

Benjamin F. Cooke

RESEARCH FELLOW · UNIVERSITY OF WARWICK, ASTRONOMY AND ASTROPHYSICS

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Education

University of Warwick

PHD ASTRONOMY AND ASTROPHYSICS

- Supervisor: Prof. Don Pollacco

Coventry, CV4 7AL, UK

Oct. 2017 - Apr. 2021

University of Birmingham

MSc PHYSICS

- First-Class Honours

Birmingham, B15 2TT, UK

2013 - 2017

Banbury Academy Sixth Form

A-LEVELS

- Physics: A, Maths: A*, Further Maths: A, Chemistry: B

Banbury, OX16 9HY, UK

2011 - 2013

Professional Experience

2021-
present

Research Fellow, University of Warwick

2017-2021

PhD, University of Warwick

Selected Publications

PUBLISHED - PRIMARY AUTHOR

Benjamin F. Cooke, Don Pollacco, David R. Anderson et al. 2020. *Resolving period aliases for TESS monotransits recovered during the extended mission*. MNRAS, 500:5088

Benjamin F. Cooke, Don Pollacco. 2020. *SpecPhot: A Comparison of Spectroscopic and Photometric Exoplanet Follow-Up Methods*. MNRAS, 495:734.

Benjamin F. Cooke, Don Pollacco, Y. Almléaky et al. 2020. *Two Transiting Hot Jupiters from the WASP Survey: WASP-150b and WASP-176b*. AJ, 159:255.

Benjamin F. Cooke, Don Pollacco, Monika Lendl et al. 2020. *CHEOPS observations of TESS primary mission monotransits*. MNRAS, 494:736.

Benjamin F. Cooke, Don Pollacco and Daniel Bayliss. 2019. *An examination of the effect of the TESS extended mission on southern hemisphere monotransits*. A&A, 631:A83.

Benjamin F. Cooke, Don Pollacco, Richard West et al. 2018. *Single site observations of TESS single transit detections*. A&A, 619:A175.

PUBLISHED - CO-AUTHOR

James S. Jenkins, Matías R. Díaz, Nicolás T. Kurtovic et al. (**inc. Benjamin F. Cooke**). 2020. *An ultrahot Neptune in the Neptune desert* Nature Astronomy 4:1148

David J. Armstrong, Théo A. Lopez, Vardan Adibekyan et al. (**inc. Benjamin F. Cooke**). 2020. *A remnant planetary core in the hot-Neptune desert*. Nature, 483:39.

Samuel Gill, Peter J. Wheatley, **Benjamin F. Cooke** et al. 2020. *NGTS-11 b (TOI-1847 b): A Transiting Warm Saturn Recovered from a TESS Single-transit Event*. ApJL, 898:L11.

Samuel Gill, **Benjamin F. Cooke**, Daniel Bayliss et al. 2020. *A long-period ($P = 61.8$ d) M5V dwarf eclipsing a Sun-like star from TESS and NGTS*. MNRAS, 495:2713.

Full list available on request or at <https://ui.adsabs.harvard.edu/public-libraries/3-LFNLOQg-HByxaVQwiZQ>

Presentations

Oral presentation: NGTS Follow-up of TESS Single Transits PLATO ESP 2019, University of Warwick

Poster: Monotransits in TESS - Predicted Yield and Early Results UKEXOM 2019, Imperial College London

Teaching Experience

2017 - 2019 **Classical Mechanics and Special Relativity**, Undergraduate Problems Class Supervisor

*University of
Warwick*

Research Experience

University of Warwick - Astronomy and Astrophysics

Coventry, UK

SUPERVISOR: PROF. DON POLLACCO

Oct. 2017 - Apr. 2021

- PhD thesis: "Simulation, detection and characterisation of monotransits from the TESS mission"

University of Birmingham - Physics and Astronomy

Birmingham, UK

SUPERVISORS: DR. ANDREA MIGLIO & DR. TIAGO CAMPANTE

2016-2017

- Masters thesis: "The effect of convective core overshooting on the inferred masses of retired A-stars"

University of Birmingham - Physics and Astronomy

Birmingham, UK

SUPERVISORS: PROF. WILLIAM CHAPLIN & DR. TIAGO CAMPANTE

Summer 2016

- Research project: "The impact of TESS asteroseismology on the characterisation of known exoplanet systems"

Professional Development

PROPOSALS

CNTAC observing time proposal - Towards a better understanding of Very Low Mass Stars. Contributing author, successful

STFC grant proposal - The Next-Generation Transit Survey (NGTS) Operations 2019–2022. Contributing author, successful

OBSERVING EXPERIENCE

Jan. 2019 **HARPS-North, TNG**, Visiting observer

*Roque de los
Muchachos*

Oct. 2018 **HARPS, ESO 3.6m**, Visiting observer

La Silla

2018 - 2019 **NITES**, Remote observer

*Roque de los
Muchachos*

COMPUTING EXPERIENCE

Python 5 years experience.

Bash 3 years experience.

C/C++ 1 years experience.

RELEVANT SKILLS

Problem solving - Tackled multiple novel problems through my PhD and research career

Computational simulations - Developed simulations of unique, complex problems, displayed in my published works

Data analysis - Displayed analysis experience of multi-source data sets, utilised in multiple publications

Communication - Both written and oral, demonstrated through published works and formal presentations

Collaborations - Member of the international NGTS consortium, author on multiple collaborative publications