



Steven Gillman

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Overview

Fourth year PhD student at the Centre for Extragalactic Astronomy, Durham University studying galaxy evolution through the use of state of the art integral field observations of high redshift star-forming galaxies.

Education

- 2016– **PhD in Astronomy**
Dept. of Physics, Durham University
Thesis: The dynamical evolution of high-redshift star-forming galaxies
Supervisor: Prof. Ray Sharples and Dr. Mark Swinbank
- 2012–2016 **MPhys (Hons) Physics and Astronomy**, First Class
Dept. of Physics, University of Birmingham
Masters Thesis: Morphology Density relation in low redshift galaxy clusters
Supervisor: Dr. Graham Smith and Dr. Felicia Ziparo
- 2015 **Research Internship**
Dept. of Physics, University of Birmingham
Project: Galaxy Cluster Scaling Relations
Supervisor: Dr. Graham Smith and Dr. Sarah Mulroy

Publications [\[ADS\]](#)

- 2019 **[From Peculiar Morphologies to Hubble-type Spirals: The relation between galaxy dynamics and morphology in star-forming galaxies at \$z \sim 1.5\$](#)**
MNRAS Submitted 2019
S. Gillman, A. L. Tiley, A. M. Swinbank, C. M. Harrison, Ian Smail, U. Dudzevičiūtė, R. M. Sharples, L. Cortese, D. Obreschkow, R. G. Bower, T. Theuns, M. Cirasuolo, D. Fisher, K. Glazebrook, Edo Ibar, J. Trevor Mendel and Sarah M. Sweet

The Dynamics and Distribution of Angular Momentum in HiZELS Star-Forming Galaxies at $z = 0.8 - 3.3$, MNRAS 486 175G 2019

S. Gillman, A. M. Swinbank, A. L. Tiley, C. M. Harrison, Ian Smail, U. Dudzevičiūtė, R. M. Sharples, P. N. Best, R. G. Bower, R. Cochrane, D. Fisher, J. E. Geach, K. Glazebrook, Edo Ibar, J. Molina, D. Obreschkow, M. Schaller, D. Sobral, S. Sweet, J. W. Trayford, T. Theuns

The Shapes of the Rotation Curves of Star-forming Galaxies Over the Last ~ 10 Gyr, MNRAS 485 934T 2019

Alfred L. Tiley, A. M. Swinbank, C. M. Harrison, Ian Smail, O. J. Turner, M. Schaller, J. P. Stott, D. Sobral, T. Theuns, R. M. Sharples, **S. Gillman**, R. G. Bower, A. J. Bunker, P. Best, J. Richard, Roland Bacon, M. Bureau, M. Cirasuolo, G. Magdis

Angular momentum of $z \sim 1.5$ galaxies and their local analogues with adaptive optics, MNRAS 485 5700S 2019

Sarah Sweet, Deanne Fisher, Karl Glazebrook, Danail Obreschkow, **Steven Gillman**, Alfred Tiley, Claudia Lagos, Liang Wang, A. Mark Swinbank; Richard Bower, Ray Sharples

2018 **The core of the massive cluster merger MACS J0417.5-1154 as seen by VLT/MUSE**, MNRAS 483 3082J 2018

Mathilde Jauzac, Guillaume Mahler, Alastair C. Edge, Keren Sharon, **Steven Gillman**, Harald Ebeling, David Harvey, Johan Richard, Michele Fumagalli, A. Mark Swinbank, Steven L. Hamer, Jena-Paul Kneib, Richard Massey, Philippe Salome

2017 **Galaxy cluster luminosities and colours, and their dependence on cluster mass and merger state**, MNRAS 472 3246 2017

Mulroy, Sarah L.; McGee, Sean L.; **Gillman, Steven**; Smith, Graham P.; Haines, Chris P.; Démoclès, Jessica; Okabe, Nobuhiro; Egami

Conference Talks

March 2019 **The Angular Momentum Distribution in High Redshift Star-Forming Galaxies**
Life and Death of Star-Forming Galaxies, Perth, Australia

January 2019 **The Angular Momentum Distribution in High Redshift Galaxies**
DEX XV, Royal Observatory of Edinburgh, UK

December 2018 **The Redistribution of Angular Momentum in High Redshift Star-Forming Galaxies - A KMOS and SINFONI study**
KMOS @ 5, ESO, Garching, Germany

November 2018 **The Dynamics and Distribution of Angular Momentum in High Redshift Star-Forming Galaxies**
Friday Lunchtime Astronomy Talk, Durham, UK

March 2018 **Integral Field Galaxy Evolution**

Friday Lunchtime Astronomy Talk, Durham, UK

June 2017

IFView of Galaxy Evolution

Friday Lunchtime Astronomy Talk, Durham, UK

Telescope Proposals

2018

2018B, PI, 3h, HAWK-I

Resolving Clumps in High Redshift KMOS GTO Galaxies across Cosmic Time using High Resolution HawkI Narrow Band Imaging

2018A, PI, 15h, KMOS

Resolved Metallicity Gradients in Star Forming Main-Sequence Galaxies at $z \sim 1.5$

Observing Experience

2018

PauCam (WHT 4.2 m), Santa Cruz de La Palma, Spain (*4 nights*)

PI: N. Hatch, Understanding how $z > 1$ galaxy clusters form

2017

OSIRIS (Keck 10 m), W. M. Keck Observatory, Maunakea, Hawaii (*3 nights*)

PI: K. Glazebrook, Resolving the evolution of galaxy angular momentum and metallicity

2017

KMOS (VLT 8 m), Paranal Observatory, Chile (*3 nights*)

PI: R. Sharples, KMOS Galaxy Evolution Survey (KGES): Tracing the Dynamics, Star-Formation and Chemical Properties of Star-Forming Galaxies Across Half the Age of the Universe

Technical Skills

Experience reducing and analysing integral field spectroscopic observations. In particular: VLT-KMOS; VLT-SINFONI and Keck-OSIRIS

Programming knowledge of Python, Unix, \LaTeX and basic HTML as well as experience using DS9, ESOREX, GALFIT and SEXTRACTOR

Responsibilities, Leadership and Teaching activities

2019–

Departmental Galaxy Evolution Meeting (GEM) Organiser

2018–2019

Weekly Postgraduate Journal Club Organiser

2017–2020

Undergraduate Year 2 Stars and Galaxies Workshop Demonstrator

2017–2018

Weekly 1st Year Postgraduate Journal Club Organiser

2016–2017

Undergraduate Year 1 Problems Administrator

Awards and Scholarships

2016–2020 **STFC Postgraduate Studentship**
Centre for Extragalactic Astronomy, Durham, UK

June 2015 **Gateway Internship Bursary**
Dept. of Physics, University of Birmingham

Professional Memberships

2019– Fellow of the Royal Astronomical Society
2016– Member of Institute of Physics
2013–2016 Student Member of Institute of Physics