

Heidelberger Geographische Gesellschaft

Der Klimawandel in der Antarktis

– Impressionen eines Forschungsaufenthalts

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Pädagogische Hochschule Heidelberg
Abteilung Geographie

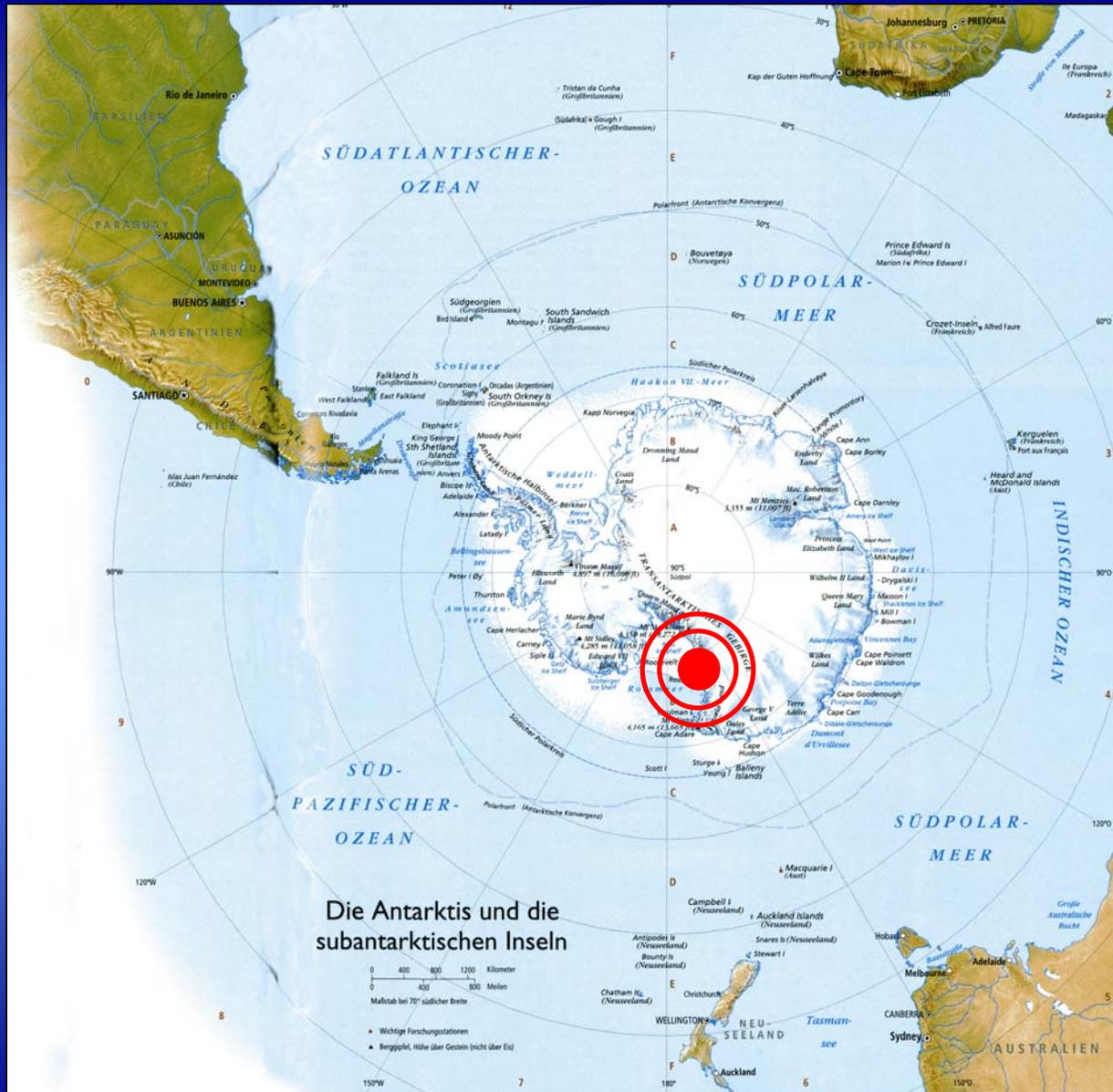
Heidelberg, 17. Juli 2007







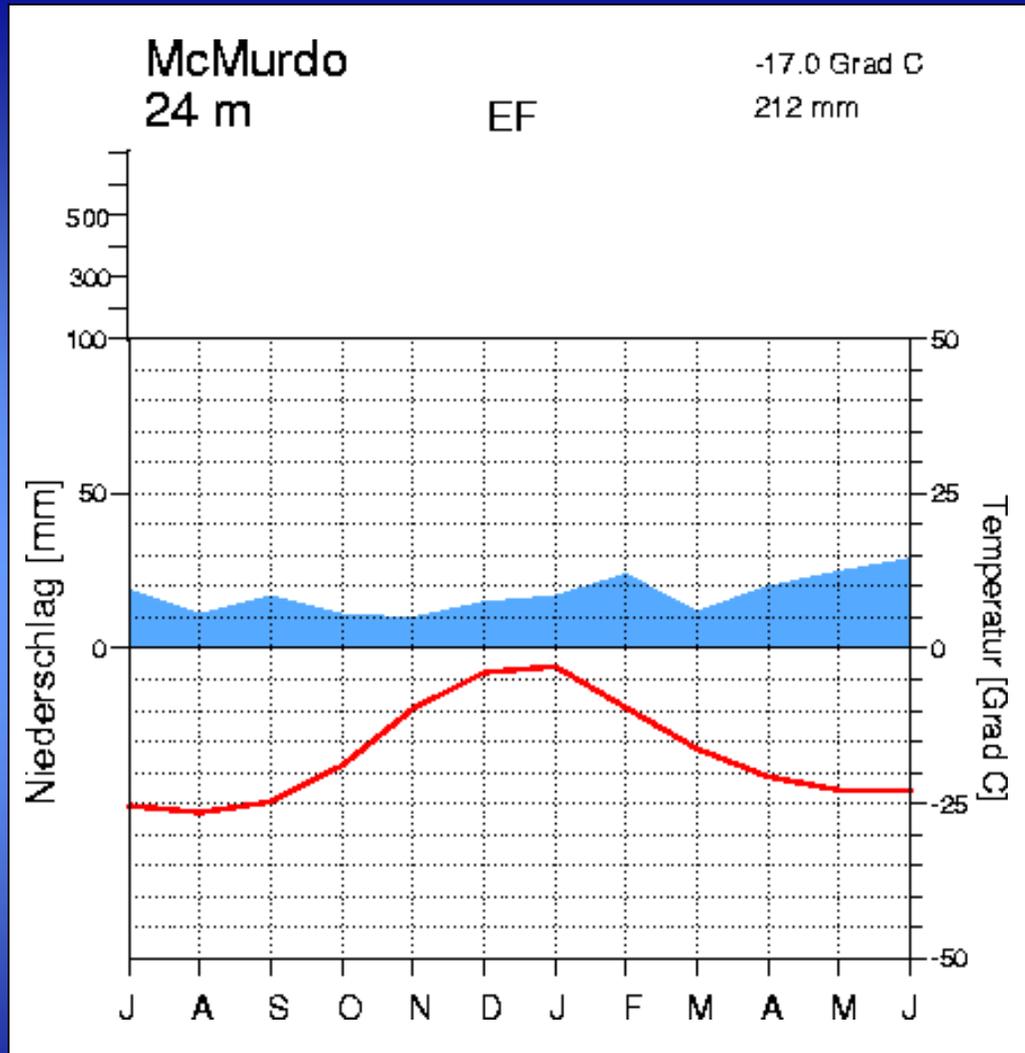
Lage der Forschungsstation McMurdo



