

Brad S. Singer

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Professor
Department of Geoscience
University of Wisconsin-Madison
1215 W. Dayton Street
Madison, WI 53706

<http://geoscience.wisc.edu/geoscience/people/faculty/brad-singer/>
WiscAr Lab: <https://geochronology.geoscience.wisc.edu>
bsinger@wisc.edu
tel: +1 608 265 8650

EDUCATION

1990 **Ph.D. Geology**, University of Wyoming
1985 **M.S. Geology**, University of New Mexico
1983 **B.A. Geological Sciences**, University of California, Santa Barbara

PROFESSIONAL APPOINTMENTS

2020- **Chair**, Department of Geoscience, University of Wisconsin-Madison
2017 summer **Visiting Professor**, Tohoku University, Sendai, Japan
2015 summer **Visiting Professor**, Earth Observatory of Singapore, Nanyang Technological University
2011-2014 **Chair**, Department of Geoscience, University of Wisconsin-Madison
2006-present **Professor**, Department of Geoscience, University of Wisconsin-Madison
2006 **Visiting Scientist**, Laboratoire des Sciences du Climat et de l'Environnement, Gif sur Yvette, France
2003-2006 **Associate Professor**, Department of Geoscience, University of Wisconsin-Madison
1999-2003 **Assistant Professor**, Department of Geoscience, University of Wisconsin-Madison
1993-1998 **Maître Assistant**, Dépt. de Minéralogie, Université de Genève, Genève, Switzerland
1991-1993 **Research Fellow**, Dept. of Geological Sciences, Southern Methodist University, Dallas, TX
1990-1991 **Visiting Assistant Professor**, Dept. of Geological Sciences, Univ. of Michigan, Ann Arbor, MI

HONORS and AWARDS

2019 **Vilas Distinguished Achievement Professor**, UW-Madison
2019 **Fellow of the Geological Society of America**
2018 **Fellow of the American Geophysical Union**
2016 **Einstein Distinguished Lecturer**, Chinese Academy of Sciences
2012 **Distinguished Alumnus Award**, University of California-Santa Barbara, Dept. of Earth Science
2008-2010 **Vilas Associate Faculty Award**, UW-Madison Graduate School
2006 **Fulbright Scholar, France**, at CEA-CNRS Laboratoire des Sciences du Climat et de l'Environnement
1982 **Outstanding Undergraduate in Field Geology** (Miner Award), UC Santa Barbara

PROFESSIONAL AFFILIATIONS

American Geophysical Union, member 1985-, International Association of Volcanology and Chemistry of the Earth's Interior, member 2003-, The Geological Society of America, member 2004-

SERVICE

External

Arthur L. Day medal nominating committee, *Geological Society of America* (July, 2021-June 2024)
Science Editor: *Geological Society of America Bulletin* (January 2016 - December 2023; serving 2nd 4-year term).
Associate Editor: *Journal of Geophysical Research Solid Earth* (April 2018-)
Participant: *1st EarthTime-China Summer School*. Gave lectures and tutorials during 6 day short course for 50 students and faculty at China University of Geosciences, Beijing August 4-9, 2018.
Convener: American Geophysical Union Chapman Conference, "*Merging Geophysical, Petrochronologic, and Modeling Perspectives of Large Silicic Magma Systems*". Week long conference brought 79 scientists from 13 countries to Chile January 7-12, 2018.
Publications Committee: *Geological Society of America*, (April, 2019-).

Co-convenor: NSF EarthRates Research Coordination Network workshop at University of Minnesota, November 10-11, 2017. Workshop brought together 70 earth scientists to begin formulating white paper to help guide future of the NSF Sedimentary Geology and Paleobiology program.

Steering Committee for NSF '*Challenges and Opportunities in Geochronology*' document (2014-15).

Convener: NSF EarthCube workshop "Bringing geochronology into the EarthCube framework". At UW-Madison, Oct. 1-3, 2013. 70 invited participants discussed current status and future needs to manage geochronology data in a cyber-infrastructure framework. (http://earthcube.ning.com/group/geochronology?xg_source=activity).

