

Andrew Robertson

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JPL Postdoc

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Academic positions

2021–present **Jet Propulsion Laboratory, Caltech, Pasadena, USA, JPL Postdoc.**

- Investigating using galaxy cluster shapes (that can be measured by the SuperBIT telescope) to constrain the SIDM cross-section
- Combining weak lensing and redshift-space distortions around galaxy clusters to test theories of gravity

2017–2021 **Institute for Computational Cosmology, Durham, UK, Postdoctoral Research Associate.**

- Ran and analysed cosmological simulations of systems ranging in mass from dwarf galaxies up to galaxy clusters, with self-interacting dark matter and hydrodynamical models of galaxy formation.
- Produced ray-tracing code to produce mock strong and weak lensing data from simulated galaxy clusters.
- Worked on analytical modelling of the density profiles of self-interacting dark matter haloes and how they respond to the presence of baryons.
- Made weak lensing mock catalogues for the Euclid 'Enabling weak lensing cosmology' project

Education

2013–2017 **Institute for Computational Cosmology, Durham University, PhD in Astrophysics.**

- Incorporated particle physics phenomenology into Cosmological simulations of dark matter.
- Performed analytical calculations of dark matter self-interaction rates through cosmic time.
- Simulated Bullet Cluster-like systems with self-interacting dark matter.
- Cosmological zoom simulations of galaxy clusters with hydrodynamics and self-interacting dark matter.

2009–2013 **Selwyn College, University of Cambridge, Master of Natural Science in Experimental and Theoretical Physics.**

- MSci & BA(Hons), Class 1
- Masters Thesis: Fast Simulation of Atmospheric Phase Screens for Adaptive Optics

Awards and Prizes

2018 Alan Martin Doctoral prize for the best PhD thesis in Physics (Durham University)

2010–2013 Academic Scholarship from Selwyn College, Cambridge

2013 Siddans Prize for Physics (Selwyn College)

2012 Braybrook Prize for Physics (Selwyn College)

2010 Tripos Prize for Natural Science (Selwyn College)

Teaching and Supervision

I currently remotely co-supervise two Durham University PhD students, and have previously supervised one other PhD student and a Masters student (who have both now graduated). The PhD students have worked on strong gravitational lensing, self-interacting dark matter in galaxy clusters and the destruction of dark matter substructures in hydrodynamical simulations. The Masters student worked on something quite different – the modelling of a cycling peloton – combining ideas from the field of 'collective motion' with a basic model of human physiology. I do not currently do any undergraduate teaching, but have previously been a tutor for 1st year students taking a Foundations of Physics course as well as a workshop demonstrator for a 3rd and 4th year cosmology course.

Conference Talks and Seminars

I enjoy attending conferences and discussing my work, and have given submitted talks at a number of large conferences including UK National Astronomy Meetings, and the European Week of Astronomy and Space Science. On top of this I have spoken at a number of smaller events including the annual DEX meeting held jointly by Durham and Edinburgh (where I was awarded the prize for 'best long talk' in 2017) and regular meetings of the VIRGO consortium. As well as applying to talk at conferences I have been invited to give the following talks.

Invited

- Aug 2022 **Durham Astronomy Seminar**, Durham, UK.
Trying to understand the dark stuff
- Nov 2021 **WE-Heraeus Seminar: Dark Matter**, *The Royal Society*, London, UK.
Self-interacting dark matter
- Oct 2021 **Cosmology and astronomy seminar**, UC Davis, USA.
Probing the nature of dark matter with galaxy clusters
- Aug 2021 **EXPLORE workshop: Astrophysical laboratories of DM**.
Constraining dark matter self-interactions with galaxy clusters
- May 2021 **ITP Cosmology Seminars**, Heidelberg University, Germany.
Probing the nature of dark matter with galaxy clusters
- Oct 2020 **Sussex Seminar**, University of Sussex, UK.
Probing the nature of dark matter – from dwarf galaxies to galaxy clusters
- Feb 2020 **Oxford Cosmology Seminar**, University of Oxford, UK.
Probing the nature of dark matter – from dwarf galaxies to galaxy clusters
- Nov 2019 **The First Shanghai Assembly on Cosmology and Galaxy Formation**, Shanghai, China.
Constraints on self-interacting dark matter from galaxy clusters
- Oct 2019 **Competing Structure Formation Models**, Reykjavik, Iceland.
Constraints on self-interacting dark matter from galaxy clusters
- Feb 2019 **UCI Seminar**, *UC Irvine*, California, USA.
Placing constraints on self-interacting dark matter using galaxy clusters
- Oct 2018 **BUFFALO Meeting**, Marseille, France.
Observable tests of self-interacting dark matter in galaxy clusters
- May 2018 **MSSL Seminar**, Surrey, UK.
Strong and weak lensing signals from self-interacting dark matter clusters
- Mar 2018 **Unravelling the dark matter mystery**, Durham, UK.
Simulations (Self-interacting Dark Matter)
- Aug 2017 **SIDM Workshop**, *Niels Bohr Institute*, Copenhagen, Denmark.
What Does the Bullet Cluster Tell us about Self-Interacting Dark Matter?
- Jun 2015 **Dark Matter UK**, Liverpool, UK.
Probing Dark Matter Self-Interactions with Cosmological Particle Colliders

