

# Christy B. Till

(she/her/hers)

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## RESEARCH INTERESTS

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Magma Genesis; Volcano Science; Experimental Petrology; Subduction Zones; Mantle Melting; Diffusion Chronometry; Magmatism on Exoplanets; Inclusion in the Geosciences

## EDUCATION

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- 2011 Ph.D. in Geochemistry/Geology (Advisor: T.L. Grove)  
Massachusetts Institute of Technology
- 2005 M.S. in Geological Sciences (Advisors: P. Gans & F. Spera)  
University of California, Santa Barbara
- 2004 B.S. in Geological Sciences (Highest Honors)  
University of California, Santa Barbara

## PROFESSIONAL EXPERIENCE

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- 2020-present *Associate Professor, School of Earth & Space Exploration*  
Arizona State University
- 2014-2020 *Assistant Professor, School of Earth & Space Exploration*  
Arizona State University
- 2012-2013 *Mendenhall Postdoctoral Scholar, Volcano Science Center*  
US Geological Survey
- 2012-2013 *Visiting Scholar, Dept. of Geological & Environmental Sciences*  
Stanford University
- 2011 *Postdoctoral Associate, Dept. of Earth, Atmospheric and Planetary Sciences*  
Massachusetts Institute of Technology
- 2006 *Post-MS Research Assistant, Dept. of Geological Sciences*  
UC Santa Barbara
- 2005 *Forest Geologist, Los Padres National Forest*  
US Forest Service

## LEADERSHIP POSITIONS/ACTIVITIES

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- 2025-present Associate Director of Faculty, Arizona State University
- Leadership position to oversee faculty administration across the School of Earth & Space Exploration (unit with 70 faculty)

2025-present	American Geophysical Union Board of Directors ( <i>elected</i> ) <ul style="list-style-type: none"> <li>Fiduciary responsibility for the business, organization and legal affairs of the organization</li> </ul>
2024-2025	Arizona State University Leadership Academy
2021-2023	American Geophysical Union LANDInG Fellow <ul style="list-style-type: none"> <li>1 of 12 individuals selected for the inaugural cohort of AGU's DEI Leadership Academy</li> <li>Led project to revisit graduate assessment and qualifying exams</li> </ul>
2020-2021	Associate Director for Inclusive Community, Arizona State University <ul style="list-style-type: none"> <li>Leadership position to facilitate &amp; incentivize diversity, equity and inclusion work across the School of Earth &amp; Space Exploration</li> <li>Chair of Inclusive Community Strategic Plan Task Force &amp; led development of strategic plan</li> </ul>
2019-2020	Secretary, American Geophysical Union's Volcanology, Geochemistry and Petrology Section ( <i>elected</i> ) <ul style="list-style-type: none"> <li>Solicited, organized &amp; scheduled section's contributions to Fall Meeting for 2 years</li> </ul>
2018-2022	Subduction Zones in 4D (SZ4D) Steering Committee Member <ul style="list-style-type: none"> <li>Inaugural steering committee to develop a new scientific consortia and funding program for subduction zone hazard science</li> <li>Co-chair Magmatic Drivers of Eruption Working Group</li> <li>Founder &amp; co-chair Building Equity &amp; Capacity in the Geosciences Working Group</li> </ul>
2018-2022	Co-I, Community Response to Volcanic Eruptions NSF Research Coordination Network (CONVERSE) <ul style="list-style-type: none"> <li>Inaugural Co-I for a research network to design the processes for and coordinate the US academic response to volcanic eruptions with the USGS</li> </ul>
2013-2014	Vice Chair, American Geophysical Union Council ( <i>elected</i> ) <ul style="list-style-type: none"> <li>1<sup>st</sup> early career member to hold position in history of organization</li> <li>Responsible for governing AGU Council in partnership with AGU President-Elect</li> </ul>
2010-2014	American Geophysical Union Council ( <i>elected, two successive terms</i> ) <ul style="list-style-type: none"> <li>Governing the scientific affairs of the organization (forming science policy, generating and deliberating on science-related ideas and programs, &amp; advising on science and member issues)</li> </ul>

#### **AWARDS, HONORS & FELLOWSHIPS**

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2024	Daly Lecture, American Geophysical Union's Volcanology, Petrology & Geochemistry Section
2020	Meierjurgan Faculty Fellowship, University of Oregon ( <i>declined due to COVID-19</i> )
2019	Early Career Award, Geological Society of America's Mineralogy, Geochemistry, Volcanology & Petrology Division
2017	ASU School of Earth & Space Exploration Best Graduate Professor
2017	NSF Faculty Early Career (CAREER) grant recipient
2016	Kavli Frontiers of Science Fellow, National Academy of Sciences
2014	AGU Trailblazer Award ( <i>for service in AGU leadership</i> )
2012-2013	USGS Mendenhall Postdoctoral Fellowship
2010	AGU Outstanding Student Paper Award, Volcanology, Geochemistry, Petrology
2007-2010	NSF Graduate Research Fellowship
2007	AGU Outstanding Student Paper Award, Study of the Earth's Deep Interior
2006-2007	MIT Presidential Fellowship
2005	UCSB Geology G.K. Gilbert Award ( <i>best graduate student talk</i> )

2005	UCSB Geology Teaching Assistant of the Year
2004	UCSB Geology Outstanding Senior in Geological Sciences
2002-2003	UCSB Vice Chancellor of Research Undergraduate Research Grant
2003	UCSB Faculty Women's Scholarship
2002	UCSB Robert M. Norris Prize in Field Geology

## PUBLICATIONS

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**Till Google Scholar citations: 2789, h-index: 23** (as of Oct. 8, 2025)

### Key to Citation Formatting:

Student, A. = Till Primary Graduate Advisee

Student, A. = Till Primary Undergraduate Advisee

**\*\*Student, A.** = Graduate Student Project Advised by Till

**‡Postdoc, A.** = Till Postdoctoral Advisee

*A Note on Publication Order Norms: First author conducted the majority of the work, with subsequent authors listed in order of relative contribution from most to least. For papers where a student is the first author, the primary advisor is traditionally second.*

### PAPERS IN PREP/REVIEW

45) **Till, C.B., ‡Goltz, A.E., ‡deGraffenried, R., in prep.**, Life in the Fast Lane: Observations from a Compilation of Magma Flux, Ascent & Decompression Rates (invited). *Bulletin of Volcanology*.

44) **‡Goltz, A.E., Till, C.B., Kent, A.J., in review.**, From the bottom up: Calculating mantle-derived magma flux using subduction parameters & petrologic constraints at oceanic arcs. *G-cubed*.

43) **\*\*Jacobs, S., \*\*Karageozian, M., Till C.B., Unterborn, C., Hull, S., and Panero, W., in revision**, Modeled Crystallization of Exoplanet Bulk Silicate Mantles: Implications for Magma Ocean Solidification and Early Crust Formation & Observability. *JGR Planets*.

### PEER-REVIEWED PUBLICATIONS

42) **Till, C.B., Blatter, D.L., Folguera, A., LaFemina, P., Maryliyani, G.I., Ruch, J., in press**, Tectonic Controls on the Distribution and Characteristic of Volcanoes (invited), in *Encyclopedia of Volcanoes (3<sup>rd</sup> Edition)*.

41) **\*\*Ravi, S., Till, C.B., Robinson, M., 2025**, On the Origin of Silicic Magmas on the Moon. *Planetary Science Journal*.

40) **Till, C.B., 2025**, Magmatic Trees: A Method to Compare Processes Between Igneous Systems. *Volcanica*. v. 8(1), p. 135-157.

39) **‡Wieser, P.E., Kent, A. J., Till, C. B., Abers, G., 2023**, Geophysical and Geochemical Constraints on Magma Storage Depths along the Cascade Arc: Knowns and Unknowns. *Geochemistry, Geophysics, Geosystems*. v. 24(11), e2023GC011025.

38) **Kent, A.J., Till, C.B., Cooper, K.M., 2023**, Start me up: The relationship between volcanic eruption characteristics and eruption initiation mechanisms, *Volcanica*. v. 6(2), p. 161-172.

37) **Zapata, S., Jaramillo-Rios, J.S., Botello, G.E., Siachoque, A., Calderon-Día, Cardona, A., Till, C.B., Valencia, V., 2023**, Miocene Paleogeography of NW Colombia: A review of the

sedimentary and magmatic evolution of the Amagá Basin a century after Grosse's work, *Revista de la Academia Colombiana de Ciencias Exactas, Físicas y Naturales*. v. 47. Available [here](#).

36) ~~Wieser~~, **P.E.**, Kent, A. J., **Till, C. B.**, 2023, Barometers behaving badly II: A critical evaluation of Cpx-only and Cpx-Liq thermobarometry in variably-hydrous arc magmas, *Journal of Petrology*. v. 64(8), egad050.

35) ~~Wieser~~, **P.E.**, Kent, A. J., **Till, C. B.**, Donovan, J., Neave, D. A., Blatter, D. L., & Krawczynski, M. J., 2023, Barometers Behaving Badly I: Assessing the Influence of Analytical and Experimental Uncertainty on Clinopyroxene Thermobarometry Calculations at Crustal Conditions, *Journal of Petrology*, v. 64(2), egac126.

34) ~~Wieser~~, **P.**, Petrelli, M., Lubbers, J., Wieser, E., Ozaydin, S., Kent, A. and **Till, C.**, 2022, Thermobar: An open-source Python3 tool for thermobarometry and hygrometry, *Volcanica*, v. 5(2), p. 349–384. doi: 10.30909/vol.05.02.349384.

33) Brugman, K.K., **Till, C.B.**, Bose, M., 2022, Common assumptions and methods yield overestimated diffusive timescales, as exemplified in a Yellowstone post-caldera lava, *Contributions to Mineralogy & Petrology*, v. 177(6), 63.

32) Phillips, M., **Till, C. B.**, 2022, Crustal Storage and Magmatic Ascent Rates of the Mt. Shasta Primitive Magnesian Andesite, *Contributions to Mineralogy & Petrology*, v. 177(1), p. 1-27.

31) Brugman, K.K., Phillips, M., **Till, C.B.**, 2021, Experimental Determination of Mantle Solidi and Melt Compositions for Two Likely Rocky Exoplanet Compositions, *JGR-Planets*, v. 126 (7), e2020JE006731.

30) Shamloo, H., **Till, C.B.**, Hervig, R., 2021, Multi-Mode Magnesium Diffusion in Sanidine: Application for Geospeedometry in Magmatic Systems, *Geochemica et Cosmochemica Acta*, v. 298, p.55-69.

29) Guild, M., **Till, C.B.**, Mizukami, T., Wallis, S., 2020, Petrogenesis of the Higashi-Akaishi Ultramafic Body: Implications for lower crustal foundering and mantle wedge processes, *Journal of Petrology*, v. 61(9), p. 1-25.