Advisory Board member: STEPPE (Sedimentary geology, Time, Environment, Paleontology, Paleoclimate, and Energy) (2012-14). This consortium of the Geological Society of America, Society for Sedimentary Geology, and the Paleontological Society, supported by NSF, promotes research on deep time problems.

Guest Editor, *special ⁴⁰Ar/³⁹Ar volume of Quaternary Geochronology* (2014).

Associate Editor, *Geological Society of America Bulletin* (2004-2015).

Editorial Board, *Quaternary Geochronology* (2006-2015).

NSF Panel Member, *Sedimentary Geology and Paleobiology Program* (November, 2006 - May, 2009).

Standing Member of Scientific Advisory Committee, Paleomagnetism and Geochronology Laboratory, Institute of Geology and Geophysics, *Chinese Academy of Sciences, Beijing* (2006-present).

Invited participant: NSF GeoPrisms Alaska Primary Site Planning meeting, Portland, OR, Sept. 22-24. Provided input to science plan and gave 10 minute talk on field logistics in the Aleutian Island Arc to 200 scientists.

Invited participant in NSF workshop: Opportunities for EarthScope Science in Alaska in Anticipation of USArray, Austin, TX, May 16-17, 2011. Gave 40 minute presentation on geochemical and geophysical imaging of the Aleutian Island Arc and provided input to science planning.

Invited participant: NSF GeoPrisms Subduction Cycles and Deformation workshop, Bastrop TX, Jan. 5-7, 2011. Provided input to shaping the new GeoPrisms program during this 3 day workshop attended by 200 scientists.

Event Supervisor for Dynamic Earth, National Science Olympiad, May 21, 2011. UW-Madison Campus.

UW-Madison

Physical Sciences Division Executive (tenure) Committee (elected to 3-year term; 2009-2012)
Faculty Senator, 2002-2007.

UW-Madison Department of Geoscience (Major commitments only):

Department Chair, July 2020-present
Search Committee Chair for faculty in Isotope Geochemistry (September, 2017-May, 2018).
Department Chair, July 2011-August, 2014.
Department Council, 2007-2011 & 2019-2020; Graduate Studies Committee 1999-2005, Chair; 2007-2011;
Repository Committee, Chair, 2009-2011.

COURSES TAUGHT at UW-MADISON

Geology 140: Natural Hazards and Disasters (traditional and remote/online versions)
Geology 610: Geochronology, Timescales, and Rates of Geological Processes
Geology 875: Magmatism and structure of the Andes (succeeded by 16-day field trip to Chile & Argentina)
Geology 302: Physics and Chemistry of the Earth's Interior
Geology 203: Earth Materials with lab (Petrology and Mineralogy course)
Geology 370: Elementary Petrology with lab
Geology 101: Introductory Geology with lab
Geology 100: Introductory Geology
Geology 875: Volcanic Geology of the Canary Islands (seminar with 2-week field excursion for graduate students)
Geology 875: Argon Geochronology: Theory, Methods, and Applications (graduate course)
Geology 771: Igneous Petrology (graduate course)
Geology 916: Volcanic Geology of Chile (with 2-week field excursion for graduate students)
Geology 875: Magmatic and crustal evolution processes (variety of graduate seminars)

