

# JÖRG M. SCHÄFER

LAMONT-DOHERTY EARTH OBSERVATORY • THE EARTH INSTITUTE AT COLUMBIA UNIVERSITY  
ROUTE 9W • PALISADES, NY 10964 • USA  
PHONE: 1 845 365 8756 • FAX: 1 845 365 8155 • EMAIL: schaefer@ldeo.columbia.edu

## Personal

---

Born 1968 in Stuttgart, Germany  
Language: german, english, french

Citizenship: German

90 Morningside Drive • Apt. 2G  
New York • NY-10027

## Education

*Lamont Research Professor*

Lamont-Doherty Earth Observatory of Columbia University

*Adjunct Professor*

Dept. of Earth and Environmental Sciences, Columbia University

*Doherty Associate Research Scientist (September 2003-November 2008)*

Lamont-Doherty Earth Observatory of Columbia University

*Postdoctoral Research Fellow (January 2001-August 2003)*

Lamont-Doherty Earth Observatory of Columbia University

*Postdoctoral Researcher (February 2000-October 2000)*

Dept. of Earth Sciences, Swiss Federal Institute of Technology (ETH) Zürich

*Ph.D. (March 1996-June 2000)*

Swiss Federal Institute of Technology (ETH) Zürich.

Dissertation: Reconstruction of landscape evolution and continental paleoglaciations using in-situ cosmogenic nuclides.

Jointly supervised by Profs. R. Wieler, C. Schlüchter, A.N. Halliday at the Department of Earth Sciences, ETH Zürich

*Masters Degree ("Diplom") in Physics (1995)*

Institute of Environmental Physics, University of Heidelberg, Germany.

Reconstruction of bio-geochemical trace substance cycles from an alpine ice-core. Supervisors: Dr. D. Wagenbach, Prof. U. Platt.

*Exchange student • ERASMUS program (1991-92)*

Department of Physics, University of Aix- Marseille III, France.

*Bachelor of Physics (1989-91)*

Department of Physics, University of Tübingen, Germany

## Research Interests

---

Climate, Glaciers and Society; Quaternary Geology; Ice Ages; Climate Change and Earth Surface Processes on all time-scales; Geochemistry, Glacial Sedimentology, Mass Spectrometry;

In particular: Climate and Ice; Global Temperature reconstruction over the last glacial cycle using mountain glaciers; Formation and Stability of Ice Sheets;

## Experimental techniques used

---

Noble Gas Mass-Spectrometry, Accelerator Mass-Spectrometry, Inductively Coupled Plasma Mass-Spectrometry, Ion-Chromatography.

## Grants funded (or 'recommended for funding')

---

Schaefer, J.M., Winckler, G., and Steig, E (UW Seattle). Collaborative Research: A high-sensitivity  $^{10}\text{Be}$  and extraterrestrial  $^3\text{He}$  record from an ice core at South Pole; NSF-OPP; \$ 700,100 (CU/Lamont budget; total budget 1.0 M\$; Lead PI: Joerg Schaefer).

Young, N. and Schaefer, J.M., Collaborative Research: Ice sheet sensitivity in a changing Arctic system - using geologic data and modeling to test the stable Greenland Ice Sheet hypothesis. NSF-ARcSS; \$ 751,359 (CU/Lamont budget; total budget 2.9 M\$, Lead PI: Jason Briner, SUNY Buffalo).

Kaplan, M., Schaefer, J.M., Winckler, G.; Collaborative Research: Multidisciplinary analysis of Antarctic blue ice moraine formation and their potential as climate archives over multiple glacial cycles; NSF-OPP; \$ 294,861.

Young, N., Schaefer, J.M., (2014); Collaborative Research: Testing Arctic Ice Sheet Sensitivity to Abrupt Climate Change; NSF-PLR; \$ 367,658;

Kaplan, M., Schaefer, J.M. (2013); Collaborative Research: Testing the Orbital Theory of Ice Ages Using Glacial Deposits in Southern South America and Numerical Modeling; NSF-BCS; \$ 216,000;

Schaefer, J.M., Gentine, P., Rupper, S.: Cross-Cutting Initiative, EI: 'Glacier Change and Energy-Test case Rhone River Catchment'; \$ 30,000.

Schaefer, J.M., Winckler, G. (2013); Collaborative Research: West Antarctic Ice Sheet stability, alpine glaciation, and climate variability: a terrestrial perspective from cosmogenic-nuclide dating in McMurdo Sound; NSF OPP; \$ 349,997;

Schaefer, J.M., Cook, E., Rupper, S (University of Utah): (2013): Collaborative Research: Climate and Glacier change in Bhutan: the last millennia, present and future; \$ 333,089; NSF Global Change.

Kaplan, M., Schaefer, J.M., Winckler, G., (2012), Terrestrial Geological Context for Glacier Change in the Northeast Antarctica Peninsula; NSF-OPP, \$ 424,700.

- Schaefer, J.M., Cook, E.: EAGER: Collaborative Research: Climate and Glacier change in Bhutan: the last millennia, present and future; \$ 82,801; NSF-EAR.
- Kaplan, M., Schaefer, J.M., Denton, G., (2011) Communicating Research to Public Audiences: Shrinking Glaciers: A Chronology of Climate Change; NSF-Division of Research on Learning in Formal and Informal Settings; \$ 109,440;
- Schaefer, J.M., Winckler, G. (2011) Collaborative Research: Multi-nuclide approach to systematically evaluate the scatter in surface exposure ages in Antarctica and to develop consistent alpine glacier chronologies; NSF-OPP, \$ 320,832.
- Schaefer, J.M., Winckler, G. (2010), Collaborative Research: Timing and structure of the last glacial maximum and termination in southern Peru: Implications for the role of the tropics in climate change; NSF-EAR, \$ 199,139.
- Schaefer, J.M. (2010), (Lead PI: Charles Langmuir, Harvard University). Collaborative Research: Constraining Arc Processes through Comprehensive Geochemical Study of the Chilean Southern Volcanic Zone, NSF-EAR, \$ 143,479.
- Schaefer, J.M., (2009), 'Glacier-Climate-Water' Mini-Conference at Lamont, November 11-13, 2009; NSF-EAR, \$ 17,950.
- Schaefer, J.M. (2009), Quantifying subglacial erosion rates and exploring proglacial bedrock as climate archive by in-situ cosmogenic C-14 and Be-10 techniques; NSF-EAR, \$ 187,029;
- Kaplan, M., Schaefer, J.M., Denton, G.H., Collaborative Research: A Southern Hemispheric Perspective on Holocene Climate Variability Based on Mountain Glacial Chronologies; NSF-EAR, \$ 260,834;
- Schaefer, J.M., CRONUS-Supplement – PhD student Brent Goehring (2009), NSF-EAR, \$ 86,500.
- Schaefer, J.M., Kaplan, M., Denton, G.H., Finkel, R.C. (2008), Collaborative Research: The Pulse of Holocene Glaciations in New Zealand's Southern Alps. NSF P2C2-EAR, \$ 290,786.
- Schaefer, J.M., (2008), SGER: Quantifying subglacial erosion rates and Timing of Holocene warm periods by in-situ  $^{14}\text{C}/^{10}\text{Be}$  – A proof of concept. NSF GEOMORPHOLOGY AND LANDUSE DYNAMICS; \$ 40,000.
- Kaplan, M., Schaefer, J.M., Denton, G.H., (2008), Collaborative Research: A Southern Mid-Latitude Perspective on the Last Ice Age Based on Be-10 Moraine Chronologies. NSF EAR; \$ 184,000.
- Schlosser, P., Anderson, R. F., Broecker, W. S., Gordon, A., Kaplan, A., Schaefer, J., Seager, R., Ting, M., Cane, M., Cook, E., deMenocal, P., Denton, G., 2008, Abrupt Climate Change in a Warming World: Lessons from Holocene Paleo and Modern Instrumental Records and Model Simulations: NOAA-ARCHES grant # NA08OAR4320912, M\$ 2,0 total, Schaefer and Denton share: \$ 320,000.
- Steckler M., Schaefer J. M., Stark C., Malinverno A., and Seeber L. (2006) Collaborative Research: Uplift and faulting at the transition from

