

SETH A. JACOBSON

PI of the Planetary Makerspace @ MSU

seth@msu.edu | sethajacobson.com | 517-335-1941

288 Farm Ln, 207 College of Natural Sciences Building, East Lansing, MI 48824

PROFESSIONAL APPOINTMENTS

Assistant Professor at Michigan State University	Aug. 2019 – Present
<i>Department of Earth & Environmental Sciences, East Lansing, MI, USA (primary)</i>	
<i>Department of Physics & Astronomy, East Lansing, MI, USA (adjunct)</i>	
Assistant Professor at Northwestern University	Aug. 2017 – Aug. 2019
<i>Department of Earth & Planetary Sciences, Evanston, IL, USA</i>	
Postdoctoral Researcher with Joint Appointment	Jan. 2013 – Aug. 2017
<i>Observatoire de la Côte d'Azur (OCA), Laboratoire Lagrange, Nice, France</i>	
<i>Universität Bayreuth, Bayerisches Geoinstitut (BGI), Bayreuth, Germany</i>	

EDUCATION

University of Colorado, Boulder, CO, USA	Aug. 2008 - Dec. 2012
<i>Ph.D. Astrophysical and Planetary Sciences</i> 2012	
<i>M.S. Astrophysical and Planetary Sciences</i> 2010	
Cornell University, Ithaca, NY, USA	Aug. 2004 - May 2008
<i>B.S. Applied and Engineering Physics</i> 2008	

AWARDS

Ronald Greeley Early Career Award in Planetary Sciences from AGU	2017
Asteroid 8618 (1981 DX) named Sethjacobson at Asteroids, Comets, Meteors	2014
NASA Earth and Space Science Fellowship	2010-2012
National Optical Astronomy Observatory (NOAO) Thesis Support Award	2011-2012
Astrophysical and Planetary Sciences Department Fellowship	2010
NSF Graduate Research Fellowship Honorable Mention	2009,2010

REFEREED PUBLICATIONS

[Google Scholar](#) | [ADS Abstract Service](#) | [ArXiv Preprints](#) | [ORCID Record](#)

40. M. Nakajima, G. J. Golabek, K. Wuennemann, D. C. Rubie, C. Burger, H. J. Melosh, **S. A. Jacobson**, L. Manske, & S. D. Hull. "Scaling laws for the geometry of an impact-induced magma ocean." *Earth and Planetary Science Letters*, 568, 116983, 1–12, 2021.
39. L. Allibert, S. Charnoz, J. Siebert, **S. A. Jacobson**, & S. N. Raymond. "Quantitative estimates of impact induced crustal erosion during accretion and its influence on the Sm/Nd ratio of the Earth." *Icarus*, 363, 114412, 1–10, 2021.
38. S. Cambioni, **S. A. Jacobson**, A. Emsenhuber, E. Asphaug, D. C. Rubie, T. S. J. Gabriel, S. R. Schwartz, & R. Furfaro. "The effect of inefficient accretion on planetary differentiation." *Planetary Science Journal*, 2(3), 93, 1–12, 2021.
37. J. K. Steckloff, J. Debes, A. Steele, B. Johnson, E. R. Adams, **S. A. Jacobson**, & A. Springmann. "How sublimation delays the onset of dusty debris disk formation around white dwarf stars." *Astrophysical Journal Letters*, 913(2), L31, 1–10, 2021.
36. E. S. Jennings, **S. A. Jacobson**, D. C. Rubie, Y. Nakajima, A. K. Vogel, L. A. Rose-Weston, & D. J. Frost. "Metal-silicate partitioning of W and Mo and the role of carbon in controlling their abundances in the bulk silicate Earth." *Geochimica et Cosmochimica Acta*, 293, 40–69, 2021.

35. A. Morbidelli, G. Libourel, H. Palme, **S. A. Jacobson**, & D. C. Rubie. “Subsolar Al/Si and Mg/Si ratios of non-carbonaceous chondrites reveal planetesimal formation during early condensation in the protoplanetary disk.” *Earth and Planetary Science Letters*, 538(116220), 1–10, 2020.
34. J. Scora, D. Valencia, A. Morbidelli, & **S. A. Jacobson**. “Chemical diversity of super-Earths as a consequence of formation.” *Monthly Notices of the Royal Astronomical Society*, 493(4), 4910–4924, 2020.
33. S. T. S. Poon, R. P. Nelson, **S. A. Jacobson**, & A. Morbidelli. “Formation of compact systems of super-Earths via dynamical instabilities and giant impacts.” *Monthly Notices of the Royal Astronomical Society*, 491(4), 5595–5620, 2020.
32. A. A. Christou, G. Borisov, A. Dell’Oro, **S. A. Jacobson**, A. Cellino, & E. Unda-Sanzana. “Population control of Mars Trojans by the Yarkovsky and YORP effects.” *Icarus*, 1–35, 2019.
31. N. Zube, F. Nimmo, R. Fischer, & **S. A. Jacobson**. “Constraints on terrestrial planet formation timescales and equilibration processes in the Grand Tack scenario from Hf-W isotopic evolution.” *Earth and Planetary Science Letters*, 522, 210–218, 2019.
30. M. Lambrechts, A. Morbidelli, **S. A. Jacobson**, A. Johansen, B. Bitsch, A. Izidoro, & S. Raymond. “Formation of planetary systems by pebble accretion and migration: How the radial pebble flux determines a terrestrial-planet or super-Earth growth mode.” *Astronomy and Astrophysics*, 627(A83), 1–14, 2019.
29. B. Bitsch, A. Izidoro, A. Johansen, S. Raymond, A. Morbidelli, M. Lambrechts, & **S. A. Jacobson**. “Formation of planetary systems by pebble accretion and migration: growth of gas giants.” *Astronomy and Astrophysics*, 1–25, 2019.
28. A. Morbidelli, D. Nesvorny, V. Laurenz, S. Marchi, D. C. Rubie, L. Elkins-Tanton, M. Wieczorek, & **S. A. Jacobson**. “The timeline of the lunar bombardment—revisited.” *Icarus*, 305, 262–276, 2018.
27. D. P. O’Brien, A. Izidoro, **S. A. Jacobson**, S. N. Raymond, & D. C. Rubie. “The delivery of water during terrestrial planet formation.” *Space Science Reviews*, 214(47), 1–27, 2018.
26. **S. A. Jacobson**, J. Hernlund, D. Rubie, A. Morbidelli, & M. Nakajima. “Formation and stratification and mixing of the cores of Earth and Venus.” *Earth and Planetary Science Letters*, 474, 375–386, 2017.
25. D. Polishook, **S. A. Jacobson**, O. Aharonson, & A. Morbidelli. “A Martian origin for the Mars Trojan asteroids.” *Nature Astronomy*, 1(179), 1–6, 2017.
24. **S. A. Jacobson**. “Multiple origins of asteroid pairs.” *Proceedings of the IAU*, 318, 55–65, 2016.
23. D. C. Rubie, V. Laurenz, **S. A. Jacobson**, A. Morbidelli, H. Palme, A. K. Vogel, & D. J. Frost. “Highly siderophile elements were stripped from Earth’s mantle by iron sulfide segregation.” *Science*, 353(6304), 1141–1144, 2016.
22. J. de Vries, F. Nimmo, H. J. Melosh, **S. A. Jacobson**, A. Morbidelli, & D. C. Rubie. “Impact-induced melting during accretion of the Earth.” *Progress in Earth and Planetary Science*, 3(7), 1–11, 2016.
21. D. C. Rubie & **S. A. Jacobson**. “Mechanisms and geochemical models of core formation.” H. Terasaki & R. Fischer, eds., *Deep Earth: Physics and Chemistry of the Lower Mantle and Core*, AGU/John Wiley and Sons and Inc., vol. 217 of *Geophysical Monograph Series*, 181–190. 2016.
20. **S. A. Jacobson**, F. Marzari, A. Rossi, & D. J. Scheeres. “Matching asteroid population characteristics with a model constructed from the YORP-induced rotational fission hypothesis.” *Icarus*, 277, 381–394, 2016.
19. S. N. Raymond, A. Izidoro, B. Bitsch, & **S. A. Jacobson**. “Did Jupiter’s core form in the

