

CURRICULUM VITAE

Kate H. R. Rubin

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Education

Ph.D., Astronomy & Astrophysics, University of California, Santa Cruz	Expected June 2010
M.S., Astronomy & Astrophysics, University of California, Santa Cruz	Fall 2006
B.S., Astronomy & Physics, <i>magna cum laude</i> , Yale University	May 2004

Research Interests

Galactic Winds
Gaseous Halos and Absorption Line Systems
Galaxy Evolution and Formation

Honors & Awards

ARCS Foundation Fellowship	2009-2010
UC Santa Cruz Regents Fellow	Spring 2005
George Beckwith Prize for excellence in Astronomy, Yale University	May 2004
George J. Schulz Prize for the Physical Sciences awarded for academic excellence to a student in Silliman College at Yale University	May 2004

Successful Telescope Proposals

3. **Keck-I**, 2009A
Title: *Probing Galactic Winds and Metallicities at $0.3 < z < 1.4$*
Phillips, A. C., **Rubin, K. H. R.**, Prochaska, J. X., Koo, D. C., Rosario, D.
2. **Keck-I**, 2008B
Title: *Rest-frame UV Spectroscopic Survey in GOODS-S: Galactic Winds and Metallicity Studies Using LRIS/ADC*
Phillips, A. C., **Rubin, K. H. R.**, Koo, D. C., Rosario, D.
1. **Keck-I**, 2008A
Title: *Rest-frame UV Spectroscopic Follow-up Survey in EGS and GOODS-N: Galactic Winds and Metallicity Studies Using LRIS/ADC*
Phillips, A. C., **Rubin, K. H. R.**, Koo, D. C., Rosario, D.

Observing & Software Experience

Observing Experience:

Keck/LRIS long-slit and multi-object spectroscopy (12 nights)
Lick Shane 3m KAST optical spectroscopy (1 night)
MMT/Megacam optical imaging (2 nights)
Green Bank Telescope radio spectroscopy (2 nights)

Software:

IDL, XIDL (for Keck/LRIS data reduction), DAOPHOT, IRAF, Supermongo, RooFit, C, C++

Research Experience

Galactic Winds and Absorption Line Systems (UCSC) 2007-present

Advisors: J. X. Prochaska & D. C. Koo

- survey of cool gaseous outflows in galaxies at $0.3 < z < 1.5$ traced by rest-frame UV absorption lines
- galaxies as background probes of cool gas absorption in foreground galaxy halos
- mapping winds in emission at $z \sim 1$

White Dwarfs in Open Clusters (UCSC) 2005-2008

Advisor: M. Bolte

- a photometric and spectroscopic search for white dwarfs in open clusters
- constraints on the white dwarf initial-final mass relation

Undergraduate Senior Thesis (Yale) 2003-2004

Advisor: P. G. van Dokkum

- analysis of *Chandra* imaging of $z \gtrsim 2$ galaxies for constraints on star formation rates and AGN content

Research Experience for Undergraduates (NRAO, Green Bank) June - August 2003

Advisor: G. Langston

- mapping the neutral hydrogen in the M81 group using GBT spectroscopy

Research Experience for Undergraduates (Cornell University) June - August 2002

Advisor: J. Cordes

- a search for bow shock nebulae from neutron stars using $H\alpha$ imaging

Teaching Experience

Teaching Assistantships

Hartnell Community College Astronomy Short Course August 2007

- week-long course; led facilitation for inquiry-based activity and contributed to lecturing
- Astronomy 4 - Introductory Astronomy: The Stars (UCSC, Prof. M. Bolte) Fall 2004

High School Outreach

California State Summer School for Mathematics & Science Summer 2005 & 2006

- Stars, Sight and Science instructor