May 5, 2023

Jeremy S. Heyl

Present position:

Professor and Canada Research Chair in Origins, Department of Physics and Astronomy, University of British Columbia, 7/13−present.

Education:

Ph.D., University of California at Santa Cruz, March 1998 (Astrophysics)
Thesis Advisor: Lars Hernquist
Thesis Title: *Implications of Strong-Magnetic Fields for Neutron-Star Physics*
M.Sc., University of Cambridge, January 1995 (Institute of Astronomy)
Thesis Advisor: Richard Ellis
Thesis Title: *Galaxy Evolution – Observations, Analysis, and Theory*
University of Durham, October 1992−October 1993 (Physics)
A.B., Princeton University, June 1992 (Astronomy, *summa cum laude*, Certificate in Russian Studies with Distinction, Phi Beta Kappa, Sigma Xi)
Undergraduate Thesis Advisor: David Spergel
Senior Thesis Title: *Observational Tracers of Galaxy Merger Remnants*

Previous positions:

Associate Professor and Canada Research Chair in Origins, Department of Physics and Astronomy, University of British Columbia, 7/08−6/13.
Assistant Professor and Canada Research Chair in Origins, Department of Physics and Astronomy, University of British Columbia, 8/03−6/08.
Chandra Fellow. Theoretical Astrophysics Division, Harvard-Smithsonian Center for Astrophysics, 9/00−7/03.

Lee A. DuBridge Postdoctoral Scholar in Theoretical Astrophysics. Theoretical Astrophysics and Relativity Group, California Institute of Technology, 1/98−8/00.
NSF Graduate Fellow, Board of Studies in Astronomy and Astrophysics, University of California at Santa Cruz, 10/94−12/97.
Marshall Scholar, Institute of Astronomy, University of Cambridge, 10/93−10/94.
Marshall Scholar, Department of Physics, University of Durham, 10/92−10/93.
Visiting Researcher, The Central Astronomical Observatory at Pulkovo, Sankt-Petersburg, Russia, 7/92−9/92.
Research Assistant, National Astronomical and Ionospheric Center, Arecibo, Puerto Rico, 6/91−8/91.
Research Assistant, Princeton University Observatory, Princeton, New Jersey, 6/89−9/89.

Awards:

Canada Research Chair, 2003−.
Chandra Postdoctoral Fellow, 2000−2003.
Achievement Reward for College Scientists, 1996.
Phi Beta Kappa, Northern California Association Scholar, 1995.
National Science Foundation Fellow, 1994−1997.
Marshall Scholor, 1992−1994.
Barry Goldwater Scholar, 1990−1992.
Princeton Department of Physics Manfred Pyka Prize, 1991.
Thomas J. Watson Scholar, 1988−1992.
American Chemical Society Olympiad Finalist, 1988.

Personal Data:

Citizenship: United States, Canada
Languages: English, Spanish, Russian, Italian

Service:

Member of Science Team: X-ray Polarimetry Explorer, Generation-X,
Consultant to the NASA SEU Roadmap Committee, 2002,
Chandra, NASA ATP peer review, 2001−2003,
Educational consultant to Nickelodeon Television Network, 2001,
Consultant to the NAS/NRC Committee on the Physics of the Universe, 2001,
Organize Tufts/CfA/MIT Joint Cosmology Seminar Series, 2001−2003,
Organize Theoretical Astrophysics Division Seminar Series, Harvard-Smithsonian Center for Astrophysics, 2000−2003,
Organized Theoretical Astrophysics Seminar Series, California Institute of Technology, 1998−2000,
Served on Astronomy Colloquium Committee, California Institute of Technology, 1999−2000,
Referee for *Phys. Rev. D*, *Phys. Rev. Lett.*, *Journ. Phys. A*, *Mon. Not. Royal Astr. Soc.*, *Astron. Astrophys.*, and *Astrophys. J.*, 1994−present,
Served as an external examiner for dissertation examinations at University of California at Santa Cruz,
Served on curriculum review committee, Dean of the College, Princeton University, 1990−1992.

Teaching:

Taught undergraduate and graduate classes in high-energy astrophysics and radiative transfer, University of British Columbia, 2003−,
Taught graduate classes in high-energy astrophysics and radiative transfer, California Institute of Technology, 1999−2000,
Teaching assistant for an undergraduate introductory course in astronomy, University of California at Santa Cruz, 1994−1995,
Teaching assistant for undergraduate introductory courses in mathematics and physics, Princeton University, 1990−1992.

Invited Talks:

1999 February: Princeton Astrophysics Seminar, Columbia Astronomy Seminar,
1999 April: High-Energy Astrophysics Division Meeting, AAS, Charleston SC,
1999 October: Canadian Institute for Theoretical Astrophysics Seminar, ITP Seminar
1999 December: Durham Physics Seminar December,
2000 January: Caltech Astronomy Colloqium, Astronomy Seminars at MIT, Penn State and Berkeley
2000 February: UCSB Astronomy Seminar
2000 March: Pacific Coast Gravity Meeting at Caltech
2000 April: University of Michigan High-Energy-Physics Seminar
2000 October: Spin and Magnetism in Young Neutron Stars Conference, ITP, University of Washington Astronomy Colloquium
2001 February: University of Michigan Astronomy Seminar
2001 April: Seminars at Durham, St. Andrews, Oxford and ROE
2001 June: SCIPP Seminar at UCSC
2002 January: Astronomy Seminars at Harvard and University of Michigan
2002 February: Yale Astronomy Colloquium, Princeton Astronomy Seminar
2002 March: Seminars at Cambridge and ROE
2002 November: SCIPP Seminar, Colloquiums at UCSC Physics, Wesleyan Astronomy and University of Maryland Astronomy
2002 December: Seminar at IGR, University of Glasgow
2003 January: Seminar at MIT, Colloquiums at Chicago and McGill

Bibliography:

Publications: Refereed Journals

1. Hernquist, L., Heyl, J. S., Spergel, D. N. 1993, “Bending Instabilities in Galaxy Merger Remnants,” *Astrophys. J. Lett.*, **416**, 9-12.

2. Hernquist, L., Spergel, D. N., Heyl, J. S. 1993, “Structure of Merger Remnants. III. Phase-Space Constraints,” *Astrophys. J.*, **416**, 415-424.

3. Heyl, J. S., Hernquist, L., Spergel, D. N. 1994, “Structure of Merger Remnants: IV. Isophotal Shapes,” *Astrophys. J.*, **427**, 165-173.

4. Heyl, J. S., Cole, S., Frenk, C. S., Navarro, J. F. 1995, “Galaxy Formation in a Variety of Hierarchical Models,” *Mon. Not. Royal Astr. Soc.*, **427**, 755-768.*

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6. Heyl, J. S., Hernquist, L., Spergel, D. N. 1996, “Structure of Merger Remnants: V. Kinematics,” *Astrophys. J.*, **463**, 69-79.

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8. Heyl, J. S., Hernquist, L. 1996, “Magnetically Catalyzed Fusion,” *Phys. Rev. C*, **54**, 2751-2759.

9. Heyl, J. S., Hernquist, L. 1997, “Powering Anomalous X-ray Pulsars by Neutron Star Cooling,” *Astrophys. J. Lett.*, **489**, 67-70.

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11. Heyl, J. S., Hernquist, L. 1997, “QED One-Loop Corrections to a Macroscopic Magnetic Dipole,” *Journ. Phys. A*, **30**, 6475-6483.

12. Heyl, J. S., Hernquist, L. 1997, “The Birefringence and Dichroism of the QED Vacuum,” *Journ. Phys. A*, **30**, 6485-6492.

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