Karen L. Masters

Contact Information

Physics & Astronomy Department
Haverford College
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Professional Appointments

Physics & Astronomy Department, Haverford College, PA, USA
Associate Professor of Astronomy and Physics — **Jan 2018 -**

Institute of Cosmology and Gravitation, University of Portsmouth, UK
0.2 FTE Reader in Astronomy and Astrophysics — **Jan 2018 - Sept 2019**
Reader in Astronomy and Astrophysics (equiv. Associate Prof.) — **2015-2017**
Senior Lecturer (equiv. Assistant Prof.) — **2014-2015**
University Research Fellow — **2012-2014**
Leverhulme Early Career Research Fellow (with Bob Nichol) — **2010-2012**
The 2008 Peter and Patricia Gruber Foundation IAU Fellow (with Bob Nichol) — **2008-2010**
. (maternity leave Feb-Sep 2010)
Harvard-SAO Center for Astrophysics, Cambridge, MA, USA
Smithsonian Visiting Scientist (with Andrés Jordán) — **July/Aug 2008**
Harvard Postdoctoral Research Fellow (with John Huchra) — **Sept 2005- June 2008**
. (maternity leave Mar-Jun 2007)

Education

Ph.D in Astronomy, **Cornell University**, Ithaca, NY, USA — **August 2005**
Thesis: *Galaxy flows in and around the Local Supercluster*, (Advisor: Martha Haynes)

M.S. in Astronomy **Cornell University**, Ithaca, NY, USA — **January 2003**

B.A. in Physics (1st Class, Top of B.A. class), **Oxford University**, Oxford, UK — **June 2000**

Selected Honours and Awards

- Royal Astronomical Society Group Achievement Award for Galaxy Zoo Team (June 2019)
- Elected SDSS-IV Spokesperson (July 2016); re-elected (July 2019)
- Named SDSS-IV "Architect" (2014).
- Winner, Women of the Future: Science 2014 (for "women who are shaping Britain's future").
- One of the "100 Women" of 2014, by the BBC.

Selected Recent Publications

- *Galaxy Zoo Builder: Four Component Photometric decomposition of Spiral Galaxies Guided by Citizen Science.*, Lingard, T. K., **Masters, K. L.,** Krawczyk, C., et al. 2020, ApJ in press (arXiv e-prints, arXiv:2006.10450).
- *Galactic conformity in both star formation and morphological properties.*, **Otter, J. A.**, **Masters, K. L.**, Simmons, B., Lintott, C. J. 2020, MNRAS 492, 2722.
- *L-band Calibration of the Green Bank Telescope from 2016-2019.*, **Goddy, J.**, Stark, D. V., **Masters, K. L.** 2020, RNAAS, 4, 3.
- *The Sixteenth Data Release of the Sloan Digital Sky Surveys: First Release from the APOGEE-2 Southern Survey and Full Release of eBOSS Spectra*, Ahumada et al. (SDSS-IV Collaboration in alphabetical order co-ordinated by **Karen L. Masters**) 2020, ApJS 249, 1.
- *HI-MaNGA: H I follow-up for the MaNGA survey*, **Karen L. Masters** et al 2019, MNRAS 488, 3396
- *Galaxy Zoo: Unwinding the Winding Problem - Observations of Spiral Bulge Prominence and Arm Pitch Angles Suggest Local Spiral Galaxies are Winding*, **Karen L. Masters** et al. 2019, MNRAS 487, 1808

Summary: **139 publications in peer reviewed journals. Combined total of over 15,000 citations (from ADS; Astrophysics Data System), h-index=52.**

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Selected Research Talks/Seminars

