**Lucy Robertson**

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EDUCATION

2016-2021 **University of St Andrews**

*MPhys (Hons) Astrophysics (2:1)*

* Relevant modules include Contemporary Astrophysics, Observational Astrophysics, Exoplanetary Science, Gravitational Dynamics, and Computational Astrophysics.
* Transferable Skills for Physicists module during Honours prioritised written and verbal communication skills, research and analysis, and teamwork.
* Group Discovery Project in first year further reinforced relevant transferable skills.
* Final semester dissertation project titled ‘Understanding the formation history of galaxies’, which required combining high redshift spectroscopy from the VLT with photometry and low redshift integral field data. Required 10,000-word written report and a presentation to a small audience of academic staff.
* Deans’ list 2016, 2017, 2018 for academic excellence.

2009 – 2016 **Glasgow High School**

* Advanced Highers: Physics (A), Chemistry (A), Mathematics (B).
* Highers: Physics (A), Chemistry (A), History (A), Mathematics (A), English (B).

RESEARCH EXPERIENCE

June – Aug 2019 **University of South Carolina, USA**

 *Visiting research student*

* Awarded the Astronomy SSC Vacation Award, granting participation in this project.
* Extracted key data from galaxy spectra using relevant computational software.
* Conducted in-depth analysis of acquired images, comparing results with published data.
* Independently gained experience using the image reduction software package IRAF in order to extract relevant data.
* Helped to prepare an informative guide on using the software for the department, which is currently being used for future summer internship students.

May – July 2018 **University of St Andrews, School of Physics & Astronomy**

*Undergraduate summer internship research student*

* Developed simulations of stellar orbits under modified Newtonian dynamics in FORTRAN.
* Programmed numerous simulations to relate different observable quantities under different gravitational potentials (radius of orbit, rate of change of radius with a0).
* Analysed results alongside theoretical models to estimate the precession rate of Oort’s cloud objects under modified Newtonian dynamics.
* Helped develop an informational website for the University’s cosmology and dark matter group.

ADDITIONAL WORK EXPERIENCE

June – Aug 2017 **Strathclyde Science Centre**

 *Educational Assistant*

* Gave tours of the centre to visitors from a range of backgrounds, developing my oral communication skills.
* Explained how the interactive exhibits work, requiring clear and consistent communication in addition to patience and active listening when questions arose.
* Facilitated children’s activity sessions, providing a strong sense of accountability and responsibility.

June – Aug 2016 **The New Inn, Milngavie**

 *Bar staff (part-time)*

* Provided high-level of customer service within a fast-paced, dynamic environment.
* Maintained the bar area, helping to keep it clean and tidy throughout.
* Suggested themed evenings during team meetings, which helped increase customer numbers by 20%.

POSITIONS OF RESPONSIBILITY

2016 – 2017 **School of Physics & Astronomy Student-Staff Council**

*Astronomy Representative, Secretary*

* Served as liaison between students and academic staff during regular meetings, discussing any issues arising with the department or course.
* Responsible for accurately recording and then circulating the minutes of each meeting to the rest of the group.

2015 – 2017 **Astrosoc**

*Committee Member*

* Wrote press releases on various astronomy topics to increase student interest.
* Liaised with guest speakers and university services.
* Managed room reservations, ensuring ample space for all members.
* Organised applying for grants when running events of a larger scale.

ADDITIONAL INFORMATION

**IT skills**

* Excellent knowledge of LaTeX and Microsoft Office suite.
* Experienced with FORTRAN and IRAF.
* Working knowledge of Mathematics, HTML, Unix, Maple, and R.

**Languages**

* French (intermediate).

**Professional memberships**

* Student member of the Institute of Physics.

**Travel**

* Full, clean UK driver’s licence.

INTERESTS AND ACTIVITIES

**Athletics**

* Trained for the Great North Run 2017.
* Member of the University of St Andrews Athletics Club.