Quelle: D. McGonigal, 2004

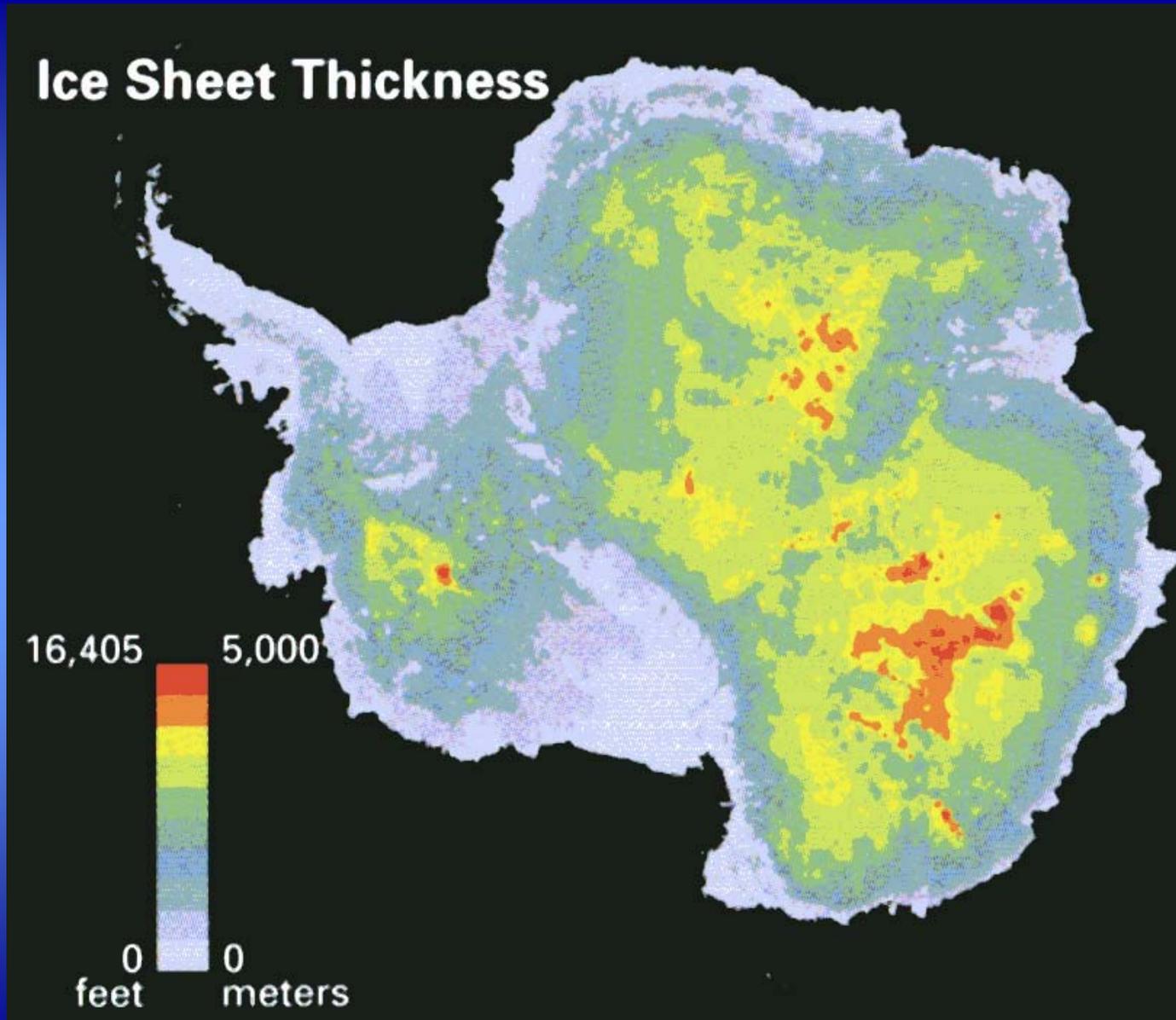


Klimadiagramm der Station McMurdo



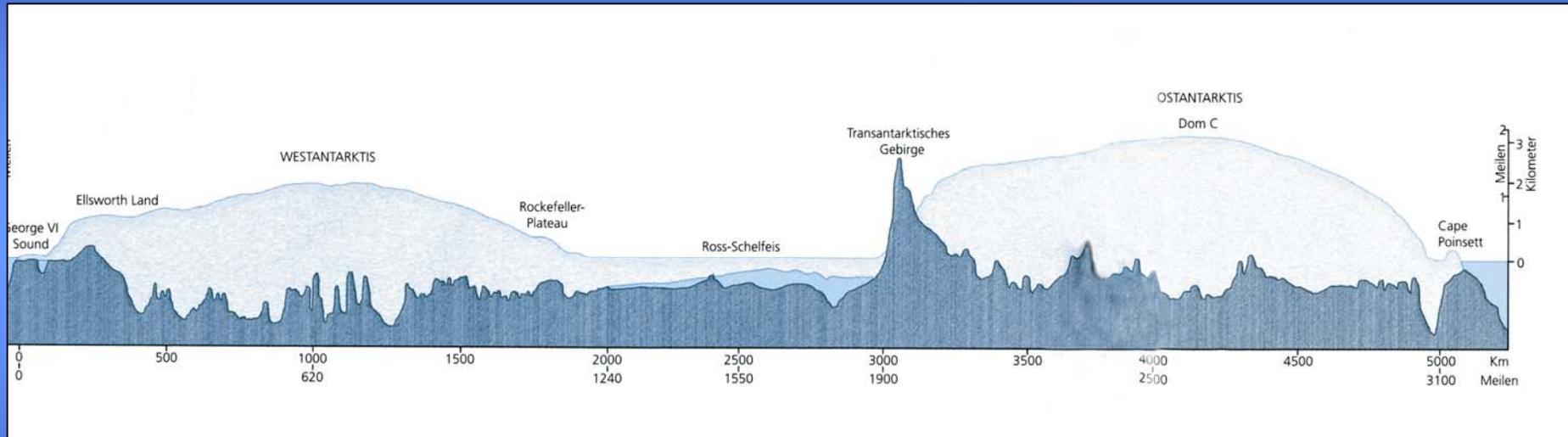
<http://www.klimadiagramme.de/Australien/mcmurdo.html>

McMurdo		
Monat	[mm]	[° C]
Jan	17	-2.9
Feb	24	-9.6
Mar	12	-16.2
Apr	20	-20.7
May	25	-22.9
Jun	29	-22.9
Jul	19	-25.4
Aug	11	-26.5
Sep	17	-24.8
Oct	11	-18.9
Nov	10	-9.7
Dec	15	-3.9
Year	212	-17.0





