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Education:

1975 Ph.D. in Astronomy, California Institute of Technology
1970 A.B. *magna cum laude* in Astronomy, Harvard College

Employment:

2006-2007 Sabbatical Leave, Kavli Institute for Theoretical Physics
2004- Harvard College Professor of Astronomy
2001- Clowes Professor of Science, Harvard University
2001-2007 Master of Quincy House, Harvard College
1998-2002 Head, Optical and Infrared Division, Center for Astrophysics
1990-1997 Chairman, Department of Astronomy, Harvard University
1986- Professor of Astronomy, Harvard University
1976-1984 Assistant, Associate, Full Professor of Astronomy, The University of Michigan
1974-1976 Postdoctoral Research Associate, Kitt Peak National Observatory

Honors and Awards

2007 Co-recipient of the Gruber Prize in Cosmology
2005 Elected Member, American Philosophical Society
2003-2005 President, American Astronomical Society
1998 Elected Member, National Academy of Sciences
1992 Elected Member, American Academy of Arts and Sciences
1980 Henry Russel Award, The University of Michigan
1978 Alfred P. Sloan Fellowship, The University of Michigan
1970 NSF Graduate Fellowship, Caltech
1970 Bowdoin Prize for Useful and Polite Literature, Harvard

Named Lectures

2007 Distinguished Lecture Series, Victoria College, Victoria TX
2007 Biard Lecturer, The Ohio State University
2006 Weizmann Lecturer, Weizmann Institute, Israel

2006	Director's Distinguished Lecturer, Lawrence Livermore National Laboratory
2006	The McDonnell Lecturer, Washington University
2006	Distinguished Faculty Lecturer, Texas A&M
2006	Distinguished Faculty Lecturer, Kansas State University
2006	The Lyle Lecture, Lambeth College, Jackson Tennessee
2006	The Morgan Lecture, Appalachian State University
2006	The Chesley Lecturer, Carleton College
2005	Invited Speaker, Otterbein College Einstein Festival
2005	Year of Physics Lecturer, Weber State University, Utah
2005	Director's Lecture, Los Alamos National Laboratory
2005	Public Lecture, Santa Fe Institute
2005	Einstein Year of Physics Lecturer, University of Guelph, Ontario
2004	The Anderson Lecture, Oberlin College
2004	The Crump Lecture, St. Andrew's School, Delaware
2004	The George Gamow Lecture, University of Colorado
2004	Distinguished Science Lecture, Duquesne University
2003	Kibbe Lecture, Bowdoin College
2003	Papallardo Lecture, MIT
2003	Marker Lecturer, Penn State

Selected Activities

Trustee, Associated Universities Incorporated; Member, The Magellan Council; Smithsonian Science Commission; Gemini International Board; Next Generation Space Telescope Ad Hoc Science Working Group; AURA Board; AAS Council; HST Users' Committee, AURA Observatories' Committee, World Book Encyclopedia "Science Year" Board, National Academy of Sciences Publications Board, Center for Adaptive Optics external visiting committee

Educational Work

Instructor for Science A-35, "The Energetic Universe", a large quantitative science course; author of "The Extravagant Universe—exploding stars, dark energy, and the accelerating cosmos," from Princeton University Press, shortlisted for the Aventis Prize for Science Books, 2003. Author of articles for the general public in Sky and Telescope, Natural History, and National Geographic magazines. Speaker at AAAS, National Science Teachers' Association, Knight Journalism Fellows at MIT, Neiman Fellows at Harvard,

