

JOEL R. PRIMACK

Physics Department, University of California, Santa Cruz, CA 95064

EDUCATION

A.B. Physics, Princeton University, 1966 (Summa cum Laude)

Ph.D. Physics, Stanford University, 1970

PROFESSIONAL EXPERIENCE

1983-now Professor of Physics, UC Santa Cruz, ≥ 2007 Distinguished Prof, ≥ 2014 Emeritus

1977-1983 Associate Professor of Physics, University of California, Santa Cruz

1973-1977 Assistant Professor of Physics, University of California, Santa Cruz

1970-1973 Junior Fellow of the Society of Fellows of Harvard University

HONORS AND AWARDS (partial list)

A. P. Sloan Foundation Research Fellowship, 1974-1978

APS Forum on Physics and Society Award, 1977; Fellow, 1988; Leo Szilard Award, 2016

American Association for the Advancement of Science, Fellow, 1995

Humboldt Research Award of the Alexander von Humboldt Foundation, 1999-2004

SELECTED PAPERS (h-index = 70)

Is Main Sequence Galaxy Star Formation Controlled by Halo Mass Accretion? By A. Rodriguez-Puebla, **J. R. Primack**, P. Behroozi, S. M. Faber, *MNRAS*, (2016).

Formation of Elongated Galaxies with Low Masses at High Redshift, by Daniel Ceverino, **Joel Primack**, Avishai Dekel, *MNRAS*, 453, 408 (2015)

Understanding the Structural Scaling Relations of Early-Type Galaxies, by L. A. Porter, R. S. Somerville, **J. R. Primack**, P. H. Johansson, *MNRAS*, 444, 1389 (2014)

Gravitationally Consistent Halo Catalogs and Merger Trees for Precision Cosmology, by P. Behroozi, R. Wechsler, H. Wu, M. Busha, A. Klypin, **J. Primack**, *ApJ*, 763, 18 (2013)

Triumphs and Tribulations of Λ CDM, by **Joel R. Primack**, *Ann. Phys.*, 524, 535 (2012)

Dark Matter Halos in the Standard Cosmological Model: Results from the Bolshoi Simulation, by A. A. Klypin, S. Trujillo-Gomez, **J. Primack**, *ApJ*, 740, 102 (2011)

The Major and Minor Galaxy Merger Rates at $z < 1.5$, J. Lotz, P. Jonsson, T. Cox, D. Croton, **J. Primack**, R. Somerville, K. Stewart, *MNRAS*, 391, 1137 (2011)

Accelerating dust temperature calculations with graphics-processing units, by P. Jonsson, **J. R. Primack**, *New Astronomy*, 15, 509 (2010)

A New Non-Parametric Approach to Galaxy Morphological Classification, Jennifer M. Lotz, **Joel Primack**, and Piero Madau, *AJ*, 128, 163-182 (2004)

Dynamical effects of the cosmological constant, by Ofer Lahav, Per B. Lilje, **Joel R. Primack**, Martin J. Rees, *MNRAS* **251**, 128 (1991)

Formation of Galaxies and Large-Scale Structure with Cold Dark Matter, by G. R. Blumenthal, S. M. Faber, **J. R. Primack**, M. J. Rees, *Nature* **311**, 517 (1984)

SYNERGISTIC AND SERVICE ACTIVITIES (partial list)

University Service: Director, University of California systemwide High-Performance AstroComputing Center (UC-HiPACC), 2010-15. Chair, University of California systemwide Committee on Computing, 2010-12; Chair, UCSC Committee on Computing and Telecommunications (2008-11); Chair, UCSC Committee on Educational Policy (1992-94).