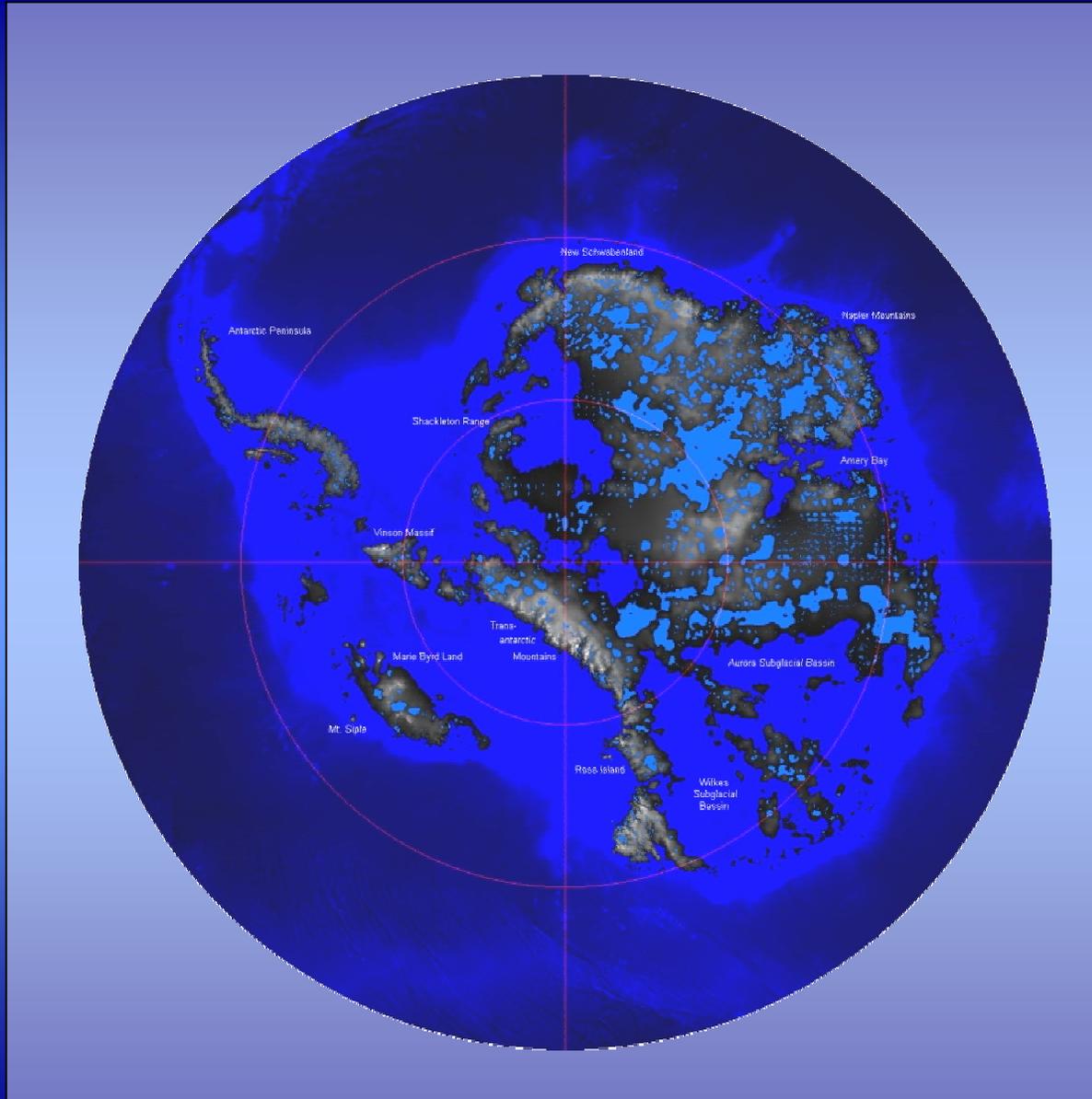
Querprofil durch die Antarktis



Quelle: D. McGonigal, 2004



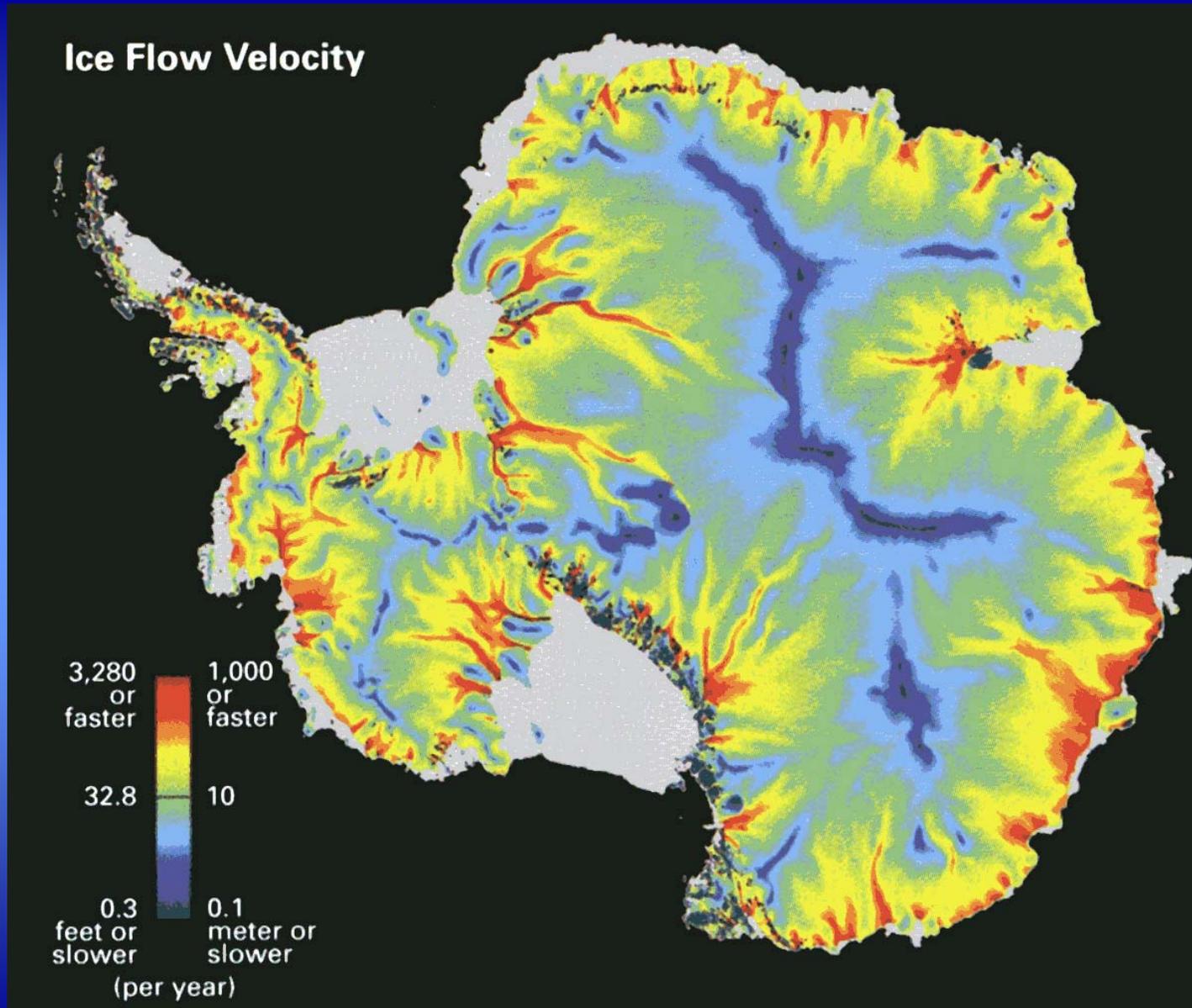
Was wäre die Antarktis ohne Eis?



<http://de.wikipedia.org/wiki/Bild:AntarcticaRockSurface.jpg>



Alles im Fluss – vom Inlandeis zum Schelfeis ...



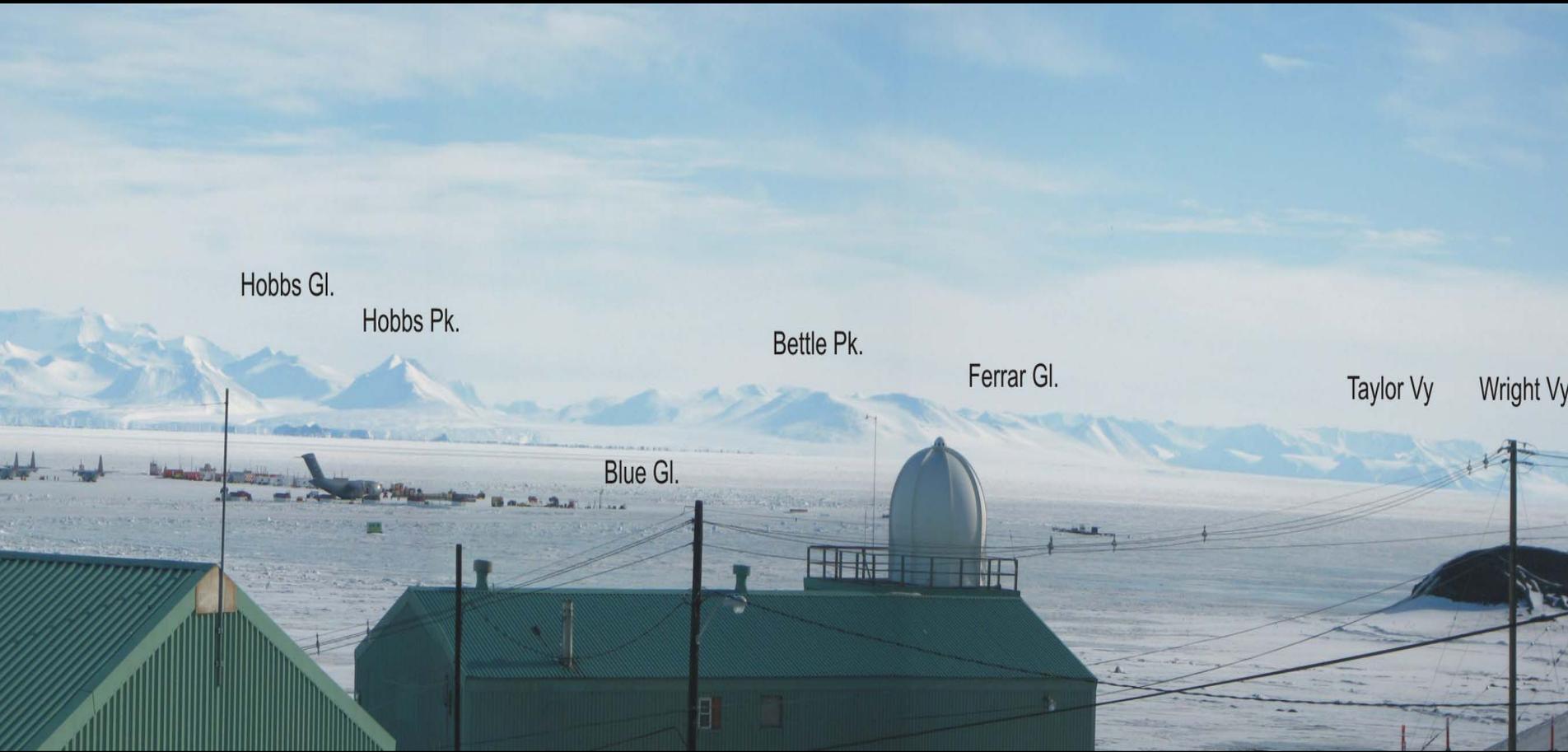
Quelle: National Geographic Society, 2002











Hobbs Gl.

Hobbs Pk.

Bettie Pk.

Ferrar Gl.

Taylor Vy

Wright Vy

Blue Gl.



