# Charlotte Mason

Associate Professor of Extragalactic Astrophysics Cosmic Dawn Center, University of Copenhagen

address: Niels Bohr Institute, University of Copenhagen,

Jagtvei 128, 2200 København N, Denmark

charlotte.mason@nbi.ku.dk email:

website: http://charlottenosam.github.io

Research **Interests** 

Hydrogen reionization; high redshift galaxy formation and evolution; evolution of the intergalactic medium; dark matter; Lyman- $\alpha$  emission; 21-cm signal; gravitational lensing; Bayesian statistics

**Academic Employment**  **Associate Professor** of Extragalactic Astrophysics

2021 -

Cosmic Dawn Center, Niels Bohr Institute, University of Copenhagen, Denmark

NASA Hubble Fellow & CfA Fellow

2018 - 2021

Colloquium

Colloquium

Colloquium

Colloquium

Seminar

Seminar

Seminar

Seminar Seminar

Center for Astrophysics | Harvard & Smithsonian, Cambridge, MA, USA

**Education** 

2015 - 2018

Doctor of Philosophy (PhD) 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

Selected Honours, Fellowships, and Awards

NASA Hubble Fellowship, 2018

CfA Fellowship, Harvard-Smithsonian Center for Astrophysics, 2018

Rodger Doxsey Prize, AAS, 2018

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 - 2018

Chair's Outstanding Service Award, Physics Department, UC Santa Barbara, 2015

Yzurdiaga Graduate Fellowship, UC Santa Barbara, 2013 Broida Fellowship, Physics Department, UC Santa Barbara

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 Scholar, International Summer School for Young Physicists, Perimeter Institute, 2008

**Publications** 

56 journal articles (14 under review), including 10 as first author. 767 first author paper citations,

2392 total citations. h index of 26 (ADS 2023-01-30). Full publication list at end of CV.

Invited Colloquia, Seminars and Lectures

34. Munich, Germany, 2023 (upcoming)

33. Aarhus University, Denmark, 2023 (upcoming)

32. Stockholm University, Sweden, 2023 (upcoming)

31. University of Southern California, USA, 2023 (upcoming)

30. University of Edinburgh, UK, 2023

29. Laboratoire d'Astrophysique de Marseille, France, 2022

28. Scuola Normale Superiore di Pisa, Italy, 2022

27. Uppsala University, Sweden, 2022

26. Imperial College London, UK, 2022

25. University of Hertfordshire, UK, 2022 Seminar

24. Niels Bohr Institute, University of Copenhagen, Denmark, 2021	Tenure Lecture
23. UCLA, USA, 2021	Colloquium
22. Kathmandu Astrophysics School, Nepal, 2020	Lecture
21. University of Arizona, USA, 2020	Seminar
20. Cosmic Dawn Center, University of Copenhagen, Denmark, 2020	Seminar
19. University of Sussex, UK, 2020	Colloquium
18. Institute for Cosmology and Gravitation, Portsmouth, UK, 2020	Colloquium
17. Lancaster University, UK, 2020	Seminar
16. University of Minnesota, USA, 2020	Colloquium
15. UT Austin, USA, 2019	Colloquium
14. Tufts University, USA, 2019	Seminar
13. University of Michigan, USA, 2019	Colloquium
12. University of Melbourne, Australia, 2019	Colloquium
11. CITA, Canada, 2019	Seminar
10. McGill Space Institute, Canada, 2018	Seminar
9. University of Connecticut, USA, 2018	Seminar
8. Harvard-Smithsonian CfA, USA, 2018	Seminar
7. UC Berkeley, USA, 2017	Seminar
6. KIPAC, Stanford University, USA, 2017	Seminar
5. UC Santa Barbara, USA, 2017	Seminar
4. CCAPP, Ohio State University, USA, 2017	Seminar
3. University of Oxford, UK, 2016	Seminar
2. UC Davis, USA, 2016	Seminar
1. Institute for Cosmology and Gravitation, Portsmouth, UK, 2015	Seminar

