

Graham S. Kerr

Solar Astrophysicist

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Summary

My research interests are in the area of solar flare physics, particularly in the transport of energy, radiation, and mass through the solar atmosphere during flares or other transient heating events. This is achieved through a combination of state-of-the-art numerical modelling and the analysis of solar flare observations. I have expertise of imaging and spectroscopic data analysis, utilising the Solar Orbiter, Hinode, IRIS, SDO & RHESSI observatories. I am a lead user/developer of radiation hydrodynamics & radiation transfer numerical simulations to model physical processes during solar flares, with a focus on understanding the formation of optically thick radiation. Model-data comparisons to assess the ability of models to stand up to the scrutiny of observations is the crucial final step.

Education

University of Glasgow | **PhD Physics and Astronomy** *Oct 2012 - Feb 2017*
Supervisor: Prof. Lyndsay Fletcher | Topic: Observations and Modelling of the Chromosphere During Solar Flares
• Funded by a College of Science and Engineering Research Scholarship.

University of Glasgow | **MSci. (1st Class Hons.) Physics and Astronomy** *Oct 2007 - June 2012*
• Undergraduate integrated Masters in Science degree.

Career History

University of Glasgow | **Royal Society University Research Fellow** *Jan 2026 –*

Catholic University of America | **Research Scientist** *April 2020 – Dec 2025*
PHaSER co-operative scientist based onsite at NASA Goddard Space Flight Center.

NASA Postdoctoral Program (GSFC) | **NPP Fellow** *April 2017 – April 2020*
Administered by USRA, based at NASA Goddard Space Flight Center.

High Altitude Observatory / CU LASP | **REU Student (solar physics)** *Summer 2011*

Montana State University | **REU Student (solar physics)** *Summer 2010*

Publications, Presentations and Grant funding

A publication list and a list of invited presentationsis listed at the end. Summaries are:
• Successfully proposed to competitive research solicitations as PI/Co-PI (4 grants; $>\sim \$1.8$M) and Co-I (9 grants; $>\sim \$4.1$M)
• Selected as a Royal Society University Research Fellow in June 2025 (£1.9M, Jan 2026-Dec 2033).
• 44 peer-reviewed publications (14 as main author) | $h-$index = 20 | 1200+ citations
• > 20 invited presentations at international conferences and seminars.

Awards

NASA GSFC Heliophysics Science Division Peer Award, 2025
NASA GSFC Science and Exploration Directorate Special Act Award, 2024 (Early Career Leadership)
NASA GSFC Robert H Goddard Award, 2024 (DEIA Category)
NASA GSFC Heliophysics Science Division Peer Award, 2022
AAS/Solar Physics Division Thomas Metcalf Travel Award, 2019
Rolls-Royce Rolls-Royce Science Prize 2nd place, 2016 *(team award for a year long outreach project, from 2000 initial entrants)*
AAS/Solar Physics Division Zirin Studentship (travel + presentation at TESS), 2015
University of Glasgow, Graduate School Hunter-Cumming outreach prize, 2016 | Thomson Experimental Prize, 2015 | Hunter-Cumming research prize, 2014 | College of Science and Engineering PhD Scholarship, 2012-2016
University of Glasgow, Undergraduate Archibald McAulay Memorial, 2012 | Tannahill Bequest, 2012 | MacKay-Smith Prize, 2011 | Lang Scholarship, 2010 | Tannahill Bequest, 2010 | Lanfine Bursary, 2009 | Cleland Prize, 2009 | Astronomy 2 class prize, 2009.

Selected Community Involvement and Leadership

Leadership Roles and Committees

UK Solar Physics (UKSP), Council Member *Oct 2026 –*

UK Space Agency, Space Frontiers Heliophysics Thematic Panel member *Dec 2025 – June 2026*

Supported UKSA's decadal prioritisation efforts | Evaluated community white papers and assessed strategic priorities in the context of UK heliophysics leadership | Co-wrote a report for the Steering Committee and UKSA

EDI Committee Member, School of Physics and Astronomy, University of Glasgow *2026 –*

AAS / Solar Physics Division Public Policy Committee member *2022 – 2025*

Outreach and advocacy for heliophysics, engaging with various stakeholders

Heliophysics Coalition *2022 – 2025*

Member of this heliophysics community public policy group

NASA GSFC LGBTQ+ Employee Resource Group member *2018 – 2025*

NASA Goddard Association of Postdoctoral Scholars (NGAPS+) co-officer *2021 – 2025*

NGAPS+ rep for the Heliophysics Science Division | Member of the DEIA sub-committee | Co-wrote, analyzed, and disseminated the results of, two culture and climate surveys focussed on early career scientists at NASA GSFC.

