

Dr. Sean P. S. Gulick

Research Professor, Institute for Geophysics and Department of Geological Sciences,
Jackson School of Geosciences, University of Texas at Austin
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Research Interests

- Tectonic processes, tectonic-climate interactions and geohazards of convergent margins and transitional tectonic environments
- Role of catastrophism in the geologic record including impact cratering, hurricanes, and tectonic events
- Marine and planetary geophysical imaging at nested resolutions and ground truth through drilling, coring, logging, and sampling

Employment

Co-Director, Center for Planetary Systems Habitability, University of Texas at Austin	Jan. 2020 – Present
Research Professor, University of Texas at Austin	Sept. 2015 - Present
Research Associate Professor, University of Texas at Austin	Jan. 2012 - Aug. 2015
Research Scientist, University of Texas Institute for Geophysics	Aug. 2007 - Jan. 2012
Research Associate, University of Texas Institute for Geophysics	Dec. 2001 - July 2007
Post-doctoral Fellow, University of Texas Institute for Geophysics	June 1999 - Nov. 2001

Education

Ph.D. in Geological Sciences, Lehigh University, Bethlehem, Pennsylvania Dissertation: “Seismic studies of the southern Cascadia subduction zone near the Mendocino triple junction,” Advisor: A. Meltzer, Committee: B. Carson, D. Anastasio, S. Clarke, Jr. (USGS), and J. Diebold (LDEO).	1999
Bachelor of Science in Geology, Minor in Marine Sciences, University of North Carolina, Chapel Hill, North Carolina, Advisor: Christine Powell.	1993

Field Experience

<u>Trinity River Paleochannel Project (TRIPP)</u> Bureau of Ocean & Energy Mgmt. Chief Scientist, Gulf of Mexico, R/V <i>Trident</i>	Aug., 2018
<u>SISIE: South Island, New Zealand, Subduction Initiation Experiment</u> Co-Chief Scientist, New Zealand, R/V <i>Marcus G. Langseth</i>	Feb.-Mar., 2018
<u>High-resolution Imaging of the Ries Impact Crater</u> Co-Chief Scientist, Nordlingen, Germany	Aug., 2017
<u>Chicxulub Impact Crater Drilling IODP Expedition 364</u> Onshore Science Party Co-Chief Scientist, IODP Core Repository, University of Bremen	Sept.-Oct., 2016
<u>Icy Bay Geohazards and Taan Fiord Landslide Joint NSF/USGS Project</u> Co-Chief Scientist, Multichannel sparker seismic, multibeam bathymetry R/V <i>Alaskan Gyre</i>	Aug., 2016
<u>Chicxulub Impact Crater Drilling IODP Expedition 364 Offshore Operations</u> Co-Chief Scientist, L/B <i>Myrtle</i>	April-May, 2016

<u>Rio Grande Submarine Fan Seismic and Coring Study</u> Chief Scientist, R/V <i>Manta</i>	Oct., 2015
<u>Totten Glacier Ice-Ocean-Sediment Interactions Study, East Antarctica</u> Seismic Team Leader, RVIB <i>Nathaniel B. Palmer</i>	Jan-Mar, 2014
<u>Southeast Alaska Tectonics and Climate IODP Expedition 341</u> Co-Chief Scientist, JOIDES <i>Resolution</i>	May-July, 2013
<u>Chicxulub Impact Crater Hazards Assessment</u> Co-Chief Scientist, High resolution marine geology and geophysics, R/V <i>Justo Sierra</i>	April, 2013
<u>Straits of Magellan Seismic Tests</u> Seismic specialist, Multichannel seismic, multibeam, chirp, RVIB <i>Palmer</i>	Aug., 2012
<u>Yakutat Bay Earthquake Fault Mapping</u> Chief Scientist, Multichannel seismic, chirp, R/V <i>Alaskan Gyre</i>	Aug., 2012
<u>Gulf of Alaska Law of the Sea Assessment</u> Co-chief Scientist, Multichannel seismic, Multibeam bathymetry, R/V <i>Langseth</i>	June, 2011
<u>Hubbard Glacier Reconnaissance</u> Co-chief Scientist, Chirp, Sidescan, and CTD R/V <i>Quest</i>	April, 2010
<u>RECONS: Rapid Enriquillo Plantain Offshore Neotectonic Study</u> Co-chief Scientist, Chirp, Bathymetry, Sidescan, and Coring R/V <i>Endeavor</i>	Feb.-Mar., 2010
<u>STEEP: ST, Elias Erosion/tectonics Project</u> Chief Scientist, Reflection and refraction studies on R/V <i>Marcus Langseth</i>	Sept., 2008
<u>Exploring controls on great earthquake rupture, Sumatra convergent margin</u> Co-Chief Scientist, Seismic imaging on R/V <i>Sonne</i>	June-July, 2008
<u>Nankai Trough Seismogenic Zone Experiment IODP Expedition 314</u> Logging Specialist, Log-Seismic Integration Team on D/V <i>Chikyu</i>	Sept.-Nov., 2007
<u>Imaging and modeling impact generated deformation at the Chicxulub Crater</u> Co-Chief Scientist, Seismic Imaging on R/V <i>Maurice Ewing</i>	Jan.-Feb., 2005
<u>High-resolution imaging and sampling of Alaskan glacial sedimentation</u> Seismic Acquisition Specialist during Seismic Imaging, Swath Mapping, and Sediment Coring cruise on R/V <i>Maurice Ewing</i>	Aug.-Sept., 2004
<u>Nankai Subduction Margin ROV and Submersible Studies of Active Venting</u> Shipboard Geologist, ROV studies aboard M/V <i>Kairei</i>	July-Aug. 2002 & May-June 2003
Visiting Scientist, Ocean Research Institute including leg aboard M/V <i>Yokosuka</i>	July 2000
<u>Office of Naval Research's Geoclutter marine acoustics research program</u> Shipboard Scientist, Shallow drilling of New Jersey margin on R/V <i>Knorr</i>	Sept.-Oct. 2002
Shipboard Geophysicist, 2-D and 3-D CHIRP seismic on R/V <i>Endeavor</i>	Aug.-Sept. 2001
Shipboard Scientist, Grab sampling and coring on R/V <i>Cape Henlopen</i>	July-Aug. 2001
<u>Ocean Drilling Program Leg 196: Nankai Trough accretionary prism fluid flow</u> Logging Specialist, Logging while drilling on JOIDES <i>Resolution</i>	Jan.-Feb. 2001
<u>Investigation of Nankai Subduction Thrust Seismicity and Fault Properties</u> Shipboard Geophysicist, 3-D Seismic off Japan on R/V <i>Maurice Ewing</i>	June-Aug. 1999
<u>National Undersea Research Program: Oregon-Washington seafloor deformation</u> Shipboard Geologist, Submersible/ROV studies on the M/V <i>Laney Choest</i>	Oct. 1996/1997
<u>Eel River Basin Gas Hydrate Study</u> Shipboard Geologist, ROV studies aboard the R/V <i>Point Lobos</i>	Aug. 1997