MCMURDO
F. D.
ANTARCTICA

NO. 1



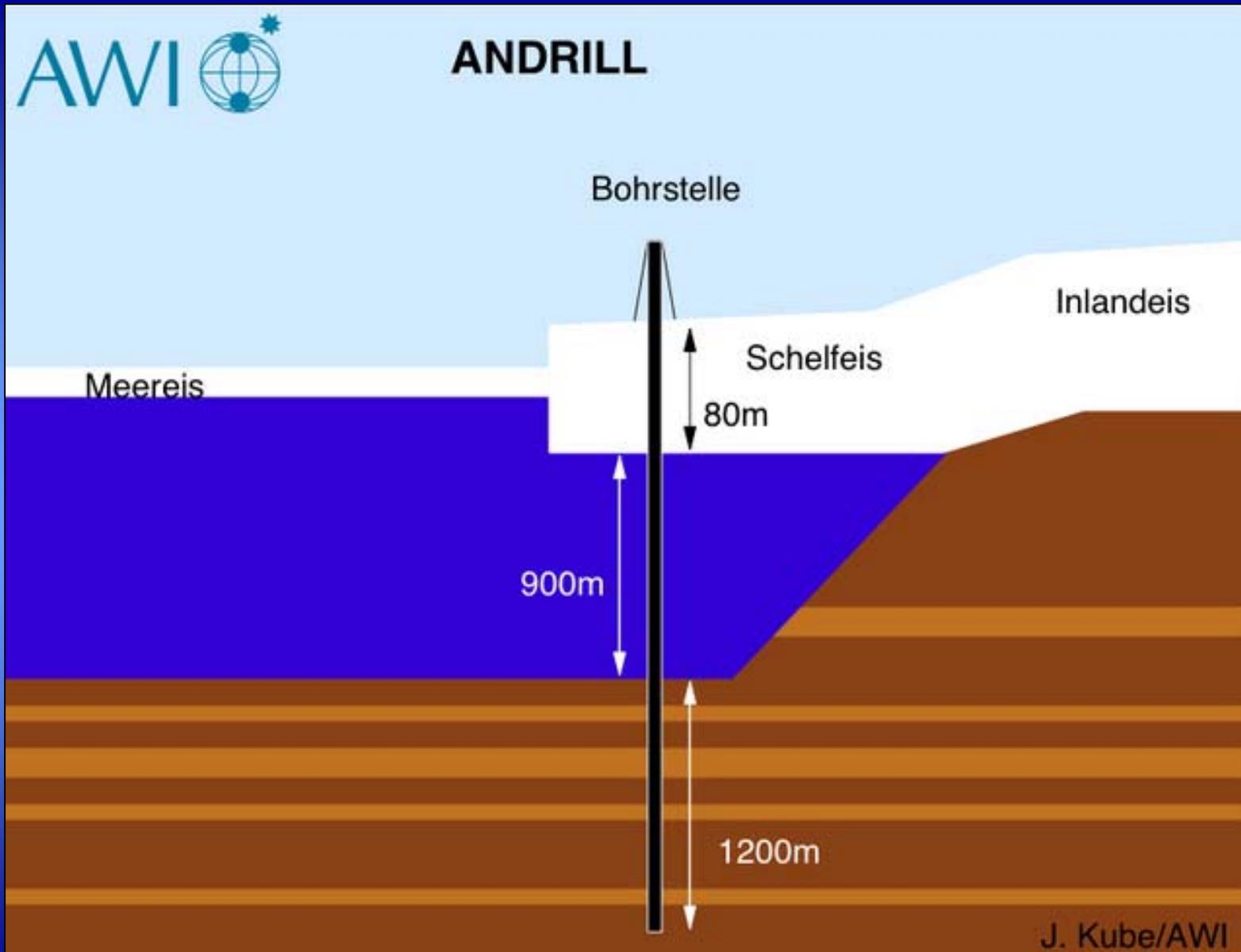
McMurdo



3



Die Bohrstelle des ANDRILL-Projekts – „bewegtes“ Eis





ADP 026 811





CONTROL
Imp Core Bit
3 782x2 400 Series 1043

2 A 0
Imp Core Bit
3 782x2 400 Series 1043

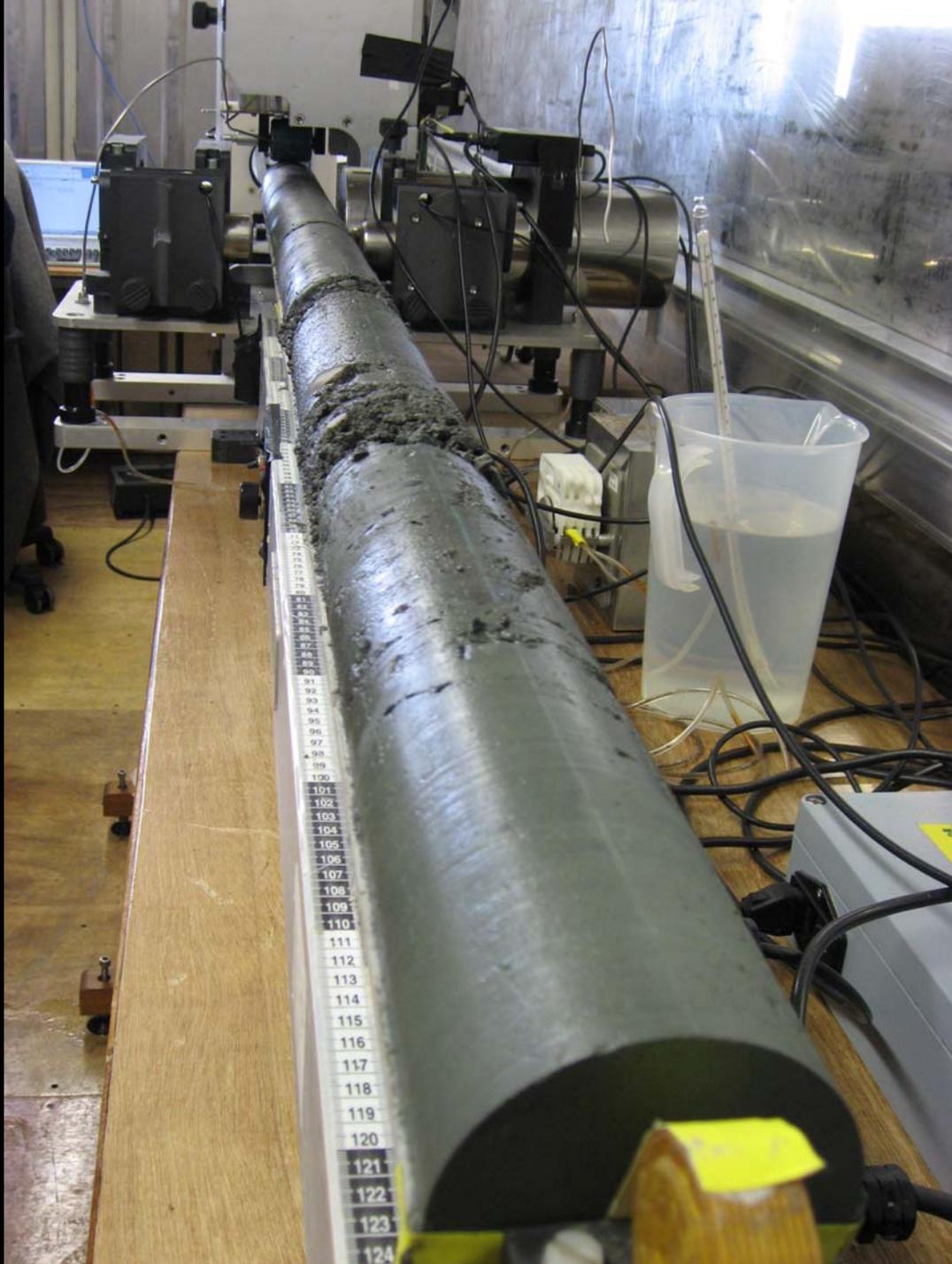
6 A 0
RSG
Imp Core Bit
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6A 8282
20-416-538
Imp Core Bit HQT
3 782x2 400 Series 1043

Imp Core Bit
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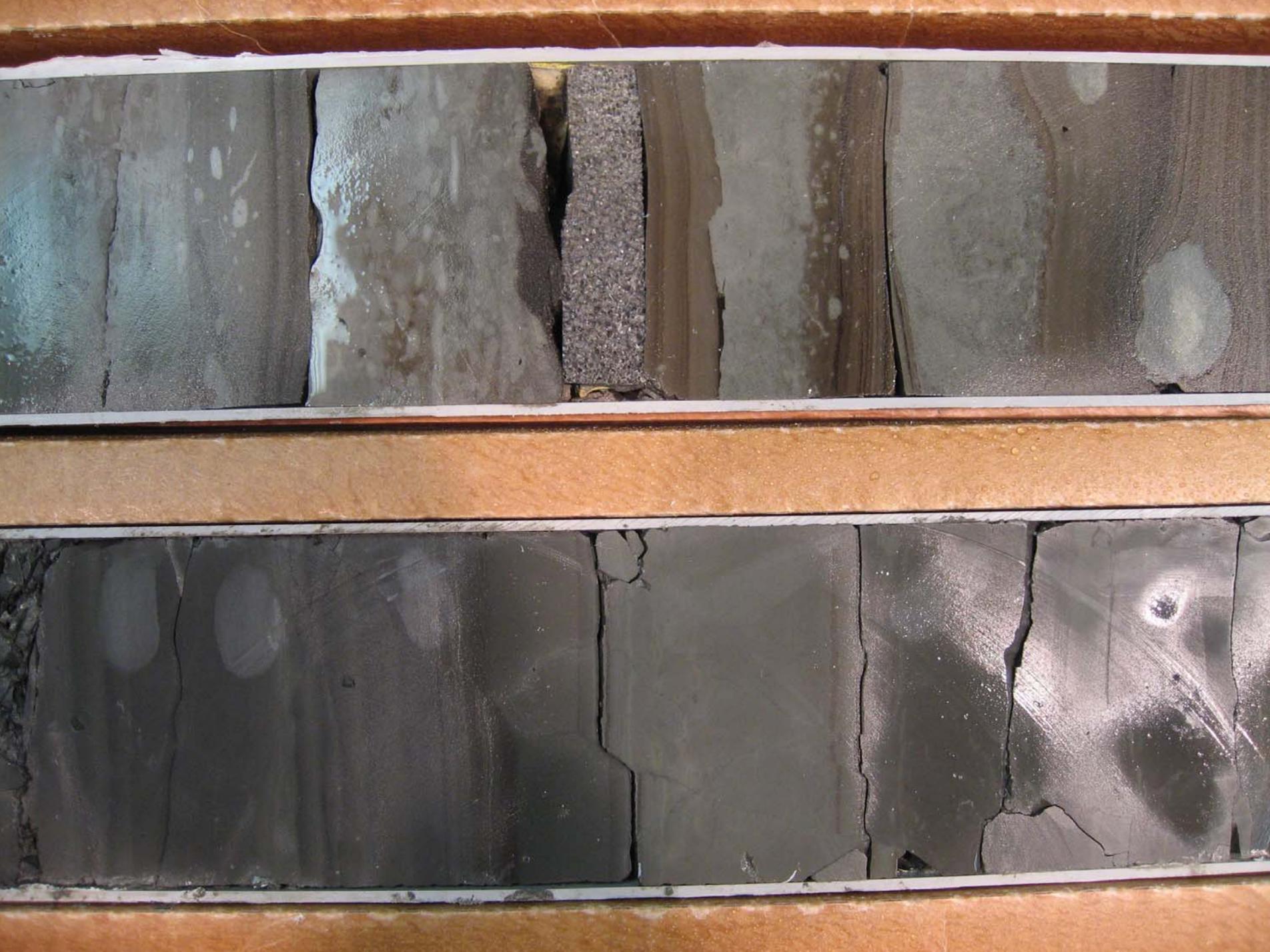
6A 8281
Imp Core Bit
3 782x2 400 Series 1043
Comments





