

# Dr. Lauren Rhodes (she/her)

TROTTIER SPACE INSTITUTE, MCGILL UNIVERSITY, 3550 RUE UNIVERSITY, MONTRÉAL, QC H3A 2A7, CANADA

☎ +1 (438) 399 7148 ✉ lauren.rhodes@mcgill.ca ORCID 0000-0003-2705-4941

## EMPLOYMENT

---

### Trottier Space Institute Postdoctoral Research Fellow

Sept 2024-Present

TROTTIER SPACE INSTITUTE, MCGILL UNIVERSITY, CANADA

### STFC (Science Technology and Facilities Council) Post-doctoral Research Associate

Sept 2022-Aug 2024

DEPARTMENT OF PHYSICS, UNIVERSITY OF OXFORD, UK

### Graduate Student

Oct 2018-June 2022

DEPARTMENT OF PHYSICS, UNIVERSITY OF OXFORD, UK  
& MAX PLANCK INSTITUTE FOR RADIO ASTRONOMY, GERMANY

### SURE (Sheffield Undergraduate Research Scheme) Research Student

June-Aug 2016

UNIVERSITY OF SHEFFIELD, UK

## EDUCATION

---

Oct 2018 – July 2022

### DPhil Astrophysics

ST CATHERINE'S COLLEGE, UNIVERSITY OF OXFORD, UK

Thesis title: The astrophysics of relativistic radio transients

Supervisors: Prof. R. Fender and Prof. M. Kramer.

Sept 2014 – July 2018

### MPhys Physics and Astrophysics

UNIVERSITY OF SHEFFIELD, UK

Thesis title: Evaluating the effectiveness of the CO[5-4] line as a tracer for instantaneous star formation rate

Supervisors: Dr. J. Mullaney

## SERVICE TO THE COMMUNITY

---

Jan 2025 – present

### Transient Journal Club Co-organisator

TSI, MCGILL UNIVERSITY

Jan 2024 – present

### Science reviewer for NRAO/GBO

OXFORD ASTROPHYSICS, UNIVERSITY OF OXFORD

Part of the *gravitational wave and energetic transients* science panel

Sep 2023 – present

### Journal Referee

Nature Astronomy; Astronomy & Astrophysics

Sept 2023 – Sept 2024

### Post-doctoral representative for astrophysics

OXFORD ASTROPHYSICS, UNIVERSITY OF OXFORD

Attend departmental meetings and communicate relevant information back to the post-doctoral community. Organise social events. Implement changes within the department that benefit the post-doctoral researchers.

Oct 2022 – Sept 2024

### Seminar Organiser

OXFORD ASTROPHYSICS, UNIVERSITY OF OXFORD

Coordinating the organisation and invitation of speakers for the 'SPI-MAX' (Stars Planets Instrumentation Methods Accretion & eXplosions) seminar series.

Nov 2022 – present

### Mentor

SUPERNOVA FOUNDATION

Part of an international mentor/mentee program to aid in resolving the international gender gap in STEM.

Dec 2022 – present

### Undergraduate Interviews

EXETER COLLEGE, UNIVERSITY OF OXFORD

Assisted Professor Cotter in interviewing physics undergraduates for admission into Exeter College.

---

## TEACHING EXPERIENCE

---

Jan 2025 – April 2025	High energy astrophysics graduate course lecturer	McGILL UNIVERSITY
	Taught lectures on gamma-ray bursts and gravitational waves as part of a physics graduate level course. Set and marked problems sets associated with both lectures. Students also wrote mock observing proposals as part of their coursework with I helped assess.	
Oct 2020 – June 2021	Ci Astrophysics	UNIVERSITY OF OXFORD
	Faculty teaching delivering small group tutorials covering the entirety of the final year, Masters level astrophysics option. The course covered radiative processes, high-energy astrophysics, cosmology, stellar structure and evolution, and galaxies.	

---

## SUPERVISORY EXPERIENCE

---

### PRIMARY SUPERVISOR:

May – Aug 2025	Dinah Ibrahim and Nisrine Sqalli	McGILL UNIVERSITY, CANADA
	Studying the radio counterparts of gamma-ray bursts with the AMI-LA telescope	
June – Aug 2024	Isabel Stephens	UNIVERSITY OF OXFORD, UK
	Does Scorpius-X1 produce fast jets?	

