

KATHY L. COOKSEY


E-mail: klcooksey@yahoo.edu

URL: <http://geocities.com/klcooksey>

EDUCATION

BACHELOR OF SCIENCE with Honors, Summa Cum Laude May 2003
Valparaiso University, Valparaiso, Indiana

- GPA: 3.95/4.0
- **Christ College Scholar** (Interdisciplinary Honors Program)

EXPERIENCE

RESEARCH

Honors Work in Physics, Valparaiso University 2002-2003

- "The Formation of Substellar Companions due to Protostellar Disk Instabilities: Modeling the Effects of Gravitational Environment" with Dr. Brian Pickett
- Modeling protostellar disk with 3-D hydrodynamics code modified with gravitational perturbation due to star cluster

Northeastern University/ CERN, Switzerland

2002 Research Experience for Undergraduates Program Summer 2002

- Calibration of Compact Muon Solenoid Hadron Calorimeter
- Equipment setup (cabling, etc), data collection, data analysis

Laser Interferometer Gravitational-Wave, California Institute of Technology

2001 Research Experience for Undergraduates Program Summer 2001

- "Gravitational-wave Signal Simulation for LIGO" with Dr. Hiroaki Yamamoto
 - Java program to simulate gravitational-wave source to use with LIGO detector simulation
- See Publications

Cerro Tololo Inter-American Observatory, Chile

2001 Research Experience for Undergraduates Program Winter 2001

- "Star Formation in the Isolated Molecular Cloud NGC1788 (LDN1616)" with Dr. Stefanie Wachter and Dr. Don Hoard
 - Multi-wavelength survey in radio, visible, infrared and x-ray with our data, collaborator data, and web-based all-sky surveys
 - Observations on Schmidt (visible), CTIO 0.9-m (visible), and CTIO 1.5-m (near-infrared) telescopes
 - Data reduction and photometry
- Observation of RR Lyrae variable stars for Dr. Andrew Layden
 - See Publications

VU Department of Physics and Astronomy

Summer 2000

- "Observational Studies of Evolved Stars" with Dr Bruce Hrivnak
 - Long-term study of possible periodic variation in visual magnitude of proto-planetary nebulae
 - Observation with VU Observatory 0.4-m telescope
 - Data reduction and analysis of periodicity with IRAF, CLEAN, Lomb, Phase Dispersion Method

WORK and VOLUNTEER

- Whispering Pines Health Care Center** 2001-2003
- Visit with adopted-grandparent
 - Help with activities (exercise, crafts, cooking)
- VU Department of Physics and Astronomy** Spring 2002
- Grader for Introduction to Astrophysics
- VU Sports Fest 2002** April 2002
- Soccer training for youths, ages 8 to 12
- NCAA Youth Education through Sports Clinic** November 2001
- Goalkeeper training for girls, ages 7 to 12

PUBLICATIONS

- Cooksey, Kathy. "Gravitational-wave Signal Simulation for LIGO." The Proceeding of the National Conference of Undergraduate Research April 25-27, 2002. University of North Carolina at Asheville, 2002.
- Day, Alicia S.; Layden, Andrew C.; Hoard, D. W., Brammer, Gabriel; Cooksey, Kathy; Cuadra, Jorge; Holmes, Shadrian; Labbe, Erika; Montez, Rodolfo, Jr. "Light and Color Curves of Six Field RR Lyrae Variable Stars." *The Publications of the Astronomical Society of the Pacific*. 114 (2002): 645-649.
- Cooksey, Kathy. "Gravitational-wave Signal Simulation for LIGO." LIGO Document Control Center. Laser Interferometer Gravitational-wave Observatory, California Institute of Technology. 9 Sept. 2002: <<http://www.ligo.caltech.edu/docs/P/P020002-00.pdf>>

SKILLS and ASSETS

- Programming languages: JAVA, Interactive Data Language (IDL), HTML, C++, Fortran
- Operating systems: Windows 95/99/XP, UNIX
- Analysis software: IRAF, Mathematica, SlideWrite (error analysis program)
- Telescope operation

HONORS

- VU Lumina Award (3.6 GPA for 6 semesters), 2002
- 2002 Rhodes Scholar state interviewee for Indiana
- Honorable Mention, 2002 Centuria of Excellence, Search for Excellence Undergraduate Merit Award Program
- Presentations
 - Oral presentation of LIGO research at National Conference of Undergraduate Research, April 25-27, 2002
 - Oral and poster presentation of CTIO research at VU Celebration of Undergraduate Scholarship Conference, April 24, 2002
 - Poster session for CTIO research at American Astronomical Society 199th Meeting, January 6-11, 2002
- VU Student-Athlete Laureate (student-athlete graduating with highest GPA), 2003

ACTIVITIES and ORGANIZATIONS**VU Women's Soccer**, 1999-2002

- Varsity, 1999-2002
- Mid-Continent Conference Tournament Finalist, 1999
- Mid-Continent Conference All-Academic Team, 2000, 2001, 2002

American Astronomical Society, 2002-present**Delta Epsilon Iota National Honor Society**, 2002-present**Sigma Pi Sigma**, National Physics Honor Society, 2002-present**REFERENCES**

Available upon request