Embarrassment

- Still missing solid quantitative reconstruction of LGM Atlantic
- Pacific, Indian, Southern Ocean?
- Consistent multi-proxy picture of even Atlantic water masses on millennial timescales

• Reconstruct the strength of the large-scale meridional overturning circulation in the Atlantic at millennial timescales over the last 30 kyr with an estimate of the associated error

• Reconstruct associated fluxes of heat and carbon
  – We are close
  – We are very interested in the answer as it applies to the understanding of abrupt climate change and stability of Holocene
  – Will this happen without PACE anyway?
Embarrassment

• Still missing solid quantitative reconstruction of LGM Atlantic
• Pacific, Indian, Southern Ocean?
• Consistent multi-proxy picture of even Atlantic water masses on millennial timescales
PACE Strawman B

• Reconstruct large scale water mass distribution and circulation for the global ocean during LGM (19-23kyr)
  – Global picture
  – May have to settle for qualitative view in Pacific/Southern
  – Are we ready for even qualitative view of Pacific/Southern?
Embarrassment

- Still missing solid quantitative reconstruction of LGM Atlantic
- Pacific, Indian, Southern Ocean?
- Consistent multi-proxy picture of even Atlantic water masses on millennial timescales
Workshop Goals

*Timescale: Past ~30 +/- 30 kyrs at millennial resolution*

- Assess the potential of existing paleoceanographic proxies -- to what extent can they constrain scenarios of past mean ocean circulation if widely applied
- Assess the sufficiency of existing data coverage
- Determine whether a large scale coordinated program (PACE) is warranted, and what it might look like, based on the above
Breakout session 2

- Assess the potential of existing paleoceanographic proxies -- to what extent can they constrain scenarios of past ocean circulation if widely applied
- Assess the sufficiency of existing data coverage
  - How does current data coverage address Strawman A and B?
  - What method developments are necessary for wider/more effective coverage?
Plenary Discussion

• Are we ready to move forward with A, B, neither or both?
  – Planning takes time, isn’t always fun
  – Planning can (but doesn’t necessarily) lead to better/quicker results
  – Planning can bring resources
  – What resources does planning require?
Breakout groups

- Water mass tracers (carbon isotopes, Nd isotopes, trace metals) - Zahn  Room 1205
- Radiocarbon and Pa/Th - McManus,Yu  Room 1175
- T,S, d18O, density - Adkins, Lynch-Stieglitz  Room 1116
- Grain size - bottom velocity - Hall  Top Atrium
- Inverse methods - Marchal  Bottom Atrium
Schedule

• 8:30-9:00 Goals
• 9:00-10:00 Breakout
• 10:00-10:15 coffee break
• 10:15-11:00 Report from breakout (5 minutes summaries)
• 11:00-12:00 Plenary discussion - PACE