Mendocino Triple Junction Seismic Experiment, Lehigh University

June 1994

Shipboard Geophysicist, Seismic imaging off California on *R/V Maurice Ewing*

Undergraduate Students

Ms. Lindsay Lugin, UT DGS, Co-Advisor	B.S., 2013
Ms. Julie Zurbuchen, UT DGS, Jackson School Honors Student, Advisor	B.S. Honors, 2014
Mr. Susannah Morey, UT DGS, Jackson School Honors Student, Advisor	B.S. Honors, 2016
Ms. Rose Palermo, UT DGS, Jackson School Honors Student, Committee	B.S. Honors, 2016
Mr. Colin White, UT DGS, Jackson School Honors Student, Co-Advisor	B.S. Honors, 2017
Mr. Cole Speed, UT DGS, Jackson School Honors Student, Advisor	B.S. Honors, 2017
Mr. Eric Hiatt, UT DGS, Research Collaborator	B.S., 2019
Ms. Patty Standing, UT DGS, Research Collaborator	B.S., 2020

Graduate Students

Mr. Matt McDonald, UT DGS, Advisor (now Geophysicist at Shell Oil)	M.S., 2006
Mr Ryan Elmore, UT DGS, Advisor (now PhD Student Texas A&M Univ)	M.S., 2008
Mr. John Swartz, UT DGS, Advisor (now PhD Student UT-Austin)	M.S., 2014
Mr. Jason Sanford, UT DGS, Co-advisor (now Chevron)	M.S., 2015
Mr. Sebastian Cardona, UT DGS, Co-advisor (now PhD Student Col. Sch. Mines)	M.S., 2015
Mr. Alexander "Sasha" Montelli, UT DGS, Advisor (now PhD Student Cambridge)	M.S., 2015
Mr. Jacob "Jake" Burstein, UT DGS, Co-Advisor	M.S. Expected, 2021
Mr. Russell Miller, UT DGS, Co-Advsiior	M.S. Expected, 2022
Dr. Lindsay Worthington, UT DGS, Advisor (now Asst. Prof., Univ New Mexico)	Ph.D., 2010
Dr. Kylara Martin, UT DGS, Advisor (now Adjunct, UTIG)	Ph.D., 2011
Dr. Robert Reece, UT DGS, Advisor (now Asst. Professor, Texas A&M Univ.)	Ph.D., 2013
Dr. Maria Prieto, UT DGS, Co-Advisor (now Chevron)	Ph.D., 2016
Dr. Marina Frederik, UT DGS, Co-advisor (now BPPT, Indonesia)	Ph.D., 2016
Dr. Maureen LeVoir Walton, UT DGS, Advisor (now Mendenhall Postdoc, USGS)	Ph.D., 2016
Mr. Sebastian Ramirez, UT DGS, Co-advisor (now at Shell)	Ph.D., 2016
Mr. John Swartz, UT DGS, Advisor	Ph.D., 2019
Mr. Dominik Kardell, UT DGS, Co-Advisor	Ph.D., 2020
Mr. Brandon Shuck, UT DGS, Co-Advisor	Ph.D. Expected, 2021
Ms. Naoma McCall, UT DGS, Advisor	Ph.D. Expected, 2022
Ms. Catherine Ross, UT DGS, Co-Advisor	Ph.D. Expected, 2022
Mr. Eric Hiatt, UT DGS Co-Advisor	Ph.D. Expected, 2024
Ms. Carson Miller, UT DGS Co-Advisor	Ph.D. Expected, 2025
Ms. Emily Pangborn, UT DGS, Committee Member	M.S., 2007
Ms. Keren Mendoza, UNAM, Committee Member	M.S., 2007
Ms. Svetlana Burris, UT DGS, Committee Member	M.S., 2012
Mr. Mark Duncan, UT DGS, Committee Member	M.S., 2013
Ms. Julie Ditkof, UT DGS, Committee Member	M.S., 2013
Mr. Francis Mulcahy, UT DGS, Committee Member	M.S., 2015
Ms. Kubra Arisoy, UT DGS, Committee Member	M.S., 2015

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Mr. Johnathon Lee Osmund, UT DGS, Committee Member	M.S., 2016
Ms. Casey O'Brien, UT DGS, Committee Member	M.S., 2016
Mr. Andrew Parisi, UT DGS, Committee Member	M.S., 2018
Dr. Jen Aschoff, UT DGS, Committee Member	Ph.D., 2008
Dr. Bryce Willems, NIU, Committee Member	Ph.D., 2009
Dr. Bruce Frederick, UT DGS, Committee Member	Ph.D., 2015
Dr. Drew Eddy, UT DGS, Committee Member	Ph.D., 2015
Dr. Nicholas Perez, UT DGS, Committee Member	Ph.D., 2015
Dr. Kaustubh Thirumalai, UT DGS, Committee Member	Ph.D., 2016
Dr. Joshua "Bud" Davis, UT DGS, Committee Member	Ph.D., 2017
Dr. Dylan Meyer, UT DGS, Committee Member	Ph.D., 2018
Mr. Dennis Tong, UT DGS, Committee Member	Ph.D., 2019
Mr. Gabriel Tagliaro, UT DGS, Committee Member	Ph.D., 2020
Mr. Eric Goldfarb, UT DGS, Committee Member	Ph.D. Expected, 2021
Ms. Wei Xie, UT DGS, Committee Member	Ph.D. Expected, 2022
Mr. Peter Miller, UT DGS, Committee Member	Ph.D. Expected, 2022
Ms. Emily Bamber, UT DGS, Committee Member	Ph.D. Expected, 2024
Ms. Michele Tebolt, UT DGS, Committee Member	Ph.D. Expected, 2025

