

# Christy B. Till

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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

## 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
- 2020-2021 *Associate Director for Inclusive Community*  
Arizona State University
- Leadership position to facilitate and incentivize equity & inclusion work across the School of Earth & Space Exploration
  - Chair of JEDI Task Force & led JEDI Strategic Plan development.
- 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

## AWARDS, HONORS & FELLOWSHIPS

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2021-2023	AGU LANDInG Fellow ( <i>AGU's DEI Leadership Academy</i> )
2020	Meierjurgan Faculty Fellowship, University of Oregon ( <i>declined due to COVID-19</i> )
2019	Early Career Award, Geological Society of America, Mineralogy, Geochemistry, Volcanology & Petrology Division
2019-2020	Secretary ( <i>elected</i> ), American Geophysical Union (AGU), Volcanology, Geochemistry & Petrology Section
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>1st early career elected to AGU leadership 2008-2014</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 G.K. Gilbert Award ( <i>best graduate student talk</i> )
2005	UCSB Teaching Assistant of the Year
2004	UCSB 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

## FUNDED GRANTS AT ASU

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*Total of ~\$2.6M to Till since 2014 (calculated as Grant Total x Till %)*

## GRANTS PRIOR TO ASU

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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

## PUBLICATIONS

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*Till Google Scholar citations: 2055, h-index: 19 (as of Oct. 29, 2023)*

### 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 in My Field: 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 PRESS/REVIEW/PREPRINT

- 42) †**Wieser, P.E.**, Kent, A. J., **Till, C. B.**, Abers, G., *in press*, Geophysical and Geochemical Constraints on Magma Storage Depths along the Cascade Arc: Knowns and Unknowns. *Geochemistry, Geophysics, Geosystems*. Available on a preprint server [here](#).
- 41) †**Goltz, A.E.**, **Till, C.B.**, Kent, A.J., *in review*, Systematic Underestimation of Magmatic Flux at Continental Arcs. *Nature Communications*.
- 40) \*\***Jacobs, S.**, \*\***Karageozian, M.**, **Till C.B.**, Unterborn, C., Hull, S., and Panero, W., *in review*, Modeled Crystallization of Exoplanet Bulk Silicate Mantles: Implications for Magma Ocean Solidification and Early Crust Formation & Observability. *JGR Planets*.
- 39) †**Wieser, P.E.**, **Till, C. B.**, Kent, A. J., Gleeson, M., *in prep.*, Comment on ‘The magmatic architecture and evolution of the Chang’e-5 lunar basalts.’ *Icarus*. Available on a preprint server [here](#).

#### PEER-REVIEWED PUBLICATIONS

- 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 <sup>87</sup>Sr/<sup>86</sup>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., Bohron, 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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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. <https://doi.org/10.1038/s43017-020-00127-7>. *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. 15 for complete list of conference abstracts -----

#### **STUDENT & POSTDOCTORAL SUPERVISION**

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##### **Postdoctoral Advisees**

1. June 2022 – present Dr. Rebecca deGraffenried, NSF Postdoctoral Fellow  
*starting Jan. 2024 Assist. Prof., Univ. of Missouri*
2. April 2022 – present Dr. Lydia Harmon
3. Feb 2022 – present Dr. Andrea Goltz
4. Aug 2021-June 2023 Dr. Daniel Portner, SESE Exploration Postdoc (co-advised)  
*now Assist. Prof., New Mexico Tech*
5. Dec 2020-May 2022 Dr. Penny Wieser, Postdoctoral Scholar (co-advised)  
*now Assist. Prof., U.C. Berkeley*
6. Oct 2016-Dec 2018 Dr. Kayla Iacovino, FESD Postdoctoral Fellow  
*now Experimental Petrologist, NASA JSC experimental lab*
7. July 2014-June 2016 Dr. Sarah Cichy, SESE Exploration Postdoc (co-advised)  
*now Research Scientist and IHPV Lab Manager at Universität Potsdam*

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

1. Fall 2019-present Felix Ishimwe (PhD Candidate)
2. Fall 2019-present Jessie Bersson (PhD Candidate)

3. Fall 2015-Spring 2020      Hannah I. Shamloo, PhD (<https://www.hannahshamloo.com>)  
*now Assistant Professor, Central Washington University*
4. Fall 2014-Summer 2020      Meghan R. Guild, PhD (<https://meghanguild.weebly.com>)  
*now SIMS Research Scientist, Arizona State University*
5. Fall 2014-Summer 2020      Karalee K. Brugman, PhD, (<http://karabrugman.com>)  
*now FORCE Research Scientist, Arizona State University*
6. Fall 2017-Fall 2019            Mitchell Phillips, MS  
*now Maps & Publications, USGS, Menlo Park CA*