Invited Conference Talks:
Invited Review, Galactic Dynamics in the Era of Large Surveys, July 2019, Shanghai — MaNGA Collaboration Meeting, Oxford, Apr 2019 — Review Talk, Galactic Rings, Alabama, June 2018 — Ten Years of Galaxy Zoo, Conference Summary, July 2017 — Multimedia in Physics Teaching & Learning, Milton Keynes Sept 2017 — Conference Summary, The Changing Faces of Galaxies, Tasmania, Australia, Sept 2016 — Invited Plenary, SDSS-IV Collaboration Meeting, Madison, WI, USA, June 2016 — "Sharing One Sky: SDSS, APOGEE and Astronomy Outreach, Chile, May 2016 — UK Dark Energy Strategy Meeting, RAS, London, Jan 2016 — FM19 of the IAU General Assembly, Honolulu, Hawaii, USA, Aug 2015 — Plenary, SDSS Collaboration Meeting, Madrid, Spain, Jul 2015 — The Many Pathways to Galaxy Growth, Prato, Italy, Jun 2015 — Kavli Workshop on Citizen Science, Oxford, UK, Apr 2015 — RAS Ordinary Meeting, London, Mar 2015 — Chinese SDSS-VI Collaboration, NAOC, Beijing, China, Nov 2014 — Plenary, Sloan Digital Sky Survey Collaboration Meeting, Utah, USA, Jul 2014 — Plenary, Morphology in the Era of Large Surveys (ESO Workshop), Chile, Nov 2013 — Plenary, Evolutionary Paths in Galaxy Morphology, Sydney, Australia, Sept 2013 — Plenary, Cosmic Flows Meeting, Marseille, France, Jun 2013 – IAU SpS15: Data Intensive Astronomy, Beijing, China, Aug 2012 — Invited Discourse, 28th GA of IAU, Beijing, China, Aug 2012.

Colloquia/Seminars:
NMSU, Mar 2020 — UC Boulder, Mar 2020 — Penn State, Oct 2019 — Rutgers, Mar 2019 — Cornell, Feb 2019 — STScI (JHU), Nov 2018 — Toronto, Oct 2018 — Nottingham, Oct 2017 — Potsdam, Jun 2017 — Belfast, Feb 2017 — Nottingham, Dec 2016 — Oxford, Oct 2016 — Southampton, May 2016 — AMNH, NY, Mar 2016 — Kent, Feb 2016 — UCL, Oct 2015 — Adler Planetarium, Chicago, Mar 2015 — Leicester, Jan 2015 — Caltech, Aug 2014 — Imperial College, London, May 2014 — Geneva Observatory, Mar 2014 — Academia Sinica, Taiwan, Mar 2014 — Arcetri Observatory, Florence, Feb 2014 — Exeter, Oct 2013 — UCLan, Mar 2012 — Sussex, Jan 2013 — Surrey, Dec 2012 — UCL, Oct 2012 — Cambridge, Nov 2011.

Teaching and Research Supervision

PhD Supervision:
Tim Lingard (PhD, 2020expt , *Human-Guided Four-Component Photometric Modelling of Spiral Galaxies*), Dr. Lucy Newnham (PhD, 2019, *Tracing Galaxy Evolution through Internal Structures*), Dr. Tom Melvin (PhD, 2016, *The Role of Bars in Disc Galaxy Evolution*).

PhD External Examination:
Vaishali Parkash (Monash, July 2019) — Milena Pawlick (St Andrews, June 2016) — Ashley Hyde (Imperial College, Dec 2014)

Haverford/Bryn Mawr Undergraduate Research:
James Garland '22 (Summer 2020) — Karla Garcia '21 (Summer 2020) — Elizabeth Warrick BMC '21 (Fall 2019, Spring, Summer 2020) — Nathan Wolthius '21 (Summer 2019, 2020, Fall 2019) — Shoaib Shamsi '21 (Summer 2018, 2019, 2020, Spring 2019, 2020) — Anubhav Sharma '23 (Winter, Spring, Summer 2020) — Kate Gold BMC '21 (Spring 2020) — Autumn Winch BMC '22 (Spring 2020) — Sadie Kenyon-Dean '20 (Senior Thesis: *Light Pollution on the Haverford Campus*) — Emily Harrington BMC '20 (Summer 2018, 2019; Senior Thesis: *Inspiring a Love of Stem in BVI Children*) — Julian Goddy '21 (Summer 2019, Fall 2019) — Rachel Eaglin BMC '22 (Spring 2019) — Reilly Milburn, '19 (Senior Thesis: *Using Small Telescopes to Followup Exoplanet Transits* — Justin Otter '19 (17/18 and 18/19; Senior Thesis on campus reader)

Undergraduate Teaching at Haverford: PHYS105: *Introduction to Physics I* (Fall 2019, 2020), ASTR341: *Advanced Observational Astrophysics* (Spring 2019, Fall 2020), ASTR101: *Astronomical Ideas* (Spring 2020), ASTR204/5: *Introduction to Astrophysics* (Fall 2018, 2019), PHYS102/106: *Introduction to Physics II (Labs)* (Spring 2019), ASTR152: *First Year Seminar in Astrophysics* (Spring 2018, 2019), ASTR344: *Extragalactic Astronomy and Cosmology* (Spring 2018).

