

Jasper S. Halekas
Physics and Astronomy
Curriculum Vitae as of January 1, 2025

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EDUCATION AND PROFESSIONAL HISTORY

Higher Education

2003	PhD , Physics, University of California Berkeley
2000	MA , Physics, University of California Berkeley
1997	BS , Math, Magna Cum Laude, University of Washington
1997	BS , Physics, Magna Cum Laude, University of Washington

Professional and Academic Positions

2022 - Present	Professor , University of Iowa
2014 - 2022	Associate Professor , University of Iowa
2011 - 2014	Associate Research Physicist II , University of California Berkeley
2009 - 2011	Assistant Research Physicist V , University of California Berkeley
2007 - 2009	Assistant Research Physicist III , University of California Berkeley
2005 - 2007	Assistant Research Physicist I , University of California Berkeley
2003 - 2005	Visiting Postdoctoral Research Physicist , University of California Berkeley
1998 - 2003	Graduate Student Researcher , University of California Berkeley
1996 - 1998	Undergraduate Research , University of Washington
1995	Undergraduate Research , University of California Berkeley
1993 - 1994	Undergraduate Research , University of Washington

Honors and Awards (* = individual award)

2024	AGU Certificate of Recognition* , <i>American Geophysical Union</i> , In appreciation for service to AGU and the scientific community as editor of Reviews of Geophysics.
2023	Group Achievement Award for Parker Solar Probe Team , <i>NASA</i> , For outstanding, proactive teamwork that dramatically increased the scope and volume of data returned by Parker Solar Probe and demonstrably increased its science return.
2022	Collegiate Scholar Award* , <i>College of Liberal Arts and Sciences</i> , University of Iowa.
2020	Editor's Citation for Excellence in Refereeing* , <i>Geophysical Research Letters</i> , For outstanding service to the authors and readers of Geophysical Research Letters.
2019	Collegiate Teaching Award* , <i>College of Liberal Arts and Sciences</i> , University of Iowa.
2019	NASA Silver Achievement Medal for Parker Solar Probe Team , <i>NASA</i> , For a stellar achievement that supports NASA's core values.
2019	Exceptional Achievement Award for Science Team for DREAM2 Center for Space Environments , <i>NASA</i> , For exceptional applications of space environmental science to exploration endeavors.
2018	Group Achievement Award for MAVEN Mission Team , <i>NASA</i> , For unlocking the mysteries of Mars atmosphere loss through exceptional operation and utilization of MAVEN.
2016	Exceptional Scientific Achievement Medal* , <i>NASA</i> , For exceptional contributions to MAVEN's science return using the Solar Wind Ion Analyzer (SWIA) instrument.
2016	Group Achievement Award for Science Team for MAVEN Mission , <i>NASA</i> , For achieving exciting science results and making fundamental discoveries about the Mars environment from the MAVEN spacecraft.
2015	Editor's Citation for Excellence in Refereeing* , <i>Geophysical Research Letters</i> , For outstanding service to the authors and readers of Geophysical Research Letters.

2014	Exceptional Achievement Award for Engineering Team for MAVEN Mission , <i>NASA</i> , For the outstanding team that delivered on all MAVEN technical, schedule, and cost commitments through launch for Goddard's first mission to Mars.
2001 - 2003	NASA Graduate Student Researchers Program* , <i>NASA</i> , University of California Berkeley.
2000	NASA Space Grant Summer Fellowship* , <i>California Space Grant Consortium (NASA)</i> , University of California Berkeley.
1998 - 1999	Department of Education Fellowship* , <i>Department of Education</i> , University of California Berkeley.
1993 - 1997	NASA Space Grant Scholarship* , <i>Washington State Space Grant Consortium (NASA)</i> , University of Washington.

Memberships

1996 – Present	American Geophysical Union
2023 – Present	American Association for the Advancement of Science
2017 - 2018	American Association for the Advancement of Science

TEACHING

Courses Taught at the University of Iowa

Term	Course#	Title	Ten-Day Enrollment	Final Enrollment
Fall 2024	PHYS:3811:0001	Electricity and Magnetism I	23	21
Fall 2024	ASTR:7991:5930	Research: Astronomy	2	2
Fall 2024	PHYS:7990:6154	Research: Physics	2	2
Spring 2024	PHYS:3812:0001	Electricity and Magnetism II	17	17
Spring 2024	ASTR:7991:4692	Research: Astronomy	1	1
Spring 2024	PHYS:7990:4824	Research: Physics	2	2
Fall 2023	PHYS:3811:0001	Electricity and Magnetism I	21	21
Fall 2023	ASTR:7991:2605	Research: Astronomy	1	1
Fall 2023	PHYS:7990:2651	Research: Physics	3	3
Spring 2023	PHYS:5812:0001	Classical Electrodynamics II	9	9
Spring 2023	ASTR:7991:0663	Research: Astronomy	1	1
Spring 2023	PHYS:7990:0088	Research: Physics	2	2
Fall 2022	PHYS:5811:0001	Classical Electrodynamics I	7	7
Fall 2022	ASTR:7991:8102	Research: Astronomy	1	1
Fall 2022	PHYS:7990:8099	Research: Physics	2	2
Spring 2022	PHYS:5812:0001	Classical Electrodynamics II	9	9

Term	Course#	Title	Ten-Day Enrollment	Final Enrollment
Spring 2022	ASTR:7991:5560	Research: Astronomy	1	1
Spring 2022	PHYS:7990:6119	Research: Physics	2	2
Fall 2021	PHYS:5811:0001	Classical Electrodynamics I	11	11
Fall 2021	ASTR:7991:3962	Research: Astronomy	1	1
Fall 2021	PHYS:7990:3949	Research: Physics	2	2
Spring 2021	PHYS:3710:0001	Intermediate Mechanics	22	18
Spring 2021	ASTR:7991:2298	Research: Astronomy	2	2
Spring 2021	PHYS:7990:2257	Research: Physics	2	2
Fall 2020	ASTR:7991:9651	Research: Astronomy	1	1
Fall 2020	PHYS:7990:0679	Research: Physics	1	1
Fall 2020	ASTR:7830:0001	Space and Astrophysical Plasma Physics	17	17
Fall 2020	PHYS:4999:0248	Undergraduate Research	1	1
Summer 2020	PHYS:7990:9177	Research: Physics	1	1
Spring 2020	PHYS:3812:0001	Electricity and Magnetism II	17	18
Spring 2020	ASTR:7991:8150	Research: Astronomy	1	1
Spring 2020	PHYS:7990:7295	Research: Physics	3	3
Fall 2019	PHYS:3811:0001	Electricity and Magnetism I	24	23
Fall 2019	ASTR:7991:5161	Research: Astronomy	1	1
Fall 2019	PHYS:7990:5222	Research: Physics	2	2
Spring 2019	PHYS:3812:0001	Electricity and Magnetism II	23	23
Spring 2019	ASTR:7991:3779	Research: Astronomy	1	1
Spring 2019	PHYS:7990:3323	Research: Physics	3	3
Fall 2018	PHYS:3811:0001	Electricity and Magnetism I	20	19
Fall 2018	ASTR:7991:1382	Research: Astronomy	1	1
Fall 2018	PHYS:7990:0883	Research: Physics	3	3
Spring 2018	PHYS:2704:0AAA	Physics IV	35	30

Term	Course#	Title	Ten-Day Enrollment	Final Enrollment
Spring 2018	PHYS:2704:0BBB	Physics IV	3	5
Spring 2018	ASTR:7991:0143	Research: Astronomy	1	1
Spring 2018	PHYS:7990:8882	Research: Physics	2	2
Spring 2018	ASTR:7970:0001	Seminar: Astrophysics	2	2
Spring 2018	PHYS:4999:8609	Undergraduate Research	1	1
Fall 2017	PHYS:7990:6555	Research: Physics	2	2
Fall 2017	ASTR:7830:0001	Space and Astrophysical Plasma Physics	16	16
Fall 2017	PHYS:4999:8254	Undergraduate Research	1	1
Spring 2017	HONR:3050:4738	Honors Studies	1	1
Spring 2017	PHYS:2704:0AAA	Physics IV	30	27
Spring 2017	PHYS:2704:0BBB	Physics IV	2	2
Spring 2017	ASTR:7991:4690	Research: Astronomy	1	1
Spring 2017	PHYS:7990:4685	Research: Physics	3	3
Spring 2017	URES:3992:5655	Undergraduate Research/Creative Projects	1	1
Fall 2016	PHYS:1511:0AAA	College Physics I	301	288
Fall 2016	HONR:3994:3587	Honors Research Practicum	1	1
Fall 2016	ASTR:7991:1539	Research: Astronomy	1	1
Fall 2016	PHYS:7990:1854	Research: Physics	3	3
Fall 2016	PHYS:4999:3499	Undergraduate Research	1	1
Fall 2016	URES:3992:3597	Undergraduate Research/Creative Projects	2	2
Summer 2016	URES:3992:2832	Undergraduate Research/Creative Projects	1	1
Spring 2016	PHYS:1702:000A	Physics II	24	23
Spring 2016	PHYS:7990:0052	Research: Physics	2	2
Fall 2015	PHYS:1511:0AAA	College Physics I	284	277
Fall 2015	PHYS:7990:0052	Research: Physics	2	2
Summer 2015	PHYS:7990:0052	Research: Physics	2	2

Term	Course#	Title	Ten-Day Enrollment	Final Enrollment
Spring 2015	PHYS:1702:000A	Physics II	23	21

Student Mentoring

BA - Supervised Research

Summer 2018 - 2020 Kistler, Michael; *Completed*, Went on to masters of education program. Conducted research with ARTEMIS data from the Moon, resulting in a peer-reviewed publication in Advances in Space Research. Charles A. Wert award winner.

BS – Academic Advisor

2021 - 2024 Hancock, Griffin; *Completed*
 2020 - 2021 Strange, Mitchell; *Completed*
 2018 - 2021 Peters, Eric; *Completed*
 2018 - 2020 Lyu, Tailin; *Completed*
 2018 - May 2019 Song, Shuo; *Completed*, Went on to graduate school.