### SECONDARY SUPERVISOR:

June – Aug 2024	Alex Scott	UNIVERSITY OF OXFORD, UK
	Extreme jets from black holes and neutron stars	

---

## PUBLICATIONS

---

REFEREED (FIRST AUTHOR: 10, CO-AUTHORED: 34, H-INDEX: 19):

MNRAS: Monthly Notices of the Royal Astronomical Society

A&A: Astronomy & Astrophysics

ApJ(L): Astrophysical Journal (Letters)

\* indicates student led work

First author:

- **Long term optical variations in Swift J1858.6–0814: comparisons to radio properties**  
Rhodes L., Russell D., Saikia P., Alabarta K., van den Eijnden J., Knight A. H., Baglio M. C., Lewis F., 2025, MNRAS, 536, 3421
- **Rocking the BOAT: the ups and downs of the radio light curve of GRB 221009A**  
Rhodes L. van der Horst A.J., Bright J. S., Leung J. K., Anderson G. E., Fender R., Agüí Fernández J. F., Bremer M., Chandra P., Dobie D., Farah W., Giarratana S., Gourdji K., Green D. A., Lenc E., Michałowski M. J., Murphy T., Nayana A. J., Pollak A. W., Rowlinson A., Schussler F., Siemion A., Starling R. L. C., Scott P., Thöne C. C., Titterton D., de Ugarte Postigo A., 2024, MNRAS, 533, 4435
- **Discovery of the optical and radio counterpart to the fast X-ray transient EP240315a**  
Gillanders J. H. & Rhodes L. & Srivastav S. (joint first authors), and Carotenuto F. and Bright J. Huber M. E. Stevance H. F. Smartt S. J. Chambers K. C. Chen T. -W. Fender R. Andersson A. Cooper A. J. Jonker P. G. Cowie F. J. deBoer T. Erasmus N. Fulton M. D. Gao H. Herman J. Lin C. -C. Lowe T. Magnier E. A. Miao H. -Y. Minguez P. Moore T. Ngeow C. -C. Nicholl M. Pan Y. -C. Pignata G. Rest A. Sheng X. Smith I. A. Smith K. W. Tonry J. L. Wainscoat R. J. Weston J. Yang S. Young D. R., 2024, ApJL, 969, L14.
- **Precise Measurements of Self-absorbed Rising Reverse Shock Emission from Gamma-ray Burst 221009A**  
Bright J. S. & Rhodes L. (joint first authors), Farah W., Fender R., van der Horst A., Leung J.K., Williams D.R.A., Anderson G., Atri P., DeBoer D.R., Giarratana S., Green D.A.,

Heywood I., Lenc E., Murphy T., Pollak A.W., Premnath P.H., Scott P.F., Sheikh S.Z., Siemion A., Titterton D.J., 2023, *Nature Astronomy*, 7, 986

- **FRB 20121102A: images of the bursts and the varying radio counterpart**  
Rhodes L., Caleb M., Stappers B. W., Andersson A., Bezuidenhout M.C., Driessen L. N., Heywood I., Woudt P. A., 2023, *MNRAS*, 525, 3, 3626
- **Day-timescale variability in the radio light curve of the Tidal Disruption Event AT2022cmc: confirmation of a highly relativistic outflow**  
Rhodes L., Bright J. S., Fender R., Green D. G., Horesh A., Mooley K., Pasham D., Sfaradi I., Smartt S., Titterton D. J., van der Horst A. and Williams D. R. A., 2023, *MNRAS*, 521, 389
- **Two component jet observed in the afterglow of the dark very high energy GRB 201216C**  
Rhodes L., van der Horst A. J., Fender R., Aguilara-Dena D. R., Bright J. S., Vergani S. and Williams D. R. A., 2022, *MNRAS*, 513, 2, 1895
- **Long term radio monitoring of neutron star X-ray binary *Swift* J1858.8-0814**  
Rhodes L., Fender R. P., Motta S., van den Eijnden J., Williams D. R. A., Bright J. and Sivakoff G. R., 2022, *MNRAS*, 513, 2, 2708
- **An early peak in the radio light curve of short-duration Gamma-Ray Burst 200826A**  
Rhodes L., Fender R., Williams D. R. A. and Mooley K., 2021, *MNRAS*, 503, 2966
- **Radio afterglows of very high-energy gamma-ray bursts 190829A and 180720B**  
Rhodes L., van der Horst A. J., Fender R., Monageng I. M., Anderson G. E., Antoniadis J., Bietenholz M. F., Böttcher M., Bright J. S., Green D. A., Kouveliotou C., Kramer M., Motta S. E., Wijers R. A. M. J., Williams D. R. A. and Woudt P. A., 2020, *MNRAS*, 496, 3326