Undergraduate Teaching at Portsmouth: *Mathematical Physics* (2011, 2014); *Space Science and Applications of Physics* (2015, 2016, 2017); *Computational Physics* (2016, 2017)

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Other Professional Activities

Spokesperson for Sloan Digital Sky Surveys (SDSS)-IV Collaboration (July 2016-2021). Elected position at leader of the scientific collaboration which has over 200 members at more than 30 institutions worldwide.

Project Scientist for Galaxy Zoo (2013 -). Leadership role in the (Royal Astronomical Society Group Achievement Award 2019 winning) science team behind the citizen science project.

External Review Committees: Macalauster College Physics Department (Oct 2019), WEAVE Project (Jan 2020).

American Astronomical Society (AAS) Service: Member AAS Education Committee (2019-), Elected to AAS Nominations Committee (2020-)

Radio Astronomy Community Service: Member CORF (National Academy of Sciences Committee on Radio Frequencies, July 2020-), Green Bank Observatory Advisory Council (July 2020-), US National Radio Astronomy Observatory (NRAO) Users Committee, 2007-2010

Professional Society Memberships: RAS, AAS, IAU

Equity and Inclusion Work:

Member COINS (Committee on INclusiveness in SDSS).

Co-author of: *Asking Gender Questions*, Astronomy & Geophysics, Vol 55, Dec 2014. A study of the gender balance of astronomers asking questions at the UK National Astronomy Meeting.

Member of University of Portsmouth Athena SWAN (Gender equity in Academia) panel (2011-2017).

Popular Book Writing:

Co-Author: "30 Second Spacetravel" (popular science book, publication date TBA).

Co-Author: "30 Second Universe: 50 most significant ideas, theories, principles and events that sum up... everything" (popular science book, published 1st Oct 2019).

Chapter author: "Mary Somerville and the Mechanism of the Heavens", in "More Passion for Science: Journeys into the Unknown" (an anthology of stories of women in STEM).

Media Outreach:

Author and narrator of BBC Ideas short animated film "Scientopia", released 2018.

TV-radio guest credits for astronomy outreach include Sky at Night (*Impacts*, June 2014; *Secrets of the Whirlpool Galaxy*, June 2016), BBC Radio 4 *The Today Show*, BBC Radio Solent, also BBC World Service, Radio 5 Live, ExpressFM.

Frequent contributor to micro-outreach through new media sources. I have more than 9k followers on Twitter (@KarenLMasters) where I tweet about astronomy/science.

Outreach/Public Engagement Leadership:

Faculty Support for Public Observing nights at the Haverford College, Strawbridge Observatory (2018 -)

Outreach co-ordinator for ICG, Portsmouth, with responsibility for outreach budget, tracking impact of outreach. Line manager and mentor for ICG outreach officer, Dr. Jennifer Gupta (2011-2017).

Led Public Engagement and Outreach program for the UK National Astronomy Meeting, Portsmouth, Jun 24-27th 2014. Reached 1000+ people with a variety of astronomy outreach including a "Science Comedy Supernova!", schools programs, and live video chat with Tim Peake.

Director of Education and Public Engagement for SDSS (2013-2016). Leading development of online engagement including new education website, blogging and a social media presence.

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FULL PUBLICATION LIST

Summary: **139 publications in peer reviewed journals. Combined total of over 15,000 citations (from ADS; Astrophysics Data System), h-index=52.**

REFEREED PUBLICATIONS (FIRST AUTHOR OR SIGNIFICANT INVOLVEMENT)

2020 39. *Galaxy Zoo Builder: Four Component Photometric decomposition of Spiral Galaxies Guided by Citizen Science.*, Lingard, T. K., **Masters, K. L.,** Krawczyk, C., et al. 2020, ApJ in press (arXiv e-prints, arXiv:2006.10450).

