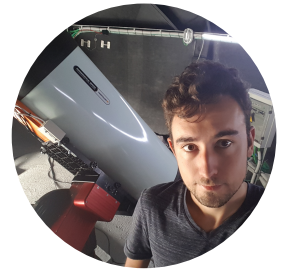


JAMES BLAKE

Postgraduate Student (Research)

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🐦 @jblake_95 🌐 in/jamesblake95 🏠 github.com/jblake95



EXPERIENCE

Postgraduate Student (Research)

Department of Physics, University of Warwick

📅 September 2017 – Ongoing 📍 Coventry, United Kingdom

- **Supervisor:** Prof. Don Pollacco (Astronomy)
- **Funding:** Science and Technology Facilities Council (STFC)
- **Project outline:** *The debris population at geostationary orbit and the fate of aged spacecraft* | Development of a Python-based reduction and detection pipeline for use in multiple survey campaigns, searching for artificial debris at geostationary altitudes | Commissioning of a 36 cm Rowe-Ackermann Schmidt Astrograph, a debris-monitoring prototype instrument | Deep observations of the geostationary belt with the Isaac Newton Telescope, situated at the Roque de los Muchachos Observatory on the Canary Island of La Palma.

See [department webpage](#) for further detail.

Summer Research Intern

Department of Physics, University of Warwick

📅 2015, 2016 & 2017 📍 Coventry, United Kingdom

Completed three 10-week summer projects as part of the Undergraduate Research Support Scheme (URSS):

- 2015 | **Supervisor:** Prof. Don Pollacco (Astronomy) | **Project:** *Attempted detection of weather patterns on HAT-P-7b*
- 2016 | **Supervisor:** Dr. David Armstrong (Astronomy) | **Project:** *Modelling the circumbinary candidate KOI-1741*
- 2017 | **Supervisors:** Dr. David Armstrong (Astronomy) & Dr. Hendrik Schäfer (Life Sciences) | **Project:** *Modelling panspermia in the TRAPPIST-1 system*

Extensive use of Python for data analysis and/or modelling.

Outreach and Recruitment Ambassador

SROAS Office, University of Warwick

📅 March 2014 – Ongoing 📍 Coventry, United Kingdom

Group leader/ night staff on 10 residentials for year 9–12 students | Mentor for Sutton Scholars Programme | Tutor for GCSE/ A Level revision bootcamps | Delivered sessions on university life, careers and student finance at schools for year 7–12 students | Excellent customer service skills developed from campus tours and open days | Approachable telephone manner from student calling | Involved with Brilliant Club, UniTracks and Realising Opportunities initiatives, promoting widening participation at Russell Group universities | Event management for audiences of 200+

Work Experience Placement

Laser 2000 (UK) Ltd, Huntingdon

📅 August – September 2012 📍 Cambridgeshire, United Kingdom

Trained alongside two physics graduates | Underlying theory and sale of photonic equipment | Entrusted with digitization of legal documents | Research project investigating the effect of temperature on a laser beam

CONTACT

Department of Physics
University of Warwick
Gibbet Hill Road
Coventry
CV4 7AL

RESEARCH PROFILE

I am a second-year postgraduate research student in the Astronomy Group at Warwick University. My work is primarily focused on the detection and monitoring of artificial space debris.

I observe the night sky with optical telescopes and use this data to get accurate positions and brightnesses for satellites and debris.

Alongside this, I have a keen interest in the fields of exoplanets and astrobiology.

EDUCATION

Ph.D. in Space Science

University of Warwick

📅 September 2017 – Ongoing

Supervisor: Prof. Don Pollacco (Astronomy)

Project: *The debris population at geostationary orbit and the fate of aged spacecraft* (see Experience)

M.Phys. in Physics

University of Warwick

📅 Sept 2013 – June 2017

Grade: First Class Honours

Supervisor: Dr. Jeremy Sloan (Microscopy)

Project: *Characterising low-dimensional 'extreme nanowires' of phase change materials in single-walled carbon nanotubes*

A Levels & GCSEs

Wrenn Academy & Sixth Form

📅 September 2010 – June 2013

A2: Maths (A*), History (A*), Physics (A), Chemistry (A)

AS: Above (AAAA), Further Maths (A), Philosophy (B)