28) ~~Iacovino~~, **K.**, Guild, M., **Till, C.B.**, 2020, Aqueous fluids are effective oxidizing agents of the mantle in subduction zones, *Contributions to Mineralogy & Petrology*, v. 175, no. 4, p. 1-21.

27) Grove, T.L., **Till, C.B.**, 2019, H<sub>2</sub>O-rich mantle melting near the slab-wedge interface, *Contributions to Mineralogy & Petrology*, v. 174, no. 10 p. 80-102.

26) **Till, C.B.**, Vazquez, J.A., Stelten, M., Shamloo, H., Shaffer, J., 2019, Co-existing Discrete Bodies of Rhyolite and Punctuated Volcanism Characterize Yellowstone's Post-Lava Creek Tuff Caldera Evolution, *Geochemistry, Geophysics, Geosystems*, v. 20(8), p. 3861-3881.

25) Brugman, K., **Till, C.B.**, 2019, A Low-Aluminum Clinopyroxene-Liquid Geothermometer for High-Silica Magmatic Systems, *American Mineralogist*, v. 104(7), p. 996-1004.

24) Shamloo, H., **Till, C.B.**, 2019, Decadal Transition from Quiescence to Supereruption; Petrologic Investigation of the Lava Creek Tuff, Yellowstone Caldera, WY, *Contributions to Mineralogy & Petrology*, v.174(32).

- 23) **Till, C.B.**, Kent, A., Abers, G., Janiszewski, H., Gaherty, J., Pitcher, B., 2019, The Causes of Spatiotemporal Variations in Erupted Fluxes and Compositions Along a Volcanic Arc, *Nature Communications*, v. 10 (1350), p. 1-12 (Open Access).
- 22) Edwards M.A., M.G. Jackson, A.R.C. Kylander-Clark, J. Harvey, G.A. Hagen-Peter, G.G.E. Seward, **C.B. Till**, J.V. Adams, J.M. Cottle, B.R. Hacker, F.J. Spera, 2019, Beyond EM2: extreme enriched and heterogeneous  $^{87}\text{Sr}/^{86}\text{Sr}$  ratios recorded in magmatic plagioclase from the Samoan hotspot, *Earth & Planetary Science Letters*, v. 511, p. 190-201.
- 21) ~~Iacovino~~, **K.**, **Till, C.B.**, 2019, DensityX: A program for calculating the densities of hydrous magmatic liquids from 427-1627°C and up to 30 kbar, *Volcanica*, v. 2 (1), p. 1-10.
- 20) Cooper, K.M., **Till, C.B.**, Kent, A.J.R., Costa, F., Rubin, A.E., Gravley, D., Deering, C., Cole, J., Bose, M., 2017, Response to “Cold Storage in a Heat Wave?”, *Science*, v. 358 (6370), p. 9145.
- 19) **Rubin, A.E.**, Cooper, K.M., **Till, C.B.**, Kent, A.J.R., Costa, F., Gravley, D., Deering, C., Cole, J., Bose, M., 2017, Rapid cooling and cold storage in a silicic magma reservoir recorded in individual crystals, *Science*, v. 356 (6343), p. 1154-1156, doi:10.1126/science.aam8720.
- 18) **Till, C.B.**, 2017, A Review & Update of Mantle Thermobarometry for Primitive Arc Magmas (invited paper), *American Mineralogist*, v. 102, p. 931-947, dx.doi.org/10.2138/am-2017-5783.
- 17) **Till, C.B.**, Vazquez, J.A., Boyce, J.W., 2015, Months between rejuvenation and volcanic eruption at Yellowstone caldera, Wyoming, *Geology*, v.43(8), p. 695-698, doi:10.1130/G36862.1.
- 16) Grove, T.L., **Till, C.B.**, 2015, Melting of the Earth's Upper Mantle, *Encyclopedia of Volcanoes*, Second Edition, Haraldur Sigurdsson, editor, p. 35-47.
- 15) Grove, T.L., Holbig, E.S., Barr, J.A., **Till, C.B.**, Krawczynski, M.J., 2013, Melting of compositionally variable upper mantle in the garnet stability field: Distinguishing melts of lherzolite and pyroxenite source regions, *Contributions to Mineralogy & Petrology*, vol. 166(3), p.887-910, doi: 10.1007/s00410-013-0899-9.
- 14) **Till, C.B.**, Grove, T.L., Carlson, R.W., Donnelly-Nolan, J.M., Fouch, M.J., Wagner, L.S., Hart, W.K., 2013, Depths and Temperatures of Asthenospheric Melting and the Lithosphere-Asthenosphere Boundary in the southern Cascades Arc and Back-Arc, *Geochemistry, Geophysics, Geosystems*, doi:10.1002/ggge.20070.
- 13) **Till, C.B.**, Grove, T.L., Withers, T., 2012, Reply to ‘Comment on “The beginnings of hydrous mantle wedge melting” by Till et al.’ by Stalder, *Contributions to Mineralogy & Petrology*, v. 164(6), p.1073-1076, doi: 10.1007/s00410-012-0796-z.
- 12) **Till, C.B.**, Grove, T.L., Withers, T., 2012, Reply to ‘Comment on “The beginnings of hydrous mantle wedge melting” by Till et al.’ by Green, Rosethal and Kovacs, *Contributions to Mineralogy & Petrology*, v. 164(6), p.1083-1085, doi: 10.1007/s00410-012-0803-z.
- 11) **Till, C.B.**, Grove, T.L., and Krawczynski, M.J., 2012, A melting model for variably depleted and enriched lherzolite in the plagioclase and spinel stability fields, *Journal of Geophysical Research (Solid Earth)*, v. 117, no. B06206, doi: 10.1029/2011JB009044.
- 10) Long, M.D., **Till, C.B.**, Druken, K.A., Carlson, R.W., Wagner, L.S., Fouch, M.J., James, D.E., Grove, T.L., Schmerr, N., Kincaid, C., 2012, Mantle dynamics beneath the Pacific Northwest and

the generation of voluminous back-arc volcanism, *Geochemistry, Geophysics, Geosystems*, v. 13(1) Q0AN01, doi: 10.1029/2012GC004189.

9) Grove, T.L., **Till, C.B.**, Krawczynski, M.J., 2012, The Role of H<sub>2</sub>O in Subduction Zone Magmatism, *Annual Review of Earth and Planetary Sciences*, v. 40, p. 413-439, doi:10.1146/annurev-earth-042711-105310.

8) **Till, C.B.**, Grove, T.L., Withers, T., 2012, The Beginnings of Hydrous Mantle Wedge Melting, *Contributions to Mineralogy & Petrology*, v. 163, p. 669-688, doi: 10.1007/s00410-011-0692-6.

7) **Till, C.B.**, Elkins-Tanton, L.T. and Fisher, K.M., 2010, Low Extent Melts at the Lithosphere-Asthenosphere Boundary, *Geochemistry, Geophysics, Geosystems*, v. 11 (10), doi:10.1029/2010GC003234.

6) Grove, T.L., **Till, C.B.**, Lev, E., Chatterjee, N. and Medard, E., 2010, *Reply to* Global Systematics of Arc Volcano Position, *Nature*, v. 468, p. E6-E8.

5) Grove, T.L., **Till, C.B.**, Lev, E., Chatterjee, N. and Medard, E., 2009, Kinematic variables and water transport control the formation and location of arc volcanoes; *Nature*, v. 459, p.694-697.

4) **Till, C.B.**, Gans, P.B., and Spera, F.J., 2009, Perils of petrotectonic modeling: A view from southern Sonora Mexico; *J. Volcanology & Geothermal Research*, v. 186, p.160-168.

3) Mariner, R.H., Minor, S.A., King, A.P., Boles, J.R., Kellog, K.S., Evans, W.C., Landis, G.A., Hunt, A.G. and **Till, C.B.**, 2008, A landslide in Tertiary marine shale with superheated fumaroles, Coast Ranges, California, *Geology*, v. 36(12), p.959-962.

2) Hirschmann, M.M., Ghiorso, M.S., Davis, F.A., Gordon, S.M., Mukherjee, S., Grove, T.L., Krawczynski, M., Medard, E., and **Till, C.B.**, 2008, Library of Experimental Phase Relations (LEPR): A database and web portal for experimental magmatic phase equilibria data, *Geochemistry, Geophysics, Geosystems*, v. 9, no. Q03011.

1) Spera, F.J., Bohrsen, W.A., **Till, C.B.**, and Ghiorso, M.S., 2007, Partitioning of trace elements among coexisting crystals, melt and supercritical fluid during isobaric crystallization and melting; *American Mineralogist*, v. 92, p.1881-1898.

#### OTHER PUBLICATIONS (NON-PEER REVIEWED)

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H) Brugman, K., **Till, C.B.**, 2025, Geochemical Habitability, Habitable Worlds Observatory Science Case Development Document. (*An SCDD is a document created during the mission planning process that outlines the scientific rationale, objectives, and technical requirements for a proposed mission*).

G) **Till, C.B.**, 2025, Inclusive Qualifying Exams Toolkit, EarthArXiv.  
<https://doi.org/10.31223/X5MT55>

F) Kodaira, S., Seton, M., Sonter, L.J., **Till, C.B.**, Williams, H.M., 2021, Reflections on solid Earth research; *Nature Reviews Earth & Environment*, v. 2, p. 21–25. (*Invited perspective piece on the future of magma science. Authors each contributed perspectives on a different subject and are listed alphabetically.*)

E) Cooper, K.M., Kent, A.J.R., **Till, C.B.**, Shea, T., Cottrell, L., Andrews, B., Wallace, P., 2019, White Paper on the Outcomes of the CONVERSE Petrology, Geochemistry, Experiments &

Sampling Disciplinary Workshop. <https://volcanoresponse.files.wordpress.com/2020/02/rock-workshop-report.pdf>

D) **Till, C.B.**, Pritchard, M.E., Miller, C.A., **Brugman, K.K.**, Ryan-Davis, J., 2018, Super-volcanic investigations, *Nature Geoscience (News & Views)*, v. 11, p. 227-229.

C) Anbar, A., **Till, C.B.**, Hannah, M., 2016, Upstairs, Downstairs: Building a Theory of Earth System Evolution, *Nature (Commentary)*, v. 539, p. 25-27, doi:10.1038/539025a.

B) **Till, C.B.**, 2015, Big Geochemistry, *Nature (News & Views)*, v. 532, p.292-294, doi:10.1038/523293a.

A) **Till, C.B.**, 2014, Big data and quantifying variability top scientific trends list, *Eos Trans. AGU*, v. 95 (50), p. 479, doi:10.1002/2014EO500008.

