

Pleistocene Glaciation and Volcanism

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Abstract

The coupled ~100,000 year variations in ice volume, temperature, and atmospheric CO₂ during the late Pleistocene are generally considered to arise from a combination of changes in orbital forcing, ice dynamics, and ocean circulation. Evidence is presented that volcanic contributions induced by changes in glaciation influence atmospheric CO₂ and act as an important feedback upon variations in glaciation. Furthermore, the response of ocean ridge volcanism to sea level variations is suggested to generate the 100 ky time scale of late-Pleistocene glaciation.