Paul James Wright

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INFORMATION University of Glasgow Web: www.pauljwright.co.uk
Glasgow, G12 8QQ Email: paul.wright@glasgow.ac.uk
United Kingdom Publication List: SAO/NASA ADS

RESEARCH INTERESTS My interests range from stellar to solar physics; my main interests lie in the heating of the solar atmosphere, including active regions and loops. I have expertise in analysis of data from SDO/AIA, Hinode/XRT, Hinode/EIS, and NuSTAR.

EDUCATION University of Glasgow, Glasgow, UK

2014 – present

Ph.D. Solar Physics

Thesis Topic: *The Energetics of Small Flares and Brightenings* Advisers: Dr Iain G. Hannah, Dr Alexander MacKinnon

University of Southampton, Southampton, UK

2010 - 2014

MPhys Astrophysics with a year abroad

First class honours (1:1) Adviser: Professor Malcolm Coe

Harvard University/Harvard-Smithsonian CfA, Cambridge, MA

2013 - 2014

MPhys Astrophysics with a year abroad

Thesis Topic: Superflare Rates of Solar-Like Stars Advisers: Dr Steven H. Saar, Dr Jeremy J. Drake

ACADEMIC APPOINTMENTS

Post-Graduate Research Assistant, University of Glasgow

2014 - 2017

SUPA School of Physics and Astronomy

Project: The Energetics of Small Flares and Brightenings

- Analysed observations of the Sun with *NuSTAR*, a telescope not designed for heliophysics. These observations are the most sensitive of their kind and have resulted in numerous, wide-ranging highly-collaborative peer-reviewed publications.
- Analysed non-flaring coronal time-series in order to extract signatures of the coronal heating mechanism. Techniques included Fourier analysis, Wavelet analysis, and Local Intermittency Measure.
- Studied the temperature distribution of the solar atmosphere through the recovery of an ill-posed inverse problem using techniques such as Tikhonov Regularization, Markov-Chain Monte Carlo, and Sparsity.

Collaborators: Iain Hannah, Alec MacKinnon, Hugh Hudson

Visiting Researcher, NASA Goddard Space Flight Center (GSFC)

2016

Heliophysics Science Division

• Worked on the possibility of implementing DEM maps in the Helioviewer project, and their usefulness as an input for various established analysis techniques.

Collaborators: Nicholeen Viall, Jack Ireland

Research Scholar, Harvard-Smithsonian Center for Astrophysics (CfA) 2013 – 2014 Solar and Stellar X-Ray Group

• Designed and implemented a sophisticated stellar flare detection routine for long-cadence (30 mins) *Kepler* data. This work has had coverage by Science, and The Smithsonian Magazine.

