

A long-term ^{10}Be record from Dome Fuji ice core and cosmic-ray stratigraphy

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Cosmogenic nuclides (^{10}Be , ^{14}C , ^{26}Al , ^{36}Cl) in paleoenvironmental archives serve as a proxy indicator of the paleointensity of cosmic ray, controlled largely by the strength of the solar/geomagnetic fields. Here, we present a millennial record of cosmogenic ^{10}Be covering the past 300 kyr and obtained from ice cores drilled at the Dome Fuji station ($77^{\circ}19'S$, $39^{\circ}42'E$), inland East Antarctica. A number of specific increases in ^{10}Be were observed in this record and were connected semi-quantitatively to those in the cosmic-ray intensity caused by geomagnetic excursions during the last 300 kyr. These features can be used as stratigraphic time-markers for synchronization of not only Antarctic ice cores but also various paleoenvironmental archives such as deep-sea sediments