

Curriculum Vitae for Dr. Harriet George

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Research Focus:

Dr. Harriet George studies magnetospheric dynamics throughout our solar system using a combination of in-situ spacecraft observations and simulations. Her research experience spans the magnetospheres of Earth, Venus and Uranus, and her primary current research projects focus on magnetotail dynamics at Earth using a combination MMS and THEMIS data.

Employment:

Oct. 2025 – present: Postdoctoral Researcher, Institutet För Rymdfysik (IRF) / Swedish Institute for Space Physics, Uppsala, Sweden.

Jan. 2023 – Sept. 2025: Research Scientist, Laboratory for Atmospheric and Space Physics (LASP), University of Colorado Boulder, Boulder, Colorado, USA.

Jan. 2019 – Dec. 2022: Doctoral Researcher, University of Helsinki, Finland.

Oct. – Dec. 2018: Research Assistant, University of Otago, New Zealand.

Education:

Ph.D. (Physics) 2022
University of Helsinki, Finland
Title: “Transport and loss of outer radiation belt electrons”
Supervisors: Dr. Emilia Kilpua, Dr. Minna Palmroth, Dr. Adnane Osmane
Defended: Nov. 23, 2022, against opponent Dr. Richard Horne.
Degree conferred: Dec. 15, 2022

BSc. Honours (Physics) 2018
University of Otago, New Zealand
Supervisor: Dr. Craig Rodger

BSc. (Major: Physics; Minor: Mathematics) 2017
University of Otago, New Zealand

Publications:

27 peer-reviewed publications (6 first-author, 21 co-author).

Citizenship: New Zealand

First-author Publications:

George, H., et al. (2024), *Plasma wave survey from Parker Solar Probe observations during Venus gravity assists*. *Astronomy & Astrophysics*, 689, A214. DOI: 10.1051/0004-6361/202450244.

George, H., et al. (2023), *Non-Lightning-Generated Whistler Waves in Near-Venus Space*. *Geophysical Research Letters*, 50, e2023GL105426. DOI: 10.1029/2023GL105426.

George, H., et al. (2022), *Contributions to Loss Across the Magnetopause During an Electron Dropout Event*. *Journal of Geophysical Research (Space Physics)*, 127, e2022JA030751. DOI: 10.1029/2022JA030751.

George, H., et al. (2022), *Estimating Inner Magnetospheric Radial Diffusion Using a Hybrid-Vlasov Simulation*. *Frontiers in Astronomy and Space Sciences*, 9, 866455. DOI: 10.3389/fspas.2022.866455.

George, H., et al. (2020), *Outer Van Allen belt trapped and precipitating electron flux responses to two interplanetary magnetic clouds of opposite polarity*. *Annales Geophysicae*, 38, 931. DOI: 10.5194/angeo-38-931-2020.

George, H. et al. (2019), *Developing a Nowcasting Capability for X-Class Solar Flares Using VLF Radiowave Propagation Changes*. *Space Weather*, 17, 1783. DOI: 10.1029/2019SW002297

Grants:

2025:

- NSF GEM: *Plasmapause control of outer radiation belt electron enhancements*. Proposal requesting funding for analysis of GPS data to study the long-term relationship between radiation belt enhancements and the plasmapause location, 324,438 USD. July 15, 2025 – June, 30 2028. PI: Harriet George; Co-I: Allison Jaynes. *Plship transferred to Maria Usanova on September 3, 2025*.
- NASA Topical Workshops, Symposiums, and Conferences: *International Workshop on Instrumentation for Planetary Missions 6*, 50,000 USD. July 1, 2025 – June 30, 2026. PI: Harriet George; Co-I's: Lena Heffern, Robert Wilson.

2024:

- MMS Early Career Award, *Spatial Extent of Turbulence in Earth's Magnetotail*, 121,125 USD. December 1, 2024 – November 30, 2025. PI: Harriet George
- Uranus flagship workshop, early career researcher travel support, 1500 USD.

2022:

- Travel Grant for PhD Students, 700€. Doctoral School in Natural Sciences, University of Helsinki, Finland.

2021:

- Travel Grant for PhD Students, 890€. Doctoral School in Natural Sciences, University of Helsinki, Finland.
- Grant for the Space Physics Writing Workshop, 1200€. Doctoral Programme in Particle Physics and Universe Sciences, University of Helsinki, Finland.

2020:

- Vela Fellowship, 10,000 USD. Los Alamos National Laboratory, USA.
- Travel Grant for PhD Students, 1300€. Doctoral School in Natural Sciences, University of Helsinki, Finland.

2017:

- Beverly Bursary in Physics (2017), 500 NZD. Faculty of Science, University of Otago, New Zealand.

