# Adam Carnall

PhD Student, Institute for Astronomy, Royal Observatory Edinburgh, EH9 3HJ, adamc@roe.ac.uk

2015 - 2019 Royal Observatory Edinburgh - PhD in Astrophysics

Thesis: The star-formation histories of massive quiescent galaxies

Supervisors: Prof. Ross McLure and Prof. James Dunlop

2011 - 2015 Durham University – MPhys Physics and Astronomy

First class honours: final mark 82%

Thesis: A new search for high-redshift quasars

Supervisor: Prof. Tom Shanks

2007 - 2011 Thirsk School and Sixth Form College

A-Levels: A\*A\*A\* in Physics, Maths, Further Maths and Chemistry

AS-Levels: AA in Geography and General Studies

GCSEs: Eight A\* grades and two A grades

#### First-Authored Publications

- 5. The VANDELS survey: the star-formation histories of massive quiescent galaxies at 1.0 < z < 1.3, A. C. Carnall et al. arXiv:1903.11082, Mar 2019a
- 4. How to Measure Galaxy Star Formation Histories. I. Parametric Models, A. C. Carnall et al. ApJ, 873:44, Mar 2019b. doi:10.3847/1538-4357/ab04a2
- 3. Inferring the star formation histories of massive quiescent galaxies with BAGPIPES: evidence for multiple quenching mechanisms, A. C. Carnall et al. MNRAS, 480, 4379, November 2018. doi:10.1093/mnras/sty2169
- 2. SpectRes: A Fast Spectral Resampling Tool in Python, A. C. Carnall. arXiv:1705.05165, May 2017
- 1. Two bright z > 6 quasars from VST ATLAS and a new method of optical plus mid-infrared colour selection, A. C. Carnall et al. MNRAS, 451, L16, July 2015. doi:10.1093/mnrasl/slv057

#### Coauthored Publications

- 8. The VANDELS survey: the stellar metallicities of star-forming galaxies at 2.5 < z < 5.0, F. Cullen et al. arXiv:1903.11081, Mar 2019
- 7. Maximising the power of deep extragalactic imaging surveys with the James Webb Space Telescope, T. W. Kemp et al. arXiv:1903.08169, Mar 2019
- 6. The VANDELS survey: the role of ISM and galaxy physical properties on the escape of Ly $\alpha$  emission in  $z \sim 3.5$  star-forming galaxies, F. Marchi et al. arXiv:1903.08593, Mar 2019
- How to measure galaxy star formation histories II. Nonparametric models, J. Leja et al. arXiv:1811.03637, November 2018
- 4. The VANDELS ESO public spectroscopic survey, R. J. McLure et al. MNRAS, 479, 25, September 2018. doi:10.1093/mnras/sty1213
- 3. The VANDELS ESO public spectroscopic survey: Observations and first data release, L. Pentericci et al. A&A, 616, 174, September 2018. doi:10.1051/0004-6361/201833047
- 2. Two more, bright, z > 6 quasars from VST ATLAS and WISE, B. Chehade et al. MNRAS, 478, 1649, August 2018. doi:10.1093/mnras/sty690
- 1. The VANDELS survey: dust attenuation in star-forming galaxies at z=3-4, F. Cullen et al. MNRAS, 476, 3218, May 2018. doi:10.1093/mnras/sty469

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# Talks and Presentations

Mar 2019	Talk	Geneva Observatory, Switzerland
Jan 2019	Talk	The growth of galaxies in the early Universe V, Sexten, Italy
Nov 2018	Talk	IAU Symposium 341: Challenges in panchromatic galaxy modelling with next generation facilities, Osaka University, Japan
Oct 2018	Lunch talk	University of St Andrews, UK
Oct 2018	Seminar	Royal Observatory Edinburgh, UK
$\mathbf{Sep}\ 2018$	Talk	VANDELS collaboration meeting, Arcetri Observatory, Florence, Italy
Apr 2018	Invited talk	The art of measuring galaxy physical parameters, UC Riverside, USA
Jan 2018	Talk	The growth of galaxies in the early Universe IV, Sexten, Italy
Jan 2018	Talk	Durham Edinburgh Extragalactic Conference XIV, Durham, UK
Nov 2017	Talk	Royal Society of Edinburgh Cormack Meeting, Edinburgh, UK
$\mathbf{Sep}\ 2017$	Talk	VANDELS collaboration meeting, Bologna Observatory, Italy
Jun 2017	Invited talk	Advances in Galaxy Evolution with Surveys, Ringberg Castle, Germany
Jun 2016	Poster	32nd IAP Colloquium: Cosmic dawn of galaxy formation: linking observations and theory with new-generation spectral models, Paris, France
Jan 2016	Talk	Durham Edinburgh Extragalactic Conference XII, Durham, UK

## **Awards and Prizes**

2018	Scottish Universities Physics Alliance PECRE Bursary Funding for five week visit to Harvard-Smithsonian Center for Astrophysics
2015	Durham University J. A. Chalmers Prize in Experimental Physics Awarded for best MPhys research project
2015	Durham University Summer Research Placement Bursary Funding for six week summer research project
2014	Institute of Physics Top 50 Award: Southampton University Funding for eight week summer research project
2013	Oxford University Summer Research Programme Funding for eight week summer research project
2013	Leicester University SURE Bursary Funding for six week summer research project

# Teaching and Supervision

2018	Edinburgh University Numerical Recipes Course Guest lecture on Markov chain Monte Carlo methods
2018	St. Andrews University Research Methods Course Guest lecture on galaxy star-formation histories
2018	Edinburgh University Physics Summer Scholarship Student: Jamie Yellen Project: Advanced Bayesian methods for galaxy spectral fitting

## 2017 Royal Society of Edinburgh Cormack Research Scholarship

Student: Joe Cairns Project: SCUBA-diving into the deep universe: the origins of massive galaxies

## 2015 Edinburgh University Teaching Assistant

- 2019 Supervised tutorials and labs for a variety of courses