BS - Supervised Research

Fall 2024 - Present Vandercoy-Daniels, David, *In Process*
 Fall 2024 - Present Tune, Sydney, *In Process*
 Fall 2024 - Present Carne, Braden, *In Process*
 2024 - Present Homann, Jason, *In Process*
 2021 - 2023 Peters, Melissa, *Completed*
 Fall 2020 Nandanwar, Siddharth, *Completed*
 Summer 2020 – Spring 2021 Leali, Alexis; *Completed*, Went on to work as research intern. Iowa Space Grant Hands-On research program winner.
 Summer 2018 - May 2019 Cowsky, Jacob; *Completed*, Worked on sounding rocket eventually launched into space, Went on to graduate school.
 Summer 2018 - May 2019 Garcia, Brandon; *Completed*, Worked on sounding rocket eventually launched into space, Went on to graduate school.
 August 2016 - May 2019 Lipman, Dani; *Completed*, Went on to graduate school. Space Grant Scholar.
 Summer 2016 - Fall 2017 Reed, Logan Kelly; *Completed*
 Summer 2017 Reed, Mason; *Completed*
 Summer 2016 - Spring 2017 Raman, Caleb; *Completed*, Went on to graduate school. Charles A. Wert award winner.
 August 2016 - December 2016 Larson, Joshua; *Completed*, Went on to graduate school.
 Summer 2016 Khan, Kallin; *Completed*, ICRU Fellow.
 Summer 2016 - Winter 2016 Xie, Tianshi; *Completed*
 Winter 2015 - Schmitz, Frank; *Completed*, Went on to professional engineering

Summer 2016	career.
Fall 2015 - Winter 2015	Sink, Joseph; <i>Completed</i> , Went on to graduate school.
Summer 2015	Isbell, Jacob; <i>Completed</i> , Went on to graduate school. Charles A. Wert award winner.
Summer 2015	Parker, Devin; <i>Completed</i>

MS – MS Advisor

Summer 2015 - Spring 2017	Tiedeken, Staci; <i>Completed</i> , <i>Magnetism and Geology of the Moon</i> , Went on to science outreach position at NASA Goddard Space Flight Center.
Spring 2018 - August 2019	Henderson, Sarah; <i>Completed</i> , <i>An Analysis of Precipitating Solar Wind Hydrogen at Mars: Observations by the MAVEN Spacecraft</i> , Space Grant Fellowship Winner. Went on to data analysis position at Science Systems and Applications, Inc.

MS - Master's Thesis Committee Member

January 2017 - June 2017	Tetrick, Sadie; <i>Completed</i>
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PhD - Dissertation Committee Member

September 2024 – Present	Pette, Daniel; <i>In Process</i>
October 2024 – Present	Packard, Colin; <i>In Process</i>
April 2024 – Present	Broadfoot, Robert; <i>In Process</i>
April 2024 - Present	Huang, Rui; <i>In Process</i>
Jan 2023 – April 2024	Joseph, Jayasri; <i>Completed</i>
May 2022 – April 2024	Brown, Collin; <i>Completed</i>
April 2022 – September 2024	Feltman, Connor; <i>Completed</i>
April 2022 – July 2024	Greene, Kenton; <i>Completed</i>
April 2022 – April 2024	Chepuri, Sanjay; <i>Completed</i>
January 2021 – May 2023	Horvath, Sarah; <i>Completed</i>
January 2021 – May 2023	Troyer, Riley; <i>Completed</i>
April 2019 – December 2021	McCubbin, Andrew; <i>Completed</i>
Spring 2015 -	Holdaway, Robert; <i>Not Completed</i>
April 2019 - November 2020	Afshari, Arya; <i>Completed</i>

December 2016 - Scheiner, Brett; *Completed*
July 2017

Spring 2014 - Hemingway, Doug; *Completed (U.C. Santa Cruz)*
Summer 2015

PhD - Ph.D. Advisor

Spring 2024 – Wen, Yuanzheng, *In Process, MAVEN observations of dynamic*
Present *processes in the Martian magnetotail.*

Fall 2023 - Present Moore, Aidan, *In Process, Cusp Electron Dynamics Instrument.*

Spring 2021 - Nair, Raaman; *All but Dissertation, Switchbacks in the Young*
Present *Solar Wind: Electron Evolution Observed Inside Switchbacks*
Between 0.125 and 0.25 AU.

Spring 2021 – Fruchtman, Jacob; *Completed, Seasonal and Mach Number*
December 2024 *Variation of the Martian Bow Shock Structure.* Pfeiffer/Maltby
Scholarship Winner. Graduated and went on to postdoctoral
research.

Fall 2021 – Fall Henderson, Sarah; *Completed, Characterizing Global Behaviors*
2023 *of Precipitating Solar Wind Hydrogen in the Martian Atmosphere*
Iowa Space Grant Fellowship Winner. Pierazzo International
Student Travel Award Winner. Went on to postdoctoral research
position at Montana State University.

August 2016 - McGinnis, Daniel; *Completed, Electron Measurements of the*
May 2021 *Nascent Solar Wind with the Parker Solar Probe.* Went on to
postdoctoral research position with another group at Iowa.

Summer 2015 - Andreone, Gian; *Completed, Improving Electron Measurements in*
May 2021 *Space Plasmas Through Instrument Design and Data Analysis.*
Pfeiffer Family Scholarship Winner. Went on to postdoctoral
research position at Princeton.

May 2019 - June Elliott, Sadie; *Completed, Whistler-Mode Waves and the*
2020 *Acceleration of Energetic Electrons in the Jovian Polar Region:*
Observations from the Juno Spacecraft (Became Ph.D. Advisor
after Prof. Gurnett's retirement). Went on to postdoctoral research
position at Iowa, and then research scientist position at Minnesota.

Summer 2015 - Howard, Stephanie; *Completed, Resonant Interactions Between*
May 2020 *Ultra Low Frequency Waves and Reflected Ions in the Lunar*
Plasma Environment, Space Grant Fellowship winner, Pfeiffer
Family Scholarship winner, AGU Outstanding Student
Presentation award winner. Went on to postdoctoral research
position at NASA Goddard Space Flight Center.

PhD - Supervised Teaching Activity

January 2017 - Heitritter, Kenneth
May 2017

August 2016 - Alhousseini, Mohammad
December 2016

August 2016 - Gustafson, Erik
December 2016

August 2016 - Holdaway, Robert
December 2016

August 2016 - December 2016	Martinez Martinez, Manuel
August 2016 - December 2016	Schrock, Katrina
Spring 2016	McGinnis, Daniel
Fall 2015	Berumen Canto, Jorge
Fall 2015	Kuthini Kunhammed, Sirajudheen
Fall 2015	McMillan, Stephen
Fall 2015	Unmuth-Yockey, Judah
Spring 2015	Whiting, Catherine

Engineer

November 2021 – November 2024	Sheets, David
September 2016 - September 2019	Macias, Rafael

Postdoctoral Research Supervision

September 2022 - Present	Shen, Han-Wen
August 2021 - Present	Sawyer, Rhyan
January 2022 – April 2023	Joshi, Dev; <i>Went on to position at NASA.</i>
January 2019 – June 2021	Cao, Xin; <i>Went on to position at University of Colorado.</i>
Fall 2018 – Fall 2020	Chu, Feng; <i>Went on to position at Los Alamos National Laboratory.</i>
October 2018 - December 2019	Madanian, Hadi; <i>Went on to position at Southwest Research Institute.</i>
January 2016 - October 2017	Lue, Charles; <i>Went on to position at Swedish Institute of Space Physics.</i>
Summer 2015 - June 2017	Walker, Jeffrey; <i>Went on to employment in the Netherlands.</i>
Summer 2014 - January 2017	Ruhunusiri, Suranga; <i>Promoted to Assistant Research Scientist/Engineer</i>

Research Intern

August 2019 - August 2021	Jones, Nicholas; <i>Accepted to graduate school in Physics at the University of New Hampshire for Fall 2021. Conducted research with MAVEN data, resulting in a peer-reviewed publication submitted to Geophysical Research Letters.</i>
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Research Scientist

May 2019 - Present	Kurth, William
August 2018 –	Girazian, Zachary. Started as assistant research scientist, promoted

December 2023	to associate. <i>Went on to position as data scientist.</i>
January 2017 – June 2023	Ruhunusiri, Suranga. Started as assistant research scientist, promoted to associate. <i>Went on to position at C.U. Boulder.</i>
2018-2020	Kopf, Andy; <i>Went on to research position at US Naval Observatory.</i>
2017-2018	Harada, Yuki; <i>Went on to position as Assistant Professor at the University of Kyoto.</i>

SCHOLARSHIP

Publications

CLAS * System * = Senior Author, Major Contribution, ** = Secondary Contribution, *** = Equal Contribution, **** = Minor Contribution

