

Interactive comment on “Connecting the Greenland ice-core and U/Th timescales via cosmogenic radionuclides: Testing the synchronicity of Dansgaard-Oeschger events” by Florian Adolphi et al.

F. Parrenin (Referee)

frederic.parrenin@univ-grenoble-alpes.fr

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This manuscript discusses the relative timing of DO events observed in Greenland ice cores with those observed in dated speleothems. The methodology is based on the synchronisation via cosmogenic radionuclides. The synchronisation is done during three intervals where variations in production of cosmogenic radionuclides are important: 11-13 ka, 21-23 ka and 41-43 ka (Laschamp event). In-between these three time periods, a kind of interpolation is done and its uncertainty is evaluated thanks to a statistical method which assumes the GICC05 MCE as age interval uncertainty. It

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is found that DO events are synchronous in ice cores and speleothems within uncertainties (189 yr). Moreover, GICC05 is found to agree with the U-Th chronology of speleothems within its MCE uncertainty, although clearly the MCE is strongly correlated in some intervals (e.g. uncertain layers are always real layers).

This is an interesting manuscript which is very well written. I will focus on the discussion of chronologies since I am not an expert of cosmogenic radionuclides. The only main comment I have is that the title and the formulation of the manuscript are a bit misleading since this manuscript does NOT provide a continuous connection of ice core and speleothems chronologies, but rather a discrete one during only three time periods. The interpolation which is done in-between is just an interpolation and in my opinion should not be treated as a continuous synchronisation.

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