Postdoctoral Fellows Supervised

Dr. Rodrigo Fernandez, UTIG Postdoctoral Fellow (now at Univ. Santiago, Chile)	2012-2014
Dr. Chris Lowery, Buffler Postdoctoral Fellow (co-advised) (now at UTIG)	2016-2018
Dr. Cornelia Rasmussen, Postdoctoral Fellow (co-advised)	2017-2020

Funding History

Grant Number	Title	PI(s)	Start Date	End Date	Award
Texas GLO	Evaluation of Trinity paleochannel system (Region 1) for Texas Coastal Resiliency Master Plan	Goff Gulick Lowery Christeson	May 8, 2020	Dec. 31, 2022	\$1,372,530
ConTex	3D imaging of drill sites in Chicxulub impact crater	Gulick Meckel Christeson	Sept 1, 2019	Aug. 31, 2020	\$70,869
IODP-Columbia	IODP Science Evaluation Panel, Co-Chair Year 3	Gulick	Oct. 1., 2018	Sept. 30, 2019	\$60, 843
NSF-OCE-1737351	Collaborative Proposal: Chicxulub impact effects and the recovery of life using scientific drilling investigations at ground zero	Gulick Christeson Stockli	Sept. 1, 2017	Aug. 31, 2019	\$566,407

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IODP-Columbia	IODP Science Evaluation Panel, Co-Chair Year 2	Gulick	Oct. 1., 2017	Sept. 30, 2018	\$51,587
NSF-OCE-1654689	Collaborative Research: SISIE: South Island, New Zealand, Subduction Initiation Experiment	Van Avendonk Gulick	Aug. 1, 2017	July 31, 2020	\$764,544
IODP-Columbia	IODP Science Evaluation Panel, Co-Chair Year 1	Gulick	Oct. 1., 2016	Sept. 30, 2017	\$49,601
BOEM	Texas Offshore Sediment Resources Inventory	Gulick Christeson Goff	Sept 16, 2016	Sept 30, 2020	\$880,489
IODP-Columbia Univ.	Orienting cores using CT and borehole images for Chicxulub Expedition	Gulick	Dec. 1, 2016	Feb. 28, 2018	\$15,000
IODP-Columbia Univ.	Expedition 364: Drilling the Chicxulub Impact Crater, Co-Chief Salary Support Onshore	Gulick	July 1, 2016	Feb. 28, 2017	\$125,461
USGS-G16AP00150	Integrative onshore-offshore fault mapping and hazard assessment, Icy Bay, Southeast Alaska	Gulick	July 1, 2016	June 30, 2017	\$103,644
NSF-GLD-1638434	Collaborative Research: The 2015 Taan Fiord Landslide tsunami: An interdisciplinary study of cause and effect	Gulick	May 15, 2016	April 30, 2017	\$47,573
University of Leicester UTA16-000580	Vertical seismic profile source for IODP Expedition 364	Gulick	Jan. 1, 2016	Dec. 31, 2016	\$66,951
IODP-Columbia Univ.	Expedition 364: Drilling the Chicxulub Impact Crater, Co-Chief Salary Support Offshore	Gulick	Aug. 1, 2015	Feb. 28, 2017	\$269,951
JSG- SEED	Tracking sand in the Rio Grande incised valley to deep sea fan: Modern analog for the Frio and Wilcox plays	Gulick Mohrig Stockli Fernandez	Jan. 1, 2015	Dec 31, 2015	\$73,935

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OCE-1435121	Collaborative Research: Linking climate-driven changes in erosion to tectonic processes along the southern Alaska margin	Gulick	Sept. 1, 2014	Aug. 31, 2016	\$54,782
JSG- SEED	A pilot study to utilize AUV technology to map the ice-water-sediment interface of a marine-terminating glacier	Goff Gulick	Feb 1, 2014	Jan. 31, 2015	\$71,502
COL T341A59 amended	Post-Expedition Award: Integrating Expedition 341 discoveries with regional seismic images	Gulick	Nov 19, 2013	Jan. 31, 2015	\$14,848
COL T341A59	Expedition 341: South Alaska tectonics, climate, and sedimentation, Co-Chief Salary Support	Gulick	May 29, 2013	Jan. 30, 2014	\$130,324
OPP-1143843	Collaborative Research: Totten Glacier system and the marine record of cryosphere-ocean dynamics	Blankenship Gulick	Sept. 1, 2012	Aug. 31, 2015	\$620,716
USGS G12-PX01832	Southeast Alaska Fault Mapping Project	Gulick	Sept. 15, 2012	Jan. 16, 2014	\$20,000
RCUK 139-232603	Seabed Hazard Assessment Survey- Chicxulub impact structure, Mexico	Gulick Goff	Mar 15, 2013	Dec 31, 2013	\$227,189
USGS G12- AP20009	NEHERP: Evaluating active faulting and geohazards in the Yakutat Bay region of southeastern Alaska	Gulick	Dec 31, 2012	Dec 30, 2013	\$87,930
COL SA 12-13	Pre-Drilling Activity: Mapping the Sumatran marginal plateau in the 2004 rupture area	Gulick Austin	May 1, 2012	Apr 30, 2013	\$13,331
USGS G11-PX01641	Alaska Fault Mapping Project	Gulick	Sept 1, 2011	July 31, 2012	\$20,000