Refereed Articles

- 407 * Halekas, J.S., Hansen, C., Ruhunusiri, S., Sheets, D., Washington, A., Beals, R.M., Bounds, S.R., Carton, A., Christopher, I.W., Crawford, D., Deasy, K., Dolan, J.S., Dvorsky, R., Feltman, C., Hinson, G., Hisel, S., Lasko, A., Moore, A., Morris, K., Piker, C.W., Steele, K., Wilkinson, D., Kletzing, C.A., Miles, D.M. (2025), The TRACERS Analyzer for Cusp Electrons, *Space Science Reviews*, *in review*.
- 406 * Fruchtman, J., Halekas, J., Eparvier, F. G., Gruesbeck, J., Mazelle, C., & Mitchell, D. (2024), Application of a Scale Normalization Technique for High Resolution Analysis of the Magnetosheath at Mars, *Journal of Geophysical Research (Space Physics)*, *129*, 2024JA033166.
- 405 ** Xu, S., Mitchell, D. L., Halekas, J. S., McFadden, J. P., Fowler, C. M., Hanley, K., DiBraccio, G. A., Mazelle, C., Akbari, H., & Curry, S. M. (2024), Electron Energization by Ion Density Enhancement in the Martian Magnetotail—MAVEN Observations, *The Astrophysical Journal*, *975*, 246.
- 404 * Shen, H.-W., Halekas, J. S., McFadden, J. P., Gruesbeck, J. R., & Schnepf, N. R. (2024), Heavy Ion Escape at Mars during the Disappearing Solar Wind Event in 2022 December, *The Astrophysical Journal*, *975*, 175.
- 403 **** Rivera, Y. J., Badman, S. T., Stevens, M. L., Raines, J. M., Owen, C. J., Paulson, K., Niembro, T., Livi, S. A., Lepri, S. T., Landi, E., Halekas, J. S., Ervin, T., Dewey, R. M., Coburn, J. T., Bale, S. D., & Alterman, B. L. (2024), Mixed Source Region Signatures inside Magnetic Switchback Patches Inferred by Heavy Ion Diagnostics, *The Astrophysical Journal*, *974*, 198.
- 402 ** Azari, A. R., Abrahams, E., Sapienza, F., Halekas, J., Biersteker, J., Mitchell, D. L., Pérez, F., Marquette, M., Rutala, M. J., Bowers, C. F., Jackman, C. M., & Curry, S. M. (2024), A Virtual Solar Wind Monitor at Mars With Uncertainty Quantification Using Gaussian Processes, *Journal of Geophysical Research: Machine Learning and Computation*, *1*, e2024JH000155.
- 401 **** Cheng, L., Wang, Y., Lillis, R., Halekas, J., Langlais, B., Zhang, T., Gruesbeck, J. R., Mitchell, D. L., & Curry, S. (2024), Two-Spacecraft Observations of Asymmetric Martian Bow Shock: Conjunctions of Tianwen-1 and MAVEN, *Journal of Geophysical Research (Space Physics)*, *129*, e2024JA033185.
- 400 ** Rivera, Y. J., Badman, S. T., Stevens, M. L., Verniero, J. L., Stawarz, J. E., Shi, C., Raines, J. M., Paulson, K. W., Owen, C. J., Niembro, T., Louarn, P., Livi, S. A., Lepri, S. T., Kasper, J. C., Horbury, T. S., Halekas, J. S., Dewey, R. M., De Marco, R., & Bale, S. D. (2024), In situ observations of large-amplitude Alfvén waves heating and accelerating the solar wind, *Science*, *385*, 962.
- 399 ** Phan, T. D., Drake, J. F., Larson, D., Oieroset, M., Eriksson, S., Yin, Z., Lavraud, B., Swisdak, M., Bale, S. D., Livi, R., Romeo, O., Whittlesey, P., Halekas, J., Rahmati, A., Pulupa, M., Szabo, A., Koval, A., Moncuquet, M., Kasper, J., Stevens, M., Desai, M., & Raouafi, N. (2024), Multiple Subscale Magnetic Reconnection Embedded inside a Heliospheric Current Sheet Reconnection Exhaust: Evidence for Flux Rope Merging, *The Astrophysical Journal*, *971*, L42.
- 398 **** Romanelli, N., Andrés, N., DiBraccio, G. A., Verniero, J. L., Gruesbeck, J. R., Szabo, A., Espley, J. R., & Halekas, J. S. (2024), The Incompressible Magnetohydrodynamic Energy Cascade Rate Upstream of Mars: Effects of the Total Energy and the Cross-helicity on Solar Wind Turbulence, *The Astrophysical Journal*, *971*, 10.
- 397 ** Xu, S., Mitchell, D. L., Whittlesey, P., Rahmati, A., Livi, R., Larson, D., Luhmann, J. G., Halekas, J. S., Hara, T., McFadden, J. P., Pulupa, M., Bale, S. D., Curry, S. M., & Persson, M. (2024), Closed magnetic topology in the Venusian magnetotail and ion escape at Venus, *Nature Communications*, *15*,

- 6065.
- 396 ** Kleinböhl, A., Willacy, K., Slipski, M. J., Poncin, L., Halekas, J. S., & Mayyasi, M. (2024), Hydrogen escape on Mars dominated by water vapour photolysis above the hygropause, *Nature Astronomy*, *8*, 827.
- 395 *** Chirakkil, K., Lillis, R. J., Deighan, J., Chaffin, M. S., Jain, S. K., Brain, D. A., Fillingim, M. O., Susarla, R., Holsclaw, G., Fang, X., Schneider, N. M., AlMazmi, H., AlMatroushi, H., Gacesa, M., El-Kork, N., Thiemann, E., & Halekas, J. S. (2024), EMM EMUS Observations of FUV Aurora on Mars: Dependence on Magnetic Topology, Local Time, and Season, *Journal of Geophysical Research (Planets)*, *129*, e2024JE008336.
- 394 *** Lillis, R. J., Deighan, J., Chirakkil, K., Jain, S., Fillingim, M., Chaffin, M., Holsclaw, G., Susarla, R., Brain, D., Al Matroushi, H., Lootah, F., Al Mazmi, H., Dong, Y., Schneider, N., Azari, A., Ramstad, R., Nauth, M., Ma, Y., Halekas, J., Espley, J., & Curry, S. (2024), Sinuous Aurora at Mars: A Link to the Tail Current Sheet?, *Journal of Geophysical Research (Space Physics)*, *129*, e2024JA032477.
- 393 ** Barani, M., Poppe, A. R., Fillingim, M. O., McFadden, J. P., Halekas, J. S., & Sibeck, D. G. (2024), A Study of Ionospheric Heavy Ions in the Terrestrial Magnetotail Using ARTEMIS, *Journal of Geophysical Research (Space Physics)*, *129*, e2023JA032346.
- 392 *** Vasko, I. Y., Mozer, F. S., Bowen, T., Verniero, J., An, X., Artemyev, A. V., Bale, S. D., Bonnell, J. W., Halekas, J., & Kuzichev, I. V. (2024), Resonance of Low-frequency Electromagnetic and Ion-sound Modes in the Solar Wind, *The Astrophysical Journal*, *967*, L31.
- 391 ** Bourouaine, S., Perez, J. C., Chandran, B. D. G., Jagarlamudi, V. K., Raouafi, N. E., & Halekas, J. S. (2024), On the Heating of the Slow Solar Wind by Imbalanced Alfvén-wave Turbulence from 0.06 to 1 au: Parker Solar Probe and Solar Orbiter Observations, *The Astrophysical Journal*, *967*, L19.
- 390 * Shen, H.-W., Halekas, J. S., & Poppe, A. R. (2024), Dependence of Lunar Pickup Ion Flux on Source Location: ARTEMIS Observations, *The Astrophysical Journal*, *967*, 84.
- 389 ** Schnepf, N. R., Dong, Y., Brain, D., Hanley, K. G., Peterson, W. K., Strangeway, R. J., Thiemann, E. M. B., Halekas, J. S., Espley, J. R., Eparvier, F., & McFadden, J. P. (2024), Solar and Solar Wind Energy Drivers for O⁺ and O₂⁺ Ion Escape at Mars, *Journal of Geophysical Research (Space Physics)*, *129*, e2023JA032053.
- 388 *** Seki, K., Matsumoto, Y., Terada, N., Hara, T., Brain, D. A., Nakagawa, H., McFadden, J. P., Halekas, J. S., Ruhunusiri, S., Mitchell, D. L., Andersson, L., Espley, J. R., Baker, D. N., Luhmann, J. G., & Jakosky, B. M. (2024), Characteristics of plasma boundaries with large density gradients and their effects on Kelvin–Helmholtz instability, *Frontiers in Astronomy and Space Sciences*, *11*, 1394817.
- 387 * Henderson, S., Halekas, J., Jolitz, R., Mitchell, D., Mazelle, C., Eparvier, F., & Elrod, M. (2024), Characterizing Precipitation Behaviors of H⁻ in the Martian Atmosphere, *Journal of Geophysical Research (Space Physics)*, *129*, e2024JA032420.
- 386 ** Shaver, S. R., Solt, L., Andersson, L., Halekas, J., Jian, L., da Silva, D. E., Jolitz, R., Malaspina, D., Fowler, C. M., Ramstad, R., Lillis, R., Xu, S., Azari, A. R., Mazelle, C., Rahmati, A., Lee, C. O., Hesse, T., Hamil, O., Pilinski, M., Brain, D., Garnier, P., Cravens, T. E., McFadden, J. P., Hanley, K. G., Mitchell, D. L., Espley, J. R., Gruesbeck, J. R., Larson, D., & Curry, S. (2024), The Martian Ionospheric Response to the Co-Rotating Interaction Region That Caused the Disappearing Solar Wind Event at Mars, *Journal of Geophysical Research (Space Physics)*, *129*, e2023JA032181.
- 385 * Girazian, Z., Halekas, J., & Ruhunusiri, S. (2024), MAVEN SWIA Observations of Solar Wind Signatures in the Collisional Atmosphere of Mars, *Journal of Geophysical Research (Space Physics)*, *129*, e2023JA032164.
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Refereed Book and Monograph Chapters

7. ** Farrell, W. M., Halekas, J. S., Horányi, M., Killen, R. M., Grava, C., Szalay, J. R., Benna, M., Clark, P. E., Collier, M. R., Colaprete, A., Deca, J., Elphic, R. C., Fatemi, S., Futaana, Y., Holmström, M., Hurley, D. M., Kramer, G. Y., Mahaffy, P. R., Nishino, M. N., Noble, S. K., Saito, Y., Poppe, A. R., Retherford, K. D., Wang, X., & Yokota, S. (2023), The Dust, Atmosphere, and Plasma at the Moon, *Reviews in Mineralogy and Geochemistry*, *89*, 563.
6. *** Wiczorek, M. A., Weiss, B. P., Breuer, D., Cébron, D., Fuller, M., Garrick-Bethell, I., Gattacceca, J., Halekas, J. S., Hemingway, D. J., Hood, L. L., Laneville, M., Nimmo, F., Oran, R., Purucker, M. E., Rückriemen, T., Soderlund, K. M., & Tikoo, S. M. (2023), Lunar Magnetism, *Reviews in Mineralogy and Geochemistry*, *89*, 207.
5. ** Gaddis, L. R., Joy, K. H., Bussey, B. J., Carpenter, J. D., Crawford, I. A., Elphic, R. C., Halekas, J. S., Lawrence, S. J., & Xiao, L. (2023), Recent Exploration of the Moon: Science from Lunar Missions Since 2006, *Reviews in Mineralogy and Geochemistry*, *89*, 1.

4. * Halekas, J. S., J. G. Luhmann, E. Dubinin, Y. Ma (2021), Induced Magnetospheres: Mars. *Space Physics and Aeronomy, Vol. 2, Magnetospheres in the Inner Solar System* (pp. 391-406), Ed. R. Maggiolo, N. Andres, H. Hasegawa, D.T. Welling, Y. Zhang, L. J. Paxton. Washington, D.C.: American Geophysical Union.
3. * Harada, Y., Halekas, J.S. (2016). Upstream Waves and Particles at the Moon. In *Low Frequency Waves in Space Plasmas, Geophysical Monograph Series, 216*, 307-322. Washington, D.C.: American Geophysical Union.
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1. ** Brain, D., Halekas, J. S. (2012). Aurora in Martian mini magnetospheres. *Auroral Phenomenology and Magnetospheric Processes: Earth and Other Planets* (vol. 197, pp. 123-132). Washington D.C.: American Geophysical Union.