38. *The Sixteenth Data Release of the Sloan Digital Sky Surveys: First Release from the APOGEE-2 Southern Survey and Full Release of eBOSS Spectra.*, Ahumada, R., et al, (SDSS-IV Collaboration in alphabetical order co-ordinated by **Karen L. Masters**) 2020, ApJS 249, 1.

37. *The H I morphology and stellar properties of strongly barred galaxies: support for bar quenching in massive spirals.*, Newnham, L., **Masters, K** et al. 2020, MNRAS 492, 4697.

36. *Galactic conformity in both star formation and morphological properties.*, Otter, J. A., **Masters, K. L.**, Simmons, B., Lintott, C. J. 2020, MNRAS 492, 2722.

35. *L-band Calibration of the Green Bank Telescope from 2016-2019.*, Goddy, J., Stark, D. V., **Masters, K. L.** 2020, RNAAS, 4, 3.

2019 34. *HI-MaNGA: H I follow-up for the MaNGA survey*, **Karen L. Masters**, David Stark et al 2019, MNRAS 488, 3396

33. *2MTF - VII. 2MASS Tully-Fisher survey final data release: distances for 2,062 nearby spiral galaxies*, Hong, Stavely-Smith, **Masters** et al. 2019, MNRAS 487, 2061

32. *Galaxy Zoo: Unwinding the Winding Problem - Observations of Spiral Bulge Prominence and Arm Pitch Angles Suggest Local Spiral Galaxies are Winding*, **Masters** et al. 2019, MNRAS 487, 1808.

31. *The Fifteenth Data Release of the Sloan Digital Sky Surveys: First Release of MaNGA-derived Quantities, Data Visualization Tools, and Stellar Library* Aguago et al. (SDSS-IV Collaboration in alphabetical order co-ordinated by **Karen L. Masters**) 2019, ApJ 240, 23.

2018 30. *Exploring the legacy of big stargazing events*, **Masters**, Gupta & Kedziora 2018, A&G 59, f6.

29. *SDSS-IV MaNGA: evidence of the importance of AGN feedback in low-mass galaxies*, Penny, **Masters** et al. 2018, MNRAS 476, 979

28. *The Fourteenth Data Release of the Sloan Digital Sky Survey: First Spectroscopic Data from the Extended Baryon Oscillation Spectroscopic Survey and from the Second Phase of the Apache Point Observatory Galactic Evolution Experiment* Abolfathi et al. (SDSS-IV Collaboration in alphabetical order co-ordinated by **Karen L. Masters**) 2018, ApJS 235, 42.

27. *SDSS-IV MaNGA: the different quenching histories of fast and slow rotators* Smethurst, **Masters** et al. 2018 MNRAS 473, 2679

2016 26. *SDSS-IV MaNGA: faint quenched galaxies - I. Sample selection and evidence for environmental quenching* Samantha Penny, **Karen L. Masters** et al. 2016, MNRAS 462, 3955.

25. *Science Learning via Participation in Online Citizen Science*, **Karen Masters** et al. 2016, Journal of Science Comunication, 15, 3.

2014 24. *Galaxy Zoo: CANDELS barred discs and bar fractions*, Brooke Simmons, Tom Melvin, Chris Lintott, **Karen L. Masters** et al. 2014, MNRAS 445, 3466

23. *2MTF III. HI 21cm observations of 1194 spiral galaxies with the Green Bank Telescope*, **Karen L. Masters** et al. 2014, MNRAS 443, 1044.

22. *Galaxy Zoo: an independent look at the evolution of the bar fraction over the last eight billion years from HST-COSMOS*, Tom Melvin, **Karen L. Masters** et al. 2014, MNRAS 438, 2882

2013 21. *Galaxy Zoo: Observing Secular Evolution through Bars*, Edmond Cheung, Lia Athanassoula, **Karen L. Masters** et al. 2013, ApJ, 779, 162

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2013 20. *Galaxy Zoo 2: detailed morphological classifications for 304,122 galaxies from the Sloan Digital Sky Survey*, Kyle W. Willett, Chris J. Lintott, Steven P. Bamford, **Karen L. Masters**, et al. 2013, MNRAS 435, 2835

19. *2MTF II: New Parkes 21cm observations of 303 southern galaxies*, Hong Tao, Lister Stavely-Smith, **Karen L. Masters** et al., 2013, MNRAS 432, 1178

18. *The Different Star Formation Histories of Red and Blue Spirals and Ellipticals*, Rita Tojeiro, **Karen L. Masters** et al., 2013, MNRAS 432, 359

2012 17. *Galaxy Zoo and ALFALFA: Atomic Gas and the Regulation of Star Formation in Barred Disc Galaxies*, **Karen L. Masters** et al. 2012, MNRAS 424, 2180.