-----See p. 17 for complete list of conference abstracts -----

## FUNDED GRANTS

**Total of ~\$4M to Till since 2014** (calculated as Grant Total x Till %)

Title	Agency	Duration	Role/Collaborators	Status
[1] Quantifying Geochemical Exchange at the Slab-Wedge Interface with Experiments & Natural Samples	NSF-EAR Petrology & Geochemistry	36 months, 5/2015-4/2018	PI: <b>C. Till</b>	Concluded
[2] Facility Support: The Arizona State University SIMS Laboratories	NSF-EAR Instrument & Facilities	36 months, 1/2015-12/2017	PI: R. Hervig, Co-PI's: <b>C. Till</b> (25%), P. Williams, L. Williams	Concluded
[3] Exoplanetary Ecosystems: Exploring Life's Detectability on Chemically Diverse Exoplanets	NASA NExSS	60 months, 4/2015-3/2020	PI: S. Desch, and 27 Co-I's including <b>C. Till</b>	Concluded
[4] CAREER: Triggering Eruptions: Determination of Pressure-Temperature-Composition-time (P-T-X-t) Histories for Magma Bodies Preceding Eruption	NSF- EAR CAREER	60 months, 1/2017-12/2021 (+ 2 one year No Cost Extensions)	PI: <b>C. Till</b>	Concluded
[5] Experimental Investigation of Li-in-Zircon Diffusion Rates in Natural Silicic Magmatic Zircon	NSF EAR- Supplement to CAREER grant	12 months (1/2018 – 1/2019)	PI: <b>C. Till</b>	Concluded
[6] Community Facility Support: The Arizona State University SIMS Laboratories	NSF-EAR Instrument & Facilities	48 months (6/1/18-5/30/21)	PI: R. Hervig, Co-I's: <b>C. Till</b> , M. Bose, P. Williams, L. Williams	In Progress (in No Cost Extension)
[7] Community Network for Volcanic Eruption Response (CONVERSE)	NSF EAR Research Coordination Network	36 months (9/2018-8/2020)	PI: T. Fischer (UNM), Co-I's: 14 Co-I's including <b>C. Till</b>	Concluded

[8] Volcanism in the eastern Panama-Choco block (Columbia): Constraining tectonic environments and feedbacks during the mid-Miocene	Smithsonian Tropical Research Institute-ASU Collaborative Initiative	12 months (9/2018-9/2019)	PI: <b>C. Till</b> & C. Jaramillo	Concluded
[9] A Research Coordination Network for the SZ4D Initiative	NSF EAR Research Coordination Network	36 months (7/2018-6/2021)	PI: H. Tobin (UW), no Co-I's. RCN was funded to organize the relevant communities to design & propose a new funding program at NSF for subduction zone science. I was one of 15 people on the steering committee. Concluded.	
[10] Collaborative Research: Consequences of flat slab subduction on the chemical, structural, and dynamic evolution of continental lithosphere	NSF EAR – Frontier Research in Earth Science (FRES)	48 months (1/2020-12/2023)	ASU PI: <b>C. Till</b> , PI's at other institutions: L. Wagner (Carnegie), T. Becker & B. Horton (UT Austin)	Concluded
[11] Collaborative Research: Synthesizing arc-scale geochemical, petrologic, and geophysical datasets to investigate causes of volcanic diversity in the Cascades Arc	NSF GeoPRISMS	36 months (7/2020 – 6/2023)	<b>PI: C. Till</b> , Co-I: A. Kent (OSU), G. Abers (Cornell)	Concluded
[12] INTERN: Investigating Magma Genesis and Pre-Eruptive Storage at Glacier Peak	NSF EAR-INTERN Supplement to CAREER grant	4 months (7/2023-10/2023)	PI: C. Till	Concluded
[13] Tracing Rocky Exoplanet Compositions	NASA Interdisciplinary Consortia for Astrobiology Research (ICAR)	60 months (9/2023- 8/2028)	PI: S. Desch + 9 Co-I's including <b>C. Till</b>	In Progress
[14] GLOW: Exploring effects of rocky exoplanet composition on habitability and target selection	NSF AST - GLOW (Astronomy & Astrophysics)	36 months (9/1/2025- 8/31/2028)	PI: K. Brugman (UNM) Co-I: <b>C. Till</b>	To be started soon

## GRANTS PRIOR TO ASU

2012-2013 USGS Mendenhall Postdoctoral Fellowship  
2007-2010 National Science Foundation Graduate Research Fellowship  
2002-2003 UC Santa Barbara Vice Chancellor of Research Undergraduate Research Grant

## STUDENT & POSTDOCTORAL SUPERVISION

### Postdoctoral Advisees

- 2024-2025 Dr. Elizabeth Grant
- 2022 –2024 Dr. Lydia Harmon  
*now Assist. Prof., Occidental College*
- 2022 –2024 Dr. Andrea Goltz  
*now Carnegie Postdoc*
- 2022 –2023 Dr. Rebecca deGraffenried, NSF Postdoctoral Fellow  
*now Assist. Prof., Univ. of Missouri*
- 2021- 2023 Dr. Daniel Portner, SESE Exploration Postdoc (co-advised)



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|               | <i>now Assist. Prof., New Mexico Tech</i>   |
| 6. 2020- 2022 | Dr. Penny Wieser, Postdoctoral Scholar (co-advised)<br><i>now Assist. Prof., U.C. Berkeley</i>                                      |
| 7. 2016- 2018 | Dr. Kayla Iacovino, FESD Postdoctoral Fellow<br><i>now Experimental Petrologist, NASA JSC experimental lab</i>                      |
| 8. 2014- 2016 | Dr. Sarah Cichy, SESE Exploration Postdoc (co-advised)<br><i>now Research Scientist and IHPV Lab Manager at Universität Potsdam</i> |

#### **ASU SESE Graduate Student Primary Advisees**

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| 1. 2024-present | Julia Clarke (PhD Student)   |
| 2. 2019-present | Felix Ishimwe (PhD Candidate) - ABD<br><i>now Research Scientist, Freeport-McMoran</i>   |
| 3. 2019-2024    | Jessie Bersson (PhD Candidate)<br><i>now Smithsonian Peter Buck Postdoctoral Fellow</i>  |
| 4. 2015- 2020   | Hannah I. Shamloo, PhD<br><i>now Assistant Professor, Central Washington University</i>  |
| 5. 2014- 2020   | Meghan R. Guild, PhD<br><i>now Lead SIMS Technician, Beamline Semiconductors</i>         |
| 6. 2014-2020    | Karalee K. Brugman, PhD<br><i>now FORCE Research Scientist, Arizona State University</i> |
| 7. 2017-2019    | Mitchell Phillips, MS<br><i>now Maps &amp; Publications, USGS, Menlo Park CA</i>         |

#### **ASU SESE Second Project Advisees**

*In SESE, all PhD students are required to conduct two research projects prior to their PhD candidacy exam, one of which is required to be advised by a faculty who is not their primary research advisor. These research projects ultimately often constitute a chapter of the student's dissertation and/or a publication.*

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| 1. 2020 – 2025 | Claire Richardson, Graduated PhD                                     |
| 2. 2018 – 2024 | Mara Karageozian, Graduated PhD, now Policy Advisor ASU DC Office    |
| 3. 2018- 2023  | Srinidhi Ravi, Graduated PhD, now Postdoc, Khalifa U.                |
| 4. 2018 – 2022 | Samantha Jacobs, Graduated PhD, now Research Scientist, NASA Houston |
| 5. 2017- 2020  | Hannah Bercovicci, Graduated MS                                      |
| 6. 2017- 2020  | Chadlin Ostrander, Graduated PhD, now Postdoc, WHOI                  |
| 7. 2015- 2020  | Aleisha Johnson, Graduated PhD, now Postdoc U. Arizona               |

#### **ASU Graduate Student Thesis Committee Membership (excluding Advisees)**

1. Abhijeet Chakraborty (SESE, PhD candidate), started Fall 2024 (transfer from UC Davis)
2. Christian Koemer (SESE, PhD candidate), started Fall 2024 (transfer from UC Davis)
3. Prachi Kar (SESE, PhD student), started Fall 2021
4. Allyson Trussell (SESE, PhD student), started Fall 2021
5. Samuel Courville (SESE, PhD candidate), Graduated Spring 2025
6. Kevin Trinh (SESE, PhD candidate), started Fall 2020
7. Kyle Mohr (SESE, PhD candidate), started Fall 2017
8. Tucker Ely (SESE, PhD), Graduated Summer 2020, now Postdoc, CU Boulder
9. Huawei Chen (SESE, PhD), Graduated 2019, now Staff Scientist, China Univ. of Geosciences
10. James Leong (SESE, PhD), Graduated 2020, now Postdoc, Lamont-Doherty
11. Soumya Ray (SESE, PhD), Graduated 2021, now Postdoc, Univ Maryland

12. Anna Brunner (SESE, MS), *Graduated 2019*
13. Shule Yu (SESE, PhD), *Graduated 2019, now Software Engineer, Tencent*
14. Alyssa Anderson (SESE, PhD), *Graduated 2019, now Postdoc, Princeton*
15. Hong Yu Lai (SESE, PhD), *Graduated 2019, now Data Scientist, Carvana*
16. Mary Schultz (SESE, PhD), *Graduated 2017, now Professor, San Jacinto College*
17. Margo Regier (SESE, MS), *Graduated 2016, now Program Officer, National Academy of Sciences*
18. Kera Tucker (SESE, MS), *Graduated 2015, now Systems Engineer, Lockheed Martin*
19. Chelsea Allison (SESE, PhD) *Graduated 2018, now Postdoc, Cornell University*
20. Danika Wellington (SESE, PhD), *Graduated 2018, now Scientist, USGS EROS Data Center*
21. Alexandra Reyes (SESE, MS), *Graduated 2018, now Sample Curator, NASA JSC*
22. Joey Romero (SESE, MS), *Graduated 2018, now Museum Facilitator, Museum of Sci. & Industry, Chicago*

### **ASU Undergraduate Research Advisees**

- |                   |  |
|-------------------|--|
| 1. 2024 – present | Caden Grenley - SESE Geology major   |
| 2. 2024 – 2025    | Alan Bartlett – Barrett Honors College Senior Thesis, now PhD student Purdue   |
| 3. 2023           | Maegan Bouwens - SESE Geology major  |
| 4. 2018 –2020     | Jax Webb - SESE Geology major  |
| 5. 2018- 2019     | Emma Valdez – School of Life Sciences major, SESE Geology minor  |
| 6. 2017-2018      | Andrés Aldana – SESE Geology major   |
| 7. 2016- 2018     | Kelly Vote - Recipient CLAS Research Scholarship Summer 2017,  |
| 8. 2015- 2017     | Mitchell Phillips - Recipient CLAS Research Scholarship 2016- 2017,<br>Now USGS, Menlo Park  |
| 9. 2014- 2016     | Eric Escoto - Recipient 2016 CLAS Dean's Medal & 2015 R. Greeley Scholarship,<br>Now ASU PhD Student & NSF Graduate Research Fellow  |
| 10. 2014- 2016    | Jamie Shaffer – Received MS Student New Mexico State &<br>now Hydrogeologist at Leonard Rice Engineers Inc.  |
| 11. 2014- 2015    | Katherine Sheppard -Recipient CLAS Dean's Medal & ASU Outstanding<br>Graduate & Barrett Honors Thesis, "Modeling Mantle Genesis of Basalts from Lassen<br>Volcano", now Data Analyst at Raytheon, Tucson |

