Charlotte A. Mason

High Redshift — Galaxy Evolution — Reionization
Luminosity Functions — Gravitational Lensing

ADDRESS: Department of Physics and Astronomy
UCLA, Los Angeles
CA 90095-1547, USA
EMAIL: cmason@astro.ucla.edu
WEBSITE: http://astro.ucla.edu/~cmason

Education

Current 2015 - | **Doctor of Philosophy (PhD) Candidate** in Astronomy
University of California, Los Angeles, California, USA
Thesis: "*Galaxies at the Epoch of Cosmic Reionization*"
Advisor: Prof. Tommaso Treu

2013 - 2015 | **Master of Arts (MA)** in Physics, with Astrophysics Emphasis
University of California, Santa Barbara, California, USA

2009 - 2013 | **Master of Physics (MPhys)**, 4 Year Undergraduate Honours Degree
Merton College, University of Oxford, Oxford, UK
Thesis: "*High-Redshift Disk Formation*"
Supervisors: Dr. Julien Devriendt & Dr. Adrianne Slyz

Honours, Fellowships, and Awards

Dr. Pliny A. and Margaret H. Price Prize in Cosmology and AstroParticle Physics, *CCAPP, Ohio State University*, 2017
NASA Earth and Space Science Fellowship (NESSF), 2016, $30,000
Chair's Outstanding Service Award, *Physics Department, UC Santa Barbara*, 2015
International Travel Grant to XXIX IAU General Assembly, *AAS*, 2015, $1,000
Yzurdiaga Graduate Fellowship, *UC Santa Barbara*, 2013, $7,000
Broida Fellowship, Physics Department, *UC Santa Barbara*, 2013, $3,000
Haigh Tie for Achievement and Service to College Sport, *Merton College, University of Oxford*, 2013
Fowler Prize for Achievement, 4 times, *Merton College, University of Oxford*, 2009 - 2013
Exhibition (Prize Scholarship), *Merton College, University of Oxford*, 2012
Summer Undergraduate Research Fellowship, *California Institute of Technology*, 2011
Book Prize, Physics Undergraduate Speaking Competition, *University of Oxford*, 2011
Prize for Excellence in Physics, *Oxford High School GDST*, 2009
Prize for Academic Achievement and Service to the School, *Oxford High School GDST*, 2009
Royal Air Force Gliding Scholarship, 2008
Scholar, International Summer School for Young Physicists, *Perimeter Institute*, 2008
Academic Scholarship & Best Astronomer Award, *Senior Space School UK*, 2007

Publications

14 peer reviewed papers, including 3 as first author.
52 first author paper citations, 227 total citations (June 1, 2017).

First Author Publications

3. Mason, C. A., et al. First Results from the KMOS Lens-Amplified Spectroscopic Survey (KLASS): Kinematics of Lensed Galaxies at Cosmic Noon. ApJ, 838:14, 2017.
2. Mason, C. A., Trenti, M., and Treu, T. The Galaxy UV Luminosity Function before the Epoch of Reionization. ApJ, 813:21, 2015.
1. Mason, C. A., et al. Correcting the $z \sim 8$ Galaxy Luminosity Function for Gravitational Lensing Magnification Bias. ApJ, 805:79, 2015.

Contributing Author Publications

11. Schmidt, K. B., et al. The Grism Lens-Amplified Survey from Space (GLASS). XI. Detection of CIV in Multiple Images of the z = 6.11 Lyα Emitter behind RXC J2248.7-4431. ApJ, 839:17, 2017.
10. Hoag, A., et al. Spectroscopic confirmation of an ultra-faint galaxy at the epoch of reionization. Nature Astronomy, 1:0091, 2017.

9. Wang, X., et al. The Grism Lens-amplified Survey from Space (GLASS). X. Sub-kiloparsec Resolution Gas-phase Metallicity Maps at Cosmic Noon behind the Hubble Frontier Fields Cluster MACS1149.6+2223. ApJ, 837:89, 2017.
8. Santini, P., et al. Characterizing elusive, faint dusty star-forming galaxies: a lensed, optically undetected ALMA galaxy at $z = 3.3$. A&A, 596:A75, 2016.
7. Bernard, S. R., et al. Galaxy Candidates at $z \sim 10$ in Archival Data from the Brightest of Reionizing Galaxies (BORG[z8]) Survey. ApJ, 827:76, 2016.
6. Agnello, A., et al. Spectroscopy and high-resolution imaging of the gravitational lens SDSS J1206+4332. MNRAS, 458:3830–3838, 2016.
5. Huang, K.-H., et al. Detection of Lyman-alpha Emission from a Triply Imaged $z = 6.85$ Galaxy behind MACS J2129.4-0741. ApJ, 823:L14, 2016.
4. Schmidt, K. B., et al. The Grism Lens-Amplified Survey from Space (GLASS). III. A Census of Lyα Emission at $z7$ from HST Spectroscopy. ApJ, 818:38, 2016.
3. Calvi, V., et al. Bright Galaxies at Hubbles Redshift Detection Frontier: Preliminary Results and Design from the Redshift $z \sim 9-10$ BoRG Pure-Parallel HST Survey. ApJ, 817:120, 2016.
2. Treu, T., et al. The Grism Lens-Amplified Survey from Space (GLASS). I. Survey Overview and First Data Release. ApJ, 812:114, 2015.
1. Schmidt, K. B., et al. Through the Looking GLASS: HST Spectroscopy of Faint Galaxies Lensed by the Frontier Fields Cluster MACSJ0717.5+3745. ApJ, 782:L36, 2014.

