

Cause of 100 ky periodicity in glacial-interglacial cycles

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It is known that the pace of glacial-interglacial cycles has been controlled by Milankovitch cycle. However, the mechanism of glacial-interglacial cycles is not fully understood. Especially, the origin of 100 ky periodicity is the long lasting question. Recent result of oxygen isotope and pCO₂ analyses of the trapped air in ice cores revealed pCO₂ increase during deglaciation leads the decrease in d18O, suggesting that pCO₂ increase should be the cause of deglaciation. Temperature increase in southern hemisphere and equatorial region and prevalence of humid climate in inland Asia also lead the deglaciation. It is likely that the pCO₂ increase is probably caused by eccentricity-cycle-driven climatic change in middle to low latitude and consequent changes in ocean productivity.