16. *The fraction of early-type galaxies in low redshift groups and clusters of galaxies*, Ben Hoyle, **Karen L. Masters**, Robert C. Nichol, Raul Jimenez & Steven P. Bamford, 2012, MNRAS 423, 3478.

15. *Galaxy Zoo: The Environmental Dependence of Bars and Bulges in Disc Galaxies*, Ramin Skibba, **Karen L. Masters**, Robert C. Nichol et al. 2012, MNRAS, 423, 1485

14. *The 2MASS Redshift Survey - Description and Data Release*, John P. Huchra, Lucas M. Macri, **Karen L. Masters**, et al., 2012, ApJS 199, 26

2011 13. *The Morphology of Galaxies in the Baryon Oscillation Spectroscopic Survey*, **Karen L. Masters**, Claudia Maraston, Robert C. Nichol, et al. 2011, MNRAS 418, 1055

12. *Galaxy Zoo: Bar Lengths in Local Disk Galaxies,* Ben Hoyle, **Karen L. Masters**, Robert C. Nichol, et al. 2011 MNRAS 415, 3627

11. *Galaxy Zoo: Bars in Disk Galaxies,* **Karen L. Masters**, Robert C. Nichol, Ben Hoyle, et al. 2011 MNRAS 411, 2026

2010 10. *Galaxy Zoo: Passive Red Spirals,* **Karen L. Masters**, Moein Mosleh, A. Kathy Romer, Robert C. Nichol, et al. 2010, MNRAS 405, 783

9. *The ACS Fornax Cluster Survey VII: Half Light Radii of Globular Clusters in Early-Type Galaxies,* **Karen L. Masters**, Andrés Jordán, et al. 2010, ApJ 715, 1419.

8. *Galaxy Zoo: Dust in Spiral Galaxies* **Karen L. Masters**, Robert C. Nichol, et al. 2010, MNRAS 404, 792

2008 7. *2MTF I: The Tully-Fisher Relation in the 2MASS J, H and K-bands* **Karen L. Masters**, C. M. Springob & J. P. Huchra. 2008, AJ 135, 1738 (48 ADS citations).

6. *Geometric Tests of Cosmological Models: II. Calibration of Rotational Widths and the Tully-Fisher Relation*, A. Saintonge, **Karen L. Masters**, C. Marinoni, K. Spekkens, R. Giovanelli, & M.P. Haynes. 2008, A&A 478, 57

2007 5. *SFI++ II: A New I-band Tully-Fisher Catalog, Derivation of Peculiar Velocities and Dataset Properties,* Christopher M. Springob, **Karen L. Masters**, M.P. Haynes, R. Giovanelli & C. Marinoni. 2007, ApJS 172, 599

2006 4. *SFI++ I: A New I-band Tully-Fisher Template, the Cluster Peculiar Velocity Disp. and* H_0 **Karen L. Masters**, C.M. Springob, M.P. Haynes & R. Giovanelli. 2006, ApJ 653, 861

2004 3. *The Impact of Distance Uncertainties on Local Luminosity and Mass Functions* **Karen L. Masters**, M.P. Haynes and R. Giovanelli, 2004, ApJ 607, L115

2003 2. *Internal Extinction in Spiral Galaxies in the Near-Infrared.* **Karen L. Masters**, R. Giovanelli, and M.P. Haynes, 2003, AJ 126, 158 (64 ADS citations).

2000 1. *The Elliptical Galaxy Formerly Known as the Local Group: merging the globular cluster systems*, D.A. Forbes, **Karen L. Masters**, D. Minniti, and P. Barmby, 2000, A&A 358, 471

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Other Refereed Publications

2020 100. *SDSS-IV MaNGA: Spatially resolved star formation in barred galaxies.* Fraser-McKelvie, A., et al. including **Karen L. Masters** 2020, MNRAS, in press.