GRADUATE, UNDERGRADUATE and POST-DOCTORAL STUDENTS SUPERVISED

<u>PhD students (10) advised</u>	<u>Current occupation</u>
Benjamin Bruck	2021- underway
Jacob Klug	2019- underway
Allen Schaen	2018 Research Scientist, University of Arizona
Nathan Andersen	2017 Research Geologist, USGS Cascades Volcano Observatory
John Hora	2009 Scientist, Czech Republic Geological Survey, Prague
Brian Jicha	2006 Senior Research Scientist/WiscAr Lab Manager, UW-Madison
Michael Smith	2006 co-advisor Associate Professor, Northern Arizona University
Daniel Douglass	2005 Associate Teaching Professor, Northeastern University, Boston MA
Fidel Costa	2000 co-advisor Professor, Nanyang Technological University, Singapore
Thao Ton-That	2001 Environmental consulting industry, Geneva, Switzerland
<u>MS Students (21)</u>	
Pablo Moreno-Yeager	2019-underway
Benjamin Bruck	2021 UW-Madison PhD student
Jacob Klug	2019 UW-Madison PhD student
Paola Martinez	2017 Researcher, SERNAGEOMIN ⁴⁰ Ar/ ³⁹ Ar Lab, Chile
Erin Birsic	2015 Adjunct lecturer, Alleghany College, PA
Allen Schaen	2014 post-doc, University of Arizona
Daniel Murray	2011 Wisconsin State Geological Survey
Sarah Siewert	2011 Geologist BP, Houston
Kate Smith	2010 PhD student, University of British Columbia
Sara Greene	2009 Geologist Exxon, Houston
Melissa Harper	2003 Geologist BP, Houston
Kurt Refsnider	2006 co-advisor Assistant Professor, Prescott College, AZ
Justin Gosses	2006 co-advisor Chief Information Office, NASA Johnson Space Center, Houston, TX
Richard Becker	2005 co-advisor PhD student, UW-Madison
Lauren Chetel	2004 co-advisor Geologist, BP, Aberdeen UK
Miriam Barquero-Molina	2003 Assistant Teaching Professor, University of Missouri-Columbia
Brian Jicha	2002 WiscAr Geochronology lab manager
Monica Relle	2001 High school science teacher, Maine
Michael Smith	2001 co-advisor Assistant, now Associate Professor, Northern Arizona University
Yann Vincze	1998 Switzerland
Thao Ton-That	1998 Switzerland, Environmental consulting
<u>Post-docs supervised (6)</u>	
Youjuan Li	2019- Chinese Academy of Sciences, EarthTime China project
Allen Schaen	2018-19 EarthCube cyberinformatics in WiscAr Lab
Brian Jicha	2007- WiscAr Geochronology lab manager
Michael Kaplan	2000-02 Senior Research Professor, Lamont Doherty, Columbia University
Xifan Zhang	2004-07 Professor in China
Kyle Min	2002-03 Assistant Professor, University of Florida
<u>Undergraduate honors thesis students advised (8)</u>	
Alexandra Macho	2012 MSc Geology, University of Arizona
Stephanie Massignan	2012
Dylan Colon	2011 PhD student, University of Oregon
Sarah Siewert	2009 Geologist, BP Houston, TX
Bill Cassata	2007 PhD UC Berkeley 2012; now at Lawrence Livermore Nat. Lab.
Ben Kirby	2005 MS Geology, The Ohio State University 2008
Brian Allen	2005
Alissa Naymark	2002 High school science teacher

INVITED LECTURES 2012-2021 (*total between 1991-2019 = 74*)

