



Fast Antarctic temperature variations imprint in the CO₂ concentration? A high-resolution CO₂ record over the last glacial period

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With the advent of high-resolution ice core records, the investigation of the connection between fast Greenland temperature variations (Dansgaard-Oeschger events; DO-events) and their slower Antarctic counterparts (Antarctic Isotope Maximum events; AIM events) during glacial periods has gained considerable momentum. As long as the timing between physical and carbon cycle changes is poorly constrained, a fundamental understanding of these interhemispheric events is impossible. An important step forward was the confirmation of a one-to-one coupling between the DO-events and the AIM events (EPICA community members, 2006). Presently available records from Antarctic ice cores show CO₂ variations only for the larger of the AIM events. We present for the first time a high-resolution CO₂ record between 30 and 110 kyr BP from the EDML ice core. Ten well-defined CO₂ peaks are found back to AIM 24. Our preliminary data further reveal a number of CO₂ jumps of a few ppmv likely associated with the smaller AIM events.