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OCE-1130078	Expedition Oriented Research: Sedimentation and tectonics in Kumano forearc basin evolution, NanTroSEIZE study area	Hayman Gulick Milliken	Oct 1, 2011	Sept 30, 2014	\$299,204
USGS G11-AC20096	Gulf of Alaska Law of the Sea Assessment	Gulick Christeson	April 7, 2011	Dec 7, 2013	\$199,016
OCE-1028001	RAPID: Offshore coseismic effects of the Port au Prince earthquake, Haiti	Gulick Hornbach	Feb 15, 2010	Feb 14, 2011	\$40,954
EAR-0408584 / EAR-1009986	Collaborative Research: St. Elias Tectonics and Erosion Project (STEEP)	Gulick, Christeson, Mann, van Avendonk, Horton	August 01, 2004	September 30, 2012	\$769,119 plus 2 year renewal for \$356,600
COL SA8-03	An evaluation of Neogene sedimentation on the Surveyor Fan, Gulf of Alaska: Site Augmentation proposal for IODP 686	Gulick	August 1, 2008	July 31, 2010	\$12,962
Army Corps	Investigation of Catastrophic Flooding by the Hubbard Glacier, Alaska	Gulick Goff	March 15, 2008	March 14, 2009	\$42,923
COL T314B59	Differences in resistivity measurements and implications for lithology, permeability and fracture characteristics, Nankai Trough, Japan	Gulick (On behalf of Martin)	Sept. 15, 2007	January 1, 2009	\$20,118
COL T314A59	Scales of deformation in fault zones from the Nankai Trough using Seismic Logging-While-Drilling Correlations	Gulick	Sept. 15, 2007	January 1, 2009	\$37,024

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OCE-0623165	Exploring structural controls on great earthquake rupture and architecture of the Sumatra-Andaman convergent margin: A regional seismic reflection survey in collaboration with the UK-National Oceanographic Center	Gulick Bangs Austin	Oct. 01, 2007	Sept. 30, 2009	\$350,072
OCE-0452340	NanTroSEIZE: 3-D Seismic investigation the Nankai Trough plate boundary system in the Kumano Basin	Bangs Gulick	March 01, 2005	February 28, 2010	\$496,380
JOI/USSSP 200402646-001	Toward a sequence stratigraphy of the Chicxulub impact basin infill: Integration of lithostratigraphy, biostratigraphy, and seismic stratigraphy	Gulick	March 01, 2005	February 28, 2006	\$8,618
OCE-0351620	Collaborative Research: Establishing Quaternary Climate/Terrestrial/ Oceanic Linkages in southern Alaska and IODP Site Survey	Gulick	May 01, 2004	April 31, 2006	\$81,108
OCE-0221103	Collaborative Research: Imaging and Modeling Impact Generated Deformation at the Chicxulub Crater, Joint US/UK/Mexico Investigation and IODP Site Survey	Gulick, Christeson	January 01, 2003	December 31, 2006	\$347,497 + supplement of \$175,647
EAR-0237008	Joint Continental Dynamics/JOI Workshop on Tectonic and Climate Interplay in the Gulf of Alaska	Gulick	April 01, 2003	March 31, 2004	\$24,804
GEO-0224501	Cataclysms and Catastrophes – The Role of Science in Natural and Human-Induced Disasters	Ellins, Gutierrez, Gulick, Christeson	Oct 01, 2002	September 30, 2004	\$152,126
JOI/USSSP S20265550	Site Augmentation in the Nankai Trough	Gulick	April 01, 2003	March 31, 2004	\$9,075

JOI/USSSP 418929- BA357	Investigation of Fluid Flow Indicators in Nankai Accretionary Prism 3-D Seismic Data through Seismic-LWD Integration at Frontal Thrust	Gulick	July 02, 2001	May 04, 2002	\$27,611
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Awards and Honors

Fellow of the Geological Society of America	2018
Eugene Shoemaker Memorial Award, Arizona State University	2017
Hanse-Wissenschaftskolleg Fellow, Delmenhorst, Germany	July-Oct., 2016
Co-chief Scientist for IODP Expedition 364 to Chicxulub Impact Crater	2016-2018
University of Texas Signature Course Essential Elements Award for Excellence in Teaching Oral Communication	2015
Jackson School Research Excellence Award	2015
UTIG Director's Circle of Excellence	2010, 2012, 2013, 2014, 2015, 2016, 2017
Co-chief Scientist for IODP Expedition 341 to Gulf of Alaska	2013-2015
Consortium for Ocean Leadership Distinguished Lecturer	2007-2008
Jackson School of Geosciences Research Achievement Award	2007-2009
Joint Oceanographic Institutions Distinguished Lectureship	2007-2008
Jackson School of Geosciences Research Fellowship	2006-2007
Jackson School of Geosciences Young Scientist Fellowship	2005-2006
Japanese Marine Science and Technology Award for Shinkai 6500	2000
Palisades Geophysical Institute Postdoctoral Fellow	1999-2002
Geological Society of America Annual Meeting Travel Grant	1998
Lehigh University College of Arts and Sciences Travel Grant	1998
Lehigh University Earth and Environmental Sciences Research Grant	1997
Best Student Paper Award, Seismological Society of America Eastern Section	1993

Invited Lectures

“Life and Death by Impact: Drilling for Clues”, Rice University, Houston, TX	2020
“Life and Death by Impact: Drilling for Clues”, Oklahoma State Univ., Stillwater, OK	2020
“Life and Death by Impact: Drilling for Clues”, Univ. California Los Angeles, CA	2020
“Life and Death by Impact: Drilling for Clues”, Univ. South Florida, St. Petersburg, FL	2019
“Life and Death by Impact: Drilling for Clues”, SciTech Museum & Curtin University, Perth, Australia	2018
“Life and Death by Impact: Drilling for Clues”, Purdue University, Lafayette, IN	2018
“Life and Death by Impact: Drilling for Clues”, Division Lecture, Caltech, Pasadena, CA	2018
“Life and Death by Impact: Drilling for Clues”, Louisiana State Univ., Baton Rouge, LA	2018
“Life and Death by Impact: Drilling for Clues”, West Texas Geology Fndn, Midland, TX	2018
“Life and Death by Impact: Drilling for Clues”, Univ. of Otago, Dunedin, New Zealand	2018
“Life and Death by Impact: Drilling for Clues”, Eugene Shoemaker Memorial Lecture, Phoenix, AZ	2017
“Drilling the Chicxulub impact structure: Resurfacing planets and links to life”, Dallas	