- Gordon Conference on Geochronology, New Hampshire [August 8, 2019] Challenges and Opportunities in Synchronizing Geomagnetic Field Behavior Across the Quaternary
- USGS Menlo Park, CA [April 12, 2019] Dynamics and hazards of the large, restless, rhyolitic magma system beneath Laguna del Maule, Chile
- Stanford University [April 11, 2019] Dynamics and hazards of the large, restless, rhyolitic magma system beneath Laguna del Maule, Chile
- University of Wyoming [September 10, 2018] The large, restless, rhyolitic magma system at Laguna del Maule, southern Andes: Its dynamics and hazards
- China University of Geoscience, Wuhan [August 11, 2018] Synchronizing volcanic, sedimentary, and ice core records of Earth's last geomagnetic polarity reversal
- Institute of Geology and Geophysics, Chinese Academy of Sciences, Beijing [August 2, 2018] Synchronizing volcanic, sedimentary, and ice core records of Earth's last geomagnetic polarity reversal
- Ibaraki University, Japan [July 10, 2017] The $^{40}\text{Ar}/^{39}\text{Ar}$ multi-collector revolution and implications for the Quaternary Geomagnetic Instability Time Scale (GITS)
- National Institute of Polar Research, Japan [July 7, 2017] The $^{40}\text{Ar}/^{39}\text{Ar}$ multi-collector revolution and implications for the Quaternary Geomagnetic Instability Time Scale (GITS)
- Kumamoto University, Japan [June 29, 2017] The large, restless, rhyolitic magma system at Laguna del Maule, southern Andes: Its dynamics and hazards
- Kumamoto University, Japan [June 29, 2017] The $^{40}\text{Ar}/^{39}\text{Ar}$ multi-collector revolution and implications for the Quaternary Geomagnetic Instability Time Scale (GITS)
- Tohoku University, Japan [June 22, 2017] The large, restless, rhyolitic magma system at Laguna del Maule, southern Andes: Its dynamics and hazards
- University of South Carolina [April 20, 2017] The large, restless, rhyolitic magma system at Laguna del Maule, southern Andes: Its dynamics and hazards
- Northern Arizona University [October 6, 2016] The large, restless, rhyolitic magma system at Laguna del Maule, southern Andes: Its dynamics and hazards
- China University of Geoscience, Wuhan [July 18, 2016] The large, restless, rhyolitic magma system at Laguna del Maule, southern Andes: Its dynamics and hazards
- Institute of Geochemistry, Chinese Academy of Sciences, Guangzhou [July 15, 2016] The large, restless, rhyolitic magma system at Laguna del Maule, southern Andes: Its dynamics and hazards
- Institute of Geochemistry, Chinese Academy of Sciences, Guangzhou [July 14, 2016] The multi-collector revolution in $^{40}\text{Ar}/^{39}\text{Ar}$ dating & implications for time scale calibration
- Institute of Geology and Geophysics, Chinese Academy of Sciences, Beijing [July 12, 2016] The multi-collector revolution in $^{40}\text{Ar}/^{39}\text{Ar}$ dating & implications for time scale calibration
- Institute of Geology and Geophysics, Chinese Academy of Sciences, Beijing [July 11, 2016] The large, restless, rhyolitic magma system at Laguna del Maule, southern Andes: Its dynamics and hazards
- University of Iowa, [May 6, 2016] The large, restless, rhyolitic magma system at Laguna del Maule, southern Andes: Its dynamics and hazard
- 15th Congreso Geológico Chileno [October 5, 2015] The Laguna del Maule Volcanic Field: Its Dynamics and Hazards. (invited presentation at National meeting in Chile, >150 attendees)
- Earth Observatory of Singapore, Nanyang Technological University [June 9, 2015] Is the next rhyolitic super-eruption brewing in the southern Andes?
- University of Concepcion, Chile [October 15, 2014] Is the next rhyolitic super-eruption brewing in the southern Andes?
- University of Chile-Santiago [October 10, 2014] Is the next rhyolitic super-eruption brewing in the southern Andes?
- Energy Development Corporation, Santiago, Chile [October 9, 2014] Is the next rhyolitic super-eruption brewing in the southern Andes?
- University of Wisconsin-Madison [September 12, 2014] Is the next rhyolitic super-eruption brewing in the southern Andes?
- Brigham Young University, Provo, UT [February 26, 2014] Evolution of a large, restless, rhyolitic magma system, Laguna del Maule Volcanic Field, southern Andes.
- Northwestern University, Evanston, IL [October 11, 2013] Geological, geochemical, and geophysical evidence for rhyolite caldera inception at Laguna del Maule, southern Chilean Andes

University of New England, Biddeford, Maine [October 10, 2013] I gave a University-wide “Core Connections” lecture on the theme of natural disasters to 100 undergraduate students and faculty entitled: *Is the next super-eruption brewing in the Andes?*

Jilin University, Department of Earth Sciences, Changchun, China [July 2, 2013] Geological, geochemical, and geophysical evidence for rhyolite caldera inception at Laguna del Maule, southern Chilean Andes

University of California, Santa Barbara [June 7, 2012] Geological, geochemical, and geophysical evidence for rhyolite caldera inception at Laguna del Maule, southern Chilean Andes

UW-Madison Geoscience Dept. [May 11, 2012] Geological, geochemical, and geophysical evidence for rhyolite caldera inception at Laguna del Maule, southern Chilean Andes

Cornell University, Ithaca, NY [April 19, 2012] Taking the Pulse of the Geodynamo: A Quaternary Geomagnetic Instability Time Scale (GITS)

