DR JAMES A BLAKE

Research Fellow

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researchgate/James_Blake8 github/jblake95 webpage

EXPERIENCE

Research Fellow

Department of Physics, University of Warwick

May 2021 – Ongoing Coventry, UK

Fellowship: Science and Technology Facilities Council
(April 2024 – Ongoing)

- Developing a prototype neuromorphic instrument to provide early warning of satellites encroaching on astronomical fields
- Simulating SDA sensor architectures to identify capability gaps that can be filled by neuromorphic technology

Fellowship: Defence Science and Technology Laboratory
(May 2021 – April 2024)

- Leading the DebrisWatch Programme - campaigns to remotely observe the GSO region with the SkyMapper (Australia) and Bisei (Japan) telescopes
- Investigating sensor architecture designs in the context of furthering the UK's sovereign SDA capabilities

Secretary

Centre for Space Domain Awareness (CSDA)

July 2021 – Ongoing Coventry, UK

- Organisational/administrative tasks for the CSDA

Secretary and Advisory Board Member

Global Network On Sustainability In Space (GNOSIS)

November 2019 – Ongoing

- GNOSIS promotes collaboration across academia, industry and government to understand/solve problems relating to the sustainable use of space
- Organising/managing hybrid events for 50–400 registrants, including conferences, workshops and outreach activities
- Managing social media accounts and engagement with membership

Postgraduate Student (Research, full-time)

Department of Physics, University of Warwick

September 2017 – April 2021 Coventry, UK

Studentship: Science and Technology Facilities Council

- Developed Python analysis pipelines to detect artificial debris in images of the geosynchronous region
- Aided the commissioning and operation of a 36 cm robotic astrograph
- Led the DebrisWatch Programme, carrying out a survey of faint geosynchronous debris with the Isaac Newton Telescope, La Palma

Senior Outreach and Recruitment Ambassador

SROAS Office, University of Warwick

March 2014 – April 2021 Coventry UK

WRITE TO

F.07 Millburn House
Department of Physics
University of Warwick
Gibbet Hill Road
Coventry
CV4 7AL
UK

RESEARCH PROFILE

My research is focused on the use of optical tools and techniques for space domain awareness – to detect, monitor and characterise satellites and orbital debris.
Alongside this, I have a keen interest in the fields of exoplanetary science and astrobiology.

EDUCATION

Ph.D. in Space Domain Awareness

University of Warwick

September 2017 – April 2021

Supervisor: Don Pollacco (Astronomy)
Project: *Optical imaging of space debris in low and high altitude orbits*

M.Phys. in Physics

University of Warwick

September 2013 – June 2017

Grade: First Class Honours
Supervisor: Jeremy Sloan (Microscopy)
Project: *Characterising low-dimensional 'extreme nanowires' of phase change materials in single-walled carbon nanotubes*
Key topics: Astronomy, Computing, Quantum, Mechanics, Relativity, Electricity & Magnetism, Thermal, Geophysics, Particle, Materials

A Levels & GCSEs

Wrenn Academy & Sixth Form

September 2010 – June 2013

A2: Maths (A*), Hist. (A*), Phys. (A), Chem. (A)
AS: Above 4(A), Furth. Maths (A), Phil. (B)
GCSE: 9(A*) incl. Maths, Phys., Eng. Lang. & 5(A) incl. Astro.

- Mentor for the Sutton Scholars Programme (Sutton Trust)
- Tutor at GCSE and A-Level revision bootcamps
- Organised/delivered outreach sessions for year 7–13 students
- Group leader and night staff for 10+ summer schools and residentials
- Campus tours and open days – excellent customer service skills
- Student calling – approachable telephone manner
- Coordinated events for audiences of 200+ visitors
- Involved with the Brilliant Club, UniTracks and Realising Opportunities initiatives, promoting Widening Participation (WP) in local schools

Summer Research Intern

Department of Physics, University of Warwick

2015–17 Coventry, UK

Three 10-week summer projects through the Undergraduate Research Support Scheme – developed Python skills for data analysis and/or modelling

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

Work Experience Placement

Laser 2000 (UK) Ltd

August – September 2012 Huntingdon, UK

- Received training as a prospective Sales Engineer, covering the theory and commercialisation of photonic equipment
- Entrusted with digitization of company legal documents
- Research project investigating the effect of temperature on a laser beam

MEDIA

Press releases

2023 | **Make Way for Santa** – release
Festive take on CSDA activities tackling space debris, interview with LBC