- Geological Society, Dallas, TX **2017**
- “Drilling the Chicxulub impact structure: Study of large impact formation and effects on life during IODP-ICDP Expedition 364”, Keynote Speaker, SciPy, Austin, TX **2017**
- “Southeast Alaska 1899 earthquake events & 2015 Taan Fiord landslide”, Distinguished International Visitor Program, Durham University, Durham, UK **2017**
- “Unroofing the St. Elias Mountains: Quantifying sediment flux in a collisional, glaciated margin using the deep sea record”, Distinguished International Visitor Program, Durham University, Durham, UK **2017**
- “Drilling the Chicxulub impact structure: Resurfacing planets and links to life”, Distinguished International Visitor Program, Durham University, Durham, UK **2017**
- “Drilling the Chicxulub impact structure: Resurfacing planets and links to life”, Dinos After Dark Program, Natural History Museum, New York, New York **2016**
- “Unroofing the St. Elias Mountains: Quantifying sediment flux in a collisional, glaciated margin using the deep sea record”, University of Nebraska, Lincoln, Nebraska **2016**
- “Drilling the Chicxulub impact structure: Study of large impact formation and effects on life during IODP-ICDP Expedition 364”, University of Nebraska, Lincoln, Nebraska **2016**
- “Drilling the Chicxulub impact structure IODP-ICDP Joint Expedition 364 April-May 2016”, MARUM, University of Bremen, Bremen, Germany **2016**
- “Drilling the Chicxulub impact structure: Study of large impact formation and effects on life”, Hanse-Wissenschaftskolleg, Delmenhorst, Germany **2016**
- “Drilling the Chicxulub impact structure IODP-ICDP Joint Expedition 364 April-May 2016”, Alfred Wegner Institute, Bremerhaven, Germany **2016**
- “Comparative Planetology: Drilling the Chicxulub impact structure during IODP-ICDP Joint Expedition 364”, Yucatan Maya Festival, Merida, Mexico **2016**
- “Geophysical characterization of the Chicxulub Impact Crater: Insights into planetary processes and extinction”, Lehigh University, keynote speaker at Graduate Research Symposium, Bethlehem, Pennsylvania **2015**
- “Insights into late-stage basin collapse from the terrestrial Chicxulub crater”, Brown University-Vernadsky Institute Microsymposium 56- The Crust of the Moon, Insights into Early Planetary Processes, The Woodlands, Texas **2015**
- “Drilling the Chicxulub impact structure: IODP-ICDP Joint Expedition 364”, Latin American Forum XII, Mexico City, Mexico **2015**
- “Source to sink on overdrive: Tectonic-climate interactions in the Gulf of Alaska, Lehigh University, keynote speaker at Graduate Research Symposium, Bethlehem, Pennsylvania **2015**
- “Geophysical characterization of the Chicxulub Impact Crater: Insights into planetary processes and extinction”, Brown University, Providence, Rhode Island **2014**
- “Tale of two fans: Tectonics vs climate in the Gulf of Alaska sediments”, Shell Energy Company, Houston, Texas **2014**
- “The 65.6 million year old Chicxulub impact crater: Insights into planetary processes, extinction, and evolution”, Austin Gem and Mineral Society, Austin, Texas **2014**
- “From the field to Decisions Space Desktop: UTIG Marine Geology and Geophysics Field Course teaches acquisition, processing, interpretation, and integration”, Landmark Innovation Forum 2013, Houston, Texas **2013**

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- “Geophysical characterization of the Chicxulub Impact Crater: Insights into planetary processes and extinction”, Colorado School of Mines, Golden, Colorado **2013**
- “Evolution of southeast Alaska shelf and fan since the Miocene: Roles of sediment accommodation, glacial systems, and tectonic-climate feedback”, Shell Energy Company, Houston, Texas **2013**
- “The 65.5 million year old Chicxulub Impact Crater: Insights into planetary processes, extinction and evolution”, Austin Forum, Texas Advanced Computer Center, Austin, Texas **2013**
- “A kinematic backstop model for landward vergence: Implications for extended updip rupture”, GSA Penrose Conference, Forearcs of Convergent Margins, Il Ciocco, Italy **2012**
- “Effects of surface processes on subduction zone dynamics” Department of Geological Sciences, UT-Austin **2011**
- Chapman Distinguished Lecturship, University of Alaska- Fairbanks, presented talks: **2011**
- “Crustal structure, history, and deformation of the Yakutat Terrane” and “Tectonic-climate interactions in southeast Alaska”, Anchorage, AK
- “Effects of surface processes on subduction cycles and dynamics, invited talk at Alaska GeoPRISMS workshop, Portland, OR **2011**
- “Marine geophysical insights into subduction zone geohazards”, presented at University of Oklahoma, Norman, OK **2010**
- “Geohazards of subduction zones and how marine geophysics can yield insights: Examples from the Nankai Trough and Sumatran margin”, presented at University of Texas at El Paso and at University of Southampton, National Oceanography Centre, UK **2009**
- Consortium for Ocean Leadership lecture series: “One Rock to Change the World: Story of the Chicxulub Impact Crater”, presented at Univ. of St. Thomas, Univ. of Arkansas, Montana Tech., New Mexico State Univ., Renesaller Polytechnical Inst., Georgia Southern Univ., Queens College, and Univ. of Florida **2007-2008**
- Environmental Sciences Institute Hot Science, Cool Talks, University of Texas **2008**
- “Bolide impact hazards: Lessons from Chicxulub and smaller events:”, IODP Geohazards Workshop, Portland, Oregon **2007**
- “Imaging and Drilling the Chicxulub Impact Crater”, Seminar Series, Universidad Nacional Autonoma Mexico, Mexico City, Mexico **2007**
- “Subduction Zones: A story of deformation, dewatering, and great earthquakes,” Foster-Hewitt Lecture Series, Lehigh University, Bethlehem, PA **2004**
- “3-D images of the outer Nankai accretionary margin: Reconstructing a prism,” Seminar Series, University of Florida, Gainesville, FL **2003**
- “Tectonic interplay between oblique subduction and Mendocino triple junction migration along the southern Cascadia subduction zone, offshore northern California,” GSA Penrose Conference: Great Cascadia Earthquake Tricentennial, Seaside, OR **2000**
- “Mendocino triple junction influence on and neotectonic implications of seismically imaged Quaternary faulting in the offshore Eel River forearc basin, northern California,” 2000 PANGA meeting, Corvallis, OR **2000**

Teaching

Professor, *Planetary Geology and Geophysics*, co-taught with John Lassister for upper level undergrads and grads including mission design concepts **2020**