### **TEACHING HISTORY**

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- |  |   |
|--|---|
| Spring 2016<br>(in-person),<br>Spring 2024 (online)<br>Fall 2024 (online)            | GLG 101: Introduction to Geology<br><i>Introductory general education class teaching basic principles of geology,<br/>geochemistry, and geophysics.</i><br>Enrollment: 220 (in person), 500-1000 (online)   |
| Fall 2015,<br>Spring 2017,<br>Spring 2019,<br>Spring 2020<br>Fall 2023,<br>Fall 2025 | SES 494/598: Science Communication<br><i>Developed as part of NSF CAREER grant – Upper level ugrad &amp; graduate<br/>course to develop and practice skills in effective oral and written science<br/>communication for both scientific and general audiences. Course includes<br/>significant writing &amp; oral communication practice.</i><br>Av. Enrollment: 25 |
| Spring 2015  | GLG 494/598: Subduction Zones<br><i>Undergraduate &amp; graduate course covering the physics and chemistry of geologic<br/>processes occurring in subduction zones from the subducting plate to the surface.<br/>Course work includes weekly reading of journal articles, presentations and final<br/>research projects.</i>  |

Enrollment: 35

Fall 2014, 2015, 2016, 2017, 2018, 2019, Spring 2025 GLG 424: Petrology  
*Undergraduate course (2-3 graduate students enrolled per year) course covering the origin of igneous and metamorphic rocks. Upper division core curriculum in the geosciences track within the BS in the School of Earth & Space Exploration. (co-taught in F '14 & F '15)*  
Av. Enrollment: 30

Fall 2020 GLG 494/598: Equity in the Academic Sciences  
*Each student enrolled conducted a semester-long research project on a topic of their choosing on how to make our academic scientific communities, systems, and structures more equitable and inclusive. During the class students built self-guided research skills & engaged with a variety of education, physical and social sciences literature on their topics. Students synthesized their research into the following series of White Papers that summarize their research and resulting recommendations.*  
Av. Enrollment: 7

### **Participated as Lecturer**

Spring 2016, 2018 THP/HAD 494/598: Animating Scientific Research  
*One of five featured professors who worked with Herberger students to use art to animate our research. Included weekly engagement and mentoring of the students.*  
Enrollment: 25

Fall 2014 SES 494/598: Archean Geophysics  
*Graduate course in the history of the early Earth. I attended weekly and delivered lectures on the origin of the Earth's continental crust & upper mantle magma genesis.*  
Enrollment: 25

Fall 2015, 2015, 2017, 2018, 2019 2023, 2024 GLG 591: Faculty Research Seminar  
*Presented a lecture on research as part of an introductory graduate class.*

Jan. 2014, 2015, 2016, 2017, 2019, 2020, 2024 ASU Workshop on Secondary Ion Mass Spectrometry  
*Week-long workshop held by the NSF-supported SIMS Facility at Arizona State University, which includes training on the Cameca 6f and NanoSIMS 50L and example applications.*  
Enrollment: 15

### **INVITED TALKS & COLLOQUIA**

#### **I. College/University/Scientific Agency Colloquia**

1. Feb 2026 Pomona College Woodford-Eckis Distinguished Lectureship (*upcoming*)
2. Oct 2023 Cal State Fullerton Geology Seminar
3. March 2022 UC Santa Barbara Earth Science Seminar
4. November 2021 Oregon State University, Earth Science Seminar
5. March 2021 CalTech, GPS Division Seminar

6. August 2020 Arizona State University, SESE Colloquium
7. June 2020 American Museum of Natural History (*cancelled COVID-19*)
8. April 2020 Bristol University, UK (*cancelled COVID-19*)
9. November 2019 University of New Mexico, Earth Sciences Colloquium
10. March 2019 University of Wisconsin, Weeks Lecture
11. January 2019 Universidad Nacional de Colombia, Sede Medellín, EGEO Seminar
12. October 2018 University of Nevada, Reno, Geological Sciences Colloquium
13. September 2018 University of Tennessee, Dept. of Earth & Environmental Science Seminar
14. May 2018 Stanford University, Dept. Geological & Enviro. Science Colloquium
15. January 2018 Oregon State University, Geology Seminar
16. May 2017 University of Wyoming, Geological Sciences Seminar
17. April 2017 US Geological Survey, Denver CO
18. April 2017 ASU, School of Earth & Space Exploration Colloquium
19. November 2016 University of Washington, Earth & Space Sciences Seminar
20. November 2016 University of Oregon, Dept. of Earth Sciences Seminar
21. July 2016 Kanazawa University, Geosciences Seminar, Japan
22. November 2015 New Mexico State, Geological Sciences Seminar
23. November 2014 University of Arizona, Dept. of Geosciences Colloquium
24. September 2013 Rice University, Dept. of Earth Science Seminar
25. September 2013 US Geological Survey, Reston VA, Mendenhall Fellows Seminar
26. April 2013 Lawrence Berkeley National Lab/UC Berkeley Geology Seminar
27. March 2013 Stanford University, Dept. Geological & Enviro. Science Colloquium
28. February 2013 UC Santa Cruz, Whole Earth Seminar
29. February 2013 Arizona State University, School of Earth & Space Exploration Seminar
30. February 2013 Washington State University, Earth & Planetary Sciences Seminar
31. January 2013 UC Santa Barbara, Earth Sciences Seminar
32. January 2013 Boise State University, Dept. Geosciences Seminar
33. October 2012 UC Davis, Earth Sciences Seminar
34. September 2012 UC Santa Cruz, Whole Earth Seminar
35. May 2012 UC Los Angeles, Dept. Earth & Space Sciences Seminar
36. April 2012 San Jose State University, Geology Seminar
37. April 2012 Washington University, St. Louis, Dept. Earth & Planetary Sci. Seminar
38. February 2012 Boise State University, Dept. Geosciences Seminar
39. February 2012 US Geological Survey, Menlo Park, Volcano Science Center Seminar
40. April 2011 US Geological Survey, Anchorage, AK
41. March 2011 Bryn Mawr College, Dept. Geological Sciences Seminar
42. October 2010 Middlebury College, Dept. Geology Seminar

## **II. Invited Talks at Scientific Conferences & Meetings**

1. December 2025 American Geophysical Union Fall Meeting, New Orleans, LA (*upcoming*)
2. December 2024 Daly Lecture, American Geophysical Union Meeting, Washington DC
3. December 2022 American Geophysical Union Fall Meeting, Chicago IL
4. December 2019 American Geophysical Union Fall Meeting, Washington DC
5. September 2019 Geological Society of America Annual Meeting, Phoenix, AZ
6. June 2019 CIDER Summer Program on Volcanoes, Berkeley CA
7. June 2019 Gordon Conference: Solid Earth, Mt. Holyoke, MA

8. December 2018 American Geophysical Union Fall Meeting, Washington DC
9. August 2018 Goldschmidt Conference, Boston MA
10. January 2018 Keynote, Chapman Conference on Large Silicic Magmatic Systems, Chile
11. December 2018 Keynote, CIDER workshop @ AGU Fall Meeting, New Orleans, LA
12. August 2017 IAVCEI 2017, Portland OR (2 invited talks)
13. August 2017 IAVCEI 2017, Portland OR (2 invited talks)
14. October 2016 Subduction Zone Observatory Planning Meeting, Boise ID
15. July 2016 Goldschmidt Conference, Yohohama, Japan
16. December 2015 American Geophysical Union Fall Meeting, San Francisco, CA
17. October 2015 GeoPRISMS Experimental & Theoretical Institute on Subduction Zones
18. December 2014 American Geophysical Union Fall Meeting, San Francisco, CA
19. August 2014 Goldschmidt Meeting, Sacramento CA
20. December 2013 American Geophysical Union Fall Meeting
21. December 2012 American Geophysical Union Fall Meeting
22. October 2011 EarthScope Institute on Lithosphere-Asthenosphere Boundary
23. September 2008 Am. Geophysical Union Chapman Conf./5th Int'l Lherzolite Conf.

### III. Other Invited Talks

1. October 2017 ASU KED Talk, ASU, Phoenix AZ
2. November 2016 ASU KED Research Academy Talk, Tempe AZ
3. Fall 2016 Desert Mountain Speaker Series, Scottsdale AZ
4. January 2016 SESE New Discoveries Public Lecture, Tempe AZ
5. January 2014 AGU Editor in Chiefs Meeting, Albuquerque NM
6. May 2012 Society of Scientific, Technical & Medical Publishers Annual Meeting

### PROFESSIONAL SERVICE

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#### I. Service to Arizona State University

- |              |   |
|--------------|---|
| 2025-present | SESE Associate Director for Faculty   |
| 2024-2025    | SESE Heptennial Academic Performance Review Committee                             |
| 2023-2025    | Chair, SESE Inclusive Community Committee   |
| 2020-2021    | SESE Associate Director for an Inclusive Community                                |
| 2014-present | ASU SIMS/NanoSIMS Facility Oversight Committee                                    |
| 2014-present | ASU SMS-SESE High Pressure Experimental Facilities Oversight Committee            |
| 2014-2020    | SESE Safety & Facilities Committee (2019-2020 Safety Subcomm. Chair)              |
| 2018-2020    | SESE Awards Nominations Committee   |
| Spring 2021  | SESE Cluster Hire Recruitment Committee   |
| Spring 2019  | SESE Faculty Search Committee, SESE Director                                      |
| Winter 2016  | SESE Faculty Search Committee, Geophysics   |
| Winter 2016  | SESE Search Committee, SESE Exploration Postdoctoral Fellowship                   |
| Nov. 2016    | KED Research Academy Talk <i>"Behind the Scenes of a Successful NSF Proposal"</i> |
| Aug. 2015    | Presentation on SESE to ASU Undergraduate Recruiters                              |
| 2015-2018    | SESE Postdoc Development/Workshops for Success Organization Committee             |

#### II. Service to Professional Societies and Organizations

- |              |  |
|--------------|--|
| 2024-present | Geochemical Society F.W. Clarke Award Committee  |
| 2023-present | National Volcano Early Warning Science Advisory Committee ( <i>federally appointed</i> ) |
| 2021         | American Geophysical Union Governance Task Force   |

2019-2022 Geochemical Society Program Committee

2018-2022 SZ4D Research Coordination Network, Steering Committee Member & 'Magmatic Drivers of Eruption' & 'Building Equity & Capacity in the Geosciences' Working Group Co-Chair (*to propose new NSF program focused on subduction zone hazard-related science*)