- subduction to collision - a field and modeling study of the Calabrian Arc. NSF CONTINENTAL DYNAMICS, M\$ 2.5.
- Winckler G. and Schaefer J. M. (2005) Direct dating of old ice by extraterrestrial  $^3\text{He}$  and  $^{10}\text{Be}$  - a proof of concept. NSF ANTARCTIC GEOLOGY & GEOPHYSICS, \$ 74,500.
- Schaefer J. M., Commins D., and Anders M. (2004) Quantification of Extensional Fault Processes and Landscape Response using Surface Exposure Dating. NSF TECTONICS, \$ 188,128.
- Schaefer J. M. (2004) Collaborative Research: Age, Origin and Climatic Significance of Buried Ice in the Western Dry Valleys, Antarctica (lead PI. David Marchant, Boston University). NSF ANTARCTIC GEOLOGY & GEOPHYSICS, \$ 111,246.
- Schaefer J. M. and Schlosser P. (2004) Collaborative Research: A Proposal for the Cosmic-Ray prOduced NUclide Systematics on Earth (CRONUS-Earth) Project (lead PI: Fred Phillips, New Mexico Tech). NSF EARTH SCIENCES, \$ 529,764.
- Schaefer J. M. (2004) Retention grant to start-up a Surface Exposure Dating Laboratory at L-DEO. LAMONT-Doherty, \$ 190,000.
- Schaefer J. M. (2004) Retention grant for a 2 year postdoctoral research position and a 1 year technical assistant position in the Surface Exposure Dating group at L-DEO. LAMONT-DOHERTY EARTH OBSERVATORY, approx. \$ 150,000.
- Schaefer J.M., (2006) Reconstructing paleoglaciations in New Zealand, Greenland and North America, THE COMER SCIENCE AND EDUCATION FOUNDATION, \$ 299,800.
- Schaefer J. M. and Schlosser P. (2004) The final implementation step of the L-DEO Surface Exposure Dating Laboratory. THE COMER SCIENCE AND EDUCATION FOUNDATION, \$ 131,800.
- Broecker W. S., Denton G. H., and Schaefer J. M. (2004) Greenland Younger Dryas Fellowship. THE COMER SCIENCE AND EDUCATION FOUNDATION, \$ 50,550.
- Broecker W. S. and Schaefer J. M. (2002) Tracing Ice Ages with cosmogenic nuclides. THE COMER SCIENCE AND EDUCATION FOUNDATION , \$ 300,000.
- Goehring, B., Schaefer, J.M. (2006), Cosmogenic dating of late glacial and Holocene moraines in the Icicle Creek/Enchantment Lakes region, Washington. L-DEO CLIMATE CENTER, \$ 6,000.
- Schaefer, J. M., Schluechter, C., and Lifton, N. A. (2005). Reconstruction of Holocene warm periods by cosmogenic nuclide burial dating using  $^{10}\text{Be}$  and  $^{14}\text{C}$ . L-DEO CLIMATE CENTER, \$ 5,500.
- Kelly, M. A., Barker, S., Schaefer, J. M., and Broecker, W. S. (2005). Equilibrium line altitudes of late-glacial and Holocene ice extents near the Cordillera Vilcanota and Quelccaya Ice Cap, Peru. L-DEO CLIMATE CENTER , \$ 4,000.

- Commins D. C. and Schaefer J. M. (2004) How fast does climate drive erosion? - Constraining Rates of Colorado Plateau Erosion using Surface Exposure Dating. L-DEO CLIMATE CENTER, \$ 6000.
- Rinterknecht V. R., Schaefer J. M., Seager R., and Greene A. M. (2004) Comparing climate changes in the tropics and mid/high latitudes L-DEO CLIMATE CENTER, \$ 6000.
- Schaefer J. M. (2003) Climate changes recorded in glacial surfaces on Long Islands and Manhattan. L-DEO CLIMATE CENTER, \$ 5,500.
- Schaefer J. M. and Hemming S. (2002) Optically Stimulated Luminescence Dating of Mono Lake Sediments - A complementary dating method to Surface Exposure Dating. L-DEO CLIMATE CENTER, \$ 6,000.
- Schaefer J. M., Hemming S. R., and Winckler G. (2002) Heinrich Events recorded in Mono Lake moraines? Refining the glacial chronology by new Surface Exposure dates; Field trip to Mono Lake, California. L-DEO CLIMATE CENTER, \$ 6,000.
- Schlosser P., Hemming S., Schaefer J. M., and Stute M. (2001) Surface Exposure Dating using cosmogenically produced  $^{21}\text{Ne}$ . L-DEO INVESTMENT FUND, \$ 70,000.

## Outreach and Teaching

---

- Director of the Cosmogenic Dating Laboratory and Research Group at L-DEO, and head of the “Glaciers and Climate” Group. This facility consisting of several different laboratories to analyze cosmogenic radionuclides ( $^{10}\text{Be}$ ,  $^{26}\text{Al}$ ,  $^{36}\text{Cl}$ ,  $^{53}\text{Mn}$ , and  $^{14}\text{C}$ ) and noble gases (in collaboration with PI Gisela Winckler:  $^3\text{He}$  in routine mode,  $^{21}\text{Ne}$  in exploration mode) is the backbone of an forefront research group (including LRP Kaplan, Assist LRP Young, Assist. Prof Aaron Putnam/U Maine, and postdoctoral research scientist Lamp, Staff Associate Schwartz, PhD (Josh Maurer, Carly Peltier, Max Cunningham) and CU undergraduate students) and has impact on a wide variety of disciplines within L-DEO and the outside community for studies in ice-sheet stability and sea level rise, paleoclimate, climate and society, quaternary geology, natural hazards, geomorphology, tectonics, volcanology etc.
- Teaching at the Department of Earth and Environmental Sciences, Columbia University, including ‘TERRESTRIAL PALEOCLIMATE’ (developed this new course together with Wallace Broecker), key #20091EESC4330W001; 2016, 2014; 2012, 2010; and the ‘Environmental Science Senior Thesis Seimar’ (directed by M. Stute, [EESCX3801 001 2016 1](#));
- Adj. Professor at University of Maine and head of the Lamont-University of Maine student exchange program, established since 2005 (together with George Denton, University of Maine) and Lamont-supervisor of several generations of Masters and PhD students by George Denton and now Aaron Putnam.
- Member of the DEES PhD admissions committee.