# Conference Talks

- 17 invited conference talks and reviews since 2016, marked with \*
- \*28. (upcoming) The James Webb Space Telescope turns one: the birth and growth of galaxies, Sexten CfA, Italy, 2023
- \*27. (upcoming) A new era in extragalactic astronomy: early results from the James Webb Space Telescope, Cambridge, UK, 2023
- \*26. (upcoming) Growth of Galaxies in the Early Universe, Sexten CfA, Italy, 2023
- \*25. (upcoming) Understanding the epoch of cosmic reionization, Sexten CfA, Italy, 2023
- \*24. (upcoming) The Co-evolution of the Cosmic Web and Galaxies across Cosmic Time, KITP, CA. 2023
- \*23. Reionization on a Blackboard, New York, NY, 2022
- Invited Review
- \*22. DAWN Inauguration Conference, Copenhagen, DK, 2022
- \*21. Reionization and Cosmic Dawn, Berkeley, CA, 2022 (cancelled due to illness)
- \*20. Growth of Galaxies in the Early Universe, Sexten CfA, Italy, 2022
- Invited Review

- 19. SAZERAC: The 21cm signal, online, 2022
- \*18. SAZERAC: Learning the high-redshift Universe, online, 2022
- Invited Review Invited Review

- \*17. DAWN Summit, Copenhagen, DK, 2021 16. Cosmology From Home, online, 2021
- \*15. EAS Symposium: Panchromatic and hyper-spectral observations of Cluster Lenses and Lensed Galaxies, online, 2020
- \*14. Growth of Galaxies in the Early Universe, Sexten CfA, Italy, 2020
- 13. Barefoot EoR, Fitzroy Island, Australia, 2019
- 12. Big Eyes on the Early Universe, Los Angeles, CA, 2019
- \*11. Growth of Galaxies in the Early Universe, Sexten CfA, Italy, 2019
- \*10. KMOS@5, ESO, Garching, Germany, 2018
  - \*9. Growth of Galaxies in the Early Universe, Sexten CCfA, Italy, 2018
  - 8. AAS 231, Washington DC, 2018

Dissertation Talk

- 7. Cosmic Dawn with JWST, STScl, Baltimore, MD, 2017
- 6. EWASS SS15: Unravelling the First Billion Years, Prague, CZ, 2017
- 5. Physical Characteristics of Normal Galaxies at z > 2, Leiden, NL, 2016
- 4. Galaxy Workshop, UC Santa Cruz, CA, 2016
- 3. The Reionization Epoch, Aspen Center for Physics, Aspen, CO, 2016
- \*2. Growth of Galaxies in the Early Universe, Sexten CfA, Italy, 2016
- 1. First Light & Cosmology, Institut Astrophysique de Paris, France, 2015

# Advising and Teaching **Experience**

#### **PhD Students**

- Ting-Yi Lu (University of Copenhagen), 2021-Primary supervisor.
- Gonzalo Prieto Lyon (University of Copenhagen), 2021-Primary supervisor. 1 paper published.
- Rohan Naidu (Harvard), 2018-2020 Co-supervisor for projects related to reionization. 2 papers published.

### **Undergraduate Students**

- Alexa Morales (Florida International University → UT Austin, PhD student) Supervisor for SAO Summer REU program, 2020. 1 published paper: Morales, Mason, et al. 2021. ApJ, 919, 120.
- Lilv Whitler (Arizona State University → University of Arizona, NSF Graduate Research Fellow) Supervisor for SAO Summer REU program, 2019. 1 published paper: Whitler, Mason, et al., 2020. MNRAS, 495, 3602.

#### **Examinations**

PhD defense committee: Vasily Kokorev (NBI), Lukas Furtak (Sorbonne Université, France)

#### **Teaching**

- Lecturer: Cosmology. Unversity of Copenhagen 2022.
- Lecturer: Extragalactic Astrophysics. Unversity of Copenhagen 2021–2022.
- Primary Instructor: Astronomy Lab, 2015–2017. Interactive class taught in a planetarium and observatory. As Adjunct Faculty, Santa Barbara City College
- Teaching Assistant: Quantum Mechanics, Physics 1 Classical Mechanics for non-Physics student. Physics Department, UCSB

### Training in teaching and mentorship

- Introduction to University Pedagogy course, University of Copenhagen, 2022
- PhD Supervision course, University of Copenhagen, 2021
- The Science of Teaching Science course, Harvard University, 2021
- Certificate in Undergraduate Mentoring in Science Education, Harvard University, 2020
- AAS Astronomy Ambassador, 2018

### Major Grants (PI)

Career total: \$2.4 million (16 million DKK) in external funding.

