

# CURRICULUM VITA

## KAREN O'NEIL

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### ADDRESS

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### EDUCATION

- 1991 – 1997 University of Oregon  
Ph.D. in Physics (Astrophysics) – *Faint Fuzzy Stuff: The Missing Baryons?*  
Dissertation committee: Dr. G. Bothun, Dr. J. Schombert, Dr. J. Isenberg,  
Dr. J. Brau, Dr. J. Imamura  
Master of Science in Physics – received 1993
- 1987 – 1991 Marlboro College  
Bachelor of Science with high honors in Physics/Mathematics – received 1991  
*Explosion, Inflation, & History: An Historical Description of Two Cosmological  
Models*  
Thesis committee: Dr. J. Mahoney, Dr. J. Mazur, Dr. E. Bertschinger (MIT)
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### WORK EXPERIENCE

- Experienced site director at Green Bank site (approximately 140 employees)
- Experienced program manager at Green Bank site
- Developed and managed short and long term budget plans for both individual projects and entire site (\$10k – \$10M)
- Implemented site effort tracking and budget planning to the project level
- Excellent knowledge of Green Bank and NRAO long term vision
- Excellent understanding of radio astronomy instrumentation and software
- Ten years experience managing a wide variety of software and hardware projects
- Experience with a wide range of telescopes, instruments, and software
- Extremely good people skills
- Proven record of scientific results

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 EMPLOYMENT SUMMARY

2008 – present	Assistant Director for Green Bank Operations <i>NRAO, Green Bank, WV</i>
2010 – present	Adjunct Professor <i>West Virginia University, Morgantown, WV</i>
2006 – 2008	Head of Program Development <i>NRAO, Green Bank, WV</i>
2004 – 2006	Associate Scientist <i>NRAO, Green Bank, WV</i>
2005	Visiting Scientist <i>University of Paris, Meudon, France</i>
2003 – 2004	Assistant Scientist <i>NRAO, Green Bank, WV</i>
2000 – 2003	Staff Research Associate <i>Arecibo Observatory, PR</i>
1998 – 2000	Post Doctoral Research Associate <i>Arecibo Observatory, PR</i>
1997 – 1998	Adjunct Assistant Professor <i>U. of Oregon Physics Department, Eugene, OR</i>
1993 – 1997	Graduate Research Assistant <i>U. of Oregon Physics Department, Eugene, OR</i>
1992 – 1997	Physics and Mathematics tutor <i>Private, Eugene, OR</i>
1996	High School Teacher <i>Wellsprings School, Eugene, OR</i>
1991 – 1993	Graduate Teaching Assistant <i>U. of Oregon Physics Department, Eugene, OR</i>
1990	Undergraduate Research Assistant <i>Argonne National Laboratory, Chicago, IL</i>
1990 – 1991	Physics Teacher <i>Marlboro College, Marlboro, VT</i>
1988 – 1991	Mathematics Teacher <i>Marlboro Elementary School, Marlboro, VT</i>
1988 – 1991	Physics and Mathematics tutor <i>Marlboro College Marlboro, VT</i>
1989	Undergraduate Research Assistant <i>Marlboro College, Marlboro, VT</i>

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 TELESCOPE EXPERIENCE

20cm – 1mm	>5000 hours on single dish radio telescopes (GBT, Arecibo, Nançay, IRAM 30m)
20cm – 1mm	100s hours on synthesis radio telescopes (VLA, GMRT, OVRO, PdB)
0.1 – 100 $\mu$ m	~ 1000 hours on optical/IR/UV telescopes (HST, GALEX, Spitzer, NOAO, Lowell, CTIO, Palomar, McDonald)
	Observations with both single pixel and array receivers, imaging and spectroscopy
	Observations as an individual researcher and as part of a large team