- innermost parts of the Sun's protoplanetary disk?" *Monthly Notices of the Royal Astronomical Society*, 458(3), 2962–2972, 2016.
18. A. Morbidelli, B. Bitsch, A. Crida, M. Gounelle, T. Guillot, **S. A. Jacobson**, A. Johansen, M. Lambrechts, & E. Lega. "Fossilized condensation lines in the Solar System protoplanetary disk." *Icarus*, 267, 368–376, 2016.
 17. E. D. Young, I. E. Kohl, P. H. Warren, D. C. Rubie, **S. A. Jacobson**, & A. Morbidelli. "Oxygen isotopic evidence for vigorous mixing during the Moon-forming giant impact." *Science*, 351 (6272), 493–496, 2016.
 16. J. K. Steckloff & **S. A. Jacobson**. "The formation of striae within cometary dust tails by a sublimation-driven YORP-like effect." *Icarus*, 264, 160–171, 2016.
 15. A. Morbidelli, M. Lambrechts, **S. A. Jacobson**, & B. Bitsch. "The great dichotomy of the Solar System: small terrestrial embryos and massive giant planet cores." *Icarus*, 258, 418–429, 2015.
 14. J.-L. Margot, P. Pravec, P. A. Taylor, B. Carry, & **S. A. Jacobson**. "Asteroid systems: binaries and triples and and pairs." P. Michel, F. E. DeMeo, & W. F. Bottke, eds., *Asteroids IV*, University of Arizona Press, Space Science Series, 355–374. 2015.
 13. D. C. Rubie, **S. A. Jacobson**, A. Morbidelli, D. P. O'Brien, E. D. Young, J. de Vries, F. Nimmo, H. Palme, & D. J. Frost. "Accretion and differentiation of the terrestrial planets with implications for the compositions of early-formed Solar System bodies and accretion of water." *Icarus*, 248, 89–108, 2015.
 12. P. Scheirich, P. Pravec, **S. A. Jacobson**, J. Ďurech, P. Kušnirák, K. Hornoch, S. Mottola, M. Mommert, S. Hellmich, D. Pray, D. Polishook, Yu. N. Krugly, R. Ya. Inasaridze, O. I. Kvaratskhelia, V. Ayvazian, I. Slyusarev, J. Pittichová, E. Jehin, J. Manfroid, M. Gillon, A. Galád, J. Pollock, J. Licandro, V. Alí-Lagoa, J. Brinsfeld, , & I. E. Molotov. "The binary near-Earth asteroid 175706 (1996 FG₃)—an observational constraint on its orbital evolution." *Icarus*, 245, 56–63, 2015.
 11. K. J. Walsh & **S. A. Jacobson**. "Formation and evolution of binary asteroids." P. Michel, F. E. DeMeo, & W. F. Bottke, eds., *Asteroids IV*, University of Arizona Press, Space Science Series, 375–393. 2015.
 10. **S. A. Jacobson** & K. J. Walsh. "Earth and terrestrial planet formation." J. Badro & M. J. Walter, eds., *The early Earth: accretion and differentiation*, AGU/John Wiley and Sons and Inc., vol. 212 of *Geophysical Monograph Series*, 49–70. 2015.
 9. D. Veras, **S. A. Jacobson**, & B. T. Gänsicke. "Post-main-sequence debris from rotation-induced YORP break-up of small bodies." *Monthly Notices of the Royal Astronomical Society*, 445(3), 2794–2799, 2014.
 8. **S. A. Jacobson** & A. Morbidelli. "Lunar and terrestrial planet formation in the Grand Tack scenario." *Philosophical Transactions of the Royal Society A*, 372(174), 1–26, 2014.
 7. **S. A. Jacobson**. "Small asteroid system evolution." *Complex Planetary Systems, Proceedings of the International Astronomical Union, IAU Symposium*, 310, 108–117, 2014.
 6. **S. A. Jacobson**, A. Morbidelli, S. N. Raymond, D. P. O'Brien, K. J. Walsh, & D. C. Rubie. "Highly siderophile elements in Earth's mantle as a clock for the Moon-forming impact." *Nature*, 508(7494), 84–87, 2014.
 5. **S. A. Jacobson**, F. Marzari, A. Rossi, D. J. Scheeres, & D. R. Davis. "Effect of rotational disruption on the size-frequency distribution of the Main Belt asteroid population." *Monthly Notices of the Royal Astronomical Society: Letters*, 439(1), L95–L99, 2014.
 4. **S. A. Jacobson**, D. J. Scheeres, & J. McMahon. "Formation of the wide asynchronous binary asteroid population." *The Astrophysical Journal*, 780(60), 1–21, 2014.
 3. **S. A. Jacobson** & D. J. Scheeres. "Long-term stable equilibria for synchronous binary

- asteroids.” *The Astrophysical Journal Letters*, 736(L19), 1–5, 2011.
2. **S. A. Jacobson** & D. J. Scheeres. “Dynamics of rotationally fissioned asteroids: source of observed small asteroid systems.” *Icarus*, 214(1), 161–178, 2011.
 1. P. Pravec, D. Vokrouhlický, D. Polishook, D. J. Scheeres, A. W. Harris, A. Galád, O. Vaduvescu, F. Pozo, A. Barr, P. Longa, F. Vachier, F. Colas, D. P. Pray, J. Pollock, D. Reichart, K. Ivarsen, J. Haislip, A. Lacluyze, P. Kušnirák, T. Henych, F. Marchis, B. Macomber, **S. A. Jacobson**, Yu. N. Krugly, A. V. Sergeev, & A. Leroy. “Formation of asteroid pairs by rotational fission.” *Nature*, 466(7310), 1085–1088, 2010.

 TEACHING RECORD - UNIVERSITY COURSES

Michigan State University

- Cosmochemistry, GLG 890:** Instructor of record, 10 students Spring 2021
Dynamic Earth, GLG 201: Instructor of record, 144 students Fall 2021
 with 2 teaching assistants: Chanse Ford and Luis Martinetti
Solar System Dynamics, GLG 890: Instructor of record, 2 students Fall 2021

Northwestern University

- Exploration of the Solar System, EARTH 110:** Instructor of record, 51 students Spring 2019
 with 2 teaching assistants: Howard Chen and Nooshin Saloor
Planet Formation & Evolution, EARTH 381: Instructor of record, 11 students Winter 2019
Cosmochemistry, EARTH 382: Instructor of record, 6 students Spring 2018
 with lab teaching assistant: Michelle Wenz
Exploration of the Solar System, EARTH 110: Instructor of record, 65 students Winter 2018
 with 2 teaching assistants: Howard Chen and Yuxi Suo

University of Colorado at Boulder

- Planets, Moons, & Rings, ASTR 3750:** Grading assistant, 45 students Spring 2012
 with instructor of record: Larry Esposito
Intro. Astronomy - Solar System, ASTR 1110: Co-instructor of record, 30 students Summer 2012
 with co-instructor of record: Julia Kamenetzky
Formation & Dynamics of Planetary Systems, ASTR 3710: Grading assistant, 40 students Fall 2011
 with instructor of record: Nick Schneider
Radiative & Dynamical Processes, ASTR 5120: Grading assistant, 9 students Spring 2011
 with instructor of record: Rosalba Perna
Intro. Astronomy - Stars and Galaxies, ASTR 1120: Grading assistant, 38 students Summer 2009
 with instructor of record: Collin Wallace
Intro. Astronomy Labs, ASTR 1010 & 1030: Lab manual editor & author Summer 2009
 including 15 labs, 224 pages, 20% new material, 80% edited old material
Intro. Astronomy - Labs, ASTR 1010: Lab teaching assistant, 36 students Spring 2009
 led two lab sections with lecture course instructor of record: Seth Hornstein
Accelerated Intro. Astronomy - Labs, ASTR 1030: Lab teaching assistant, 45 students Fall 2008
 led two lab sections with lecture course instructor of record: Bob Ergun

Cornell University

- Lasers & Photonics, AEP 110:** Lab learning assistant, 71 students Spring 2007
 with instructor of record: Alexander Gaeta

 TEACHING RECORD - SHORT COURSES

- The three body problem:** 5 hours, 20 students Feb. 20, 2017
 Advanced Dynamics Course, Supérieur École d’Aerospace, Toulouse, France
From pebbles to planets: the story of the Solar System: 1.5 hours, 50 students Aug. 24–28, 2016

APCosPA-Planet² RESCEU Summer School, University of Tokyo, Takayama, Japan

The three body problem: 5 hours, 20 students

Mar. 7, 2016

Advanced Dynamics Course, Supérieur École d'Aerospace, Toulouse, France

Topics in planet formation: 3 hours, 25 students

Aug. 24–28, 2015

Universität Bern, Leukerbad, Switzerland

INVITED SEMINARS

47. “Searching in the asteroid belt for evidence of giant impacts beyond the Moon-forming impact” Institut für Planetologie, University of Münster, Münster, Germany (Virtual), May 26, 2021.
46. “Searching in the asteroid belt for evidence of giant impacts beyond the Moon-forming impact” Theoretical Astrophysics Program, University of Arizona, Tucson, Arizona (Virtual), Apr. 9, 2021.
45. “Searching in the asteroid belt for evidence of giant impacts beyond the Moon-forming impact” Department of Earth, Atmospheric, and Planetary Science, Massachusetts Institute of Technology, Cambridge, Massachusetts (Virtual), Dec. 1, 2020.
44. “Combining astrophysics and geology to study the formation of Earth.” Max-Planck-Institut für Astronomie, Heidelberg, Germany (Virtual), May 28, 2020.
43. “Searching in the asteroid belt for evidence of giant impacts beyond the Moon-forming impact” Groupe de Planétologie, Observatoire de la Côte d’Azur, Nice, France (Virtual), Apr. 29, 2020.
42. “Searching in the asteroid belt for evidence of giant impacts beyond the Moon-forming impact” Small Bodies Group, Jet Propulsion Labs, Pasadena, California, Mar. 2, 2020.
41. “Combining astrophysics and geology to study the formation of Earth.” Department of Physics, Oakland University, Rochester, Michigan, Jan. 30, 2020.
40. “Searching in the asteroid belt for evidence of giant impacts beyond the Moon-forming impact” Earth and Planets Laboratory, Carnegie Institution for Science, Washington, District of Columbia, Jan. 22, 2020.
39. “Combining astrophysics and geology to study the formation of Earth.” Earth and Planets Laboratory, Carnegie Institution for Science, Washington, District of Columbia, Jan. 21, 2020.
38. “Combining astrophysics and geology to study the formation of Earth.” Department of Geological and Environmental Sciences, Western Michigan University, Kalamazoo, Michigan, Nov. 11, 2019.
37. “Combining astrophysics and geology to study the formation of Earth.” Department of Astronomy, University of Michigan, Ann Arbor, Michigan, Oct. 31, 2019.
36. “Combining astrophysics and geology to study the formation of Earth.” Division of Geological and Planetary Sciences, California Institute of Technology, Pasadena, California, Oct. 7, 2019.
35. “A giant impact origin for the Earth-Venus dichotomy.” Department of Physics and Astronomy, Michigan State University, East Lansing, Michigan, Oct. 2, 2019.
34. “Combining astrophysics and geology to study the formation of Earth.” Department of Earth and Environmental Sciences, Michigan State University, East Lansing, Michigan, May 17, 2019.
33. “Combining astrophysics and geology to study the Earth.” Department of Physics, Illinois Institute of Technology, Chicago, Illinois, Apr. 11, 2019.
32. “Modern views on terrestrial planet formation.” Center for Gravitation, Cosmology & Astrophysics, University of Wisconsin, Milwaukee, Wisconsin, Feb. 22, 2019.