- Lead PI of NSF funded collaboration with the American Museum of Natural History, New York, producing a 'AMNH Scientific Bulletin' about our 'glaciers and climate' research program (the AMNH Scientific Bulletins are shown in the Great Hall of AMNH, prominently placed on the AMNH webpage and typically reach more than a million viewers).
- Hosting organizer of the first 'Bhutan Symposia' at Lamont and Columbia University; June 11 & 12, 2013 and July 1, 2014.
- PI of the 'Bhutan Climate and Society' initiative, an integrated research and education program lead by Ed Cook, between Lamont/EI and the Ugyen Wangchuck Institute for Conservation and Environment, Bhutan, including two visits to Bhutan, lectures in Bhutan, hosting of bhutanese colleagues at Lamont and lead of a pending NSF proposal.
- Host of Mary Tharp Fellow Joanne Johnson, British Antarctic Survey, January – April 2011.
- Conveiner of AGU session PP53E. Present and Holocene Changes in the Southern Hemisphere Climate; AGU Fall Meeting 2013, San Francisco.
- Conveiner of the INQUA Session # 92 'Inter-hemispheric climate perspectives from high-precision glacier records; INQUA 2011, July 21-27, Berne, Switzerland.
- Excursion-Leader of INQUA post-congress excursion 'Post-03, "Last Glacial Maximum - Lateglacial - Neoglacial / Western Swiss Transect", July 28 - 31, 2011.
- Host and organizer of the NOAA and Lamont Climate Center sponsored Mini-Conference 'The geological record of West Antarctic Ice Sheet Stability', Lamont, April 22-24, 2011.
- Host and organizer of the NSF and NOAA sponsored 'Climate-Glacier-Water' workshop at Lamont, November 2009;
- Co-coordinator of the NOAA-ACCWW mini-conference, Lamont, July 2009.
- Co-conveiner of AGU session PP52: Decadal- to Century-Scale Climate Variability Over the Past Millennium: Evidence From Non-Tree-Ring Archives; AGU Fall meeting 2009.
- Member of the scientific program committee for the Goldschmidt Conference 2008, Vancouver, Canada.
- Co-conveiner of AGU session PP32A: Terrestrial Records of Climate Change: Contributions From in Situ Cosmogenic Nuclides; AGU Fall meeting 2007.
- Organization of the Mini-Conference that initiated the CRONUS initiative (**C**osmogenically **P**roduced **N**uclide **S**ystematics on Earth; a large-scale US/EU initiative to improve the physical understanding underlying the production or cosmogenic nuclides in near-surface rocks).; March 17-19, 2002, Lamont-Doherty Earth Observatory;
- Member of the CRONUS-Earth steering committee;
- Co-Chair of the "Ice Age Terminations and other rapid climate changes" session, 12th Annual Goldschmidt Conference, Davos, Switzerland, 2002.
- Co-Coordinator of the Joint Chinese/Swiss/US project 'Paleoglaciations of the Tibetan Plateau', including organization of bilateral science exchange, organization of the expedition 2001 to Nyalam County, South Tibet.

- Co-organizer and lecturer of the summerschool within the NSF funded project “Uplift and faulting at the transition from subduction to collision - a field and modeling study of the Calabrian Arc”, Sept 2008.

## Developing Others

---

- Nomination (successful) of postdoc Nicolas Young for the Blavatnik Foundation Young Scientist award 2015, with an allocated cash prize of \$ 30,000: Nicolas is the 2015 winner in the Engineering and Natural Science Competition.
- Mentoring of Josh Maurer during his NASA PhD fellowship proposal, granted.
- Coordinator of the University of Maine – Lamont student exchange program (with George Denton, University of Maine); List of students to date: Peter Strand (PhD), Courtney King (PhD); Aaron Putnam (PhD); Kathryn Ladig (Masters); Toby Koffman (PhD); Alice Daughy (Masters); Sam Kelley (Masters); Peter Strand (Masters); Jeniffer Lennon (Masters); Colin Dowey (Masters).
- Co-coordinator of the Lamont – South America student exchange program (lead by Mike Kaplan, Jorge Strelin - Argentina and Esteban Sagredo – Chile; List of students to date: Scott Rehnhoud (Catholic University, Santiago, Chile; PhD); Mateo Martini (University of Cordoba, Argentina, PhD), Paola Aroya (Catholic University, Santiago, Chile).
- Sponsor and host of ‘Mary Tharp Fellow’ Dr Joanne Johnson, British Antarctic Survey, 2011; resulting in a 2014 Science paper.
- Sponsor, host and co-supervisor of PhD student Hella Wittmeier, University of Bergen, Norway.
- Sponsoring supervisor of various postdoctoral research scientist at L-DEO: (i) Vincent Rinterknecht (March 2001 – August 2003; now lecturer at the University of St. Andrews, Scotland); (ii) Deirdre Commins (August 2003 – June 2005; now at Shell); (iii) Meredith Kelly (July 2004 – now Assistant Professor at Dartmouth College); (iv) Michael Kaplan (January 2006 – today, now Doherty Associate (Senior) Research Professor); (v) Aaron Putnam (now Doherty Assistant Research Professor); (vi) Nicolas Young, Lamont Postdoctoral Research Fellow; (vii) Ricardo Ramalho, Lamont Postdoctoral Research Scientist.
- Advisor of the following PhD students: Advisor or record of Josh Maurer (Sept 2015); Brent Goehring (September 2006 – December 2010; now Assistant Professor at Tulasne University); Co-supervisor of Margaret Reitz (since September 2007, Columbia University), Aaron Putnam (University of Maine, January 2006 – Sept 2011, now Lamont Assistant Research Professor), Toby Koffman (University of Maine, since January 2011), Peter Strand (University of Maine; since April 2013); Hella Wittmeier (University of Bergen, Norway; since January 2013); Peter Oberholzer (January 2000 – July 2004, ETH Zuerich, Switzerland);

- Advisor of the following Masters students: Colin Dowey (University of Maine, 2015); Alice Doughty (University of Maine, 2009; now PhD student at Victoria University, Wellington, NZ), Sam Kelly (University of Maine, 2010, now PhD student at SUNY Buffalo); Kathryn Ladig (University of Maine, 2010).
- Supervision of female undergraduate students Claire Lackner, Ashley Edwards, Rebecca Steinberg, Mikah McCabe (all Columbia University); mentoring female postdoctoral research scientists Meredith Kelly, Deirdre Commins, and female L-DEO staff associate Roseanne Schwartz;