Cornell University, Ithaca, NY [April 18, 2012] Geological, geochemical, and geophysical evidence for rhyolite caldera inception at Laguna del Maule, southern Chilean Andes

PUBLIC MEDIA, OUTREACH, INTERVIEWS

February 18, 2021: Interviewed by Nell Greenfieldboyce for **National Public Radio Weekend Edition** report on potential environmental impacts of the last excursion of earth's magnetic field:
<https://www.npr.org/2021/02/18/969063568/ancient-trees-show-when-the-earths-magnetic-field-last-flipped-out>

August 7, 2019: I granted a dozen interviews for a variety of news and science media outlets interested in a paper on Earth's last magnetic polarity reversal that was published in **Science Advances**. This research was covered by 30 news media sites: <https://advances.sciencemag.org/content/5/8/eaaw4621>, including stories by Newsweek, CNN, Fox News, Scientific American, and Smithsonian Magazine.

December, 2018: **Scientific American** article, *Hidden Inferno*, by Shannon Hall:
<https://www.scientificamerican.com/article/a-supervolcano-with-a-cold-heart-may-be-brewing-in-chile/>. This story features research I have led on understanding how large rhyolitic magma systems evolve, particularly the results from the project at Laguna del Maule, Chile.

June 28, 2018: **Live Science**: Internet story on *Science Advances* paper on geomorphic expression of magma reservoir growth at Laguna del Maule: <https://www.livescience.com/62934-andean-volcanoes-could-erupt.html>

May 31, 2018: **Science Café, East High School, Madison, WI**: Two hour discussion with high school students about geology in general and the ongoing eruption of Kilauea Volcano, Hawaii.

May 25, 2018: **Valley Public Radio/National Public Radio 89 FM, Fresno, CA**: 15 minute interview on the Long Valley Caldera eruption and its context relative to the ongoing eruption at Kilauea Volcano, Hawaii.

May 17, 2018: **WORT radio Perpetual Notion Machine, Madison, WI**: 30 minute interview on the ongoing eruption of Kilauea Volcano, Hawaii. Podcast available at Thursday May 17 WORT archives:
<http://archive.wortfm.org/>

November, 6, 2017: **New York Times**. The Cool Beginnings of a Volcano's Supereruption, by Shannon Hall.
<https://www.nytimes.com/2017/11/06/science/the-cool-beginnings-of-a-volcanos-supereruption.html?smid=tw-nytimescience&smtyp=cur&r=1>. Story about PNAS paper by Andersen et al., 2017 on the Bishop Tuff, California.

December 13, 2016: **Reuters News**. Potencial erupción de volcán bajo laguna en Los Andes desata preocupación [Potential eruption of volcano under lake in the Andes unleashes concern], by Antonio de la Jara and Rosalba O'brien. <https://lta.reuters.com/article/domesticNews/idLTAKBN1421HV>.

April 14, 2015: Brad Singer interview on **Teletrece, the national television channel 13 in Chile**. This 3 minute news story: El "súper volcán" de la Laguna del Maule, aired widely in Chile and featured video created by David Tenenbaum, a UW science journalist. <http://www.t13.cl/videos/nacional/volcan-maule>.

December 2, 2014: **Nature World News**. Chilean Lake May be the Site of a Mega-Eruption, by Jenna Iacurci. <http://www.natureworldnews.com/articles/10820/20141202/chilean-lake-may-be-the-site-of-mega-eruption.htm>. Story about Singer et al. (2014) *GSA Today* paper on Laguna del Maule volcanic field.

November 8, 2014: **UW News**. UW team explores large, restless volcanic field in Chile, by David Tenenbaum,

November 11, 2013: **Wired Science**. A Caldera in the Making: The Curious Story of Laguna del Maule, by Erik Klemetti. <http://www.wired.com/wiredscience/2013/11/a-caldere-eruption-in-the-making-the-curious-story-of-laguna-del-maule/>. Story about Singer et al. presentation at the annual Geological Society of America Meeting that became an invited paper about Laguna del Maule in *GSA Today* (Singer et al., 2014).