2023 | **Our Fragile Space** – release
Coverage of Max Alexander's space debris exhibition, hosted by the CSDA at the Ruins of Coventry Cathedral, e.g., BBC

2022 | **First Hybrid GNOSIS Conference** – release
Coverage of conference and outreach activities, hosted at Warwick

2021 | **First-of-its-kind Research Centre in UK** – release
Launch of Centre for Space Domain Awareness, University of Warwick

2020 | **DebrisWatch I** – release
Survey of faint geosynchronous debris, reached hundreds of news outlets internationally, e.g., Phys.org, interviews with BBC Midlands Today, BBC Radio 5 Live, BBC CWR

2017 | **Winds of Rubies and Sapphires** – release
First weather report for a Hot Jupiter, reached several hundred news outlets, e.g., New Scientist – PBS – Space.com – The Conversation

Articles and blogs

2022 | **Striving for Precision SSA**
Blog post for GNOSIS – article

2022 | **Mopping up the mess of space**
Invited article for Challenge (environmental journal in Parliament)

2020 | **The sticky situation regarding space debris**
Invited feature for Warwick's Knowledge Centre – article

PROPOSALS/GRANTS

2023 | **Fellowship (STFC)**
Three-year postdoctoral fellowship applying neuromorphic camera technology to astronomy and space domain awareness (£366k, PI: Blake)

2023 | **Impact Accelerator Account (EPSRC)**
Leveraging neuromorphic camera technology for space domain awareness (£13k, PI: Blake)

2022 | **Impact Accelerator Account (EPSRC)**
Impact of solar storms and space weather on tracking capabilities of satellites and destructive debris (£10k, PI: Veras)

2020 | **Fellowship (Dstl)**
Five-year postdoctoral fellowship supporting collaborative projects between Dstl and University of Warwick (£1m, PI: Pollacco)

2020 | **Travel Grant (RAS)**
Travel and subsistence for the AMOS Conference, Maui, Hawaii (£3k, PI: Blake)

2019 | **Network+ (STFC)**
GNOSIS: Global Network On Sustainability In Space (£392k, PI: Pollacco, Mann)

2019 | **Travel Grant (Warwick Ventures)**
Travel and subsistence for the International Orbital Debris Conference, Texas (£5k, PI: Blake)

2019 | **Defence and Security Accelerator (DASA)**
DASA funding for conception and design of a system to monitor the geosynchronous region (£170k, PI: Pollacco)

2018 | **PhD Studentship (EOARD)**
Full-time PhD (Shrive), 3.5 years, applying machine learning techniques to space situational awareness (PI: Pollacco)

2018 | **Isaac Newton Telescope (ING)**
Awarded 8 nights of dark-grey time to observe the geosynchronous region (PI: Pollacco)

2017 | **PhD Studentship (STFC)**
Full-time PhD (Blake), 3.5 years, extended by 6 months due to COVID-19 (PI: Pollacco)

2015, 16, 17 | **Research Bursaries (URSS)**
Undergraduate Research Support Scheme bursaries for subsistence during summer research projects (£2k each, PI: Blake)

2019 | **Five reasons future space travel should explore asteroids**
Article for The Conversation on World Asteroid Day – article

2018 | **Pondering panspermia - how life could travel through space**
Invited feature for Warwick's Knowledge Centre – article

Other

2021–Ongoing | **Invited Comments**
SLIM lunar lander (2024) – comment
Peregrine lander failure (2024) – Mirror
First space debris penalty (2023) – Yahoo
Russian anti-satellite test (2021) – comment
Chinese rocket body re-entry (2021) – CNET

2023 | **Our Fragile Space**
Featured in Max Alexander's space debris photography exhibition

2022–23 | **AMOSTECH interviews**
Invited to feature in conference promotional videos

2021 | **Press Briefing** (NAM, Uni. Bath)
Invited as a panel member to discuss the impact of satellite constellations on astronomy and the space environment

2016 | **Warwick Prospectus**
Chosen to appear on the front covers of the Warwick prospectus and 50th anniversary rebranding document

ACTIVITIES

Teaching

2018–Ongoing | **Student supervision**
- Undergraduate Research Support Scheme (2024) – *Ben Vallow*
- B.Sc. project (2019) – *Omar Elamin & Toyaj Singh*
- M.Phys. project (2018) – *Jonathan Roberts & Aharan Manoharan*