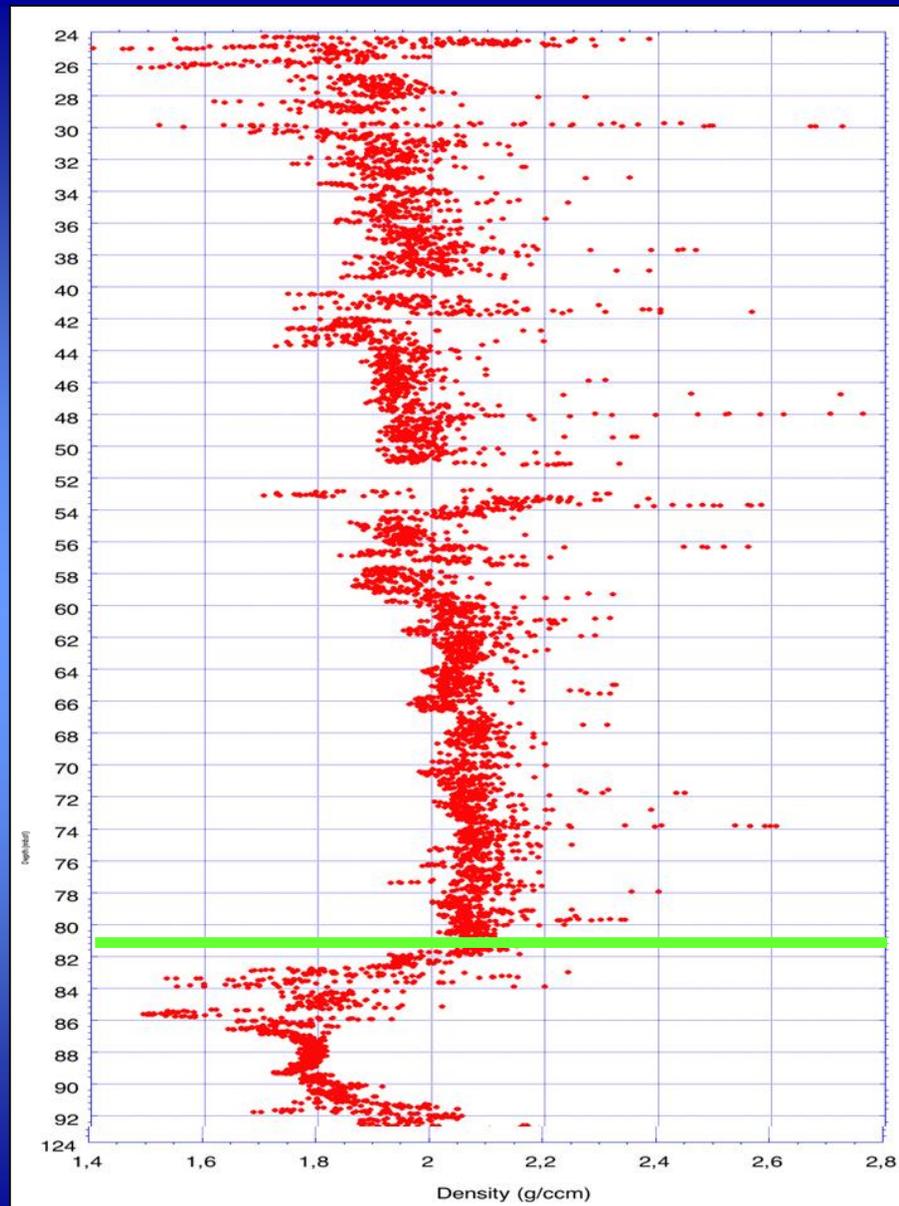
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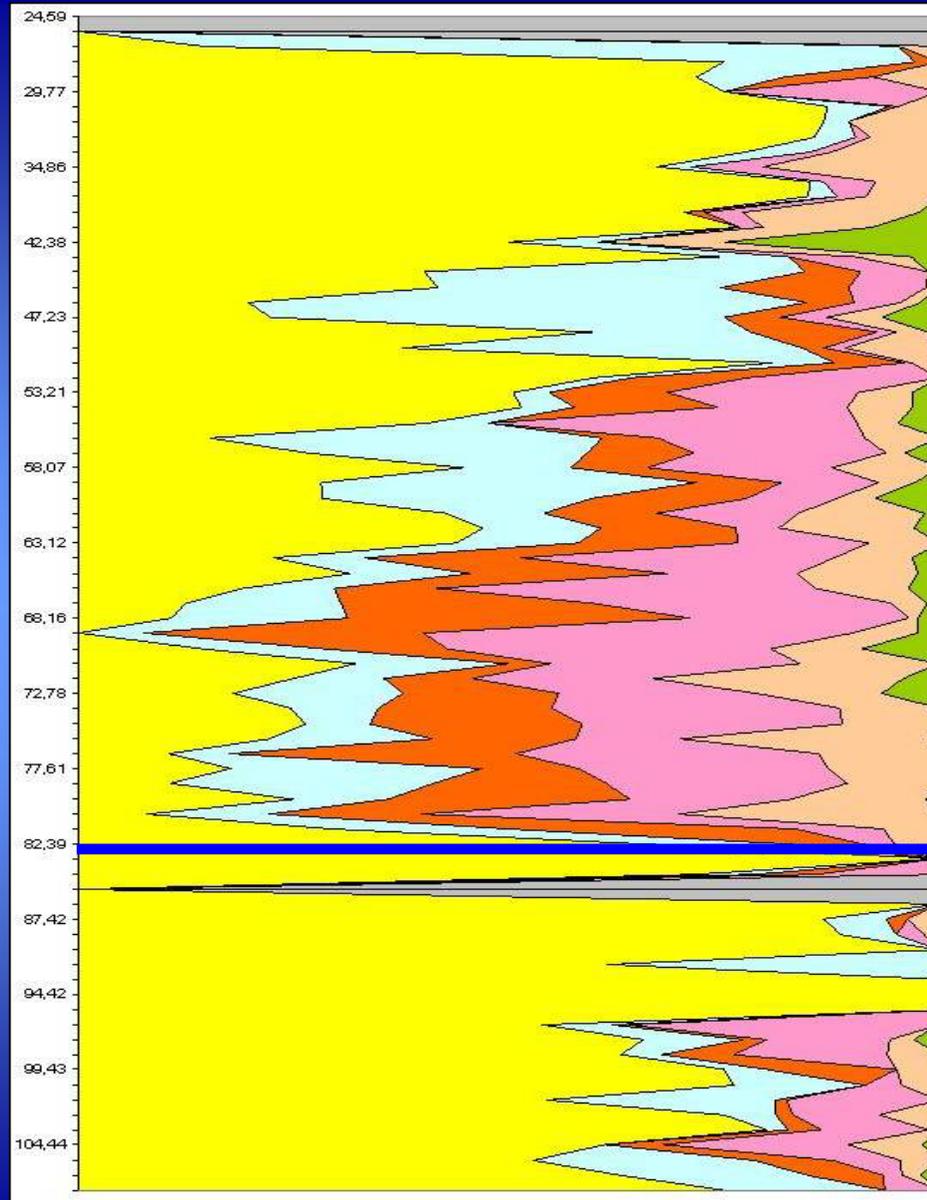


