Thomas Moore

2nd Year PhD Student at Queen's University Belfast

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Education

Queen's University Belfast *Belfast, Northern Ireland*

PhD Astrophysics - Expected Graduation Winter 2024 Oct. 2021 - Oct. 2024

Supernova group - supervisors: Prof. Stephen Smartt and Dr. Stuart Sim.

Queen's University Belfast *Belfast, Northern Ireland*

MSci Physics with Astrophysics - First-Class Honours Sep. 2016 - May. 2021

Thesis title: The Origin of Umbral Waves: Sub-surface Eigenmodes or Resonance Cavity Harmonics?

Saint Martin's University *Lacey, Washington*

Non-Degree Exchange Student on a Study USA Scholarship Aug. 2018 - May. 2019

Technical Skills

Programming	Python, IDL, Monte Carlo simulation, Plotly, C
Professional Softwares	EsoReflex, PESSTO Pipeline
Drawing & Typesetting	Office, LaTeX
Languages	English (native)

Awards and Honors

Oct. 2021	**Scholarship**: DfE PhD Studentship
Aug. 2018	**Scholarship**: Study USA Scholarship

Presentation / Attendance / Teaching

ATLAS Meeting 2022 *Belfast*

Talk Title: A population of long-duration SN Ib/c June 2022

ePESSTO+ Meeting *Barcelona*

Attended the ePESSTO+ workshop at the Institute of Space Sciences, Barcelona June 2022

ENGRAVE Workshop *Munich*

Attended the ENGRAVE Munich Workshop Feb 2023

Observing Experience

ePESSTO+ Observing

I have completed 11 nights of observations at the ESO NTT as an ePESSTO+ observer. Seven of these nights were remote observing and four were at the telescope.

ENGRAVE

Member of the ENGRAVE spectroscopy and photometry working groups responsible for ToO triggers and data reduction for VLT instruments to observe gravitational wave electromagnetic counterparts.

ATLAS and Pan-STARRS

Experience using difference-imaged photometry from the ATLAS and Pan-STARRS wide-field survey telescopes. Regularly use ATLAS data to discover new transient objects.

Liverpool Telescope (LT)

Co-Investigator on three successful LT proposals with experience with IO:O and SPRAT data to study and classify supernovae.

References

- Prof. Stephen Smartt (Primary Supervisor)
  Astrophysics sub-Department, Department of Physics, University of Oxford, Keble Road, Oxford, OX1 3RH, UK
  ✉ stephen.smartt@physics.ox.ac.uk
- Dr. Stuart Sim (Second Supervisor)
  Astrophysics Research Centre, School of Mathematics and Physics, Queen's University Belfast, BT7 1NN, UK
  ✉ s.sim@qub.ac.uk

Publications

(a) Dheeraj R. Pasham, Matteo Lucchini, Tanmoy Laskar, Benjamin P. Gompertz, Shubham Srivastav, Matt Nicholl, Stephen J. Smartt, James C. A. Miller-Jones, Kate D. Alexander, Rob Fender, Graham P. Smith, M. Fulton, Gulab Dewangan, Keith Gendreau, Eric R. Coughlin, Lauren Rhodes, Assaf Horesh, Sjoert van Velzen, Itai Sfaradi, Muryel Guolo, Noel Castro Segura, Aysha Aamer, Joseph P. Anderson, Iair Arcavi, Seán J. Brennan, Kenneth Chambers, Panos Charalampopoulos, Ting-Wan Chen, A. Clocchiatti, Thomas de Boer, Michel Dennefeld, Elizabeth Ferrara, Lluís Galbany, Hua Gao, James H. Gillanders, Adelle Goodwin, Mariusz Gromadzki, M. Huber, Peter G. Jonker, Manasvita Joshi, Erin Kara, Thomas L. Killestein, Peter Kosec, Daniel Kocevski, Giorgos Leloudas, Chien-Cheng Lin, Raffaella Margutti, Seppo Mattila, Thomas Moore, Tomás Müller-Bravo, Chow-Choong Ngeow, Samantha Oates, Francesca Onori, Yen-Chen Pan, Miguel Perez-Torres, Priyanka Rani, Ronald Remillard, Evan J. Ridley, Steve Schulze, Xinyue Sheng, Luke Shingles, Ken W. Smith, James F. Steiner, Richard Wainscoat, Thomas Wevers, and Sheng Yang. The Birth of a Relativistic Jet Following the Disruption of a Star by a Cosmological Black Hole. *Nature Astronomy*, 7:88–104, January 2023