Ph.D. Thesis

1. Halekas, J.S. (2003). *The origins of lunar crustal magnetic fields*. University of California, Berkeley.

Technical Report

1. Halekas, J. S. (2019). BIFOCAL ELECTRON SENSOR FLIGHT OF OPPORTUNITY ON THE INVESTIGATION OF CUSP IRREGULARITIES-5 MISSION. *Science Mission Directorate Technology Highlights: 2018*. NASA.

Areas of Research Interest

Atmospheric escape from Mars and other unmagnetized bodies
 Basic processes and sources of instabilities in plasma wakes
 Charged particle measurement techniques
 Composition and dynamics of tenuous exospheres
 Magnetic reconnection
 Near-surface plasma sheaths above the surface of airless bodies
 Planetary magnetism
 Planetary magnetospheres
 Plasma interactions with sub-ion inertial scale magnetic fields
 Plasma physics in the interplanetary medium and the environments of planets and moons
 Solar wind kinetic physics
 Space plasma instrumentation
 Wave-particle interactions

Grants and Contracts

Funded

- Jun 2022 – May 2026 *Investigating the Radial Evolution of the Interactions between Solar Wind Plasma, Macroscopic Structures, and Intermediate Frequency Waves*
 Funded by University of Minnesota (prime sponsor is NASA). UI Award amount (\$128,705.00) Jasper S Halekas (UI Institutional Lead).
- Dec 2022 - Sep 2025 *MAVEN/SWIA Extended Mission 5*
 Funded by University of Colorado (prime sponsor is NASA). UI Award amount (\$954,674.00) Jasper S Halekas (UI Institutional Lead and Solar Wind Ion Analyzer Instrument Lead).
- Mar 2022 – Oct 2027 *HelioSwarm*
 Funded by NASA - Subcontract through University of New Hampshire. Proposed UI award amount (\$280,684.00). Jasper S Halekas (UI Institutional Lead and Instrument Scientist for Medium Class Explorer mission).
- Oct 2018 - Sep 2025 *SWEAP Phase E*
 Funded by Smithsonian Astrophysical Observatory (Prime Sponsor NASA). UI Award amount: (\$536,967.00). Jasper S Halekas (UI Institutional Lead and Solar Probe Analyzer-Electrons Instrument Scientist).

- Jan 2019 - Jun 2025 *TRACERS*
Funded by NASA. Investigator/s Craig Kletzing (Principal Investigator), Jasper S Halekas (Co-Investigator, Instrument Lead for Analyzer for Cusp Electrons, ~\$4,000,000 of TRACERS funding).
- Nov 2019 - Nov 2025 *LEADER*
Funded by NASA/GSFC. UI Award amount: (\$349,855.00). Jasper S Halekas (UI Institutional Lead and Plasma Team Lead).
- Jul 2021 - Dec 2025 *Lunar Vertex*
Funded by NASA - Subcontract through Johns Hopkins Applied Physics Laboratory. Proposed UI award amount (\$163,589.00). Jasper S Halekas (UI Institutional Lead and Deputy Principal Investigator for landed lunar mission).
- Jan 2020 - Jan 2024 *Flows, Fields, and Forces in the Magnetospheres of Unmagnetized Bodies*
Funded by NASA. UI Award amount: (\$508,950.00). Jasper S Halekas (Principal Investigator for grant).
- Nov 2019 – Nov 2022 *Hybrid Fluid-Kinetic Model of the Processes in the Moon's Plasma Environment*
Funded by University of Maryland Baltimore County (prime sponsor is NASA). UI Award amount (\$154,785.00), Jasper S Halekas (UI Institutional Lead and Co-Investigator).
- Nov 2019 - Nov 2023 *A Reexamination of the Composition, Structure, and Variability of the Lunar Exosphere Utilizing ARTEMIS Observations*
Funded by NASA. UI Award amount: (\$361,095.00). Jasper S Halekas (Principal Investigator for grant).
- Oct 2019 - Dec 2022 *MAVEN/SWIA Extended Mission 4*
Funded by University of Colorado (prime sponsor is NASA). UI Award amount (\$874,997.00) Jasper S Halekas (UI Institutional Lead and Solar Wind Ion Analyzer Instrument Lead).
- Jun 2019 - Apr 2023 *ACES-II*
Funded by NASA Heliophysics Technology and Instrument Development Program. Total UI Award amount: (\$3,476,266.00). Investigator/s Scott Bounds (Principal Investigator), Jasper S Halekas (Co-Investigator).
- Oct 2017 - Sep 2023 *THEMIS*
Funded by University of Iowa. UI Award amount: (\$360,041.00). Investigator/s Jasper S Halekas (UI Institutional Lead and Acting Deputy Principal Investigator for THEMIS-ARTEMIS mission until Dec. 2022).
- Sep 2016 - Sep 2021 *Hydrogen Precipitation in Planetary Atmospheres*
Funded by NASA Solar System Workings Program (via subcontract to U.C. Berkeley). UI Award amount: (\$135,730.00). Jasper S Halekas (UI Institutional Lead).
- Mar 2018 – Mar 2022 *Probing Particle Energization in Heliospheric Plasmas using Field-Particle Correlations*
Funded by NASA. UI Award Amount (\$317,037.57). Investigator/s Gregory Howes (Principal Investigator), Jasper S Halekas (Co-Investigator)
- Aug 2018 – Aug 2021 *Using Field-Particle Correlations to Explore Particle Energization in MMS Magnetosheath Observations*
Funded by NASA. UI Award Amount (\$323,753.00). Investigator/s Gregory Howes (Principal Investigator), Jasper S Halekas (Co-Investigator)
- Jun 2018 – Jul 2021 *Determining Particle Energization by the Dissipation of Turbulence in Heliospheric Plasmas*
Funded by NASA. UI Award Amount (\$152,279.00). Investigator/s Gregory Howes (Principal Investigator), Jasper S Halekas (Co-Investigator)
- Sep 2018 – Sep 2020 *Proposal for Continued Participation in the Mars Express Extended Mission; FY2019 (Phase E) & FY2020 (Phase F): MARSIS Radar Sounder Investigation*
Funded by Jet Propulsion Laboratory (prime sponsor is NASA). UI Award

- Amount (\$803,000.00). Jasper S Halekas (UI Institutional Lead, Co-Investigator and Lead US Investigator for MARSIS).
- May 2018 - May 2020 *ICI-5 Bifocal Flight Opportunity*
Funded by NASA Heliophysics Technology and Instrument Development Program. UI Award amount: (\$505,779.00). Jasper S Halekas (Principal Investigator for grant).
- Feb 2016 - Feb 2020 *BIFOCAL: A next-generation electron instrument for solar wind monitoring and high phase space resolution*
Funded by NASA Heliophysics Technology and Instrument Development Program. UI Award amount: (\$608,853.00). Jasper S Halekas (Principal Investigator for grant).
- Oct 2018 - Sep 2019 *MAVEN/SWIA Extended Mission 3*
Funded by University of Colorado (prime sponsor is NASA). UI Award amount: (\$275,000.00). Jasper S Halekas (UI Institutional Lead and Solar Wind Ion Analyzer Instrument Lead).
- Mar 2015 - Mar 2019 *Dynamic Response of the Environment at Asteroids, the Moon, and the moons of Mars (DREAM²), NASA SSERVI*
Funded by NASA/GSFC. UI Award amount: (\$363,000.00). Jasper S Halekas (UI Institutional Lead and Plasma Team Lead).
- Sep 2017 - Sep 2018 *TRACERS Phase A Study*
Funded by NASA Heliophysics Small Explorers. Total UI Award amount: (\$1,250,000.00). Investigator/s Craig Kletzing (Principal Investigator), Jasper S Halekas (Co-Investigator and Analyzer for Cusp Electrons Instrument Lead).
- Oct 2016 - Sep 2018 *MAVEN/SWIA Extended Mission 2*
Funded by University of Colorado (prime sponsor is NASA). UI Award Amount (\$225,000.00), Jasper S Halekas (UI Institutional Lead and Solar Wind Ion Analyzer Instrument Lead).
- Aug 2014 - Aug 2018 *SPAN-Electrons - SWEAP Phase C/D*
Funded by University of California, Berkeley (prime sponsor is NASA). UI Award amount: (\$167,818.00). Jasper S Halekas (UI Institutional Lead and Solar Probe Analyzer-Electrons Instrument Scientist).
- Apr 2015 - Apr 2018 *Investigating the Interaction of Solar Wind Protons with the Moon using ARTEMIS data*
Funded by NASA Lunar Data Analysis Program (via subcontract to U.C. Berkeley). UI Award amount: (\$89,964.00). Jasper S Halekas (UI Institutional Lead).
- Sep 2017 - Jan 2018 *PRISM: Phobos Regolith Ion Sample Mission*
Funded by NASA PSDS3 (via subcontract to NASA Goddard Spaceflight Center). UI Award Amount (\$50,040.00). Jasper S Halekas (UI Institutional Lead).
- Aug 2014 - Aug 2017 *Start-Up Funding for Jasper Halekas*
Funded by University of Iowa Start-Up. Award amount: (\$509,986.00).
- Dec 2015 - Dec 2016 *HALO NNX16AD03G*
Funded by NASA/GSFC. UI Award amount: (\$50,000.00). Jasper S Halekas (UI Institutional Lead).
- Oct 2015 - Sep 2016 *MAVEN/SWIA Extended Mission*
Funded by University of California, Berkeley (prime sponsor is NASA). UI Award amount: (\$210,000.00). Jasper S Halekas (UI Institutional Lead and Solar Wind Ion Analyzer Instrument Lead).
- Aug 2014 - Mar 2016 *Solar Wind Ion Analyzer (SWIA) - MAVEN Phase E*
Funded by University of Colorado (prime sponsor is NASA). UI Award amount: (\$127,437.00). Jasper S Halekas (UI Institutional Lead and Solar Wind Ion Analyzer Instrument Lead).
- Sep 2014 - Sep 2015 *Quantifying the Links Between the Space Plasma Environment and the Lunar Dusty Atmosphere: A Virtual Plasma Instrument for LADEE NNX14AR24G*

Funded by NASA. UI Award amount: (\$152,815.76). Jasper S Halekas (Principal Investigator for grant).