#### Co-authored

- **Blast waves and reverse shocks: from ultra-relativistic GRBs to moderately relativistic X-ray binaries**  
Matthews J., Cooper A., Rhodes L. et al. 2025, *MNRAS* *in press*.
- **The Long-lived Broadband Afterglow of Short Gamma-Ray Burst 231117A and the Growing Radio-Detected Short GRB Population**  
Schroeder G., ... Rhodes L. et al., 2025, *ApJ*, 982, 42.
- **Constraints on Relativistic Jets from the Fast X-ray Transient 210423 using Prompt Radio Follow-Up Observations**  
Ibrahimzade D., ... Rhodes L. et al., 2025, *ApJ*, 980, 92
- **Multi-Wavelength Analysis of AT 2023sya: a Luminous Orphan Afterglow With Evidence for a Structured Jet**  
Srinivasaragavan G.P. ... Rhodes L., et al., 2025, *MNRAS*, 538, 351.
- **The observed phase space of mass-loss history from massive stars based on radio observations of a large supernova sample**  
Sfaradi I., ... Rhodes L. et al. 2025, *ApJ*, 979, 189
- **Discovery of the optical counterpart of the fast X-ray transient EP240414a**  
Srivastav S, Chen J., Gillanders J., Rhodes L. et al. 2025, *ApJL*, 978, L21
- **The Radio Counterpart to the Fast X-ray Transient EP240414a**  
Bright J.S., ... Rhodes L., et al. 2025, *ApJ*, 981, 48
- **Simultaneous Optical and X-ray Detection of a Thermonuclear Burst in the 2024 Outburst of EXO 0748-676**  
Knight A., Rhodes L. et al. 2025, *MNRAS*, 536, L26.
- **Late-time radio brightening and emergence of a radio jet in the changing-look AGN iES 1927+654**  
Meyer E.T., ... Rhodes L. et al. 2025, *ApJL*, 979, L2
- **The early radio afterglow of short GRB 230217A**  
Anderson G., ... Rhodes L. et al 2024, *ApJL*, 975, L13.

