The 8.2 kyr event recorded at high resolution by a speleothem from the Northern French Alps

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Continental records of Holocene climate variability in the Alps are scarce and they rarely document the “8.2 kyr event”. Several reasons have been proposed: records do not have sufficient resolution, are not precisely dated or the proxies are not sufficiently sensitive to climate variations associated with this event. The European records of adequate resolution generally allow the identification of an anomaly but its characterisation is unclear: it seems that the event has triggered significant impacts only for a few decades and mainly expressed in winter (whereas most archives are more sensitive to summer conditions). Thus, the detailed characterisation of the impacts of this event requires records with sub-annual resolution and preferably sensitive to winter conditions.

Here we present a multi-proxy, high-resolution analysis of this event, as recorded by a stalagmite of the Bauges massif (Northern French Alps), at ~1400 m altitude. Comparison of these results with other regional and distant data allows for a discussion about climatic impacts and teleconnections at this time.