NASA GSFC Science and Exploration Directorate (SED) Goals and Values Committee *2022 – 2023*

Part of a team re-evaluating the goals and values of the SED, with my sub-team's particular focus being retention and future of work | Co-wrote a report of findings and recommendations for SED leadership.

NASA GSFC Heliophysics Science Division Early Career Committee *2021 – 2024*

ISSI Team Leader *2019 – 2022*

Co-led an International Space Science Institute (ISSI) team on *Interrogating Field-Aligned Solar Flare Models: Comparing, Contrasting, and Improving* | Team comprised 12 scientists from six countries and ten institutions.

Student Mentoring

Postgraduate Research

Eilidh Bush, University of Glasgow – PhD Student (primary supervisor), Oct 2026-

Danai Kasselaki, University of Glasgow – PhD Student (secondary supervisor), Oct 2026-

Dr. S. McLaughlin, Queen's University Belfast – mentor for modeling aspects of his PhD research, including a Jan-May 2023 visit to GSFC

Undergraduate Research

Bryn Pardoe-Matthews, University of Glasgow (2026/2027 senior thesis) | Julia Murdoch, University of Glasgow (summer 2026) | Gavin Wright, Montana State Univ. REU (summer 2025) & Union College senior thesis (Jan-June 2026) | Simon Sheppard, Western Kentucky University, (Jan - Dec 2024) | Lydia Reiss, American University, Capstone Project (Autumn 2023) | Melissa Kane, CU Boulder, NASA OSTEM Internship, (Summer 2023)

PhD Committee/Examination, University of Oslo (Dr. Helle Bakke) *Oct 2023*

Reviewing

Journals Astrophysical Journal | Astronomy and Astrophysics | Frontiers in Astronomy & Space Science | Monthly Notices of the Royal Astronomical Society | Nature Astronomy

Funding Agencies NASA | National Science Foundation | Czech Academy of Sciences

Conference Planning

Sessions National Astronomy Meeting (NAM) 2026 (Solar Flares) | AGU 2025 *(solar flares in the high-resolution era)* | AGU 2024 *(solar-stellar eruption connections)* | CoolStars 2024 *(solar-stellar eruptions splinter session)* | SHINE 2023 *(solar-stellar connections discussion)* | SHINE 2022 *(solar flare modeling discussion)* | AGU 2020 *(solar flare modelling session)* | RHESSI Workshop 2019

Organizing Committees IRIS/Hinode 2022 *(science organizing committee)*

Missions & Research

Solar Orbiter/STIX Co-Investigator *2026 –*

Solar Orbiter Major Flare Campaign coordinator *2026 –*

MUSE Science Team member *2021 –*

ESCAPE Collaborator/Science Team Member *2023 –*

SPARK Consortium member *2022 –*

ISSI team member

Next-Generation Solar Flare Modelling: Bridging the multi-dimensional gap (2025 - 2027)

Maximising Science from Solar Orbiter's Solar Flare Campaigns (2025 - 2027)

Flare ribbon fine-structure: where does it come from and what can it tell us? (2025 - 2027)

The Impact of Solar Flare Irradiance on the Earth's Ionosphere (2024 - 2026)

Diagnosing Heating Mechanisms in Solar Flare's Through Spectroscopic Observations (2017 - 2018

Observations and Modeling of Flare Chromospheres (2012-2014)

Teaching

Exploring Planetary Systems II | **Honours Level, University of Glasgow** *2026/2027*

Selected Scientific Outreach and Media

Airdrie Astronomical Association *2026*
Presentation to group members

St. Andrews & St. Bride's High School, East Kilbride UK *2024 - present*
Various presentations | Career Fairs

AirSpace on Tap *June 2025*
Public talk at the National Air and Space Museum, Washington D.C.

ABC7DC, Eclipse Across America *April 2024*
Three hour televised live commentary of the 2024 total solar eclipse, with ABC7 & National Weather Desk meteorologists | Aired on cable and on over 100 online platforms (streaming alone reached > 820,400 people).

