CURRICULUM VITAE

EMILY MAHER

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EDUCATIONAL BACKGROUND

09/99–08/05   University of Minnesota (Minneapolis, MN)

Ph.D. Program, Department of Physics, Emphasis on experimental high energy physics, completion: Spring 2005 (expected)

Thesis: "A Measurement of the Interaction Cross Section of the Tau Neutrino"

09/95–05/99   Hendrix College (Conway, AR)

Bachelors of Arts, Department of Physics

TEACHING EXPERIENCE AND ACTIVITIES

01/05–05/05   Will teach a *Modern Physics* course (20 students) at the University of St. Thomas, St. Paul, MN.

09/03–12/03   Teaching Assistant.

Methods of Experimental Physics I. Included digital and analog electronics and experimental methods.

09/03–12/03   Completed a course in the Preparing Future Faculty program entitled, "Teaching in Higher Education". The PFF program provides a teaching and learning forum for graduate students. Program participants discuss learning theory and strategies, develop teaching and assessment skills, and create classroom and job search materials.

11/2003   Attended 2003 CIRTL (Center for the Integration of Research, Teaching, and Learning) Forum, Madison WI.

06/03–08/03   Supervised students during a Research Experience for Undergraduates (REU) summer program at the University of Minnesota.

06/02–08/02	Co-taught course.
	Introductory Physics for Science and Engineering I. Taught this course with Professor Jim Eckert (Harvey Mudd College) at the University of Minnesota. We devised homeworks and tests together. We also shared the lectures.
01/02–05/02	Supervised undergraduate student in research project.
09/00–12/00	Head Teaching Assistant.
	Introductory College Physics I. Was responsible for organizing other TA's and meetings in addition to the normal TA responsibilities.
09/99–12/99	Teaching Assistant.
	Introductory Physics for Science and Engineering I.
01/00–05/00	Teaching Assistant.
	Introductory Physics for Science and Engineering II.
09/99–05/03	Private Tutor
	Tutored students in physics at the college level.

Research Experience

01/01–present	Research Assistant, Fermilab Experiment 872 Minneapolis, MN
	Refined event location analysis software in an emulsion detector for the purposes of discovering the first interactions of the tau neutrino. Refined probability analysis for tau neutrino events. Measured the first interaction cross section of the tau neutrino.
06/01–08/02	Research Assistant, Fermilab Experiment 875 Minneapolis, MN and Soudan, MN
	Constructed parts of the far detector for the MINOS experiment which is looking for neutrino oscillations. Installed and debugged electronics for data acquisition.
06/99–08/99	Research Assistant, Fermilab Experiment 872 Minneapolis, MN
	Located neutrino events in emulsion data using software algorithms.
05/98–03/99	Research Assistant, Hendrix College, Conway AR
	Developed methods to detect metallic ions in the plume of rockets. Contributed to the development of a ring laser gyroscope to measure variations in Earth's rate of rotation.

Awards and other Activities

2004	President's Student Leadership and Service Award, University of Minnesota.
2003	Created and served as an officer for a mentoring program for first year graduate students in the physics department at the University of Minnesota.
2003	Served as an officer for the Women In Physics and Astronomy group, University of Minnesota.
2002	Lobbied for increased funding to the US Department of Energy Office of Science during the 2002 Congressional session, Washington, District of Columbia.
2001	Outstanding TA Award, University of Minnesota.
1999	Graduated with highest distinction, Hendrix College.

Professional and Academic Affiliations

2004–present	American Association of Physics Teachers
1999–present	Sigma Pi Sigma: The National Physics Honor Society
1998–present	American Physical Society

Presentations

August, 2004	"Creating a Mentoring Program for New Graduate Students" presented at the American Association of Physics Teachers meeting, Sacramento, CA.
August, 2004	"New Results from the DONuT Experiment" presented at the physics seminar at the University of Hawaii, Honolulu, HI.
July, 2003	"Status Report from the DONuT Experiment" presented at the Department of Energy Review, University of Minnesota, Minneapolis, MN.
April, 2003	"New Nu's from the DONuT Experiment" presented at the high energy seminar at the University of Minnesota, Minneapolis, MN.
May, 2002	"Further Results from the DONuT Collaboration" presented at American Physics Society Division of Particles and Fields meeting, Williamsburg, VA.

April, 1999	"Monitoring Metallic Compounds in Rocket Plumes" presented at the National Conference on Undergraduate Research, Rochester, NY.
2001 - present	Numerous presentations at DONuT collaboration meetings.

REFERENCES

Dr. Kenneth Heller
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