

Paul James Wright

CONTACT INFORMATION	Rm 614, Kelvin Building University of Glasgow Glasgow, G12 8QQ United Kingdom	Work: +44 (0)14133 08855 Web: www.pauljwright.co.uk Email: paul.wright@glasgow.ac.uk 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 <i>SDO/AIA</i> , <i>Hinode/EIS</i> , <i>Hinode/XRT</i> , and <i>NuSTAR</i> Solar observations.	
EDUCATION	University of Glasgow , Glasgow, UK 2014 – present (expected 2018) Ph.D. Solar Physics Thesis Topic: <i>The Energetics of Small Flares and Brightenings</i> 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: <i>Superflare Rates of Solar-Like Stars</i> Advisers: Dr Steven H. Saar, Dr Jeremy J. Drake	
CURRENT ACADEMIC APPOINTMENT	Affiliate Staff Member , University of Glasgow SUPA School of Physics and Astronomy <ul style="list-style-type: none">● Investigating the non-flaring coronal time-series data for signs of the coronal heating mechanism.	2017 – present
PREVIOUS ACADEMIC APPOINTMENTS	Post-Graduate Research Assistant , University of Glasgow SUPA School of Physics and Astronomy Project: <i>The Energetics of Small Flares and Brightenings</i> <ul style="list-style-type: none">● Analysed observations of the Sun with <i>NuSTAR</i>, a telescope not designed for helio-physics. 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.● This work had coverage by news outlets including The BBC... Collaborators: <i>Iain Hannah, Alexander MacKinnon</i> Visiting Researcher , NASA Goddard Space Flight Center (GSFC) Heliophysics Science Division <ul style="list-style-type: none">● Worked on the possibility of implementing DEM maps in the Heliviewer project, and their usefulness as an input for various established analysis techniques. Collaborators: <i>Nicholeen Viall, Jack Ireland</i> Research Scholar , Harvard-Smithsonian Center for Astrophysics (CfA) 2013 – 2014 Solar and Stellar X-Ray Group <ul style="list-style-type: none">● Designed and implemented a sophisticated stellar flare detection routine for long-cadence (30 mins) <i>Kepler</i> data.● This work has had coverage by Science, and The Smithsonian Magazine. Collaborators: <i>Steven Saar, Søren Meibom, Jeremy Drake, Vinay Kashyap</i>	2014 – 2017

Paul James Wright

REFEREED JOURNAL PUBLICATIONS	[1] Marsh, A. J., Smith, D. M., Glesener, L. <i>et al</i> 2017. <i>First NuSTAR Limits on Quiet Sun Hard X-Ray Transient Events</i> , <i>ApJ</i> (in revision)	
	[2] Wang, J., Simões, P. J. A., Jeffrey, N. L. S. <i>et al</i> 2017. <i>Observations of Reconnection Flows in a Flare on The Solar Disk</i> , <i>ApJL</i> , 847, L1	
	[3] Wright, P. J. , Hannah, I. G., Grefenstette, B. W., <i>et al</i> 2017. <i>Microflare Heating of a Solar Active Region Observed with NuSTAR, Hinode/XRT, and SDO/AIA</i> , <i>ApJ</i> , 844, 132	
	[4] Kuhar, M., Krucker, S., Hannah, I. G., <i>et al</i> 2017. <i>Evidence of Significant Energy Input in the Late Phase of a Solar Flare from NuSTAR X-ray Observations</i> , <i>ApJ</i> , 835, 6	
FIRST AUTHOR PUBLICATIONS IN PREPERATION	[5] Wright, P. J. , Hannah, I. G., Viall, N. M., <i>et al</i>	
	[6] Wright, P. J. , Saar, S. H., Meibom, S., <i>et al</i>	
CONFERENCES, WORKSHOPS, & SCHOOLS	Invited Oral Presentations	
	<i>ISSI Team Meeting: Coronal Nanoflares</i> , Bern, CH	2016
	<i>Harvard-Smithsonian Center for Astrophysics</i> , Cambridge, MA, USA	2014
	Oral/ePoster Presentations	
	<i>Solar Physics Division Meeting (SPD/AAS)</i> , Portland, OR, USA	2017
	<i>Coronal Loops Workshop VIII</i> , Palermo, Sicily, IT	2017
	<i>Living with a Star (SDO/LWS) Workshop</i> , Burlington, VT, USA	2016
	<i>Hinode 10</i> , Nagoya, JP	2016
	<i>National Astronomy Meeting 2016</i> , Nottingham, UK	2016
	<i>Hinode 9</i> , Belfast, UK	2015
	<i>Glasgow-Cambridge Flare Workshop</i> , Glasgow, UK	2015
	Poster Presentations	
	<i>European Solar Physics Meeting (ESPM)</i> , Budapest, HU	2017
	<i>Solar Physics Division Meeting (SPD/AAS)</i> , Portland, OR, USA	2017
	<i>Living with a Star (SDO/LWS) Workshop</i> , Burlington, VT, USA	2016
	<i>Coronal Loops Workshop VII</i> , Cambridge, UK	2015
	<i>NAM 2015</i> , Llandudno, UK	2015
	<i>223rd AAS Meeting</i> , National Harbor, MD, USA	2014
	Schools Attended	
	<i>CESRA Radio Summer School 2015</i> , Glasgow, UK	2015
	<i>STFC Advanced Summer School in Solar Physics</i> , Dundee, UK	2014
	Conferences/Workshops Attended	
	<i>NuSTAR Heliophysics Workshop (remote participation)</i> , Berkeley, CA, USA	2017
	<i>SUPA Cormack Astronomy Meeting</i> , Edinburgh, UK	2015
	<i>RAS Discussion Meeting: Results from IRIS</i> , London, UK	2015
	<i>SUPA Cormack Astronomy Meeting</i> , Edinburgh, UK	2014
	<i>1st Space Glasgow Research Conference</i> , Glasgow, UK	2014
AWARDS AND GRANTS TOTAL: £7000	SUPA School of Physics and Astronomy, University of Glasgow	
	<i>Solar Physics Division Meeting (SPD/AAS) Student Poster Award</i>	2017
	<i>Solar Physics Division Meeting (SPD/AAS) Studentship Award</i>	2017
	<i>Coronal Loops Workshop VIII Travel Award</i>	2017
	<i>National Astronomical Observatory of Japan Travel Award</i>	2016
	<i>Hinode 9 Travel Award</i>	2015
	<i>European Space Agency/Cambridge Philosophical Society Travel Award</i>	2015