Capital News Service, UMd *April 2024*
Interview regarding the 2024 total solar eclipse.

Astronomy on Tap DC *April 2024*
Public talk on 'The Sun's Dynamic Atmosphere' Washington D.C.'s DC9 nightclub.

Total Solar Eclipse *2017*
Eclipse related hands-on activities in downtown Washington D.C.

Rolls-Royce Science Prize | 2nd place winners *2015-2016*
Team member of the St Vincent's Primary School's entry to the Rolls Royce Science prize 2015/16, led by Danielle Timmons. We were awarded 2nd place, after working on a year long program of space & astronomy themed activities for the whole school community (ages 5-11 + parents). My involvement included advising on the purchase of specialist equipment, assisting with the planning and delivery of the weekly Astronomy Club, specific responsibility for delivering specialist sessions for each year group (e.g. building spectrometers) & assisting with stargazing evenings.

STEMNET Ambassador *2012-2016*
Various activities, including: careers events for high schoolers | public talks, e.g. 'Science of Star Wars' | Glasgow Science Center movie Q&As and Exporathon events.

University of Glasgow, Astronomy and Astrophysics group *2010-2017*
Various activities, including: Pint of Science and Seven Minutes of Science events, | Public solar observing | Stargazing live themed events | Transit of venus open evening | many planetarium shows and schools sessions | Glasgow Film Theatre Q&A. | Royal Astronomical Society Masterclass demonstrator

Publication List

Refereed

- Riley, S., Qiu, J., **Kerr, G.S.**, Cauzzi, G. *et al*. (2026), *Identification of Chromospheric Dynamical Signatures in the 2022 December 27 Solar Flare with DKIST.* The Astrophysical Journal, In Press.
- Allred, J.C., **Kerr, G.S.**, Guidoni, S.E, Dahlin, J.T., *et al*. (2026), *A New Framework for Modeling Solar Flares from MHD to Kinetic Processes.* The Astrophysical Journal, 1011(1), 138.
- Baker, D., *et al*. (2026), *Inverse FIP effect plasma in the solar atmosphere: a synthesis of current understanding and new insight from AR 11967.* Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences. 384 (2323), 20250187.
- Bekker, S., O'Hare, A.N., *et al*. (2026), *A Statistical Study of the Ionospheric Total Electron Content Response to the Late Phase of a Solar Flare.* Journal of Geophysical Research: Space Physics, 131, e2026JA035779.
- Gomez, T.A., Kowlalski, A.F., Tamburri, C., **Kerr, G.S.** & White, J.R. (2026), *Enigmatic Line Broadening During Solar Flares: Magnetic Field Broadening?* The Astrophysical Journal, 1005(1), 65.
- **Kerr, G.S.**, Krucker, S., Allred, J.C., *et al*. (2026), *Spatial Variation of Energy Transport Mechanisms Within Solar Flare Ribbons*, Nature Astronomy. https://doi.org/10.1038/s41550-025-02747-9
- Ryan, D.F., Hayes, L.A., Collier, H., **Kerr, G.S.**, *et al*. (2025), *Solar Orbiter's 2024 Major Flare Campaign: An Overiew*, Solar Physics, 300, 152.
- Granovsky, S., Kosovichev, A.G., Sadykov, V.M., **Kerr, G.S.**, and Allred, J.C. (2025), *Strong Photospheric Heating Indicated by Fe I 6173Å Line Emission During White-Light Solar Flares*, The Astrophysical Journal, 988(1), 74.
- Lorincik, J., Polito, V., **Kerr, G.S.**, Hayes, L.A. and Russell, A.J.B. (2025), *Probing progression of heating through the lower flare atmosphere via high-cadence IRIS spectroscopy*, The Astrophysical Journal, 986(1), 73.
- Young, P.R., Inglis, A.R., **Kerr, G.S.**, Kucera, T.A. and Ryan, D.F. (2025), *Fe XVIII and Fe XX Forbidden Lines Observed by Solar Orbiter/SPICE*, The Astrophysical Journal, 986(1), 64.
- Simões, P.J.A., Fletcher, L, Hudson, H.S., **Kerr, G.S.**, Penn, M. & Lopez, K.F. (2024), *Precise timing of solar flare footpoint sources from mid-infrared observations*, Monthly Notices of the Royal Astronomical Society, 532(1).
- **Kerr, G.S.**, Polito, V., Xu, Y. & Allred, J.C. (2024), *Solar Flare Ribbon Fronts II. Evolution of heating rates in individual flare footpoints*, The Astrophysical Journal, 970(1).

