



**The 8.2K event**  
(Born & Levermann, G<sup>3</sup>, 2010)

known as **temporary** cooling  
on Greenland ~8200y BP

Paleodata shows **persistent**  
changes in the subpolar ocean

These can be understood as a  
**switch of the subpolar gyre**  
reconciling various observations:

- Little or no Labrador Sea Water formation during the early Holocene (Hillaire-Marcel et al., 2007; Hillaire-Marcel et al., 2001)
- Labrador Sea Water formation increased after ~8k (Hillaire-Marcel et al., 2007; Hillaire-Marcel et al., 2001)
- Abrupt and persistent cooling of North American slope waters (Sachs, 2007; de Vernal et al., 2006; Solignac et al., 2004.)
- Warming on Reykjanes Ridge due to intensification of Irminger Current (Andersen et al., 2004)
- Strong Greenland-Scotland Ridge overflow but moderate in North Atlantic. (Keigwin et al., 2005, Oppo et al., 2003, Keigwin et al., 2000)
- Freshwater flood did not impact the Labrador Sea (Hillaire-Marcel et al., 2007; Winsor et al., 2006; Keigwin et al., 2005)