## Awards and External Visibility

---

- Senior Fellow of the Center for Climate and Life, Columbia University (<http://climateandlife.columbia.edu/science/climate-and-life-fellows/>).
- Adjunct Professor at the Climate Change Institute and the School of Earth and Climate Sciences Seminar, University of Maine;
- Visiting Professor at the University of Berne, Switzerland, Institute for Environmental Physics, and Visiting Scientist Awardee of the Hans-Sigrist Foundation at the University of Berne; June 28-July 30, 2013.
- 'Excellence in Mentoring' Award, Lamont-Doherty Earth Observatory, September 2012.
- Medal of ETH Zürich awarding PhD thesis, 2002
- Promotion to 'Lamont Research Professor' and 'Adj. Professor, Dept. Earth and Environmental Sciences, Columbia University', February 2013;
- Promotion to 'Lamont Associate Research Professor', July 2010;
- Early Promotion to 'Doherty Research Scientist', November 2008;
- Promotion to Adjunct Associate Professor at the Department of Earth and Environmental Sciences (full faculty), Columbia University, 2008;
- Offer from University of Bergen, Norway, Associate Professor (tenured) in Quaternary Geology and Paleoclimatology, November 2007.
- Offer from Imperial College, London, UK, senior lectureship position ('Grantham lecturer') at the Grantham Institute of Climate Change, 2007.
- Postdoctoral Fellowship in the Earth, Environmental, and Ocean Sciences of the Lamont-Doherty Earth Observatory 2001-2003.
- Member of the Emmy Noether-program of the German Science Foundation (DFG) 2001-2004
- Referee for: Science, Nature, Nature Geoscience, Earth and Planetary Science Letters, Geochimica et Cosmochimica Acta, Quaternary Science Reviews, Quaternary Geochronology, Terra Nova, G-cubed;



## Media Features

---

- 'Greenland Melted in the Recent Geologic Past', Columbia Earth Institute Press (<http://www.earth.columbia.edu/articles/view/3350>).
- 'Shrinking Glaciers-A chronology of Climate Change'; Scientific Bulletin of the American Museum of Natural History about the 'Glacier-Climate' project in New Zealand (<http://www.amnh.org/explore/science-bulletins/%28category%29/24949>); released September 2012, shown in the AMNH and online.
- Feature in the Emmy award-winning scientific documentary "How the Earth was made", produced by Pioneer TV, broadcasted on History Channel since December 2007 ([http://en.wikipedia.org/wiki/How\\_the\\_Earth\\_Was\\_Made](http://en.wikipedia.org/wiki/How_the_Earth_Was_Made)).
- Feature in Scientific American, September 24, 2009 (<http://www.scientificamerican.com/article.cfm?id=cosmogenic-dating-glaciers-rocks-moraine-climate-change>);
- Feature in the New York Times, September 14, 2005, covering our investigations of ice ages in New York City (<http://www.nytimes.com/2005/09/14/nyregion/14glacier.html>)
- Feature in the scientific documentary "The good Earth" broadcasted in Japan, January 1, 2006

## Field experience

---

- Coordinator of the annual 'Glacier, Climate, Water and Energy' field campaign, Swiss and Austrian Alps; 2013-2017, including sampling expeditions at Rhone Glacier, Nufenen Pass, Julier Pass, Steingletscher -all Switzerland' and the Silvretta-Austrian Alps.
- Excursion-Leader of INQUA post-congress excursion 'Post-03, "Last Glacial Maximum - Lateglacial - Neoglacial / Western Swiss Transect", July 28 - 31, 2011.
- Coordinator of the quaternary geology program within the 'climate-glaciers-society' initiative in Bhutan, October 2010 and November 2011.
- Coordinator of the chronology section of the quaternary geology field campaigns in New Zealand's Southern Alps, annually since 2001.
- Co-coordinator of the sedimentology/stratigraphy field expeditions to Calabria L-DEO/INGV (Rome, Italy), September 2005. 2006.
- Co-coordinator of the ETH Zürich/University of Berne expeditions to the Tibetan Plateau 1998 (Litang County, East Tibet), 1999 (Central Tibet); coordinator of the L-DEO expedition 2001 (Nyalam, Southern Tibet).
- Coordinator of various sampling campaigns in the New York area.
- Member of various field-campaigns in the European Alps, 2002, 2005, since 2009 annually.
- Coordinator of the 1995 ice core drilling campaign of the University of Heidelberg, Colle Gnifetti (4550 m), Monte Rosa, Swiss Alps.

## Recent Invited Talks

---

- AGU Fall Meeting 2015: 'Ice-free Greenland during the mid-Pleistocene?' invited talk in Session GC14C-05 'Global Eyes on the New Arctic: Exploring the Trajectory Toward a New State and Responding to Rapid Change'; December 14, 2015.
- Climate Change Institute and School of Earth and Climate Sciences Seminar, University of Maine, September 30, 2015.
- International Glacier Symposium, UWICE Bhutan 'Glacier Change in Bhutan and the monsoonal Himalayas -Lessons from the last millennium'; UWICE, Bumthang, Bhutan, April 16-18, 2015.
- Colloquium ETH Zürich, celebrating the 65th birthday and retirement of Prof. Rainer Wieler; October 10, 2014.
- Colloquium at the Department of Geology, SUNY Buffalo, April 10, 2014.
- Earth Institute Cross-Cutting Initiative Symposium; March 3, 2014.
- Colloquium at the Institute of Environmental Physics, University of Berne, Switzerland, August 13, 2013.
- Colloquium at CEREGE, Aix-en-Provence (invited by Eduard Bard), France, June 20, 2013.
- Keynote Address at the celebration for the 25th birthday of the Center for Accelerator Mass Spectrometry at the Lawrence Livermore National Laboratory, Livermore, CA, July 25, 2013.
- Colloquium Earth Institute and the Chinese Academy of Science, Lamont, September 10, 2013.

## Publications (refereed full papers; \*denotes students, postdocs or junior faculty mentored by Schaefer)

---

1. Schaefer, JM, Finkel, RC, Balco, G, Alley, RB, Caffee, M, Briner, JP, Young, NE, Gow, AJ, Schwartz, R. "Greenland was nearly ice-free for extended periods during the Pleistocene." **Nature**. 540. (2016): 252-255; featured in many outlets globally.
2. Swanger, KM, Lamp, JL, Winckler, G, Schaefer, JM, Marchant, DR. "Glacier advance during Marine Isotope Stage 11 in the McMurdo Dry Valleys of Antarctica." **Nature Scientific Reports**. (In Press).
3. Godbout, P-M, Roy, M, Veillette, J, Schaefer, JM. "osmogenic  $^{10}\text{Be}$  dating of raised shorelines constrains the timing of lake levels in the eastern Lake Agassiz-Ojibway basin." **Quaternary Research**. (In Press).
4. Young, NE, Briner, JP, Maurer, J, Schaefer, JM. " $^{10}\text{Be}$  measurements in bedrock constrain erosion beneath the Greenland Ice Sheet margin." **Geophysical Research Letters**. 43. (2016).
5. Bromley, GR, Putnam, AE, Lowell, TV, Hall, BL, Schaefer, JM. "omment on 'Was Scotland deglaciaded during the Younger Dryas?' by Small and Fabel (2016)." **Quaternary Science Reviews**. 152. (2016): 203-206.