- Calcines, A. and the SISA Team (inlc. **Kerr, G.S.**). (2024), *Spectral Imaging of the Solar Atmosphere (SISA): The First Extreme-UV Solar Integral Field Spectrometer Using Slicers*, Aerospace, 11(3), 208.
- **Kerr, G.S.**, Kowalski, A.F., Allred, J.C., Daw, A.N. & Kane, M.R. (2024), *An Optically Thin View of the Flaring Chromosphere: Nonthermal line widths in a chromospheric condensation during an X-class Solar Flare*, Monthly Notices of the Royal Astronomical Society, 527(2), 2523-2548.
- Sadykov, V.M., Kosovichev, A.G., Stefan, J.T., Stejko, A., Kowalski, A.F., Allred, J.C. & **Kerr, G.S.** (2024), *Can Proton Beam Heating Flare Models Explain Sunquakes?*, The Astrophysical Journal, 960(1), 80.
- Reid, H.A.S. and the SPARK Team (inlc. **Kerr, G.S.**). (2023), *The Solar Particle Acceleration Radiation and Kinetics (SPARK) mission concept*, Aerospace, 10(12), 1034.
- Yang, K., Sun, X., **Kerr, G.S.** & Hudson, H.S. (2023), *A Possible Mechanism for "Late Phase" in Stellar White-Light Flares*, The Astrophysical Journal, 959(1), 54.
- Xu, Y., **Kerr, G.S.**, Polito, V., Huang, N., Jing, J. & Wang, H. (2023), *Extreme Red-wing Enhancement of UV Lines During the 2022 March 30 X1.3 Solar Flare*, The Astrophysical Journal, 958(1), 67.
- **Kerr, G.S.**, Allred, J.C., Kowalski, A.F., Milligan, R.O., Hudson, H.S., Zambrana Prado, N., Kucera, T.A. & Brosius, J.W. (2023), *Prospects of Detecting Non-thermal Protons in Solar Flares via Lyman Line Spectroscopy: Revisiting the Orrall-Zirker Effect*, The Astrophysical Journal, 945(2), 118.
- McLaughlin, S.A., Milligan, R.O., **Kerr, G.S.**, Monson, A.J., Simões, P.J.A. & Mathioudakis, M. (2023), *Formation of the Lyman Continuum During Solar Flares*, The Astrophysical Journal, 944(2), 186.
- Polito, V., **Kerr, G.S.**, Xu, Y., Sadykov, V.M. & Lorincik, J. (2023), *Solar Flare Ribbon Fronts I. Constraining flare energy deposition with IRIS spectroscopy*, The Astrophysical Journal. 944(1), 104.
- **Kerr, G.S.** (2023), *Interrogating Solar Flare Loop Models with IRIS Observations 2: Plasma Properties, Energy Transport, and Future Directions*. Frontiers in Astronomy and Space Sciences, 9 (1060862).
- **Kerr, G.S.** (2022), *Interrogating Solar Flare Loop Models with IRIS Observations 1: Overview of the Models, and Mass flows*. Frontiers in Astronomy and Space Sciences, 9 (1060856).
- Yadav, R., de La Cruz Rodriguez, J., **Kerr, G.S.**, Diaz Baso, C.J. & Leenaarts, J. (2022), *On the Radiative Losses in the Chromosphere During a C-class Flare*. Astronomy & Astrophysics, 665, A50.
- Allred, J.C., **Kerr, G.S.** & Emslie, A.G. (2022), *Solar Flare Heating with Turbulent Suppression of Thermal Conduction*. The Astrophysical Journal, 931, 60.
- Kowalski, A.F., Allred, J.C., Carlsson, M., **Kerr, G.S**, Tremblay, P.E., Namekata, K., Kuridze, D., Uitenbroek, H. (2022), *The Atmospheric Response to High Nonthermal Electron Beam Fluxes in Solar Flares. II. Hydrogen Broadening Predictions for Solar Flare Observations with the Daniel K. Inouye Solar Telescope*. The Astrophysical Journal, 928(2).
- Cheung, M.C. M., Martínez-Sykora, J., Testa, P., De Pontieu, B., Chintzoglou, G., Rempel, M., Polito, V. **Kerr, G.S.**, *et al*. (2022), *Probing the Physics of the Solar Atmosphere with the Multi-slit Solar Explorer (MUSE): II. Flares and Eruptions*. The Astrophysical Journal, 926(1), 53.
- Xu, Y., Yang, X., **Kerr, G.S.**, Polito, V., Sadykov, V.M., Jing, J, Cao, W, & Wang, H. (2022), *Multi-passband Observations of a Solar Flare over the He I 10830 Å line*. The Astrophysical Journal Letters, 924(1), L18.
- **Kerr, G.S.**, Xu, Y., Allred, J.C., Polito, V., Sadykov, V.M., Huang, N. & Wang, H. (2021), *He I 10830Å Dimming During Solar Flares, I: The Crucial Role of Non-Thermal Collisional Ionisations* The Astrophysical Journal, 912(2).
- Allred, J.C., Alaoui, M., Kowalski, A.F. & **Kerr, G.S.** (2020), *Modeling the Transport of Nonthermal Particles in Flares Using Fokker-Planck Kinetic Theory*. The Astrophysical Journal, 902, 16.
- **Kerr, G.S.**, Allred, J.C. & Polito, V. (2020), *Solar Flare Arcade Modelling: Bridging the gap from 1D to 3D Simulations of Optically Thin Radiation*. The Astrophysical Journal, 900(1), 18.
- Sadykov, V.M., Kosovichev, A.G., Kitiashvili, I.N. & **Kerr, G.S.** (2020), *Response of SDO/HMI Observables to Heating of the Solar Atmosphere by Precipitating High-energy Electrons*. The Astrophysical Journal, 893(1), 24.
- **Kerr, G.S.**, Carlsson, M. & Allred, J.C. (2019), *Modelling Mg II During Solar Flares, II: Non-Equilibrium Effects*. The Astrophysical Journal, 885(2), 119.
- **Kerr, G.S.**, Allred, J.C. & Carlsson, M. (2019), *Modelling Mg II During Solar Flares, I: Partial Frequency Redistribution, Opacity, and Coronal Irradiation*. The Astrophysical Journal, 883(1), 57.
- Kowalski, A.F., Butler, E., Daw, A.N., Fletcher, L., AllredJ.C., de Pontieu, B., **Kerr, G.S.** & Cauzzi, G. (2019), *Spectral Evidence for Heating at Large Column Mass in Umbral Solar Flare Kernels. I. IRIS Near-UV Spectra of the X1 Solar Flare of 2014 October 25*. The Astrophysical Journal, 878(2), 135;
- Sadykov, V.M., Kosovichev, A.G., Sharykin, I.N. & **Kerr, G.S.** (2019), *Statistical Study of Chromospheric Evaporation in the Impulsive Phase of Solar Flares*. The Astrophysical Journal, 871(1), 2.
- **Kerr, G.S.**, Carlsson, M., Allred, J.C., Young, P.R. & Daw, A.N. (2019) *Si IV Resonance Line Emission During Solar Flares: Non-LTE, Non-Equilibrium, Radiation Transfer Simulations*. The Astrophysical Journal, 871(1), 23;
- Brown, S.A., Fletcher, L., **Kerr, G.S.**, Labrosse, N., Kowalski, A.F., de la Cruz Rodriguez, J. (2018), *Modelling the Hydrogen Lyman Lines In Solar Flares*. The Astrophysical Journal, 862(1), 59.