2. Semper Ardens: Accelerate grant, Carlsberg Foundation, 2022

1. Villum Young Investigator, Villum Foundation, 2021

5 million DKK 8 million DKK

# **Approved** Observing Proposals (PI)

- 3. ESO-109.24EZ.001 (DDT): The high redshift universe in full colour: the power of MUSE and JWST
- 2. MMT/Binospec 2019-2020: Unraveling Reionization with Resolved Lyman Alpha (15.5 nights)
- 1. Magellan/FIRE 2020: The Evolution of Super Massive Black Holes in the First Billion Years (2 nights)

# **Approved** Observing Proposals (Col)

JWST (1 ERS program - PI Treu, 4 GO programs - PIs: Dunlop, Malkan, Oesch, Roberts-Borsani), HST (4 GO progams - Pls: Treu, Trenti, 2 archival programs - Pls: Bradač, Morishita), Spitzer (1 program - PI: Bouwens), ESO (3 programs - PIs: Fontana, Sanchez-Janssen, Hayes), MMT (1 program - PI: Tacchella)

### **Professional** Service

- Conference scientific organizing committees: SAZERAC conference (online) 2020, 2021; EAS Symposium (Seville, Spain) 2021, First Light Conference (Boston, USA) 2023
- Seminar organizing: DAWN Cake talks, CfA High Redshift Galaxy Evolution Meeting, CfA Galaxies & Cosmology Seminar, UCSB Astrophysics Colloquia
- Grant/observing proposal reviewing: NSF Astronomy and Astrophysics Grants, NASA Astrophysics Data Analysis Program, NASA FINESST graduate fellowship

- Hiring committees: DAWN Fellowship committee (chair 2022), DAWN PhD selection committee
- Journal referee: ApJ, MNRAS, A&A, Physical Review Letters
- Software tester for STScl JWST Data Analysis Development Forum
- Working groups: E-ELT ANDES Science Team member

# Media, Outreach and DEI

- Media Interviews:
  - TV/Video: BBC/PBS NOVA "Universe"; Videnskab.dk
  - Radio: NPR "All Things Considered"
  - Print: Scientific American; Science; Nature
- Outreach:
  - NASA Universe of Learning Subject Matter Expert
  - AAS Astronomy Ambassador
  - Volunteer at Cambridge Explores the Universe
  - Virtual classroom visits with YouthAstroNet
  - Host and speaker at Astronomy on Tap, Santa Barbara and Boston
  - Invited Public Talks at Santa Barbara City College, Santa Barbara Salon, Santa Barbara Astronomical Unit and Merton College, Oxford
- DEI:
  - Contributor to NHFP Anti-Racism Initiative https://www.nhfp-equity.org
  - Committee member of UCSB Women in Physics group
  - Started a mentorship program for women in STEM at Oxford University

#### **Publication List**

PhD students directly under my supervision are marked with †, BSc and MSc students are marked with \*

