



**First workshop of the PAGES Sea Ice Proxy (SIP) working group
The basis of sea ice proxies**

GEOTOP, 201 President Kennedy 7th floor
March 7-9, 2012

Preliminary schedule

WEDNESDAY, MARCH 7

8:30-9:30	<i>Past4Future members only : WP4.2 meeting – Marit-Solveig Seidenkrantz</i>
9:30-10:30	Welcome to all with « café et croissants »
10:30-10:40	Introduction and workshop objectives - Anne de Vernal, Eric Wolff, Rainer Gersonde
10:40-12:00	Physics and modelling of sea ice
10:40-11:00	Sea-ice dynamics and modelling issues – Andrew Bush
11:00-11:20	Sea-ice data assimilation and modelling - Hughes Goosse
11:20-12:00	DISCUSSION : How sea-ice proxy data can help to evaluate sea-ice models? What type of proxy data is required for model/data intercomparisons? Moderator : Xavier Crosta
12:00-13:30	Lunch
13:30-15:00	Ice core proxies and other physical proxies of sea-ice
13:30-13:50	Ice core proxies, and sea-salt as a possible sea ice proxy – Eric Wolff
13:50-14:10	DMS and sea-ice – Jacqueline Stefels
14:10-14:30	MSA in ice cores : promise and problems –Nerilie Abram
14:30-14:50	Circum-Arctic terrestrial proxies – Christophe Kinnard
14:50-15:10	Foraminiferal isotopes in sea- ice environments – Claude Hillaire-Marcel
15:10-15:40	DISCUSSION : What sea ice parameters can be reconstructed from ice cores ? How physical proxies can lead to quantitative estimates of sea ice?

	Moderator : André Rochon
15:40-16:10	Health break
16:10-17:10	The basis for the use of biogenic proxies
16:10-16:30	Biophysical processes affecting ice algal production – Christopher Mundy
16:30-16:50	Sea ice biochemistry – Christine Michel
16:50-17:10	Biogeochemical modelling of sea ice – Hughes Goosse

THURSDAY, MARCH 8

9:00-10:30	The biology-ecology of micro-organisms and their relationship with sea ice
9:00-9:20	Diatoms – Rainer Gersonde
9:20-9:40	Dinoflagellates – André Rochon
9:40-10:00	Planktonic/benthic foraminifers – Leonid Polyak
10:00-10:20	Ostracods – Thomas Cronin
10:20-11:00	Coffee Break
11:00-12:30	Biomarkers as sea ice proxies
11:00-11:20	IP25 : the current understanding of this biomarker – Simon Belt
11:20-11:40	The benefit of coupling IP25 and marine phytoplankton biomarkers for sea ice reconstructions – Juliane Müller
11:40-12:00	Development of new organic proxies for Antarctic sea ice – Guillaume Massé
12:00-12:30	Discussion on the regional signal of IP25 – Tim Shanahan and others
12:30-14:00	Lunch
14:00-15:00	The approaches for quantitative reconstructions from microfossil proxies (beyond presence/absence)
14:00-14:20	Qualitative and quantitative reconstruction of circum-Antarctic sea-ice : the bases, accuracy, limitations - Xavier Crosta
14:20-14:40	Dinocyst databases and the application of analogue techniques to reconstruct sea-ice cover : the bases, accuracy, limitations – Anne de Vernal
14:40-15:00	Other approaches and general discussion about transfer functions
15:00-15:30	Health Break
15:30-17:00	<p><i>DISCUSSION: What are the sea-ice parameters that can be reconstructed from biogenic proxies ?</i></p> <p><i>What about the use of the biogenic proxies for sea-ice reconstructions on qualitative bases and quantitative bases?</i></p> <p><i>What are the respective advantages and disadvantages of biogenic proxies?</i></p> <p><i>What about their robustness and limitation in time and space?</i></p> <p><i>How far can we go from qualitative to quantitative reconstruction of sea-ice cover?</i></p> <p>Moderator : Hughes Goosse</p>

19:00 - Conference dinner at the *Hotel de l'Institut* (3535 rue St-Denis)

FRIDAY, MARCH 9

9:00-10:30	Examples of reconstruction of sea ice : consistencies and discrepancies ?
9:00-9:10	Sea ice reconstructions off west Greenland - Hui Jiang
9:10-9:20	IP25 vs diatoms as sea ice proxies in the Bering Sea and western Arctic - Beth Caissie
9:20-9:30	Last interglacial sea ice in Western Arctic and Iceland plateau based on ostracods + summary of the last 50 ka records - Thomas Cronin
9:30-9:40	Dinocysts, planktic foraminifers and stable isotopes to reconstruct central Arctic and peri-Arctic sea ice during the last 50ka - Frédérique Eynaud
9:40-9:50	Sea-ice proxies in West Antarctic cores - Alison Criscitiello/Sarah Das
9:50-10:00	Diatoms from modern and palaeo-records of Antarctic Peninsula and Scotia Sea used to assess the proxy – Claire Allen
10:00-10:10	Southern Ocean and North Pacific sea-ice reconstructions – Oliver Esper
10:10-10:20	600 kyr comparison of three methods – Rainer Gersonde
10:20-10:30	Sea ice/water mass stratification from multiproxies – Anne de Vernal
10:30-10:40	Examples of sea ice cover inferred from benthic foraminifera in the Labrador Sea – Marit-Solveig-seidenkrantz
10:40-10:50	Examples of sea-ice reconstruction from the Beaufort Sea from benthic foraminiferal assemblages – David Scott
10:50-11:20	Coffee Break
11:20-12:30	Towards a multi-proxy reconstruction of polar and sub-polar sea ice
	<p>DISCUSSION :</p> <p><i>Can we make general recommendations for a best use of sea-ice proxies (approaches, geographical areas, temporal range, parameter to reconstruct, etc.)?</i></p> <p><i>Can we agree on standardized qualitative/quantitative indices to combine different sea ice proxies?</i></p> <p><i>What can we learn from discrepancies between proxies?</i></p> <p><i>Would it be possible to plan a multi-proxy reconstruction on global scale ? (as with MARGO for example)</i></p> <p><i>Can we organise a specific proxy intercomparison, using one or two well-chosen cores or regions?</i></p> <p>Moderator: Claude Hillaire-Marcel</p>
12:30-13:30	Lunch
13:30-15:00	Concluding points
	<p>Summary of the workshop</p> <p>Special SIP issue in QSR</p> <p>Next workshop : theme, host, date and location ?</p>