Currently Under Review

- Sep 2025 – Feb 2031 *POLARIS*
Funded by NASA – Subcontract through Goddard Space Flight Center. Proposed UI award amount (\$325,350.00). Jasper S Halekas (UI Institutional Lead).
- Aug 2025 – Aug 2028 *A Systematic Exploration of How Variations in Solar Wind Alfvén Mach Number Affect Martian Ion Dynamics*
Funded by NASA. Proposed award amount (\$431,847.00). Han-Wen Shen (Principal Investigator). Jasper S Halekas (Co-Investigator)

Not Funded

- Nov 2024 – Oct 2027 *Exploring the Rapid Response of the Martian Magnetotail to the Dynamic Solar Wind: Multi-Point Approach*
Funded by NASA. Proposed award amount (\$152,749.00). Jasper S Halekas (Principal Investigator).
- Mar 2024 – Feb 2027 *ChAMP: Charging, Admittance, Magnetics, and Plasma*
Funded by NASA. Subcontract through Southwest Research Institute. Proposed UI award amount (\$105,707.00). Jasper S Halekas (UI Institutional Lead).
- Jan 2024 – Dec 2026 *Gated Electron and Negative Ion Experiment (GENIE): Diagnosing Lunar Surface Interactions by Quantifying Electron and Negative Ion Emission*
Funded by NASA. Proposed award amount (\$2,272,900.00). Jasper S Halekas (Principal Investigator).
- Apr 2023 – Apr 2026 *Spatial and Temporal Variations of the Shape of He⁺ PUI Focusing Cone*
Funded by NASA - Subcontract through Southwest Research Institute. Proposed UI award amount (\$108,220.00). Jasper S Halekas (UI Institutional Lead).
- Jun 2022 – May 2026 *Plasma Observatory for Lunar Exploration*
Funded by NASA – Subcontract through Goddard Space Flight Center. Proposed UI award amount (\$128,810.00). Jasper S Halekas (UI Institutional Lead).
- 2022-2027 *Valkyries: Shining New Light on the Aurora*
Funded by NASA Explorer Program. Jasper S Halekas (Co-Investigator and Deputy Instrument Lead).
- 2022-2027 *Energetic Particle Precipitation Impacts and Coupling (EPPIC)*
Funded by NASA Explorer Program. Jasper S Halekas (Co-Investigator and Instrument Lead).
- 2015-2034 *Europa Plasma Environment Experiment*
Funded by NASA Europa Instrument Investigations. Jasper S Halekas (Co-Investigator and Instrument Lead).
- Sep 2021 -Aug 2026 *LunaTICS: Lunar-Terrestrial Ion outflow Compositional Studies*
Funded by NASA – Subcontract through U.C. Berkeley. Jasper S Halekas (UI Institutional Lead).
- Jan 2020 - Dec 2022 *HALOS*
Funded by NASA Development and Advancement of Lunar Instrumentation Program. Investigator/s Jasper S Halekas (Co-Investigator and UI Institutional Lead).
- Sep 2018 - Aug 2021 *A Reexamination of the Composition, Structure, and Variability of the Lunar Exosphere Utilizing ARTEMIS Observations*
Funded by NASA Lunar Data Analysis Program. Investigator/s Jasper S Halekas (Principal Investigator). – Resubmitted and Later Funded
- Sep 2018 - Aug 2021 *Flows, Fields, and Forces in the Magnetospheres of Unmagnetized Bodies*
Funded by NASA Solar System Workings Program. Investigator/s Jasper S Halekas (Principal Investigator). – Resubmitted and Later Funded
- Jan 2018 - Jan 2021 *Cold Ion Composition Experiment*

- Funded by NASA Heliophysics Technology and Instrument Development Program. Investigator/s Jasper S Halekas (Principal Investigator).
- Aug 2019 - Oct 2020 *Magnetic Explorer Phase A Study*
Funded by University of Colorado (prime sponsor is NASA). Investigator/s Jasper S Halekas (Co-Investigator, UI Institutional Lead, and Instrument Lead for Solar Wind Sensor).
- Feb 2017 - Jun 2020 *Volatile Ion Composition Experiment*
Funded by NASA (via subcontract to U.C. Berkeley). Investigator/s Jasper S Halekas (Co-Investigator).
- Jul 2017 - Jun 2020 *Pulsed Ion Composition Analyzer*
Funded by NASA Planetary Instrument Concepts for the Advancement of Solar System Observations. Investigator/s Jasper S Halekas (Principal Investigator).
- Jun 2017 - Jun 2020 *Interpretation and Characterization of the ARTEMIS observations of solar wind interactions with the lunar surface, magnetic anomalies, and exosphere*
Funded by NASA Lunar Data Analysis Program (via subcontract to Space Sciences Institute). Investigator/s Jasper S Halekas (Co-Investigator and UI Institutional Lead).
- Mar 2017 - Mar 2020 *Earth, Moon, and Mars: Laboratories for Foreshock Processes*
Funded by NASA Heliophysics Supporting Research Program. Investigator/s Jasper S Halekas (Principal Investigator).
- Jul 2016 - Jun 2019 *Pulsed Ion Composition Analyzer*
Funded by NASA Planetary Instrument Concepts for the Advancement of Solar System Observations. Investigator/s Jasper S Halekas (Principal Investigator).
- Jul 2016 - Jun 2019 *ACES-II*
Funded by NASA Heliophysics Technology and Instrument Development Program. Investigator/s Jasper S Halekas (Co-Investigator), Scott Bounds (Principal Investigator). – Resubmitted and Later Funded
- Apr 2016 - Mar 2019 *Identifying the Kinetic Physics of Turbulent Dissipation in the Solar Wind*
Funded by NASA Heliophysics Supporting Research Program. Investigator/s G Howes (Principal Investigator), Jasper S Halekas (Co-Investigator). – Resubmitted and Later Funded
- Mar 2016 - Mar 2019 *Earth, Moon, and Mars: Laboratories for Foreshock Processes*
Funded by NASA Heliophysics Supporting Research Program. Investigator/s Jasper S Halekas (Principal Investigator).
- Feb 2016 - Jan 2019 *The Signatures of Landau Damping in the Velocity Distributions of Solar Wind Plasma*
Funded by NASA Heliophysics Guest Investigator. Investigator/s G Howes (Principal Investigator), Jasper S Halekas (Co-Investigator). – Resubmitted and Later Funded
- May 2015 - May 2018 *Pulsed Ion Composition Analyzer*
Funded by NASA Planetary Instrument Concepts for the Advancement of Solar System Observations. Investigator/s Jasper S Halekas (Principal Investigator).
- Apr 2015 - Mar 2018 *The Kinetic Signature of Turbulent Dissipation in the Solar Wind*
Funded by NASA Heliophysics Supporting Research Program. Investigator/s G Howes (Principal Investigator), Jasper S Halekas (Co-Investigator). – Resubmitted and Later Funded

Invited Lectures and Conference Presentations

International – Oral Invited

- 2023 Lunar Plasma Interdisciplinary Network, *THEMIS-ARTEMIS*, Bjorkliden, Sweden, Presenters/Authors: Halekas, Jasper S
- 2023 Deep Space Sciences Conference, *The Mars-Solar Wind Interaction Under Weak Solar Wind Conditions*, China (remote), Presenters/Authors: Halekas, Jasper S
- 2022 American Geophysical Union Fall Meeting, *Radial Evolution and Acceleration of the*

- 2022 *Solar Wind*, Chicago, Illinois, Presenters/Authors: Halekas, Jasper S
COSPAR, *Utilizing Pickup Ion Measurements to Probe the Lunar Exosphere*, Athens, Greece, Presenters/Authors: Halekas, Jasper S
- 2021 Parker One Conference, *Electrons in the Near-Sun Environment*, Virtual, Presenters/Authors: Halekas, Jasper S
- 2021 COSPAR, *Electron Energetics in the Young Solar Wind*, Australia (Virtual), Presenters/Authors: Halekas, Jasper S
- 2019 American Geophysical Union Fall Meeting, *Space Weather Impacts at Unmagnetized Bodies*, American Geophysical Union, San Francisco, California, United States, Presenters/Authors: Halekas, Jasper S
- 2018 American Geophysical Union Fall Meeting, *Boundary Layer Asymmetries and Instabilities at Mars*, American Geophysical Union, Washington, District of Columbia, United States, Presenters/Authors: Halekas, Jasper S
- 2018 American Geophysical Union Fall Meeting, *Observations of Precipitating Solar Wind Hydrogen in the Martian Ionosphere*, American Geophysical Union, Washington, District of Columbia, United States, Presenters/Authors: Halekas, Jasper; Student Presenters/Authors: Henderson, Sarah
- 2018 American Geophysical Union Fall Meeting, *The influence of solar wind and interplanetary magnetic field conditions on ultra-low frequency waves and reflected ions near the Moon*, American Geophysical Union, Washington, District of Columbia, United States, Presenters/Authors: Halekas, Jasper; Student Presenters/Authors: Howard, Stephanie
- 2018 Comparative Aeronomy Symposium, *Momentum Transfer and Boundary Layer Processes at Mars*, ESTEC, Noordwijk, Netherlands, Presenters/Authors: Halekas, Jasper S
- 2018 Fundamental Physical Processes in Solar-Terrestrial Research and Their Relevance to Planetary Physics, *Momentum Transfer Processes at Unmagnetized Planets and Moons*, Kailua-Kona, Hawaii, Presenters/Authors: Halekas, Jasper S
- 2017 Asia Oceania Geosciences Society Annual Meeting, *Solar wind interaction with the Moon*, Asia Oceania Geosciences Society, Singapore, Presenters/Authors: Halekas, Jasper S
- 2017 Mars Aeronomy Conference, *The Magnetosphere and Space Environment of Mars*, Boulder, Colorado, United States, Presenters/Authors: Halekas, Jasper S
- 2017 The Dust, Atmosphere, and Plasma Environment of the Moon and Small Bodies, *The Plasma Environment of the Moon*, Boulder, Colorado, United States, Presenters/Authors: Halekas, Jasper S
- 2016 American Geophysical Union Fall Meeting, *A case study of right hand polarized waves in the lunar plasma environment*, American Geophysical Union, San Francisco, California, United States, Presenters/Authors: Halekas, Jasper; Student Presenters/Authors: Howard, Stephanie
- 2016 Lunar Exploration Analysis Group, *ARTEMIS Mission Update*, Laurel, Maryland, United States, Presenters/Authors: Halekas, Jasper S
- 2016 American Geophysical Union Fall Meeting, *Kinetic Plasma Interactions Between the Solar Wind and Lunar Magnetic Fields*, American Geophysical Union, San Francisco, California, United States, Presenters/Authors: Halekas, Jasper S
- 2016 Corsica Lunar Paleomagnetism Workshop, *What can electron reflectometry tell us about lunar magnetism*, Corsica, Italy, Presenters/Authors: Halekas, J S
- 2012 39th European Physical Society Conference on Plasma Physics/16th International Congress on Plasma Physics, *Results from the ARTEMIS mission*, Presenters/Authors: Halekas, J S
- 2006 COSPAR Meeting, *Comparative mini-magnetospheres: Moon and Mars*, Beijing, China, Presenters/Authors: Halekas, J S
- 2006 COSPAR Meeting, *Origin and expected variability of Martian Aurorae*, Beijing, China, Presenters/Authors: Halekas, J S

