



DR. RELLEN HARDTKE

Raised in Oconto Falls, Dr. Rellen Hardtke graduated from OFHS in 1987. She earned her Bachelor's degree in Mathematics from the Massachusetts Institute of Technology (M.I.T.) and was then an actuarial consultant in Washington, D.C.

In 2002, Rellen earned her Ph.D. in the new field of Particle Astrophysics from the University of Wisconsin – Madison. Her research sought to identify the enigmatic sources of gamma ray bursts (GRBs), the most powerful explosions in the universe since the Big Bang. Discovered in the 1960s, the explanation for these explosions of relativistic particles and energy remained a mystery for several decades.

As a graduate student, Rellen helped construct, calibrate, and use data from the Antarctic Muon and Neutrino Detector Array (AMANDA), located at the Earth's geographic South Pole to study GRBs. AMANDA was a new kind of telescope – one that used particles called neutrinos to map the universe instead of light waves like traditional telescopes. Rellen's work took her to the South Pole three times.

Rellen used GRB data from a NASA satellite and neutrino data from AMANDA to search for coincidences in time and space that would help explain whether GRBs were produced by hypernovas -- the explosive deaths of massive stars -- or by the gravitational mergers of black holes or neutron stars. She was awarded a U.S. Department of Energy graduate fellowship that included the opportunity to work with future Nobel Physics Prize winner George Smoot at Lawrence Berkeley National Laboratory.

In addition to her astrophysics research, Dr. Hardtke has been very involved in Gender Studies and social justice work. She also studied and conducted research projects about the intersections of gender, science, technology, and society. She has been an ardent and effective advocate for encouraging more women and students of color to pursue careers in science, math, and engineering.

As a Professor at the University of Wisconsin – River Falls (UWRF), Dr. Hardtke teaches courses in Physics, Engineering, Astronomy, and Gender Studies. She has been very involved in service to students, the University, and her community, including advising student organizations like the Gender & Sexuality Alliance.

Rellen served as an elected member of the River Falls Board of Education and has been the recipient of numerous awards for teaching, research, service, and outreach.

Dr. Hardtke has traveled abroad extensively for research and teaching and encourages young people to expand their horizons as that is what education and her parents' support did for her. She is married to Dr. Todd Coleman and they have two daughters.

9