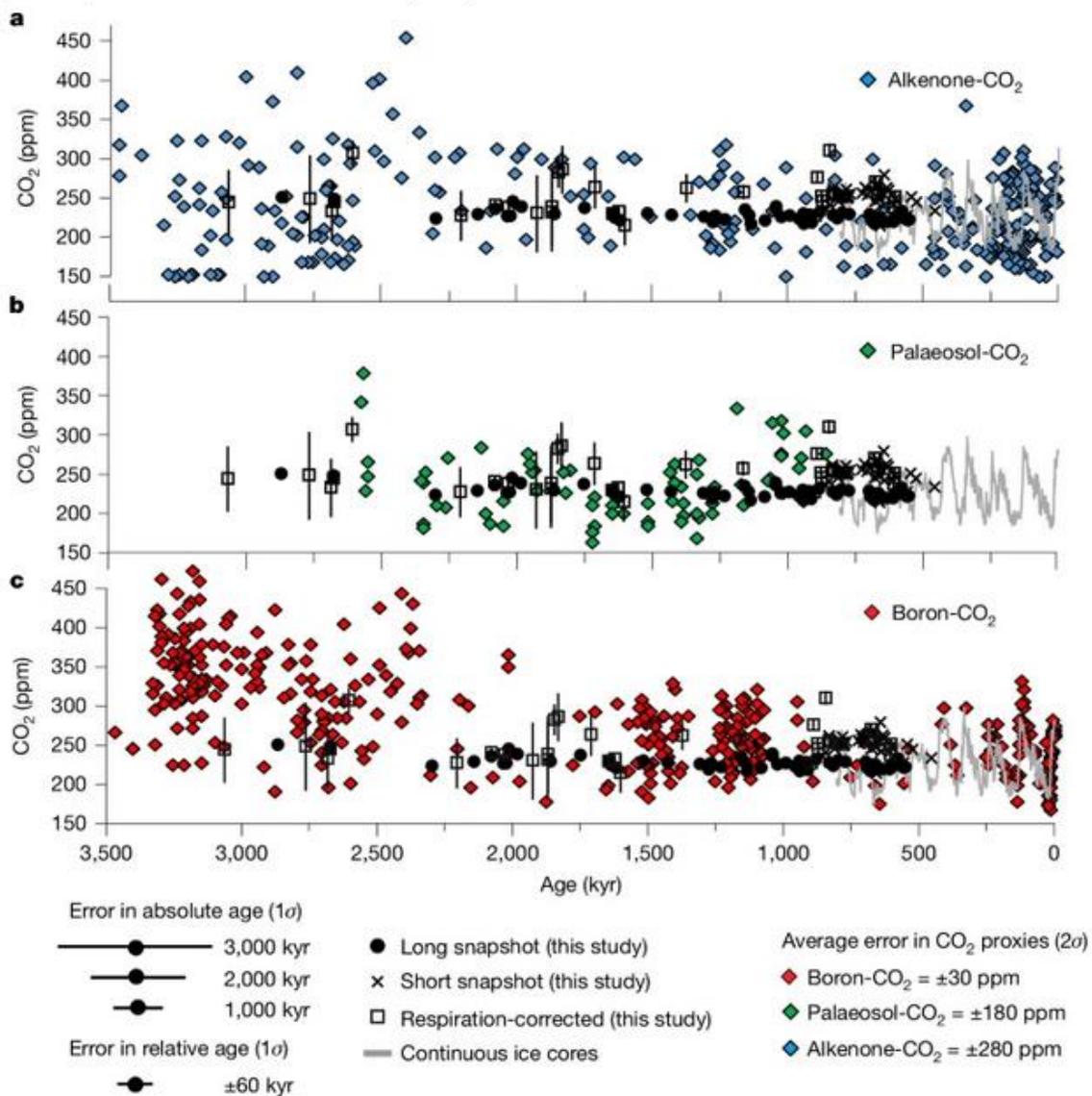
But choosing sacred cows is quite the dilemma, because the ice cores are sacred too. The Vostok graphs were the core propaganda graph of climate change even before The Hockey Stick. Then they starred as a giant extravaganza in the Al Gore documentary. So every other way we have of guesstimating ancient levels of CO₂, like stomata and alkenones, are considered fine until they disagree with the ice cores, then everyone forgets they exist.

These proxies below in the graph — are all the estimates of the atmospheric levels of CO₂ 3 million years ago. Obviously, there is quite a lot of data suggesting that CO₂ was

400ppm at the time. And since temperature causes CO₂ to rise, we'd expect CO₂ to be higher in a warmer world.

So maybe these proxies are right. Either way, CO₂ is still a minor player.

Fig. 3: CO₂ records from ice cores and proxy reconstructions.



...

For those wondering where they can find ice that's up to 6 million years old — the cores were dug at Allan Hills where strong winds stop new snow from depositing on top of the ice core, preserving the really old ice somewhere near the surface.

But this study is quite the spanner in the works. When forced to choose between the ice cores and "CO₂ as Earth's control knob", surprisingly the ice cores are more important to the believers. And the second Nature paper released actually considers whether

CO₂ is a driver rather than toss out the ice core graph — even wondering out loud if the power of CO₂ was weak...

There are three possible explanations for this tight balance: (1) it reflects the CO₂-thermostat responding to a decline in CO₂ sources; (2) it reflects the CO₂-thermostat responding to an increase in continental weatherability; and (3) **the CO₂-thermostat is weak and CO₂ sources and sinks are invariant and constant over the past 3 Myr.**

— Marks-Peterson (2026)

The Blasphemy...

At least one science writer got the idea that CO₂ could be the main driver today, but not 3 million years ago. Those laws of physics you know, switch on and off:

[Something Else Used to Drive Climate Changes, Ancient Ice Cores Reveal](#)

By Jess Cockerill, *ScienceAlert*

The [rapid climate change](#) we are experiencing today is mainly driven by the [greenhouse gases](#) we humans keep releasing into the air.

But new evidence from ancient Antarctic ice cores suggests this wasn't always the case for the past three million years of Earth's changing climate.

According to the findings of two new papers published in *Nature*, at certain transition points **ocean temperatures could have had a greater influence over Earth's climate than greenhouse gases.**

Lordy! Imagine the oceans being more influential than a trace gas at 0.04%?! What was she thinking....?

REFERENCES

Marks-Peterson, J., Shackleton, S., Higgins, J. *et al.* [Broadly stable atmospheric CO₂ and CH₄ levels over the past 3 million years.](#) *Nature* **651**, 647–652 (2026).

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