September 26, 2008: **Science magazine**, News of the Week. Solid Rock Imposes Its Will on a Core's Magnetic Dynamo, by Richard A. Kerr. <http://science.sciencemag.org/content/321/5897/1756.2>. Story on Science paper by Hoffman and Singer (2008) on new hypothesis for mantle control on the geomagnetic field.

U.S. FEDERAL RESEARCH GRANT AWARDS at UW-MADISON

Principal Investigator on 29 grants (28 NSF, 1 NOAA) between 1999 and 2021 totaling \$11,868,747.

- [29] NSF EAR-2100000, *Collaborative Research: Ice Forcing in Arc Magma Plumbing Systems (IF-AMPS)*. 9/1/2021-8/31/2026. \$1,898,952 [UW-Madison portion of \$2.8M collaborative grant].
- [28] NSF EAR-1951812, *NSFGEO-NERC: Collaborative Research: Developing a new Lower Cretaceous time scale: Foundation for the next generation of paleoceanographic and biogeochemical studies*. 11/15/2020-10/31/2023. \$482,903 [UW-portion of \$1.7M international collaborative grant].
- [27] NSF EAR-1813278, *Collaborative Research: Anatomy of a Greenhouse world: The Early Eocene in the Green River Basin, Wyoming*. 7/1/2018-6/30/23. \$909,982 [UW portion of \$2.7M Integrated Earth Systems Program grant among 8 institutions; lead PI Alan Carroll, co-PIs Steve Meyers & Brad Singer].
- [26] NSF EAR-1740694, *Collaborative Proposal: EarthCube Integration: Geochronology Frontier at the Laboratory-Cyberinformatics Interface*. 9/1/2017-8/31/2020. \$1,449,662.
- [25] NSF EAR-1650232, *Collaborative Research: Andean plutonic perspectives on the generation, storage, and eruption of rhyolite*. 1/1/2017-5/31/19. \$254,025.
- [24] NSF EAR-1630130, *Collaborative Research: Can Low-Angle Normal Faults Produce Earthquakes? Reading a Pseudotachylyte 'Rosetta Stone'*. 8/1/2016-7/31/2019. \$290,400 (lead PI Laurel Goodwin, Singer co-PI).
- [23] NSF EAR-1411779, *Collaborative Research: Dynamics of caldera-scale rhyolitic magma systems*. 9/1/2014-8/31/2019. \$2,378,419 (lead PI with co-PIs Thurber, Feigl, DeMets, Tikoff, Bennington, Keranen, Dufek, Huber, Unsworth, Williams-Jones).
- [22] NSF EAR-1422819, *Collaborative Research: High-resolution Cretaceous terrestrial climate records of temperature, weathering and hydrologic response to hyperthermals in Songliao Basin, China*. 8/15/2014-7/31/2015. \$71,466 (with co-PIs Chamberlain, Graham, Carroll).
- [21] NSF EAR-1343130, *Earthcube end-users domain workshop: Bringing geochronology into the Earthcube framework*. 6/1/2013-5/31/2014. \$100,000 (with co-PI Shanan Peters).
- [20] NSF EAR-1322595, *RAPID proposal: Accelerating unrest at a large rhyolitic magma system: Laguna del Maule, Chile*. 3/1/13-2/28/14; \$64,000 (co-PI with Basil Tikoff, Cliff Thurber)
- [19] NSF EAR-1250446, *Collaborative Research: An EARTHTIME Chronology for the Matuyama-Brunhes Geomagnetic Field Reversal*. \$399,713 UW-Madison portion (3/1/2013-2/28/2016) co-PIs B. Jicha and R. Coe.
- [18] NSF EAR-114494, *Collaborative Research: A 21st century Reconnaissance of the Aleutian Arc*. \$217,341 (4/1/12-3/31-2014), co-PI with UW-Madison lab manager B. Jicha as PI, and S. Kay co-PI.
- [17] NSF EAR-0943584, *Collaborative Research: Morphology and Timing of the Reunion/Huckleberry Ridge Event(s)*. \$84,022 (9/1/10-8/31/12). With Joshua Feinberg and Ken Hoffman.
- [16] NSF EAR-0959108, *Collaborative Research: Integrating Radioisotopic and Astronomical Time Scales for the Cretaceous*. \$418,600 (5/1/2010-4/30/14). With S. Meyers and B. Sageman co-PIs.
- [15] NSF OCE-0825659, *Collaborative Research: Temporal evolution of submarine Mauna Loa provides insights into the nature of the Hawaiian plume*. \$102,866 (9/1/08-8/31/10). With J.M. Rhodes.
- [14] NSF EAR-0741794, *Acquisition of a multi-collector mass spectrometer for the UW Madison Rare Gas Geochronology Laboratory*. \$370,000 (3/1/08-2/29/09). Brian Jicha co-PI.
- [13] NSF EAR-0738007, *Lying in Wait? Evolution of dacite beneath Santa Maria Volcano, Guatemala*. \$337,706 (1/1/08-12/31/11). Brian Jicha co-PI.
- [12] NSF EAR-0538159, *Collaborative Research: Spatiotemporal Evolution of the Neogene Ignimbrite Flare-up in the Altiplano-Puna Volcanic Complex, Central Andes: Insights into the Development of Large Silicic Magmatic Systems*. \$100,355 (4/15/06-3/31/09).
- [11] NSF EAR-0516760, *Phase II technician support for the UW-Madison Rare Gas Geochronology Laboratory*, \$88,006 (9/1/05-8/31/07).
- [10] NSF EAR-0439155, *Collaborative Research: Paleomagnetism and geochronology of the Mono Lake Event recorded in the lava flow sequence of Santa Maria volcano, Guatemala*, \$50,092 (1/1/05-12/31/06).
- [9] NSF EAR-0337667, *A new generation of timescales for arc magmatic processes*. \$427,036, co-PIs: C. Johnson, B. Beard. (1/1/04 - 12/31/07).
- [8] NSF EAR-0337684, *A geomagnetic instability timescale for the Pleistocene*. \$302,596 (1/1/04 - 12/31/07).
- [7] NOAA-National Undersea Research Program, *Primitive plutonism in an island arc, a study of deep submarine canyons in the western Aleutian arc*. \$31,040, co-PI's: Yagodzinski, Keleman, Scholl (6/1/04-5/31/05).