International – Poster Invited

- 2022 American Geophysical Union Fall Meeting, *Sources of Ions in the Near-Mars*

Environment, Chicago, Illinois, Presenters/Authors: Halekas, Jasper S

International - Seminar

- 2021 New York University Abu Dhabi Seminar, *The Mars Hydrogen Cycle: Precipitation, Escape, and Aurora*, Abu Dhabi (Virtual), Presenters/Authors: Halekas, J S
- 2020 Taiwan Lunar Workshop, *The Plasma Environment of the Moon*, Taiwan (Virtual), Presenters/Authors: Halekas, J S
- 2018 IKI (Russian Space Research Institute) Seminar, *The Mars-Solar Wind Interaction Observed by MAVEN*, Moscow, Russia, Presenters/Authors: Halekas, J S
- 2018 IKI (Russian Space Research Institute) Seminar, *The Moon: A Natural Laboratory for Charged Particle Interactions with Small-Scale Magnetic Fields*, Moscow, Russia, Presenters/Authors: Halekas, J S
- 2014 Lunar Workshop, *Plasma interactions with small-scale magnetic fields: Current understanding and unsolved problems*, Kyung-Hee University, Presenters/Authors: Halekas, J S
- 2010 Center for Space Science and Applied Research Seminar, *Fundamental plasma physics in the Martian magnetotail and boundary layer*, Beijing, China, Presenters/Authors: Halekas, J S
- 2010 Center for Space Science and Applied Research Seminar, *The Lunar Wake: Current understanding and first results from ARTEMIS*, Beijing, China, Presenters/Authors: Halekas, J S
- 2009 JAXA/ISAS Seminar, *Lunar electric fields: The view from Lunar Prospector*, Tokyo, Japan, Presenters/Authors: Halekas, J S

National - Colloquium

- 2021 University of Colorado Astrophysics and Planetary Science Colloquium, *Electron Physics in the Young Solar Wind: New Results from the Parker Solar Probe*, Department of Astrophysics and Planetary Science, University of Colorado, Presenters/Authors: Halekas, Jasper S
- 2016 Kansas University Physics Colloquium, *A Physics Laboratory in the Sky: Lunar Magnetic Fields*, Lawrence, Kansas, United States, Presenters/Authors: Halekas, J S
- 2016 UCLA Earth Planetary and Space Science Colloquium, *Dynamic Mars: First results from MAVEN*, Presenters/Authors: Halekas, J S
- 2014 UNH Physics Colloquium, *The lunar wake: A natural plasma physics laboratory*, Presenters/Authors: Halekas, J S
- 2014 University of Iowa Physics and Astronomy Colloquium, *The lunar wake: A natural plasma physics laboratory*, Presenters/Authors: Halekas, J S
- 2006 Space Sciences Laboratory Colloquium, *Martian Aurora*, Presenters/Authors: Halekas, J S

National – Oral Invited

- 2023 Parker Solar Probe Science Working Group, *Do we know how the solar wind is accelerated?* Laurel, MD (remote), Presenters/Authors: Halekas, J S
- 2015 Lunar and Planetary Science Conference, *MAVEN observations of the Martian magnetosphere and its response to solar wind drivers*, Houston, Texas, United States, Presenters/Authors: Halekas, J S
- 2013 Lunar Science Forum, *ARTEMIS: Summary of new science at the Moon*, Presenters/Authors: Halekas, J S
- 2012 Dust, Atmosphere and Plasma: Moon and Small Bodies, *ARTEMIS and the Moon's Sphere of Influence*, Presenters/Authors: Halekas, J S
- 2012 Cluster-THEMIS Workshop, *ARTEMIS observations of pickup ions around the Moon*, Presenters/Authors: Halekas, J S
- 2012 LEAG, *ARTEMIS: Results from the first year*, Presenters/Authors: Halekas, J S
- 2012 Lunar Science Forum, *First results from the ARTEMIS mission*, Presenters/Authors: Halekas, J S
- 2010 Lunar Dust Atmosphere and Plasma Workshop, *Lunar plasma and exospheric science from ARTEMIS*, Presenters/Authors: Halekas, J S

- 2007 Workshop on science associated with the lunar exploration architecture, *Determining lunar crustal magnetic fields and their origin*, Presenters/Authors: Halekas, J S
- 2007 American Geophysical Union Spring Meeting, *Global vs. local mini-magnetospheres: Differences and similarities*, Presenters/Authors: Halekas, J S
- 2005 American Geophysical Union Fall Meeting, *Solar wind interaction with the lunar environment*, Presenters/Authors: Halekas, J S

National - Seminar

- 2023 Parker Solar Probe Theory Telecon, *Solar Wind Acceleration: Radial Evolution and Energy Sources*, Virtual, Presenters/Authors: Halekas, Jasper S
- 2023 LuSEE Weekly Seminar, *Plasma Physics at the Moon*, Virtual, Presenters/Authors: Halekas, J S
- 2022 Magnetosphere Online Seminar Series, *Plasma Physics at the Moon*, Virtual, Presenters/Authors: Halekas, J S
- 2020 Minnesota Space Physics Seminar, *Electron Physics in the Young Solar Wind: New Results from the Parker Solar Probe*, Department of Physics, University of Minnesota, Presenters/Authors: Halekas, Jasper S
- 2020 Parker Solar Probe Theory Telecon, *Electrons in the Young Solar Wind*, Presenters/Authors: Halekas, Jasper S
- 2019 Space Environment Center, *The Lunar Space Environment as Observed by ARTEMIS*, NASA Marshall Space Flight Center, Presenters/Authors: Halekas, Jasper S
- 2018 Laboratory for Astrophysics and Space Physics Seminar, *Escape!*, University of Colorado, Boulder, Colorado, Presenters/Authors: Halekas, Jasper S
- 2016 Minnesota Space Physics Seminar, *Dynamic Mars: First results from MAVEN*, Presenters/Authors: Halekas, J S
- 2014 NASA Headquarters Brownbag Seminar, *ARTEMIS explores the Lunar Environment*, Presenters/Authors: Halekas, J S
- 2014 University of Michigan Atmospheric Oceanic and Space Sciences Seminar, *ARTEMIS explores the Lunar Environment*, Presenters/Authors: Halekas, J S
- 2014 University of Iowa Astronomy and Space Physics Seminar, *Lunar magnetic fields and their "shocking" effects on the surfaces and space environment*, Presenters/Authors: Halekas, J S
- 2014 UNH Space Physics Seminar, *Plasma physics in the Martian magnetosphere: A view towards MAVEN*, Presenters/Authors: Halekas, J S
- 2014 University of Iowa Plasma Physics Seminar, *Plasma physics in the Martian magnetosphere: A view towards MAVEN*, Presenters/Authors: Halekas, J S
- 2014 American Physical Society Prairie Section Plenary, *Small but surprising: The curious magnetic fields of the Moon*, Presenters/Authors: Halekas, J S
- 2013 UCLA Space Physics Seminar, *Ions from the Moon: Sources and implications*, Presenters/Authors: Halekas, J S
- 2013 U.C. Santa Cruz Earth and Planetary Sciences Seminar, *The tenuous lunar exosphere: A view from ARTEMIS on the eve of LADEE*, Presenters/Authors: Halekas, J S
- 2012 ARTEMIS Science Working Team, *ARTEMIS observations of pickup ions: Tying space plasma data to the surface and exosphere* Presenters/Authors: Halekas, J S
- 2012 Lunar and Planetary Institute Seminar, *First results from ARTEMIS: The Moon's sphere of influence*, Presenters/Authors: Halekas, J S
- 2012 NLSI Director's Seminar, *Using ARTEMIS observations to connect the space plasma environment to the surface and exosphere*, Presenters/Authors: Halekas, J S
- 2011 U.C. Berkeley Space Physics Seminar, *Lunar Precursor Effects*, Presenters/Authors: Halekas, J S
- 2010 UCLA Earth and Space Sciences Seminar, *The lunar plasma wake: Waiting for ARTEMIS*, Presenters/Authors: Halekas, J S
- 2009 U.C. Berkeley Space Physics Seminar, *Space physics in the dynamic lunar environment*, Presenters/Authors: Halekas, J S
- 2009 SETI Institute, *The dynamic lunar environment* Presenters/Authors: Halekas, J S
- 2008 University of Washington Earth and Space Sciences Research Seminar, *Lunar surface charging: Lunar Prospector Observations*, Presenters/Authors: Halekas, J S

- 2008 University of Washington Earth and Space Sciences Seminar, *The enigma of lunar magnetism*, Presenters/Authors: Halekas, J S
- 2000 California Institute of Technology Geological & Planetary Sciences Seminar, *Lunar crustal magnetism: New results from Lunar Prospector*, Presenters/Authors: Halekas, Jasper S

Regional - Symposium

- 2011 Bay Area Consortium for Heliophysics Symposium, *Evidence for reconnection at Mars*, Presenters/Authors: Halekas, J S

Regional - Colloquium

- 2020 Truman State University, *Diving Into the Sun with the Parker Solar Probe*, Truman State University, Kirksville, Missouri, Presenters/Authors: Halekas, Jasper S

University - Colloquium

- 2018 University of Iowa Physics and Astronomy Colloquium, *The Great Escape!*, Presenters/Authors: Halekas, J S

University - Seminar

- 2023 University of Iowa Astronomy and Space Physics Seminar, *Radial Evolution and Acceleration of the Solar Wind: Parker Solar Probe Results*, Presenters/Authors: Halekas, J S
- 2019 University of Iowa Astronomy and Space Physics Seminar, *The Young Solar Wind: First Results from the Parker Solar Probe*, Presenters/Authors: Halekas, J S
- 2017 University of Iowa Astronomy and Space Physics Seminar, *The Mars Hydrogen Cycle: Precipitation, Escape, and Aurora*, Presenters/Authors: Halekas, J S
- 2016 University of Iowa Astronomy and Space Physics Seminar, *Blowin' in the wind: First results from the MAVEN mission*, Presenters/Authors: Halekas, J S