American Physical Society activities: Executive Committee, APS Division of Astrophysics 2000-2002; APS Panel on Public Affairs (POPA) 2002-2004; Chair, POPA Task Force on NASA Moon-Mars Program and Funding for Astrophysics 2004; Chair, Forum on Physics and Society 2005-06; Chair, Sakharov Prize Committee, 2010

Advice: SAGENAP advisory panel to DOE/NSF 2000-2001; DOE Lehman Review of SNAP Proposal 2001; Chair, NASA Cosmology panel on LTSA and ADP 2001; Cosmology Panel, Hubble Space Telescope Time Allocation Committee 2003; Editorial Board, Journal of Cosmology and Astroparticle Physics 2003-06; National Academy Beyond Einstein study, 2006-07; Detectors and Computer panel, National Academy NASA Technology Roadmap study, 2011

Outreach: Smithsonian National Air and Space Museum, Advisory Committee on “Cosmic Voyage” IMAX film, 1994–1996. Co-organizer, “Cosmic Questions” Conference, Smithsonian National Museum of Natural History, Washington, DC, April 14-16, 1999. Author of many articles on cosmology in magazines and encyclopedias. Many popular lectures at universities, planetariums, museums, and conferences. Contributed to dome shows at Morrison, Adler, and Hayden Planetariums.

Popular teaching: UCSC Freshman Seminar on Cosmology 2002-2004. Co-taught with Nancy Abrams UCSC course Cosmology and Culture offered regularly 1996-2009, the basis for two popular books: *The View from the Center of the Universe* (2006) and *The New Universe and the Human Future* (2011), both with foreign editions.

RECENT COLLABORATORS

58: Bill Atwood, Peter Behroozi, Kevin Bundy, Andy Burkert, Michael Busha, Daniel Ceverino, Alison Coil, Chris Conselice, Mike Cooper, Avishai Dekel, Julien Devriendt, Aaron Dutton, David Elbaz, Richard Ellis, Sandra Faber, Henry Ferguson, Ricardo Flores (supervised PhD 1984), Michele Fumagalli, Reinard Genzel, Antonis Georgakakis, Mauro Giavalisco, Oleg Gnedin, Yicheng Guo, Stefan Gottloeber, Raja Guhathakurta, S. Gwyn, Francesco Haardt, Jon Holtzman (PhD 1989), J. Huang, Susan Kassin, Anatoly Klypin, David Koo, Andrey Kravtsov, Ofer Lahav, E. Le Floc’h, Piero Madau, Gary Mamon, Nir Mandelker, Paul Nandra, Jeff Newman, Kai Noeske, Casey Papovich, Manolis Plionis, Cristiano Porciani, Francisco Prada, Jason Prochaska, Stefano Profumo, George Rieke, Aaron Romanowsky, D. Schiminovich, Rachel Somerville (PhD 1997), Volker Springel, Kyle Stewart, Ben Weiner, David A. Williams, S. P. Willner, Andrew Zentner, Adi Zolotov, plus AEGIS, AGORA, CANDELS and DEEP teams and students and postdocs listed below.

Recent postdocs 6: Tsafrir Kolatt (1996-9), Kelvin Wu (2000), Jennifer Lotz (2002-3), Patrik Jonsson (2004-9), Miguel Rocha (2014), Aldo Rodriguez-Puebla (2014-16).

Recent PhD students 18: Brandon Allgood (PhD 2005), James Bullock (PhD 1999), Matt Covington (PhD 2008), T. J. Cox (PhD 2004), Alberto Dominguez (PhD 2011), Rudy Gilmore (PhD 2009), Anthony Gonzalez, Michael Gross (PhD 1997), Michael Kuhlen, Patrik Jonsson (PhD 2004), Christoph Lee, Ari Maller (PhD 1999), Christopher Moody (PhD 2013), Mark Mozena, Greg Novak (PhD 2008), Christina Pierce (PhD 2009), Lauren Porter (PhD 2013), and Risa Wechsler (PhD 2001). Supervised 11 postdocs, and all or part of research of 45 graduate students. **PhD Advisor:** S. D. Drell. **Postdoc:** Junior Fellow, Harvard Society of Fellows (Senior Fellows in Physics were Ed Purcell, Norman Ramsay)