Dating a 133-m ice core from East Antarctic Plateau by volcanic markers

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Precise dating is the essential but quite important part of paleoclimate research. In this study, sulphate records and dielectrical profiling (DEP) records are used to trace the volcanic signals in a 133-m ice core from Dome A, east Antarctic. Then, 6 well-known volcanic stratigraphic markers are used to date this ice core. Results show that, the bottom of the ice core reaches 1976 BC. This study also indicates that, the imprints of large volcanic eruptions in the ice core at this site are in good agreement with the over-all pattern of Antarctic in the recent 2000 years.