31. "The consequences of multi-stage planet formation." Department of Earth and Environmental Sciences, University of Illinois at Chicago, Chicago, Illinois, Oct. 4, 2018.
30. "Pieces of planets in the asteroid belt." Department of Earth, Atmospheric, and Planetary Sciences, Purdue University, West Lafayette, Indiana, Sep. 20, 2018.
29. "Pieces of planets in the asteroid belt." Department of Earth and Planetary Sciences, Northwestern University, Evanston, Illinois, Apr. 20, 2018.
28. "Pieces of planets in the asteroid belt." Department of Earth Sciences, University of Minnesota, Minneapolis, Minnesota, Mar. 30, 2018.
27. "The consequences of multi-stage core formation." Department of Earth Sciences, University of Minnesota, Minneapolis, Minnesota, Mar. 29, 2018.
26. "Pieces of planets in the Solar System: origin of some achondrites and 'differentiated' asteroids." Lund Observatory, University of Lund, Lund, Sweden, Nov. 15, 2017.
25. "Pieces of planets in the Solar System: origin of some achondrites and 'differentiated' asteroids." Centre for Star and Planet Formation, University of Copenhagen, Copenhagen, Denmark, Nov. 14, 2017.
24. "Pieces of planets in the Solar System: origin of some achondrites and 'differentiated' asteroids." Department of Geophysical Sciences, University of Chicago, Chicago, IL, USA, Oct. 27, 2017.
23. "A combined astronomic-geologic approach to understanding planet formation." Centre for Research in Earth and Space Science, York University, Toronto, Canada, Mar. 3, 2017.
22. "A combined astronomic-geologic approach to understanding planet formation." Department colloquia, Astronomy, Cornell University, Ithaca, New York, USA, Feb. 28, 2017.
21. "Activated asteroids, missing family members, and pieces of planets." Planetary Lunch Astronomy, Cornell University, Ithaca, New York, USA, Feb. 27, 2017.
20. "A combined astronomic-geologic approach to understanding planet formation." APS colloquia, Astrophysical and Planetary Sciences, University of Colorado, Boulder, Colorado, USA, Feb. 6, 2017.
19. "A combined astronomic-geologic approach to understanding planet formation." Department seminar, Earth and Planetary Sciences, Northwestern University, Evanston, Illinois, USA, Jan. 23, 2017.
18. "Giant impacts and formation of Earth's core." Department seminar, Earth and Planetary Sciences, Northwestern University, Evanston, Illinois, USA, Mar. 14, 2016.
17. "Differentiation of Earth." Special seminar, Earth and Planetary Sciences, University of California, Santa Cruz, California, USA, Mar. 2, 2016.
16. "Growth of the terrestrial planets." Whole Earth Earth and Planetary Sciences, University of California, Santa Cruz, California, USA, Mar. 1, 2016.
15. "The last giant impact on Earth." Institute for Geophysics and Planetary Physics Earth and Planetary Sciences, University of California, Santa Cruz, California, USA, Dec. 11, 2015.
14. "Importance of the timing of the last giant (Moon-forming) impact." Annual Academy Commission, Bayerisches Geoinstitut, Universität Bayreuth, Bayreuth, Germany, Apr. 16, 2015.
13. "Moon formation in the context of the protoplanetary disk." Planetary science group, Purdue University, West Lafayette, Indiana, USA, Jan. 2, 2015.
12. "Terrestrial planet formation in the age of the truncated disk." Bayerisches Geoinstitut, Universität Bayreuth, Bayreuth, Germany, Sep. 9, 2014.
11. "Terrestrial planet formation in the age of the truncated disk." Department of Earth Sciences, Eidgenössische Technische Hochschule Zürich, Zürich, Switzerland, department seminar, Jun. 5, 2014.

10. “Terrestrial planet formation in the age of the truncated disk.” Institut für Planetologie, Westfälische Wilhelms-Universität Münster, Münster, Germany, Apr. 23, 2014.
9. “Terrestrial planet formation in the age of the truncated disk.” Lund Observatory, Lund University, Lund, Sweden, Apr. 10, 2014.
8. “Terrestrial planet formation in the age of the truncated disk.” Solar, Stellar, and Planetary Sciences Center for Astrophysics, Harvard University, Cambridge, MA, USA, Nov. 13, 2013.
7. “Rubble-pile asteroid evolution.” Science Visitor and Colloquia Program Planetary Science Jet Propulsion Labs, La Cañada Flintridge, CA, USA, Nov. 14, 2012.
6. “The role of non-gravitational forces in asteroid binaries.” Friday Lunch Astronomy Seminar Hour, National Optical Astronomy Observatory, Tucson, AZ, USA, Oct. 19, 2012.
5. “Small asteroid evolution.” Groupe de Planétologie, Observatoire de la Côte d’Azur, Nice, France, Sep. 19, 2012.
4. “Binary asteroids: formation and evolution.” Department of Earth and Space Sciences, University of California, Los Angeles, CA, USA, May 3, 2012.
3. “Small asteroid evolution.” Planetary Science Directorate, Southwest Research Institute, Boulder, CO, USA, Jan. 24, 2012.
2. “Dynamics of rotationally fissioned asteroids: source of observed asteroid systems.” Planetary group, University of Colorado, Boulder, CO, USA, Apr. 2, 2010.
1. “Planetary astrophysics: dynamics of post-fission asteroids.” JILA, University of Colorado, Boulder, CO, USA, Nov. 20, 2009.

KEYNOTE AND INVITED CONFERENCE CONTRIBUTIONS

11. **S. A. Jacobson.** “What can we learn about terrestrial planet formation from Venus?” *Planetary Science and Astrobiology Decadal Survey Venus Panel*, Virtual, Oral, Mar. 10, 2021.
10. **S. A. Jacobson.** “What might happen to a binary asteroid?” *Didymos Observer’s Workshop*, Virtual, Oral, Jun. 22–25, 2020.
9. **S. A. Jacobson.** “The new planetary growth paradigm of pebble accretion.” *65th American Geophysical Union Fall Meeting*, San Francisco, CA, USA, Oral: UA11, Dec. 9–13, 2019.
8. **S. A. Jacobson.** “Searching for evidence of pebble accretion in the Solar System and beyond.” *Gordon Research Conference: Origins of Solar Systems*, South Hadley, MA, USA, Oral, Jun. 23–28, 2019.
7. **S. A. Jacobson.** “A giant impact origin for the Earth-Venus dichotomy.” *Origin and Evolution of Planet Earth*, New Haven, CT, USA, Oral, May 3–4, 2019.
6. **S. A. Jacobson.** “What makes the solar system unique?” *XVth Rencontres du Vietnam: Search for Life from Early Earth to Exoplanets*, Quy Nhon, Vietnam, Oral, Mar. 24–30, 2019.
5. **S. A. Jacobson.** “Consequences of multi-stage core formation.” *28th Goldschmidt Conference*, Boston, MA, USA, Oral, Aug. 12–17, 2018.
4. **S. A. Jacobson.** “Formation and early evolution of the solar system: the big picture.” *International Space Science Institute-Europlanet Forum*, Bern, Switzerland, Oral, Sep. 13–15, 2016.
3. **S. A. Jacobson, D. C. Rubie, & A. Morbidelli.** “Beyond matching orbits and masses, terrestrial planet formation in the era of compositional constraints.” *26th Goldschmidt Conference*, Yokohama, Japan, Oral: 1312, Jun. 26–Jul. 1, 2016.
2. **S. A. Jacobson.** “Evolutionary pathways for asteroid satellites.” *International Astronomical Union Symposium 318: Asteroids: New Observations, New Models*, Honolulu, HI, USA, Oral, Aug. 3–7, 2015.
1. **S. A. Jacobson.** “Small asteroid evolution.” *International Astronomical Union Symposium 310: Complex Planetary Systems*, Namur, Belgium, Oral, Jul. 7–11, 2014.

FIRST-AUTHOR CONFERENCE CONTRIBUTIONS

51. **S. A. Jacobson**. “Where can the water go? Giant impacts and the deep mantle.” 28th Goldschmidt conference, Lyon, France, 8056, July 4–9, 2021.
50. **S. A. Jacobson** & **C. Sandine**. “Missing evidence for giant impacts during terrestrial planet formation.” Habitable Worlds II, Virtual, Talk, February 22–26, 2020.
49. **S. A. Jacobson** & **C. Sandine**. “Too much debris? Evidence for fewer giant impacts in the asteroid belt.” 52nd Division of Planetary Sciences meeting, Virtual, Talk 205.04, Oct. 26–30, 2020.
48. **S. A. Jacobson**. “Eureka! A mission to a piece of Mars.” 52nd Division of Planetary Sciences meeting, Virtual, Poster 320.08, Oct. 26–30, 2020.
47. **S. A. Jacobson**, **C. Sandine**, F. DeMeo, & B. Carry. “Dynamical evidence for terrestrial planet debris in the asteroid belt.” The main belt: a gateway to the formation and early evolution of the solar system, Villasimius, Sardinia, Italy, Talk, June 4–7, 2019.
46. **S. A. Jacobson**, A. Morbidelli, G. Libourel, & D. Rubie. “Making the terrestrial planets.” Fréjus Group Meeting, Fréjus, France, Talk, March 18–20, 2019.
45. **S. A. Jacobson**. “Consequences of an early last giant impact on Venus compared to Earth.” 64th American Geophysical Union Fall Meeting, Washington, DC, USA, Talk DI32A-04, December 10–14, 2018.
44. **S. A. Jacobson**, M. Lambrecht, A. Morbidelli, A. Johansen, B. Bitsch, A. Izidoro, & S. N. Raymond. “Formation of planetary systems from pebble accretion and migration I: the growth dichotomy between close-in rocky super-Earth systems and terrestrial planets.” 50th Division of Planetary Sciences meeting, Knoxville, TN, USA, Talk 101.05, October 21–26, 2018.
43. **S. A. Jacobson**. “Consequences of multi-stage core formation.” 28th Goldschmidt conference, Boston, MA, USA, Talk 1148, August 12–17, 2018.
42. **S. A. Jacobson**, M. Lambrecht, & A. Morbidelli. “How the pebble flux controls the growth dichotomy between tightly packed systems and the Solar System.” Chicago Exoplanet Meeting, Chicago, IL, USA, Talk, December 7, 2017.
41. **S. A. Jacobson**, D. C. Rubie, A. Morbidelli, A. Izidoro, & S. N. Raymond. “Mantle composition constraints on different planet formation scenarios.” 27th Goldschmidt conference, Paris, France, Talk 1508, August 13–18, 2017.
40. **S. A. Jacobson**, D. Polishook, A. Morbidelli, & O. Arohson. “Origin of the Mars Trojans.” 48th Division on Dynamical Astronomy meeting, London, United Kingdom, Talk 402.03, June 12–15, 2017.
39. **S. A. Jacobson**, A. Morbidelli, D. C. Rubie, S. Raymond, & A. Izidoro. “Mantle composition constraints on planet formation scenarios.” 2nd ACCRETE meeting, Nice, France, Talk, May 29–June 3, 2017.
38. **S. A. Jacobson**, D. Polishook, A. Morbidelli, & O. Arohson. “A Martian origin for the Mars Trojans and the A-type Hungarias.” 13th Asteroids, Comets, and Meteors conference, Montevideo, Uruguay, Talk, April 10–14, 2017.
37. **S. A. Jacobson**, D. C. Rubie, A. Morbidelli, & E. D. Young. “Composition and origin of Theia—the Moon-forming impactor.” 62nd American Geophysical Union Fall Meeting, San Francisco, CA, USA, Poster V41A-3107, December 12–16, 2016.
36. **S. A. Jacobson** & A. Morbidelli. “Quantifying the lack of differentiated material amongst asteroid families.” 48th Division of Planetary Sciences meeting, Pasadena, CA, USA, Talk 522.08, October 17–21, 2016.
35. **S. A. Jacobson**, J. Hernlund, D. C. Rubie, & A. Morbidelli. “Terrestrial core stratification and

