

COSMOGENIC VARIATIONS OF NITRATE ABUNDANCE IN POLAR ICE

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Time variations of the nitrate content in Greenland ice core for the last 400 years are analysed. An approximately 20-year cyclicity dominates the nitrate series during the Maunder minimum (1645-1715) due to similar variations of galactic cosmic ray intensity. During times of normal high solar activity level, the 4-6-year periodicity dominates the nitrate series. This is probably due to a superposition of fluxes of galactic and solar cosmic rays, and due to favourable conditions for the nitrate precipitation.