

# SAMANTHA YOULES

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I am a fourth year PhD student, investigating the potential of detecting a weak lensing signal from Lyman-alpha forest surveys in order to probe the distribution of dark matter at redshifts of  $0.7 < z < 1.0$ .

## EDUCATION

2017-Now	<b>Institute of Cosmology &amp; Gravitation</b> Doctor of Philosophy Candidate Thesis : Weak lensing with Lyman-alpha forest surveys Supervisors : Prof David Bacon, Dr Julian Bautista, Prof Rob Crittenden
2014-2017	<b>Royal Holloway, University of London,</b> BSc Astrophysics 1st Class Hons

## AWARDS & GRANTS

2014	Principal's Excellence Scholarship	£3000
2018	DESI Travel Grant	\$488
2019	SDSS Early Career Researcher Travel Grant	\$535

## COLLABORATIONS

eBOSS	<b>extended Baryon Oscillation Spectroscopic Survey, part of SDSS - IV</b> , I am a member of this collaboration and of the Lyman- $\alpha$ working group. I contributed to the final key science paper on Lyman- $\alpha$ .
DESI	<b>Dark Energy Spectroscopic Instrument</b> , I have been a member of DESI since 2018. I am a member of the Lyman- $\alpha$ working group and of the Picca software task force.

## PUBLICATIONS

- The Completed SDSS-IV extended Baryon Oscillation Spectroscopic Survey : Baryon acoustic oscillations with Lyman- $\alpha$  forests**, *Héliou du Mas des Bourboux et al, including Samantha Youles, 2020 ApJ 901 2 153.*
- Weak Lensing with Lyman- $\alpha$  forest surveys**, *Samantha Youles, Julian Bautista, Anže Slosar, 2021 in prep.*
- The effect of redshift errors on Lyman- $\alpha$  BAO parameters**, *Samantha Youles, Julian Bautista, Andreu Font-Ribera, 2021 in prep.*

## TEACHING AND MARKING

2004-2008	<b>Tutoring</b> IGCSE Mathematics GSCE English, History, Geography ICT including HTML
2018	<b>Undergraduate exam marking</b> 2nd Year 'Stars, Galaxies and The Universe'
2019	<b>Undergraduate coursework marking</b> 3rd Year Astrophysics : critical review essays 1st Year Mathematical Physics
2020	<b>Undergraduate coursework marking</b> 3rd Year Astrophysics : critical review essays

## OUTREACH AND VOLUNTEERING

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07/2015	Student Ambassador	Royal Holloway
12/2017	Meet a Physicist participant	University of Portsmouth
01/2018	Stargazing Live demonstrator	ICG and Portsmouth Historic Dockyard
12/2018	Meet a Physicist participant	University of Portsmouth
01/2019	Stargazing Live demonstrator	ICG and Portsmouth Historic Dockyard
03/2019	Meet a Female Physicist participant	Portsmouth Academy
01/2020	Stargazing Live demonstrator	ICG and Portsmouth Historic Dockyard

## SCHOOLS, CONFERENCES & WORKSHOPS

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08/2017	Introductory Summer School in Astronomy	STFC, University of Manchester
02/2018	eBOSS Collaboration Meeting	MPI Garching
2018	GPROF Workshops : teaching for PhDs	University of Portsmouth
03/2018	From Micrometres to Megaparsecs	University of Southampton
07/2018	Summer School on Large-Scale Structure	MPA Berlin
09/2018	Data Analysis Workshop	ICIC Imperial College, London
02/2018	DESI Collaboration Meeting	Barcelona
12/2018	eBOSS Collaboration Meeting	Paris
04/2019	A History of the Universe in Redshift	University of Southampton
07/2019	DESI Collaboration Meeting	Berkeley
03/2020	DESI Collaboration Meeting	Online
06/2020	Cosmology Summer School	University of Michigan (Online)
12/2020	DESI Collaboration Meeting	Online

## TALKS

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### General

02/2018	The short life & violent death of a massive star	University of Portsmouth
02/2018	Analysing outliers in Lyman-alpha forests	MPI Garching

### Weak lensing with Lyman-alpha forests

06/2018	Journal Club	University of Portsmouth
07/2018	South Coast Cosmology Conference	University of Sussex
10/2018	DESI meeting	Barcelona
11/2018	Seminar	University of Portsmouth
12/2018	eBOSS meeting	Paris
05/2019	Joint eBOSS-DESI meeting	Saclay, Paris
07/2019	DESI meeting	Berkeley

## ACTIVITIES

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- 2019 Member of organising committee for a SEPNet student-led conference, 'A History of the Universe in Redshift' at the University of Southampton. Chaired the session on 'First Light'.
- 2019 Student representative on the departmental committee for Athena SWAN Charter award application for gender equality.
- 2020 Student representative on the departmental committee for Equality, Diversity and Inclusion.

## SKILLS

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<b>Codes</b>	Python, C++, HTML
<b>Tools</b>	$\LaTeX$ , Office (Word, Excel, PowerPoint)

## REFERENCES

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Available on request