(b) Shubham Srivastav, S. J. Smartt, M. E. Huber, G. Dimitriadis, K. C. Chambers, Michael D. Fulton, Thomas Moore, F. P. Callan, James H. Gillanders, K. Maguire, M. Nicholl, Luke J. Shingles, S. A. Sim, K. W. Smith, J. P. Anderson, Thomas de Boer, Ting-Wan Chen, Hua Gao, and D. R. Young. The Luminous Type Ia Supernova 2022ilv and Its Early Excess Emission. , 943(2):L20, February 2023

(c) M. D. Fulton, S. J. Smartt, L. Rhodes, M. E. Huber, V. A. Villar, T. Moore, S. Srivastav, A. S. B. Schultz, K. C. Chambers, L. Izzo, J. Hjorth, T. W. Chen, M. Nicholl, R. J. Foley, A. Rest, K. W. Smith, D. R. Young, S. A. Sim, J. Bright, Y. Zenati, T. de Boer, J. Bulger, J. Fairlamb, H. Gao, C. C. Lin, T. Lowe, E. A. Magnier, I. A. Smith, R. Wainscoat, D. A. Coulter, D. O. Jones, C. D. Kilpatrick, P. McGill, E. Ramirez-Ruiz, K. S. Lee, G. Narayan, V. Ramakrishnan, R. Ridden-Harper, A. Singh, Q. Wang, A. K. H. Kong, C. C. Ngeow, Y. C. Pan, S. Yang, K. W. Davis, A. L. Piro, C. Rojas-Bravo, J. Sommer, and S. K. Yadavalli. The Optical Light Curve of GRB 221009A: The Afterglow and the Emerging Supernova. , 946(1):L22, March 2023

(d) P. Wiseman, Y. Wang, S. Hönig, N. Castro-Segura, P. Clark, C. Frohmaier, M. D. Fulton, G. Leloudas, M. Middleton, T. E. Müller-Bravo, A. Mummery, M. Pursiainen, S. J. Smartt, K. Smith, M. Sullivan, J. P. Anderson, J. A. Acosta Pulido, P. Charalampopoulos, M. Banerji, M. Dennefeld, L. Galbany, M. Gromadzki, C. P. Gutiérrez, N. Ihanec, E. Kankare, A. Lawrence, B. Mockler, T. Moore, M. Nicholl, F. Onori, T. Petrushevska, F. Ragosta, S. Rest, M. Smith, T. Wevers, R. Carini, T. W. Chen, K. Chambers, H. Gao, M. Huber, C. Inserra, E. Magnier, L. Makrygianni, M. Toy, F. Vincentelli, and D. R. Young. Multiwavelength observations of the extraordinary accretion event AT2021lwx. , April 2023

(e) H. Kuncarayakti, J. Sollerman, L. Izzo, K. Maeda, S. Yang, S. Schulze, C. R. Angus, M. Aubert, K. Auchettl, M. Della Valle, L. Dessart, K. Hinds, E. Kankare, M. Kawabata, P. Lundqvist, T. Nakaoka, D. Perley, S. I. Raimundo, N. L. Strotjohann, K. Taguchi, Y. Z. Cai, P. Charalampopoulos, Q. Fang, M. Fraser, C. P. Gutierrez, R. Imazawa, T. Kangas, K. S. Kawabata, R. Kotak, T. Kravtsov, K. Matilainen, S. Mattila, S. Moran, I. Murata, I. Salmaso, J. P. Anderson, C. Ashall, E. C. Bellm, S. Benetti, K. C. Chambers, T. W. Chen, M. Coughlin, F. De Colle, C. Fremling, L. Galbany, A. Gal-Yam, M. Gromadzki, S. L. Groom, A. Hajela, C. Inserra, M. M. Kasliwal, A. A. Mahabal, A. Martin-Carrillo, T. Moore, T. E. Muller-Bravo, M. Nicholl, F. Ragosta, R. L. Riddle, Y. Sharma, S. Srivastav, M. D. Stritzinger, A. Wold, and D. R. Young. The Bactrian? Broad-lined Type-Ic supernova SN 2022xxf with extraordinary two-humped light curves. *arXiv e-prints*, page arXiv:2303.16925, March 2023

(f) T. Nagao, H. Kuncarayakti, K. Maeda, T. Moore, A. Pastorello, S. Mattila, K. Uno, S. J. Smartt, S. A. Sim, L. Ferrari, L. Tomasella, J. P. Anderson, T. W. Chen, L. Galbany, H. Gao, M. Gromadzki, C. P. Gutiérrez, C. Inserra, E. Kankare, E. A. Magnier, T. E. Müller-Bravo, A. Reguitti, and D. R. Young. Photometry and spectroscopy of the Type Icn supernova 2021ckj: The diverse properties of the ejecta and circumstellar matter of Type

Icn SNe. *arXiv e-prints*, page arXiv:2303.07721, March 2023

TNS Astronotes

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