- subsequent mixing.” 26th Goldschmidt conference, Yokohama, Japan, Talk 1311, June 26–July 1, 2016.
34. **S. A. Jacobson**. “Asteroid geophysics from applying tidal theory to binary asteroids.” 4th Workshop on Binaries in the Solar System conference, Prague, Czechia, Talk, June 21–23, 2016.
 33. **S. A. Jacobson**, A. Morbidelli, & B. Carry. “Establishing different size distributions in the asteroid belt.” 47th Division on Dynamical Astronomy, Nashville, TN, USA, Talk, May 22–26, 2016.
 32. **S. A. Jacobson**, F. DeMeo, A. Morbidelli, B. Carry, D. Frost, & D. C. Rubie. “There’s too much mantle material in the asteroid belt.” 47th Lunar and Planetary Science Conference, The Woodlands, TX, USA, *LPI Contribution* 1903, Talk 1895, March 21–25, 2016.
 31. **S. A. Jacobson**, A. Morbidelli, B. Bitsch, A. Crida, M. Gounelle, T. Guillot, A. Johansen, M. Lambrechts, & E. Lega. “Ice line fossilization.” International Space Science Institute Workshop on “The delivery of water to proto-planets, planets and satellites”, Bern, Switzerland, Talk, January 11–15, 2016.
 30. **S. A. Jacobson**, D. C. Rubie, J. Hernlund, & A. Morbidelli. “Core layering.” 61st American Geophysical Union Fall Meeting, San Francisco, CA, USA, Talk DI41B-04, December 14–18, 2015.
 29. **S. A. Jacobson**, D. C. Rubie, J. Hernlund, & A. Morbidelli. “A late giant impact is necessary to create Earth’s magnetic field.” 46th Lunar and Planetary Science Conference, The Woodlands, TX, USA, *LPI Contribution* 1832, Poster 1882, March 16–20, 2015.
 28. **S. A. Jacobson**, E. D. Young, D. C. Rubie, & A. Morbidelli. “Composition of the terrestrial planets in the Grand Tack model.” Workshop on Early Solar System Impact Bombardment III, Houston, TX, USA, *LPI Contribution* 1826, Talk 3034, February 4–5, 2015.
 27. **S. A. Jacobson**, D. C. Rubie, A. Morbidelli, D. P. O’Brien, E. D. Young, J. de Vries, F. Nimmo, H. Palme, & D. J. Frost. “Accretion and core-mantle differentiation of the Earth and other terrestrial planets.” 46th Division of Planetary Sciences meeting, Tucson, AZ, USA, *Bulletin of the American Astronomical Society* 46:5, Talk 504.03, November 9–14, 2014.
 26. **S. A. Jacobson**, D. J. Scheeres, & J. McMahon. “Forming the wide asynchronous binary asteroid population.” 12th Asteroids, Comets, and Meteors conference, Helsinki, Finland, Talk, June 30–July 4, 2014.
 25. **S. A. Jacobson**, D. J. Scheeres, A. Rossi, F. Marzari, & D. Davis. “Both size-frequency distribution and sub-populations of the main belt asteroid population are consistent with YORP-induced rotational fission.” 12th Asteroids, Comets, and Meteors conference, Helsinki, Finland, Talk, June 30–July 4, 2014.
 24. **S. A. Jacobson** & A. Morbidelli. “Dynamical friction during planet formation in the Grand Tack scenario.” 45th Division on Dynamical Astronomy meeting, Philadelphia, PA, USA, *Bulletin of the American Astronomical Society* 46:3 Talk 102.02, April 28–May 2, 2014.
 23. **S. A. Jacobson**, A. Morbidelli, D. C. Rubie, D. P. O’Brien, S. N. Raymond, K. J. Walsh, S. Stewart, & S. Lock. “Planet formation within the Grand Tack model.” 45th Lunar and Planetary Science Conference, The Woodlands, TX, USA, *LPI Contribution* 1777, Talk 2274, March 17–21, 2014.
 22. **S. A. Jacobson**, D. J. Scheeres, A. Rossi, & F. Marzari. “The effects of rotational fission on the Main Belt asteroid population.” 45th Lunar and Planetary Science Conference, The Woodlands, TX, USA, *LPI Contribution* 1777, Poster 2363, March 17–21, 2014.
 21. **S. A. Jacobson**, A. Morbidelli, K. J. Walsh, D. P. O’Brien, S. N. Raymond, & D. C. Rubie. “Getting down ‘to brass tacks’ in the Grand Tack scenario: matching important accretion and timing constraints.” 45th Division of Planetary Sciences meeting, Denver, CO, USA, *Bulletin*

- of the American Astronomical Society* 45:5, Talk 503.02, October 6–11, 2013.
20. **S. A. Jacobson**, A. Morbidelli, K. J. Walsh, D. P. O'Brien, S. N. Raymond, & D. C. Rubie. "Moon formation in the Grand Tack scenario." Royal society satellite meeting: origin of the Moon—challenges and prospects, Chicheley Hall, Buckinghamshire, UK, Poster, September 25–26, 2013.
 19. **S. A. Jacobson**, A. Morbidelli, K. J. Walsh, D. P. O'Brien, & S. N. Raymond. "Tactful accretion: considering constraints in the Grand Tack model." Conference for Protostars and Planets VI, Heidelberg, Germany, Poster 2H024, July 15–20, 2013.
 18. **S. A. Jacobson**, A. Morbidelli, K. J. Walsh, D. P. O'Brien, & S. N. Raymond. "Last giant (Moon-forming) impacts in the Grand Tack paradigm." 12th Gordon Research Conference: Origins of Solar Systems, South Hadley, MA, USA, Poster, June 23–28, 2013.
 17. **S. A. Jacobson** & D. J. Scheeres. "Asteroid geophysics through a tidal-BYORP equilibrium." 60th American Geophysical Union Fall Meeting, San Francisco, CA, USA, Poster P31A-1875, December 3–7, 2012.
 16. **S. A. Jacobson** & D. J. Scheeres. "Comet bursting through relaxation." 44th Division of Planetary Sciences meeting, Reno, NV, USA, *Bulletin of the American Astronomical Society* 44:5, Talk 514.03, October 14–15, 2012.
 15. **S. A. Jacobson**, P. Scheirich, P. Pravec, & D. J. Scheeres. "Spacecraft discoveries enabled by photometric observations of the dynamics of 1996 FG₃." 7th European Planetary Science Conference, Madrid, Spain, Talk 365, September 23–28, 2012.
 14. **S. A. Jacobson** & D. J. Scheeres. "Forming the observed binary asteroid population." 11th Asteroids, Comets, and Meteors conference, Niigata, Japan, *LPI Contribution* 1667, Talk 6092, May 16–20, 2012.
 13. **S. A. Jacobson** & D. J. Scheeres. "Long-term rotation state evolution of comet nuclei including the effects of jet torques and internal dissipation." 43rd Division on Dynamical Astronomy meeting, Mt. Hood, OR, USA, *Bulletin of the American Astronomical Society* 44:3, Talk 08.06, May 6–10, 2012.
 12. **S. A. Jacobson** & D. J. Scheeres. "Asteroid evolutionary tracks." 43rd Division on Dynamical Astronomy meeting, Mt. Hood, OR, USA, *Bulletin of the American Astronomical Society* 44:3, Poster 09.15, May 6–10, 2012.
 11. **S. A. Jacobson** & D. J. Scheeres. "Formation of the asynchronous binary asteroids." 43rd Lunar and Planetary Science Conference, The Woodlands, TX, USA, *LPI Contribution* 1659, Talk 2737, March 19–23, 2012.
 10. **S. A. Jacobson** & D. J. Scheeres. "Evolution of small near-Earth asteroid binaries." Joint 43rd Division of Planetary Sciences meeting and 6th European Planetary Science Conference, Nantes, France, Talk 647-2, October 2–11, 2011.
 9. **S. A. Jacobson** & D. J. Scheeres. "A long-term stable equilibrium for synchronous binaries including tides and the BYORP effect." 42nd Division on Dynamical Astronomy meeting, Austin, TX, USA, *Bulletin of the American Astronomical Society* 43:3, Talk 01.02, April 10–14, 2011.
 8. **S. A. Jacobson** & D. J. Scheeres. "Long-term stable equilibria for synchronous binary asteroids." 42nd Lunar and Planetary Science Conference, The Woodlands, TX, USA, *LPI Contribution* 1608, Talk 2239, March 7–11, 2011.
 7. **S. A. Jacobson** & D. J. Scheeres. "Dynamics of rotationally fissioned asteroids." 42nd Division of Planetary Sciences meeting, Pasadena, CA, USA, *Bulletin of the American Astronomical Society* 42:4, Talk 63.07, October 3–8, 2010.
 6. **S. A. Jacobson** & D. J. Scheeres. "Dynamical evolution of binary asteroid systems." 2nd Workshop on Binaries in the Solar System, Poznan, Poland, Talk, July 13–15, 2010.

