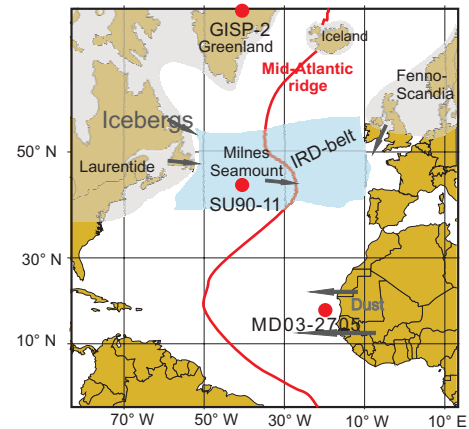
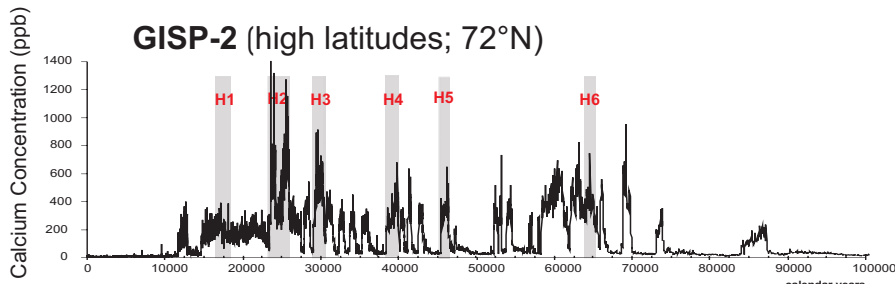


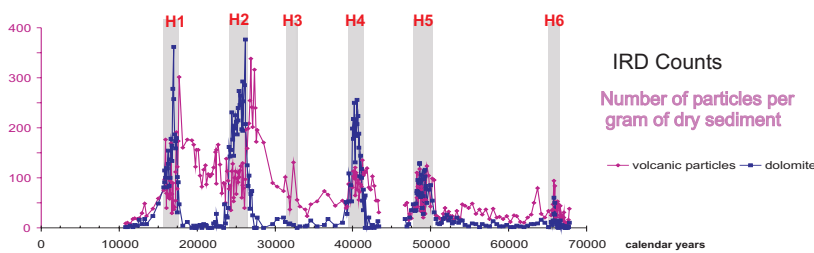
High latitude "icy Heinrich events" vs. Tropical "dusty Heinrich-like events": are they teleconnected?

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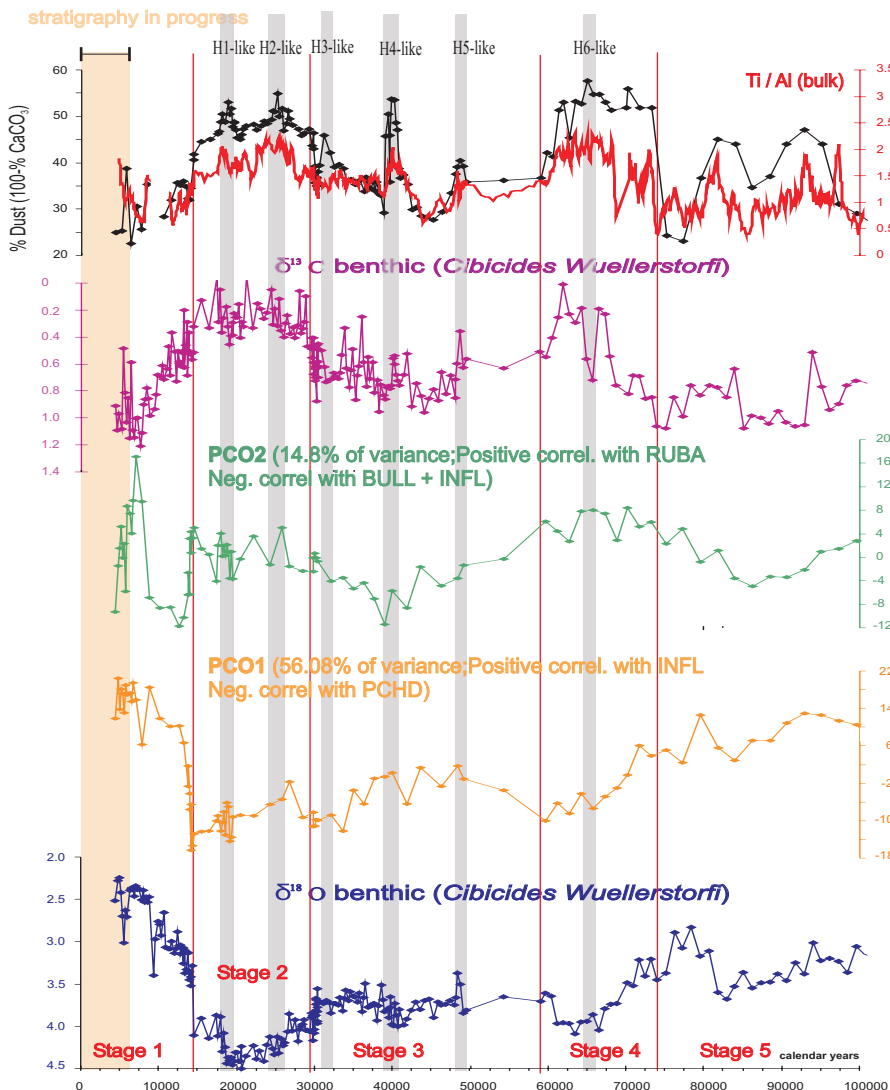
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Core SU90-11 (IRD belt; 44°N)



Core MD03-2705 (low latitudes; 18°N)



In the North Atlantic, at about 45°N, typical "Heinrich events" have been observed by many authors within the so-called "Ruddiman IRD belt". They reveal abrupt, massive discharges of icebergs induced by Laurentide ice sheet collapses. Their classic pattern is illustrated in core SU90-11, in which we counted >150µm ice-rafted debris (Icelandic volcanic particles and Canadian dolomite grains). Such a record allowed us to locate the last six Heinrich events (Jullien et al., submitted). **Do these events have contemporaneous analogs at higher and lower latitudes?**

At high latitudes (72°N), the dust profile obtained in the Greenland ice core GISP-2 (Mayewski et al., 1994) display typical dust peaks (concentrations multiplied by factors 20-to-30), made of Asian aerosols (Biscaye et al., 1997). They were interpreted as periods of intensified aridity over Asia along with intensified Westerly winds. Their calendar ages reveal that these "dusty" events correspond to the classic Heinrich events ages.

At low latitudes (18°N; 3100m depth), the IMAGES core MD03-2705 displays similar events. These so-called "Heinrich-like events" are characterized by "dusty events", reflecting an increased aridity on the nearby African continent (i.e. higher % of dust) along with enhanced winds (i.e. higher Ti/Al ratio reflecting the transport of heavier minerals).

The age-model obtained for this core has been derived by tuning the ¹⁸O benthic record on a similar record obtained on a neighbour core (deMenocal et al., 2000). It seems that the "Heinrich-like dusty events" are synchronous with the typical "Heinrich IRD events". More ¹⁴C-AMS dates, however, are needed (*still in progress!*...) before we may clearly claim that there is synchronicity? or leads? or lags?

Preliminary conclusion: it seems that typical "Heinrich icy events" that occurred at about 40-50°N triggered a major atmospheric reorganisation, leading to enhanced winds and enhanced aridity both at the Westerlies and Trades latitudes. Such a reorganisation is clearly simulated by a coupled global climatic model (Hewitt et al., Submitted).