2018-2022 Co-I, Community Response to Volcanic Eruptions NSF Research Coordination Network (CONVERSE) (*to organize US academic response to volcanic eruptions in coordination with USGS*)

2019-2020 American Geophysical Union, Volcanology, Geochemistry and Petrology Secretary (*elected, in charge of organizing VGP contributions to Fall Meeting*)

2015-2018 American Geophysical Union Volcanology, Geochemistry and Petrology Medals Nomination Committee

2014 Chair, American Geophysical Union Scientific Trends Task Force

2013-2014 American Geophysical Union Board of Directors (*elected, 1<sup>st</sup> early career member to hold position in history of organization*)

2013-2015 Vice Chair of American Geophysical Union Council (*elected, 1<sup>st</sup> early career member to hold position in history of organization*)

2012-2014 AGU Council Leadership Team (*elected*)

2010-2014 American Geophysical Union Council (*elected, two successive terms*)

2010-2012 American Geophysical Union Rep to the American Geosciences Institute (AGI)

2008-2010 American Geophysical Union Comm. on Education & Human Resources

2008-2010 Primary Student Representative to the American Geophysical Union

### III. Service Broadening Participation in STEM

2014-present **Graduate & Postdoctoral Mentor** - *To date, I have mentored 22 persons with marginalized gender identities in STEM (woman and/or transgender) and 7 with marginalized racial or ethnic identities.*

2023-2025 **Chair**, SESE Inclusive Community Committee

2022-2025 **SEQEL Project PI** – *ASU project studying use of rubrics in graduate qualifying exams*

2021-2023 **AGU LANDInG Fellow** - *DEI Leadership Academy (inaugural cohort), chosen as 1 of 12 from across AGU*

2014-2022 **Faculty Advisor** - *SESE Women in Planetary Sciences (WIPS) Chapter*

2020-2021 **PI Seed Grant** (ASU College of Liberal Arts & Sciences) - *to create in-house bystander intervention training*

2020-2021 **Associate Director for Inclusive Community** - *Leadership position in the School of Earth & Space Exploration at ASU to facilitate and incentivize Charter-related activities in the school. Chaired Inclusive Community Task Force & led Strategic Plan development.*

2021 **Invited Panelist** – *ASU panel discussing the experience of women in academia & "Picture A Scientist" documentary*

2020 **Invited Panelist** – *ASU Faculty Women's Association "Success in the Early Years" panel featuring several outstanding, recently-tenured, female faculty members*

2019-2021 **Facilitator ADVANCEGeo Workshops** – *Led ~10 bystander intervention and/or code of conduct workshops for the ADVANCEGeo program*

2019 **ADVANCEGeo Train the Trainers Workshop** – *trained to facilitate workshops on preventing harassment & bullying behaviors in Academic STEM environments.*

- 2019 **Workshop Participant** - *ASU Bystander Intervention Training for Academic Environments Participant*
- 2018-2020 **SESE Awards Nominations Committee** – *Effort to nominate PEERs for awards*
- 2014-2020 **Sundial Summer Bridge Program Faculty Participant** - *Program to entrain and retain under-presented minorities in STEM majors at ASU*
- 2016-2018 **500 Women Scientists Pod Leader** – *advocacy group for women & PEERS in STEM*
- 2018 **Workshop Participant** - *ASU Faculty Women's Association Workshop on Inclusion*
- 2016 **Course Designer** - *Co-designed online class on implicit bias for ASU*
- 2016 **Invited Panelist** - *American Women in Science Jump Starting STEM Careers Panel*

#### IV. Editorial Service

- 2023-present Associate Editor, Contributions to Mineralogy & Petrology
- 2017-2020 Associate Editor, American Mineralogist
- 2014-2020 Editorial Board, Review Editor, Frontiers in Volcanology
- 2004-present Manuscript reviewer for: Nature • Science • Geology • Earth and Planetary Science Letters • Scientific Reports • Journal of Petrology • Geochemistry Geophysics Geosystems • American Mineralogist • Contributions to Mineralogy and Petrology • Chemical Geology • Journal of Volcanology and Geochemical Research • Lithos • Frontiers in Volcanology

#### V. Grant Proposal and Panel Service

- 2024 Panelist, NSF EAR Frontier Research in Earth Science Review Panel
- 2021 Panelist, NSF EAR Frontier Research in Earth Science Review Panel
- 2019 Panelist, NSF EAR Antarctic Earth Science Research Review Panel
- 2017 Panelist, NSF EAR Studies of the Earth's Deep Interior Review Panel
- 2016 Panelist, NSF EAR Petrology & Geochemistry Review Panel
- 2010 Panelist, NASA Solar System Workings Review Panel
- 2006-present Proposal reviewer for National Science Foundation (NSF) EAR-Petrology & Geochemistry • NSF EAR-CAREER • NSF EAR-EarthScope • NSF-EAR GeoPRISMS • NSF OCE-Marine Geology & Geophysics • NASA Solar Systems • NASA Emerging Worlds • NERC

#### VI. Service Activities at Scientific Meetings

- 2012-present Outstanding Student Paper Judge, American Geophysical Union Fall Meeting
- 2024 Session Convener, American Geophysical Union Fall Meeting, Washington DC: *Upstairs, Downstairs Revisited: Progress and Prospects in Understanding the Consequences of Internal Planet Evolution for the Habitability of Planetary Surfaces*
- 2019 Scientific Session Organizer, Goldschmidt 2019, Barcelona
- 2019 Invited Participant, GeoPRISMS Experimental & Theoretical Institute on Synthesizing Research Outcomes, San Antonio, TX
- 2018 Scientific Session Organizer (3 sessions), Goldschmidt 2018, Boston
- 2018 Division Scientific Organizing Committee, Goldschmidt 2018, Boston
- 2017 Co-Organizer, Cooperative Institute for Dynamic Earth Research (CIDER) Summer Workshop on Subduction Zone Structure & Dynamics, UC Berkeley, CA
- 2016 Invited Participant & Speaker, Subduction Observatory Planning Mtg, Boise ID
- 2016 Science Organizing Committee, NSF/NASA Workshop Without Walls on Planetary Habitability, Tempe Arizona

- 2015 Session Convener (3 sessions), American Geophysical Union Fall Meeting, San Francisco CA: 1) *Chemistry of the Earth's Mantle*; 2) *A Tangled Web? Generation and Transport of Fluids, Volatiles and Melts in Subduction Zones from Source to Surface*; 3) *Transport of Volatiles from Mantle to Surface: Insights on Diffusion, Exsolution and Migration of Fluids in Magmatic Environments from Natural Samples and Experiments*.
- 2015 Invited Participant, GeoPRISMS Experimental & Theoretical Institute on Subduction Zones, San Diego, CA
- 2015 Invited Participant, Diffusion Workshop, Bochum University, Germany
- 2014 Session Convener (2 sessions), American Geophysical Union Fall Meeting, San Francisco, CA: 1) *Accelerated and Punctuated: Using Geochronology, Diffusion Modeling, and Numerical Models to Understand Magmatic Processes*; 2) *Upstairs Downstairs: Consequences of Internal Evolution for the Habitability of Planetary Surfaces*.
- 2014 Session Convener, Goldschmidt Conference, Sacramento, CA: *Geologic and Geochemical Processes at the Plate Interface*.
- 2013 Session Convener, American Geophysical Union Fall Meeting, San Francisco CA: *The Detection and Migration of Melt and Volatiles in the Earth's Interior*.
- 2011 Invited Participant & Speaker, NSF GeoPRISMS Experimental & Theoretical Institute on the Lithosphere-Asthenosphere Boundary, Portland OR
- 2011 GeoPRISMS Alaska Primary Site Planning Meeting, Portland OR
- 2010 MARGINS Successor Planning Workshop
- 2009 Session Convener, American Geophysical Union Fall Meeting, San Francisco CA: *Mantle Potential Temperature: A Very Hot Topic*.
- 2005 Session Chair, Geological Society of America Annual Meeting, Salt Lake City UT: *Tectonics*

## VII. Example Service to the Public /Outreach

- 2020 **National Geographic "X-Ray Earth" Series** - featured scientist in the "Volcano Apocalypse" episode discussing our research at Yellowstone volcano. <https://www.natgeotv.com/za/shows/natgeo/x-ray-earth>
- 2018 **ASU KED Talk** – one of eight professors from ASU chosen to film a short TED-like talk on my research and path to being a professor. Available here: <https://research.asu.edu/kedtals>
- 2014-2019 **Earth & Space Exploration (ESE) Day** - Open SESE labs to the general public on a weekend day. EPIC lab hosts a series of activities regarding studying the Earth's interior, including making your own rock in a simplified version of our high-pressure apparatus, make your own lava lamp, trashcano, and exploring the mantle.
- 2014-2019 **ASU Night of the Open Door** - Open ASU to the general public on weekend evening. EPIC lab hosts a series of activities similar to ESE Day.
- 2016 **SESE New Discoveries Public Lecture** - "When will the Yellowstone supervolcano erupt again?" Evening public lecture to an audience of over two hundred.



- 2016                      **Desert Mountain Speaker Series, AZ** - “When will the Yellowstone supervolcano erupt again?” Evening public lecture to an audience of over two hundred.
- 2010                      **MIT 150<sup>th</sup> Anniversary Open House** - created and led exhibit on geologic history of Massachusetts

### VIII. Selected Press Coverage & Media

1. November 2024    [Science News Explores](#) article features our eruption initiation research
2. September 2024    [ASU Now](#) article on Daly Lecture
3. October 2023        [Muse Science Magazine for Kids](#), interview on solar system volcanoes
4. March 2019          [ASU Now](#) article on Till et al., 2019
5. Dec. 2018           [Scientific American article](#) discussing our Yellowstone research
6. May 2018           [Science News article](#) featuring our Exoplanet research
7. Nov 2017            Appeared on [AZ PBS “Horizon” to discuss Yellowstone Research](#)
8. Oct 2017            Appeared on [12 News “Sunday Square Off” to discuss Yellowstone Research](#)
9. Oct 2017            [New York Times article on our research](#) & associated coverage ([Snopes](#), [Time](#), [USA Today](#), [Newsweek](#), [Fox News](#))
10. June 2017          Interviewed on Arizona’s KJZZ ‘The Show’, [“What if Scientists Could Better Predict When A Volcano Might Erupt?”](#)
11. March 2017        [Blog piece](#) for AGU’s Plainspoken Scientist
12. Dec. 2016          AGU [EOS article on our work at Yellowstone](#)
13. August, 2016        Featured in ASU Now video: “ASU professors’ words of wisdom”
14. Jan., 2016          Interviewed on KTAR 92.3 News Radio, Phoenix AZ
15. Nov., 2015          Featured in ASU Connections Podcast
16. July, 2015          “For smaller eruptions, Yellowstone can wake up quickly” [ArsTechnica.com](#)
17. July, 2015          “Geologists are setting a Stopwatch for a Yellowstone Eruption,” [Serious-Science.org](#) article on Till et al., 2015
18. July, 2015          “Creating a stopwatch for volcanic eruptions”, [Phys.org](#) article
19. July, 2015          “Potential for future eruptions at Yellowstone volcano”, [ScienceDaily.com](#)
20. July, 2015          “ASU professor strives to better understand the potential for future eruptions at Yellowstone volcano by studying those in the recent past” [AAAS EurekaAlert.org](#)
21. July, 2015          “Recharging A magma chamber” [the-earth-story](#).
22. Spring, 2015        “No Small Feat” [TechConnect Magazine](#), article on ASU NanoSIMS facility
23. April, 2015        “UA, ASU teams to search for alien life”, interviewed in Arizona Daily article about NExSS grant
24. March, 2015        [“A \(Brief\) Tour of Exciting Topics in Experimental Petrology,”](#) co-authored American Geophysical Union Volcanology Geochemistry and Petrology Education and Outreach Spotlight article

