

Session CL1.14/CR2.12

Past climate reconstructions from ice core records: limits and gaps in the interpretation of proxies embedded in the ice

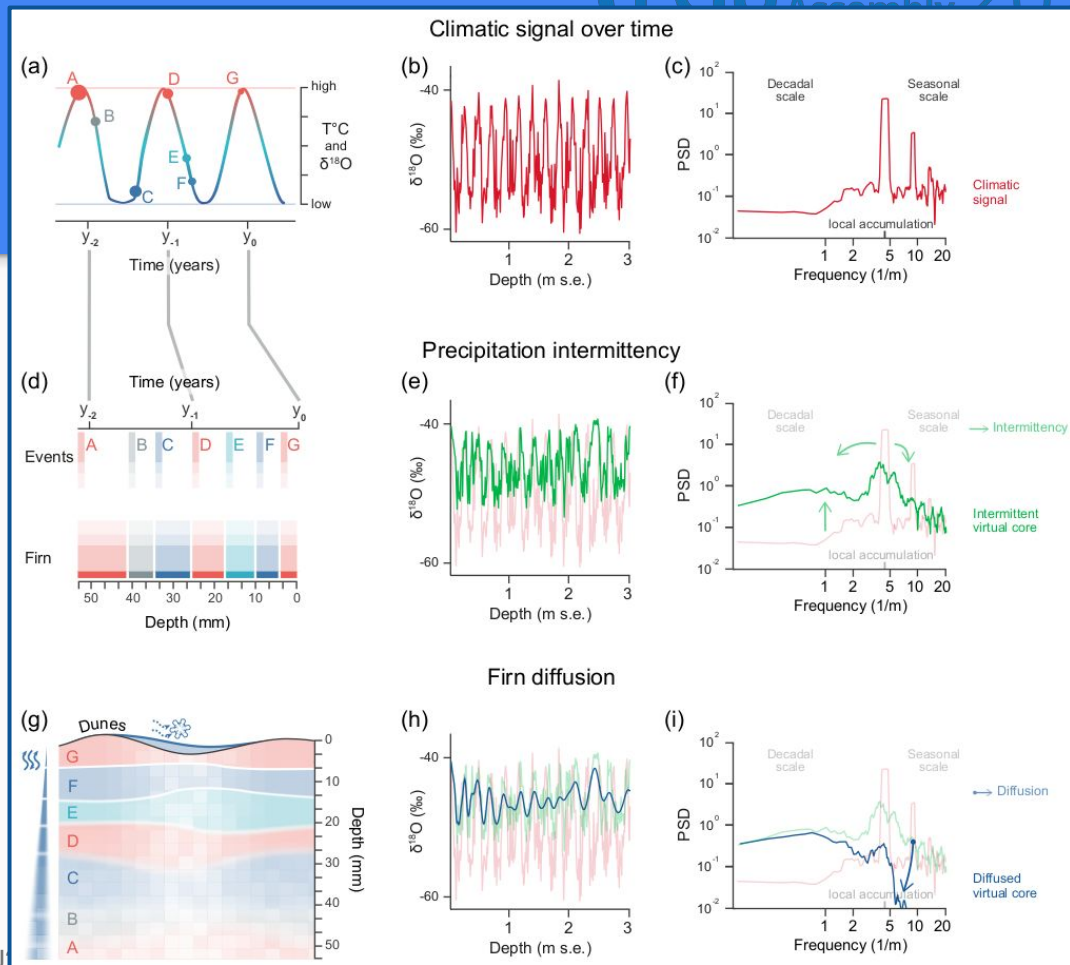
Conveners: Mathieu Casado, Pete Akers, Marie Cavitte, Thomas Münch

Session summary and objectives

- Ice cores are a key archive to study past climate variability. Various physico-chemical proxies provide key insights into past temperature, atmospheric composition, volcanic activity, and atmospheric circulation. BUT, we still lack a detailed, process-based understanding of how archived climatic signals are created.
- This session aims to discuss:
 - **The extent to which climatic signals are archived in the proxy signals**
 - **How archival processes affect the recorded signal** (atmosphere to surface to post-depositional changes)
 - **How to optimally recover the original climatic signals from existing ice-core records**
 - **The impact that individual processes have on the relationship between proxy and past climate variability across various temporal and spatial scales**
- Presentations will cover interpretation of various proxies from:
 - Ice core records from Antarctica, Greenland, or high mountainous areas
 - Analyses of climate model, reanalysis and back trajectory data;
 - Novel application of statistical and spectral methods to proxy data
 - New measurement techniques.

Archival of a climate signal in an ice core: what do we measure?

Figure from Casado et al. (in review, Fig.2), Climate of the Past Discussion, [doi:10.5194/cp-2019-134](https://doi.org/10.5194/cp-2019-134)



Live chat session info

- 10:45 am - 12:30 pm CET Tuesday 5th May 2020
 - 10:45 am - 11:45 am: discussion of the uploaded presentations (similar to PICO sessions) where presenters can explain their slides/answer questions
 - 11:45 am - 12:30 pm: group discussion on 2 to 3 broader topics based on the themes of the presentations
- We encourage short powerpoint presentations (1-3 slides)
 - Very much like this presentation !
 - Choose a single focus and main conclusion from your presented research
- Your presentations will then stay online until the 31st of May 2020 for viewing by other EGU members