

P. Buford Price, Physics Department., University of California, Berkeley, 94720

Education and Post-doctoral Fellowships

1954 B.S. Summa cum Laude, Physics, Davidson College
1956, 1958 M.S. and Ph.D., University of Virginia
1958-59 Fulbright, University of Bristol, England, Physics
1959-60 NSF, Cambridge University, England, Physics
1965-66 Fulbright, Tata Institute of Fundamental Research, Bombay, Physics
1976-77 Guggenheim, held at Kyoto, LBL and Max Planck Institute, Munich

Positions

1960-69 Physicist, General Electric Research Lab., Schenectady, NY
1969-- Professor, University of California, Berkeley
1979-85 Director, Space Sciences Laboratory, U. C. Berkeley
1983, 1992 Visiting Professor, University of Rome
1984 Scientific Associate, CERN
1987-92 Chairman, Physics Department, University of California, Berkeley
1992-2001 Dean of Physical Sciences, University of California, Berkeley
2002- Professor in the Graduate School, University of California, Berkeley

Societies

Fellow, American Physical Society and American Geophysical Union
Member, American Astronomical Society and AAAS

Selected Activities

1971-72 Member, Lunar Sample Analysis Planning Team
1973-76 Member, Space Studies Board of National Academy of Sciences
1975-76 Chairman, Astrophysics Division, American Physical Society
1982-86 Vice-Chairman, Advisory Committee, California Space Institute
1981-84 Chairman, Geophysics Section, National Academy of Sciences
1988-91 Chair, Physical and Math. Sciences Class of National Academy of Sciences
1981-86 Member, Board of Directors, Terradex Corporation, Walnut Creek, CA.
1988 Chairman, NASA Review Panel, Small-Class Explorer Mission
1991-94 Advisory Committee, Bartol Research Institute
1993-- Regional Director, California Alliance for Minority Participation (NSF)
1994 Blue Ribbon Panel for Reconstruction of NSF South Pole Station
1994-95 NAS Steering Group on Future of Space Science
1999--2001 Member, Polar Research Board of National Academy of Sciences
2001--02 Led a 20-person review of all of Uppsala University (Sweden)
2001--04 Physical Science representative on U. S. Ice Core Working Group

Honors and Prizes

1964 Award for Distinguished Service, American Nuclear Society
1964, '65, '72 IR-100 Awards (invention of Nuclepore filter; radon detector; radiation dosimeter)
1971 Ernest O. Lawrence Award, Atomic Energy Commission
1972-73 Adolph C. and Mary Sprague Miller Research Professor
1973 Honorary Sc.D. Degree, Davidson College
1973 Medal for Exceptional Scientific Achievement, NASA
1975 Election to National Academy of Sciences
1990-91 Holder of William H. McAdams Chair of Physics, UC Berkeley
1997 Scientific Symposium in Honor of P. B. Price's 65th Birthday, Aug. 23-24
2000 Honorary Fellow of Indian Institute of Astrophysics, Bangalore, India
2002 Awarded the Berkeley Citation (for outstanding research and leadership)

Publications

491 papers + 1 monograph on materials science, defects in solids, condensed matter physics, geochronology, cosmochemistry, nuclear physics, particle physics, astrophysics, optics, acoustics, neutrino astronomy, paleoclimatology, life in extreme environments, and detection of anthrax spores.

Co-inventions

Fission track dating; Nuclepore filter; radon detector; 9 patents during period 1967-74; optical dust-logger; biospectrologger; miniaturized biollogger; grain-size logger.

Activities with Broader Impact

I recently taught a Freshman Seminar on Bioterrorism. At my weekly research group meetings, we talk about cross-cutting topics including astrophysics, climatology, glaciology, microbiology, planetology, and origin of life. I strongly believe in the interconnectivity of topics across disciplinary boundaries.