### **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.*

1. Fall 2020 - present            Claire Richardson (PhD Candidate)
2. Fall 2018 – present            Mara Karageozian (PhD Candidate)
3. Spring 2015-present          Crystlynda Fudge (PhD Candidate)
4. Summer 2018-July 2023      Srinidhi Ravi, *Graduated PhD, now Postdoc, Khalifa U.*
5. Fall 2018 – Fall 2022          Samantha Jacobs, *Graduated PhD, now Research Scientist, NASA Houston*
6. Fall 2017-Spring 2020        Hannah Bercovicci, *Graduated MS*
7. Spring 2017-Spring 2020      Chadlin Ostrander, *Graduated PhD, now Postdoc, WHOI*
8. Fall 2015-Spring 2020        Aleisha Johnson, *Graduated PhD, now Postdoc U. Arizona*

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

1. Prachi Kar (SESE, PhD student), *started Fall 2021*
2. Allyson Trussell (SESE, PhD student), *started Fall 2021*
3. Samuel Courville (SESE, PhD candidate), *started Fall 2020*
4. Kevin Trinh (SESE, PhD candidate), *started Fall 2020*
5. Kyle Mohr (SESE, PhD candidate), *started Fall 2017*
6. Tucker Ely (SESE, PhD), *Graduated Summer 2020, now Postdoc, CU Boulder*
7. Huawei Chen (SESE, PhD), *Graduated 2019, now Staff Scientist, China Univ. of Geosciences*
8. James Leong (SESE, PhD), *Graduated 2020, now Postdoc, Lamont-Doherty*
9. Soumya Ray (SESE, PhD), *Graduated 2021, now Postdoc, Univ Maryland*
10. Anna Brunner (SESE, MS), *Graduated 2019*
11. Shule Yu (SESE, PhD), *Graduated 2019, now Software Engineer, Tencent*
12. Alyssa Anderson (SESE, PhD), *Graduated 2019, now Postdoc, Princeton*
13. Hong Yu Lai (SESE, PhD), *Graduated 2019, now Data Scientist, Carvana*
14. Mary Schultz (SESE, PhD), *Graduated 2017, now Professor, San Jacinto College*
15. Margo Regier (SESE, MS), *Graduated 2016, now Program Officer, National Academy of Sciences*
16. Kera Tucker (SESE, MS), *Graduated 2015, now Systems Engineer, Lockheed Martin*
17. Chelsea Allison (SESE, PhD) *Graduated 2018, now Postdoc, Cornell University*
18. Danika Wellington (SESE, PhD), *Graduated 2018, now Scientist, USGS EROS Data Center*
19. Alexandra Reyes (SESE, MS), *Graduated 2018, now Sample Curator, NASA JSC*
20. Joey Romero (SESE, MS), *Graduated 2018, now Museum Facilitator, Museum of Sci. & Industry, Chicago*

### **ASU Undergraduate Research Advisees**

1. Summer 2023 – present      Maegan Bouwens - *SESE Geology major*
2. Fall 2018 – Winter 2020      Jax Webb - *SESE Geology major*



3. Fall 2018- Spring 2019 Emma Valdez – *School of Life Sciences major, SESE Geology minor*
4. Spring 2017-2018 Andrés Aldana – *SESE Geology*
5. Fall 2016- May 2018 Kelly Vote - *Recipient CLAS Research Scholarship Summer 2017,*
6. Dec 2015-May 2017 Mitchell Phillips - *Recipient CLAS Research Scholarship 2016- 2017, Now USGS, Menlo Park*
7. May 2014-Aug 2016 Eric Escoto - *Recipient 2016 CLAS Dean’s Medal & 2015 R. Greeley Scholarship, Now ASU PhD Student & NSF Graduate Research Fellow*
8. May 2014-Aug 2016 Jamie Shaffer – *Received MS Student New Mexico State & now Hydrogeologist at Leonard Rice Engineers Inc.*
9. May 2014-May 2015 Katherine Sheppard -*Recipient CLAS Dean’s Medal & ASU Outstanding Graduate & Barrett Honors Thesis, “Modeling Mantle Genesis of Basalts from Lassen Volcano”, now Data Analyst at Raytheon, Tucson*

