Amanda Ann Kepley

MAILING ADDRESS: P.O. Box 400325
University of Virginia
Charlottesville, VA 22904-4325

PHONE: +1-434-260-1066
FAX: +1-434-924-3104
EMAIL: kepley@virginia.edu

EDUCATION

University of Wisconsin—Madison	Astronomy	Ph.D., December 2008
University of Wisconsin—Madison	Astronomy	M.S., August 2004
Case Western Reserve University	Astronomy	B.S., summa cum laude, 2002

AWARDS AND HONORS

Green Bank Telescope (GBT) Student Support Award	2005 – 2008
National Science Foundation Graduate Research Fellowship	2003 – 2007
Wisconsin Space Grant Consortium Graduate Fellowship	2003, 2007
Karl Guthe Jansky and Alice Knapp Jansky Award	2006

RESEARCH EXPERIENCE

University of Virginia — Research Associate — 10/2008 – present

- *Supervisor:* Dr. Kelsey E. Johnson
- *Primary task:* developed research projects using new and upcoming radio telescopes to probe the conditions in the interstellar medium of star-forming galaxies (especially those of low mass and metallicity) to better constrain star formation models.
- Led a project to use radio recombination lines to probe the conditions and kinematics of the ionized gas in starburst galaxies.
    - Wrote successful GBT and EVLA (both Resident Shared Risk and Open Shared Risk) proposals for observations.
    - Early results published in *Astrophysical Journal Letters* Special EVLA Issue (Kepley et al. 2011b).
- Quantified the dust-obscured star formation in dwarf starburst galaxy II Zw 40 using high-resolution radio continuum observations (Kepley et al. 2011, in prep).
- Correlated star cluster formation in the tidal tails produced by galaxy mergers with neutral hydrogen in tidal tails (Mullan et al. 2011; Mullan et al. 2012, in prep).

University of Wisconsin—Madison — Research Associate — 9/2008
Research Assistant — 8/2002 – 8/2008

- *Advisor:* Dr. Eric M. Wilcots
- Studied the role of magnetic fields in the interstellar medium of irregular galaxies and how they are generated and sustained (Kepley et al. 2010, 2011a).
- Analyzed the spatial relationship between the neutral and ionized gas and the neutral hydrogen kinematics of WLM, a dwarf irregular galaxy (Kepley et al. 2007a).

Case Western Reserve University — Undergraduate Research — 6/2001 – 8/2002

- *Advisor:* Dr. Heather L. Morrison
- Developed method for detecting sub-structure in Galactic halo stars near the Sun using only radial velocity information (Kepley et al. 2007b).

TEACHING EXPERIENCE

Instructor, Observational Astronomy for Majors, University of Virginia Fall 2011
Redesigned course to more effectively reflect long-term learning goals. Integrated best learning practices using technology where appropriate. Added summative activity where students present an original project in a poster session open to the larger university community.

Course Design Institute, Teaching Resource Center at University of Virginia 5/2011
Participated in a week-long workshop to design a learner-centered syllabus for a future course.

Guest Lecturer, University of Virginia 2009 - 2010
Graduate ISM (1 lecture), Observational Astronomy for Majors (2 lectures)

Introductory Teaching Excellence Workshop, Center for Astronomy Education 1/2009
Participated in a two-day course to introduce effective teaching and learning strategies for introductory astronomy courses and to gain practical experience with these techniques.

Mentoring Graduate Students 2009 – present
Lisa May Walker at the University of Virginia, Brendan Mullan at Penn State University, and Katie Rabidoux at West Virginia University.

Introductory Astronomy Tutor, University of Wisconsin–Madison 2005 – 2008

Teaching Assistant, University of Wisconsin–Madison Fall 2003
Developed classroom activities to reinforce concepts, went over homework and tests, and prepared exam reviews for six discussion sections per week in an introductory astronomy course.

OUTREACH

Public Talks for star parties, amateur astronomy groups, libraries, etc. 2006 – present

Expanding Your Horizons 2003, 2005 – 2007
Developed and led astronomy activities to increase the interest of middle-school girls in science.

Informal Science Education for Scientists, University of Wisconsin–Madison Fall 2003
Developed activity for use in the Expanding Your Horizons program as part of a seminar on developing and evaluating outreach activities.

SERVICE

Reviewer for *Nature* and *Astronomical Journal* 4/2011 – present
Star Formation Journal Club Organizer 10/2008 – present
Galaxies Lunch Coordinator 6/2006 – 6/2008

OBSERVING EXPERIENCE

Extensive experience with both spectral line and continuum observations at millimeter and centimeter wavelengths. Telescopes used include the Expanded Very Large Array, Green Bank Telescope, Australian Telescope Compact Array, Arizona Radio Observatory 12-m, Arizona Radio Observatory Submillimeter Telescope, and Mopra.

Additional optical experience using WIYN and the Kitt Peak 2.1m.