- [6] NSF EAR-0114055, *Technician support for the University of Wisconsin Rare Gas Geochronology Laboratory*. \$128,688 (9/15/01 - 8/31/04).
- [5] NSF ATM-0212450, *Glacial and paleoclimate record of the southern Andes, 46°S, for the late Pleistocene*. \$330,274, co-PIs: D. Mickelson, J. Bockheim (9/01/02 - 8/31/05).
- [4] NSF EAR-0230123, *Quantifying the temporal evolution of Eocene Lake Gosiute*. \$268,003, co-PI: A. Carroll (6/01/03-5/31/06).
- [3] NSF ATM-0081852, *Sedimentary response of large lakes to climate change: Direct measurement using high-precision ⁴⁰Ar/³⁹Ar geochronology*. \$124,475, co-PI A. Carroll (8/1/00 - 7/31/02).
- [2] NSF EAR-9909309, *Temporal constraints on geomagnetic field behavior from high-precision ⁴⁰Ar/³⁹Ar geochronology*. \$179,992 (3/1/00 - 2/28/03).
- [1] NSF EAR-9972851, *Acquisition of an ultra-sensitive mass spectrometer for the University of Wisconsin Rare Gas Geochronology Laboratory*. \$151,560 (12/15/99 - 11/30/02).

