



Timing of Antarctic temperature and CO₂ Changes across the last deglaciation

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The analysis of air bubbles from ice cores has yielded a precise record of atmospheric greenhouse gas concentrations, but the timing of changes in these gases with respect to temperature is not accurately known because of uncertainty in the gas age–ice age difference (Δ age). A previous study (Monnin et al., 2001) has concluded that Antarctic temperature warming preceeded the CO₂ rise by 800 ± 600 years during the last deglaciation. Here, based on several techniques, we revised this Δ age estimate. The sequence of events during Termination III suggests that the CO₂ increase and Antarctic deglacial warming were roughly in phase. This finding has important consequences concerning our understanding of the role of CO₂ during past and future climate changes. CO₂ might be more than a simple amplifier during climate changes.