- **An IXPE-led X-Ray Spectropolarimetric Campaign on the Soft State of Cygnus X-1: X-Ray Polarimetric Evidence for Strong Gravitational Lensing**  
Steiner J. F., ... Rhodes L. et al., 2024, *ApJL*, 969, L30
- **The expansion of the GRB 221009A afterglow**  
Giarratana S., ... Rhodes L. et al. *A&A*, 690, A74
- **A Radio Flare in the Long-Lived Afterglow of the Distant Short GRB 210726A: Energy Injection or a Reverse Shock from Shell?**  
Schroeder G., Rhodes L. et al. 2024, *ApJ*, 970, 2, 139
- **Ultrasoft state of microquasar Cygnus X-3: X-ray polarimetry reveals the geometry of the astronomical puzzle**  
Veledina A., ... Rhodes L. et al., 2024, *A&A*, 688, L27
- **Testing EMRI models for Quasi-Periodic Eruptions with the 3-year NICER campaign of eRO-QPE1**  
Chakraborty J., ... Rhodes L. et al. 2024, *ApJ*, 965, 12
- **JWST detection of heavy neutron-capture elements in a compact object merger**  
Levan A., ... Rhodes L. et al. 2024, *Nature*, 626, 8000, p.737-741
- **The dense and non-homogeneous circumstellar medium revealed in radio wavelengths around the Type Ib SN 2019oys**  
Sfaradi I., ... Rhodes L. et al. 2024, *A&A* 686, A129, 14
- **An off-axis relativistic jet seen in the long-lasting delayed radio flare of the TDE AT2018hyz** Sfaradi I., ... Rhodes L. et al. *MNRAS*, 527, 3, 7672
- **SN 2022jli: A Type Ic Supernova with Periodic Modulation of Its Light Curve and an Unusually Long Rise**  
Moore T., ... Rhodes L. et al, 2023, *ApJL*, 956, L31
- **Commensal Transient Searches in Eight Short Gamma Ray Burst Fields**  
Chastain S., ... Rhodes L. et al. 2023, *MNRAS*, 526, 2, 1888
- **AT2022aedm and a new class of luminous, fast-cooling transients in elliptical galaxies**  
Nicholl M., ... Rhodes L. et al. 2023, *ApJ*, 954, L28
- **Bursts from Space: MeerKAT - The first citizen science project dedicated to commensal radio transients**  
Anderson A., ... Rhodes L. et al, 2023, *MNRAS*, 523, 2, 2219
- **The False Widow Link Between Neutron Star X-ray Binaries and Spider Pulsars**  
Knight A., ... Rhodes L. et al, 2023, *MNRAS*, 520, 3, 3416
- **The optical light curve of GRB 221009A: the afterglow and detection of the emerging supernova SN 2022xiw**  
Fulton M., Smartt S., Rhodes L., et al, 2023, *ApJL*, 946, 1, L22, 12 pp
- **The Birth of a Relativistic Jet Following the Disruption of a Star by a Cosmological Black Hole**  
Pasham D., ... Rhodes L. et al, 2023, *Nature Astronomy*, 7, 88
- **Serendipitous discovery of radio flaring behaviour from a nearby M dwarf with MeerKAT**  
Andersson A., ... Rhodes L., et al, 2022, *MNRAS*, 513, 3
- **GRB 201015A: VLBI observations of the shortest Gamma-Ray Burst ever detected at Very High Energy**  
Giarratana S., Rhodes L., et al, 2022, *A&A*, 664, A36
- **A persistent ultraviolet outflow from an accreting neutron star binary transient**  
Castro Segura N., .. Rhodes L., et al, 2022, *Nature*, 603, 52
- **Radio and X-ray observations of the luminous Fast Blue Optical Transient AT2020xnd**  
Bright J. S., ... Rhodes L., et al, 2022, *ApJ*, 926, 2.

- **An analysis of the time-frequency structure of several bursts from FRB 121102 detected with MeerKAT**  
Platts E., ... **Rhodes L.** et al, 2021, MNRAS, 505, 3041.
- **Observations of a radio-bright, X-ray obscured GRS 1915+105**  
Motta S. E., ... **Rhodes L.**, et al, 2021, MNRAS, 503, 152
- **Simultaneous multi-telescope observations of FRB 121102**  
Caleb M., ... **Rhodes L.**, et al, 2020, MNRAS, 496, 4565
- **The 2018 outburst of BHXB H1743-322 as seen with MeerKAT**  
Williams D. R. A. ... **Rhodes L.**, et al, 2020, MNRAS, 491, L29
- **Full orbital solution for the binary system in the northern Galactic disc microlensing event Gaia16aye**  
Wyrzykowski L., ... **Rhodes L.**, et al., 2020, A&A, 633, A98
- **Gaia16apd - a link between fast and slowly declining type I superluminous supernovae**  
Kangas T., ... **Rhodes L.**, et al, 2017, MNRAS, 469, 1246

## WHITE PAPERS &amp; BOOK CHAPTERS:

- **Multidisciplinary Science in the Multi-diagnostic era of astrophysics (White paper)**  
Burns E., Fryer C.L., ... **Rhodes L.** et al arxiv:2502.03577

