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Synthesis of dust records, vegetation reconstructions and speleothem growth for 10 key areas of the global climate system during the last 60 000 years

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Published literature on the dust content in terrestrial and marine sediment cores is synchronized with terrestrial and marine pollen data and speleothem growth phases on a common time scale for 10 selected key areas of the global climate system during the last 60 000 years. Records have different time resolution and are dated by different methods, but still are brought to a synthesis for each of the 10 regions. All regions shows speleothem growth during the early MIS3, sometimes continued into the middle MIS3, but sometimes confined to interstadial times only. Dust is common during the entire MIS2, but dust deflation in some regions start in the middle MIS3. It is not always apparent if the dust deflation is confined to stadial phases only, because the time resolution is often not sufficient to resolve the stadial/interstadial phases precisely. A major problem for the middle and early MIS3 are the limitations of 14C dating. Finally, we detect only three regions where a MIS3 synthesis of dust, vegetation and spelothem growth results in coherent pattern. These regions are central America, central Europe, central Asia.