Grants on which Singer is a Co-Principal Investigator at UW-Madison (total of these awards \$3,621,650)

- [5] NSF EAR-1337156, *Acquisition of a modern electron microprobe*. \$960,312. co-PI with J Fournelle, C-B Eom, J. Valley, L. Goodwin. (8/1/13 - 7/31/14).
- [4] NSF EAR-1321939, *Collaborative research: Paleogeographic Record of Contractional to Extensional Tectonics in the Cordilleran Hinterland, Nevada*. \$56,024 UW-Madison portion. co-PI with E. Cassel (PI), M. Smith, and B. Jicha (co-PIs). (9/1/13 to 8/31/16)
- [3] NSF EAR-06251678, *Collaborative Research: Late-Quaternary Glacial and Paleoclimate History of the Uinta Mountains, Utah*, \$228,216, PI: D.M. Mickelson, co-PI: B.S. Singer (1/1/04 to 12/31/06).
- [2] NSF (Instrumentation and Facilities Program) *Acquisition of an ion microprobe for stable isotope analysis*. \$2,000,000, PI: J. Valley, co-PIs: C. Johnson, C. Kelly, D. Shoeller, B.S. Singer (7/01/03-6/30/05).
- [1] NSF subaward to U. South Carolina (Marine Geology & Geophysics Program), *Collaborative Research on primitive magmatism and crustal genesis in an island arc*. \$30,767, co-PI: B.S. Singer (6/1/04 - 5/31/06).

SWISS RESEARCH GRANT AWARDS

6 grants as PI at the University of Geneva between 1994 and 1999 (total: 473,000 Swiss Francs/\$500,000 USD)

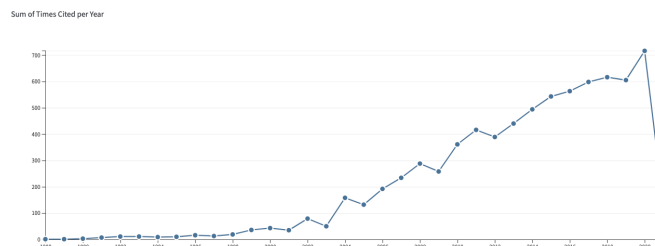
- [6] **Swiss NSF 20-050867.97:** *Chronology of the Matuyama-Brunhes geomagnetic polarity reversal and late Quaternary glaciations in the Southern Hemisphere*, 119,544 SFr (1997-99). PI: Singer.
- [5] **Swiss NSF 21-049110.96:** *⁴⁰Ar/³⁹Ar dating of young (<50 ka) tephra and lava in marine and terrestrial settings*, 127,083 SFr (1997-99). PI: Singer.
- [4] **Swiss NSF 7BUPJ048659:** *Origin of epithermal gold in Bulgaria: constraints on the timing of magmatism, alteration, and mineralization from ⁴⁰Ar/³⁹Ar geochronology*, 28,000 SFr. (1997-1998). PI: Singer.
- [3] **Ernst and Lucie Schmidheiny Foundation:** *Acquisition of a dual wavelength laser probe for the University of Geneva ⁴⁰Ar/³⁹Ar geochronology laboratory*, 80,000 Sfr (co-PI).
- [2] **Swiss NSF 21-43077.95:** *Timing of Pleistocene glaciations in the Southern Hemisphere from ⁴⁰Ar/³⁹Ar dating of volcanic materials in the Lago Buenos Aires moraines, Argentina*, 18,415 SFr. PI: Singer.
- [1] **Swiss NSF 21-045462.95:** *Acquisition of an infrared and ultraviolet laser probe for argon extraction and ⁴⁰Ar/³⁹Ar geochronology from micro-samples*, 100,000 SFr (co-PI w/ M. Dungan, L. Fontboté).

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- [1] **National Geographic Society:** *Southern Andes Fire and Ice Research and Education (SAFIRE) Project*, (2018-2019), 20,000 USD. PI: Singer.

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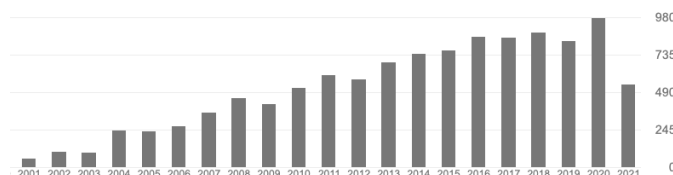


Brad S Singer

University of Wisconsin-Madison

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ABSTRACTS

From 1985 to 2021: authored or co-authored >456 abstracts presented at national or international meetings, including several invited presentations beginning in 1992.