5. **S. A. Jacobson** & D. J. Scheeres. “Formation of observed asteroid systems by rotational fission.” 41st Division on Dynamical Astronomy meeting, Brookline, MA, USA, *Bulletin of the American Astronomical Society* 41:3, Talk 02.07, April 25–29, 2010.
4. **S. A. Jacobson** & D. J. Scheeres. “The evolution of binary asteroids formed by spin fission.” 41st Lunar and Planetary Science Conference, The Woodlands, TX, USA, *LPI Contribution* 1533, Talk 2098, 2010.
3. **S. A. Jacobson** & D. J. Scheeres. “A rapid phase of tidal dissipation for post-fission binary asteroids.” 41st Division of Planetary Sciences meeting, Fajardo, Puerto Rico, USA, *Bulletin of the American Astronomical Society* 41:3, Talk 56.08, October 4–9, 2009.
2. **S. A. Jacobson** & D. J. Scheeres. “Tidal and dynamical evolution of binary asteroids.” 40th Division on Dynamical Astronomy meeting, Virginia Beach, VA, USA, *Bulletin of the American Astronomical Society* 41:2, Talk 10.02, May 2–5, 2009.
1. **S. A. Jacobson** & J.-L. Margot. “Colors of TNO binaries and evidence for a triple system from HST observations.” 39th Division of Planetary Sciences meeting, Orlando, FL, USA, *Bulletin of the American Astronomical Society* 39:3, Poster 52.11, October 7–12, 2007.

CO-AUTHOR CONFERENCE CONTRIBUTIONS

82. A. Morbidelli, G. Libourel, D. Rubie, & **S. A. Jacobson**. “The Al/Si ratio: sub-solar in enstatite chondrites but supra-solar in the Earth - a plausible explanation.” 28th Goldschmidt conference, Lyon, France, 3958, Jul. 4–9, 2021.
81. G. Nathan, D. C. Rubie, & **S. A. Jacobson**. “Isotopic fractionation during multi-stage core formation.” 28th Goldschmidt conference, Lyon, France, 8201, Jul. 4–9, 2021.
80. P. Sossi, I. L. Stotz, **S. A. Jacobson**, A. Morbidelli, & H. O’Neill. “Stochastic accretion of the Earth.” 28th Goldschmidt conference, Lyon, France, 7033, Jul. 4–9, 2021.
79. I. Blanchard, E. Jennings, I. Franchi, X. Zhao, S. Petitgirard, N. Miyajima, **S. A. Jacobson**, & D. C. Rubie. “Fate of carbon during the formation of Earth’s core.” 28th Goldschmidt conference, Lyon, France, 6805, Jul. 4–9, 2021.
78. S. Cambioni, E. Asphaug, A. Emsenhuber, R. Furfaro, T. S. J. Gabriel, **S. A. Jacobson**, R. Mizrahi, D. C. Rubie, & S. R. Schwartz. “Building terrestrial planets using machine learning.” Space Science Institute Conference: Applications of Statistical Methods and Machine Learning in the Space Sciences, Virtual, Talk, May 17–21, 2021.
77. M. Lambrechts, S. Lorek, A. Johansen, & **S. A. Jacobson**. “Formation of terrestrial-like systems with pebble accretion.” 66th American Geophysical Union Fall Meeting, Virtual, Talk DI021-02, Dec. 1–17, 2020.
76. G. Nathan, **S. A. Jacobson**, & D. C. Rubie. “Isotopic fractionation during multi-stage core formation.” 66th American Geophysical Union Fall Meeting, Virtual, Talk DI016-0011, Dec. 1–17, 2020.
75. J. Barnes, **S. A. Jacobson**, & S. R. Schwartz. “Formation of planetesimals through gravitational collapse.” 66th American Geophysical Union Fall Meeting, Virtual, Talk DI019-0002, Dec. 1–17, 2020.
74. J. Barnes, S. Schwartz, & **S. A. Jacobson**. “Formation of planetesimals through gravitational collapse.” 52nd Division of Planetary Sciences meeting, virtual, poster 206.01, Oct. 26-30, 2020.
73. L. Fujishima, G. Nathan, & **S. A. Jacobson**. “Accretion of moon(s) around Earth-like planets” 52nd Division of Planetary Sciences meeting, virtual, talk 507.03, Oct. 26-30, 2020.
72. D. Veras, D. J. Scheeres, **S. A. Jacobson**, S. Ettl, A. Higuchi, S. Ida, & B. Gänsicke. “Comparative planetology with exo-minor planets” 52nd Division of Planetary Sciences meeting, virtual, talk 306.03, Oct. 26-30, 2020.

71. P. Sossi, I. Stotz, **S. A. Jacobson**, A. Morbidelli, & H. O'Neill. "Stochastic accretion of the Earth." 15th European Planetary Science Congress, Virtual, Talk 652, Sep. 21–Oct. 9, 2020.
70. M. Cuk, **S. A. Jacobson**, & K. Walsh. "Barrel instability for elongated secondaries in binary asteroids." 15th European Planetary Science Congress, Virtual, Poster 983, Sep. 21–Oct. 9, 2020.
69. S. Cambioni, **S. A. Jacobson**, A. Emsenhuber, E. Asphaug, D. C. Rubie, T. S. J. Gabriel, R. Furfaro, & S. R. Schwartz. "The Effect of inefficient accretion on planetary differentiation." 15th European Planetary Science Congress, Virtual, Talk 407, Sep. 21–Oct. 9, 2020.
68. M. Cuk, **S. A. Jacobson**, & K. Walsh. "Barrel instability for elongated secondaries in binary asteroids." 51st Division of Dynamical Astronomy meeting, Virtual, Talk 103.04, Aug. 3–7, 2020.
67. I. Blanchard, E. S. Jennings, I. A. Franchi, S. Petitgirard, N. Miyajima, **S. A. Jacobson**, & D. C. Rubie. "Fate of carbon during the formation of Earth's core." 17th International Symposium on Experimental Mineralogy, Petrology and Geochemistry, Potsdam, Germany, Talk, Jun. 21–24, 2020.
66. I. Blanchard, E. Jennings, I. Franchi, Z. Zhao, S. Petitgirard, N. Miyajima, **S. A. Jacobson**, & D. C. Rubie. "Fate of Carbon During the Formation of Earth's Core." 17th European Geosciences Union general assembly, Poster 8297, May 4–8, 2020.
65. N. G. Zube, R. A. Fischer, F. Nimmo, & **S. A. Jacobson**. "Probability of the Earth and the Moon having similar mantle tungsten isotopic composition in various n-body accretion simulations." 51st Lunar and Planetary Science Conference, Abstract 2997, Mar. 16-20, 2020.
64. M. Nakajima, G. J. Golabek, K. Wünnemann, D. C. Rubie, C. Burger, L. Manske, H. J. Melosh, **S. A. Jacobson**, F. Nimmo, & S. D. Hull. "Scaling laws for the geometry of an impact-induced magma ocean." 51st Lunar and Planetary Science Conference, Abstract 2691, Mar. 16-20, 2020.
63. S. Cambioni, **S. A. Jacobson**, A. Emsenhuber, E. Asphaug, D. C. Rubie, T. S. J. Gabriel, R. Furfaro, & S. R. Schwartz. "Beyond perfect merging: the effect of inefficient accretion on planets' core-mass-fraction." 51st Lunar and Planetary Science Conference, Abstract 1499, Mar. 16-20, 2020.
62. L. Allibert, S. Charnoz, J. Siebert, S. N. Raymond, & **S. A. Jacobson**. "Evolution of the silicate Earth composition induced by collisional erosion in the context of terrestrial planets accretion." 51st Lunar and Planetary Science Conference, Abstract 2071, Mar. 16-20, 2020.
61. J. Barnes, **S. A. Jacobson**, & S. Schwartz. "Simulating gravitational collapse in the Kuiper Belt." 235th American Astronomical Society Meeting, Honolulu, HI, USA, Poster 211.06, Jan. 4–8, 2020.
60. G. Nathan, **S. A. Jacobson**, & D. C. Rubie. "Multistage core formation of Mars." 65th American Geophysical Union Fall Meeting, San Francisco, CA, USA, Poster V43D-0109, Dec. 9–13, 2019.
59. A. Morbidelli, G. Libourel, H. Palme, **S. A. Jacobson**, & D. C. Rubie. "Sub-solar Al/Si and Mg/Si ratios of the enstatite chondrites reveal planetesimal formation during early condensation in the protoplanetary disk." 14th European Planetary Science Congress joint with the 51st Division of Planetary Sciences meeting, Geneva, Switzerland, Talk 25, Sep. 15–20, 2019.
58. A. Christou, A. Dell'Oro, G. Borisov, **S. A. Jacobson**, A. Cellino, & E. Unda-Sanzana. "Production and escape of Trojan asteroids by non-gravitational forces at 1.5 au from the Sun." 14th European Planetary Science Congress joint with the 51st Division of Planetary

