

Scott Carlsten

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Present Address

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Permanent Address

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Education

Princeton University, Princeton, NJ 2022
Ph.D Astrophysics (expected)

Rice University, Houston, TX 13 May 2017
B.S. Astrophysics, *summa cum laude with distinction in research*
Thesis entitled: "H₂ and Br γ Line Offsets in Regions of
Massive Star Formation"
GPA 4.19 in major, 4.17 overall (A=4.0, A⁺=4.33)
Physics GRE 990/990

Experience

Research Assistant, Rice University, Houston, TX 05/16 - Present
Studied stochastic particle production during inflation. Modeled
evolution of fields and calculated the two-point correlation
function of fluctuations in the gravitational potential.

Teaching Assistant, Rice University, Houston, TX 01/16 - 05/16
Teaching assistant for an introductory astronomy lab class.
Acted as telescope operator, helping students take photographic
and spectroscopic data with the campus observatory.

Research Assistant, Rice University, Houston, TX 04/15 - 05/16
Reduced near-IR data of photo-dissociation regions and
compared with computer models to constrain physical properties
of these regions.

Research Intern, CTIO, Cerro Tololo, La Serena, Chile 01/15 - 04/15
Analyzed kinematics and stellar population parameters of
shell galaxies to try to explain their formation by comparing
with computer models of galaxy evolution.

Research Assistant, Los Alamos National Lab, Los Alamos, NM 04/14 - 08/14
Wrote code to rapidly stream data off of a digitizer board and
developed algorithms for the parallel processing of RF data.

Academic Honors

National Distinguished Award Winner, EnergySolutions 2010
National Merit Scholarship 2011
Los Alamos National Laboratory Foundation Platinum Scholar 2012
Max Roy Scholarship for full tuition, Rice 2012-2016
Presidential Honor Roll, Rice Fall 2012 - Fall 2015
Bonner Book Award for Outstanding Junior in Physics, Rice 2015
Claude W. Heaps Prize for Outstanding Senior Thesis in Physics, Rice 2016

Computer Skills

Languages: Python, Mathematica, MATLAB, L^AT_EX
Software: IRAF, including optical, near-IR, and spectroscopic data

Coursework

Introductory physics, waves and optics, multivariable calculus, differential equations, partial differential equations, mechanics, quantum mechanics, stellar interiors and stellar evolution (graduate level), galaxies and cosmology (graduate level), statistical mechanics and thermodynamics, electromagnetism, plasma physics (graduate level), and quantum field theory (graduate level)

Presentations & Publications

Presentations:

- 2016 AAS Winter Meeting. Poster: “Stellar Populations of Shell Galaxies”
- 2015 Rice Departmental Seminar: “Stellar Populations of Shell Galaxies”

Publications:

- **S. Carlsten**, G. Hau, & A. Zenteno (2017), *Stellar Populations of Shell Galaxies*, MNRAS **472** 2889, arXiv:1611.05437