- Simões, P.J.A., **Kerr, G.S.**, Fletcher, L., Hudson, H.S., Giménez de Castro, C.G. & Penn, M. (2017), *Formation of the Thermal Infrared Continuum in Solar Flares*. Astronomy & Astrophysics, 605, A125.
- **Kerr, G.S.**, Fletcher, L., Russell, A.J.B. & Allred, J. (2016), *Simulations of the Mg II k and Ca II 8542 Lines from an Alfvén Wave-Heated Flare Chromosphere*. The Astrophysical Journal, 827(2), 101
- **Kerr, G.S.**, Simões, P.J.A., Qiu, J. & Fletcher, L. (2015), *IRIS Observations of the Mg II h & k Lines During a Solar Flare*. Astronomy & Astrophysics, 582, (A50).
- Milligan, R.O., **Kerr, G.S.**, Dennis, B.R., Hudson, H.S., Fletcher, L., Allred, J.C., Chamberlin, P.C., Ireland, J., Mathioudakis, M. & Keenan, F.P. (2014), *The Radiated Energy Budget of Chromospheric Plasma in a Major Solar Flare Deduced from Multi-Wavelength Observations*. The Astrophysical Journal 793(2), 70.
- **Kerr, G.S.** & Fletcher, L. (2014), *Physical Properties of White-Light Sources in the 2011 Feb 15 Solar Flare*. The Astrophysical Journal 783(2), 98.
- Cheng, J. X., **Kerr, G.S.** & Qiu, J. (2012), *Hard X-ray and Ultraviolet Observations of the 2005 January 15 Two-Ribbon Flare*. The Astrophysical Journal 744(1), 48.

