

Before satellites: reconstructing past sea ice changes using proxy records

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Despite its importance in Earth's climate system, very little information exists to constrain sea ice processes prior to the satellite era. The enigmatic nature of sea ice means that it doesn't impart a direct signal on the geological record, however there are many indirect indicators of sea ice presence. This presentation will give an overview of the various proxies that exist for reconstructing aspects of sea ice change prior to direct observations. There will be a particular focus on the advances that have been made over the last decade in understanding the history of Antarctic sea ice from ice cores. Some examples of the challenges in linking proxy reconstructions of sea ice with physical climate processes will also be discussed.