- Sciences meeting, Geneva, Switzerland, Talk 224, Sep. 15–20, 2019.
57. E. Jennings, D. C. Rubie, **S. A. Jacobson**, A. Morbidelli, Y. Nakajima, A. Vogel, L. Rose-Weston, & D. Frost. “Metal-silicate partitioning of Mo and W in Earth’s mantle during core formation.” 14th European Planetary Science Congress joint with the 51st Division of Planetary Sciences meeting, Geneva, Switzerland, Talk 977, Sep. 15–20, 2019.
 56. J. Scora, D. Valencia, A. Morbidelli, & **S. A. Jacobson**. “Forming rocky super-Earths with realistic collisions” Extreme Solar Systems IV, Reykjavik, Iceland, Talk 300.04, Aug. 19–23, 2019.
 55. J. Scora, D. Valencia, A. Morbidelli, & **S. A. Jacobson**. “Forming rocky super-Earths with realistic collisions” 28th Goldschmidt conference, Barcelona, Spain, Talk 3030, Aug. 18–23, 2019.
 54. C. Sandine & **S. A. Jacobson**. “Dynamical evidence for terrestrial planet debris in the asteroid belt.” 50th Division of Dynamical Astronomy Meeting, Boulder, CO, USA, Talk 302.04, Jun. 10–13, 2019.
 53. J. Brooks & **S. A. Jacobson**. “Losing moons: The gravitational influence of close encounters on satellite orbits.” 50th Division of Dynamical Astronomy Meeting, Boulder, CO, USA, Talk 302.05, Jun. 10–13, 2019.
 52. N. G. Zube, F. Nimmo, R. A. Fischer, & **S. A. Jacobson**. “Hf/W isotopic evolution for post last-giant impact Earths and Moons in Grand Tack accretion simulations.” 50th Lunar and Planetary Science Conference, The Woodlands, TX, USA, *LPI Contribution* 2132, Talk 2260, Mar. 18–22, 2019.
 51. A. Morbidelli, D. Nesvorny, V. Laurenz, S. Mar.i, D. C. Rubie, L. Elkins-Tanton, M. Wieczorek, **S. A. Jacobson**, & M. H. Zhu. “Sequestration of highly siderophile elements into the lunar core during a late magma ocean crystallization and mantle overturn.” 7th European Lunar Symposium, Manchester, United Kingdom, Talk 255-02, May 21–23, 2019.
 50. A. Detweiller & **S. A. Jacobson**. “Examining Initial Conditions of Planetary Formation Simulations.” 223rd American Astronomical Society Meeting, Washington, DC, USA, Poster 255-02, Jan. 6–10, 2019.
 49. N. Zube, F. Nimmo, **S. A. Jacobson**, & R. A. Fischer. “Hf/W Isotopic Evolution in Various Earth-Moon Impact Scenarios Occurring in Grand Tack Accretion Simulations.” 64th American Geophysical Union Fall Meeting, Washington, DC, USA, Talk DI13A-02, Dec. 10–14, 2018.
 48. I. Blanchard, E. S. Jennings, S. Petitgirard, I. Franchi, X. Zhao, **S. A. Jacobson**, & D. C. Rubie. “Fate of carbon during the formation of Earth’s core.” 64th American Geophysical Union Fall Meeting, Washington, DC, USA, Talk DI11B-0018, Dec. 10–14, 2018.
 47. I. Blanchard, **S. A. Jacobson**, S. Abeykoon, V. Laurenz, A. K. Vogel, L. A. Rose-Weston, & D. C. Rubie. “Behavior of Sulfur during Core-Mantle Differentiation of the Earth.” 64th American Geophysical Union Fall Meeting, Washington, DC, USA, Talk DI11B-0002, Dec. 10–14, 2018.
 46. J. Brooks & **S. A. Jacobson**. “Losing moons: the gravitational influence of close encounters on satellite orbits.” 50th Division of Planetary Sciences meeting, Knoxville, TN, Talk 219.02, Oct. 21–26, 2018.
 45. C. Sandine & **S. A. Jacobson**. “Numerical evidence for terrestrial planet debris in the asteroid belt.” 50th Division of Planetary Sciences meeting, Knoxville, TN, Talk 113.07, Oct. 21–26, 2018.
 44. N. Hung & **S. A. Jacobson**. “Linking the Moon-forming impact to Earth’s circular orbit with impact ejecta.” 50th Division of Planetary Sciences meeting, Knoxville, TN, Talk 113.06, Oct. 21–26, 2018.

43. B. Bitsch, A. Izidoro, S. N. Raymond, A. Johansen, A. Morbidelli, M. Lambrechts, & **S. A. Jacobson**. “Formation of planetary systems from pebble accretion and migration III: the formation of gas giants.” 50th Division of Planetary Sciences meeting, Knoxville, TN, Talk 101.07, Oct. 21–26, 2018.
42. A. Izidoro, B. Bitsch, S. N. Raymond, A. Johansen, A. Morbidelli, M. Lambrechts, & **S. A. Jacobson**. “Formation of planetary systems from pebble accretion and migration II: hot super-Earth systems from breaking compact resonant chains.” 50th Division of Planetary Sciences meeting, Knoxville, TN, Talk 101.06, Oct. 21–26, 2018.
41. B. Bitsch, A. Izidoro, A. Johansen, A. Morbidelli, S. N. Raymond, **S. A. Jacobson**, & M. Lambrechts. “Origin of super-Earths planets: influence of pebble accretion, migration, and instabilities.” Take a Closer Look meeting at ESO-HQ, Garching bei München, Germany, Talk 7, Oct. 15–19, 2018.
40. A. Morbidelli, D. Nesvorny, V. Laurenz, S. Mar.i, D. Rubie, L. Elkins-Tanton, M. Wieczorek, & **S. A. Jacobson**. “The timeline of the lunar bombardment–revisited.” 48th Lunar and Planetary Science Conference, The Woodlands, TX, USA, *LPI Contribution 2298*, Talk 1750, Mar. 20–24, 2017.
39. C. J. Bierson, F. Nimmo, & **S. A. Jacobson**. “Using the KBO density distribution as a constraint on formation timescale.” 63rd American Geophysical Union Fall Meeting, New Orleans, LA, USA, Poster P31E-08, Dec. 10–15, 2017.
38. N. Zube, F. Nimmo, **S. A. Jacobson**, & R. A. Fischer. “Modeling Hf-W Evolution for Earth, Moon and Mars in Grand Tack Accretion Simulations: The Isotopic Consequences of Rapid Accretion.” 63rd American Geophysical Union Fall Meeting, New Orleans, LA, USA, Poster P53F-05, Dec. 10–15, 2017.
37. M. Hirabayashi, **S. A. Jacobson**, & A. Davis. “Binary asteroid orbit evolution due to primary shape deformation.” 49th Division of Planetary Sciences meeting, Provo, Utah, Poster 117.03, Oct. 15–20, 2017.
36. A. Christou, G. Borisov, **S. A. Jacobson**, F. Colas, A. dell’Oro, A. Cellino, & S. Bagnulo. “Population control of Martian Trojans by the Yarkovsky, YORP effects.” 49th Division of Planetary Sciences meeting, Provo, Utah, Talk 302.05, Oct. 15–20, 2017.
35. D. Polishook, N. Moskovitz, S. D. Benecchi, **S. A. Jacobson**, & O. Aharonson. “A HST campaign to search for widely separated satellites around asteroid pairs.” 49th Division of Planetary Sciences meeting, Provo, Utah, Poster 110.24, Oct. 15–20, 2017.
34. M. Nakajima, D. C. Rubie, H. J. Melosh, **S. A. Jacobson**, G. J. Golabek, F. Nimmo, & A. Morbidelli. “A scaling law for impact-induced melt volume.” 11th European Planetary Science Conference meeting, Riga Latvia, Talk 895, Sep. 17–22, 2017.
33. D. Veras, **S. A. Jacobson**, & B. T. Gänsicke. “Rotation-induced YORP break-up of small bodies to produce post-main-sequence debris.” 11th European Planetary Science Conference meeting, Riga Latvia, Talk 50, Sep. 17–22, 2017.
32. E. Jennings, D. C. Rubie, **S. A. Jacobson**, A. Morbidelli, K. Armstrong, & D. J. Frost. “Sequestration of tungsten into the core during Earth’s accretion.” 26th Goldschmidt conference, Paris, France, Talk 1831, Aug. 13–18, 2017.
31. A. Morbidelli, D. Nesvorny, V. Laurenz, S. Mar.i, D. Rubie, L. Elkins-Tanton, & **S. A. Jacobson**. “HSE removal from the lunar mantle and the timeline of the lunar bombardment.” 26th Goldschmidt conference, Paris, France, Talk 1831, Aug. 13–18, 2017.
30. N. G. Zube, F. Nimmo, **S. A. Jacobson**, & R. Fischer. “The trouble with building planets too quickly: rapid accretion in Grand Tack simulations requires extremely efficient mantle equilibration of Hf-W.” 48th Lunar and Planetary Science Conference, The Woodlands, TX, USA, *LPI Contribution 2298*, Talk 1750, Mar. 20–24, 2017.

29. C. J. Bierson, F. Nimmo, C. Goldblatt, & **S. A. Jacobson**. “Geophysical implications of fast KBO accretion.” 48th Lunar and Planetary Science Conference, The Woodlands, TX, USA, *LPI Contribution* 2298, Poster 1624, Mar. 20–24, 2017.
28. A. Morbidelli, D. Nesvorny, V. Laurenz, S. Mari, D. C. Rubie, L. Elkins-Tanton, & **S. A. Jacobson**. “The lunar late heavy bombardment as a tail-end of planet accretion.” 48th Lunar and Planetary Science Conference, The Woodlands, TX, USA, *LPI Contribution* 2298, Talk 1895, Mar. 20–24, 2017.
27. N. Zube, F. Nimmo, & **S. A. Jacobson**. “Following the Tungsten: isotopic consequences of Earth, Mars, and the proto-Moon formation in Grand Tack accretion simulations.” 62nd American Geophysical Union Fall Meeting, San Francisco, CA, USA, Poster P53D-01, Dec. 12–16, 2016.
26. M. Nakajima, D. C. Rubie, H. J. Melosh, **S. A. Jacobson**, G. Golabek, F. Nimmo, & A. Morbidelli. “A scaling relationship for impact-induced melt volume.” 62nd American Geophysical Union Fall Meeting, San Francisco, CA, USA, Poster P51A-2118, Dec. 12–16, 2016.
25. D. Polishook, **S. A. Jacobson**, & O. Aharonson. “Shared origin for seven of Mars trojans – impact ejecta from Mars?” 48th Division of Planetary Sciences meeting, Pasadena, CA, USA, Talk 522.08, Oct. 17–21, 2016.
24. F. Nimmo, R. Fischer, N. Zube, **S. A. Jacobson**, & D. P. O’Brien. “Accretion, mixing, and differentiation of planetary bodies.” Before the Moon, Japan, Talk, 2016.
23. D. C. Rubie, V. Laurenz, **S. A. Jacobson**, A. Morbidelli, H. Palme, A. K. Vogel, & D. J. Frost. “Evolution of sulfur concentrations in magma oceans during Earth’s accretion.” 26th Goldschmidt conference, Yokohama, Japan, Talk 2677, Jun. 26–Jul. 1, 2016.
22. D. C. Rubie, V. Laurenz, **S. A. Jacobson**, A. Morbidelli, H. Palme, A. K. Vogel, & D. J. Frost. “High concentrations of highly siderophile elements were stripped from Earth’s mantle by the segregation of exsolved iron sulfide melt.” 47th Lunar and Planetary Science Conference, The Woodlands, TX, USA, *LPI Contribution* 1903, Talk 1895, Mar. 21–25, 2016.
21. N. G. Zube, F. Nimmo, & **S. A. Jacobson**. “Tungsten isotopic evolution and mantle equilibration in Grand Tack accretion simulations.” 47th Lunar and Planetary Science Conference, The Woodlands, TX, USA, *LPI Contribution* 1903, Talk 2480, Mar. 21–25, 2016.
20. E. D. Young, I. E. Kohl, P. H. Warren, D. C. Rubie, **S. A. Jacobson**, & A. Morbidelli. “Oxygen isotopic evidence for vigorous mixing during the Moon-forming giant impact.” 47th Lunar and Planetary Science Conference, The Woodlands, TX, USA, *LPI Contribution* 1903, Talk 1803, Mar. 21–25, 2016.
19. V. Laurenz, D. C. Rubie, **S. A. Jacobson**, A. Morbidelli, H. Palme, & A. Vogel. “The Origin of Non-chondritic HSE Ratios in the Earth’s Mantle.” 61st American Geophysical Union Fall Meeting, San Francisco, CA, USA, Talk V52A-01, Dec. 14–18, 2015.
18. A. Morbidelli, M. Lambrechts, B. Bitsch, & **S. A. Jacobson**. “Origin of the great dichotomy of the Solar System: small terrestrial embryos and massive giant planet cores.” International Astronomical Union Division A Fundamental Astronomy Meeting 29, Honolulu, HI, USA, Aug. 7, 10, 2015.
17. J. K. Steckloff, J. Keane, M. M. Knight, J. Kleyna, S. N. Milam, I. Coulson, K. Meech, **S. A. Jacobson**, & H. J. Melosh. “The size and fragmentation of the nucleus of comet C/2012 S1 (ISON).” 46th Lunar and Planetary Science Conference, The Woodlands, TX, USA, *LPI Contribution* 1832, Poster 2723, Mar. 16–20, 2015.
16. J. K. Steckloff & **S. A. Jacobson**. “A novel, sublimation-driven YORP-like effect, and the formation of dust striae in cometary tails.” 46th Division of Planetary Sciences meeting, Tucson, AZ, USA, *Bulletin of the American Astronomical Society* 46:5, Talk 200.05, Nov. 9–14,