Teaching / Mentoring Experience:

Guest lecturer:

- 2025: ASTR 3400 (Research Methods in Astronomy), guest lectures on in-situ plasma instrumentation (2 lectures), University of Colorado Boulder.
 ASTR 5300 (Introduction to Magnetospheres), guest lecture on Uranus's magnetosphere (1 lecture), University of Colorado Boulder.
 Research Experience for Undergraduates Bootcamp, introductory lecture on magnetospheric physics (1 lecture), University of Colorado Boulder.
- 2024: Research Experience for Undergraduates Bootcamp, introductory lecture on magnetospheric physics (1 lecture), University of Colorado Boulder.
- 2023: Research Experience for Undergraduates Bootcamp, introductory lecture on magnetospheric physics (1 lecture). University of Colorado Boulder.

Advisor for Research Experience for Undergraduates summer student:

- 2023: Alexis "Lexy" Hensley, "GPS Satellite Observations of a Radiation Belt Dropout Event in the Post-RBSP Era". Continued to work with Lexy following the end of the summer program to develop her research into a paper that will be submitted soon to a peer-reviewed journal. Lexy presented her results at AGU-2023 and will

attend the geophysics graduate program at Stanford University, starting Fall 2025.

Course assistant:

- 2021 - 2022: PAP323 (Advanced Space Plasma Physics), University of Helsinki
- 2020 - 2021: PAP305 (Space Applications of Plasma Physics), University of Helsinki

Laboratory demonstrator:

- 2018: PHSI132 (Fundamentals of Physics 2), University of Otago
- 2018: PHSI191 (Biological Physics), University of Otago

Professional Service:

Conference / Session organization

American Geophysical Union (AGU):

- Radiation Belt Dynamics: Wave-Particle Interactions and Radiation Belt Modeling, session convener, 2024 Annual Meeting.
- Understanding radiation environments at the Earth, the Gas Giants, and Beyond, Early Career Convener, 2024 Annual Meeting.
- Radiation Belt Dynamics: Wave-Particle Interactions and Radiation Belt Modeling, session convener, OPSA liaison, 2023 Annual Meeting.
- Nonlinear and Nonresonant Wave-Particle Interactions in Earth's Magnetosphere, session convener, 2023 Annual Meeting.

Geospace Environment Modeling (GEM):

- Focus Group leader, 'Radiation Belts as a System of Systems', 2025 – 2029. Responsible for leading session organization at GEM and miniGEM.
 - 2025 GEM workshop: 6 sessions.

International Workshop on Instrumentation for Planetary Missions 6 (IPM-2025):

- Lead organizer of the IPM-2025 workshop, August 4 - 6, 2025. Hybrid workshop with the in-person component held in Boulder, Colorado, August 4 – 6, 2025. Approximately 180 attendees. Information available at <https://lasp.colorado.edu/meetings/ipm-2025/> and <https://zenodo.org/records/17056361>.

Review panels

- 2024: NASA ROSES panel, served as an in-person reviewer. 14 proposals in the panel, primary reviewer of 3 proposals, secondary reviewer of 1 proposal and tertiary reviewer of 1 proposal.

Committees

- July 2025 – present: organizing committee for joint VERSIM / GEM RB-SoS journal club.
- June 2023 – May 2025: Friends of the Magnetosphere LASP seminar series, lead organizer.

- 2023: Early Career Organization. LASP.
- 2022: Space Physics Writing Workshop, lead organizer. University of Helsinki.
- 2022: Faculty Use Working Group. University of Helsinki.
- 2019 - 2022: PhysHIP Wellbeing Group. University of Helsinki.

Journal article peer reviewer

- 2025: 1 paper. Reviewed for Journal of Geophysical Research: Space Physics.
- 2024: 3 papers. Reviewed for Journal of Geophysical Research: Space Physics, Physics of Plasmas and Nature Communications.
- 2023: 2 papers. Reviewed for Journal of Geophysical Research: Space Physics and Astronomy & Astrophysics.
- 2022: 1 paper. Reviewed for Journal of Geophysical Research: Space Physics.

Miscellaneous:

- NASA Heliophysics early career roundtable, September 9, 2024.
- NASA Heliophysics LASP visit (Joe Westlake/Peg Luce) - Early Career Scientists meeting, April 18, 2024.
- LASP External Advisory Committee – early career meeting, January 8, 2024.
- NASA administrators visit to LASP / CU - Student & Post-docs meeting, April 20, 2023.

Seminars / conference presentations:

2025:

- GEM workshop, talk, June 26, Des Moines, IA.
- GEM workshop, **invited plenary talk**, June 24, Des Moines, IA.
- **Invited seminar**, June 6, University of California Los Angeles, Los Angeles, CA.
- **Invited seminar**, May 20, University of Helsinki, Helsinki, Finland.
- MMS 10th Anniversary & MMS 11th Community Workshop, talk, May 13. Paris, France.
- **Invited colloquium**, May 1, University of Alberta, Edmonton, Canada.
- **Invited seminar**, April 5, Rice University, Houston, TX. Presented remotely.
- MMS Telecon, **invited talk**, March 18. Virtual telecon, presented remotely.