6. Bromley, GR, Schaefer, JM, Hall, BL, Rademaker, KM, Putnam, AE, Todd, CE, Hegland, M, Winckler, G, Jackson, MS, Strand, PD. "A cosmogenic <sup>10</sup>Be chronology for the local last glacial maximum and termination in the Cordillera Oriental, southern Peruvian Andes: Implications for the tropical role in global climate." **Quaternary Science Reviews**. 148. (2016): 54-67.
7. Eaves, SR, Mackintosh, AN, Anderson, BM, Doughty, AM, Townsend, DB, Conway, CE, Winckler, G, Schaefer, JM, Leonard, GS, Calvert, AT. "The Last Glacial Maximum in the central North Island, New Zealand: palaeoclimate inferences from glacier modelling." **Climate of the Past**. 12. (2016): 943-960.
8. Kaplan, M, Schaefer, J, Strelin, J, Denton, G, Anderson, R, Vandergoes, M, Finkel, R, Schwartz, R, Travis, S, Garcia, J. "Patagonian and southern South Atlantic view of Holocene climate." **Quaternary Science Reviews**. 141. (2016): 112-125.
9. Maurer, J.\*, Rupper, S., and Schaefer, J. M., published as discussion paper, Quantifying ice loss in the eastern Himalayas since 1974 using declassified spy imagery: **The Cryosphere**.
10. Eaves, S. R., Mackintosh, A. N., Anderson, B. M., Doughty, A. M., Townsend, D. B., Conway, C. E., Winckler, G., Schaefer, J. M., Leonard, G. S., and Calvert, A. T., published as discussion paper, The Last Glacial Maximum in central North Island, New Zealand: palaeoclimate inferences from glacier modelling: **Climate of the Past**.
11. Kaplan, M. R., Schaefer, J. M., Strelin, J. A., Denton, G. H., Anderson, R. F., Vandergoes, M. J., Finkel, R. C., Schwartz, R., Travis, S. G., Garcia, J. L., Martini, M., and Nielsen, S. R., in press, Patagonian and southern South Atlantic view of Holocene climate: **Quaternary Science Reviews**.
12. Schaefer, J. M., Winckler, G., Blard, P.-H., Balco, G., Shuster, D. L., Friedrich, R., Jull, A. T., Wieler, R., and Schluechter, C., 2016, Performance of CRONUS-P-A pyroxene reference material for helium isotope analysis: **Quaternary Geochronology**, v. 31, p. 237-239.
13. Eaves, S. R., Mackintosh, A. N., Winckler, G., Schaefer, J. M., Alloway, B. V., and Townsend, D. B., 2016, A cosmogenic <sup>3</sup>He chronology of late Quaternary glacier fluctuations in North Island, New Zealand (39° S): **Quaternary Science Reviews**, v. 132, p. 40-56.
14. Young, N. E.\*, Schweinsberg, A. D., Briner, J. P., and Schaefer, J. M., 2015b, Glacier maxima in Baffin Bay during the Medieval Warm Period coeval with Norse settlement: **Science Advances**, v. 1, no. 11, p. e1500806.
15. Ramalho, R.S.\*, Winckler, G., Madeira, J., Helffrich, G.R., Hipólito, A., Quartau, R., Adena, K., Schaefer, J.M., **2015**. "Hazard potential of volcanic flank collapses raised by new megatsunami evidence". **Science Advances** 1.: e1500456.
16. Schaefer, J M; Putnam, A E; Denton, G H; Kaplan, M R; Birkel, S; Doughty, A C; Kelley, S; Barrell, D J A; Finkel, R C; Winckler, G; Anderson, R F; Ninneman, U S; Barker, S; Schwartz, R; Andersen, B G; Schluechter, C., **2015**. "The Southern Glacial Maximum 65,000 years ago

- and its Unfinished Termination." **Quaternary Science Reviews**. 114.: 52-60.
17. Seltzer, A.\*; Stute, M., Morgenstern, U., Stewart, M., Schaefer, J., **2015**. Mean annual temperature in New Zealand during the last glacial maximum derived from dissolved noble gases in groundwater. **Earth and Planetary Science Letters** 431, 206-216.
  18. Borchers, B., Marrero, S., Balco, G., Caffee, M., Goehring, B., Lifton, N., Nishiizumi, K., Phillips, F., Schaefer, J., and Stone, J., 2016, Geological calibration of spallation production rates in the CRONUS-Earth project: **Quaternary Geochronology**, v. 31, p. 188-198.
  19. Phillips, F. M., Argento, D. C., Balco, G., Caffee, M. W., Clem, J., Dunai, T. J., Finkel, R., Goehring, B., Gosse, J. C., and Hudson, A. M., 2016a, The CRONUS-Earth project: a synthesis: **Quaternary Geochronology**, v. 31, p. 119-154.
  20. Phillips, F. M., Kelly, M. A., Hudson, A. M., Stone, J. O., Schaefer, J., Marrero, S. M., Fifield, L. K., Finkel, R., and Lowell, T., 2016b, CRONUS-Earth calibration samples from the Huancañé II moraines, Quelccaya Ice Cap, Peru: **Quaternary Geochronology**, v. 31, p. 220-236.
  21. Doughty, A M\*; Schaefer, J M; Putnam, A E; Denton, G H; Kaplan, M R; Barrell, D J A; Andersen, B G; Kelley, S A; Finkel, R C; Schwartz, R. **2015** "Mismatch of glacier extent and summer insolation in Southern Hemisphere mid-latitudes." **Geology**: G36477 1.
  22. Krusic, P J; Cook, E R; Dukpa, D; Putnam, A; Rupper, S; Schaefer, J M., **2015**; "638 years of summer temperature variability over the Bhutanese Himalaya." **Geophysical Research Letters**. doi:101002/2015GL063566.
  23. Bromley, G R M\*; Hall, B L; Thompson, W; Kaplan, M R; Garcia, J L; Schaefer, J M., **2015**; "Late glacial fluctuations of the Laurentide Ice Sheet in the White Mountains of Maine and New Hampshire, USA." **Quaternary Research** 83, 522-530.
  24. Lifton, N; Caffee, M; Finkel, R; Marrero, S; Nishiizumi, K; Phillips, F; Goehring, B; Gosse, J; Stone, J; Schaefer, J M; Theriault, B; Jull, A J T; Fifield, K. **2015**, "In situ cosmogenic nuclide production rate calibration for the CRONUS-Earth project from Lake Bonneville, Utah, shoreline features." **Quaternary Geochronology**. doi:101016/j.quageo201411002.
  25. Phillips, F.M., Argento, D.C., Balco, G., Caffee, M.W., Clem, J., Dunai, T.J., Finkel, R., Goehring, B., Gosse, J.C., Hudson, A.M., Jull, A., Kelly, M., Kurz, M., Lal, D., Lifton, N., Marrero, S., Nishiizumi, K., Reedy, R., Schaefer, J., Stone, J., Swanson, T., Zreda, M., **2015**. The CRONUS-Earth project: a synthesis. **Quaternary Geochronology**, doi:10.1016/j.quageo.2015.1009.1006.
  26. Blard, P H; Balco, G; Burnard, P G; Farley, K A; Fenton, C R; Friedrich, R; Jull, A J T; Niedermann, S; Pik, R; Schaefer, J M; Scott, EM; Shuster, D L; Stuart, F M; Stute, M; Tibari, B; Winckler, G; Zimmermann, L., **2014**, "An inter-laboratory comparison of cosmogenic <sup>3</sup>He and radiogenic <sup>4</sup>He in the CRONUS-P pyroxene standard." **Quaternary Geochronology**. doi:101016/j.quageo201408004.