#### First author and student publications

- 13. Mason, C. A., Trenti, M., and Treu, T. The brightest galaxies at cosmic dawn. Accepted for publication in MNRAS, 2023. arXiv:2207.14808.
- 12. Mason, C. A., et al. 21cmfish: Fisher-matrix framework for fast parameter forecasts from the cosmic 21-cm signal. arXiv e-prints, arXiv:2212.09797, 2022.
- 11. †Prieto-Lyon, G., et al. The production of ionizing photons in UV-faint  $z\sim 3-7$  galaxies. Accepted for publication in A&A, arXiv:2211.12548, 2022.
- 10. \*Morales, A. M., et al. The Evolution of the Lyman-alpha Luminosity Function during Reionization. ApJ, 919, 2:120, 2021.
- 9. Mason, C. A. and Gronke, M. Measuring the properties of reionized bubbles with resolved  $Ly\alpha$  spectra. MNRAS, 499, 1:1395–1405, 2020.
- 8. \*Whitler, L. R., et al. The impact of scatter in the galaxy UV luminosity to halo mass relation on Ly  $\alpha$  visibility during the epoch of reionization. MNRAS, 495, 4:3602–3613, 2020.
- 7. Mason, C. A., et al. Model-independent constraints on the hydrogen-ionizing emissivity at z > 6. MNRAS, 489, 2:2669–2676, 2019.
- 6. Mason, C. A., et al. Inferences on the timeline of reionization at z  $\sim$  8 from the KMOS Lens-Amplified Spectroscopic Survey. MNRAS, 485, 3:3947–3969, 2019.
- 5. Mason, C. A., et al. Beacons into the Cosmic Dark Ages: Boosted Transmission of Ly $\alpha$  from UV Bright Galaxies at z  $\gtrsim$  7. ApJ, 857, 2:L11, 2018.
- 4. Mason, C. A., et al. The Universe Is Reionizing at  $z \sim 7$ : Bayesian Inference of the IGM Neutral Fraction Using Ly $\alpha$  Emission from Galaxies. ApJ, 856, 1:2, 2018.
- 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, 1:14, 2017.
- 2. Mason, C. A., Trenti, M., and Treu, T. The Galaxy UV Luminosity Function before the Epoch of Reionization. ApJ, 813, 1:21, 2015.
- 1. Mason, C. A., et al. Correcting the  $z\sim 8$  Galaxy Luminosity Function for Gravitational Lensing Magnification Bias. ApJ, 805, 1:79, 2015.

#### **Contributing author publications**

56. Bakx, T. J. L. C., et al. Deep ALMA redshift search of a  $z\sim12$  GLASS-JWST galaxy candidate. MNRAS, 519, 4:5076–5085, 2023.