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Professor, *The Interactive Ocean: History, Science and People on the Blue Planet*, Freshman Signature course, University of Texas at Austin **2013-2015**

Director and Professor/Lecturer, *Marine Geology and Geophysics Field Course*, designed and taught laboratory and at sea field course supplying hands on experience with a range of MG&G techniques, University of Texas at Austin **2008-2019**

Professor/Lecturer, Individual research directed study by graduates and undergraduates **2006-2020**

Professor/Lecturer, *Marine Tectonics*, team taught covering plate boundary processes, upper level undergraduates and graduate students, enrollment of 20-35 students per year (majority undergraduate), University of Texas at Austin **2006-2020**

Guest Lecturer, *Mass Extinctions*, University of Texas at Austin **2016**

Guest Lecturer, *Planetary Science*, University of Texas at Austin **2012, 2014, 2016**

Guest Lecturer, *Subduction Zones*, University of Texas at Austin **2012, 2014, 2016, 2018**

Guest Lecturer, *Tectonics*, University of Texas at Austin **2001-2005**

Substitute Lecturer, *Seismology, Rocks and Minerals, Sedimentology, and Geographic Information Systems*, Lehigh University **1997-1998**

Teaching Assistant, *Seismology, Geographic Information Systems, Structural Geology, Hydrogeology, and Introduction to Geology*, Lehigh University **1995-1998**

Documentaries

Episode on Gulf of Mexico on National Geographic's "Drain the Oceans" **2018**

"Day the Dinos Died", NOVA-Public Broadcasting Systems produced by Barcroft Media and NOVA (re-broadcast in 2019 and 2020) **2017**

"The Day the Dinosaurs Died", British Broadcasting Corporation (BBC-2) produced by Barcroft Media **2017**

"The Day the Dinosaurs Died", produced by Barcroft Media, international version broadcast under various names in Germany, Australia, France, Japan, and other countries **2017**

"Haiti's Killer Quake: Why It Happened", Pioneer Productions **2010**

Workshops and Service

Department of Geological Sciences, Chair internal search committee **2020**

IODP Renewal Committee- SOD23+ **2018-2021**

Jackson School of Geosciences, Dean search committee **2019**

UTIG Director's Search Committee, Co-chair **2018-2019**

IODP Science Evaluation Panel, Co-Chair **2016-2020**

Marine Seismic Research Oversight Committee, ex-officio IODP representative **2017-2019**

Steering Committee for UT Pop-Up Institute on Planetary Habitability (6 week long) **2018**

Co-convener, IODP Expedition 364 Second Post-cruise Meeting, Merida, México **2018**

Curriculum Vitae: Sean P. S. Gulick

Marcus Langseth Science Oversight Committee	2016-2017
Steering Committee for Subduction Zone Observatory Workshop, Boise, Idaho	2016
Steering Committee for Antarctica Drilling Workshop, College Station, Texas	2016
IRIS Scientific Grand Challenges Committee Co-chair	2014-2016
IODP Science Evaluation Panel	2014-2016
Jackson School of Geosciences Strategic Planning Committee	2015-Present
Chair, Jackson School of Geosciences, Marine Geosciences Theme	2011-2019
Jackson School of Geosciences Graduate Admissions Committee	2008-2014
Guest Associate Editor, Geosphere, Alaska Tectonics and Climate Special Issue	2012-2014
Chair, Jackson School of Geosciences, Strategic Planning Council	2011-2013
GSA Penrose Subduction Zone Dynamics, Il Ciocco, Italy	2012
STEEP Mini-workshop on Surface Processes	2012
EarthScope Alaska Workshop, Co-convener	2011
USGS Marine Geohazards Program Meeting	2011
AGU Chapman Source to Sink systems, Oxnard, California	2011
GeoPRISMS Subduction Cycles and Dynamics, Bastrop, Texas	2011
NSF RAPID Haiti Workshop Steering Committee	2010
Sumatra Great Earthquakes Workshop, Fondation des Treilles, France	2010
Steering Committee for Future of US Academic Marine Seismology Workshop	2010
MARGINS renewal Workshop	2010
Earthscope Science Planning Workshop	2009
Member of the INVEST Steering Committee for planning renewal of IODP	2008-2009
Steering Committee US CHART meeting for planning US IODP renewal	2009
Co-convener of STEEP/IODP Alaska Workshop, Austin, TX	2009
Member of the Site Survey Panel of IODP	2007-2009
Co-chair IODP-MI Depth Scales Committee	2006
IODP-ICDP Chicxulub Drilling Workshop, Steering Committee	2006
1 st International Conference on Impact Cratering in the Solar System, ESA, Netherlands	2006
GSA Backbone of the Americas meeting, Mendoza Argentina	2006
International Core-Log-Seismic Integration Workshop, Keynote Speaker	2005
GSA Penrose Conference: Arc-Continent Collisions	2005
International 3-D Seismic Workshop, Lamont-Doherty Earth Observatory	2005
Member of the Scientific Measurements and Science Technology Panels of IODP	2003-2005
IODP Downhole Tools Workshop	2004
Member of the interim Scientific Measurements Panel (iSciMP) of IODP	2002-2003
Co-convener of Joint NSF-JOI Tectonic-Climate Interplay Workshop	2003
3 rd International Conference on Large Meteorite Impacts	2003
University of Delaware research vessel advisory committee	2001-2003
R/V Maurice Ewing Midlife Refit Workshop	2002
NanTroSEIZE conference on Riser Drilling in Nankai Trough	2002
Conference on U.S. Participation in IODP (CUSP)	2002
Leg 190/196 2 nd Post-cruise Meeting in Kochi, Japan	2002
NSF-MARGINS Source-to-Sink planning workshop in Lake Tahoe, California	2000
PANGA GPS workshop to interface with EARTHSCOPE's Plate Boundary Observatory	2000

Professional Affiliations

American Geophysical Union, Geological Society of America, Seismological Society of America

Publications

Books (2)

Morgan, J.V., **Gulick, S.P.S.**, Mellet, C., Green, S. and the Expedition 364 Scientists, *Proc. IODP*, 364, College Station TX (International Ocean Discovery Program), doi:10.14379/iodp.proc.364.103.2017, 2017.