### IX. Professional Society Membership (year joined in parentheses)

Geological Society of America (2003) • American Geophysical Union (2005) • Mineralogical Society of America (2006) • Earth Science Women’s Network (2010) • National Association of Geoscience Teachers (2013) • Geochemical Society (2014)

## CONFERENCE ABSTRACTS & PRESENTATIONS

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### Key to Citation Formatting:

Student, A. = Till Primary Graduate Advisee

Student, A. = Till Primary Undergraduate Advisee

‡Postdoc, A. = Till Postdoctoral Advisee

*C. Till invitations shown in green and student/postdoc invited/award-winning presentations shown in orange.*

117) Brugman, K., **Till, C.B.**, 2025, Geochemical Habitability: Experiments to Improve HWO ROI. Towards the Habitable Worlds Observatory Symposium, Washington, D.C..

116) **Till, C.B. (Daly Lecture, Invited)**, 2024, See the Changes: Conceptualizing Approaches for the Next Generation of Questions in Igneous Petrology, AGU Fall Meeting, Washington D.C.

115) **Till, C.B.**, Libarkin, J.C., 2024, A Study on the Use of Rubrics to Improve Equity in Doctoral Qualifying Exams, AGU Fall Meeting, Washington D.C.

114) Kent, A., Wieser, P.E., **Till, C.B.**, Pang, G., Abers, G.A., 2024, How well do petrologic approaches resolve transcrustal magma systems?, AGU Fall Meeting, Washington D.C.

113) Bartlett, A., **Till, C.B.**, Clarke, A., 2024, Diversity of Petrology & Eruption Initiation Mechanisms Between Mt. Shasta's Misery Hill & Hotlum Cone-Building Episodes, Geological Society of America Meeting, Anaheim, CA.

112) **Till, C.B.**, ‡deGraffenried, R., ‡Goltz, A., 2023, Life in the Fast Lane: Observations from a Compilation of Magma Flux, Ascent & Decompression Rates, AGU Fall Meeting, San Francisco, CA.

111) **Till, C.B.**, 2023, Revisiting Graduate Qualifying Exams and Assessment with an Equity Lens, AGU Fall Meeting, San Francisco, CA.

110) Kent, A., ‡Wieser, P., **Till, C.B.**, 2023, Data Gaps at High Threat Cascade Volcanoes, AGU Fall Meeting, San Francisco, CA.

109) Bersson, J., **Till, C.B.**, Andersen, N.L., Van Eaton, A.R., DeBari, S.M., 2023, Petrogenesis and pre-eruptive storage of young explosive Glacier Peak magmas, AGU Fall Meeting, San Francisco, CA.

108) ‡deGraffenried, R., **Till, C.B.**, Wright, H.M.N., Clynne, MA, Kent, A., 2023, Integrated Views of Magma Ascent and Decompression from Coordinated Approaches: A Case Study from Mount St. Helens, WA., AGU Fall Meeting, San Francisco, CA.

107) ‡Harmon, L.J., **Till, C.B.**, Cardona, A., Jaramillo, J.S., Ishimwe, F., ‡Goltz, A., 2023, Using Regional Dome Fields as a Window into Slab Tear Processes in Central Colombia., AGU Fall Meeting, San Francisco, CA.

106) ‡Wieser, P., Kent, A., Devitre, E., Gazel, E., **Till, C.B.**, Johnson, E.R., Wallace, P.J., 2023, Bubble Trouble: Raman Measurements of Cascade Melt Inclusion Vapour Bubbles Indicated Substantial Underestimation of Magma Storage Depths in Legacy Data, AGU Fall Meeting, San Francisco, CA.

- 105) **Till, C.B.**, Revisiting Graduate Qualifying Exams with an Equity Lens, 2023, ASU STEM Inclusion Summit, Phoenix AZ.
- 104) **‡A.E. Goltz (Invited), C.B. Till**, 2023, I Shall be Released: Magma Flux, Evolution, and Ascent Rates at Continental Subduction Zones, Gordon Research Conference on Geochronology, Mt. Snow, VT.
- 103) **‡A.E. Goltz (Invited), C.B. Till, A.J.R. Kent**, 2023, More Mantle, More Melt: Modeling the Mantle-derived Causes of Heterogeneity in Volumetric Magmatic Flux, IUGG, Berlin.
- 102) **‡Wieser, P.E.**, Kent, A.J.R., Devitre, C., Gazel, E., **Till. C.B.**, Wallace, P., Johnson, E., Abers, G., 2023, Magma Storage depths along the Cascade Arc: Knowns and Unknowns. European Geophysical Union Meeting.
- 101) **‡Wieser, P.E. (Invited)**, Kent, A.J.R., **Till, C.B.**, Petrelli, M., Wieser, E., Lubbers, J., Neave, D., Ozaydin, S., Donovan, J., Blatter, D., Krawczynski, M., 2023, Open-source Python3 tools for Thermobarometry: Revealing the good, the bad and the ugly of determining PTX conditions in igneous systems. European Geophysical Union Meeting.
- 100) **Till, C.B.**, 2023, If I Could Turn Back Time: A New Method to Map the Evolutionary Pathways of Igneous Rocks, IAVCEI (oral presentation).
- 99) **‡A.E. Goltz, C.B. Till, A.J.R. Kent**, 2023, More Mantle, More Melt: Modeling the Mantle-derived Causes of Heterogeneity in Volumetric Magmatic Flux, IAVCEI, New Zealand.
- 98) **Bersson, J., Till, C.B.**, Debari, S., 2023, Petrogenesis of Dacite at Glacier Peak, a Very High Threat Volcano in the Cascades Volcanic Arc, IAVCEI, New Zealand.
- 97) **Ishimwe, F., Till, C.B.**, Cardona, A., 2023, The El Botón Arc: Early Nazca Subduction-Related Magmatism in Colombia, IAVCEI, New Zealand.
- 96) **Till, C.B. (Invited)**, 2022, If I Could Turn Back Time: A New Method to Map the Evolutionary Pathways of Igneous Rocks, American Geophysical Union Meeting, Chicago.
- 95) **\*\*Ravi, S., Till. C.B.**, Robinson, M.S., 2022, Lunar Silicic Magma Genesis: Insights from Rhyolite-MELTS Modeling. American Geophysical Union Meeting, Chicago.
- 94) **‡Wieser, P.E.**, Kent, A.J.R., **Till. C.B.**, Donovan, J., Neave, D., Krawczynski, M., 2022, Barometers behaving badly: Assessing analytical & experimental error on clinopyroxene thermobarometry. Goldschmidt Conference, Hawaii.
- 93) Kent, A.J.R., **‡Wieser, P.E., Till. C.B.**, 2022, Geophysical and Geochemical Constraints on Magma Storage Depths along the Cascade Arc: Knowns and Unknowns. Goldschmidt Conference, Hawaii.
- 92) **Bersson, J. J. (Invited), Till, C. B., Schlieder, T., & Cooper, K. M.**, 2022, Employing Crystal Zonation to Quantify Eruption Initiation Mechanisms. GSA Cordilleran Meeting, Las Vegas, NV.
- 91) Kent, A.J.R., **Till. C.B.**, Abers, G., **‡Wieser, P.E.**, Pitcher, B., Janiszewski, H., Gaherty, J., 2021, Linking large geochemical & geophysical data sets to understand magmatic processes in Cascadia. American Geophysical Union Meeting, New Orleans.

- 90) Kent A.J.R., **Till, C.B.**, Cooper, K.M., 2020, What makes volcanoes erupt? American Geophysical Union Meeting, Online.
- 89) **Ishimwe, F.**, **Till, C.B.**, Cardona, A., Jaramillo, J.S., 2020, Spatio-temporal Evolution of Arc Magmatism: A Case Study of Northwestern Colombia, American Geophysical Union Meeting, Online.
- 88) **Bersson, J.**, **Till, C.B.**, Schlieder, T., Cooper, K.M., 2020, Resolving Recharge: quantifying the efficacy of mafic recharge as an eruption initiation mechanism, American Geophysical Union Meeting, Online.
- 87) **Shamloo, H.I. (Invited)**, **Till, C.B.**, 2020, Supersized and Speedy: The Timing and Initiation of the Lava Creek Tuff Supereruption, Yellowstone Caldera, American Geophysical Union Meeting, Online.
- 86) Couperthwaite, F., Kent, A.J.R., Wallace, P.J., **Till, C.B.**, 2020, An initial evaluation of olivine diffusion timescales from monogenetic-style volcanoes in the Oregon High Cascades. American Geophysical Union Meeting Abstract, Online.
- 85) **Ravi, S.**, **Till, C.B.**, Robinson, M.S., 2020, Lunar Silicic Magma Genesis: Insights from Petrological Modeling. Lunar & Planetary Science Conference, Houston, TX.
- 84) **Brugman, K.K.**, **Phillips, M.G.**, and **Till, C.B.**, 2020, Exoplanet Crust Compositions as Determined by Petrological Experiments. Exoplanets in Our Backyard, Houston, TX.
- 83) **Till, C.B. (Invited)**, Vazquez, J.A., Shamloo, H., Stelten, M.S., 2019, Record of Magma Evolution & Eruption during Yellowstone's Last Caldera Cycle from Geospeedometry & Zircon Petrochronology, American Geophysical Union Meeting Abstract, San Francisco, CA.
- 82) **Brugman, K.K.**, **Phillips, M.G.**, **Till, C.B.**, 2019, Experimental Determination of Rocky Exoplanet Crust Compositions. American Geophysical Union Meeting Abstract P51G-3437, San Francisco, CA.
- 81) Cardona, A., Leon, S., **Till, C.B.**, Jaramillio, J.S., 2019, The Colombian magmatic record of the Panama arc collision and subduction of the Nazca plate, American Geophysical Union Meeting Abstract Y31B-04, San Francisco, CA.
- 80) Cooper, K.M., Kent, A.J.R., **Till, C.B.**, 2019, The spurious controversy about cold vs. warm magma storage and the influence of conceptual models. American Geophysical Union Meeting Abstract V43A-07, San Francisco, CA.
- 79) **Guild, M.R.**, **Till, C.B.**, Hervig, R.L., 2019, Linking hydrous mineral chemistry to fluid speciation in the subduction channel. American Geophysical Union Meeting Abstract V53A-04, San Francisco, CA.
- 78) Kent A.J.R., **Till, C.B.**, Cooper, K.M., 2019, Petrological insights into the initiation of volcanic eruptions. American Geophysical Union Meeting Abstract V21A-04, San Francisco, CA.
- 77) **Shamloo, H.**, **Till, C.B.**, Kent, A.J.R., Cooper, K., 2019, Constraining first-order controls on volcanic repose time by examining cumulative distribution functions. American Geophysical Union Meeting Abstract V23G-0279, San Francisco, CA.