Gesteinsdichte im Bohrkern – ein Klimaarchiv



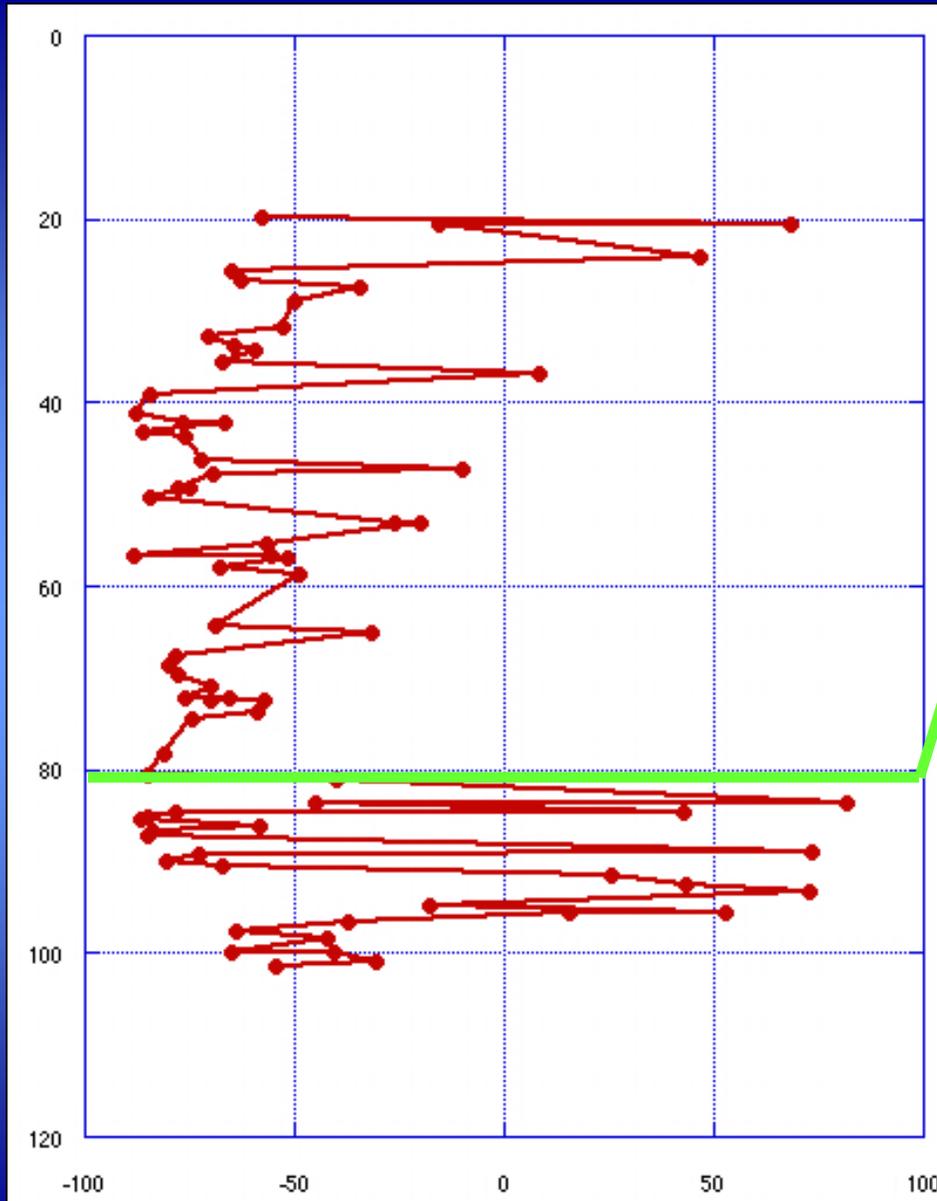


Gesteinseinschlüsse im Bohrkern – Zeugen der Gletscherströme





Magnetfeld der Erde – eine Altersskala

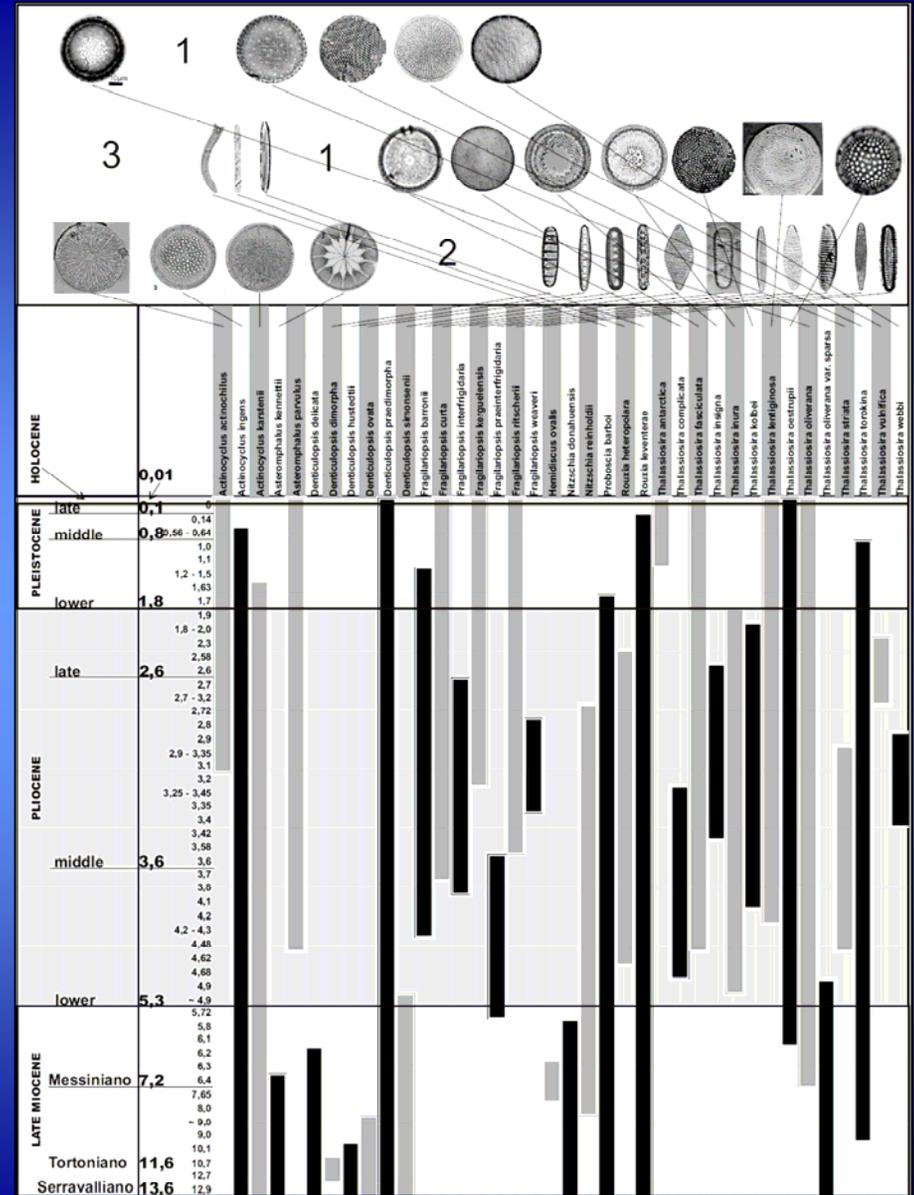
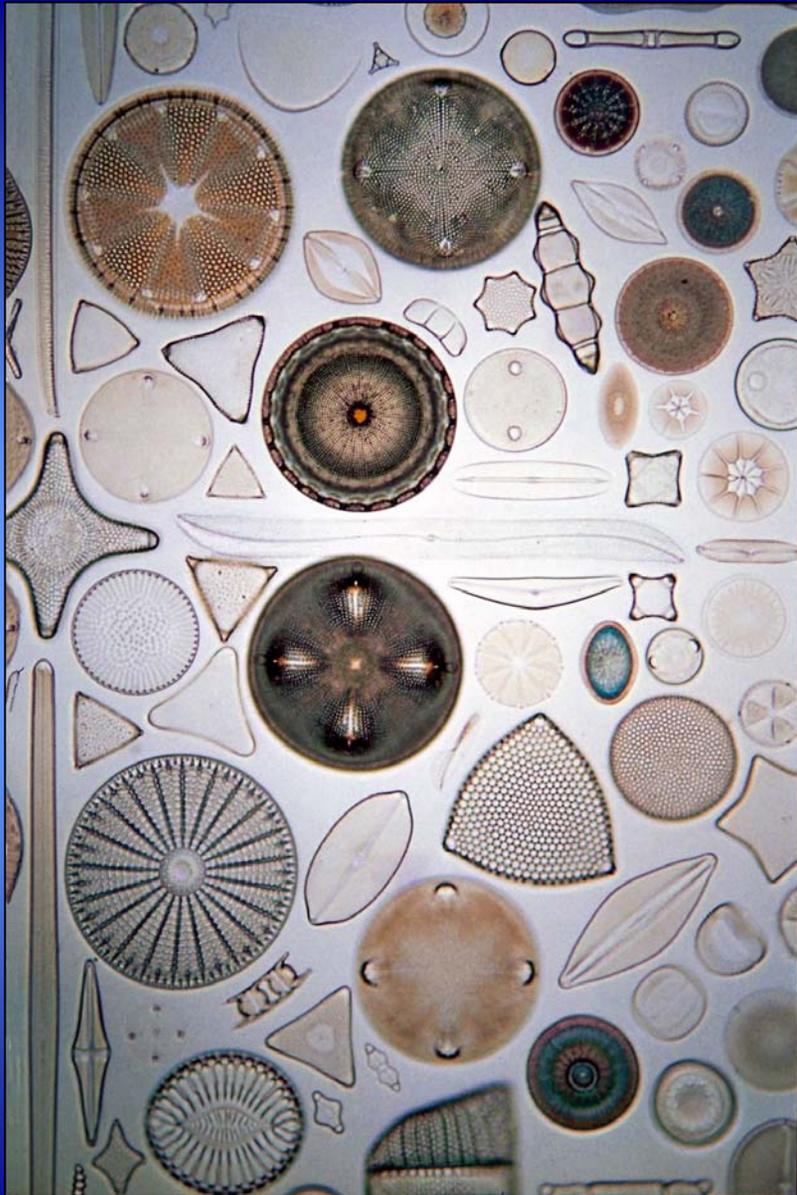


Chrono		Ma	POLARITY CHRONS	POLARITY	Polarity Subchrons and Cryptochrons				
SYSTEM	Stages								
PLEISTOCENE	M. Pleistocene	1	BRUNHES (C1n)	Black					
						Early Pleistocene	Saemern, Emilian, Sicilian	Jaramillo (C1r.1n)	Cobb Mountain (C1r.2r.1n)
						Late Pliocene	Gelasian	Olduvai (C2n)	Reunion (C2r.1n)
PLIOCENE	Middle Pliocene	3	GAUSS (C2An)	Black	Kaena (C2An.1r)				
						Early Pliocene	Zanclean	Mammoth (C2An.2r)	
								4	5
Early Pliocene	Zanclean	4	MATUYAMA (C1r)	White					
						5			
Early Pliocene	Zanclean	5	GILBERT (C3n)	Black	Cochiti (C3n.1n)				
						C3n	Nunivak (C3n.2n)		
							Sidufjall (C3n.3n)		
							Thvera (C3n.4n)		
C3r									