2019–20 | **Python Workshop Demonstrator**
- Practical sessions for 1st and 2nd year undergraduate Python modules
- Worked with students one-to-one to help them think programmatically

2017–20 | **Laboratory Marker** – *Radio astronomy*
- Marking lab books for a 2nd year undergraduate laboratory experiment

2016–18 | **Revision lectures** – *1st & 2nd year B.Sc./M.Phys.*
- Delivered revision lectures for several undergraduate modules
- Topics included quantum mechanics, thermodynamics and stellar physics

Outreach

2023 | **Our Fragile Space – photography exhibition**

Organised and recruited student helpers for school visits to Max Alexander's space debris exhibition at the Coventry Cathedral Ruins

2022–23 | **Necropolis – educational video game**

Consultations with 4WardFutures supporting game design/development, funded via STFC IAA – raising awareness of the space debris problem

2022 | **Warwick Astronomy Knowledge Exchange (WAKE)**

Supporting visiting early-stage researchers from under-represented countries in astronomy – mentor for SDA-oriented participant from Sri Lanka

2018–2022 | **Planetarium**
- Assisting with Warwick's portable planetarium show
- Visiting local schools and presenting a range of immersive shows
- Engaging with children and promoting STEM subjects

2015–18 | **Summer schools and residentials**
- Pastoral care of year 9–12 students across 10+ residentials
- Organised activities, presented sessions and coordinated large-scale events

COMPUTING

github/jblake95 for projects

- **Operating systems**
  Linux, MacOS, Windows
- **Programming languages**
  Proficient: Python
  Basic: C
- **Key libraries**
  NumPy, SciPy, Matplotlib, astropy, astroquery, SEP, datetime, rebound, Skyfield, ellc, emcee, pandas, json, photutils
- **Software packages**
  IRAF, SAOImage DS9, AstroImageJ, Astrometry.net, Origin Pro, MASTER, DRAMA
- **Developer tools**
  Git, PyCharm, Geany, Spyder
- **Word processing**
  LaTeX, Microsoft Office, Libre Office
- **Common tasks**
  Data analysis, image reduction and processing, database querying, modelling and simulation

OBSERVING

Roque de los Muchachos, La Palma

- **Isaac Newton Telescope**
  Wide Field Camera – survey of faint geosynchronous debris – *8 nights*
- **14″ Rowe-Ackermann Schmidt astrograph**
  observations of geosynchronous satellites – *18 nights*
- **SuperWASP-North**
  Observations of low Earth orbit satellite passes – *19 nights*
- **Near Infra-red Transiting ExoplanetS (NITES)**
  Remote observer – follow-up photometry for exoplanet candidates – *74 nights*
- **Warwick CLASP**
  Remote scheduling – survey of geosynchronous region – *10 nights*

Siding Spring, Australia

- **SkyMapper**
  Remote scheduling – survey of geosynchronous region – *20 nights*

Bisei Spaceguard Centre, Japan

- **Bisei 1m**
  Remote scheduling – survey of geosynchronous region – *10 nights*

- Received extensive training in safeguarding

2014–17 | **School visits**

- Delivered sessions entitled *Future Pathways*, *What are my Options?*, *Fascilitating Independence*, and *Access to Higher Education*
- Engaged with year 7–12 students at 10+ Widening Participation schools across Coventry, Rugby, Leamington and Birmingham

2014–17 | **Widening Participation Ambassador**

- Represented Warwick at various HE fairs across the UK, including UCAS fairs in Bradford and London
- Visited local Widening Participation schools for parent information evenings, careers fairs and HE awareness sessions
- Coordinated Science Campus Days for year 5–6 pupils

Societies

2018–Ongoing | **Royal Astronomical Society** – *Fellow*

2016–17 | **Warwick Astronomy Society** – *Co-Founder, Vice President, Treasurer*

- Organised workshops and talks for 80+ members
- Responsible for finance and sponsorship

2016–17 | **Warwick Physics Society** – *Academic Coordinator*

- Maintained revision guides, coordinated weekly help sessions
- Organised and led revision lectures for 12 modules

2016–17 | **Outreach and Recruitment Ambassadors' Community** – *Co-Founder*

- Established a platform for additional training and social events
- Organised and coordinated events for 100+ student ambassadors and staff