Journal Referee

- 2022–present Journal of Cosmology and Astroparticle Physics
- 2019–present Physical Review Letters
- 2019–present Astronomy & Astrophysics
- 2018–present Physical Review X
- 2017–present Monthly Notices of the Royal Astronomical Society
- 2016–present Physical Review D

Outreach

Television and radio

- Apr 2018 **The Today Programme**, *BBC Radio 4*, UK.
Interviewed by John Humphrys
- Apr 2018 **Good Evening Wales**, *BBC Radio Wales*, UK.
Interviewed by Felicity Evans and Peter Johnson
- Apr 2018 **Good Morning Scotland**, *BBC Radio Scotland*, UK.
Interviewed by Gary Robertson
- Jan 2018 **The Sky at Night - The Invisible Universe**, *BBC Four*, UK.
Featured a video of one of my Bullet Cluster simulations
- Apr 2017 **Strip the Cosmos - Mystery of the Hidden Universe**.
Featured a video of one of my Bullet Cluster simulations

YouTube

- Jun 2022 **The Absurd Search For Dark Matter**, *Veritasium*, 5.5 million views.
Featured my Bullet Cluster simulations

Andrew Robertson

Publications List

First Author

- June 2021 **The galaxy-galaxy strong lensing cross-sections of simulated Λ CDM galaxy clusters**
Andrew Robertson
Monthly Notices of the Royal Astronomical Society: Letters, 504(1):7–11
- March 2021 **The surprising accuracy of isothermal Jeans modelling of self-interacting dark matter density profiles**
Andrew Robertson, Richard Massey, Vincent Eke, Joop Schaye and Tom Theuns
Monthly Notices of the Royal Astronomical Society, 501(3):4610–4634
- May 2020 **What does strong gravitational lensing? The mass and redshift distribution of high-magnification lenses**
Andrew Robertson, Graham P. Smith, Richard Massey, Vincent Eke, Mathilde Jauzac, Matteo Bianconi and Dan Ryczanowski
Monthly Notices of the Royal Astronomical Society, 495(4):3727–3739
- April 2020 **Understanding the large inferred Einstein radii of observed low-mass galaxy clusters**
Andrew Robertson, Richard Massey and Vincent Eke
Monthly Notices of the Royal Astronomical Society, 494(4):4706–4712
- September 2019 **Observable tests of self-interacting dark matter in galaxy clusters: cosmological simulations with SIDM and baryons**
Andrew Robertson, David Harvey, Richard Massey, Vincent Eke, Ian McCarthy, Mathilde Jauzac, Baojiu Li and Joop Schaye
Monthly Notices of the Royal Astronomical Society, 488(3):3646–3662
- January 2018 **The diverse density profiles of galaxy clusters with self-interacting dark matter plus baryons**
Andrew Robertson, Richard Massey, Vincent Eke, Sean Tulin, Hai-Bo Yu, Yannick Baé, David Barnes, Richard Bower, Robert Crain, Claudio Dalla Vecchia, Scott Kay, Matthieu Schaller and Joop Schaye
Monthly Notices of the Royal Astronomical Society: Letters, 476(1):20–24
- June 2017 **Cosmic particle colliders: simulations of self-interacting dark matter with anisotropic scattering**
Andrew Robertson, Richard Massey and Vincent Eke
Monthly Notices of the Royal Astronomical Society, 467(4):4719–4730
- February 2017 **What does the Bullet Cluster tell us about self-interacting dark matter?**
Andrew Robertson, Richard Massey, and Vincent Eke
Monthly Notices of the Royal Astronomical Society, 465(1):569–587
- November 2015 **Self-interacting dark matter scattering rates through cosmic time**
Andrew Robertson, Richard Massey, Vincent Eke, and Richard Bower
Monthly Notices of the Royal Astronomical Society, 453(3):2267–2276