Jaeger, J.M., **Gulick, S.P.S.**, LeVay, L.J., and the Expedition 341 Scientists, *Proc. IODP*, 341, College Station TX (Integrated Ocean Drilling Program), doi:10.2204/iodp.proc.341.101.2014, 2014.

Journal Articles (* denotes student; # postdoc first authors, all works peer-reviewed)

Submitted (12)

Goderis, S., Sato, H., Ferrière, L., Schmitz, B., Burney, D., Kaskes, P., Vellekoop, J., Wittmann, A., Claeys, P., de Graaff, S. J., Déhais, T., de Winter, N. J., Elfman, M., Feignon, J.-G., Ishikawa, A., Koeberl, C., Kristiansson, P., Neal, C. R., Owens, J. D., Schulz, T., Sinnesael, M., Vanhaecke, F., Van Malderen, S. J. M., Bralower, T. J., Gulick, S. P. S., Lowery, C. M., Morgan, J. V., Smit, J., Whalen, M. T., and the IODP-ICDP Expedition 364 Scientists, Global iridium layer identified within the Chicxulub impact structure: *Science Advances*, submitted, 2020.

Cockell, C.S., Coolen, M.J.L., Schaefer, B., Grice, K., Wuchter, C., Schnieders, L., Morgan, J.V., **Gulick, S.P.S.**, Wittmann, A., Lofi, J., Christeson, G., Kring, D.A., Whalen, M., Bralower, T., Osinski, Claeys, P., Kaskes, P., de Graaff, S., Dehais, T., Goderis, S., and the IODP-ICDP Expedition 364 Scientists, Shaping of the present-day deep biosphere at Chicxulub by the impact catastrophe that ended the Cretaceous: *Science Advances*, submitted, 2020.

De Graaff, S., Kaskes, P., Déhais, T., Goderis, S., Debaille, V., Ross, C., **Gulick, S.**, Feignon, J.-G., Ferrière, Koeberl, C., Smit, J., Matielli, N., and Claeys, P., New insights into the formation and emplacement of impact melt rocks within the Chicxulub impact structure, following the 2016 IODP-ICDP Expedition 364: *Geological Society of America Bulletin*, submitted, 2020.

Clary, W., Worthington, L., **Gulick, S.**, Scudiero, E., Scuderi, L., Quantifying the relative influence of ice sheets, faults, and failure zones with respect to drainage cross section shape in the Gulf of Alaska: *Marine Geology*, re-submitted, 2020.

Ormö, J., **Gulick, S.P.S.**, Whalen, M.T., King, D.T., Jr., Sturkell, E., Morgan, J., Assessing event magnitude and target water depth for marine-target impacts: Ocean resurge deposits in the Chicxulub M0077A drill core compared: *Earth and Planetary Science Letters*, re-submitted, 2020.

Lowery, C.M., Jones, H., Bralower, T.J., Perez Cruz, L., Gebhardt, C., Whalen, M.T., Chenot, E., Smit, J., Purkey Phillips, M., Choumiline, K., Arenillas, I., Arz, J.A., Garcia, F., Ferrand, M., **Gulick, S.P.S.**, and IODP Expedition 364 Scientists, Early Paleocene paleoceanography and export productivity in the Chicxulub crater: *Paleoceanography and Paleoclimatology*, re-submitted, 2020.

- Schulte, F. M., Wittmann, A., Jung, S., Morgan, J. V., Gulick, S. P. S., Kring, D. A., Grieve, R. A. F., Osinski, G. R., Riller, U., and IODP-ICDP Expedition 364 Science Party, Ocean resurge-induced impact melt dynamics on the peak-ring of the Chicxulub impact structure, México, *Int. J. Earth. Sci.*, submitted, 2020.
- Ebert, M., Poelchau, M. H., Kenkmann, T., Gulick, S. P. S., Hall, B., Lofi, J., McCall, N., Rae, A. S. P., A comparison of stress orientation indicators in Chicxulub's peak ring: Kinked biotites, basal PDFs, and feather features, in *Large Meteorite Impacts and Planetary Evolution VI Conference Volume*, Reimold, ed., Geological Society of American Special Publication, submitted, 2020.
- Ross, C. H.*, Stockli, D. F., Rasmussen, C., Gulick, S. P. S., de Graaff, S. J., Claeys, P., Zhao, J., Xiao, L., Pickersgill, A. E., Schmieder, M., Kring, D. A., Wittmann, A., Morgan, J. V., Evidence of Carboniferous Arc Magmatism Preserved in the Chicxulub Impact Crater, Geological Society of America Bulletin, submitted, 2020.
- Zhao, J., Xiao, L., Xiao, Z., Morgan, J. V., Osinski, G.R., Neal, C. R., Gulick, S. P. S., Riller, U., Claeys, P., Zhao, S., Prieur, N. C., Nemchin, A., Yu, S., and IODP-364 Science Party, Shock-deformed Zircon from the Chicxulub Impact Crater and Implications for the Cratering Process, *Geology*, submitted, 2020.
- Shuck, B.*, Van Avendonk, H., Gulick, S. P. S., Gurnis, M., Sutherland, R., Stock, J., Patel, J., Hightower, E., Sastrup, S., Hess, T., Strike-slip Enables Subduction Initiation beneath a Failed Rift: New Seismic Constraints from Puysegur Margin, New Zealand, *Tectonics*, submitted, 2020.
- Ramirez, S. G.*, Hayman, N. W., Gulick, S. P. S., Milliken, K. L., Stockli, D. F., Masago, H., Sediment Provenance, Routing, and Tectonic Linkages in the Kumano Forearc Region, Japan, *Basin Research*, submitted, 2020.

