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South Atlantic island record reveals a South Atlantic response to the 8.2 kyr event

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Abstract. One of the most distinct climate fluctuations during the Holocene is the short and rapid event centred around 8200 years ago, the 8.2 kyr event, which was most likely triggered by glacial melt-water forcing from the receding Laurentide ice-sheet. Evidence for this cooling has primarily been reported from sites around the North Atlantic, but an increasing number of observations imply a more wide-spread occurrence.

Palaeoclimate archives from the Southern Hemisphere have hitherto failed to uncover a distinct climatic anomaly associated with the 8.2 kyr event. Here we present a lake sediment record from Nightingale Island in the central South Atlantic showing enhanced precipitation between 8275 and 8025 cal. yrs BP, most likely as a consequence of increased sea surface temperature (SST). We show that this is consistent with climate model projections of a warming of the South Atlantic in response to reduced north-ward energy transport during the 8.2 kyr event.

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