Co-author

- August 2022 **Cosmological simulations with rare and frequent dark matter self-interactions**
Moritz S. Fischer, Marcus Bruggen, Kai Schmidt-Hoberg, Klaus Dolag, Felix Kahlhoefer, Antonio Ragagnin, Andrew Robertson
Monthly Notices of the Royal Astronomical Society, *Advanced Access*

- July 2022 **Astrophysical Tests of Dark Matter Self-Interactions**
*Susmita Adhikari, Arka Banerjee, Kimberly K. Boddy, Francis-Yan Cyr-Racine, Harry Desmond, Cora Dvorkin, Bhuvnesh Jain, Felix Kahlhoefer, Manoj Kaplinghat, Anna Nierenberg, Annika H. G. Peter, **Andrew Robertson**, Jeremy Sakstein, Jesus Zavala*
 arXiv:2207.10638
- July 2022 **Beyond the bulge-halo conspiracy? Density profiles of Early-type galaxies from extended-source strong lensing**
*Amy Etherington, James W. Nightingale, Richard Massey, **Andrew Robertson**, Xiao Yue Cao, Aristeidis Amvrosiadis, Shaun Cole, Carlos S. Frenk, Qiuhan He, David J. Lagattuta, Samuel Lange and Ran Li*
 arXiv:2207.04070
- July 2022 **Testing the Collisionless Nature of Dark Matter with the Radial Acceleration Relation in Galaxy Clusters**
*Sut-leng Tam, Keiichi Umetsu, **Andrew Robertson**, Ian G. McCarthy*
 arXiv:2207.03506
- May 2022 **Constraints on dark matter self-interaction from the internal density profiles of X-COP galaxy clusters**
*D. Eckert, S. Ettori, **A. Robertson**, R. Massey, E. Pointecouteau, D. Harvey, and I. G. McCarthy*
 arXiv:2205.01123
- April 2022 **Enabling discovery of gravitationally lensed explosive transients: a new method to build an all-sky watch-list of groups and clusters of galaxies**
*Dan Ryczanowski, Graham P. Smith, Matteo Bianconi, Sean McGee, **Andrew Robertson**, Richard Massey, Mathilde Jauzac*
 arXiv:2204.12984
- April 2022 **Discovering gravitationally lensed gravitational waves: predicted rates, candidate selection, and localization with the Vera Rubin Observatory**
*Graham P. Smith, **Andrew Robertson**, Guillaume Mahler, Matt Nicholl, Dan Ryczanowski, Matteo Bianconi, Keren Sharon, Richard Massey, Johan Richard, Mathilde Jauzac*
 arXiv:2204.12977
- April 2022 **Galaxy-galaxy strong lens perturbations: line-of-sight haloes versus lens subhaloes**
*Qiuhan He¹, Ran Li, Carlos S. Frenk, James Nightingale, Shaun Cole, Nicola C. Amorisco, Richard Massey, **Andrew Robertson**, Amy Etherington, Aristeidis Amvrosiadis, Xiaoyue Cao*
 Monthly Notices of the Royal Astronomical Society, 512(4):5862–5873
- April 2022 **The effects of self-interacting dark matter on the stripping of galaxies that fall into clusters**
*Ellen L. Sirks, Kyle A. Oman, **Andrew Robertson**, Richard Massey and Carlos Frenk*
 Monthly Notices of the Royal Astronomical Society, 511(4):5927–5935
- April 2022 **A forward-modelling method to infer the dark matter particle mass from strong gravitational lenses**
*Qiuhan He, **Andrew Robertson**, James Nightingale, Shaun Cole, Carlos S. Frenk, Richard Massey, Aristeidis Amvrosiadis, Ran Li, Xiaoyue Cao, Amy Etherington*
 Monthly Notices of the Royal Astronomical Society, 511(2):3046–3062
- March 2022 **Snowmass2021 Cosmic Frontier White Paper: Dark Matter Physics from Halo Measurements**
*Keith Bechtol, Simon Birrer, Francis-Yan Cyr-Racine, Katelin Schutz ... **Andrew Robertson** ...*
 arXiv:2203.07354
- March 2022 **Unequal-mass mergers of dark matter haloes with rare and frequent self-interactions**
*Moritz S. Fischer, Marcus Bruggen, Kai Schmidt-Hoberg, Klaus Dolag, Antonio Ragagnin, **Andrew Robertson***
 Monthly Notices of the Royal Astronomical Society, 510(3):4080–4099