Boards/Commities/Working Groups

2023–Ongoing | **Orbital Uncertainty Working Group (GNOSIS)**

2019–Ongoing | **Advisory Board (GNOSIS)**

2018–21 | **Astrodynamics Community of Interest (Dstl)**

2013–20 | **Student Staff Liaison Committee (Uni. Warwick)**

- Platform connecting the students and staff of the Department of Physics
- Served as Secretary (2014–15) and Chair (2017–18)

Signatory/Supporter

2024 | **Zero Debris Charter (ESA)**

2023 | **Memorandum of Principles (ESSI)**

SCIENTIFIC PRESENTATIONS

Conference talks & posters

2024 | **Effective detection and characterisation of resident space objects** (talk)
Military SSA Conference, London, UK
Photonics for Space, Leicester, UK

2023 | **Joint survey of the GSO region from Australia and Japan** (talk)
JAXA-Dstl-Warwick meeting, Tsukuba Space Centre, Tokyo, JP

2023 | **Sensor architectures for surveilling the GSO region** (talk & poster)
JAXA-Dstl-Warwick meeting, Tsukuba Space Centre, Tokyo, JP
AMOSTECH, Maui, Hawaii, US

2022 | **Recent activities at the Warwick CSDA** (talk)
StarDust Conference, ESTEC Noordwijk, NE – *virtual*

2022 | **GNOSIS: Activities, Initiatives and Future Endeavours** (poster)
AMOSTECH, Maui, Hawaii, US – *virtual*

2021 | **Exploiting strategies to obtain high-cadence photometry** (talk)
GNOSIS Workshop: Novel Observation Techniques, NORSS Ltd, UK – *virtual*

2021 | **Surveying GSO with the INT and a robotic astrograph** (talk)

COURSES

Early Stage Research
2024 | Uni. Warwick, UK
Research ecosystem, leading and influencing research, academic publishing, research income and impact

Technical Short Courses
AMOSTECH, Hawaii, US
- Event-Based Sensors for SDA
- Characterising Space Debris
- Using Celestrak for SSA
- Machine/Deep Learning for SSA
- Ground-Based Optical SSA

EMER-GEN
2020 | MEDB, Hawaii, US
Mentoring from space specialists in the public and private sectors, networking and professional development, focus on innovation and entrepeneurship

Space Debris Training Course
2019 | ESA Academy, Transinne, BE
Selected as one of 30 participants, use of MASTER and DRAMA software, debris mitigation, space surveillance, satellite re-entry and debris removal

Innovation to Impact (i2i)
2019 | Warwick Ventures, UK
Enhancing research impact, communication, identifying markets and opportunities, commercialisation

Transferable Skills
Uni. Warwick, UK
- Science Communciation
- Decision Making and Leadership
- Health and Safety

Galaxies, Stars and Planets
2012 | Open University, UK
10-credit course alongside A-Level studies

NAM, Uni. Bath, UK – *virtual*

2020 | **Supplementing a survey of GSO with COTS equipment** (talk & poster)
AMOSTECH, Maui, Hawaii, US – *virtual*

2020 | **DebrisWatch: Eyes on the sky** (poster)
RAS Poster Exhibition, UK – *virtual*

2019 | **Applying astronomical tools and techniques to SSA** (talk)
NAM, Lancaster Uni., UK

2019 | **Optical imaging of faint GSO debris with the INT** (poster)
AMOSTECH, Maui, Hawaii, US – Student Award Winner

2018 | **Hitching a ride on asteroids - are we the aliens?** (talk)
ICUR, Uni. Warwick, UK, streamed to Monash Uni., AU

2018 | **Panspermia: are we the aliens?** (talk)
BCUR, Uni. Sheffield, UK

2018 | **The Warwick DebrisWatch campaign** (poster)
RAS Specialist Meeting, Burlington House, UK

2018 | **Modelling panspermia in the TRAPPIST-1 system** (poster)
Posters in Parliament, Palace of Westminster, UK

2016 | **Modelling the circumbinary candidate KOI-1741** (talk)
ICUR, Uni. Warwick, UK, streamed to Uni. Leeds, UK

2016 | **Modelling the circumbinary candidate KOI-1741** (poster)
URSS Showcase, Uni. Warwick, UK

2015 | **Searching for weather patterns on the Hot Jupiter HAT-P-7b** (poster)
ICUR, Uni. Warwick, UK

Organisation roles

2024 | **GNOSIS Conference, Uni. Warwick, UK**
Organising Committee

2023 | **AMOSTECH, Maui, Hawaii, US**
Session Chair (Orbital Debris)