- 76) Wagner, L.S., Monslave, G., **Till, C.B.**, Cardona, A., Horton, B.K., Mora A., Parra, M., Becker, T.W., Faccenna, C., Jones, M., 2019, Consequences of Time-varying Subduction Geometry beneath Colombia, American Geophysical Union Meeting Abstract T13B-05, San Francisco, CA.
- 75) **Phillips, M.**, **Till, C.B.**, 2019, Decompression Rates of Primitive Magnesian Andesite at Mt. Shasta, California. American Geophysical Union Meeting Abstract V51F-0123, San Francisco, CA.
- 74) **Till, C.B.** (*Invited Lecture in Honor of Receiving the 2019 MGPV Division Early Career Award*), 2019, Conceptual Models of Arc Magmatism: Looking to the Future. Geological Society of America Abstract 241-1, Phoenix, AZ.
- 73) **Brugman, K.K.**, **Till, C.B.**, 2019, New Clinopyroxene-Liquid Geothermometer Indicates A Broad Crystallization Interval for Low-Al Clinopyroxene in High-Silica Magmatic Systems, Geological Society of America Abstract 55-8, Phoenix, AZ.
- 72) **Shamloo, H.**, **Till, C.B.**, 2019, Mg Diffusion in Alkali Feldspar; Applications for Diffusion Chronometry in Magmatic Systems. Geological Society of America Abstract T35-338595, Phoenix, AZ.
- 71) **Phillips, M.**, **Till, C.B.**, 2019, Decompression Rates via Geospeedometry of Primitive Magnesian Andesite at Mt. Shasta, California. Geological Society of America Meeting Abstract 184-4, Phoenix, AZ.
- 70) Kent A.J.R., **Till, C.B.**, Cooper, K.M., 2019, Petrological insights into the initiation of volcanic eruptions. Geological Society of America Meeting 184-3, Phoenix, AZ.
- 69) **Guild, M.**, **Till, C. B.**, Mizukami, T., Wallis, S., 2019, Preservation of Foundered Lower Crustal Cumulates in the Higashi-Akaishi Ultramafic Body, Japan, Geological Society of America Meeting Abstract 241-3, Phoenix, AZ.
- 68) **Brugman, K.K.** (*Invited Talk*), **Phillips, M.G.**, **Till, C.B.**, 2019, Stars to Planets: Experimental Determination of Exoplanet Mantle Solidi and Crust Compositions. Presented at Goldschmidt, Barcelona, Spain.
- 67) **Till, C.B.** (*Invited Keynote*), 2019, Examining the Causes of Along Strike Geologic Heterogeneity in Volcanic Arcs, Interior of the Earth Gordon Conference, South Hadley MA.
- 66) **Till, C.B.** (*Invited*), Vazquez, J.A., Stelten, M.S., 2018, Co-existing discrete bodies of Rhyolite and Punctuated Volcanism Characterize Yellowstone's Post Lava Creek Tuff Caldera Evolution, AGU Fall Meeting, Washington D.C..
- 65) **Guild, M.**, **Till, C. B.**, Mizukami, T., Wallis, S., 2018, Petrogenesis of the Higashi-Akaishi Peridotite, American Geophysical Union Fall Meeting Abstract T21G-0301, Washington D.C.
- 64) **Phillips, M.** & **Till, C.B.**, 2018. Determining the crustal storage history of Mt. Shasta primitive magnesian andesite to assess magmatic ascent rates. American Geophysical Union Fall Meeting 2018 Abstract, Washington DC.
- 63) **Till, C.B.** (*Invited Keynote*), Kent, A., Abers, G., Janiszewski, H., Gaherty, J., Pitcher, B., 2018, Toward Assessing the Causes of Intra-Arc Diversity, Goldschmidt Conference, Boston.



- 62) *‡Iacovino, K. (Invited Keynote), Till, C.B., 2018 Can Slab Fluids Oxidize the Sub-Arc Mantle?, Goldschmidt Conference Boston.*
- 61) Hartnett H, **Till C.B.**, Anbar A, Glaser D, Guild, M., *‡Iacovino, K.*, Johnson A, Leong J & Ostrander C, 2018, Solid-Earth Processes are Key Drivers in the Evolution of Earth's Redox State and Set the Stage for the Great Oxidation Event, Goldschmidt Conference, Boston, MA.
- 60) Bose M., **Till C.B.**, Floss C., 2018, Early solar system chronometry using presolar grains, Goldschmidt Conference, Boston.
- 59) Shamloo, H., **Till, C.B.**, 2018, Mg Diffusion in Alkali Feldspar; Applications for Diffusion Chronometry in Magmatic Systems, Goldschmidt Conference Boston, MA.
- 58) Bose, M., **Till, C. B.**, and Floss, C., 2018, Chronometry Using Diffusion in Presolar Silicate Grains, Lunar & Planetary Science Conference, Woodlands, TX.
- 57) **Till, C.B. (Invited Keynote)**, 2018, A Petrologist's Eye View of Silicic Magmatic Systems, EOS AGU Chapman: Merging Geophysical, Petrochronologic, and Modeling Perspectives of Large Silicic Magma Systems Abstract P-28, Quinamávida, Maule Region, Chile.
- 56) Brugman, K.K., **Till, C.B.**, 2018. A Revised Low-Al Clinopyroxene-Liquid Geothermometer for High-Silica Igneous Systems. EOS AGU Chapman: Merging Geophysical, Petrochronologic, and Modeling Perspectives of Large Silicic Magma Systems Abstract P-28, Quinamávida, Maule Region, Chile.
- 55) *‡Iacovino, K., Till, C.B., 2017, Fluid-mediated redox transfer in subduction zones: Measuring the intrinsic  $fO_2$  of slab fluids in the lab, AGU Fall Meeting, New Orleans, LA.*
- 54) Brugman, K.K. (Invited), C.B. Till, 2017. Taking Yellowstone's Temperature: A New Clinopyroxene Geothermometer to Improve Timescales of Pre-Eruptive Events. EOS AGU Fall Meeting Abstract U13B-03, New Orleans, LA.
- 53) Brugman, K.K., **Till, C.B.**, 2017. A Revised Clinopyroxene-Liquid Geothermometer for Silicic Igneous Systems with Applications to Diffusion Chronometry of the Scaup Lake Rhyolite, Yellowstone Caldera, WY. EOS AGU Fall Meeting Abstract V11C-0365, New Orleans, LA.
- 52) Phillip, M., **Till, C.B.**, 2017, Experimental Constraints on the Melting Behavior of an Mg-Rich Exoplanetary Mantle. AGU 2017. Abstract MR41C-0417, New Orleans, LA
- 51) Guild, M., **Till, C.B.**, 2017. Developing a Hygrometer for Water-Undersaturated Lherzolite Melts, EOS AGU Fall Meeting Abstract V11B-0346, New Orleans, LA.
- 50) **Till, C.B.**, Kent, A., Abers, G., 2017, Toward Assessing the Causes of Intra-Arc Diversity, A Cascades Perspective, AGU, New Orleans LA.
- 49) **Till, C.B. (Invited)**, Kent, A., Abers, G., 2017, Toward Assessing the Causes of Intra-Arc Diversity, A Cascades Perspective, CIDER Pre-AGU Workshop, New Orleans LA.
- 48) **Till, C. B. (Invited)**, Kent, A., Abers, G., 2017, An interdisciplinary synthesis of mantle conditions, crustal storage and seismic velocities in the Southern-Central Cascades Arc, IAVCEI, Portland OR.

- 47) **Till, C.B. (Invited)**, 2017, An Integrated Approach for Identifying P-T-X-t Histories and Eruption Triggers for Silicic Magmas; An Example Examining the Scaup Lake Rhyolite Yellowstone Caldera, WY, IAVCEI, Portland OR.
- 46) **K. Brugman, Till, C.B.**, 2017, Investigation of the Applicability of Clinopyroxene Geothermometers to Silicic Igneous Systems, IAVCEI, Portland OR.
- 45) **H. Shamloo, Till, C.B.**, 2017, Petrologic Insights into the Triggering Mechanism for the Lava Creek Tuff Super-Eruption, Yellowstone Caldera, WY, IAVCEI 2017, Portland OR.
- 44) **\*\*Perez, A.M.**, Desch, S.J., Schrader, D.L., **Till, C.B.**, 2017, Determining the Relative Timing of Formation of Chondrules vs. Planetary Embryos Through Experiments. First Billion Years Conference.
- 43) **\*\*Perez, A.M.**, Desch, S.J., Schrader, D.L., **Till, C.B.**, 2017, Can Porphyritic Chondrules Form in Planetary Embryo Bow Shocks? Chondrules Conference, British Columbia.
- 42) **Shaffer, J., Till, C.B.**, 2016, New Temperature and H<sub>2</sub>O estimates for Post Caldera Yellowstone Rhyolite Lavas from Feldspar Geothermometry and Rhyolite-MELTS Modeling EOS AGU Fall Meeting.
- 41) **Shamloo, H., Till, C.B.**, 2016, Petrologic Insights into the Triggering Mechanism for the Lava Creek Tuff Super-Eruption, Yellowstone Caldera, WY, EOS AGU Fall Meeting.
- 40) **K. Brugman, Till, C.B.**, Bose, M. and Hervig, R., 2016, Clinopyroxene Diffusion Chronometry of the Scaup Lake Rhyolite, Yellowstone Caldera, WY, EOS AGU Fall Meeting (**\*\*Recipient of AGU Outstanding Student Paper Award\*\***).
- 39) **C. Till, J. Boyce**, 2016, New Approaches for Identifying the P-T-X-t Histories and Eruption Triggers for Silicic Magmas; An Example Examining the Scaup Lake Rhyolite, Yellowstone Caldera, WY, EOS AGU Fall Meeting.
- 38) **Till, C.B. (Invited)**, 2016, A joint petrologic-seismic-MT effort to map the distribution of fluids + melts in subduction zones in 3D, Subduction Zone Observatory Workshop, Boise ID.
- 37) **Till, C.B. (Invited)**, 2016, A Review of Mantle Thermobarometry for Primitive Arc Magmas, Goldschmidt Conference, Yokohama, Japan, Abstract #3131.
- 36) **Guild, M., Till, C.**, Hervig, R., Wallis, S., 2016, Depth of Chlorite Formation: Quantitative Determination Using Boron Isotopes, Goldschmidt Conference, Yokohama, Japan, Abstract #1004
- 35) **C. Till (Invited)**, J. Vazquez, J. Boyce, 2015, Setting a Stopwatch for Post-Caldera Effusive Rhyolite Eruptions at Yellowstone caldera, Wyoming, EOS AGU Fall Meeting Abstract V31G-03.
- 34) **K. Brugman, C. Till, M. Bose and R. Hervig**, 2015, Development of Clinopyroxene as an Igneous Geospeedometer Using NanoSIMS, EOS AGU Fall Meeting Abstract V31B-3030.
- 33) **Guild, M., C. Till, R. Hervig, S. Wallis**, 2015, Boron Isotopic Compositions of High Pressure Hydrous Phases from the Slab-Mantle Wedge Interface, EOS AGU Fall Meeting Abstract V43A-3096.