GCSE: 9(A*) incl. Maths, Physics and English Language, 5(A) incl. Astronomy

SCIENTIFIC PRESENTATIONS

Conference talks

2018 | “Hitching a ride on asteroids - are we the aliens?”
ICUR, University of Warwick, UK linked to Monash University, Australia

2018 | “Panspermia: are we the aliens?”
BCUR, University of Sheffield, UK

2016 | “Modelling the circumbinary candidate KOI-1741”
ICUR, University of Warwick, UK linked to University of Leeds, UK

Invited talks & seminars

2018 | “The debris population at GEO and the fate of aged spacecraft”
Warwick AstroSoc Research Symposium, University of Warwick, UK

2017 | “Extrasolar panspermia: are we the aliens?”
Stratford Astronomical Society, Alderminster, UK – [article](#)

2016 | “Circumbinary planets: a closer look at Tatooine”
Warwick AstroSoc Research Symposium, University of Warwick, UK

Poster presentations

2018 | “Modelling panspermia in the TRAPPIST-1 system”
Posters in Parliament, Palace of Westminster, UK

2016 | “Modelling the circumbinary candidate KOI-1741”
URSS Showcase, University of Warwick, UK

2015 | “Searching for weather patterns on the hot giant HAT-P-7 b”
ICUR, University of Warwick, UK




PUBLICATIONS LIST

Co-authored refereed journal articles

[Dynamical and biological panspermia constraints within multi-planet exosystems](#)
Veras, D., Armstrong, D. J., Blake, J. A., Gutiérrez-Marcos, J. F., Jackson, A. P. & Schäfer, H., *Astrobiology*, 18, 9 (2018)

[Variability in the atmosphere of the hot giant planet HAT-P-7 b](#)
Armstrong, D. J., de Mooij, E., Barstow, J., Osborn, H. P., Blake, J., & Fereshteh Saniee, N., *Nature Astronomy*, 1, 4 (2016)

AWARDS

-  **Posters in Parliament Winner**
2018 | Awarded by Prof. Wyn Morgan (University of Sheffield) for most effective [poster](#) at the British Conference for Undergraduate Research – [article](#)
 -  **Significant Contribution**
2016 | Awarded by Delyth Chambers, Director of Student Recruitment, Outreach and Admissions
 -  **Best Examination Performance**
2011 | Awarded the Wrenn School Shield for Best Examination Performance at GCSE level
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ACHIEVEMENTS

- ✓ **Warwick Prospectus**
2016 | Chosen to appear on the front covers of the Warwick prospectus and 50th anniversary rebranding document
 - ✓ **Open University Course**
2012 | Completed a 10-credit Open University course entitled *Galaxies, Stars and Planets*
-

COMPUTING

- **Operating systems**
Windows, Linux
- **Programming languages**
Python, C (basic), Bash (basic)
- **Main Python modules**
numpy, scipy, matplotlib, os, glob, argparse, astropy, astroquery, sep, datetime, rebound
- **Software packages**
IRAF, SAOImage DS9, AstrolImageJ, Astrometry.net, Origin Pro, LabView, CrystalMaker, TheSkyX (basic)
- **Version control**
Git
- **Word processing**
L^AT_EX, Microsoft Office, Libre Office

OBSERVING

La Palma, Canary Islands

- **Near Infra-red Transiting ExoplanetS (NITES):**
Remote observer | Follow-up photometry for exoplanet candidates | 25 nights
- **14'' Rowe-Ackermann Schmidt astrograph:**
Prototype debris monitor | 12 nights
- **Isaac Newton Telescope:**
Wide Field Camera | Faint debris | 8 nights

ACTIVITIES

Societies

2016 | **Warwick Astronomy Society** | *Co-founder, Vice President and Treasurer*
Organisation and coordination of events for 80+ members, such as workshops in observational astronomy, academic talks and research showcases. Responsible for finance and sponsorship.

2016 | **Warwick Physics Society** | *Academic Coordinator*
Upkeep of revision guides, organisation of revision lectures and coordination of weekly help sessions at the Physics Café.

Teaching

Outreach

Other

ADDITIONAL ROLES

- **Sales Assistant (Holiday Temp)**
Blue Inc, Wellingborough
December 2014 – June 2016
- **Tutor in Mathematics**
Barr’s Hill School, Coventry
December 2014 – April 2015
- **Fundraiser (St John Ambulance)**
Wesser Ltd, Carmarthenshire
July – August 2014

REFERENCES

Available on request.