2022 | **GNOSIS Conference, Uni. Warwick, UK**
Organising Committee & Outreach Event Coordinator
Session Chair (SDA across the globe)

2022 | **NAM, Uni. Warwick, UK**
Scientific Organising Committee
Session Convenor (Space Sustainability)

2022 | **GNOSIS Sandpit, Uni. Warwick, UK**
Organiser and Chair (Precision SSA) – *virtual*

2021 | **AMOSTECH, Maui, Hawaii, US**
Session Chair (Conjunction/Rendezvous & Proximity Operations) – *virtual*

2021 | **NAM, Uni. Bath, UK**
Session Convenor (Space Domain Awareness) – *virtual*

2020 | **AMOSTECH, Maui, Hawaii, US**
Session Chair (Orbital Debris) – *virtual*

2020 | **GNOSIS Workshop, Uni. Warwick, UK**
Organiser and Chair (Precision SSA) – *virtual*

Invited talks, seminars & panels

2024 | **Striving for Sustainability in the Space Domain**
ROARS (ESA) Consortium Meeting, Uni. Warwick, UK
UKSEDS Cluster Event, Uni. Nottingham, UK

2023 | **Space Domain Awareness**
Midlands Innovation Space Workshop, Cranfield Uni., UK

2023 | **Balancing SATCOM development with the sustainable use of space**
Panellist, Global MilSatCom Conference, London, UK

2022 | **Recent activities at the Warwick CSDA**
StarDust Conference, ESTEC Noordwijk, NE – *virtual*

2022 | **Who owns space and why should we care?**
Panellist, Grand Challenges Seminars, Uni. Oxford, UK

2022 | **The Sticky Issue of Space Debris**
Armagh Observatory and Planetarium, UK – *virtual*

AWARDS

Best Student Paper
2019 | Awarded by Prof. Brandon Jones (Uni. Texas Austin, AAS Space Surveillance Technical Committee Chair) for best student submission at AMOSTECH, Maui, Hawaii, US

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, for outstanding commitment to outreach activities

Best Examination Performance
2011 | Awarded the Wrenn School Shield for Best Examination Performance at GCSE level

PEER REVIEW

Proposals
- Liverpool Telescope TAG

Journals
- Advances in Space Research
- Curr. Opinion in Environmental Sustainability

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.

2021 | **Getting involved with GNOSIS**
NAM, Uni. Bath, UK – *virtual*

2020 | **Monitoring the Mess of Near-Earth Space**
SERENE Group, Uni. Birmingham, UK – *virtual*

2019 | **A Watchful Eye on the Sky**
UC Irvine, California, US
NASA Jet Propulsion Laboratory, California, US

2019 | **Warwick space debris projects**
Warwick Astronomy and Astrophysics Group, UK

Outreach talks & panels

2024 | **Current State of the Space Industry**
Panellist, UKSEDS Cluster Event, Uni. Nottingham, UK

2024 | **Striving for Sustainability in the Space Domain**
Warwick Aerospace Society, UK

2023 | **Tackling space debris: transcending disciplinary boundaries**
Festival of Doctoral Research, Uni. Warwick, UK

2023 | **Student Voice: A Widening Participation Perspective**
Keynote and Panellist, WP Staff & Student Conference, Uni. Warwick, UK

2023 | **The Sticky Issue of Space Debris**
Knowle Astronomical Society, UK – *virtual*

2022 | **SDA: Inspiring Future Generations**
Panellist, GNOSIS Conference, Uni. Warwick, UK

2022 | **The Sticky Issue of Space Debris**
Highlands Astronomical Society, UK – *virtual* – recording
Warwick Astronomy Society, UK
Heart of England Astronomical Society, UK – *virtual*

2021 | **Monitoring the Mess of Near-Earth Space**
Loughton Astronomical Society, UK – *virtual*

2021 | **The Sticky Issue of Space Debris**
Newbury Astronomical Society, UK – *virtual*
GoSpaceWatch, UK – *virtual* – recording
Stratford Astronomical Society, UK – *virtual*
Coventry and Warwickshire Astronomical Society, UK – *virtual*
ZF Group Astronomical Society, UK – *virtual*

2020 | **Importance of UG Research**
Panellist, ICUR, Uni. Warwick, UK – *virtual*

2020 | **Monitoring the Mess of Near-Earth Space**
Birmingham Astronomical Society, UK – *virtual*