## TEACHING HISTORY

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- Spring 2016 (in-person),  
Spring 2024 (online) GLG 101: Introduction to Geology  
*Introductory general education class teaching basic principles of geology, geochemistry, and geophysics.*  
Enrollment: 220 (in person), 500 (online)
- Fall 2015,  
Spring 2017,  
Spring 2019,  
Spring 2020  
Fall 2023 SES 494/598: Science Communication  
*Developed as part of NSF CAREER grant – Upper level undergrad & graduate course to develop and practice skills in effective oral and written science communication for both scientific and general audiences. Course includes significant writing & oral communication practice.*  
Av. Enrollment: 25
- Spring 2015 GLG 494/598: Subduction Zones  
*Undergraduate & graduate course covering the physics and chemistry of geologic processes occurring in subduction zones from the subducting plate to the surface. Course work includes weekly reading of journal articles, presentations and final research projects.*  
Enrollment: 35
- Fall 2014, 2015, 2016,  
2017, 2018, 2019 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                    GLG 591: Faculty Research Seminar  
*Presented lecture on my 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

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

1. Oct 2023            Cal State Fullerton Geology Seminar
2. March 2022        UC Santa Barbara Earth Science Seminar
3. November 2021    Oregon State University, Earth Science Seminar
4. March 2021        CalTech, GPS Division Seminar
5. August 2020        Arizona State University, SESE Colloquium
6. June 2020          American Museum of Natural History (*cancelled COVID-19*)
7. April 2020         Bristol University, UK (*cancelled COVID-19*)
8. November 2019    University of New Mexico, Earth Sciences Colloquium
9. March 2019        University of Wisconsin, Weeks Lecture
10. January 2019     Universidad Nacional de Colombia, Sede Medellín, EGEO Seminar
11. October 2018     University of Nevada, Reno, Geological Sciences Colloquium
12. September 2018   University of Tennessee, Dept. of Earth & Environmental Science Seminar
13. May 2018          Stanford University, Dept. Geological & Enviro. Science Colloquium
14. January 2018     Oregon State University, Geology Seminar
15. May 2017          University of Wyoming, Geological Sciences Seminar
16. April 2017        US Geological Survey, Denver CO
17. April 2017        ASU, School of Earth & Space Exploration Colloquium
18. November 2016    University of Washington, Earth & Space Sciences Seminar
19. November 2016    University of Oregon, Dept. of Earth Sciences Seminar
20. July 2016          Kanazawa University, Geosciences Seminar, Japan
21. November 2015    New Mexico State, Geological Sciences Seminar

22. November 2014 University of Arizona, Dept. of Geosciences Colloquium
23. September 2013 Rice University, Dept. of Earth Science Seminar
24. September 2013 US Geological Survey, Reston VA, Mendenhall Fellows Seminar
25. April 2013 Lawrence Berkeley National Lab/UC Berkeley Geology Seminar
26. March 2013 Stanford University, Dept. Geological & Enviro. Science Colloquium
27. February 2013 UC Santa Cruz, Whole Earth Seminar
28. February 2013 Arizona State University, School of Earth & Space Exploration Seminar
29. February 2013 Washington State University, Earth & Planetary Sciences Seminar
30. January 2013 UC Santa Barbara, Earth Sciences Seminar
31. January 2013 Boise State University, Dept. Geosciences Seminar
32. October 2012 UC Davis, Earth Sciences Seminar
33. September 2012 UC Santa Cruz, Whole Earth Seminar
34. May 2012 UC Los Angeles, Dept. Earth & Space Sciences Seminar
35. April 2012 San Jose State University, Geology Seminar
36. April 2012 Washington University, St. Louis, Dept. Earth & Planetary Sci. Seminar
37. February 2012 Boise State University, Dept. Geosciences Seminar
38. February 2012 US Geological Survey, Menlo Park, Volcano Science Center Seminar
39. April 2011 US Geological Survey, Anchorage, AK
40. March 2011 Bryn Mawr College, Dept. Geological Sciences Seminar
41. October 2010 Middlebury College, Dept. Geology Seminar