Ph. D. Thesis Advisees

Peter Kupferman

William P. Blair, Astrophysicist and Research Professor, Johns Hopkins University
Bradley C. Whitmore, Astronomer, Space Telescope Science Institute
Robert A. Fesen, Professor of Astronomy, Dartmouth College
Eliot Malumuth, Research Scientist, Goddard Space Flight Center
J. Ward Moody, Professor of Astronomy, Brigham Young University
Michael V. Newberry, software entrepreneur, Tucson, Arizona
Ronald Eastman, Lawrence Livermore National Laboratory
R. Chris Smith, Associate Astronomer, Cerro Tololo Inter-American Observatory
Brian P. Schmidt, Professorial Fellow, Australian National University
Jason Pun, Assistant Professor, Hong Kong Institute of Science and Technology
Adam G. Riess, Professor, Johns Hopkins & Space Telescope Science Institute
Huan Lin, Scientist, Experimental Astrophysics, Fermi National Accelerator Lab
Saurabh Jha, Assistant Professor, Rutgers University
Maryam Modjaz, Miller Fellow, University of California, Berkeley

Recent Publications

Dessart, L., Blondin, S., Brown, P. J., Hicken, M., Hillier, D. J., Holland, S. T., Immler, S., **Kirshner, R. P.**, Milne, P., Modjaz, M., and Roming, P. W. A. "Using Quantitative Spectroscopic Analysis to Determine the Properties and Distances of Type II-Plateau Supernovae: SNe 2005cs and 2006bp" ArXiv e-prints 711, arXiv:0711.1815 (2007).

Hicken, M., Garnavich, P. M., Prieto, J. L., Blondin, S., DePoy, D. L., **Kirshner, R. P.**, and Parrent, J. "The Luminous and Carbon-rich Supernova 2006gz: A Double Degenerate Merger?" *Astrophysical Journal* 669, L17 (2007).

Valenti, S., Benetti, S., Cappellaro, E., Patat, F., Mazzali, P., Turatto, M., Hurley, K., Maeda, K., Gal-Yam, A., Foley, R. J., Filippenko, A. V., Pastorello, A., Challis, P., Frontera, F., Harutyunyan, A., Iye, M., Kawabata, K., **Kirshner, R. P.**, Li, W., Lipkin, Y. M., Matheson, T., Nomoto, K., Ofek, E. O., Ohyama, Y., Pian, E., Salvo, M., Sauer, D. N., Schmidt, B. P., Soderberg, A., and Zampieri, L. "The Broad-lined Type Ic SN 2003jd" ArXiv e-prints 710, arXiv:0710.5173 (2007).

Foley, R. J., Filippenko, A. V., Aguilera, C., Becker, A. C., Blondin, S., Challis, P., Clocchiatti, A., Covarrubias, R., Davis, T. M., Garnavich, P. M., Jha, S., **Kirshner, R. P.**, Krisciunas, K., Leibundgut, B., Li, W., Matheson, T., Miceli, A., Miknaitis, G., Pignata, G., Rest, A., Riess, A. G., Schmidt, B. P., Smith, R. C., Sollerman, J., Spyromilio, J., Stubbs, C. W., Tonry, J. L., Suntzeff, N. B., Wood-Vasey, W. M., and Zenteno, A.

"Constraining Cosmic Evolution of Type Ia Supernovae" ArXiv e-prints 710, arXiv:0710.2338 (2007).

Plucinsky, P. P., Williams, B., Long, K. S., Gaetz, T. J., Sasaki, M., Pietsch, W., Tuellmann, R., Smith, R. K., Blair, W. P., Helfand, D., Hughes, J. P., Winkler, P. F., de Avillez, M., Bianchi, L., Breitschwerdt, D., Edgar, R. J., Ghavamian, P., Grindlay, J., Haberl, F., **Kirshner, R.**, Kuntz, K., Mazeh, T., Pannuti, T. G., Shporer, A., and Thilker, D. A. "Chandra ACIS Survey of M33 (ChASem33): A First Look" ArXiv e-prints 709, arXiv:0709.4211 (2007).

