



## **Nitrous Oxide Records of the Last 800,000 Years**

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Measurements on air extracted from polar ice cores provide the unique opportunity to reconstruct the past composition of the atmosphere. They are therefore very suitable to study changes in biogeochemical processes which control atmospheric greenhouse gas concentrations and occur together with changes in climate. Here, we focus on nitrous oxide ( $N_2O$ ), a greenhouse gas with both, terrestrial and marine sources. New  $N_2O$  measurements along the EPICA Dome Concordia (EDC) and EPICA Dronning Maud Land (EDML) ice cores give insight into the specific conditions during eight interglacial periods during the last 800 kyr. By comparing the new measurements with carbon dioxide and methane, we find significant changes of the relationship between the three greenhouse gases during interglacials. This gives some information about variations in the physical and biogeochemical processes, particularly during the beginning and the end of interglacial periods.