- 55. Santini, P., et al. Early Results from GLASS-JWST. XI. Stellar Masses and Mass-to-light Ratio of z > 7 Galaxies. ApJ, 942, 2:L27, 2023.
- 54. Tang, M., et al. JWST/NIRSpec Spectroscopy of z=7-9 Star Forming Galaxies with CEERS: New Insight into Bright Ly $\alpha$  Emitters in Ionized Bubbles. arXiv e-prints, arXiv:2301.07072, 2023.
- 53. Mascia, S., et al. Closing in on the sources of cosmic reionization: first results from the GLASS-JWST program. arXiv e-prints, arXiv:2301.02816, 2023.
- 52. Leethochawalit, N., et al. Early Results from GLASS-JWST. X. Rest-frame UV-optical Properties of Galaxies at 7 < z < 9. ApJ, 942, 2:L26, 2023.
- 51. Treu, T., et al. Early Results From GLASS-JWST. XII. The Morphology of Galaxies at the Epoch of Reionization. ApJ, 942, 2:L28, 2023.
- 50. Paris, D., et al. The GLASS-JWST Early Release Science Program. II. Stage I release of NIRCam imaging and catalogs in the Abell 2744 region. arXiv e-prints, arXiv:2301.02179, 2023.
- 49. Bolan, P., et al. Inferring the intergalactic medium neutral fraction at  $z\sim 6-8$  with low-luminosity Lyman break galaxies. MNRAS, 517, 3:3263–3274, 2022.
- 48. Giménez-Arteaga, C., et al. Spatially Resolved Properties of High Redshift Galaxies in the SMACS0723 JWST ERO Field. arXiv e-prints, arXiv:2212.08670, 2022.
- 47. Heintz, K. E., et al. A fundamental plane of galaxy assembly and chemical enrichment within the first 700 Myr after the Big Bang. arXiv e-prints, arXiv:2212.02890, 2022.
- 46. Castellano, M., et al. A High Density of Bright Galaxies at  $z\approx 10$  in the A2744 region. arXiv e-prints, arXiv:2212.06666, 2022.
- 45. Boyett, K., et al. Early Results from GLASS-JWST. VI. Extreme Rest-optical Equivalent Widths Detected in NIRISS Wide Field Slitless Spectroscopy. ApJ, 940, 2:L52, 2022.
- 44. Morishita, T., et al. Early results from GLASS-JWST. XVIII: A spectroscopically confirmed protocluster 650 million years after the Big Bang. arXiv e-prints, arXiv:2211.09097, 2022.
- 43. Roberts-Borsani, G., et al. A shot in the Dark (Ages): a faint galaxy at z=9.76 confirmed with JWST. arXiv e-prints, arXiv:2210.15639, 2022.
- 42. Castellano, M., et al. Early Results from GLASS-JWST. III. Galaxy Candidates at  $z\sim 9-15$ . ApJ, 938, 2:L15, 2022.
- 41. Yang, L., et al. Early Results from GLASS-JWST. V: The First Rest-frame Optical Size-Luminosity Relation of Galaxies at z > 7. ApJ, 938, 2:L17, 2022.
- 40. Roberts-Borsani, G., et al. Early Results from GLASS-JWST. I: Confirmation of Lensed  $z \ge 7$  Lyman-break Galaxies behind the Abell 2744 Cluster with NIRISS. ApJ, 938, 2:L13, 2022.
- 39. Merlin, E., et al. Early Results from GLASS-JWST. II. NIRCam Extragalactic Imaging and Photometric Catalog. ApJ, 938, 2:L14, 2022.
- 38. Ishikawa, Y., et al. Unresolved  $z\sim 8$  Point Sources and Their Impact on the Bright End of the Galaxy Luminosity Function. ApJ, 936, 2:167, 2022.
- 37. Treu, T., et al. The GLASS-JWST Early Release Science Program. I. Survey Design and Release Plans. ApJ, 935, 2:110, 2022.
- 36. Jacobs, C., et al. Early results from GLASS-JWST XIV: A first morphological atlas of the 1 < z < 5 Universe in the rest-frame optical. arXiv e-prints, arXiv:2208.06516, 2022.
- 35. Dressler, A., et al. Early Results From GLASS-JWST. XVII: Building the First Galaxies Chapter 1. Star Formation Histories at 5 < z < 7. arXiv e-prints, arXiv:2208.04292, 2022.
- 34. Glazebrook, K., et al. Early results from GLASS-JWST XV: the faintest red sources in the NIRCAM deep fields are intrinsically blue. arXiv e-prints, arXiv:2208.03468, 2022.
- 33. Roberts-Borsani, G., et al. Nature and Nurture? Comparing Ly $\alpha$  Detections in UV Bright and Fainter [O III]+H $\beta$  Emitters at  $z\sim 8$  With Keck/MOSFIRE. arXiv e-prints, arXiv:2207.01629, 2022.
- 32. Nanayakkara, T., et al. Early results from GLASS-JWST XVI: Discovering a bluer  $z\sim 4-7$  Universe through UV slopes. arXiv e-prints, arXiv:2207.13860, 2022.
- 31. Valentino, F., et al. The Archival Discovery of a Strong Ly $\alpha$  and [C II] Emitter at z=7.677. ApJ, 929, 1:L9, 2022.
- 30. Muñoz, J. B., et al. The impact of the first galaxies on cosmic dawn and reionization. MNRAS, 511, 3:3657–3681, 2022.
- 29. Gronke, M., et al. Lyman- $\alpha$  transmission properties of the intergalactic medium in the CoDall simulation. MNRAS, 508, 3:3697–3709, 2021.
- 28. Lemaux, B. C., et al. The size and pervasiveness of Ly  $\alpha$ -UV spatial offsets in star-forming galaxies at z  $\sim$  6. MNRAS, 504, 3:3662–3681, 2021.