Davis, T. M., M[^]rtzell, E., Sollerman, J., Becker, A. C., Blondin, S., Challis, P., Clocchiatti, A., Filippenko, A. V., Foley, R. J., Garnavich, P. M., Jha, S., Krisciunas, K., **Kirshner, R. P.**, Leibundgut, B., Li, W., Matheson, T., Miknaitis, G., Pignata, G., Rest, A., Riess, A. G., Schmidt, B. P., Smith, R. C., Spyromilio, J., Stubbs, C. W., Suntzeff, N. B., Tonry, J. L., Wood-Vasey, W. M., and Zenteno, A. "Scrutinizing Exotic Cosmological Models Using ESSENCE Supernova Data Combined with Other Cosmological Probes" *Astrophysical Journal* 666, 716 (2007).

Wood-Vasey, W. M., Miknaitis, G., Stubbs, C. W., Jha, S., Riess, A. G., Garnavich, P. M., **Kirshner, R. P.**, Aguilera, C., Becker, A. C., Blackman, J. W., Blondin, S., Challis, P., Clocchiatti, A., Conley, A., Covarrubias, R., Davis, T. M., Filippenko, A. V., Foley, R. J., Garg, A., Hicken, M., Krisciunas, K., Leibundgut, B., Li, W., Matheson, T., Miceli, A., Narayan, G., Pignata, G., Prieto, J. L., Rest, A., Salvo, M. E., Schmidt, B. P., Smith, R. C., Sollerman, J., Spyromilio, J., Tonry, J. L., Suntzeff, N. B., and Zenteno, A. "Observational Constraints on the Nature of Dark Energy: First Cosmological Results from the ESSENCE Supernova Survey" *Astrophysical Journal* 666, 694 (2007).

Miknaitis, G., Pignata, G., Rest, A., Wood-Vasey, W. M., Blondin, S., Challis, P., Smith, R. C., Stubbs, C. W., Suntzeff, N. B., Foley, R. J., Matheson, T., Tonry, J. L., Aguilera, C., Blackman, J. W., Becker, A. C., Clocchiatti, A., Covarrubias, R., Davis, T. M., Filippenko, A. V., Garg, A., Garnavich, P. M., Hicken, M., Jha, S., Krisciunas, K., **Kirshner, R. P.**, Leibundgut, B., Li, W., Miceli, A., Narayan, G., Prieto, J. L., Riess, A. G., Salvo, M. E., Schmidt, B. P., Sollerman, J., Spyromilio, J., and Zenteno, A. "The ESSENCE Supernova Survey: Survey Optimization, Observations, and Supernova Photometry" *Astrophysical Journal* 666, 674 (2007).

Gaetz, T. J., Blair, W. P., Hughes, J. P., Winkler, P. F., Long, K. S.,

Pannuti, T. G., Williams, B., Edgar, R. J., Ghavamian, P., Plucinsky, P. P., Sasaki, M., **Kirshner, R. P.**, Avillez, M., and Breitschwerdt, D. "Chandra ACIS Survey of M33 (ChASem33): X-Ray Imaging Spectroscopy of M33SNR 21, the Brightest X-Ray Supernova Remnant in M33" *Astrophysical Journal* 663, 234 (2007).

Brown, P. J., Dessart, L., Holland, S. T., Immler, S., Landsman, W., Blondin, S., Blustin, A. J., Breeveld, A., Dewangan, G. C., Gehrels, N., Hutchins, R. B., **Kirshner, R. P.**, Mason, K. O., Mazzali, P. A., Milne, P., Modjaz, M., and Roming, P. W. A. "Early Ultraviolet, Optical, and X-Ray Observations of the Type IIP SN 2005cs in M51 with Swift" *Astrophysical Journal* 659, 1488 (2007).

Jha, S., Riess, A. G., and **Kirshner, R. P.** "Improved Distances to Type Ia Supernovae with Multicolor Light-Curve Shapes: MLCS2k2" *Astrophysical Journal* 659, 122 (2007).