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

1. December 2022 American Geophysical Union Fall Meeting, Washington DC
2. December 2019 American Geophysical Union Fall Meeting, Washington DC
3. September 2019 Geological Society of America Annual Meeting, Phoenix, AZ
4. June 2019 CIDER Summer Program on Volcanoes, Berkeley CA
5. June 2019 Gordon Conference: Solid Earth, Mt. Holyoke, MA
6. December 2018 American Geophysical Union Fall Meeting, Washington DC
7. August 2018 Goldschmidt Conference, Boston MA
8. January 2018 Keynote, Chapman Conference on Large Silicic Magmatic Systems, Chile
9. December 2018 Keynote, CIDER workshop @ AGU Fall Meeting, New Orleans, LA
10. August 2017 IAVCEI 2017, Portland OR (2 invited talks)
11. August 2017 IAVCEI 2017, Portland OR (2 invited talks)
12. October 2016 Subduction Zone Observatory Planning Meeting, Boise ID
13. July 2016 Goldschmidt Conference, Yohohama, Japan
14. December 2015 American Geophysical Union Fall Meeting, San Francisco, CA
15. October 2015 GeoPRISMS Experimental & Theoretical Institute on Subduction Zones
16. December 2014 American Geophysical Union Fall Meeting, San Francisco, CA
17. August 2014 Goldschmidt Meeting, Sacramento CA
18. December 2013 American Geophysical Union Fall Meeting
19. December 2012 American Geophysical Union Fall Meeting
20. October 2011 EarthScope Institute on Lithosphere-Asthenosphere Boundary
21. 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

- 2020-2021 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 *"Behind the Scenes of a Successful NSF Proposal"*
- 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

- 2023-present National Volcano Early Warning Science Advisory Committee
- 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)*
- 2013-2014 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. 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

#### IV. Grant Proposal and Panel Service

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

#### V. Service Activities at Scientific Meetings

2012-present Outstanding Student Paper Judge, American Geophysical Union Fall Meeting  
 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 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 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 Convener, Goldschmidt Conference, Sacramento, CA "Geologic and Geochemical Processes at the Plate Interface"

- 2013 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 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”*

## VI. 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/kedtalks>
- 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

## VII. Selected Press Coverage & Media

1. October 2023 [Muse Science Magazine for Kids](#), interview on solar system volcanoes
2. March 2019 [ASU Now](#) article on Till et al., 2019
3. Dec. 2018 [Scientific American article](#) discussing our Yellowstone research
4. May 2018 [Science News article](#) featuring our Exoplanet research
5. Nov 2017 Appeared on [AZ PBS “Horizon” to discuss Yellowstone Research](#)
6. Oct 2017 Appeared on [12 News “Sunday Square Off” to discuss Yellowstone Research](#)
7. Oct 2017 [New York Times article on our research](#) & associated coverage ([Snopes](#), [Time](#), [USA Today](#), [Newsweek](#), [Fox News](#))

8. June 2017 Interviewed on Arizona's KJZZ 'The Show', ["What if Scientists Could Better Predict When A Volcano Might Erupt?"](#)
9. March 2017 [Blog piece](#) for AGU's Plainspoken Scientist
10. Dec. 2016 AGU [EOS article on our work at Yellowstone](#)
11. August, 2016 Featured in ASU Now video: "ASU professors' words of wisdom"
12. Jan., 2016 Interviewed on KTAR 92.3 News Radio, Phoenix AZ
13. Nov., 2015 Featured in ASU Connections Podcast
14. July, 2015 "For smaller eruptions, Yellowstone can wake up quickly" ArsTechnica.com
15. July, 2015 "Geologists are setting a Stopwatch for a Yellowstone Eruption," Serious-Science.org article on Till et al., 2015
16. July, 2015 "Creating a stopwatch for volcanic eruptions", Phys.org article
17. July, 2015 "Potential for future eruptions at Yellowstone volcano", ScienceDaily.com
18. July, 2015 "ASU professor strives to better understand the potential for future eruptions at Yellowstone volcano by studying those in the recent past" AAAS Eurkalert.org
19. July, 2015 "Recharging A magma chamber" the-earth-story.
20. Spring, 2015 "No Small Feat" TechConnect Magazine, article on ASU NanoSIMS facility
21. April, 2015 "UA, ASU teams to search for alien life", interviewed in Arizona Daily article about NExSS grant
22. 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

#### **VIII. Service re: Inclusion of PEERs (persons excluded due to ethnicity or race) in STEM**

- 2022-present **SEQEL Project PI** – ASU project studying use of rubrics in graduate qualifying exams
- 2014-present **Advisor to PEERs** - Advised PhD projects for 12 women (4 also PEERs), undergrad research projects for 4 women & 3 PEERs and postdoc projects for 6 women
- 2014-present **Faculty Advisor** - SESE Women in Planetary Sciences (WIPS) Chapter
- 2021-2023 **AGU LANDInG Fellow** - DEI Leadership Academy (inaugural cohort), chosen as 1 of 12 from across AGU
- 2020-2021 **PI JEDI 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 justice & equity work across the school. Chairing JEDI Task Force & led SESE JEDI 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

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

- 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-Silicia 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 Founder 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.
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#### **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..