- February 2022 **Systematic Errors Induced by the Elliptical Power-law model in Galaxy-Galaxy Strong Lens Modeling**
*Xiaoyue Cao, Ran Li, J. W. Nightingale, Richard Massey, **Andrew Robertson**, Carlos S. Frenk, Aristeidis Amvrosiadis, Nicola C. Amorisco, Qiuhan He, Amy Etherington*
 Research in Astronomy and Astrophysics, Volume 22, Issue 2, id.025014, 30 pp
- February 2022 **Automated galaxy-galaxy strong lens modelling: no lens left behind**
*Amy Etherington, James W. Nightingale, Richard Massey, Xiaoyue Cao, **Andrew Robertson**, Nicola C. Amorisco, Aristeidis Amvrosiadis, Shaun Cole, Carlos S. Frenk, Qiuhan He, Ran Li, and Sut-leng Tam*
 arXiv:2202.09201
- February 2022 **Halo concentration strengthens dark matter constraints in galaxy-galaxy strong lensing analyses**
*Nicola C. Amorisco, James Nightingale, Qiuhan He, Aristeidis Amvrosiadis, Xiaoyue Cao, Shaun Cole, Amy Etherington, Carlos S. Frenk, Ran Li, Richard Massey, **Andrew Robertson***
 Monthly Notices of the Royal Astronomical Society, 510(2):2464–2479
- December 2021 **Testing extensions to Λ CDM on small scales with forthcoming cosmic shear surveys**
*Sam G. Stafford, Ian G. McCarthy, Juliana Kwan, Shaun T. Brown, Andreea S. Font, **Andrew Robertson***
 Monthly Notices of the Royal Astronomical Society, 508(2):2537–2555
- September 2021 **Unequal-mass mergers of dark matter haloes with rare and frequent self-interactions**
*Moritz S. Fischer, Marcus Brüggen, Kai Schmidt-Hoberg, Klaus Dolag, Antonio Ragagnin, **Andrew Robertson***
 preprint, arXiv:2109.10035
- September 2021 **The effects of self-interacting dark matter on the stripping of galaxies that fall into clusters**
*Ellen L. Sirks, Kyle A. Oman, **Andrew Robertson**, Richard Massey and Carlos Frenk*
 preprint, arXiv:2109.03257
- September 2021 **The impact of self-interacting dark matter on the intrinsic alignments of galaxies**
*David Harvey, Nora Elisa Chisari, **Andrew Robertson**, Ian G McCarthy*
 Monthly Notices of the Royal Astronomical Society, 506(1):441–451
- July 2021 **N-body simulations of dark matter with frequent self-interactions**
*Moritz S Fischer, Marcus Brüggen, Kai Schmidt-Hoberg, Klaus Dolag, Felix Kahlhoefer, Antonio Ragagnin, **Andrew Robertson***
 Monthly Notices of the Royal Astronomical Society, 505(1):851–868
- March 2021 **A high-resolution cosmological simulation of a strong gravitational lens**
*Jack Richings, Carlos Frenk, Adrian Jenkins and **Andrew Robertson***
 Monthly Notices of the Royal Astronomical Society, 501(3):4657–4668
- Feb 2021 **PyAutoLens: Open-Source Strong Gravitational Lensing**
*James. W. Nightingale, Richard G. Hayes, Ashley Kelly, Aristeidis Amvrosiadis, Amy Etherington, Qiuhan He, Nan Li, Xiaoyue Cao, Jonathan Frawley, Shaun Cole, Andrea Enia, Carlos S. Frenk, David R. Harvey, Ran Li, Richard J. Massey, Mattia Negrello, **Andrew Robertson***
 Journal of Open Source Software, 6(58):2825
- Jan 2021 **Reconciling galaxy cluster shapes, measured by theorists vs observers**
*David Harvey, **Andrew Robertson**, Sut-leng Tam, Mathilde Jauzac, Richard Massey, Jason Rhodes and Ian McCarthy*
 Monthly Notices of the Royal Astronomical Society, 500(2):2627–2644
- Jan 2021 **From dwarf galaxies to galaxy clusters: Self-Interacting Dark Matter over 7 orders of magnitude in halo mass**
*Kyrylo Bondarenko, Anastasia Sokolenko, Alexey Boyarsky, **Andrew Robertson**, David Harvey and Yves Revaz*
 Journal of Cosmology and Astroparticle Physics, Issue 01, article id. 043 (2021)