99. *SDSS-IV MaNGA: spatially resolved dust attenuation in spiral galaxies.*, Greener, M. J., et al. including **Karen L. Masters** 2020. MNRAS 495, 2305.

98. *SDSS-IV MaNGA: the role of bars in central star formation enhancements.*, Lin, L., et al. including **Karen L. Masters** 2020. MNRAS submitted (arXiv e-prints arXiv:2005.09853.)

97. *Outflows in star-forming galaxies: Stacking analyses of resolved winds and the relation to their hosts' properties.*, Roberts-Borsani, G. W., Saintonge, A., **Masters, K. L.**, Stark, D. V. 2020, MNRAS 493, 3081.

96. *Milky Way analogues in MaNGA: multiparameter homogeneity and comparison to the Milky Way.*, Boardman, N. et al. including **Karen L. Masters** 2020, MNRAS 491, 3672.

95. *Galaxy Zoo: probabilistic morphology through Bayesian CNNs and active learning*, Walmsley, M. et al. including **Karen L. Masters** 2020, MNRAS 491, 1554.

2019 94. *The Data Analysis Pipeline for the SDSS-IV MaNGA IFU Galaxy Survey: Overview*, Westfall, K. et al. including **Karen L. Masters** 2019, AJ 158, 231

93. *SDSS-IV MaNGA: stellar population gradients within barred galaxies*, Fraser-McKelvie et al. including **Karen L. Masters**) 2019 MNRAS 488, L6.

92. *Marvin: A Tool Kit for Streamlined Access and Visualization of the SDSS-IV MaNGA Data Set*, Cherinka et al. including **Karen L. Masters**) 2019 AJ 158, 74.

91. *SNITCH: seeking a simple, informative star formation history inference tool*, Smethurst et al. including **Karen L. Masters**) 2019 MNRAS, 484, 3590

90. *A direct test of density wave theory in a grand-design spiral galaxy*, Peterken et al. (including **Karen L. Masters**) 2019 Nature Astronomy, 3, 178.

89. *SDSS-IV MaNGA: pattern speeds of barred galaxies*, Guo et al. (including **Karen L. Masters**) 2019, MNRAS 482, 1733

2018 88. *JINGLE, a JCMT legacy survey of dust and gas for galaxy evolution studies - I. Survey overview and first results*, Saintonge et al. (JINGLE collaboration, including **Karen L. Masters**) 2018 MNRAS, 481, 3497.

87. *Detecting Radio AGN Signatures in Red Geysers*, Roy et al. (including **Karen L. Masters**) 2018, ApJ 869, 117

86. *SDSS-IV MaNGA: characterizing non-axisymmetric motions in galaxy velocity fields using the Radon transform*, Stark et al. (including **Karen L. Masters**) 2018, 480, 2217

85. *Signatures of the Galactic bar on stellar kinematics unveiled by APOGEE*, Palicio et al. (including **Karen L. Masters**) 2018 MNRAS 478, 1231

84. *Galaxy Zoo: constraining the origin of spiral arm*, Hart et al. (including **Karen L. Masters**) 2018 MNRAS

83. *SDSS IV MaNGA - sSFR profiles and the slow quenching of discs in green valley galaxies*, Belfiore et al. (including **Karen L. Masters**) 2018 MNRAS 477, 3014

82. *A precise extragalactic test of General Relativity*, Collett et al. including **Karen L. Masters**) 2018, Science 360, 1342.

81. *Integrating human and machine intelligence in galaxy morphology classification tasks*, Beck et al. (including **Karen L. Masters**) 2018 MNRAS 476, 5516

80. *SDSS-IV MaNGA: the spatial distribution of star formation and its dependence on mass, structure, and environment* Spindler et al. (including **Karen L. Masters**) 2018 MNRAS 476, 580

79. *SDSS-IV MaNGA: constraints on the conditions for star formation in galaxy discs* Stark et al. (including **Karen L. Masters**) 2018 MNRAS 474, 2323

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2018 78. *Galaxy Zoo: secular evolution of barred galaxies from structural decomposition of multiband images* Kruk et al. (including **Karen L. Masters**) 2018 MNRAS 473, 4731