## SUBMITTED:

- **The partial tidal disruption of a star on a 700-day orbit around a supermassive black hole**  
Makrygianni L., ... **Rhodes L.** et al. *submitted to ApJ*
- **Puzzling two-stage size evolution of an ultraluminous gamma-ray burst jet**  
Geng J.J. ... **Rhodes L.** et al submitted to Nature Astronomy
- **Radio observations of the ultra-long GRB 220627A reveal a hot cocoon supporting the blue supergiant progenitor scenario**  
Leung J. ... **Rhodes L.** et al submitted to ApJ
- **Unprecedentedly bright X-ray flaring in Cygnus X-1 observed by INTEGRAL**  
Thalhammer P. ... **Rhodes L.** et al submitted to A&A

Additionally: a number of Astronomer's Telegrams, General Coordinate Network (GCN) notices and Transient Name Server (TNS) reports to disseminate the results of observations to the wider community.

## CONFERENCES, PRESENTATIONS AND SEMINARS

Invited Seminars/Colloquia 2025  
UNIVERSITY COLLEGE DUBLIN, IRELAND  
ANTON PANNEKOEK INSTITUTE FOR ASTRONOMY, UNIVERSITY OF AMSTERDAM, NETHERLANDS  
MAX PLANCK INSTITUTE FÜR RADIOASTRONOMIE, GERMANY

Conference Presentations 2025  
THE DYNAMIC RADIO SKY, SYDNEY AUSTRALIA  
CELEBRATING 20 YEARS OF SWIFT DISCOVERIES, FLORENCE, ITALY

Invited Seminars/Colloquia 2024  
UNIVERSITÉ DE MONTRÉAL, CANADA  
NASA GODDARD SPACE FLIGHT CENTRE, USA  
CAVENDISH ASTROPHYSICS, UNIVERSITY OF CAMBRIDGE, UK

Conference Presentations 2024  
TDAMM MEETING, BATON ROUGE, USA (INVITED)  
NAM HULL 2024 (INVITED)  
EAS PADOVA 2024  
COSPAR 2024, SOUTH KOREA (INVITED - BUT DECLINED)

Conference Posters 2024	HOTWIRING THE TRANSIENT UNIVERSE, TORONTO
Invited Seminars 2023	INAF-IRA, ITALY INAF-BRERA ASTRONOMICAL OBSERVATORY, ITALY COLUMBIA UNIVERSITY, USA VAST TELECON, AUSTRALIA (ZOOM) OzGRAV SEMINAR, AUSTRALIA (ZOOM) NIELS BOHR INSTITUTE, DENMARK MAX PLANCK INSTITUTE FOR EXTRATERRESTRIAL PHYSICS, MUNICH, GERMANY ERLANGEN CENTRE FOR ASTROPARTICLE PHYSICS, GERMANY UNIVERSITY OF MANCHESTER, UK
Conference Presentations 2023	GRB50 CONFERENCE, US EUROPEAN ASTRONOMICAL SOCIETY ANNUAL MEETING 2023, POLAND TIMING AND IMAGING OF COMPACT SOURCES WITH SKA PATHFINDERS, GREECE
Invited Seminars 2022	FOUNDATION FOR RESEARCH AND TECHNOLOGY, CRETE UNIVERSITY OF OXFORD, UK UNIVERSITY OF COLLEGE LONDON, UK
Conferences Presentations 2022	VHE GRB WORKSHOP 2022, GERMANY (INVITED) NATIONAL ASTRONOMY MEETING 2022, UK
Conferences Presentations 2021	NATIONAL ASTRONOMY MEETING, ONLINE IAU SYMPOSIUM 363, ONLINE ANNUAL MEETING OF THE GERMAN ASTRONOMICAL SOCIETY, ONLINE
SOC	INAUGURAL UNIVERSITY OF OXFORD PHYSICS POST-DOC CONFERENCE, 2024 (CHAIR) PARALLEL SESSIONS, NATIONAL ASTRONOMY MEETING 2024 PARALLEL SESSIONS, NATIONAL ASTRONOMY MEETING 2023 PARALLEL SESSIONS NATIONAL ASTRONOMY MEETING 2022 (CHAIR)
LOC	FRB 2025 UK NEUTRON STAR CONFERENCE 2023
ThunderKAT Collaboration Meetings	PRESENTATIONS AND UPDATES BETWEEN 2018 -2023

## OBSERVING EXPERIENCE

Feb 2023 – Sept 2024

**Telescope Scheduler** MRAO, UNIVERSITY OF CAMBRIDGE

Primary scheduler for the Arcminute Microkelvin Imager – Large Array at MRAO (Mullard Radio Astronomical Observatory) Cambridge, UK. Responsible for ensuring that the telescope is observing the most appropriate targets at any given time for a given science goal and ensuring the telescope is running efficiently. Also responsible for selecting new transients to observe that align with the Oxford transient research group's science goals and subsequently perform data reduction and interpretation of the observations.

