

GAIL C. McLAUGHLIN

Department of Physics
North Carolina State University
Raleigh, NC 27695-8202
tel: (919) 513-0516
e-mail: Gail_McLaughlin@ncsu.edu

EDUCATION

1987 to 1991 *Princeton University, Princeton, NJ*
A.B. Physics Magna Cum Laude, 1991

1991 to 1996 *University of California, San Diego, La Jolla, CA*
M.S. Physics, 1992. **Ph.D. Physics**, June 1996
Thesis Title “Physics of Massive Stars and Supernovae:
Weak Interactions and Stability Analysis”
Advisor: Prof. George M. Fuller

EMPLOYMENT

August 2009 to present *Department of Physics, NC State U., Raleigh, NC*
Professor

August 2005 to August 2009 *Department of Physics, NC State U., Raleigh, NC*
Associate Professor

August 2001 to August 2005 *Department of Physics, NC State U., Raleigh, NC*
Assistant Professor

September 2000 to August 2001 *Department of Physics, SUNY Stony Brook, NY*
Research Scientist

September 1998 to August 2000 *TRIUMF Theory Group, Vancouver, BC*
Postdoctoral Research Associate

September 1996 to August 1998 *Institute for Nuclear Theory, University of Washington, Seattle, WA*
Postdoctoral Research Associate

AWARDS

DOE Outstanding Junior Investigator Award, July 2002 to July 2007
Fellow of the American Physical Society
NC State Alumni Outstanding Research Award

SELECTED of 46 ARTICLES IN REFEREED JOURNALS

1. McLaughlin, G. C., Fetter, J., Balantekin, A. B. and Fuller, G. M., “An Active-Sterile Neutrino Transformation Solution for r-Process Nucleosynthesis”, *Phys Rev*, **C59** 2873 (1999).
2. Surman, R. S. and McLaughlin, G. C. and Hix, W. R. ‘Nucleosynthesis from Gamma Ray Burst accretion disks’ *Astrophys. J.* **643**, 1057 (2006).
3. Jachowicz, N. and McLaughlin, G. C. “What low-energy beta-beams can tell about supernova explosions” *Phys. Rev. Lett.* **96**, 172301 (2006).
4. Kneller, J. and McLaughlin, G. C. “Oscillation Effects and Time Variation of the Supernova Neutrino Signal”, *Phys Rev* **D77** 045023 (2007).
5. Gava, J., Kneller, J., Volpe, C and McLaughlin, G. C. “A dynamical collective calculation of supernova signals”, *Phys. Rev. Lett.* **L109** , 071101 (2009)

SELECTED of 56 INVITED CONFERENCE TALKS

1. McLaughlin, Gail C., “R-process nucleosynthesis the role of Neutrinos” PLENARY TALK
Neutrino 2006, Santa Fe, NM June 2006
2. McLaughlin, Gail C., “Supernova Neutrinos, High Energy Neutrinos, PLENARY
and Neutrino Astrophysics”, Town Meeting on Neutrinos, Neutrinos TALK
and Fundamental Symmetries, Chicago, IL January 2007
3. McLaughlin, Gail C., “Neutrino Oscillations in Supernovae”, April INVITED
American Physical Society Meeting, Washington, D.C. 2010 TALK

SELECTED of 19 NATIONAL SERVICE COMMITTEES

1. Executive Committee, APS Division of Nuclear Physics, 2003-2004
2. NSAC subcommittee to review U.S. nuclear theory program, 2003
3. Nominating Committee, APS Division of Astrophysics Chair 2003-2004
4. NSAC subcommittee for Implementation of the Long Range Plan, 2005
5. Editorial Board, Journal of Physics G, Fall 2005 -present
6. Nuclear Science Advisory Committee, 2008-present
7. American Physical Society Bethe Prize Committee, 2010-present