Invited Talks

UC Santa Barbara, CA, 2017	Lunch Talk
CCAPP, Ohio State University, OH, 2017	Price Prize Seminar
University of Oxford, UK, 2016	Galaxy Evolution Seminar
UC Davis, CA, 2016	Cosmology Seminar
Institute for Cosmology and Gravitation, Portsmouth, UK, 2015	Lunch Talk

Conferences

Physical Characteristics of Normal Galaxies at $z > 2$, Leiden, NL, 2016	Contributed Talk
Galaxy Workshop, UC Santa Cruz, CA, 2016	Contributed Talk
The Reionization Epoch, Aspen Center for Physics, Aspen, CO, 2016	Contributed Talk
Early Growth of Galaxies, Sexten Center for Astrophysics, Italy, 2016	Contributed Talk
First Light & Cosmology, Institut Astrophysique de Paris, France, 2015	Contributed Talk
Cosmic Dawn Initiative Workshop, UC Irvine, CA, 2015	Poster
IAU Symposium 319, Honolulu, HI, 2015	Poster
South by High Redshift, UT Austin, TX, 2015	Poster
IAU Symposium 311, University of Oxford, UK, 2014	Poster

Approved Observing Proposals (CoI)

5. HST-14701, PI Trenti: Is galaxy formation different during the epoch of reionization?
4. Spitzer-12058, PI Bouwens: The Brightest Galaxies at Cosmic Dawn: Securing the Largest Samples of $z = 9-11$ galaxies for JWST by leveraging the HST archive with Spitzer/IRAC
3. VLT-196.A-0778, PI Fontana: The formation and evolution of galaxies from cosmic dawn to high-noon under a magnifying GLASS
2. HST-14280, PI Bradač: Breaking Cosmic Dawn: Observing the $z \geq 7$ Universe Through Cosmic Telescopes
1. HST-13767, PI Trenti: Bright Galaxies at Hubble's Detection Frontier: The redshift $z \sim 9-10$ BoRG pure-parallel survey

Teaching Experience

Adjunct Faculty, Earth & Planetary Science Department, Santa Barbara City College

- *Astronomy Lab*, 2015-2017
  Interactive class for non-science majors, taught in a planetarium and observatory

Teaching Assistant, Physics Department, UCSB

- *Quantum Mechanics*, Fall 2013 (Upper Division)
- *Physics 1*, Spring 2014 (Lower Division, mechanics for non-Physics students)

Observing Experience

KMOS, VLT, design and reduction of ongoing 140 hour Large Program	2015 - 2017
DEIMOS, Keck II, 3 nights	2015
MOSFIRE, Keck I, 1 half night (remote)	2015
NASA IRTF, 3 nights (remote)	2011

Undergraduate Research Experience

Summer Studentship in String Theory 2012
Rudolf Peierls Center for Theoretical Physics, University of Oxford, Oxford, UK

Caltech Summer Undergraduate Research Fellowship 2011
NASA Jet Propulsion Laboratory, Pasadena, California, USA

Positions of Responsibility

Women's Captain, Merton College Boat Club, 2012 - 13
Publicity Officer, Oxford Society for Females in Engineering, Science and Technology, 2012 - 13
Creative Director, Bang! Popular Science Magazine, University of Oxford, 2011
Vice President of Junior Common Room, Merton College, University of Oxford, 2010 - 11

Outreach and Diversity

- Host and speaker at Astronomy on Tap, Santa Barbara
- Invited Public Talks at Santa Barbara City College, Santa Barbara Salon, and Santa Barbara Astronomical Unit
- Committee Member of UCSB Women in Physics group
- Started a mentorship program for women in STEM at Oxford University
- Created string theory outreach website `http://www.whystringtheory.com`
- Co-ordinated the Merton College undergraduate admissions process
- Organized 3 Open Days for undergraduates at Merton College
- BBC Mastermind contestant, 2012. Specialist Subject: Gemini Space Program.