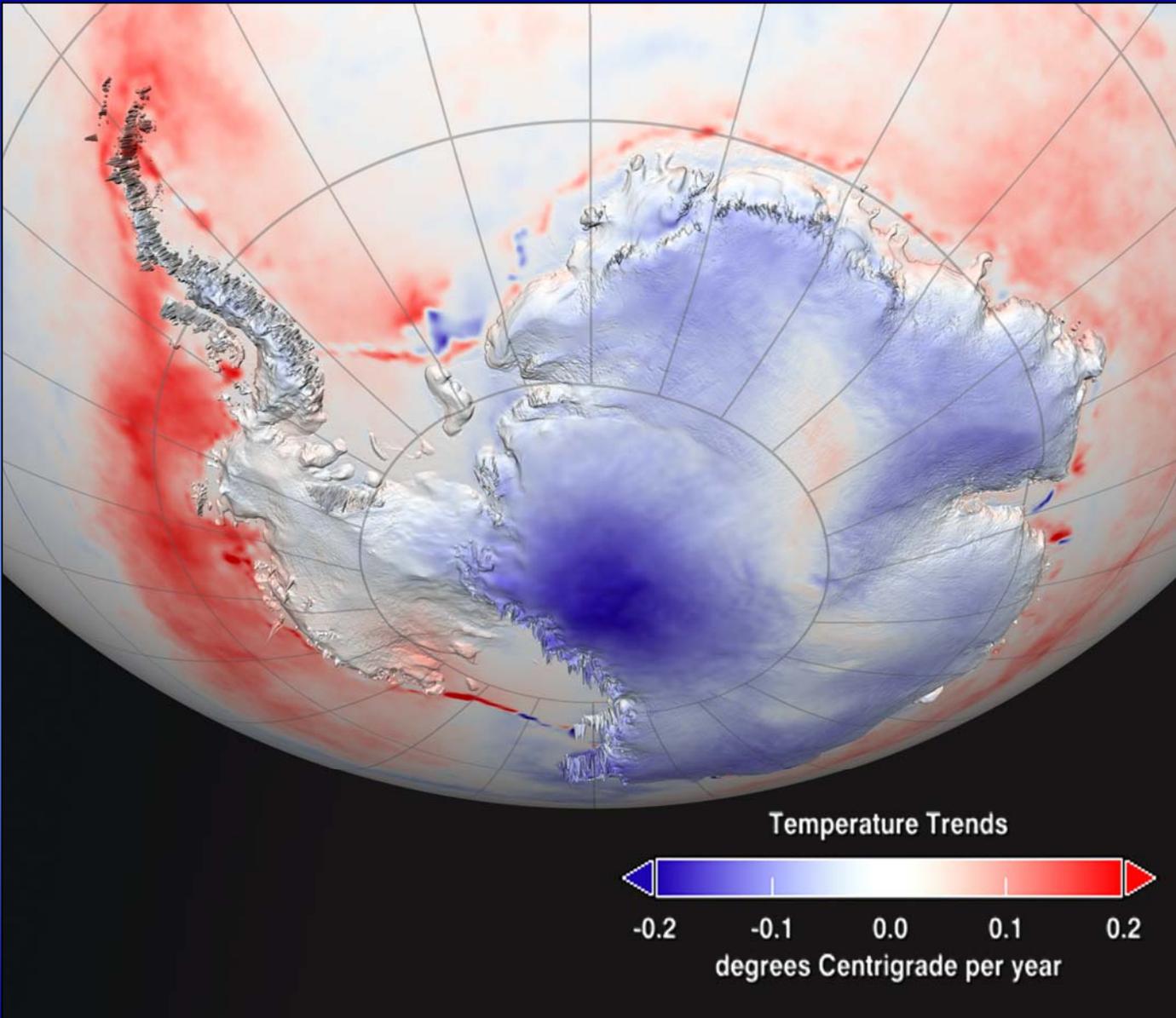


Diatomeen – Kieselalgen als Alters- und Klimaanzeiger





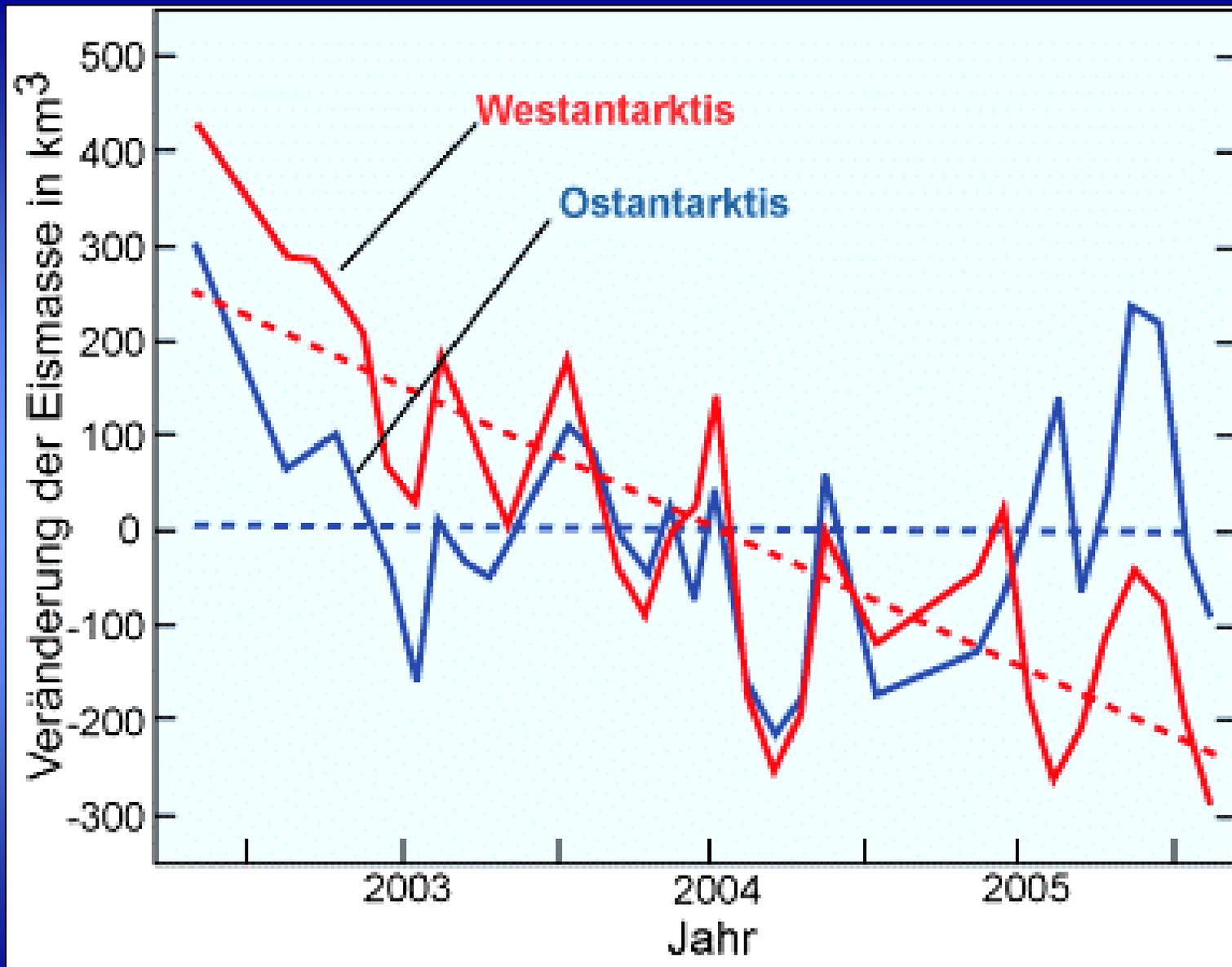
Klimatrends der Antarktis in den letzten 20 Jahren



http://svs.gsfc.nasa.gov/vis/a000000/a003100/a003188/aheat_printres.0005.tif



Veränderung der antarktischen Eismassen von 2002 bis 2006



<http://hamburger-bildungsserver.de/welcome.phtml?unten=/klima/klimafolgen/eis/antarktis.html>



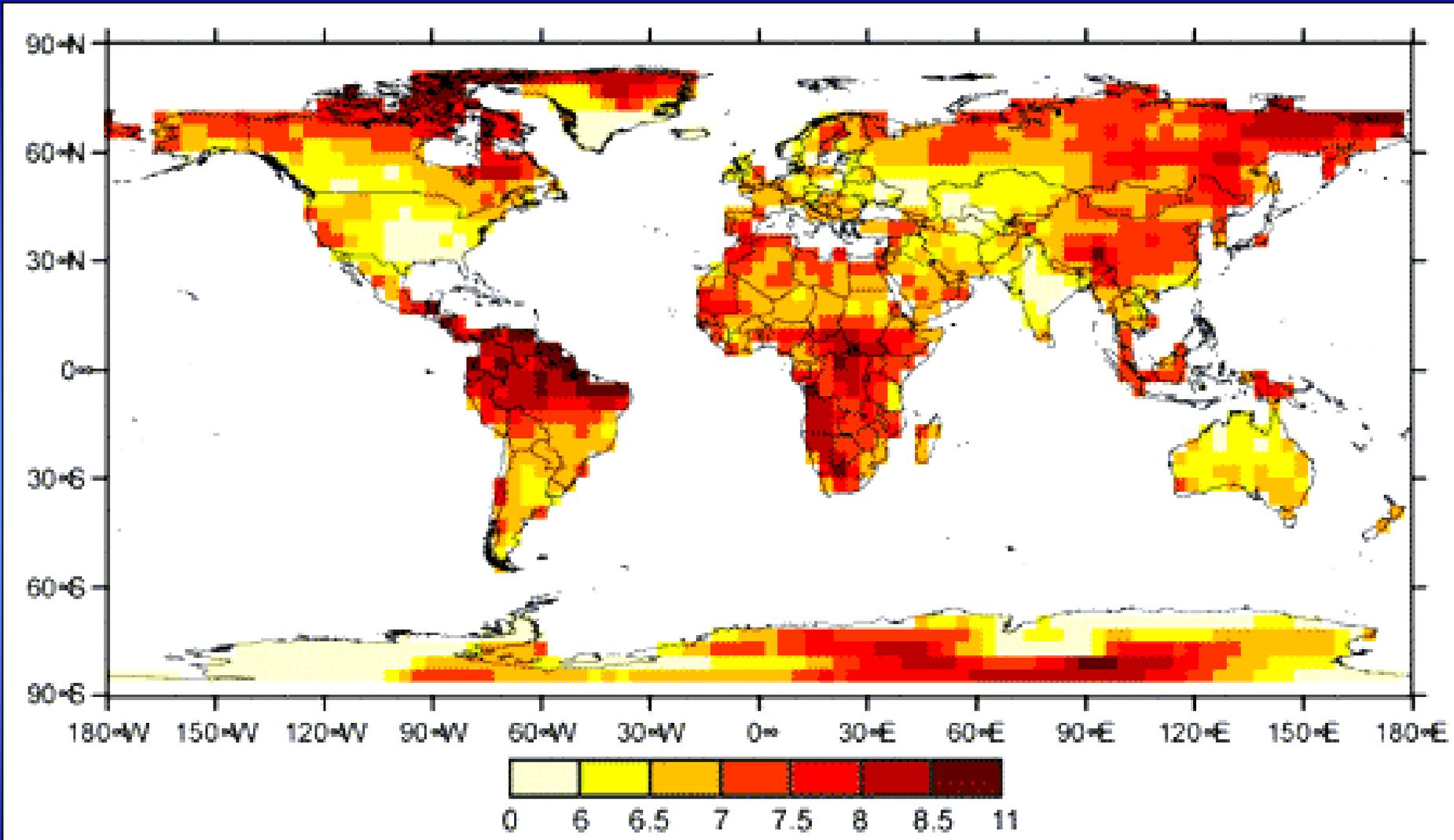
Schmelzen des Ross-Eisschelfs in den letzten 20.000 Jahren