27. Borchers, B; Marrero, S; Balco, G; Caffee, M; Goehring, B; Lifton, N; Nishiizumi, K; Phillips, F; Schaefer, J M; Stone, J. **2015**; "Geological calibration of spallation production rates in the CRONUS-Earth Project." **Quaternary Geochronology**: doi:10.1016/j.quageo.2015.01.009.
28. Johnson, J.S.\*, Bentley, M., Smith, J.A., Finkel, R.C., Rood, D.H., Gohl, K., Balco, G., Larter, R.D., Schaefer, J.M., **2014**. Rapid Thinning of Pine Island Glacier in the Early Holocene. **Science**, 343(6174): 999-1001.
29. Kelley, S.\*; Kaplan, M R; Schaefer, J M; Andersen, B G; Barrell D J A; Putnam, A E; Denton, G H; Schwartz, R; Finkel, R C; Doughty, A M. **2014**; "High-precision  $^{10}\text{Be}$  chronology of moraines in the Southern Alps indicates synchronous cooling in Antarctica and New Zealand 42,000 years ago." **Earth and Planetary Science Letters**. 405: 194-206.
30. Bromley, G.R.M.\*, Winckler, G., Schaefer, J.M., Kaplan, M.R., Licht, K.J., Hall, B.L., 2014. Pyroxene separation by HF leaching and its impact on helium surface-exposure dating. **Quaternary Geochronology** 23, 1-8.
31. Bromley, G.R.M.\*, Putnam, A.E., Rademaker, K.M., Lowell, T.V., Schaefer, J.M., Hall, B., Winckler, G., Birkel, S.D., Borns, H.W., **2014**. Younger Dryas deglaciation of Scotland driven by warming summers. **Proceedings of the National Academy of Sciences of the United States of America** 111, 6215-6219
32. Strelin, J; Kaplan, M R; Vandergoes, M; Denton, G H; Schaefer, J M; **2014**. Holocene Glacier History of the Lago Argentino Basin, Southern Patagonian Icefield. **Quaternary Science Reviews** 101, 124-145.
33. Kelly, M A; Lowell, T V; Applegate, P J; Phillips, F M; Schaefer, J M; Smith, C A; Kim, H; Leonard, K C; Hudson, A M; **2013**. A locally calibrated, late glacial  $^{10}\text{Be}$  production rate from a low-latitude, high-altitude site in the Peruvian Andes. **Quaternary Geochronology**, doi:10.1016/j.quageo.2013.10.007
34. Young, N.E.\*, Schaefer, J.M., Goehring, B., Lifton, N., Schimmelpfennig, I., Briner, J.P., 2014. West Greenland and global in situ C-14 production-rate calibrations. **Journal of Quaternary Science** 29, 401-406.
35. Schimmelpfennig, I.\*; Schaefer, J M; Putnam, A E; Koffman, T; Benedetti, L; Ivy-Ochs, S; ASTER Team; Schlüchter, C;.  $^{36}\text{Cl}$  production rate from K-spallation in the European Alps (Chironico landslide, Switzerland) **Journal of Quaternary Science**, 29, 407-413.
36. Schimmelpfennig, I.\*; Schaefer, J M; Akçar, N; Koffman, T; Ivy-Ochs, S; Schwartz, R; Finkel, R C; Zimmerman, S; Schlüchter, C; **2014**. A chronology of Holocene and Little Ice Age glacier culminations of the Steingletscher, Central Alps, Switzerland, based on high-sensitivity beryllium-10 moraine dating. **Earth and Planetary Science Letters**, 393: 220-230.
37. Goehring, B M.\*; Schimmelpfennig, I; Schaefer, J M; **2014**. Capabilities of the Lamont–Doherty Earth Observatory in situ  $^{14}\text{C}$  extraction laboratory updated. **Quaternary geochronology**, 19: 194-197.
38. Kaplan, M R.\*; Schaefer, J M; Denton, G H; Doughty, A M; Barrell, D J A; Chinn, T J H; Putnam, A E; Andersen, B G; Mackintosh, A; Finkel, R C; Schwartz, R; Anderson, B; **2013**. The anatomy of long-term warming

- since 15 ka in New Zealand based on net glacier snowline rise. **Geology**, 41(8): 887-890.
39. Putnam, A E.\*; Schaefer, J M; Denton, G H; Barrell, D J A; Andersen, B G; Koffman, T N B; Rowan, A V; Finkel, R C; Rood, D H; Schwartz, R; Vandergoes, M J; Plummer, M A; Brocklehurst, S H; Kelley, S E; Ladig, K L; 2013a. Warming and glacier recession in the Rakaia valley, Southern Alps of New Zealand, during Heinrich Stadial 1. **Earth and Planetary Science Letters**, 382: 98-110.
  40. Putnam, A. E.\*; Schaefer, J M; Denton, G H; Barrell, D J A; Birkel, S D; Andersen, B G; Kaplan, M R; Finkel, R C; Schwartz, R; Doughty, A M; **2013b**. The Last Glacial Maximum at 44°S documented by a 10Be moraine chronology at Lake Ohau, Southern Alps of New Zealand. **Quaternary Science Reviews**, 62(0): 114-141.
  41. Doughty, A.M.\*, Anderson, B.M., Mackintosh, A.N., Kaplan, M.R., Vandergoes, M.J., Barrell, D.J.A., Denton, G.H., Schaefer, J.M., Chinn, T.J.H., Putnam, A.E., **2013**. Evaluation of Lateglacial temperatures in the Southern Alps of New Zealand based on glacier modelling at Irishman Stream, Ben Ohau Range. **Quaternary Science Reviews**, 74: 160-169.
  42. Schaefer, J M; Lifton, N., **2013**. Methods. In: Elias S.A. (ed.) **The Encyclopedia of Quaternary Science**, 1: 410-417. Amsterdam: Elsevier.
  43. Young, N. E.\*; Schaefer, J M; Briner, J P; Goehring, B M; **2013**. A Be-10 production-rate calibration for the Arctic. **Journal of Quaternary Science**, 28(5): 515-526.
  44. Balco, G; Schaefer, J M; **2013**. Exposure-age record of Holocene ice sheet and ice shelf change in the northeast Antarctic Peninsula. **Quaternary Science Reviews**, 59: 101-111.
  45. Briner, J.P., Young, N.E., Goehring, B.M., Schaefer, J.M., **2012**. Constraining Holocene 10Be production rates in Greenland. **Journal of Quaternary Science**, 27(1): 2-6.
  46. Garcia, J.L., Kaplan, M.R., Hall, B.L., Schaefer, J.M., Vega, R.M., Schwartz, R., Finkel, R., **2012**. Glacier expansion in southern Patagonia throughout the Antarctic cold reversal. **Geology**, 40(9): 859-862.
  47. Goehring, B.M., Vacco, D.A., Alley, R.B., Schaefer, J.M., **2012**. Holocene dynamics of the Rhone Glacier, Switzerland, deduced from ice flow models and cosmogenic nuclides. **Earth and Planetary Science Letters**, 351: 27-35.
  48. Golledge, N.R., Mackintosh, A.N., Anderson, B.M., Buckley, K.M., Doughty, A.M., Barrell, D.J.A., Denton, G.H., Vandergoes, M.J., Andersen, B.G., Schaefer, J.M., **2012**. Last Glacial Maximum climate in New Zealand inferred from a modelled Southern Alps icefield. **Quaternary Science Reviews**, 46: 30-45.
  49. Putnam, A.E.\*; Schaefer, J.M., Denton, G.H., Barrell, D.J.A., Finkel, R.C., Andersen, B.G., Schwartz, R., Chinn, T.J.H., Doughty, A.M., **2012**. Regional climate control of glaciers in New Zealand and Europe during the pre-industrial Holocene. **Nature Geoscience**, 5(9): 627-630.