Student Presentations

- 2024 Fruchtman, J., J. S. Halekas, F. G. Eparvier, J. Gruesbeck, C. X. Mazelle, D. L. Mitchell (2024), *Utilization of a new length scale normalization binning technique to resolve high resolution structure in the Martian magnetosheath*, AGU Fall Meeting Abstracts, 2024, SM21D-2718.
- 2024 Nair, R., J. S. Halekas, C. A. Cattell, P. Whittlesey, D. E Larson, R. Livi, M. Berthomier, J. Kasper, A. W. Case, M. L. Stevens, S. Bale, R. J. MacDowall, M. Pulupa (2024), *Parker Solar Probe Observations of Suprathermal Electron Scattering from Encounter 1 to 9*, AGU Fall Meeting Abstracts, 2024, SH31F-2679.
- 2024 Wen, Y., J. S. Halekas, D. Brain, H.-W. Shen, H. Nilsson, A. Azari, Y. Dong, J. R. Espley, J. P. McFadden, D. Mitchell, C. X. Mazelle (2024), *Multi-Point Observations of Magnetic Reconnection in the Martian Magnetotail Triggered by IMF Rotation*, AGU Fall Meeting Abstracts, 2024, P21F-3054.
- 2023 Henderson, S. (2023), *Precipitating Solar Wind Hydrogen at Mars*, Seminar, Montana State University.
- 2023 Fruchtman, J., Halekas, J. S., & Gruesbeck, J. (2023), *Refined Analysis of Martian Magnetosheath Structure*, AGU Fall Meeting Abstracts, 2023, P43G-3356.
- 2023 Nair, R., Halekas, J. S., Whittlesey, Larson, D. E., Livi, R., Berthomier, M., Kasper, J., Case, A. W., Stevens, M. L., Bale, S. D., MacDowall, R. J., & Pulupa, M. (2023), *Switchbacks in the Young Solar Wind: Electron Evolution Observed from Parker's First Ten Encounters Inside Switchbacks*, AGU Fall Meeting Abstracts, 2023, SH31D-3008.
- 2023 Henderson, S., Halekas, J., Espley, J., & Elrod, M. (2023), *Influence of Magnetic Fields on Precipitating Solar Wind Hydrogen at Mars*, EGU General Assembly Conference Abstracts, EGU-985.
- 2022 Fruchtman, J., Halekas, J. S., & Gruesbeck, J. (2022), *Seasonal invariance of the Martian Bow Shock structure*, AGU Fall Meeting Abstracts, 2022, SM32A-69.
- 2022 Nair, R., Halekas, J. S., Whittlesey, P. L., Larson, D. E., Livi, R., Berthomier, M., Kasper, J., Case, A. W., Stevens, M. L., Bale, S. D., MacDowall, R. J., & Pulupa, M.

- (2022), *Switchbacks in the Young Solar Wind: Electron Evolution Observed inside Switchbacks between 0.125 AU and 0.25 AU.*, AGU Fall Meeting Abstracts, 2022, SH32E-1808.
- 2022 Henderson, S., Halekas, J. S., Mitchell, D. L., & Mazelle, C. X. (2022), *Characterizing Energy Spectra of Precipitating Solar Wind H⁺ and H⁻ in the Martian Atmosphere*, AGU Fall Meeting Abstracts, 2022, P25E-2144.
- 2021 Fruchtmann, J., Halekas, J., & Gruesbeck, J. (2021), *Analysis on the dependence of the Martian Bow Shock on Seasonal and Solar Wind Variations.*, AGU Fall Meeting Abstracts, 2021, SM55C-1794.
- 2021 Nair, R., Halekas, J., Whittlesey, P., Larson, D., Livi, R., Berthomier, M., Kasper, J., Case, A., Stevens, M., Bale, S., MacDowall, R., & Pulupa, M. (2021), *Switchbacks in the Young Solar Wind: Electron Evolution Observed inside Switchbacks between 0.125 AU and 0.25 AU.*, AGU Fall Meeting Abstracts, 2021, SH45A-2345.
- 2021 Peters, M., & Halekas, J. (2021), *Examining Electrostatic Waves at Harmonics of the Electron Cyclotron Frequency at the Moon*, AGU Fall Meeting Abstracts, 2021, P55E-1989.
- 2020 Howard, S. K., Halekas, J. S., Farrell, W. M., McFadden, J. P., & Glassmeier, K. H. (2020), *Characteristics of Ultra Low Frequency Plasma Waves Near the Moon*, AGU Fall Meeting Abstracts, 2020, U008-06.
- 2020 Andreone, G. D., Halekas, J. S., & Mitchell, D. (2020), *Using Electron Measurements from MAVEN to study the Magnetosheath of Mars*, AGU Fall Meeting Abstracts, 2020, SM053-0007.
- 2019 McGinnis, D., Halekas, J. S., Whittlesey, P. L., Larson, D. E., Kasper, J. C., Case, A. W., Korreck, K. E., Livi, R., Stevens, M. L., Bale, S. D., Bonnell, J. W., Dudok de Wit, T., Goetz, K., Harvey, P., MacDowall, R. J., Malaspina, D., & Pulupa, M. (2019), *Measurement of Electron Temperature Anisotropy to within 35 Rs*, AGU Fall Meeting Abstracts, 2019, SH12A-05.
- 2019 Kistler, M., & Halekas, J. S. (2019), *Location Analysis of ARTEMIS probes during Lunar events in the Earth's Magnetosphere*, AGU Fall Meeting Abstracts, 2019, SM33F-3286.
- 2019 Howard, S. K., Halekas, J. S., Farrell, W. M., McFadden, J. P., & Glassmeier, K. H. (2019), *Effects of the Lunar Plasma Environment on Reflected Ion Distributions and the Impact on Ultra Low Frequency Wave Generation*, AGU Fall Meeting Abstracts, 2019, SM33F-3285.
- 2018 McGinnis, D. J., Halekas, J., Larson, D., Whittlesey, P., & Kasper, J. (2018), *Correcting PSP Electron Measurements for the Effects of Spacecraft Electrostatic and Magnetic Fields*, Solar Heliospheric and Interplanetary Environment (SHINE 2018), 178.
- 2018 McGinnis, D., Halekas, J. S., Larson, D. E., Whittlesey, P. L., & Kasper, J. C. (2018), *Correcting PSP/SPAN VDF Measurements for Spacecraft Charging and B-Field Effects*, AGU Fall Meeting Abstracts, 2018, SH51B-2823.
- 2018 Howard, S. K., Halekas, J. S., Farrell, W. M., McFadden, J. P., & Glassmeier, K. H. (2018), *The Influence of Solar Wind and Interplanetary Magnetic Field Conditions on Ultra-Low Frequency Waves and Reflected Ions Near the Moon*, AGU Fall Meeting Abstracts, 2018, SM11A-06.
- 2018 Andreone, G. D., & Halekas, J. S. (2018), *Investigating precipitating cusp electrons using Bifocal, a next generation electrostatic analyzer*, AGU Fall Meeting Abstracts, 2018, SH41D-3665.
- 2018 Henderson, S., Halekas, J. S., & Lillis, R. J. (2018), *Observations of Precipitating Solar Wind Hydrogen in the Martian Ionosphere*, AGU Fall Meeting Abstracts, 2018, P54C-03.
- 2017 McGinnis, D., Halekas, J. S., Larson, D. E., Whittlesey, P. L., & Kasper, J. C. (2017), *Correcting PSP electron measurements for the effects of spacecraft electrostatic and magnetic fields*, AGU Fall Meeting Abstracts, 2017, SH23D-2696.
- 2017 Howard, S. K., Halekas, J. S., Harada, Y., Farrell, W. M., McFadden, J. P., & Glassmeier, K. H. (2017), *Polarization Statistics on 0.01 Hz Waves in the Lunar*

- 2016 *Plasma Environment, AGU Fall Meeting Abstracts, 2017, SM33D-2696.*
 Andreone, G. D., & Halekas, J. S. (2016), *Bifocal: A Multifunctional, Next Generation Electrostatic Analyzer*, AGU Fall Meeting Abstracts, SM51A-2462.
- 2016 Howard, S. K., Halekas, J. S., Farrell, W. M., McFadden, J. P., Glassmeier, K. H., & Fruehauff, D. (2016), *Low Frequency Waves and Reflected Ions in the Lunar Plasma Environment*, AGU Fall Meeting Abstracts, SM34A-02.

