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10Be of the last interglacial in the NEEM ice core, North Greenland

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We report here on 10Be results from ice saw dust samples covering the depth interval 2200-2500 m and at 2.2 m resolution from the 2540 m deep NEEM ice. The 10Be analyzed depth interval includes the last interglacial ice. After chemical separation, the 10Be was measured using the Uppsala AMS system at a general machine and background correction <15%. Concentration of 10Be varies between 0.7-2.27x104atoms/gice with a mean value of 1.18x104atoms/gice. The mean value seems to be about 25% lower than what has been measured for early Holocene sections in the NEEM ice cores. This feature suggests that either 10Be production was lower during the Eemian period than that in the Holocene or that 10Be concentration was diluted by higher snow accumulation rate. The Eemian period is known to have a warmer climate than the Holocene and that would be associated with higher temperatures and most likely with higher precipitation. Higher precipitation would mean dilution of 10Be concentrations as also indicated by our results. The 10Be data also provide possibility for exploring Cosmic-Solar-Earth interactions that have operated during the Eemian period.