50. Rupper, S., Schaefer, J.M., Burgener, L.K., Koenig, L.S., Tsering, K., Cook, E.R., **2012**. Sensitivity and response of Bhutanese glaciers to atmospheric warming. **Geophysical Research Letters**, 39: L19503.
51. Schimmelpfennig, I.\*, Schaefer, J.M., Akcar, N., Ivy-Ochs, S., Finkel, R.C., Schluchter, C., **2012**. Holocene glacier culminations in the Western Alps and their hemispheric relevance. **Geology**, 40(10): 891-894.
52. Schimmelpfennig, I.\*, Schaefer, J.M., Goehring, B.M., Lifton, N., Putnam, A.E., Barrell, D.J.A., **2012**. Calibration of the in situ cosmogenic <sup>14</sup>C production rate in New Zealand's Southern Alps. **Journal of Quaternary Science**, 27(7): 671-674.
53. Sasnett, P., Goehring, B.M., Christie-Blick, N., Schaefer, J.M., **2012**. Do phreatomagmatic eruptions at Ubehebe Crater (Death Valley, California) relate to a wetter than present hydro-climate? **Geophysical Research Letters**, 39(L02401): doi:10.1029/2011GL050130.
54. Goehring, B.M.\*, Lohne, O.S., Mangerud, J., Svendsen, J.I., Gyllencreutz, R., Schaefer, J., Finkel, R., **2012**. Late glacial and holocene <sup>10</sup>Be production rates for western Norway. **Journal of Quaternary Science** 27, 89-96.
55. Swanger, K.M., Marchant, D.R., Schaefer, J.M., Winckler, G., Head, J.W., **2011**. Elevated East Antarctic outlet glaciers during warmer-than-present climates in southern Victoria Land. **GLOBAL AND PLANETARY CHANGE**, 79(1-2): 61-72.
56. Kaplan, M. R.\*, J. A. Strelin, J. M. Schaefer, G. H. Denton, R. C. Finkel, R. Schwartz, A. E. Putnam, M. J. Vandergoes, B. M. Goehring, and S. G. Travis, **2011**, In-situ cosmogenic <sup>10</sup>Be production rate at Lago Argentino, Patagonia: Implications for late-glacial climate chronology, **Earth and Planetary Science Letters**, 309(1-2), 21-32.
57. Goehring, B.\*, J. M. Schaefer, C. Schluechter, N. Lifton, R. Finkel, A. J. T. Jull, and R. B. Alley, **2011**, The Rhone Glacier was smaller than today for most of the Holocene, **Geology**, 39(7), 679-682.
58. Bromley, G. R. M., Hall, B. L., Schaefer, J. M., Winckler, G., Rademaker, K. M., and Todd, C. E., **2011**. Glacier fluctuations in the southern Peruvian Andes during the late-glacial period, constrained with cosmogenic <sup>3</sup>He. **Journal of Quaternary Science** 26, 37-43.
59. Kaplan, M. R.\*, Schaefer, J. M., Denton, G. H., Barrell, D. J. A., Chinn, T., Putnam, A. E., Andersen, B. G., Finkel, R. C., Schwartz, R., and Doughty, A. M., **2010**. Glacier retreat in New Zealand during the Younger Dryas Stadial. **Nature** 467, 194-197.
60. Putnam, A. E.\*, Denton, G. H., Schaefer, J. M., Barrell, D., Andersen, B. G., Finkel, R., Schwartz, R., Doughty, A. M., Kaplan, M. R., and Schluchter, C., **2010**. The atmospheric footprint of the Antarctic Cold Reversal in southern middle latitudes. **Nature Geoscience** 3, 700-704.
61. Denton, G. H., Anderson, R. F., Toggweiler, J. R., Edwards, R. L., Schaefer, J. M., and Putnam, A., **2010**. The last glacial termination. **Science** 328, 1652-1656.

62. Goehring, B. M.\*, Kelly, M. A., Schaefer, J. M., Finkel, R. C., and Lowell, T. V., **2010**, Evidence for Minimal Erosion Under the Greenland Ice Sheet Through the Last Glacial Cycle from Beryllium-10 Depth Profiles. **Journal of Quaternary Science**, 25, 865-874.
63. Siddall, M., Kaplan, M., Schaefer, J. M., Putnam, A., Kelly, M. A., and Goehring, B., **2010**, Changing influence of Antarctic and Greenlandic temperature records on sea-level over the last glacial cycle. **Quaternary Science Reviews**, v. 29, p. 410-423.
64. Goehring, B.\*, Kurz, M., Balco, G., Schaefer, J., Licciardi, J., and Lifton, N. **2010**. A reevaluation of in situ cosmogenic <sup>3</sup>He production rates. **Quaternary Geochronology** 5, 410-418.
65. Putnam, A.\*, Schaefer, J. M., Barrell, D., Kaplan, M., Denton, G. H., Vandergoes, M., Schwartz, R., Finkel, R. C., Goehring, B., and Kelley, S. M., **2010**. A high precision <sup>10</sup>Be production rate calibration in New Zealand's Southern Alps. **Quaternary Geochronology** 5, 392-409.
66. Licciardi, J. M., Schaefer, J. M., Taggart, J. R., and Lund, D. C., **2009**. Holocene Glacier Fluctuations in the Peruvian Andes Indicate Northern Climate Linkages. **Science** 325, 16-77-1679
67. Schaefer, J. M., Denton, G. H., Kaplan, M., Putnam, A., Finkel, R. C., Barrell, d. J. A., Andersen, B. G., Schwartz, R., Mackintosh, A., Chinn, T., and Schlüchter, C., **2009**. High frequency Holocene glacier fluctuations in New Zealand differ from the northern signature. **Science** 324, 622.
68. Bromley, G. R. M., Schaefer, J. M., Winckler, G., Hall, B. L., Todd, C. E., and Rademaker, K. M., **2009**. Relative timing of last glacial maximum and late-glacial events in the central tropical Andes. **Quaternary Science Reviews** 28, 2514-2526.
69. Vermeesch, P., Baur, H., Heber, V. S., Kober, F., Oberholzer, P., Schaefer, J. M., Schlüchter, C., Strasky, S., and Wieler, R., **2009**, Cosmogenic <sup>3</sup>He and <sup>21</sup>Ne measured in quartz targets after one year of exposure in the Swiss Alps. **Earth and Planetary Science Letters**, v. 284, p. 417-425
70. Balco, G., Briner, J. P., Rayburn, J., Ridge, J. C., and Schaefer, J. M., **2009**, Regional beryllium-10 production rate calibration for northeastern North America: **Quaternary Geochronology**, 4, 93-107.
71. Rinterknecht, V. R.\*, Gorokhov, Y., Schaefer, J. M., and Caffee, M. W., **2008**, Preliminary <sup>10</sup>Be Chronology for the Last Deglaciation of the Western Margin of the Greenland Ice Sheet: **Journal of Quaternary Science**, p. DOI: 10.1002/jqs.1226
72. Schaefer, J. M., Oberholzer, P., Zhizhong, Z., Ivy-Ochs, S., Wieler, R., Baur, H., Kubik, P. W., and Schlüchter, C., **2008**, Cosmogenic beryllium-10 and neon-21 dating of late Pleistocene glaciations in Nyalam, monsoonal Himalayas: **Quaternary Science Reviews**, 27, p. 295-311.
73. Kelly, M.A.\*, Lowell, T. V., Hall, B. L., Schaefer, J. M., Goehring, B., Alley, R. B., and Denton, G. H., **2008**, A <sup>10</sup>Be chronology of late-glacial and Holocene mountain glaciation in the Scoresby Sund region, east Greenland: Implications for seasonality during late-glacial time: **Quaternary Science Reviews**, v. 27, no. 25-26, p. 2273-2282.