Riess, A. G., Strolger, L.-G., Casertano, S., Ferguson, H. C., Mobasher, B., Gold, B., Challis, P. J., Filippenko, A. V., Jha, S., Li, W., Tonry, J., Foley, R., **Kirshner, R. P.**, Dickinson, M., MacDonald, E., Eisenstein, D., Livio, M., Younger, J., Xu, C., Dahlén, T., and Stern, D. "New Hubble Space Telescope Discoveries of Type Ia Supernovae at $z \geq 1$: Narrowing Constraints on the Early Behavior of Dark Energy" *Astrophysical Journal* 659, 98 (2007).

Modjaz, M., Kewley, L., **Kirshner, R. P.**, Stanek, K. Z., Challis, P., Garnavich, P. M., Greene, J. E., and Prieto, J. L. "Measured Metallicities at the Sites of Nearby Broad-Lined Type Ic Supernovae and Implications for the SN-GRB Connection" *ArXiv Astrophysics e-prints arXiv:astro-ph/0701246* (2007).

Bouchet, P., Dwek, E., Danziger, J., Arendt, R. G., De Buizer, I. J. M., Park, S., Suntzeff, N. B., **Kirshner, R. P.**, and Challis, P. "SN 1987A after 18 Years: Mid-Infrared Gemini and Spitzer Observations of the Remnant" *Astrophysical Journal* 650, 212 (2006).

Modjaz, M., Stanek, K. Z., Garnavich, P. M., Berlind, P., Blondin, S., Brown, W., Calkins, M., Challis, P., Diamond-Stanic, A. M., Hao, H., Hicken, M., **Kirshner, R. P.**, and Prieto, J. L. "Early-Time Photometry and Spectroscopy of the Fast Evolving SN 2006aj Associated with GRB 060218" *Astrophysical Journal* 645, L21 (2006).

Heng, K., McCray, R., Zhekov, S. A., Challis, P. M., Chevalier, R. A.,

Crotts, A. P. S., Fransson, C., Garnavich, P., **Kirshner, R. P.**, Lawrence, S. S., Lundqvist, P., Panagia, N., Pun, C. S. J., Smith, N., Sollerman, J., and Wang, L. "Evolution of the Reverse Shock Emission from SNR 1987A" *Astrophysical Journal* 644, 959 (2006).

Morse, J. A., Smith, N., Blair, W. P., **Kirshner, R. P.**, Winkler, P. F., and Hughes, J. P. "Hubble Space Telescope Observations of Oxygen-rich Supernova Remnants in the Magellanic Clouds. III. WFPC2 Imaging of the Young, Crab-like Supernova Remnant SNR 0540-69.3" *Astrophysical Journal* 644, 188 (2006).

Clocchiatti, A., Schmidt, B. P., Filippenko, A. V., Challis, P., Coil, A. L., Covarrubias, R., Diercks, A., Garnavich, P., Germany, L., Gilliland, R., Hogan, C., Jha, S., **Kirshner, R. P.**, Leibundgut, B., Leonard, D., Li, W., Matheson, T., Phillips, M. M., Prieto, J. L., Reiss, D., Riess, A. G., Schommer, R., Smith, R. C., Soderberg, A., Spyromilio, J., Stubbs, C., Suntzeff, N. B., Tonry, J. L., and Woudt, P. "Hubble Space Telescope and Ground-based Observations of Type Ia Supernovae at Redshift 0.5: Cosmological Implications" *Astrophysical Journal* 642, 1 (2006).

Elmhamdi, A., Danziger, I. J., Branch, D., Leibundgut, B., Baron, E., and **Kirshner, R. P.** "Hydrogen and helium traces in type Ib-c supernovae" *Astronomy and Astrophysics* 450, 305 (2006).