- Jan 2021 **Velocity-dependent Self-interacting Dark Matter from Groups and Clusters of Galaxies**
*Laura Sagunski, Sophia Gad-Nasr, Brian Colquhoun, **Andrew Robertson** and Sean Tulin*
 Journal of Cosmology and Astroparticle Physics, Issue 01, article id. 024 (2021)
- Oct 2020 **Local Group star formation in warm and self-interacting dark matter cosmologies**
*Mark R. Lovell, Wojciech Hellwing, Aaron Ludlow, Jesús Zavala, **Andrew Robertson**, Azadeh Fattahi, Carlos S. Frenk and Jennifer Hardwick*
 Monthly Notices of the Royal Astronomical Society, 498(1):702–717
- August 2020 **To beta or not to beta: can higher-order Jeans analysis break the mass-anisotropy degeneracy in simulated dwarfs?**
*A. Genina, J. I. Read, C. S. Frenk, S. Cole, A. Benitez-Llambay, A. D. Ludlow, J. F. Navarro, K. A. Oman, **A. Robertson***
 Monthly Notices of the Royal Astronomical Society, 498(1):144–163
- August 2020 **Exploring extensions to the standard cosmological model and the impact of baryons on small scales**
*Sam G. Stafford, Shaun T. Brown, Ian G. McCarthy, Andreea S. Font, **Andrew Robertson** and Robert Poole-McKenzie*
 Monthly Notices of the Royal Astronomical Society, 497(3):3809–3829
- June 2020 **The distribution of dark matter and gas spanning 6 Mpc around the post-merger galaxy cluster MS 0451?03**
*Sut-leng Tam, Mathilde Jauzac, Richard Massey, David Harvey, Dominique Eckert, Harald Ebeling, Richard S Ellis, Vittorio Ghirardini, Baptiste Klein, Jean-Paul Kneib, David Lagattuta, Priyamvada Natarajan, **Andrew Robertson** and Graham P Smith*
 Monthly Notices of the Royal Astronomical Society, 496(3):4032–4050
- June 2020 **Mapping dark matter and finding filaments: calibration of lensing analysis techniques on simulated data**
*Sut-leng Tam, Richard Massey, Mathilde Jauzac and **Andrew Robertson***
 Monthly Notices of the Royal Astronomical Society, 496(3):3973–3990
- May 2020 **On building a cluster watchlist for identifying strongly lensed supernovae, gravitational waves and kilonovae**
*Dan Ryczanowski, Graham P. Smith, Matteo Bianconi, Richard Massey, **Andrew Robertson** and Mathilde Jauzac*
 Monthly Notices of the Royal Astronomical Society, 495(2):1666–1671
- April 2020 **Baryonic clues to the puzzling diversity of dwarf galaxy rotation curves**
*Isabel M.E. Santos-Santos, Julio F. Navarro, **Andrew Robertson**, Alejandro Benitez-Llambay, Kyle A. Oman, Mark R. Lovell, Carlos S. Frenk, Aaron D. Ludlow, Azadeh Fattahi, Adam Ritz*
 Monthly Notices of the Royal Astronomical Society, 495(1):58–77
- April 2020 **The BUFFALO HST Survey**
*Charles L Steinhardt, Mathilde Jauzac, Ana Acebron, Hakim Atek, ... **Andrew Robertson** ...*
 The Astrophysical Journal Supplement Series, 247(2), id.64
- March 2020 **Subhalo destruction in the Apostle and Auriga simulations**
*Jack Richings, Carlos Frenk, Adrian Jenkins, **Andrew Robertson**, Azadeh Fattahi, Robert J. J. Grand, Julio Navarro, Rudiger Pakmor, Facundo A. Gomez, Federico Marinacci and Kyle A. Oman*
 Monthly Notices of the Royal Astronomical Society, 492(4):5780–5793
- September 2019 **Observable tests of self-interacting dark matter in galaxy clusters: BCG wobbles in a constant density core**
*David Harvey, **Andrew Robertson**, Richard Massey, Ian G. McCarthy*
 Monthly Notices of the Royal Astronomical Society, 488(2):1572–1579