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- Bralower, T.J., Cosmidis, J., Fantle, M., Lowery, C.M., Passey, B., **Gulick, S.P.S.**, Morgan, J., Vajda, V., Whalen, M., Wittmann, A., Artemieva, N., Farley, K., Goderis, S., Kring, D., Lyons, S., Rasmussen, C., Sibert, E., Rodriguez-Tovar, F.J., Turner-Walker, G., Zachos, J., Carte, J., Chen, S., Cockell, C., Coolen, M., Freeman, K., Garber, J., Gonzalez, M., Grice, K., Heaney, P.J., Jones, H., Schaefer, B., Smit, J., Tikoo, S., and Hajek, E., The habitat of the nascent Chicxulub crater: *AGU Advances*, 1, e2020AV000208, doi.org/10.1029/2020AV000208, 2020.
- Whalen, M.T., **Gulick, S.P.S.**, Lowery, C.M., Bralower, T.J., Morgan, J.V., Grice, K., Schaefer, B., Smit, J., Ormö, J., Wittmann, A., Kring, D.A., Lyons, S., Goderis, S., and the IODP Expedition 364 Scientists, Winding down the Chicxulub impact: the transition between impact and normal marine sedimentation near ground zero: *Marine Geology*, 430, 106368, doi.org/10.1016/j.margeo.2020.106368, 2020.
- Smith, V., Warny, S., Grice, K., Schaefer, B., Whalen, M.T., Vellekoop, J., Chenot, E., **Gulick, S.P.S.**, Arenillas, I., Arz, J.A., Bauersachs, T., Bralower, T., Demory, F., Gattacceca, J., Jones, H., Lofi, J., Lowery, C.M., Morgan, J., Nunez Otano, N.B., O'Keefe, J.M.K., O'Malley, K., Rodriguez-Tovar, F.J., Schwark, L., and the Expedition 364 Scientists, Life and death in the Chicxulub impact crater: A record of the Paleocene-Eocene Thermal Maximum: *Climate of the Past*, 16, 1889-1899, doi.org/10.5194/cp-16-1889-2020, 2020.
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- Freeman, K.H., Organic matter from the Chicxulub crater exacerbated the K–Pg impact winter: *Proceedings of the National Academy of Sciences*, 117, pp.25327-25334, 2020.
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- Bralower, T., Cosmidis, J., Heaney, P., Kump, L., Morgan, J., Harper, D., Lyons, S., Freeman, K., Grice, K., Wendler, J., Zachos, J., Artemieva, N., Chen, A., **Gulick, S.**, House, C., Jones, H., Lowery, C., Nims, C., Schaefer, B., Thomas, E., Vajda, V., Origin of a global carbonate layer deposited in the aftermath of the Cretaceous-Paleogene boundary impact: *Earth and Planetary Science Letters*, 548, 116476, doi.org/10.1016/j.epsl.2020.116476, 2020.
- Collins, G. S., Patel, N., Davison, T. M., Rae, A. S. P., Morgan, J. V., **Gulick, S. P. S.**, and IODP-ICDP Expedition 364 Science Party, A steeply-inclined trajectory for the Chicxulub impact: *Nature Communications*, 11, 1480, doi.org/10.1038/s41467-020-15269-x, 2020.
- Kring, D.A., Tikoo, S.M., Schmieder, M., Riller, U., Rebolledo-Vieyra, M., Simpson, S.L., Osinski, G.R., Zylberman, W., Gattacceca, J., Wittmann, A., Verhagen, C.M., Cockell, C., Coolen, M.J.L., Longstaffe, F.J., **Gulick, S.P.S.**, Morgan, J.V., Bralower, T.J., Chenot, E., Christeson, G.L., Claeys, P., Ferrière, L., Gebhardt, C., Goto, K., Green, S.L., Jones, H., Lofi, J., Lowery, C.M., Mellett, C., Ocampo-Torres, R., Perez-Cruz, L., Pickersgill, A., Poelchau, M., Rae, A.S.P., Rasmussen, C., Sato, H., Smit, J., Tomioka, N., Urrutia-Fucugauchi, J., Whalen, M.T., Long, X., and Yamaguchi, K.E., Probing the hydrothermal system of the Chicxulub Crater and its potential as a deep Earth habitat: *Science Advances*, 6, eaaz3053, doi.org/10.1126/sciadv.aaz3053, 2020.
- Zhao, J., Long, X., **Gulick, S.P.S.**, Morgan, J.V., Kring, D., Urrutia-Fucugauchi, J., Schmieder, M., de Graaff, S.J., Wittmann, A., Ross, C.H., Claeys, P., Pickersgill, A., Kaskes, P., Goderis, S., Rasmussen, C., Vajda, V., Ferreira, L., Feignon, J.-G., Chenot, E., Perez-Cruz, L., Sato, H., Yamaguchi, K., Geochemistry, Geochronology and Petrogenesis of Grantoids from Mexico Gulf, Maya Block: Implications for Assembly of Pangea: *Gondwana Research*, 82, p. 128-150, doi.org/10.1016/j.gr.2019.12.003, 2020.
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- McCall, N.*, **Gulick, S.**, Hall, B., Lofi, J., Poelchau, M., Data Report: orientation correction of Chicxulub core recovered from IODP/ICDP Expedition 364: *in Proc. IODP Vol. 364*, eds. Morgan, J., **Gulick, S.**, Mellett, C.L., Green, S.L., and the Exp. 364 Sci., publications.iodp.org, doi.org/10.14379/iodp.proc.364.201.2020, 2020.
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- Frederik, M.C.G.*, **Gulick, S.P.S.**, and Miller, J.J., Effect on subduction of deeply buried seamounts offshore of Kodiak Island: *Tectonics*, published online 26 May 2020, doi.org/10.1029/2019TC005710, 2020.
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- Hightower, E., Stratigraphic architecture of Solander Trough records Southern Ocean currents and subduction initiation beneath southwest New Zealand: *Basin Research*, published online 18 May 2020, doi.org/10.1111/bre.12473, 2020.
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- Tang, Q., Sun., J., **Gulick, S.**, Sun, L., Jing, Z., Submesoscale instabilities and turbulent mixing of an oblique anticyclonic eddy in the Gulf of Alaska investigated by marine seismic survey: *Journal of Geophysical Research-Oceans, Journal of Geophysical Research: Oceans*, v 125, no. 1, e2019JC015393, 2020.
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- Montelli, A.*, **Gulick, S.P.S.**, Fernandez-Vasquez, R., Frederick, B., Shevenell, A., Leventer, A., and Blankenship, D., Seismic stratigraphy of the Sabrina Coast shelf, East Antarctica: history of early dynamic glaciations: *GSA Bulletin*, 132, p. 545-561, doi.org/10.1130/B35100.1, 2020.

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