- 2014.
15. D. J. Scheeres, **S. A. Jacobson**, J. McMahon, & M. Hirabayashi. “Using binary asteroids to explore the interior geophysics of rubble-pile asteroids.” 12th Asteroids, Comets, and Meteors conference, Helsinki, Finland, Talk, Jun. 30–Jul. 4, 2014.
 14. D. C. Rubie, **S. A. Jacobson**, A. Morbidelli, & E. D. Young. “Accretion and differentiation of the terrestrial planets: implications for the compositions of early-formed Solar System bodies.” 45th Lunar and Planetary Science Conference, The Woodlands, TX, USA, *LPI Contribution 1777*, Talk 1734, Mar. 17–21, 2014.
 13. J. de Vries, F. Nimmo, H. J. Melosh, **S. A. Jacobson**, A. Morbidelli, & D. C. Rubie. “Melting due to impacts on growing proto-planets.” 45th Lunar and Planetary Science Conference, The Woodlands, TX, USA, *LPI Contribution 1777*, Poster 1896, Mar. 17–21, 2014.
 12. D. J. Scheeres, **S. A. Jacobson**, J. McMahon, & M. Hirabayashi. “Constraining the interior geophysics of rubble pile asteroids.” 61st American Geophysical Union Fall Meeting, San Francisco, CA, USA, Poster P22A-05, Dec. 9–13, 2013.
 11. M. W. Busch, **S. A. Jacobson**, L. Benner, M. Brozovic, E. S. Howell, J.-L. Margot, S. Naidu, M. K. Shepard, & P. A. Taylor. “A lower size limit for near-Earth asteroid satellites.” 61st American Geophysical Union Fall Meeting, San Francisco, CA, USA, Poster P23A-1762, Dec. 9–13, 2013.
 10. A. Rossi, **S. A. Jacobson**, F. Marzari, D. J. Scheeres, & D. R. Davis. “Effects of YORP-induced rotational fission on the small size end of the Main Belt asteroid size distribution.” 45th Division of Planetary Sciences meeting, Denver, CO, USA, *Bulletin of the American Astronomical Society* 45:5, Talk 301.08, Oct. 6–11, 2013.
 9. D. C. Rubie, D. P. O’Brien, A. Morbidelli, **S. A. Jacobson**, & E. D. Young. “Accretion and chemical evolution of the terrestrial planets.” 23rd Goldschmidt conference, Florence, Italy, *Mineralogical Magazine* 77:5, Talk 2094, Aug. 25–30, 2013.
 8. M. W. Busch, S. J. Ostro, L. A. Benner, M. Brozovic, C. Magri, D. J. Scheeres, **S. A. Jacobson**, J. L. Margot, M. C. Nolan, P. A. Taylor, E. Howell, M. Shepard, & J. D. Giorgini. “Radar imaging of 11066 Sigurd, 2000 YF₂₉, and 2004 XL₁₄ and the obliquity distribution of contact binary near-Earth asteroids.” 44th Division of Planetary Sciences meeting, Reno, NV, USA, *Bulletin of the American Astronomical Society* 44:5, Talk 302.05, Oct. 14–19, 2012.
 7. P. Scheirich, P. Pravec, S. Mottola, M. Mommert, K. Hornoch, P. Kušnirák, J. Pittichová, **S. A. Jacobson**, D. Pray, D. Polishook, Y. N. Krugly, I. Slyusarev, J. Pollock, E. Jehin, J. Manfroid, M. Gillon, A. Galád, J. Licandro, V. Alí-Lagoa, J. Brinsfeld, R. Y. Inasaridze, & I. E. Molotov. “Zero drift in the mean anomaly of the satellite of 1996 FG₃ and its implications for the BYORP theory.” 11th Asteroids, Comets, and Meteors conference, Niigata, Japan, *LPI Contribution 1667*, Talk 6123, May 16–20, 2012.
 6. D. J. Scheeres & **S. A. Jacobson**. “Comet Rotational Relaxation and Interior Stresses and Loads.” 43rd Lunar and Planetary Science Conference, The Woodlands, TX, USA, *LPI Contribution 1659*, Talk 2169, Mar. 19–23, 2012.
 5. A. Rossi, F. Marzari, D. J. Scheeres, & **S. A. Jacobson**. “Effects of YORP-induced rotational fission on the asteroid size distribution at the small size end.” 43rd Lunar and Planetary Science Conference, The Woodlands, TX, USA, *LPI Contribution 1659*, Talk 2095, Mar. 19–23, 2012.
 4. A. Rossi, **S. A. Jacobson**, F. Marzari, & D. J. Scheeres. “Asteroid fission, binaries and the small Main Belt population.” Joint 43rd Division of Planetary Sciences meeting and 6th European Planetary Science Conference, Nantes, France, Talk 499, Oct. 2–11, 2011.
 3. P. Scheirich, P. Pravec, S. Mottola, M. Mommert, K. Hornoch, P. Kušnirák, J. Pittichová, **S. A. Jacobson**, D. Pray, M. Mueller, & the team of Spitzer program 70054. “(Non-)detection of a

- quadratic drift in mean anomaly of the satellite of 1996 FG₃.” Joint 43rd Division of Planetary Sciences meeting and 6th European Planetary Science Conference, Nantes, France, Talk 492-1, Oct. 2–11, 2011.
2. D. J. Scheeres, , P. Pravec, D. Vokrouhlický, D. Polishook, A. W. Harris, A. Galád, O. Vaduvescu, F. Pozo, A. Barr, P. Longa, F. Vachier, F. Colas, D. P. Pray, J. Pollock, D. Reichart, K. Ivarsen, J. Haislip, A. Lacluyze, P. Kušnirák, T. Henych, F. Mar.is, B. Macomber, **S. A. Jacobson**, Y. N. Krugly, A. V. Sergeev, & A. Leroy. “Formation of asteroid pairs by rotational fission.” 41st Division on Dynamical Astronomy meeting, Brookline, MA, USA, *Bulletin of the American Astronomical Society* 41:3, Talk 02.06, Apr. 25–29, 2010.
 1. D. J. Scheeres & **S. A. Jacobson**. “Fission and stability of ellipsoidal contact binary asteroids.” 40th Lunar and Planetary Science Conference, The Woodlands, TX, USA, *LPI Contribution* 1468, Talk 2040, Mar. 23–27, 2009.

 GRADUATE STUDENT MENTORING

☒ 27 letters of recommendation written in support of graduate students.

Planetary Makerspace Current Members

Gabriel Nathan (MS thesis, PhD thesis) 2018–

PhD Earth and Environmental Sciences, Michigan State University, pre-candidacy

MS Earth and Planetary Sciences, Northwestern University, 2020

Jackson Barnes (MS thesis, PhD thesis) 2018–

PhD Earth and Environmental Sciences, Michigan State University, pre-candidacy

MS Earth and Planetary Sciences, Northwestern University, 2020

Planetary Makerspace Alumni

Howard Chen (MS thesis) 2017–2019

MS Earth and Planetary Sciences, Northwestern University, 2018

Graduate Student Committees

Andrew Bollinger 2021–

PhD Earth and Environmental Sciences, Michigan State University, pre-candidacy

Teresa Panurach 2020–

PhD Physics and Astronomy, Michigan State University, pre-candidacy

Allison Pease 2021–

PhD Earth and Environmental Sciences, Michigan State University, pre-candidacy

Lindsay Putnam 2021–

PhD Earth and Environmental Sciences & Microbiology, Michigan State University, PhD candidate

Amir Salaree 2018–2019

PhD Earth and Planetary Sciences, Northwestern University, 2019

Alexi Schnur 2020–

PhD Earth and Environmental Sciences, Michigan State University, pre-candidacy

JaCoya Thompson 2018–2019

MS Earth and Planetary Sciences, Northwestern University, 2019

Yurong Zhang 2021–

PhD Earth and Environmental Sciences, Michigan State University, pre-candidacy

 UNDERGRADUATE STUDENT MENTORING

☒ 54 letters of recommendation written in support of undergraduate students.

