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GG 140 - The Atmosphere, the Ocean and Environmental Change with Professor Ronald B. Smith

Lecture 26 – Isotope Evidence for Climate Change

4. Isotopic fractionation Image credit: Monica Z. Bruckner.

http://serc.carleton.edu/microbelife/research_methods/environ_sampling/stableisotopes.html

8. Scientist logging an ice core in at the GISP2 site. Image credit: Mark Twickler, Univ. of New Hampshire.

http://earth.rice.edu/mtpe/cryo/cryosphere/cryosphere_who.html

The Greenland Ice Sheet Project 2 drill site. Image credit: Mark Twickler, Univ. of New Hampshire.

http://eo.ucar.edu/staff/russell/climate/paleoclimate/ice_core_proxy_records.html

9. Vostok Ice Core. Image credit: Todd Sowers, LDEO – Columbia University.

http://www.classzone.com/books/earth_science/terc/content/investigations/es2105/es2105page01.cfm

Vostok Ice Core. Image credit: Ron Hight. <http://www.answersingenesis.org/articles/fit/ice-cores-thousands-years>

10. Greenland and Antarctic isotope data. Image credit: Leland McInnes. <http://en.wikipedia.org/wiki/File:Ice-core-isotope.png>

11. Ice Core Records. Image credit: J.R. Petit, J. Jouzel. <http://3.bp.blogspot.com/-foyrKEMhmO4/TZj2fGNITUI/AAAAAAAAACK/nzPibKK5btw/s1600/Vostok+Ice+Core+Data.png>

<http://3.bp.blogspot.com/-foyrKEMhmO4/TZj2fGNITUI/AAAAAAAAACK/nzPibKK5btw/s1600/Vostok+Ice+Core+Data.png>

12. Jupiter effect on Kimmeridge Bay. Image credit: unknown. <http://www.southampton.ac.uk/~imw/jpg-Kimmeridge/5KMB-Jupiter-m.jpg>

13. Climate change in layered rock. Image credit: unknown. <http://www.free-extras.com/search/1/grand+canyon.htm>

14. Drilling deep sea sediment cores. Image credit: unknown. <http://www.our-earth.net/Deep-Sea-Drilling-Rig.asp>

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15. Deep Sea Cores. Image credit: College of Oceanic and Atmospheric Sciences Oregon State University. <http://oceanandair.coas.oregonstate.edu/index.cfm?fuseaction=content.display&pageID=89>
16. Foraminifera. Image credit: Thornalley et al. 20110. The Deglacial Evolution of North Atlantic Deep Convection. Science 331: 202-205. <https://wyrdsience.wordpress.com/tag/using-foraminifera-to-reconstruct-climate/>
21. Post Glacial Sea Level Rise. Image credit: Robert A. Rohde. <https://climatesanity.wordpress.com/tag/holocene/>
22. Bering land bridge. Image credit: Holt, Rinehart and Winston. http://go.hrw.com/venus_images/0814MC01.gif
23. Paleoindian stone points. Image credit: unknown. http://www.nps.gov/seac/outline/02-paleoindian/mid_points.gif