Blondin, S., Dessart, L., Leibundgut, B., Branch, D., H[^]flich, P., Tonry, J. L., Matheson, T., Foley, R. J., Chornock, R., Filippenko, A. V., Sollerman, J., Spyromilio, J., **Kirshner, R. P.**, Wood-Vasey, W. M., Clocchiatti, A., Aguilera, C., Barris, B., Becker, A. C., Challis, P., Covarrubias, R., Davis, T. M., Garnavich, P., Hicken, M., Jha, S., Krisciunas, K., Li, W., Miceli, A., Miknaitis, G., Pignata, G., Prieto, J. L., Rest, A., Riess, A. G., Salvo, M. E., Schmidt, B. P., Smith, R. C., Stubbs, C. W., and Suntzeff, N. B. "Using Line Profiles to Test the Fraternity of Type Ia Supernovae at High and Low Redshifts" *Astronomical Journal* 131, 1648 (2006).

Jha, S., **Kirshner, R. P.**, Challis, P., Garnavich, P. M., Matheson, T., Soderberg, A. M., Graves, G. J. M., Hicken, M., Alves, J. F., Arce, H. G., Balog, Z., Barmby, P., Barton, E. J., Berlind, P., Bragg, A. E., Brice^o, C., Brown, W. R., Buckley, J. H., Caldwell, N., Calkins, M. L., Carter, B. J., Concannon, K. D., Donnelly, R. H., Eriksen, K. A., Fabricant, D. G., Falco, E. E., Fiore, F., Garcia, M. R., G^umez, M., Grogin, N. A., Groner, T., Groot, P. J., Haisch, K. E., Jr., Hartmann, L., Hergenrother, C. W., Holman, M. J., Huchra, J. P., Jayawardhana, R., Jerius, D., Kannappan, S.

J., Kim, D.-W., Kleyana, J. T., Kochanek, C. S., Koranyi, D. M., Krockenberger, M., Lada, C. J., Luhman, K. L., Luu, J. X., Macri, L. M., Mader, J. A., Mahdavi, A., Marengo, M., Marsden, B. G., McLeod, B. A., McNamara, B. R., Megeath, S. T., Moraru, D., Mossman, A. E., Muench, A. A., Munoz, J. A., Muzerolle, J., Naranjo, O., Nelson-Patel, K., Pahre, M. A., Patten, B. M., Peters, J., Peters, W., Raymond, J. C., Rines, K., Schild, R. E., Sobczak, G. J., Spahr, T. B., Stauffer, J. R., Stefanik, R. P., Szentgyorgyi, A. H., Tollestrup, E. V., Visnen, P., Vikhlinin, A., Wang, Z., Willner, S. P., Wolk, S. J., Zajac, J. M., Zhao, P., and Stanek, K. Z. "UBVRI Light Curves of 44 Type Ia Supernovae" *Astronomical Journal* 131, 527 (2006).

Krisciunas, K., Garnavich, P. M., Challis, P., Prieto, J. L., Riess, A. G., Barris, B., Aguilera, C., Becker, A. C., Blondin, S., Chornock, R., Clocchiatti, A., Covarrubias, R., Filippenko, A. V., Foley, R. J., Hicken, M., Jha, S., **Kirshner, R. P.**, Leibundgut, B., Li, W., Matheson, T., Miceli, A., Miknaitis, G., Rest, A., Salvo, M. E., Schmidt, B. P., Smith, R. C., Sollerman, J., Spyromilio, J., Stubbs, C. W., Suntzeff, N. B., Tonry, J. L., and Wood-Vasey, W. M. "Hubble Space Telescope Observations of Nine High-Redshift ESSENCE Supernovae¹," *Astronomical Journal* 130, 2453 (2005).

Gallagher, J. S., Garnavich, P. M., Berlind, P., Challis, P., Jha, S., and **Kirshner, R. P.** "Chemistry and Star Formation in the Host Galaxies of Type Ia Supernovae" *Astrophysical Journal* 634, 210 (2005).