SERVICE

Profession

- 2024 National Academies, A Science Strategy for the Human Exploration of Mars – Panel on Atmospheric Science and Space Physics, Member, Tasked to identify the highest priority science objectives among all relevant science disciplines to be addressed by humans on the surface of Mars.
- 2024 NASA Planetary Data Archiving, Restoration, and Tools Review Panel, Member
- 2024 NASA Lunar Data Analysis Program Review Panel, Member
- 2024 NASA Solar Orbiter Guest Investigator Program, External Reviewer
- 2024 Nature, Publications, Reviewed one manuscript
- 2024 Geophysical Research Letters, Publications, Reviewed one manuscript
- 2024 Journal of Geophysical Research, Publications, Reviewed one manuscript
- 2024 Astronomy and Astrophysics, Publications, Reviewed one manuscript
- 2023 The Astrophysical Journal, Publications, Reviewed one manuscript
- 2023 Space Science Reviews, Publications, Reviewed one manuscript
- 2023 Journal of Geophysical Research, Publications, Reviewed two manuscripts
- 2023 Astronomy and Astrophysics, Publications, Reviewed two manuscripts
- 2023 NASA Solar System Workings Program Review Panel, Member
- 2023 Lunar Data Analysis Program, External Reviewer
- 2023 Solar System Exploration Research Virtual Institute, External Reviewer
- 2018 - 2023 Reviews of Geophysics, Editor, One of seven international editors for the preeminent review journal in geosciences.
- 2022 Heliophysics 2050 Technology Workshop, Panelist
- 2022 Astronomy and Astrophysics, Publications, Reviewed one manuscript
- 2022 Geophysical Research Letters, Publications, Reviewed one manuscript
- 2022 Journal of Geophysical Research, Publications, Reviewed three manuscripts
- 2022 Astrophysical Journal, Publications, Reviewed one manuscript
- 2022 Science Advances, Publications, Reviewed one manuscript
- 2022 Nature, Reviewer, Publications, Reviewed one manuscript
- 2022 NASA Lunar Data Analysis Program, External Reviewer
- 2022 NASA PRISM Review Panel, External Reviewer
- 2020 – 2021 National Academies, Planetary Decadal Survey - Mars Panel, Member, Sets national priorities for the next decade of planetary science and astrobiology science at the NSF and NASA.
- 2019 – 2021 Parker Solar Probe Electron/Quasi-Thermal Noise Working Group, Co-Chair
- 2021 Swiss National Science Foundation, External Reviewer
- 2021 Journal of Geophysical Research, Publications, Reviewed two manuscripts
- 2021 NASA Solar System Workings Review Panel, External Reviewer.
- 2021 Space Science Reviews, Reviewer, Publications, Reviewed one manuscript.
- 2021 Icarus, Reviewer, Publications, Reviewed one manuscript.
- 2021 Geophysical Research Letters, Reviewer, Publications, Reviewed two manuscripts.
- 2021 Astrophysical Journal, Reviewer, Publications, Reviewed two manuscripts.
- 2021 Astronomy and Astrophysics, Reviewer, Publications, Reviewed one manuscript.
- 2020 Technical Peer Review Panel for ESCAPEDE mission, Member
- 2020 Astronomy and Astrophysics, Reviewer, Publications, Reviewed one manuscript.
- 2020 Geophysical Research Letters, Reviewer, Publications, Reviewed three manuscripts.
- 2020 Journal of Geophysical Research, Reviewer, Publications, Reviewed five manuscripts.
- 2020 Space Science Reviews, Reviewer, Publications, Reviewed one manuscript.
- 2020 The Astrophysical Journal, Reviewer, Publications, Reviewed one manuscript.

2013 - 2020	Lunar Exploration Analysis Group, Executive Committee, Member
2020	NASA Solar System Workings Review Panel, Chair
2020	NASA Heliophysics Technology and Instrument Development for Science Review Panel, Member
2019	Geophysical Research Letters, Reviewer, Publications, Reviewed two manuscripts.
2019	Journal of Geophysical Research, Reviewer, Publications, Reviewed five manuscripts.
2010 - 2019	Journal of Geophysical Research - Planets, Editor, Assistant/Co-Editor
2019	NASA, Reviewer, Grant Proposals, Served as external reviewer for NASA technology proposals.
2018	Geophysical Research Letters, Reviewer, Publications, Reviewed two manuscripts.
2018	Icarus, Reviewer, Publications, Reviewed one manuscript.
2018	Journal of Geophysical Research, Reviewer, Publications, Reviewed two manuscripts.
2018	NASA, Reviewer, Grant Proposals, Served as external reviewer for 2 NASA data analysis program review panels.
2018	Scientific Organization Committee for Cluster/THEMIS Workshop, Member
2018	Scientific Organization Committee for Europlanet Conference on Planetary Atmospheric Erosion, Member
2017	Geophysical Research Letters, Reviewer, Publications, Reviewed one manuscript.
2017	Journal of Geophysical Research, Reviewer, Publications, Reviewed four manuscripts.
2017	NASA, Reviewer, Grant Proposals, Served as external reviewer for 5 NASA data analysis program review panels.
2017	Planetary and Space Sciences, Reviewer, Publications, Reviewed one manuscript.
2016	AAS, Reviewer, Publications, Reviewed one manuscript.
2016	Geophysical Research Letters, Reviewer, Publications, Reviewed two manuscripts.
2016	Journal of Geophysical Research, Reviewer, Publications, Reviewed ten manuscripts.
2016	NASA, Reviewer, Grant Proposals, Served as external reviewer for 4 NASA data analysis program review panels.
2016	Peer Review for HaloSat mission, Member
2015	EPSCOR, Reviewer, Grant Proposals, Served as external reviewer for 2 EPSCOR review panels.
2015	Geophysical Research Letters, Reviewer, Publications, Reviewed three manuscripts.
2015	Icarus, Reviewer, Publications, Reviewed one manuscript.
2015	IEEE Transactions on Plasma Physics, Reviewer, Publications, Reviewed one manuscript.
2015	Journal of Geophysical Research, Reviewer, Publications, Reviewed three manuscripts.
2015	NASA, Reviewer, Grant Proposals, Served as external reviewer for 5 NASA data analysis program review panels.
2015	Physics of Plasmas, Reviewer, Publications, Reviewed one manuscript.
2015	Swedish National Space Board, Reviewer, Grant Proposals, Served as external reviewer for two major proposals for SNSB.
2015	NASA Living With a Star Review Committee, Chair
2002 - 2014	Reviewer for NASA Data Analysis Programs, Reviewer, Review panelist for five NASA data analysis programs.
2002 - 2014	Reviewer for Various Journals, Reviewer, Reviewed over 60 articles for various journals.
2011	Critical Design Review Panel for BARREL mission, Member
2011	Earth Planets and Space Special Issue Guest Editor, Editor, Assistant/Co-Editor

Department

2022 – Present	Executive Committee
2019 – Present	Society of Physics Students Advisor, Advisor/Departmental Liaison
2025	Five-Year Peer Review Committee for Kenneth Gayley, Member
2021 – 2024	Subcommittee on Diversity, Equity, and Inclusion, Member
2023 – 2024	High Energy Physics Experiment Faculty Search Committee, Member
2024	Third-Year Review Committee for Tom Folland, Member
2023	Second-Year Review Committee for Tom Folland, Member
2023	Promotion and Tenure Committee for Casey DeRoo, Chair
2022	Third-Year Review Committee for Casey DeRoo, Member

2019 – 2021	Self Study and Strategic Planning Committee, Member
2019 – 2021	Graduate Recruiting and Admissions Committee, Member
2020	Third-Year Review Committee for David Miles, Member
2019 – 2020	Space Science Faculty Search Committee, Member
2018 – 2019	Space Science Faculty Search Committee, Member
2017	Promotion and Tenure Committee for Scott Baalrud, Member
2017 – 2019	Executive Committee, Member
2017 – 2018	Astrophysics/Space Physics Seminar, Organizer
2016 – 2017	Space Physics Faculty Search Committee, Member
2015 – 2017	Educational Operations Committee, Member

College

2023 - Present	Professional Development Award Review Committee, Member
2023 – Present	Mentor Committee for Valerie Payre (EES), Member
2023	Dean’s Advisory Council Meeting, Speaker
2022	Lunar Science Faculty Search Committee (Earth and Environmental Science Department), Member
2022	OVPR Early Career Scholars Proposal Review Panel, Member
2021	OVPR Early Career Scholars Proposal Review Panel, Member
2018	School of Music External Review, Member
2017	CLAS 20/20 Ideation Charrette, Member

University

2022 - Present	PI of P3 grant “Extending Iowa’s Success in Space-Based Research Across Campus”. Took over as PI of this \$3.6M P3 grant upon the departure of the previous PI, Phil Kaaret.
2019 - Present	Iowa Space Grant Campus Coordinator. Together with the presidential representative Dr. J. Martin Scholtz, I represent the interests of the University of Iowa in this statewide program, which supports STEM-related, education, research, and public engagement across the state of Iowa. This program brings over \$700,000/year to the state of Iowa, including more than \$60,000/year in research funding to University of Iowa faculty, staff, and students across departments and colleges, as well as additional funds for scholarships, fellowships, and internships for University of Iowa students.
2020 - 2022	Faculty Senate - CLAS Representative, Member

Community

2024	Cedar River Amateur Astronomers, Guest Speaker
2024	Public solar eclipse event, Volunteer
2023	Cedar River Amateur Astronomers, Guest Speaker
2021	Cedar River Amateur Astronomers, Guest Speaker
2020	Cedar River Amateur Astronomers, Guest Speaker
2020	Virtual Public Astronomy Night, Van Allen Observatory, Guest Speaker
2020	Lemme Elementary School, STEAM Night, Guest Speaker
2019	Science Cafe, Mt. Vernon, Invited Lecture
2019	Panel on <i>Eight Years to the Moon</i> , Panelist
2017	Cedar Rapids Lions Club, Invited Lecture
2017	Explorers Seminar Series, Invited Lecture
2017	Wilton High School, Guest Speaker
2016	Sugar Bottom Campground, Guest Speaker
2016	Northwest Middle School, Guest Speaker
2015	MAVEN Educators, Guest Speaker
2015	Sugar Bottom Campground, Guest Speaker
2015	Cedar River Amateur Astronomers, Guest Speaker

Media Contributions

2024	Newspaper/TV, Local Conducted interviews for local media outlets on solar eclipse
2023	Newspaper/Internet, National Participated in media roundtable at Fall AGU Conference, which led to articles in numerous outlets, including Space.com and Washington Post.
2022	TV, AGU TV, National Participated in AGU TV special on TRACERS mission and Iowa P&A department.
2022	TV, Local television, Local Conducted interviews for local television stations about ARTEMIS-I Launch.
2021	TV, Local television, Local Conducted interviews for local television stations about lunar eclipse.
2021	Radio, River to River, State Interview about Mars 2020 (Perseverance)
2019	Internet, Wired, International Article on the mystery of the lunar ionosphere
2018	Internet, National Geographic, International Article inspired by research published in Geophysical Research Letters.
2018	Radio, River to River, State Interview about Solar Probe Launch
2018	TV, Local television, Local Conducted interviews for local television stations about Solar Probe Launch.
2018	Radio, Radio Iowa, State Interview about Solar Probe Launch
2016	Radio, River to River, State Discussed space science on radio.
2015	Radio, River to River, State Discussed MAVEN first results on radio with Ben Kieffer
2015	TV, Discovery Daily Planet, International Conducted interview about MAVEN results for an episode of Discovery Canada Daily Planet.
2015	TV, Local television, Local Conducted interviews for local television stations.
2015	TV, NASA TV, International Participated in televised release of MAVEN results in a science update on NASA TV.
2015	Newspaper, New York Times, International Interview with New York Times on MAVEN results
2015	Radio, River to River, State Discussed Mars on radio with Ben Kieffer
2015	Radio, Talk of Iowa, State Discussed New Horizons results on radio
2015	Radio, River to River, State Discussed MAVEN results on radio with Ben Kieffer

Professional Development Activities

2016	Training/Development Program, Communicating Ideas Workshop, University of Iowa, Participated in media training workshop
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