74. Niedermann, S., Schaefer, J. M., Wieler, R., and Naumann, R., **2007**, The production rate of cosmogenic  $^{38}\text{Ar}$  from calcium in terrestrial pyroxene. **Earth and Planetary Science Letters**, 257, p. 596-608.
75. Schaefer, J.M., Denton, G.H., Ivy-Ochs, S., Kubik, P.W., Barrell, D.J., Phillips, F., Schluechter, C., Andersen, B.G., and Lowell, T.V., **2006**, Near-Synchronous Interhemispheric Termination of the Last Glacial Maximum in Mid-Latitudes: **Science**, 312, p. 1510-1513.
76. Balco G. and Schaefer J. M., **2006**, Cosmogenic-nuclide and varve chronologies for the deglaciation of southern New England. **Quaternary Geochronology**, **1**, p. 15-28.
77. Schaefer, J. M., Faestermann, T., Herzog, G., Knie, K., Korschinek, G., Masarik, J., Meier, A., Poutivtsev, M., Rugel, G., Schlüchter, C., Serifiddin, F., Winckler, G., **2006**, Terrestrial  $^{53}\text{Mn}$  – A new monitor of Earth surface processes. **Earth and Planetary Science Letters**, 251, p. 334-345.
78. Ivy-Ochs, S., Kerschner, H., Reuther, A., Maisch, M., Sailer, R., Schaefer, J.M., Kubik, P.W., Synal, H.-A., and Schluechter, C., **2006**, The timing of glacier advances in the northern European Alps based on surface exposure dating: GSA Special Paper, 415, p. 43-60
79. Staiger J. W., Marchant D. R., Schaefer J. M., Oberholzer P., Johnson J. V., Lewis A. R., and Schwanger K. M., **2006**, Plio-Pleistocene history of Ferrar Glacier, Antarctica: Implications for climate and ice sheet stability. **Earth and Planetary Science Letters** 243, p. 489-503.
80. Peteet D., Schaefer J. M., and Stute M., **2006**, Enigmatic Eastern Laurentide Ice Sheet Deglaciation. **EOS** 87(15), 151.
81. Lowell, T. V., Fisher, T. G., Comer, G. C., Hajdas, I., Waterson, N., Glover, K., Loope, H. M., Schaefer, J. M., Rinterknecht, V., Broecker, W. S., Denton, G. H., and Teller, J. T., **2005**. Testing the Lake Agassiz meltwater trigger for the Younger Dryas: **EOS**, 86, no. 40, p. 365-373.
82. Ivy-Ochs, S., Schaefer, J. M., Kubik, P. W., and Synal, A. H., **2004**. Timing of deglaciation on the northern alpine foreland (Switzerland). **Eclogae Helveticae** 97, p. 47-55.
83. Oberholzer, P., Baroni, C., Schaefer, J. M., Orombelli, G., Ivy-Ochs, S., Kubik, P., and Wieler, R., **2003**. Limited Pliocene/Pleistocene glaciation in Deep Freeze Range, northern Victoria Land, Antarctica, derived from in-situ cosmogenic nuclides. **Antarctic Science** 15, p. 493-502.
84. Tschudi, S., Schäfer, J. M., Schlüchter, C., Ivy-Ochs, S., Kubik, P. W., Borns, H., and Barrett, P. J., **2003**. Surface Exposure Dating of Sirius Formation at Allan Hills nunatak, Antarctica: New evidence for long-term ice-sheet stability. **Eclogae Geologicae Helvetiae** 96, p. 109-114.
85. Tschudi, S., Schäfer, J. M., Zhizhong, Z., Wu, X., Kubik, P. W., and Schluechter, C., **2003**. Glacial advances in Tibet during Younger Dryas? Evidence from cosmogenic  $^{10}\text{Be}$ ,  $^{26}\text{Al}$ , and  $^{21}\text{Ne}$ . **Journal of Asian Earth Sciences** 22, p. 301-306.
86. Schäfer, J.M., S. Tschudi, Z. Zhao, X. Wu, S. Ivy-Ochs, R. Wieler, H. Baur, P.W. Kubik, and C. Schluchter, **2002**. The limited influence of glaciations

- in Tibet on global climate over the past 170000 yr, **Earth and Planetary Science Letters**, 194 (3-4), p. 287-297.
87. Schlüchter, C., Schaefer, J., Ivy-Ochs, S., Tschudi, S., Oberholzer, P., and Wieler, R., **2001**, Alter und Stabilität antarktischer Landschaften, in *Polar Research as Monitor of Global Change*, Winterthur, p. 39-50
  88. Masarik, J., M. Frank, J.M. Schäfer, and R. Wieler, **2001**. Correction of in situ cosmogenic nuclide production rates for geomagnetic field intensity variations during the past 800,000 years, **Geochimica et Cosmochimica Acta**, 65, (17), p. 2995-3003.
  89. Schäfer J. M., Marchant D. R., Denton G. H., Wieler R., Ivy-Ochs S., and Schluechter C., **2000**. The oldest ice on Earth in Beacon Valley, Antarctica: New evidence from surface exposure dating. **Earth and Planetary Science Letters** 179, (1), p. 91-99.
  90. Schäfer J. M., Ivy-Ochs S., Wieler R., Leya I., Baur H., Denton G. H., and Schluechter C., **1999**. Cosmogenic noble gas studies in the oldest landscape on earth: surface exposure ages of the Dry Valleys, Antarctica. **Earth and Planetary Science Letters** 167, p. 215-226.
  91. Welten K. C., Nishiizumi K., Caffee M. W., Schäfer J.M., and Wieler R., **1999**. Terrestrial ages and exposure ages of Antarctic H-chondrites from Frontier Mountain, North Victoria Land. **Antarctic Meteorite Research** 12, p. 94-107

## Book Chapters

---

Schaefer, J.M., **2015**. Glacial Landscape (Cosmogenic Nuclide). In: Rink, W.J., Thompson, J. (Eds.), **Encyclopedia of Scientific Dating Methods**. Springer.

Schaefer, J. M., and Lifton, N., **2006, 2011**, Methods of Cosmogenic Nuclide Dating, in Elias, S. A., ed., **Encyclopedia of Quaternary Sciences**: St. Louis, Elsevier, p. 412-419.

**Google Scholar Citation Index** (ISI problematic in my case as I was 'Jörg M. Schäfer' and now I am -assigned by the US Homeland Security Department- 'Joerg M. Schaefer', and the 'ä to ae' and 'ö to oe' Umlaut conversions are not handled properly by ISI, but are only done reliably by Google Scholar).

March 2017

<b>Citation indices</b>	All	Since 2012
Citations	4253	2993
h-index	35	29
i10-index	66	60

March 2016

<b>Citation indices</b>	All	Since 2011
Citations	3507	2612
h-index	31	28
i10-index	58	54