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 PRIMARY PROJECTS LED

- 2008 – present Green Bank site director; Oversight over all site projects (\$12.5M/yr portfolio)
- 2006 – present Project Manager and scientist for GBT Dynamic Scheduling
- 2006 – 2008 Program Manager for Green Bank site (\$2M/yr portfolio)
- 2003 – 2008 Scientific sponsor for >50 GBT observing related software modification requests
- 2005 – 2007 Project Manager for the GBT/UMd Zpectrometer
- 2006 – 2007 Project Scientist for the GBT Ka-band receiver upgrade
- 2003 – 2006 Project Manager & Scientist for GBT Spectrometer Upgrade
- 2005 – 2006 Lead Scientist on GBT Observing interface (ASTRID)
- 2005 – 2006 Chair, GBT Observing Issues Group
- 2003 – 2005 Project Manager & Scientist for GBT Spigot installation
- 1998 – 2003 Lead scientist for Arecibo L-band Receiver systems
- 1998 – 2003 Lead astronomer for Arecibo Observatory web pages and documentation
- 1998 – 2003 Lead scientist for development and testing for Arecibo spectral line observing interface
- 1998 – 2003 Lead scientist for Arecibo spectral line data reduction system (AIPS++/IDL)

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 CONFERENCE COMMITTEES & REVIEW BOARDS

- 2011 Member Science and Local Organizing committee *Innovations in Data Intensive Astronomy Workshop*
- 2001 – 2007 Member (2001, 2005, 2007, 2009, 2011)/Chair (2003, 2011), Science Organizing committee  
*NRAO/NAIC School on Single-Dish Radio Astronomy Techniques and Applications*
- 2001 – 2007 Member (2001, 2007)/Chair (2003) Local Organizing Committee  
*NRAO/NAIC School on Single-Dish Radio Astronomy Techniques and Applications*
- 2006 Alternate Chair, NSF Universities Radio Observatories Review Panel
- 2001 Chair, Science Organizing committee  
*Observing with the Upgraded Arecibo Telescope: Methods and Recent Results*

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 GRANTS AND EXTERNAL FUNDS AWARDED

2011	\$49,977 – NSF OCI award for "Innovations in Data-Intensive Astronomy Workshop" (PI: K. O'Neil)
2011	\$498,378 – MIT/Lincoln Laboratories fixed-price contract for "Bi-Static Atmospheric Studies" (NRAO/AUI contract)
2010	\$1,556,426– NSF AST award for "Advanced Multibeam Spectrometer for the GBT" (PI: D. Werthimer)
2005	\$40k – NASA award for "Star Formation and Molecular Gas in Massive Low Surface Brightness Galaxies" (NASA contract NAS5-9034)
1993 – 1994	Recipient of a U.S. Department of Education GAAN fellowship

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 DISSERTATION COMMITTEE

2004 – 2008	Alok Singhal NRAO/UVa (Graduated Feb, 2008)  Dissertation: <i>The Connection between Galaxy Kinematics and HI Line Widths as Applied to the Distance Scale</i>  Committee: R. Fisher, E. Murphy, K. O'Neil
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 PROFESSIONAL SOCIETIES AND POSITIONS HELD

2005 - present	Member of the Union Radio-Scientifique Internationale (URSI)
2000 – present	Member of the International Astronomical Union
1998 – present	Member of the Astronomical Society of the Pacific
1997 – present	Member of the American Astronomical Society
1996 – present	Member of the American Physical Society
2005 – 2008	Member of the Green Bank Recreation Board
2001 – 2003	Co-Editor of the Arecibo Observatory Newsletter
2001	Member of the AIPS++ Users Group
1998 – 2001	Co-Chair of the Arecibo Observatory Colloquium
1998 – 2000	Co-Chair of the Arecibo Observatory Journal Society
1995 – 1997	Member of the University of Oregon Physics Department admissions and awards committee
1994 – 1995	Graduate student representative to the University of Oregon Physics faculty
1992 – 1993	Graduate student representative to the Pine Mountain Observatory

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REFERENCES

*References Available upon request*