77. *SDSS IV MaNGA: Dependence of Global and Spatially Resolved SFR-M⋆ Relations on Galaxy Properties*, Pan et al. (including **Karen L. Masters**) 2018 ApJ 854, 159

76. *Galaxy Zoo: Morphological Classification of Galaxy Images from the Illustris Simulation* Dickinson et al. (including **Karen L. Masters**) 2018 ApJ 853, 194

75. *SDSS-IV MaNGA: Uncovering the Angular Momentum Content of Central and Satellite Early-type Galaxies*, Greene et al. (including **Karen L. Masters**) 2018 ApJ 852, 36

2017 74. *Galaxy Zoo and SPARCFIRE: constraints on spiral arm formation mechanisms from spiral arm number and pitch angles*, Hart et al. (including **Karen L. Masters**) 2017 MNRAS 472, 2263

73. *The 13th Data Release of the Sloan Digital Sky Survey: First Spectroscopic Data from the SDSS-IV Survey Mapping Nearby Galaxies at Apache Point Observatory* Albareti et al. (SDSS-IV collaboration in alphabetical order) 2017, ApJS 233, 25

72. *SDSS-IV MaNGA: Probing the Kinematic Morphology–Density Relation of Early-type Galaxies with MaNGA* Greene et al. (including **Karen L. Masters**) 2017 ApJ 851, 33

71. *SDSS-IV MaNGA-resolved Star Formation and Molecular Gas Properties of Green Valley Galaxies: A First Look with ALMA and MaNGA* Lin et al. (including **Karen L. Masters**) 2017 ApJ, 851, 18

70. *2MTF - VI. Measuring the velocity power spectrum*, Howlett et al. (including **Karen L. Masters**) 2017 MNRAS, 471, 3135

69. *The SDSS-IV MaNGA Sample: Design, Optimization, and Usage Considerations* Wake et al. (including **Karen L. Masters**) 2017 AJ 154, 86

68. *Galaxy Zoo: the interplay of quenching mechanisms in the group environment*, Smethurst et al. (including **Karen L. Masters**) 2017 MNRAS 469, 3670

67. *Galaxy Zoo: finding offset discs and bars in SDSS galaxies*, Kruk et al. (including **Karen L. Masters**) 2017 MNRAS, 469, 3363

66. *Sloan Digital Sky Survey IV: Mapping the Milky Way, Nearby Galaxies, and the Distant Universe* Blanton et al. (including **Karen L. Masters**) 2017 AJ, 154, 28

65. *Galaxy Zoo: star formation versus spiral arm number* Hart et al. (including **Karen L. Masters**) 2017, MNRAS, 468, 1850

64. *SDSS-IV MaNGA: Spatially resolved star formation histories in galaxies as a function of galaxy mass and type* Goddard et al. (including **Karen L. Masters**) 2017, MNRAS 466, 731

63. *SDSS-IV MaNGA - the spatially resolved transition from star formation to quiescence* Belfiori et al. (including **Karen L. Masters**) 2017, MNRAS 466, 2570

62. *The Correlation between Halo Mass and Stellar Mass for the Most Massive Galaxies in the Universe* Tinker et al. (including **Karen L. Masters**) 2017, ApJ 839, 121

61. *SDSS-IV MaNGA: environmental dependence of stellar age and metallicity gradients in nearby galaxies* Zheng et al. (including **Karen L. Masters**) 2017, MNRAS 465, 4572

60. *SDSS IV MaNGA: Discovery of an H? Blob Associated with a Dry Galaxy Pair – Ejected Gas or a "Dark" Galaxy Candidate?* Lin et al. (including **Karen L. Masters**) 2017, ApJ 837, 32

59. *SDSS-IV MaNGA: stellar population gradients as a function of galaxy environment* Goddard et al. (including **Karen L. Masters**) 2017, MNRAS 465, 668

58. *Galaxy Zoo: quantitative visual morphological classifications for 48 000 galaxies from CANDELS*, Simmons et al. (including **Karen L. Masters**) 2017, MNRAS, 464, 4420

57. *Galaxy Zoo: morphological classifications for 120 000 galaxies in HST legacy imaging*, Willett et al. (including **Karen L. Masters**) 2017, MNRAS,464 4176

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2016 56. *Galaxy Zoo: Evidence for rapid, recent quenching within a population of AGN host galaxies*, Smethurst et al. (including **Karen L. Masters**), 2016, MNRAS 463, 2986

55. *The XMM Cluster Survey: The Halo Occupation Number of BOSS galaxies in X-ray clusters*, Mehrtens et al. (including **Karen L. Masters**), 2016, MNRAS 463, 1929.

