

Mysteriously warm times in Antarctica

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Dr Robert Mulvaney cuts an ice core in the cold room at the British Antarctic Survey headquarters, Cambridge

(PhysOrg.com) -- A new study of Antarctica's past climate reveals that temperatures during the warm periods between ice ages (interglacials) may have been higher than previously thought. The latest analysis of ice core records suggests that Antarctic temperatures may have been up to 6°C warmer than the present day.

The findings, reported this week by scientists from the British Antarctic Survey (BAS), the Open University and University of Bristol in the journal *Nature* could help us understand more about rapid Antarctic climate changes.

Previous analysis of ice cores has shown that the climate consists of ice ages and warmer interglacial periods roughly every 100,000 years. This

new investigation shows temperature 'spikes' within some of the interglacial periods over the last 340,000 years. This suggests Antarctic temperature shows a high level of sensitivity to greenhouse gases at levels similar to those found today.

Lead author Louise Sime of British Antarctic Survey said,

"We didn't expect to see such warm temperatures, and we don't yet know in detail what caused them. But they indicate that Antarctica's climate may have undergone rapid shifts during past periods of high CO₂."

During the last warm period, about 125,000 years ago, sea level was around 5 metres higher than today.

[Ice core](#) scientist Eric Wolff of British Antarctic Survey is a world-leading expert on past climate. He said,

"If we can pin down how much warmer temperatures were in Antarctica and Greenland at this time, then we can test predictions of how melting of the large ice sheets may contribute to [sea level rise](#)."

More information: Evidence for warmer interglacials in East [Antarctic ice](#) cores by Louise C. Sime, Eric W. Wolff, Kevin I. C. Oliver and Julia C. Tindall is published online this week in the journal *Nature*.

Provided by British Antarctic Survey ([news](#) : [web](#))

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