PI FOR OVER 1000 HOURS OF TELESCOPE TIME

### OPEN TIME PROPOSALS

**PI :**

ATCA: C3640 “Searching for a break in the late time radio light curve of GRB 221009A”

eMERLIN: CY9005, CY10002 (with long term status) and CY12003 (with long term status);  
CY14002 (with long term status); CY16204 (with long term status) “High-resolution observations of short GRBs beyond the LIGO horizon”; CY13003 and CY14001 “Studying the radio properties of the

emerging class of VHE GRBs”; CY15206 “Late time observations of GRB 221009A: the brightest radio afterglow to date”; CY16004, CY18002 “Continued eMERLIN monitoring of ZTF22aaajecp/AT2022cmc: the first jetted tidal disruption event in a decade”  
GMRT: 47\_073 ”

MeerKAT: MKT-20185 and MKT-22097 “Searching for off-axis radio emission from binary neutron star mergers using optically detected kilonovae” MKT-23101 “MeerKAT monitoring of ZTF22aaajecp/AT2022cmc: the first jetted tidal disruption event in a decade”; MKT-24208 “Searching for a break in the late time radio light curve of GRB 221009A”; MKT-24207 “Continued MeerKAT monitoring of ZTF22aaajecp/AT2022cmc: exploring the differences between thermal and non-thermal electron populations”

NOEMA: S22BT “ NOEMA Observations of the ZTF22aaajecp/AT2022cmc: the first relativistic tidal disruption event in a decade”; W22CZ “Continued NOEMA monitoring of AT2022cmc: the first relativistic tidal disruption event in a decade”

SMA: 2022B-S001, 2023A-S007 “Searching for early-time emission from gamma-ray bursts with the SMA”

VLA: 21B-170 “Studying the radio properties of the emerging class of VHE GRBs”; VLA/25A-015 “Searching for a break in the late time radio light curve of GRB 221009A”; VLA/25A-066 “Finding the radio counterpart to a rare long GRB binary neutron star merger

#### **Co-I:**

ATCA: C3542 (for three years) “A Panoptic Radio View of Long Gamma-ray Bursts”; C3204 “ATCA rapid-response triggering on Swift detected short gamma-ray bursts: Exploring the link with gravitational wave events”

GBT: GBT25A-273 “GBT Observations of a Candidate Transitional Millisecond Pulsar”

LBA: V660 “The expanding afterglow of GRB 221009A”

MeerKAT: MKT-22078 “Constraining the properties of Very High Energy detected GRBs with MeerKAT”, MKT-23011 “Relativistic Jets from Stellar Mass Black Holes and Neutron Stars”, MKT-23022 “Long-term monitoring of the compact persistent counterpart to the repeating FRB 20121102A”, MKT-23177 “Probing the Astrophysics of Neutron Star Mergers with Radio Afterglows”, MKT-23128 “Exploring the New Phenomenon of Delayed Radio Flares in Tidal Disruption Events”

VLA: VLA/24B-183 “Chasing Gamma Ray Burst radio afterglows in the early Universe”; VLA/24B-347 “A comprehensive systematic exploration of the phase space of TDE outflows”; VLA/25A-254 “Studying Relativistic Shocks with Fast VLA Follow-Up of Gamma-Ray Bursts”; VLA/25A-078 “Probing the slow and fast jets in the black hole X-ray binary GRS 1915+105”