2024:

- AGU Annual Meeting, eLightning, **invited presentation**, December 9. Washington D.C.
- AGU Annual Meeting, poster, December 9. Washington D.C.
- MiniGEM workshop, talk, December 8. Washington D.C.
- **Invited seminar**, December 5, John Hopkins University Applied Physics Laboratory, Laurel, MD.
- VERSIM workshop, **invited talk**, September 30. Breckenridge, CO.
- VERSIM workshop, talk, September 30. Breckenridge, CO.
- MOP workshop, talk, July 10. Minneapolis, MN.
- GEM workshop, talk, June 25. Fort Collins, CO.
- GEM workshop, poster, June 25. Fort Collins, CO.

- Uranus Flagship Workshop, poster, May 21. NASA GSFC, Greenbelt, MD.
- EclipseSA meeting, poster, April 9. San Antonio, TX.
- **Invited seminar**, March 8. University of California, Los Angeles, CA, USA.
- **Invited seminar**, March 4. University of Leicester, Leicester, England.
- **Invited seminar**, February 21. Northumbria University, Newcastle, England.
- Seminar, Friends of the Magnetosphere seminar series, February 13. LASP / CU Boulder, Boulder, CO.
- USNC-URSI National Radio Science Meeting, talk, January 12. Boulder, CO.

2023:

- AGU Fall Meeting, talk, December 14. San Francisco, CA.
- AGU Fall Meeting, poster, December 14. San Francisco, CA.
- Mini-GEM workshop, talk, December 10. San Francisco, CA.
- FIELDS meeting, talk, December 9. Berkeley, CA.
- **Invited seminar**, October 10. Space Sciences Laboratory UC Berkeley, Berkeley CA. Presented remotely.
- GEM workshop, talk, June 13. San Diego, CA.
- GEM workshop, talk, June 12. San Diego, CA.
- **Invited seminar**, Friends of the Magnetosphere seminar series, February 28. LASP / CU Boulder, Boulder, CO.

2022:

- AGU Fall Meeting, talk, December 13. Presented remotely.
- **Invited seminar**, June 30. German Aerospace Center, Cologne, Germany. Presented remotely.
- **Invited seminar**, June 28. Northumbria University, Newcastle upon Tyne, England. Presented remotely.
- EGU General Assembly, talk, May 26. Vienna, Austria.
- Doctoral seminar, April 14. University of Helsinki, Helsinki, Finland.

2021:

- AGU Fall Meeting, talk, December 14. New Orleans, LA.
- EGU General Assembly, talk, April 27. Virtual conference.

2020:

- EGU General Assembly, May 5. Vienna, Austria. Presented remotely.
- Finnish Centre of Excellence in Research of Sustainable Space (FORESAIL) Buzzday Conference, talk, February 14. Turku, Finland

Additional Education:

- Heliophysics Summer School ‘Comparative Heliophysics’, August 14 – 22, 2024. Boulder CO.
 - Los Alamos Space Weather Summer School, June 1 – August 5, 2021. Attended remotely.
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Awards:

2023: NASA Group Achievement Award to the Parker Solar Probe team.

Education / Outreach:

2024:

- Collaborated with Alexandra Lockhart, an Artist in Residence at the Laboratory for Atmospheric and Space Physics, to develop art pieces inspired by Parker Solar Probe and plasma waves. Presented at the Boulder Public Library on February 10, February 24, and March 9, 2024 and available online at <https://aelockhart.com/plasmawaves>, <https://aelockhart.com/dancing-data> and <https://aelockhart.com/sundanceseries>. Further information available at <https://lasp.colorado.edu/2023/10/04/lasp-selects-artists-for-new-art-meets-science-program/>.
- LASP outreach for *Moons & Planets* Boulder Philharmonic concert, Nov. 10.

2023:

- Eos article: 'Lightning Struck Down as Source of a Venus Whistler'. ([link](#))
- CU News article: 'Does lightning strike on Venus? Maybe not, study suggests'. ([link](#)).
- Science Friday radio segment: 'Venus Lightning Debate Gets Lit'. ([link](#)).
- Space.com article: "'Lightning' on Venus may not be lightning at all, Parker Solar Probe finds'. ([link](#)).
- Solar system outreach night at Ryan Elementary School, Lafayette, CO.

2022:

- Science Basement podcast: 'Killer electrons in space'. ([link](#)).
- Science Basement public lecture: 'The Earth's radiation belts and their space weather effects'. ([link](#)).