<http://svs.gsfc.nasa.gov/>



Klima im Wandel – regionale Folgen globaler Prozesse



<http://www.faz.net>







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3301

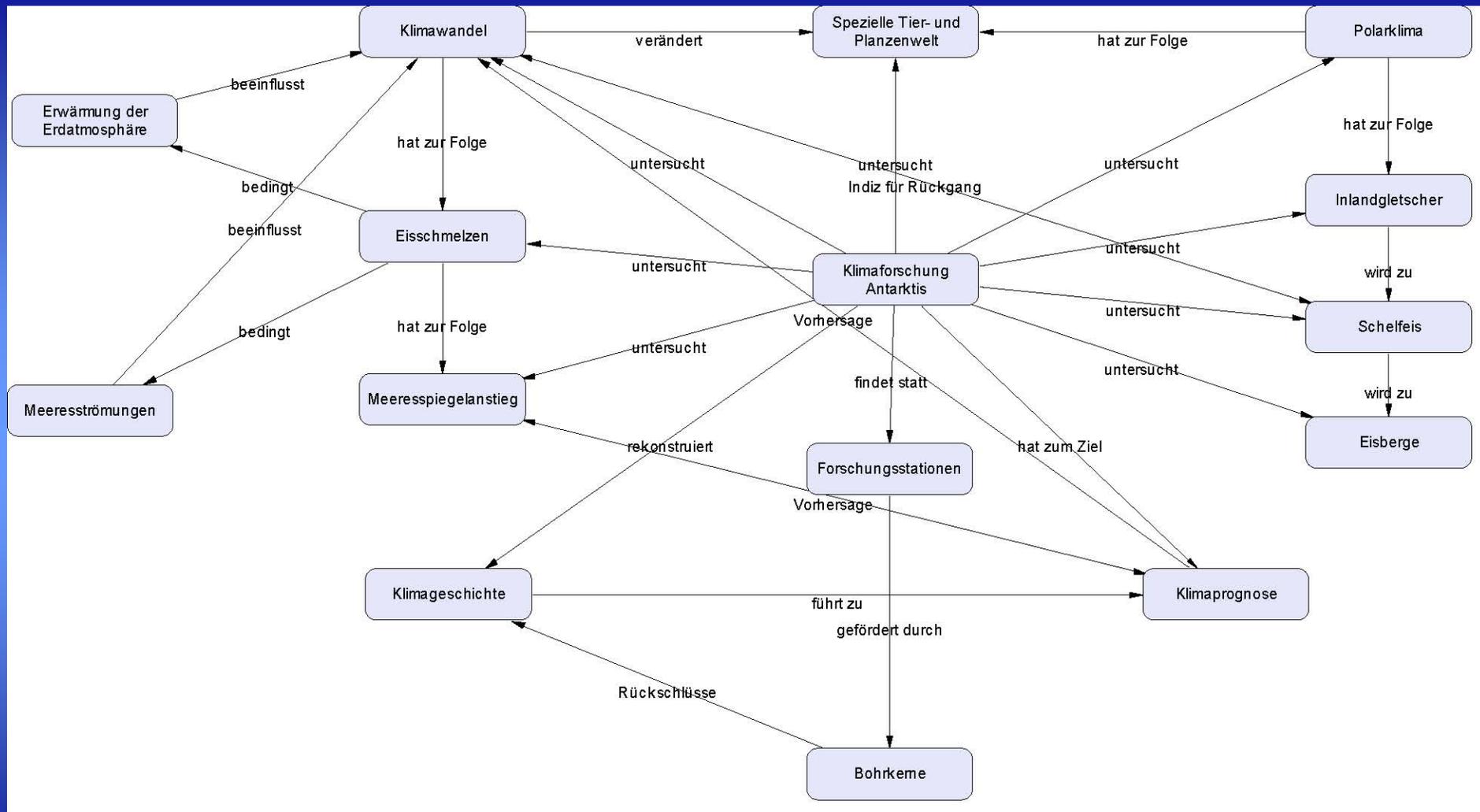


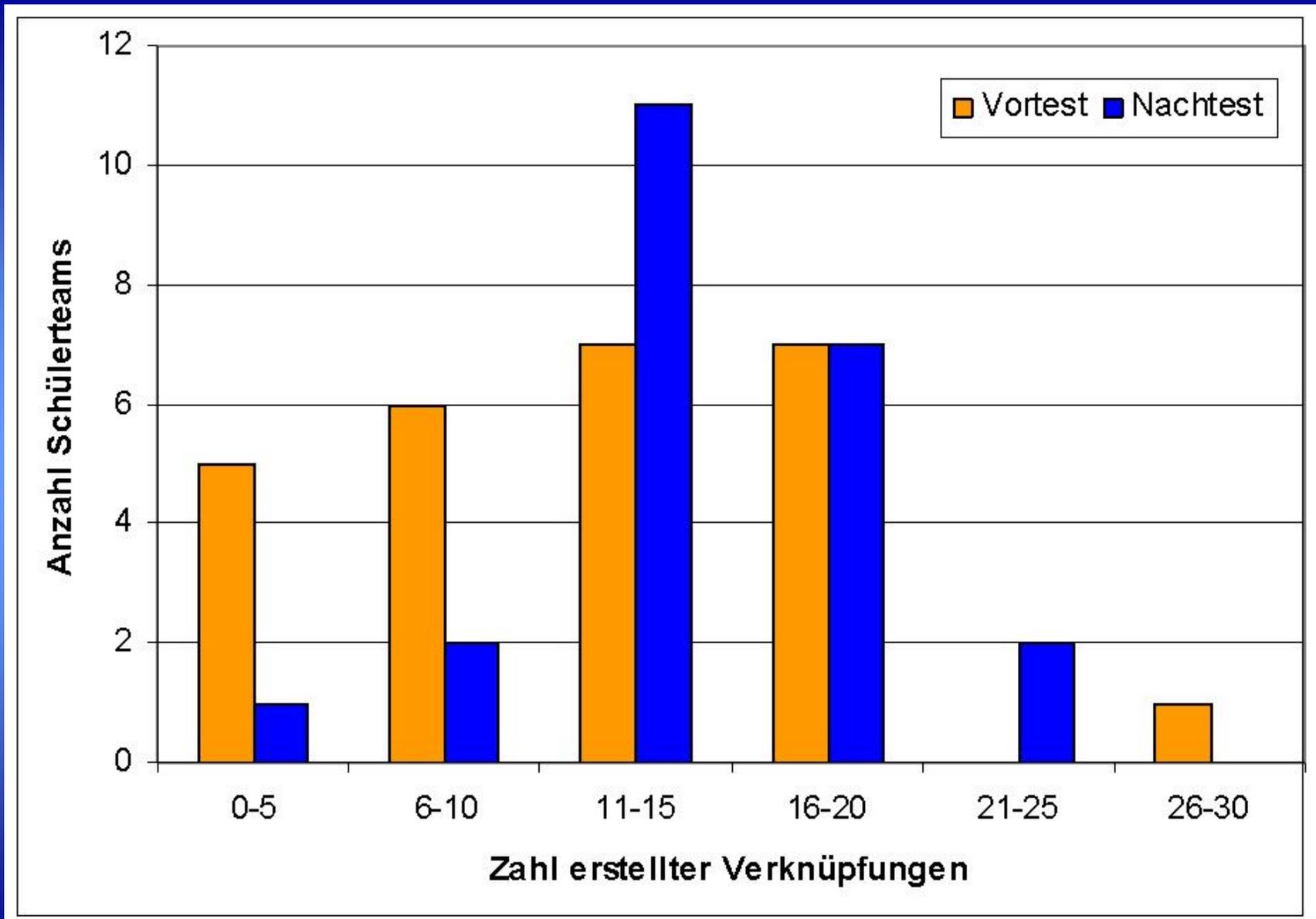






Sind Lernerfolge messbar? – Concept Maps zur Polarforschung





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... ich habe fertig – VIELEN DANK!!!

Prof. Dr. Alexander Siegmund
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Heidelberg, 17. Juli 2007