

Joel R. Primack

Distinguished Professor of Physics, University of California, Santa Cruz

Office Phone: (831) 459-2580, Fax: -3043; Cell: 831 345-8960; Email: joel@ucsc.edu

Education: Princeton University A.B. 1966 Physics (Summa cum Laude, Valedictorian); Stanford University PhD 1970 Physics

Academic Positions: Junior Fellow, Society of Fellows, Harvard University 1970-73 Assistant Professor of Physics, UCSC 1973-1977; Associate Professor of Physics, UCSC, 1977-1983; Professor of Physics, UCSC 1983-present; Distinguished Professor 2007-; Director, University of California systemwide High-Performance Astro-Computing Center, 2010-; Chair, UCSC Committee on Computing and Telecommunications, 2008-2011; Chair, University Committee on Computing and Communications, 2010-12

Advice (partial list): SAGENAP advisory panel to DOE/NSF 2000-2001; NSF Astronomy Theory Review Panel 2000; 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; Ed Board, Journal of Cosmology and Astroparticle Physics 2003-06; National Academy Beyond Einstein panel, 2006-07; National Academy Review of NASA Technology Roadmap, 2010-11.

American Physical Society activities (partial list): Executive Committee, APS Division of Astrophysics, 2000-2002; APS Panel on Public Affairs (POPA) 2002-2004; Chair, POPA Task Force on Moon-Mars Program and Funding for Astrophysics 2004; Chair, APS Forum on Physics and Society 2005; Chair, APS Sakharov Prize committee 2009

Outreach (partial list): Smithsonian National Air and Space Museum, Advisory Committee on *Cosmic Voyage* IMAX film, 1994-1996. Co-organizer, "Cosmic Questions" Conference, Smithsonian Museum of Natural History, Washington, DC, April 14-16, 1999. Over 100 public lectures on cosmology, including Sackler Lecture (UC Berkeley, 2006); J. Robert Oppenheimer Memorial Lecture (Los Alamos, 2007); APS Public Lecture (St. Louis, 2008); Terry Lectures (with Nancy Abrams, Yale, 2009)

Honors (partial list): A. P. Sloan Foundation Research Fellowship, 1974-1978 American Physical Society Forum on Physics and Society Award, 1977; Fellow, 1988 American Association for the Advancement of Science, Fellow, 1995 Humboldt Senior Award of the Alexander von Humboldt Foundation, 1999-2004 Spirit of Rustum Roy Award, Chopra Foundation, 2012

Books (partial list)

- Joel R. Primack and Frank von Hippel, *Advice and Dissent: Scientists in the Political Arena* (New York: Basic Books, 1974; New American Library, 1976)
- Joel R. Primack and Nancy Ellen Abrams, *The View from the Center of the Universe: Discovering Our Extraordinary Place in the Cosmos* (New York: Riverhead/Penguin, 2006; London: HarperCollins, 2006; Paris: Laffont, 2008; and other foreign editions)
- Nancy Ellen Abrams and Joel R. Primack, *The New Universe and the Human Future: How a Shared Cosmology Could Transform the World* (Yale University Press, 2011)

Selected peer-reviewed publications (in chronological order)

Supersymmetry, cosmology, and new physics at teraelectronvolt energies 1982, *Phys. Rev. Letters* **48**, 223. Pagels, Heinz, and **Primack, Joel R.** (369 citations in NASA Astrophysics Data System)

Formation of galaxies and large-scale structure with cold dark matter 1984, *Nature* **311**, 517. Blumenthal, G. R., Faber, S. M., **Primack, J. R.**, Rees, M. J. (928 ADS cites)

Contraction of dark matter galactic halos due to baryonic infall 1986, *ApJ* **301**, 27. Blumenthal, G. R., Faber, S. M., Flores, R., **Primack, J. R.** (632 ADS)

Dynamical effects of the cosmological constant 1991, *MNRAS* **251**, 128. Lahav, Ofer, Lilje, Per B., **Primack, Joel R.**, Rees, Martin J. (441 ADS)

Semi-analytic modeling of galaxy formation: the local Universe 1999, *MNRAS* **310**, 1087. Somerville, Rachel S., **Primack, Joel R.** (652 ADS) *

The nature of high-redshift galaxies 2001, *MNRAS* **320**, 504. Somerville, Rachel S.; **Primack, Joel R.**, Faber, S. M. (489 ADS) *

Profiles of dark haloes: evolution, scatter and environment 2001, *MNRAS* **321**, 559. Bullock, J. S., Kolatt, T. S., Sigad, Y., Somerville, R. S., Kravtsov, A. V., Klypin, A. A., **Primack, J. R.**, Dekel, A. (1235 ADS) *

Concentrations of dark halos from their assembly histories 2002, *ApJ* **568**, 52. Wechsler, R. H., Bullock, J. S., **Primack, J. R.**, Kravtsov, A. V., Dekel, A. (499 ADS) *

A New Non-Parametric Approach to Galaxy Morphological Classification 2004, *AJ* **128**, 163-182. Jennifer M. Lotz, **Joel Primack**, and Piero Madau (180 ADS)

The shape of dark matter halos 2006, *MNRAS* **367**, 1781-1796. Allgood, B., Flores, R., **Primack, J.**, Kravtsov, A., Wechsler, R., Faltenbacher, A., Bullock, J. (190 ADS) *

Feedback in Simulations of Disk Galaxy Major Mergers 2006, *MNRAS* **373**, 1013. T. J. Cox, Patrik Jonsson, **Joel R. Primack**, and Rachel S. Somerville (149 ADS) *

Simulations of Dust in Interacting Galaxies I: Dust Attenuation 2006, *ApJ* **637**, 255. Patrik Jonsson, T. J. Cox, **Joel R. Primack**, Rachel S. Somerville *

Predicting the Properties of the Remnants of Dissipative Galaxy Mergers 2008, *MNRAS* **384**, 94. M. Covington, A. Dekel, T. J. Cox, P. Jonsson, and **J. R. Primack** *

GeV Gamma-Ray Attenuation and the High-Redshift UV Background 2009, *MNRAS* **402**, 565. R.C. Gilmore, P. Madau, **J. R. Primack**, R. S. Somerville, F. Haardt *

Extragalactic background light inferred from AEGIS galaxy-SED-type fractions 2011, *MNRAS* **410**, 2556, A. Dominguez, **J. R. Primack**, et al. *

Halos and galaxies in the standard cosmological model: results from the Bolshoi simulation 2011, *ApJ*, 740, 102. A. Klypin, S. Trujillo-Gomez, **J. Primack**

* These papers are based on PhD dissertation research supervised by **Joel Primack**