54. *SDSS-IV MaNGA: A Serendipitous Observation of a Potential Gas Accretion Event*, Cheung et al, (including **Karen L. Masters**) 2016, ApJ 832, 182.

53. *HIghMass – High H I Mass, H I-rich Galaxies at $z \sim 0$: Combined H I and H2 Observations* Hallenbeck et al. (including **Karen L. Masters**) 2016 AJ 152, 225

52. *SDSS-IV MaNGA IFS Galaxy Survey – Survey Design, Execution, and Initial Data Quality* Yan et al. (including **Karen L. Masters**), 2016 AJ 152, 197

51. *SDSS-IV MaNGA: properties of galaxies with kinematically decoupled stellar and gaseous components* Jin et al. (including **Karen L. Masters**), 2016, MNRAS 463, 913

50. *Galaxy Zoo: comparing the demographics of spiral arm number and a new method for correcting redshift bias* Hart et al. (including **Karen L. Masters**), 2016, MNRAS 461, 3663

49. *The Data Reduction Pipeline for the SDSS-IV MaNGA IFU Galaxy Survey* Law et al. (including **Karen L. Masters**) 2016, AJ, 152, 83

48. *SDSS IV MaNGA - spatially resolved diagnostic diagrams: a proof that many galaxies are LIERs* Belfiori et al. (including **Karen L. Masters**) 2016 MNRAS 461, 3111.

47. *Suppressing star formation in quiescent galaxies with supermassive black hole winds* Cheung et al. (including **Karen L. Masters**) 2016, Nature, 533, 504.

46. *2MTF - V. Cosmography, β, and the residual bulk flow*, Chris Springob, Tao Hong, Lister Stavely-Smith, **Karen Masters** et al. 2016, MNRAS 456, 1886.

45. *SDSS-III Baryon Oscillation Spectroscopic Survey Data Release 12: galaxy target selection and large-scale structure catalogues*, Reid et al. (including **Karen L. Masters**) 2016, MNRAS 455, 1553.

2015 44. *Radio Galaxy Zoo: host galaxies and radio morphologies derived from visual inspection* Banfield et al. (including **Karen L. Masters**) 2015 MNRAS 453, 2326

43. *The Eleventh and Twelfth Data Releases of the Sloan Digital Sky Survey: Final Data from SDSS-III*, Alam et al. (SDSS-III Collaborating in alphabetical order, including **Karen L. Masters**), 2015, ApJS, 219, 12 (147 ADS citations)

42. *Stellar Populations of Barred Quiescent Galaxies*, Cheung et al. (including **Karen L. Masters**) 2015, ApJ 807, 36.

41. *Galaxy Zoo: evidence for diverse star formation histories through the green valley*, Smethurst et al. (including **Karen L. Masters**) 2015, MNRAS 450, 435.

40. *Galaxy Zoo: the dependence of the star formation-stellar mass relation on spiral disc morphology* Kyle Willett, Kevin Schawinski, Brooke Simmons, **Karen L. Masters** et al. 2015 MNRAS 499, 820.

39. *P-MaNGA: full spectral fitting and stellar population maps from prototype observations* Wilkinson et al. (including **Karen L. Masters**) 2015, MNRAS 449, 328

38. *P-MaNGA: Gradients in Recent Star Formation Histories as Diagnostics for Galaxy Growth and Death* Li et al. (including **Karen L. Masters**) 2015, ApJ 804, 125.

37. *Galaxy Zoo: the effect of bar-driven fuelling on the presence of an active galactic nucleus in disc galaxies* Galloway et al. (including **Karen L. Masters**) 2015, MNRAS 448, 3442.

36. *Misalignment between cold gas and stellar components in early-type galaxies*, Wong et al. (including **Karen L. Masters**) 2015 447, 3311.

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