Collaborators: Steven Saar, Søren Meibom, Jeremy Drake, Vinay Kashyap

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| REFEREED JOURNAL PUBLICATIONS | [1] Marsh, A. J., Smith, D. M., Glesener, L. et al 2017. First NuSTAR Limits on Quiet Sun Hard X-Ray Transient Events, ApJ (in revision) | | |
|--|---|------|--|
| | [2] Wang, J., Simões, P. J. A., Jeffrey, N. L. S. et al 2017. Observations of Reconnection Flows in a Flare on The Solar Disk, ApJL, 847, L1 | | |
| | [3] Wright, P. J. , Hannah, I. G., Grefenstette, B. W., et al 2017. Microflare Heating of a Solar Active Region Observed with NuSTAR, Hinode/XRT, and SDO/AIA, ApJ, 844, 132 | | |
| | [4] Kuhar, M., Krucker, S., Hannah, I. G., et al 2017. Evidence of Significal Input in the Late Phase of a Solar Flare from NuSTAR X-ray Observed 835, 6 | | |
| FIRST AUTHOR PUBLICATIONS IN PREPERATION | [5] Wright, P. J., Hannah, I. G., Viall, N. M., et al | | |
| | [6] Wright, P. J., Saar, S. H., Meibom, S., et al | | |
| | Invited Oral Presentations | | |
| CONFERENCES, WORKSHOPS, & | ISSI Team Meeting: Coronal Nanoflares, Bern, CH | 2016 | |
| SCHOOLS | Harvard-Smithsonian Center for Astrophysics, Cambridge, MA, USA | 2014 | |
| SCHOOLS | | 2011 | |
| | Oral/ePoster Presentations | | |
| | Solar Physics Division Meeting (SPD/AAS), Portland, OR, USA | 2017 | |
| | Coronal Loops Workshop VIII, Palermo, Sicily, IT | 2017 | |
| | Living with a Star (SDO/LWS) Workshop, Burlington, VT, USA | 2016 | |
| | Hinode 10, Nagoya, JP | 2016 | |
| | National Astronomy Meeting 2016, Nottingham, UK | 2016 | |
| | Hinode 9, Belfast, UK | 2015 | |
| | Glasgow-Cambridge Flare Workshop, Glasgow, UK | 2015 | |
| | Poster Presentations | | |
| | European Solar Physics Meeting (ESPM), Budapest, HU | 2017 | |
| | Solar Physics Division Meeting (SPD/AAS), Portland, OR, USA | 2017 | |
| | Living with a Star (SDO/LWS) Workshop, Burlington, VT, USA | 2016 | |
| | Coronal Loops Workshop VII, Cambridge, UK | 2015 | |
| | NAM 2015, Llandudno, UK | 2015 | |
| | 223rd AAS Meeting, National Harbor, MD, USA | 2014 | |
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| | Schools Attended | 2015 | |
| | CESRA Radio Summer School 2015, Glasgow, UK | 2015 | |
| | STFC Advanced Summer School in Solar Physics, Dundee, UK | 2014 | |
| | Conferences/Workshops Attended | | |
| | NuSTAR Solar Workshop (remote participation), Berkeley, CA, USA | 2017 | |
| | SUPA Cormack Astronomy Meeting, Edinburgh, UK | 2015 | |
| | RAS Discussion Meeting: Results from IRIS, London, UK | 2015 | |
| | SUPA Cormack Astronomy Meeting, Edinburgh, UK | 2014 | |
| | 1st Space Glasgow Research Conference, Glasgow, UK | 2014 | |
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| AWARDS AND | SUPA School of Physics and Astronomy, University of Glasgow | | |
| GRANTS TOTAL: £7000 | Solar Physics Division Meeting (SPD/AAS) Student Poster Award | 2017 | |
| | Solar Physics Division Meeting (SPD/AAS) Studentship Award | 2017 | |
| | Coronal Loops Workshop VIII Travel Award | 2017 | |
| | National Astronomical Observatory of Japan Travel Award | 2016 | |
| | Hinode 9 Travel Award | 2015 | |
| | European Space Agency/Cambridge Philosophical Society Travel Award | 2015 | |
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| | School of Physics and Astronomy, University of Southampton Research Scholarship Summer Studentship Grant | 2013 2013 | | |
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| COMMUNITY INVOLVEMENT | Nature Communications, Reviewer CESRA Radio Summer School, Volunteer Organiser | 2017 – present 2015 | | |
| SCIENTIFIC OUTREACH | Glasgow Science Centre, Demonstrator British Science Week, Demonstrator Institute of Physics: Women and Girls in Science, Demonstrator Scottish Television (STV), Guest Presenter World Wide Telescope, Ambassador BBC Stargazing Live, Demonstrator So'ton Astrodome, Demonstrator BBC Bang Goes The Theory Roadshow, Demonstrator | 2016 2016 2016 2015 2013 – 2014 2013 2012 2012 | | |
| TEACHING | University of Glasgow Astronomy 1 Tutorial Demonstrator Supervised students, and marked first year astronomy problem sets | 2016 - 2017 s. | | |
| | Physics Pre-University Summer School Engaged students in various physics experiments and marked assignments. | | | |
| | Astronomy 3/4 (Honours) Laboratory Demonstrator Demonstrated, supervised, and marked a number of final-year researing topics such as asteroid light curves, and solar limb darkening | | | |
| Memberships | NuSTAR Heliophysics Working Group, Member International Space Science Institute (ISSI), Young Scientist Member Member of Paola Testa's ISSI Team: New Diagnostics of Particle Acce Coronal Nanoflares from Chromospheric Observations and Modeling Royal Astronomical Society, RAS Fellow | 2015 – present 2015 – present eleration in Solar 2014 – present | | |
| More Information | More information and auxiliary documents can be found at http://www.p on ResearchGate, and GitHub. | auljwright.co.uk, | | |