Conference Proceedings

- Simões, P.J.A., Fletcher, L., Labrosse, N. & **Kerr, G.S.** (2016), *Observations and Modelling of Helium Lines in Solar Flares*. In: 'Ground-based Solar Observations in the Space Instrumentation Era', Coimbra Portugal. ASP Conf. Series, Vol. 504.

White Papers (leading role)

- Druett, M., **Kerr, G.S**, *et al* (2025), *Understanding Solar Flares and Energetic Events: Open questions, observational requirements, and instrumental needs over the coming decade*. White Paper submitted to UKSA's Space Frontiers 2035.
- **Kerr, G.S.**, *et al* (2022), *Requirements for Progress in Understanding Solar Flare Energy Transport: The Impulsive Phase*. White Paper submitted to the NASEM Solar and Space Physics Decadal Survey 2024-2033.
- **Kerr, G.S.**, *et al* (2022), *Requirements for Progress in Understanding Solar Flare Energy Transport: The Gradual Phase*. White Paper submitted to the NASEM Solar and Space Science Decadal Survey 2024-2033.
- Allred, J.C., **Kerr, G.S.**, *et al* (2022), *Next-Generation Comprehensive Data-Driven Models of Solar Eruptive Events*. White Paper submitted to the NASEM Solar and Space Physics Decadal Survey 2024-2033.
- **Kerr, G.S.**, *et al* (2020), *Solar Flare Energy Partitioning and Transport – the Impulsive Phase*. White Paper submitted to the Heliophysics 2050 Workshop https://doi.org/10.5281/zenodo.4036955
- **Kerr, G.S.**, *et al* (2020), *Solar Flare Energy Partitioning and Transport – the Gradual Phase*. White Paper submitted to the Heliophysics 2050 Workshop https://doi.org/10.5281/zenodo.4036973

Selected Invited Presentations

Jeremiah Horrocks Institute, University of Lancashire	*Upcoming – Dec 2026, Preston, UK*
Hinode-19 / Solar-C Science Meeting	*August 2026, Japan*
European Astronomical Society, EST Special Session	*July 2026, Switzerland*
Mullard Space Science Lab Seminar	*June 2026, Dorking, UK*
IAU Early Career Discourse Series	*May 2026, Virtual*
Naval Research Laboratory (Astrophysics group) Colloquium	*March 2025, USA*
AGU Fall Meeting	*Dec 2024, Washington D.C., USA*
AGU Fall Meeting	*Dec 2023, San Francisco, USA*
UMass Lowell Colloquium	*April 2023, USA (virtual)*
ROCMI Workshop	*Feb 2023, Svalbard, Norway*
SPHERE Workshop (session facilitator)	*Jun 2022, Boulder Co, USA*
American Physical Society, Mid-Atlantic Section annual meeting	*Dec 2020, USA (virtual)*
University of St. Andrews Seminar	*April 2020, St. Andrews, UK (virtual)*
University of Glasgow Seminar	*April 2020, Glasgow, UK (virtual)*
New Jersey Institute of Technology Seminar	*March 2020, New Jersey, USA*
High Altitude Observatory Colloquium	*Feb 2020, Boulder Co, USA*
IRIS-10 Science Meeting	*Nov 2019, Bangalore, India*
AGU Fall Meeting	*Dec 2017, New Orleans, USA*
Naval Research Laboratory (Solar Physics group) Seminar	*June 2017, Washington D.C., USA*
IRIS-8 / Hinode-11 Joint Science Meeting	*May 2017, Seattle Wa, USA*
RHESSI Group Seminar (GSFC)	*May 2017, Washington D.C., USA*
Mullard Space Science Lab Seminar	*April 2014, Dorking, UK*