



## **The Atmospheric N<sub>2</sub>O Concentration during Interglacials of the last ~800 kyr**

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Recent measurements of the N<sub>2</sub>O concentration in air bubbles extracted along the EPICA Dome C ice core revealed the atmospheric N<sub>2</sub>O variations over 0-220 kyr and 430-650 kyr BP. These results showed an equal mean interglacial N<sub>2</sub>O concentration for all the interglacials covered over the last 650 kyr BP. This is in contrast to reconstructions of the atmospheric CO<sub>2</sub> and CH<sub>4</sub> concentration on the same core. They show lower interglacial values in the older time window accompanied by lower antarctic temperatures as indicated by the water isotopes on the Dome C core. Here we present the status of the N<sub>2</sub>O measurements and extend the existing record back to ~800 kyr BP with a time resolution of at least 1500 years. These N<sub>2</sub>O results will show if the interglacial N<sub>2</sub>O level was indeed indifferent over time. Their relationship with CO<sub>2</sub> and CH<sub>4</sub> over the same time period will allow to discuss the biogeochemical changes on earth over two additional glacial-interglacial cycles.