Paul James Wright

AWARDS AND GRANTS (CONT.)	School of Physics and Astronomy, University of Southampton	
	Research Scholarship	2013
	Summer Studentship Grant	2013
TEACHING	University of Glasgow	
	Astronomy 1 Tutorial Demonstrator	2016 - 2017
	Supervised students, and marked first year astronomy problem sets.	
	Physics Pre-University Summer School	2015
	Engaged students in various physics experiments and marked assignments.	
MEMBERSHIPS	Astronomy 3/4 (Honours) Laboratory Demonstrator	2015 - 2016
	Demonstrated, supervised, and marked a number of final-year research projects covering topics such as asteroid light curves, and solar limb darkening.	
	NuSTAR Heliophysics Working Group , Member	2015 – present
	International Space Science Institute (ISSI) , Young Scientist Member	2015 – present
	Member of Paola Testa's ISSI Team: <i>New Diagnostics of Particle Acceleration in Solar Coronal Nanoflares from Chromospheric Observations and Modeling</i>	
COMMUNITY INVOLVEMENT	Royal Astronomical Society , RAS Fellow	2014 – present
	Nature Communications , Reviewer	2017 – present
	CESRA Radio Summer School , Volunteer Organiser	2015
SCIENTIFIC OUTREACH	Glasgow Science Centre , Demonstrator	2016
	British Science Week , Demonstrator	2016
	Institute of Physics: Women and Girls in Science , Demonstrator	2016
	Scottish Television (STV) , Guest Presenter	2015
	World Wide Telescope , Ambassador	2013 – 2014
	BBC Stargazing Live , Demonstrator	2013
	So'ton Astrodome , Demonstrator	2012
	BBC Bang Goes The Theory Roadshow , Demonstrator	2012
	UK Solar Physics (UKSP) Nuggets , concise, easy-to-read science articles	
	84. The first NuSTAR microflare	2017
PERSONAL PROJECTS	Hinode/XRT Picture of the Week (XPOW)	
	The First Microflare Observations with Hinode/XRT & NuSTAR	2017
	ColourBlind , A repository for colour-blind-friendly colour tables.	Citations: 1
PROFESSIONAL DEVELOPMENT	Coursera, Inc. (MOOC Platform)	
	Using Coursera.org, a massive open online course (MOOC) platform, to take specializations (sets of multiple courses) offered by accredited universities to further develop skills and understanding in a wide range of computer science applications.	
	Data Science , Johns Hopkins University	2017 – present
	Nine-course (plus capstone) introduction to data science.	
	Mastering Software Development in R , Johns Hopkins University	2017 – present
	Four-course (plus capstone) specialization providing rigorous training in the R language.	
	Statistics with R , Duke University	2017 – present
	Four-course (plus capstone) specialization providing further training in the R language with emphasis on statistics.	

Paul James Wright

PROFESSIONAL DEVELOPMENT (CONT.)	Big Data , UC San Diego	2017 – present
	Five-course (plus capstone) introduction to big data using Hadoop with MapReduce, Spark, Pig and Hive.	
	Machine Learning , University of Washington	2017 – present
	Three-course (plus capstone) introduction to Machine Learning.	
	Graphic Design , CalArts	2017 – present
	Four-course (plus capstone) introduction the fundamental skills required to make sophisticated graphic design.	
	edx, Inc. (MOOC Platform)	
	Introduction to Computer Science (CS50x) , Harvard University	2017 – present
	An introduction to the intellectual enterprises of computer science and the art of programming including languages such as C, and SQL.	
TECHNICAL SKILLS:	<i>Computing:</i> C, Python, R (caret, ggplot2, knitr), SQL, CRAN, IDL, \LaTeX , git, GitHub, Hadoop (MapReduce, Spark, Pig, Hive), Linux/Unix, Mac OSX, Microsoft Windows, Bash, Microsoft Office, Adobe Creative Cloud, Keynote, Wordpress, Shiny, GoogleVis, and Plotly, HTML, CSS, Javascript	
	<i>General:</i> Data Analysis, Data Visualization, Interdisciplinary Collaboration, Public Speaking, Statistics, Teaching, Writing (Technical & Lay)	
MORE INFORMATION	More information and auxiliary documents can be found at http://www.pauljwright.co.uk , on ResearchGate, and GitHub.	