Planetary Makerspace Current Members

Ryan Copeland (PARED) 2021–

BS Physics and Astronomy, Michigan State University, class of 2022

Lauren Fujishima (URAP, SURG) <i>BS Mechanical Engineering, Northwestern University, class of 2022</i>	2018–
Noah Behm (PA) <i>BS Computer Science, Michigan State University, class of 2021</i>	2019–
<i>Planetary Makerspace Alumni</i>	
Jeremy Brooks (SURG) <i>BS Earth and Planetary Sciences, Northwestern University, 2019</i>	2018–2019
Mercedes Collins (NSF REU) <i>BS Physics, University of North Texas at Dallas, 2020</i>	2019–2020
Lexi (Alexandra) Detweiller (NSF REU) <i>BS Physics, MS Health Physics, Illinois Institute of Technology, 2021</i>	2018–2019
Nathan Hung <i>BA Integrated Science, BS Physics & Astronomy, Northwestern University, 2019</i>	2018–2019
Miya (Mingyang) Jia (URAP) <i>BS Asian Languages and Cultures, Northwestern University, 2020</i>	2018
Carson Ryan (PA) <i>BASc Astrophysics, Michigan State University, class of 2023</i>	2019–2020
Claudia Sandine (URAP, Senior thesis) <i>BS Earth and Planetary Sciences, Northwestern University, 2019</i>	2018–2019
Eric van Camp <i>BS Earth and Planetary Sciences, Northwestern University, 2019</i>	2019
SERVICE TO MY INSTITUTION	
<i>Michigan State University</i>	
Exo/planets journal club organizer <i>co-organized with Joey Rodriguez</i>	2021–
High impact geochemistry journal club organizer <i>co-organized with Dalton Hardisty and Susannah Dorfman</i>	2020–
EES Speaker series committee member	2020–
EES Undergraduate affairs committee member	2020–
EES Code of Conflict committee member	2020–
<i>Northwestern University</i>	
Planets and disks journal club organizer <i>co-organized with Yoram Lithwick</i>	2017–2019
High impact geoscience journal club organizer <i>co-organized with Maggie Osburn</i>	2018–2019
EPS Department seminar organizer	2018-2019
EPS Senior thesis committee member	2018-2019
EPS Graduate admissions weekend trip leader	2018-2019
EPS Student prize committee member	2018-2019
NU One Book “Hidden Figures” committee member	2019
Nemmers’ Prize (Francis Albarède) department events organizer	2018
<i>Observatoire de la Côte d’Azur</i>	
Planetologie group (Thèminar) journal club organizer	2014–2017
<i>University of Colorado at Boulder</i>	
APS Graduate representative to the faculty	2012
APS Graduate admissions committee member	2011-2012
APS Graduate exams committee member	2010-2011

APS Graduate concerns committee member

2009-2010

SERVICE TO MY PROFESSION**Grant program panel chair:** 1 panel**Grant program panel member:** 6 panels across 5 programs**Grant program external reviewer:** 20 panels across 5 nations and 10 programs**Academic journal leadership**

Journal of Geophysical Research: Planets associate editor

2020–2021

*Note: Organized a special issue, “Exoplanets”.***Academic journal referee:** 65 articles

Icarus (20), *Earth & Planetary Science Letters* (6), *Journals of the American Astronomical Society* (5), *Monthly Notices of the Royal Astronomical Society* (4), *Astronomical Journal* (4), *Astronomy & Astrophysics* (3), *Nature Geosciences* (3), *Astrophysical Journal* (2), *Nature Astronomy* (2), *Progress in Earth and Planetary Science* (2), *Journal of Geophysical Research: Planets* (2), *Science* (2), *Astrophysical Journal Letters* (1), *IAU Proceedings* (1), *Moon, Earth & Planets* (1), *Planetary and Space Sciences* (1), *Nature* (1), *Publications of the Astronomical Society of Australia* (1), *Planetary and Space Science* (1), *Research in Astronomy and Astrophysics* (1), *Space Science Reviews* (1), *Geosciences* (1), *Geophysical Research Letters* (1), *Nature Scientific Reports* (1)

Professional organization leadership

AGU SEDI prize canvassing committee member

2019–

Note: On this committee, we pursue the nomination of SEDI members for AGU medals, prizes, and awards with the further intent of increasing the diversity of honorees.

AAS DDA past chair

2019–2020

AAS DDA chair

2019–2020

AAS DDA vice chair

2019–2020

AAS DDA committee member

2015–2017

*Note: In these DDA leadership roles, I created a new early career DDA award named for Vera Rubin, helped lead 5 DDA annual meetings, instituted a gender-based Rooney rule for DDA awards, and participated in AAS strategic planning.***Conference organization service**

Habitable Worlds II science organizing committee member

2021

52nd Division of Planetary Sciences meeting science organizing committee member

2020

51st Division on Dynamical Astronomy meeting virtual organizing committee member

2020

Binaries V science organizing committee member

2019

Lake Michigan Exoplanet Meeting organizer

2018

AAS DDA annual meeting science organizing committee chair

2018

AAS DPS annual meeting science organizing committee member

2018

Conference session chair service

Habitable Worlds II panel discussion leader, “Forming habitable worlds”

2021

52nd Division of Planetary Sciences meeting session co-chair, “Ancient history of asteroids”

2020

51st Division on Dynamical Astronomy meeting session chair, “Asteroid dynamics: pairs, multiples, shapes, and spin states”

2020

50th Division on Dynamical Astronomy meeting sessions chair, “Dirk Brouwer Award Prize Lecture” and “Vera Rubin Early Career Prize Lecture”

2019

AAS DPS contributed talk session co-chair on “Origins of planetary systems I and II”

2017

MIRA workshop invited session chair on “Origins of volatiles in habitable planets”	2017
ACM contributed session co-chair on “Asteroid spin, size and shape”	2014
LPSC contributed session co-chair on “Small body studies: formation, regolith, and rubble piles”	2012
AAS DDA contributed talk session chair on “Asteroids”	2012

Professional organization membership

American Astronomical Society	2010–
Division for Planetary Sciences	
Division on Dynamical Astronomy	
American Geophysical Union	2011–
Planetary Sciences	
Study of the Earth’s Deep Interior	
Volcanology, Geochemistry, and Petrology	
The Planetary Society	2014–
Geochemical Society	2017–
International Astronomical Union	2018–
Association for Women Geoscientists	2019–
National Association of Geoscience Teachers	2020–

WHITE PAPERS AND NON-REFEREED PUBLICATIONS

2. **S. A. Jacobson**, M. Bose, D. Bodewits, M. Fries, D. Jha, P. Mane, L. Nittler, S. Sandford, & M. Thompson. “Small bodies tell the story of the Solar System: a scientific rationale for a multi-target small body sample return program including the Earth-based laboratory analysis of returned samples.”. White paper, Planetary Science and Astrobiology Decadal Survey 2023-2032, 2020.
1. G. Besla, D. Huppenkothen, N. Lloyd-Ronning, E. Schneider, P. Behroozi, B. Burkhardt, C. K. Chan, **S. A. Jacobson**, S. Morrison, N. Nam, S. Naoz, A. Peter, E. Ramirez-Ruiz, E. Abrahams, J. Bailin, L. Blecha, A. Bostroem, T. Bogdanović, M. Boylan-Kolchin, E. Bellm, V. Bromm, A. Brooks, G. L. Bryan, J. Bullock, N. Chonacky, C. Christensen, K. Cruz, M. Donahue, T. Eifler, C.-A. Faucher-Giguère, E. Feigelson, K. Follette, E. Ford, T. Gabriel, O. Gnedin, C. Hayward, L. Hernquist, R. Hilborn, Z. Ivezić, K. V. Johnston, S. Juneau, M. Jurić, D. Kereš, E. Krause, A. Kravtsov, A. Lidz, A.-M. Madigan, S. Markoff, D. Narayanan, D. Norman, B. O’Shea, S. Offner, K. Olsen, V. Paschalidis, P. Pinto, D. Ragozzine, L. V. Sales, A. Siemiginowska, B. Sipócz, J. Stone, A. Tchekhovskoy, E. Tollerud, P. Torrey, H. Trac, M. Turk, M. Valluri, M. Vogelsberger, C. Walker, L. Walkowicz, A. Weltman, A. Wetzel, J. Wise, M. Zaldarriaga, Z. Zhu, M. Zingale, A. Aykotalp, C. Biwer, P. Bradley, N. Butler-Craig, B. Dingus, E. Fogerty, C. Fryer, S. Gandolfi, M. Gilmer, F. Guo, J. Guzik, A. Hungerford, P. Kilian, O. Korobkin, J. Lippuner, H. Li, Z. Medin, J. Miller, M. Mumpower, P. Polko, M. Rassel, M. Taylor, B. Wiggins, , & R. Wollaeger. “Training the future generation of computational researchers.”. White paper, Astro2020: Decadal Survey on Astronomy and Astrophysics, 2019.

OBSERVING EXPERIENCE

Demonstrating evidence of multiple YORP cycles by observing Mars Trojans

NASA IRTF 3.0-m telescope (Instruments: SpeX, 0.7-5.3 micron spectrograph and imager)

IRTF Proposal 2016A-020, CoI

3 nights awarded

Direct Imaging Studies of Binary Asteroid Systems

Hubble Space Telescope 2.4-m telescope (Instruments: WFC3/UVIS, imaging camera)

HST Proposal Cycle 23(2015)-14133

6 orbits awarded

Photometric Lightcurve Studies of Binary Asteroid Systems

Kitt Peak National Observatory 2.1-m telescope (Instruments: *T2KB* and *STA1*, imaging cameras)

NOAO Proposal 2012B-0276, PI 5.5 nights awarded

NOAO Proposal 2012A-0255, PI 6 nights awarded

NOAO Proposal 2011B-0297, PI 5.5 nights awarded

NOAO Proposal 2011A-0526, PI 9.5 nights awarded

Apache Point Observatory 3.5-m telescope (Instrument: *SPICam*, imaging camera)

APO Proposal 2012Q1-CU02, PI 2 half-nights awarded

APO Proposal 2011Q3-CU01, PI 2 half-nights awarded

APO Proposal 2011Q2-CU02, PI 3 half-nights awarded

APO Proposal 2010Q4-CU02, PI 3 half-nights awarded

PUBLIC OUTREACH

Astronomy on Tap Lansing presenter (2019)

Climate Sciences Professional Development Workshop presenter (2018)

Astronomy on Tap Chicago presenter (2018)

ETOPiA panelist (2017)

Sommers-Bausch Observatory Friday Night Open House volunteer (2008–2012)

Sommers-Bausch Observatory Astronomy Day volunteer (2009–2011)

Mathcounts coach (2010)

Boulder Science Fairs judge (2009)

Cornell Daily Sun staff science writer (2007)