- 27. Roberts-Borsani, G., et al. Improving  $z\sim7-11$  Galaxy Property Estimates with JWST/NIRCam Medium-band Photometry. ApJ, 910, 2:86, 2021.
- 26. Pelliccia, D., et al. RELICS-DP7: Spectroscopic Confirmation of a Dichromatic Primeval Galaxy at  $z \sim 7$ . ApJ, 908, 2:L30, 2021.
- 25. Morishita, T., et al. SuperBoRG: Exploration of Point Sources at  $z\sim8$  in HST Parallel Fields. ApJ, 904, 1:50, 2020.
- 24. Mirocha, J., Mason, C., and Stark, D. P. Effects of self-consistent rest-ultraviolet colours in semi-empirical galaxy formation models. MNRAS, 498, 2:2645–2661, 2020.
- 23. Girard, M., et al. The KMOS Lens-Amplified Spectroscopic Survey (KLASS): kinematics and clumpiness of low-mass galaxies at cosmic noon. MNRAS, 497, 1:173–191, 2020.
- 22. Fuller, S., et al. Spectroscopically Confirmed Ly $\alpha$  Emitters from Redshift 5 to 7 behind 10 Galaxy Cluster Lenses. ApJ, 896, 2:156, 2020.
- 21. Naidu, R. P., et al. Rapid Reionization by the Oligarchs: The Case for Massive, UV-bright, Star-forming Galaxies with High Escape Fractions. ApJ, 892, 2:109, 2020.
- 20. Bradač, M., et al. Hubble Frontier Field photometric catalogues of Abell 370 and RXC J2248.7-4431: multiwavelength photometry, photometric redshifts, and stellar properties. MNRAS, 489, 1:99–107, 2019.
- 19. Hoag, A., et al. Constraining Lyman-alpha spatial offsets at 3 < z < 5.5 from VANDELS slit spectroscopy. MNRAS, 488, 1:706–719, 2019.
- 18. Hoag, A., et al. Constraining the Neutral Fraction of Hydrogen in the IGM at Redshift 7.5. ApJ, 878, 1:12, 2019.
- 17. Ren, K., Trenti, M., and Mason, C. A. The Brightest Galaxies at Cosmic Dawn from Scatter in the Galaxy Luminosity versus Halo Mass Relation. ApJ, 878, 2:114, 2019.
- 16. Morishita, T., et al. The Bright-end Galaxy Candidates at  $z\sim9$  from 79 Independent HST Fields. ApJ, 867, 2:150, 2018.
- 15. Livermore, R. C., et al. HST Follow-up Observations of Two Bright  $z\sim8$  Candidate Galaxies from the BoRG Pure-parallel Survey. ApJ, 861, 2:L17, 2018.
- 14. Abramson, L. E., et al. The Grism Lens-amplified Survey from Space (GLASS). XII. Spatially Resolved Galaxy Star Formation Histories and True Evolutionary Paths at z > 1. AJ, 156, 1:29, 2018.
- 13. Finney, E. Q., et al. Mass Modeling of Frontier Fields Cluster MACS J1149.5+2223 Using Strong and Weak Lensing. ApJ, 859, 1:58, 2018.
- 12. Hoag, A., et al. HST Grism Observations of a Gravitationally Lensed Redshift 9.5 Galaxy. ApJ, 854, 1:39, 2018.
- 11. Hoag, A., et al. Spectroscopic confirmation of an ultra-faint galaxy at the epoch of reionization. Nature Astronomy, 1:0091, 2017.
- 10. Schmidt, K. B., et al. The Grism Lens-Amplified Survey from Space (GLASS). XI. Detection of C IV in Multiple Images of the z=6.11 Ly $\alpha$  Emitter behind RXC J2248.7-4431. ApJ, 839, 1:17, 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, 1:89, 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, 1:76, 2016.
- 6. Agnello, A., et al. Spectroscopy and high-resolution imaging of the gravitational lens SDSS J1206+4332. MNRAS, 458, 4:3830–3838, 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, 1:L14, 2016.
- 4. Schmidt, K. B., et al. The Grism Lens-Amplified Survey from Space (GLASS). III. A Census of Ly $\alpha$  Emission at z  $\gtrsim$  7 from HST Spectroscopy. ApJ, 818, 1:38, 2016.
- 3. Calvi, V., et al. Bright Galaxies at Hubble's Redshift Detection Frontier: Preliminary Results and Design from the Redshift  $z\sim 9-10$  BoRG Pure-Parallel HST Survey. ApJ, 817, 2:120, 2016.
- 2. Treu, T., et al. The Grism Lens-Amplified Survey from Space (GLASS). I. Survey Overview and First Data Release. ApJ, 812, 2:114, 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, 2:L36, 2014.