#### **DIRECTOR'S DISCRETIONARY TIME**

##### **PI:**

eMERLIN: DD8004 “Observations of sGRB 190326A”; DD9006 “High-resolution radio observations of a candidate neutron star merger event”; DD10003 “Very High Energy Gamma-ray Burst 201015A”; DD10010 “Very High Energy Gamma-ray Burst 201216C”; DD11001 “Further radio follow up Very High Energy Gamma Ray Burst 201216C at 5 GHz”; DD12002 “Late time radio follow up of short GRB 210726A at 5GHz”; RRT13002 “eMERLIN Observations of the ZTF22aaajecp/AT2022cmc: the most luminous gamma-ray burst to date or jetted tidal disruption event?”; RR14001 “5GHz observations of GRB 221009A”; DD17003 “e-MERLIN observations of new Fast X-ray Transient EP240315A; DD18001 “SN2022jli: the birth of an X-ray binary?”.

GTC: GTC2019-121 “The mysterious, possible radio counterpart to a short GRB”

LOFAR: DDT20\_003 “Catching the BOAT at low frequencies: the first explosive transient detected by LOFAR”

MeerKAT: DDT-20210107-LR-01 “Studying the radio properties of the emerging class of VHE GRBs with GRB 201216C”; DDT-20210908-RA-01 “MeerKAT follow-up of a QPE source”; DDT-20230313-LR-01 “DDT observations of GRB 230307A: a bright southern hemisphere GRB”; DDT-20231124-SA-01 “MeerKAT observations of the new bright short GRB 231117A; DDT-20240228-LR-01 “MeerKAT observations of GRB 240205B”

VLA: 20B-456 “Studying the radio properties of the emerging class of VHE GRBs with GRB 201216C”

##### **Co-I:**

eMERLIN: DD14001 “Search for a radio counterpart to SN 2022jli”; DD16001 “Continued monitoring of GRS 1915+105 as it undergoes repeated massive radio flares”

EVN: RGo13 “*Studying the structure and the dynamics of the outstanding GRB 221009A*”

Chandra: 402356 “*The Wide-Angle Outflow of SGRB 210726A*”; 23708837 “*The first relativistic tidal disruption flare in a decade*”

HST: GO/DD 15984 “*Time-resolved UV spectroscopy of the accretion disk and wind in a super-Eddington black-hole X-ray transient*”

MeerKAT: DDT-20220705-SG-01 “*Searching for the afterglow of the lensed GRB 220627A*”

Parkes: “*Assessing the Feasibility of Detecting Radio Pulsations from EXO 0748–676*”

VLA: 21A-422 “*Searching for Radio Emission from a Fast X-ray Transient*”, VLA/24A-455 “*Measuring the Spectrum of the First Radio Loud Fast X-ray Transient*”, VLA/24A-474 “*The changing-angle jets in GRS 1915+105*”

VLBA: 22B-302 “*Resolving the afterglow of GRB 221009A*”

## SCHEDULING

Current primary scheduler for the AMI–LA telescope. Have scheduled observations with MeerKAT and the Karl G. Jansky Very Large Array. Trained to observe with the Australia Telescope Compact Array and Effelsberg room telescopes. Experience reducing data for all aforementioned facilities as well as NOEMA. Previous experience in scheduling optical transient observations on the pt5m in La Palma.

## WORKSHOPS

Feb 2024	A thinkshop on fast-evolving extragalactic transients	BORMIO, ITALY
Jan 2023	Overcoming disconnects in understanding of accreting black holes	LORENTZ CENTRE, LEIDEN
Jan 2022	SMA Interferometry School	ONLINE
July 2020	17 <sup>th</sup> Synthesis Imaging Workshop	ONLINE
Oct 2019	European Radio Interferometry School	GOTHENBURG, SWEDEN

## OUTREACH

Feb 2025	TSI & Physics Outreach Public Talk Speaker	MCGILL UNIVERSITY, MONTREAL, CANADA
Jan 2025	Canadian Students for the Exploration and Development of Space Conference Keynote Speaker	MONTREAL, CANADA
Oct 2024	Astronomy of Tap Speaker	MONTREAL, CANADA
Nov 2023 & Mar 2024	Stargazing evening Outreach volunteer	BICESTER, OXFORDSHIRE, UK
Feb 2024	Minerva’s Virtual Academy Speaker	OXFORD, UK
Nov 2023	Outthinkers talks evening Speaker	PRIDE IN STEM, UK
Sept 2023	Oxford Open Doors festival Oxford Astrophysics volunteer	UNIVERSITY OF OXFORD, UK