- 32) ‡*Cichy, S., C. Till*, K. Roggensack, R. Hervig, A. Clarke, 2015, Experimental Evidence for Fast Lithium Diffusion and Isotope Fractionation in Water-bearing Rhyolitic Melts at Magmatic Conditions, EOS AGU Fall Meeting Abstract V43C-3167.
- 31) \*\**A. Rubin*, K. Cooper, A. Kent, F. Costa Rodriguez, **C. Till**, 2015, Constraining timescales of pre-eruptive events within large silicic volcanic centers, EOS AGU Fall Meeting Abstract V23F-01.
- 30) M. Coombs, J. Vazquez, L. Hayden, A. Calvert, M. Lidzbarski, N. Anderson, **C. Till**, 2015, Rejuvenation of shallow-crustal silicic magma bodies at Augustine and Hayes volcanoes, Alaska, EOS AGU Fall Meeting Abstract V42B-01.
- 29) **Till, C.B. (Invited)**, 2015, Thermobarometric Constraints on Primitive Arc Magma Genesis: A Review, GeoPRISMS Theoretical & Experimental Institute on Subduction Zones, Redondo Beach, CA.
- 28) \*\**Tucker, K.*, Hervig, R., **Till, C.**, Wadhwa, M., 2105, D/H in nominally anhydrous phases in martian meteorites: implications for the martian mantle, Meteoritics & Planetary Science Vol. 50.
- 27) **Till, C.B. (Invited)**, *Guild, M.R.*, Grove, T.L., Carlson, R.W., 2014, Evidence of Arc Magma Genesis in a Paleo-Mantle Wedge, the Higashi-akaishi Peridotite, Japan, EOS, AGU Fall Meeting Abstract V31G-07.
- 26) **Till, C.B.**, Boyce, J.W., 2014, Interrogating Commonly Applied Initial Condition Assumptions in Geospeedometry using NanoSIMS, EOS, AGU Fall Meeting Abstract V33A-4823.
- 25) Grove, T.L., **Till, C.B.**, 2014, Melting processes at the base of the mantle wedge: Melt compositions and melting reaction for the first melts of vapor-saturated lherzolite, EOS, AGU Fall Meeting Abstract DI21A-4257.
- 24) \*\**Rubin, A.E.*, Cooper, K.M., Kent, A.J.R., Costa Rodriguez, F., **Till, C.B.**, 2014, Using Li Diffusion to Track Thermal Histories within Single Zircon Crystals, EOS, AGU Fall Meeting Abstract V31F-02.
- 23) **Till, C.B. (Invited)**, Grove, T.L., Carlson, R.W., Wallis, S.R., Mizukami, T., 2014, Insight into arc magma genesis from the Higashi-akaishi Peridotite, Japan, Goldschmidt Annual Conference, #4067.
- 22) **Till, C.B.**, Grove, T.L., Donnelly-Nolan, J.M., Carlson, R.W., 2013 (*Invited*), Depths and Temperatures of Mantle Melt Extraction in the Southern Cascadia Subduction Zone, EOS, AGU Fall Meeting Abstract S11C-07.
- 21) **Till, C.B.**, Vazquez, J.A., Boyce, J.W., Stelten, M., 2013, Probing the source and timing of rejuvenation and hybridization in post-caldera rhyolite magmas at Yellowstone Caldera, EOS, AGU Fall Meeting Abstract V53A-2763.
- 20) Grove, T.L., Holbig, E.S., Barr, J.A., **Till, C.B.**, Krawczynski, M.J., 2013, How to identify garnet lherzolite melts and distinguish them from pyroxenite melts, EOS, AGU Fall Meeting Abstract.



- 19) **Till, C.B.**, Matthews, N.E., Vazquez, J.A. (2013) Refining the Chronology of Intracaldera Magmatism Following the Formation of Yellowstone Caldera, GSA Abstracts with Programs, Vol. 45, No. 7, p. 895, Paper 405-8.
- 18) **Till, C.B.**, Grove T.L., 2012 (*Invited*), In Pursuit of Parental Arc Magmas: The effects of pressure on the composition of H<sub>2</sub>O-saturated peridotite melts, EOS, AGU Fall Meeting.
- 17) **Till, C.B.**, Vazquez, J.A., Boyce, J.W., Hitzman, C., 2012, Quantifying the interval between rejuvenation and eruption of rhyolite at Yellowstone caldera using high-resolution NanoSIMS geospeedometry, EOS, AGU Fall Meeting.
- 16) **Till, C.B.**, Grove T.L., Krawczynski, M.J., 2011, A new melting model for variably metasomatized mantle and its implications for the generation of intraplate basalts in Oregon's High Lava Plains and the Modoc Plateau, CA, EOS, AGU Fall Meeting, Abstract T44D-06.
- 15) **Till, C.B.**, Grove, T.L., Carlson, R.W., Donnelly-Nolan, J.M., Fouch, M.J., Wagner, L.S., 2011, Shallow Anhydrous Asthenospheric Melting and the Location of the Lithosphere-Asthenosphere Boundary Below Southern Oregon and Northern California, Geological Society of America Abstracts with Programs, V. 43, No. 5, p. 90.
- 14) **Till, C.B.**, Grove, T.L., Carlson, R.W., Donnelly-Nolan, J.M., 2011 (*Invited*), Shallow anhydrous asthenospheric melting and the location of the lithosphere-asthenosphere boundary below southern Oregon and northern California, EarthScope Institute on the Lithosphere-Asthenosphere Boundary, Portland, OR.
- 13) **Till, C.B.**, Grove, T.L., 2010, Experimental Insights into the Subduction Filter, EOS, AGU Fall Meeting, Abstract V12B-04.
- 12) **Till, C.B.**, Grove, T.L., Carlson, R.W., 2010, Message from the Moho: Petrologic Clues to the Origin of Quaternary Basaltic Lavas from Oregon's High Lava Plains, Geologic Society of America Abstracts, V. 42, No. 5, p. 343.
- 11) **Till, C.B.**, Carlson, R.W., Grove, T.L., Wallis, S.R., Mizukami, T., 2009, A Missing Link in Understanding Mantle Wedge Melting, Higashi-akaishi Peridotite, Japan, EOS, AGU Fall Meeting, Abstract V44A-03.
- 10) M.J. Krawczynski, **Till, C.B.**, Barr, J.A., Grove, T.L., 2009, How much of the range in mantle potential temperatures is natural?, EOS, AGU Fall Meeting, Abstract V23B-2058.
- 9) **Till, C.B.**, Grove, T.L., 2008, New Observations on the Melting Behavior of H<sub>2</sub>O-Saturated Mantle: Applications to Subduction Zones, EOS, AGU Fall Meeting Abstract V24B-08.
- 8) Elkins-Tanton, L.T., **Till, C.B.**, Fisher, K.M., 2008, Melt Could Create a Sharp Lithosphere-Asthenosphere Boundary Below Eastern North America, EOS, AGU Fall Meeting Abstract U43B-0066.
- 7) **Till, C.B.**, Grove, T.L., Withers A.C., Hirschmann, M.M., 2008 (*Invited*), Unlocking the Secrets of the Mantle Wedge: H<sub>2</sub>O-Saturated Peridotite Melting Behavior to 5 GPa, AGU Chapman Conference and Fifth International Orogenic Lherzolite Conference, Mt. Shasta City, CA.

- 6) **Till, C.B.**, Grove, T.L., Withers, A., Hirschmann, M.M., Médard, E., and Chatterjee, N., 2007, Extending the Wet Mantle Solidus: Implications for H<sub>2</sub>O Transport and Subduction Zone Melting Processes; EOS Transactions AGU Fall Meeting.
- 5) **Till, C.B.**, Gans, P.B., Spera, F.J., 2007, Wet Melting Prevails in Hot Subduction Zones; Evidence for the Oligo-Miocene Arc in southern Sonora, Mexico, State of the Arc Meeting, Termas de Puyehue, Chile.
- 4) De la Fuente, J., Chatoian, J., King, A.P., **Till, C.B.**, Miller, A.R., Taylor, R.G., 2005, Development of a landslide and debris flow hazard map for the Old and Grand Prix Fires: San Bernardino National Forests, GSA Abstracts with Programs, vol. 37, no. 7, p. 175.
- 3) **Till, C.B.**, Gans, P.B., and Spera F., 2005, From Subduction to Extension/Transtension: A Case Study in Transitional Geochemistry from Sonora, Mexico; GSA Abstracts with Programs, Vol. 37, No. 7, p. 19.
- 2) **Till, C.B.**, Gans, P.B., and Spera, F., 2005, The Tertiary Transition from “Subduction-Related” to “Rift- Related” Magmatism in Southern Sonora, Mexico: A Field, Petrologic, and Geochemical Study; GSA Abstracts with Programs, Vol. 34, No.4, p. 67.
- 1) MacMillan, I., Gans, P.B., and **Till, C.**, 2005, Tectonic Implications of the Volcanic and Structural History of the Sierra Santa Ursula, Sonora, Mexico; GSA Abstracts with Programs, Vol. 34, No. 4, p. 64.

#### **OTHER EXPERIENCE**

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My first career was in ballet. I was employed full-time as a professional ballet dancer for five years in two world-renowned companies (Pennsylvania Ballet & Fort Worth Dallas Ballet, now Texas Ballet Theater) after studying ballet at the School of American Ballet at Lincoln Center in New York City and Ballet Workshop of New England. As a ballet dancer, I received several distinctions including an Honorable Mention in the Presidential Arts Competition and an invitation to participate in Exploring Ballet with Suzanne Farrell at the Kennedy Center in Washington D.C..