

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 the analysis of spectroscopic and narrow-band Extreme Ultra-Violet (EUV) and X-ray data from the <i>Solar Dynamics Observatory</i> and <i>Hinode</i> , in addition to the hard X-ray (HXR) observations from <i>NuSTAR</i> 's heliophysics campaign. Furthermore, I am currently investigating the modelling of coronal loop light-curves using the EBTEL (Enthalpy-Based Thermal Evolution of Loops) hydrodynamics code with particular interest in the weak bremsstrahlung components, and the relevance for future soft to hard X-ray instruments and missions.	
EDUCATION	University of Glasgow , Glasgow, UK Ph.D. Solar Physics Thesis Topic: <i>The Energetics of Small Flares and Brightenings</i> Advisers: Dr Iain G. Hannah, Dr Alexander MacKinnon	2014 – present (expected early 2018)
	University of Southampton , Southampton, UK MPhys Astrophysics with a year abroad First-class honours (1:1) Adviser: Professor Malcolm Coe	2010 – 2014
	Harvard University/Harvard-Smithsonian CfA , Cambridge, MA, USA 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	2013 – 2014
CURRENT ACADEMIC APPOINTMENT	Affiliate Staff Member , University of Glasgow SUPA School of Physics and Astronomy	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 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 pursuit of signatures of the coronal heating mechanism. Techniques included time-lag analysis (cross-correlation), Fourier analysis, wavelet analysis, and local intermittency measure (LIM). Studied the temperature distribution of the solar atmosphere through the recovery of an ill-posed inverse problem (the differential emission measure, DEM) using techniques such as Tikhonov regularisation, Markov chain Monte Carlo, and sparsity. The press-release image produced from the <i>NuSTAR</i> observations obtained for Wright et al. 2017 was published by numerous news outlets, and is one of the five iconic images from <i>NuSTAR</i>'s first five years in space. Collaborators: Dr Iain Hannah, Dr Alexander MacKinnon	2014 – 2017
	Visiting Researcher , NASA Goddard Space Flight Center (GSFC) Heliophysics Science Division <ul style="list-style-type: none"> Explored the possibility of implementing DEM maps in the Heliviewer project, and their usefulness as an input for various established analysis techniques. Collaborators: Dr Nicholeen Viall, Dr Jack Ireland	2016
	Research Scholar , Harvard-Smithsonian Center for Astrophysics (CfA) 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 obtained from a proprietary set of spectroscopically verified solar-type stars in three open clusters. A preliminary version of this work had coverage by Science, and The Smithsonian Magazine. Collaborators: Dr Steven Saar, Dr Søren Meibom, Dr Jeremy Drake, Dr Vinay Kashyap	2013 – 2014

Paul James Wright

PREVIOUS ACADEMIC APPOINTMENTS (CONT.)	Summer Research Intern , University of Southampton Astronomy Group <ul style="list-style-type: none">Investigated the presence of double blue straggler sequences in globular clusters using Hubble Space Telescope (WFC3) data. Collaborators: <i>Dr Andrea Dieball</i>	2013
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> , 849, 131 [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 <i>Harvard-Smithsonian Center for Astrophysics</i> , Cambridge, MA, USA	2016 2014
	Oral/ePoster Presentations <i>Solar Physics Division Meeting (SPD/AAS)</i> , Portland, OR, USA <i>Coronal Loops Workshop VIII</i> , Palermo, Sicily, IT <i>Living with a Star (SDO/LWS) Workshop</i> , Burlington, VT, USA <i>Hinode 10</i> , Nagoya, JP <i>National Astronomy Meeting 2016</i> , Nottingham, UK <i>Hinode 9</i> , Belfast, UK <i>Glasgow-Cambridge Flare Workshop</i> , Glasgow, UK	2017 2017 2016 2016 2016 2015 2015
	Poster Presentations <i>European Solar Physics Meeting (ESPM)</i> , Budapest, HU <i>Solar Physics Division Meeting (SPD/AAS)</i> , Portland, OR, USA <i>Living with a Star (SDO/LWS) Workshop</i> , Burlington, VT, USA <i>Coronal Loops Workshop VII</i> , Cambridge, UK <i>NAM 2015</i> , Llandudno, UK <i>223rd AAS Meeting</i> , National Harbor, MD, USA	2017 2017 2016 2015 2015 2014
	Schools Attended <i>CESRA Radio Summer School 2015</i> , Glasgow, UK <i>STFC Advanced Summer School in Solar Physics</i> , Dundee, UK	2015 2014
	Conferences/Workshops Attended <i>NuSTAR Heliophysics Workshop (remote participation)</i> , Berkeley, CA, USA <i>SUPA Cormack Astronomy Meeting</i> , Edinburgh, UK <i>RAS Discussion Meeting: Results from IRIS</i> , London, UK <i>SUPA Cormack Astronomy Meeting</i> , Edinburgh, UK <i>1st Space Glasgow Research Conference</i> , Glasgow, UK	2017 2015 2015 2014 2014
AWARDS AND GRANTS TOTAL: £7000	University of Glasgow <i>Solar Physics Division Meeting (SPD/AAS) Student Poster Award</i> <i>Solar Physics Division Meeting (SPD/AAS) Studentship Award</i> <i>Coronal Loops Workshop VIII Travel Award</i> <i>National Astronomical Observatory of Japan Travel Award</i> <i>Hinode 9 Travel Award</i> <i>European Space Agency/Cambridge Philosophical Society Travel Award</i> University of Southampton <i>Research Scholarship</i> <i>Summer Studentship Grant</i>	2017 2017 2017 2016 2015 2015 2013 2013

TEACHING	Coursera Inc.	
	“Data Scientists Toolbox” Community Mentor	2017 – present
	An invited mentor of a course in the Data Science specialization offered by Johns Hopkins University.	
	University of Glasgow	
	Astronomy 1 Tutorial Demonstrator	2016 - 2017
MEMBERSHIPS	Supervised students, and marked first-year astronomy problem sets.	
	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.	
	Physics Pre-University Summer School	2015
	Taught at a pre-university school for students entering first year.	
MEMBERSHIPS	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>	
	Royal Astronomical Society , RAS Fellow	2014 – present
COMMUNITY INVOLVEMENT	Nature Communications , Reviewer	2017 – present
	Glasgow Astronomy & Astrophysics Group Meeting , Organiser	2017
	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 <i>NuSTAR</i> microflare	2017
	Hinode/XRT Picture of the Week (XPOW)	
	The First Microflare Observations with <i>Hinode/XRT</i> & <i>NuSTAR</i>	2017
PERSONAL PROJECTS	ColourBlind , A repository for colour-blind-friendly colour tables.	
PROFESSIONAL DEVELOPMENT	Coursera, Inc. (MOOC Platform)	
	Using Coursera.org, a massive open online course (MOOC) platform, to take specializations (a series of related courses and a final capstone project) offered by accredited universities to further develop skills and understanding in a wide range of computer science topics.	
	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 R.	
	Statistics with R , Duke University	2017 – present
	Four-course (plus capstone) specialization providing further training in R, with emphasis on statistics.	
TECHNICAL SKILLS:	<i>Computing</i> : Python, R, IDL, \LaTeX , IRAF, git, GitHub, Linux/Unix, Mac OSX, Microsoft Windows, Bash, Microsoft Office, Adobe Creative Cloud	
	<i>General</i> : Data Analysis, Data Visualization, Interdisciplinary Collaboration, Public Speaking, Statistics, Teaching, Writing (Technical & Lay)	