July 2023	Bluedot Festival Zooniverse stand volunteer	JODRELL BANK, MANCHESTER, UK
May 2023	‘I’m a Scientist’ outreach event Online Q&A session with school students.	ONLINE/ UNIVERSITY OF OXFORD, UK
April 2023	Invited talk: The most powerful explosions in the universe. Outreach seminar to the <i>Friends of the RAS</i> .	ROYAL ASTRONOMICAL SOCIETY, UK
March 2023 & 2024	‘Marie Curious’ outreach event Annual departmental event for school girls ages 12-14.	UNIVERSITY OF OXFORD, UK
February 2023	Invited outreach talk	FIRST LIGHT FUSION, OXFORD, UK
Jan 2023	Into the Cosmos Department-wide outreach day. General volunteer.	UNIVERSITY OF OXFORD, UK
June 2019	Stargazing Live Department-wide outreach day. Organised and ran planetarium talks.	UNIVERSITY OF OXFORD, UK

## COLLABORATIONS

---

Max Planck Galactic Plane S-band Survey  
Lead of the image-plane transient working group.

LORAX  
GRB follow-up lead for a proposed large program on LOFAR 2.0.

ThunderKAT & X-KAT  
Using the MeerKAT radio telescope to study both galactic and extragalactic transients associated with compact objects

ATLAS  
Pan-sky survey made of four optical telescopes whose goal is to search for near-Earth objects. The same data can be used to search for static transients, primarily supernovae .

JAGWAR  
Using Jansky VLA and MeerKAT to search for radio emission associated with Gravitational Wave bursts.

Pan-radio GRBs  
Using ATCA to perform both prompt and long-term follow-up of gamma-ray bursts over the next years.

Transient working groups for next generation Event Horizon Telescope (ngEHT) & Square Kilometre Array (SKA)

## MEDIA COVERAGE

---

July 2024      The Astrophiz Podcast

June 2021 – Present      Oxford Physics  
First detection of heavy element from star merger  
Warm winds witnessed in neutron star first  
Study of ‘Brightest of All Time’ provides unprecedented understanding  
Oxford astronomers in front-row view of exceptional cosmic explosion.

August 2023	Astrobit.es The Fast and the Radio Luminous: FRB 20121102A by Sonja Panjkov
August 2023	National Geographic The brightest blast ever seen in space continues to surprise scientists by Liz Kruesi
April 2022	Phys.org Astronomers inspect outburst of X-ray binary Swift J1858.6–0814 by Tomasz Nowakowski

---

## FUNDING AWARDS

---

March 2024	The Astor Fund Funding visits to collaborators in the USA. (£1500)	OXFORD, UK
October 2023	The Lockey Fund Designed to fund attendance to ‘open’ conferences/workshops or meetings. (£1000)	OXFORD, UK
August 2023	AHEAD2020 Set within the European Horizon 2020 program, the AHEAD2020 program is designed to advance international collaboration within the field of high-energy astrophysics. (€2300)	BOLOGNA, ITALY
February 2023	OPTICON-RadioNet Pilot travel grant Funding visits to reduce NOEMA data. (£200)	OXFORD, UK

---

## REFERENCES

---

Prof. Jason Hessels jason.hessels@mcgill.ca	TROTTIER SPACE INSTITUTE, MCGILL UNIVERSITY
Prof. Daryl Haggard daryl.haggard@mcgill.ca	TROTTIER SPACE INSTITUTE, MCGILL UNIVERSITY
Prof. Rob Fender rob.fender@physics.ox.ac.uk	ASTROPHYSICS DEPARTMENT OF PHYSICS, UNIVERSITY OF OXFORD
Prof. Alexander van der Horst ajvanderhorst@gwu.edu	THE GEORGE WASHINGTON UNIVERSITY
Dr. Sara Motta sara.motta@inaf.it	INAF–OSSERVATORIO ASTRONOMICO DI BRERA