- June 2019 **Deep and rapid observations of strong-lensing galaxy clusters within the sky localisation of GW170814**
G. P. Smith, M. Bianconi, M. Jauzac, J. Richard, A. Robertson, C. P. L. Berry, R. Massey, K. Sharon, W. M. Farr, J. Veitch
 Monthly Notices of the Royal Astronomical Society, 485(4):5180–5191
- February 2019 **Discovery of Strongly-lensed Gravitational Waves - Implications for the LSST Observing Strategy**
Graham P. Smith, Andrew Robertson, Matteo Bianconi, and Mathilde Jauzac
 preprint, arXiv:1902.05140
- December 2018 **The impact of cored density profiles on the observable quantities of dwarf spheroidal galaxies**
David Harvey, Yves Revas, Andrew Robertson, Loic Hausammann
 Monthly Notices of the Royal Astronomical Society: Letters, 481(1):89–93
- November 2018 **Growing a ‘cosmic beast’: observations and simulations of MACS J0717.5+3745**
M. Jauzac, D. Eckert, M. Schaller, J. Schwinn, R. Massey, Y. Bahé, C. Baugh, D. Barnes, C. Dalla Vecchia, H. Ebeling, D. Harvey, E. Jullo, S. T. Kay, J.-P. Kneib, M. Limousin, E. Medezinski, P. Natarajan, M. Nonino, A. Robertson, S. I. Tam and K. Umetsu
 Monthly Notices of the Royal Astronomical Society, 481(3):2901–2917
- October 2018 **Strong-lensing of Gravitational Waves by Galaxy Clusters**
Graham Smith, Christopher Berry, Matteo Bianconi, Will Farr, Mathilde Jauzac, Richard Massey, Johan Richard, Andrew Robertson, Keren Sharon, Alberto Vecchio, John Veitch
 Proceedings of the International Astronomical Union, Volume 338, pp. 98-102
- June 2018 **Dark matter dynamics in Abell 3827: new data consistent with standard Cold Dark Matter**
Richard Massey, David Harvey, Jori Liesenborgs, Johan Richard, Stuart Stach, Mark Swinbank, Peter Taylor, Liliya Williams, Douglas Clowe, Frederic Courbin, Alastair Edge, Holger Israel, Mathilde Jauzac, Remy Joseph, Eric Jullo, Thomas D. Kitching, Adrienne Leonard, Julian Merten, Daisuke Nagai, James Nightingale, Andrew Robertson, Luis Javier Romualdez, Prasenjit Saha, Renske Smit, Sut leng Tam, Eric Tittley
 Monthly Notices of the Royal Astronomical Society, 477(1):669–677
- July 2017 **A test for skewed distributions of dark matter, and a possible detection in galaxy cluster Abell 3827**
P. Taylor, R. Massey, M. Jauzac, F. Courbin, D. Harvey, R. Joseph, and A. Robertson
 Monthly Notices of the Royal Astronomical Society, 468(4):5004–5013
- February 2017 **Looking for dark matter trails in colliding galaxy clusters**
David Harvey, Andrew Robertson, Richard Massey, and Jean-Paul Kneib
 Monthly Notices of the Royal Astronomical Society, 464(4):3991–3997
- December 2016 **The extraordinary amount of substructure in the Hubble Frontier Fields cluster Abell 2744**
M Jauzac, D Eckert, J Schwinn, D Harvey, C M Baugh, A Robertson, S Bose, R Massey, M Owers, H Ebeling, H Y Shan, E Jullo, J P Kneib, J Richard, H Atek, B Clément, E Egami, H Israel, K Knowles, M Limousin, P Natarajan, M Rexroth, P Taylor, and C Tchernin
 Monthly Notices of the Royal Astronomical Society, 463(4):3876–3893
- October 2015 **The offsets between galaxies and their dark matter in Λ cold dark matter**
Matthieu Schaller, Andrew Robertson, Richard Massey, Richard G Bower, and Vincent R Eke
 Monthly Notices of the Royal Astronomical Society: Letters, 453(1):L58–L62

June 2015 **The behaviour of dark matter associated with four bright cluster galaxies in the 10 kpc core of Abell 3827**

*Richard Massey, Liliya Williams, Renske Smit, Mark Swinbank, Thomas D Kitching, David Harvey, Mathilde Jauzac, Holger Israel, Douglas Clowe, Alastair Edge, Matt Hilton, Eric Jullo, Adrienne Leonard, Jori Liesenborgs, Julian Merten, Irshad Mohammed, Daisuke Nagai, Johan Richard, **Andrew Robertson**, Prasenjit Saha, Rebecca Santana, John Stott, and Eric Tittley*

Monthly Notices of the Royal Astronomical Society, 449(4):3393–3406