2019 | **A Watchful Eye on the Sky**
Warwick Astronomy Society, UK
Warwick Aerospace Society, UK

2018 | **The debris population at GEO and the fate of aged spacecraft**
Warwick Astronomy Society, UK

2017 | **Extrasolar panspermia: are we the aliens?**
Stratford Astronomical Society, UK – article

2016 | **Circumbinary planets: a closer look at Tatooine**
Warwick Astronomy Society, UK

2016 | **Settling into university life**
Welcome Week, Uni. Warwick, UK

PUBLICATIONS LIST

First Author

2023 | Exploring SDA Sensor Architectures for the Surveillance of Geosynchronous Spacecraft **Blake JA**, Pollacco D, Airey R, Chote P, Cooke BF, McCormac J, Shrive B, West R, Davis J, Feline W, Kerr E, Privett G, Akiyama Y, Hinagawa H, Nakamura S, Yanagisawa T, McFadden R and Eves S, In *Proceedings of the Advanced Maui Optical and Space Surveillance (AMOS) Technologies Conference*

2022 | The Global Network On Sustainability In Space (GNOSIS): Activities, Initiatives, and Future Endeavours **Blake JA**, Courtney K, Dinsley R, Eves S, Geer J,

Harrison T, Mann R and Pollacco D, In *Proceedings of the Advanced Maui Optical and Space Surveillance (AMOS) Technologies Conference*

2022 | Looking out for a sustainable space **Blake JA**, *Astronomy & Geophysics*, 63:2, 2.14-2.20 (Invited review)

2021 | Optical imaging of space debris in low and high altitude orbits **Blake JA** (PhD thesis)

2021 | DebrisWatch I: A survey of faint geosynchronous debris **Blake JA**, Chote P, Pollacco D, Feline W, Privett G, Ash A, Eves S, Greenwood A, Harwood N, Marsh TR, Veras D and Watson C, *Advances in Space Research*, 67:1, 360-370

2020 | Supplementing a survey of geosynchronous debris with commercial-off-the-shelf equipment **Blake JA**, Chote P, Pollacco D, Veras D, Ash A, Feline W, Privett G and Pirovano L, In *Proceedings of the Advanced Maui Optical and Space Surveillance (AMOS) Technologies Conference*

2019 | Optical imaging of the geosynchronous region with the Isaac Newton Telescope **Blake JA**, Chote P, Pollacco D, Veras D, Ash A, Feline W, Harwood N and Privett G, In *Proceedings of the Advanced Maui Optical and Space Surveillance (AMOS) Technologies Conference*

Co-Author

2023 | Simulated recovery of LEO objects using sCMOS blind stacking Cooke, BF, Chote P, Pollacco D, West R, **Blake JA**, McCormac J, Airey R and Shrive B, *Advances in Space Research*, 72:4, 907-921

2020 | Two Transiting Hot Jupiters from the WASP Survey: WASP-150b and WASP-176b Cooke BF, Pollacco D, Almleaky Y, Barkaoui K, Benkhaldoun Z, **Blake JA**, et al., *The Astronomical Journal*, 159:6, 255

2019 | Precision Optical Light Curves of LEO and GEO Objects Chote P, **Blake JA** and Pollacco D, In *Proceedings of the Advanced Maui Optical and Space Surveillance (AMOS) Technologies Conference*

2018 | Dynamical and biological panspermia constraints within multi-planet exosystems Veras D, Armstrong DJ, **Blake JA**, Gutiérrez-Marcos JF, Jackson AP and Schaefer H, *Astrobiology*, 18:9, 1106

2016 | Variability in the atmosphere of the hot giant planet HAT-P-7 b Armstrong DJ, de Mooij E, Barstow J, Osborn HP, **Blake JA** and Sainee NF, *Nature Astronomy*, 1, 0004

Technical Reports and Consultations

2023 | Astroscopes: Electro-Optical/Infrared Requirements (Technical Report for Dstl). **Blake JA** and Pollacco D. Identifying EO/IR requirements for UK sovereign SDA capabilities.

2022 | UKSA SDA Study (Consultation). UKSA, **GNOSIS (incl. Blake JA)**, UKspace and CGI. Roadmap for UK SDA capabilities.

2020 | GEOMON (Technical Report). **Blake JA**, Chote P, Jones G, Pollacco D and West R. Development of orbit determination/refinement tools for a ground-based optical array monitoring the geosynchronous region.