Tominaga, N., Tanaka, M., Nomoto, K., Mazzali, P. A., Deng, J., Maeda, K., Umeda, H., Modjaz, M., Hicken, M., Challis, P., **Kirshner, R. P.**, Wood-Vasey, W. M., Blake, C. H., Bloom, J. S., Skrutskie, M. F., Szentgyorgyi, A., Falco, E. E., Inada, N., Minezaki, T., Yoshii, Y., Kawabata, K., Iye, M., Anupama, G. C., Sahu, D. K., and Prabhu, T. P. "The Unique Type Ib Supernova 2005bf: A WN Star Explosion Model for Peculiar Light Curves and Spectra" *Astrophysical Journal* 633, L97 (2005).

Graves, G. J. M., Challis, P. M., Chevalier, R. A., Crotts, A., Filippenko, A. V., Fransson, C., Garnavich, P., **Kirshner, R. P.**, Li, W., Lundqvist, P., McCray, R., Panagia, N., Phillips, M. M., Pun, C. J. S., Schmidt, B. P., Sonneborn, G., Suntzeff, N. B., Wang, L., and Wheeler, J. C. "Limits from the Hubble Space Telescope on a Point Source in SN 1987A" *Astrophysical Journal* 629, 944 (2005).

Riess, A. G., Li, W., Stetson, P. B., Filippenko, A. V., Jha, S., **Kirshner, R. P.**, Challis, P. M., Garnavich, P. M., and Chornock, R. "Cepheid

Calibrations from the Hubble Space Telescope of the Luminosity of Two Recent Type Ia Supernovae and a Redetermination of the Hubble Constant" *Astrophysical Journal* 627, 579 (2005).

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Fransson, C., Challis, P. M., Chevalier, R. A., Filippenko, A. V., **Kirshner, R. P.**, Kozma, C., Leonard, D. C., Matheson, T., Baron, E., Garnavich, P., Jha, S., Leibundgut, B., Lundqvist, P., Pun, C. S. J., Wang, L., and Wheeler, J. C. "Hubble Space Telescope and Ground-based Observations of SN 1993J and SN 1998S: CNO Processing in the Progenitors" *Astrophysical Journal* 622, 991 (2005).

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Garnavich, P. M., Bonanos, A. Z., Krisciunas, K., Jha, S., **Kirshner, R. P.**, Schlegel, E. M., Challis, P., Macri, L. M., Hatano, K., Branch, D., Bothun,

G. D., and Freedman, W. L. "The Luminosity of SN 1999by in NGC 2841 and the Nature of ``Peculiar'' Type Ia Supernovae" *Astrophysical Journal* 613, 1120 (2004).

Riess, A. G., Strolger, L.-G., Tonry, J., Casertano, S., Ferguson, H. C., Mobasher, B., Challis, P., Filippenko, A. V., Jha, S., Li, W., Chornock, R., **Kirshner, R. P.**, Leibundgut, B., Dickinson, M., Livio, M., Giavalisco, M., Steidel, C. C., Benítez, T., and Tsvetanov, Z. "Type Ia Supernova Discoveries at $z > 1$ from the Hubble Space Telescope: Evidence for Past Deceleration and Constraints on Dark Energy Evolution" *Astrophysical Journal* 607, 665 (2004).

Barris, B. J., Tonry, J. L., Blondin, S., Challis, P., Chornock, R., Clocchiatti, A., Filippenko, A. V., Garnavich, P., Holland, S. T., Jha, S., **Kirshner, R. P.**, Krisciunas, K., Leibundgut, B., Li, W., Matheson, T., Miknaitis, G., Riess, A. G., Schmidt, B. P., Smith, R. C., Sollerman, J., Spyromilio, J., Stubbs, C. W., Suntzeff, N. B., Aussel, H., Chambers, K. C., Connelley, M. S., Donovan, D., Henry, J. P., Kaiser, N., Liu, M. C., Martín, E. L., and Wainscoat, R. J. "Twenty-Three High-Redshift Supernovae from the Institute for Astronomy Deep Survey: Doubling the Supernova Sample at $z > 0.7$ " *Astrophysical Journal* 602, 571 (2004).

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