When I was Dean, I hired a Ph.D. and 4-person staff to diversify students and faculty in physical sciences. I was P.I. on grants from Packard Foundation and DOE to run a National Conference of Black Physics Students. I am P.I. on NSF grants to U. C. Berkeley: (1) Alliance for Minority Participation (undergraduate level, 1992-present) and (2) Alliance for Graduate Education and the Professoriate, with the goal to triple production of minority Ph.D.s in science, mathematics, and engineering (1999-present). I have hosted three national workshops at Berkeley for minority college students and their faculty advisors. My colleagues and I equipped a workstation at South Pole Station that linked Mississippi school children and the public for the PBS program "Live from the Poles". I supervised a high-school teacher within the NSF Teachers Experiencing Antarctica program. I advise the press on science questions, and I give talks to science teachers at summer programs.

Students and Post-doctoral Fellows Supervised within the Last Five Years

Ryan Bay, Dmitry Chirkin, David Hardtke, Predrag Miocinovic, Rodin Porrata, Wolfgang Rhode, Kurt Woschnagg, Nathan Bramall, Gerardo Dominguez, Justin Vandenbroucke. Total number of graduate students advised = 44; total number of post-doc fellows advised = 44.

Five Relevant Publications in Climatology and Life in Extreme Environments

1. R. C. Bay, N. Bramall, and P. B. Price. Bipolar correlation of volcanism with millennial climate change. *Proc. Natl. Acad. Sci.* 101, 6341-6345 (2004).
2. P. B. Price and T. Sowers. Temperature dependence of metabolic rates for microbial growth, maintenance, and survival. *Proc. Natl. Acad. Sci.* 101, 4631-4636 (2004).
3. R. C. Bay, N. Bramall, P. B. Price. Ice Logging with Light and Sound. *EOS* 84 (9) 77-82 (2003).
4. N.W. Dunbar, A. Kurbatov, G.A. Zielinski, W.C. McIntosh, P.B. Price, and R. C. Bay. Volcanic ash record in the Siple Dome ice core, *Proc. WAIS Conference*, September, 2003.
5. P. B. Price *et al.* Temperature profile for glacial ice at the South Pole: Implications for life in a nearby subglacial lake, *Proc. Natl. Acad. Sci.* 99, 7844-7847 (2002).

Five Other Publications

6. P. B. Price, K. Woschnagg, and D. Chirkin. Age vs depth of glacial ice at South Pole. *Geophys. Res. Lett.* 27, 2129-2132 (2000).
7. P. B. Price. Habitat for Psychrophiles in Deep Antarctic Ice. *PNAS* 97, 1247-1251 (2000).
8. A. J. Westphal, P. B. Price, T. J. Leighton, K. E. Wheeler. Kinetics of size changes of individual *Bacillus thuringiensis* spores in response to changes in relative humidity. *PNAS* 100, 3461-3466 (2003).
9. R. C. Bay, P. B. Price, G. D. Clow, and A. J. Gow. Climate logging with a new rapid optical technique at Siple Dome. *Geophys. Res. Lett.* 28, 4635-4638 (2001).
10. P. Miocinovic, P. B. Price, and R. C. Bay. Rapid optical method for logging dust concentration versus depth in glacial ice. *Appl. Optics* 40, 2515-2521 (2001).

Collaborators on glaciology, climatology, and microbiology within the last 48 months

R. Bay¹, L. Bergstrom², N. Bramall¹, D. Chirkin¹, Y. D. He³, B. Koci⁴, T. J. Leighton⁵, P. Miocinovic⁶, O. V. Nagornov⁷, J. Priscu⁸, T. Sowers⁹, A. J. Westphal¹, K. E. Wheeler⁵, K. Woschnagg¹, N. Dunbar¹⁰, G. Zielinski¹¹.

[1] U.C. Berkeley; [2] Stockholm U., Sweden; [3] Rosetta Inpharmatics, Kirkland, WA; [4] SSEL, U. Wisconsin, Madison, WI; [5] CHORI, Oakland, CA; [6] U. of Hawaii; [7] Moscow Eng. Phys. Institute, Moscow; [8] Montana State U., Bozeman; [9] Penn State U.; [10] New Mexico Tech, Socorro; [11] U. of Maine.