

JOURNAL PUBLICATIONS:

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17. M. E. Schillaci and R. R. Silbar, "Failure of Soft Pion Techniques for the Reaction $pp \rightarrow d\pi^+$ at Threshold," *Phys. Rev.* **185**, 1830 (1969).
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86. R. R. Silbar, "Accelerators and Beams: A Multimedia Tutorial," in *Application of Accelerators in Research and Industry*, ed. by J. L. Duggan and I. L. Morgan, AIP Conf. Proc. **392**, 1231, 1997
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 94. A. S. Goldhaber, T. Goldman, and R. R. Silbar, "Effect of Hadron Dynamics on the Proton Lifetime," *Phys. Rev. D* **66**, 056001 (2002).
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 96. T. Goldman and Richard R. Silbar, "Effect of Pion Exchange in a Relativistic Quark Model of Nucleons," *Phys. Rev. C* **77**, 065203 (2008).
 97. T. Goldman and Richard R. Silbar, "Pion Linac as an Energy-tagged Neutrino Source," *Phys. Rev. ST Accel. Beams* **11**, 124701 (2008).
 98. Richard R. Silbar and T. Goldman, "Solving the Radial Dirac Equations: a Numerical Odyssey," *Eur. J. Phys.* **32**, 217-233 (2011).
 99. T. Goldman and Richard R. Silbar, "Charmed Mesons Have No Discernable Color-Coulomb Attraction," *Phys. Rev. C* **85**, 015203 (2012).

100. T. Goldman and Richard R. Silbar, "A Mesonic Analog of the Deuteron," *Intnl. J. of Modern Physics E* **23**, 14500091 (2014).

REVIEWED, PUBLISHED SOFTWARE:

The following pieces of commercial software are teaching tutorials. They were developed by WhistleSoft, Inc., with Richard R. Silbar as Project Manager. They are available for purchase from **Physics Academic Software**, a non-profit arm of the American Institute of Physics and the American Association of Physics Teachers. The software is available in essentially identical versions for both Windows and Macintosh computers.

1. *Vectors*, 1997. ISBN 1-56396-719-7 (Windows version) and ISBN 1-56396-722-7 (Macintosh version). Principal authors: R. R. Silbar, J. P. McGee, and C. S. Brownrigg. Won Honorable Mention in the Seventh Annual *Computers in Physics* Educational Software Contest (1996).
2. *Forces*, 1998. ISBN 1-56396-797-9 (Windows version) and ISBN 1-56396-798-7 (Macintosh version). Principal authors: R. R. Silbar, W. C. Mead, and R. A. Williams. Won Honorable Mention in the Eighth Annual *Computers in Physics* Educational Software Contest (1997).
3. *Motion in Electromagnetic Fields*, 1999. ISBN 1-56396-870-X (Windows version) and ISBN 1-56396-869-X (Macintosh version). Principal authors: R. R. Silbar, A. A. Browman, W. C. Mead, and R. A. Williams. Won Honorable Mention in the Ninth Annual *Computers in Physics* Educational Software Contest (1998).
4. *Dipole Magnets*, 1999. ISBN 1-928550-01-0 (Windows version) and ISBN 1-928550-02-9 (Macintosh version). Principal authors: R. R. Silbar, A. A. Browman, W. C. Mead, and R. A. Williams. Won Honorable Mention in the Ninth Annual *Computers in Physics* Educational Software Contest (1998).
5. *Quadrupole Magnets*, 2000. ISBN 1-928550-10-X (Windows version) and ISBN 1-928550-11-8 (Macintosh version). Principal authors: R. R. Silbar, A. A. Browman, W. C. Mead, and R. A. Williams.

INVITED TALKS:

1. R. R. Silbar, "Charge Exchange Effects in Medium Energy Reactions," APS Winter Meeting in the West at Pasadena, December, 1975.
2. "Nucleon Charge Exchange and $(\pi, \pi N)$ Reactions," Int. Topical Conf. on Meson Nuclear Physics, p. 297, Carnegie-Mellon Univ., May 1976.
3. R. R. Silbar, "Report on the Los Alamos Kaon Factory Seminar: Physics," Kaon Factory Workshop, 8th Int. Conf. on High Energy Phys. and Nucl. Struc., Vancouver, Canada, August 1979.
4. R. R. Silbar, Chairman's Report, "Panel P1: Strong Interactions at Intermediate Energies," Workshop on Program Options in Intermediate-Energy Physics, LASL, Los Alamos, August 1979.
5. Richard R. Silbar, "Long Range Planning at LAMPF," LAMPF User's Group, October 1979.
6. R. R. Silbar, "Nucleon-Nucleon Interactions at Intermediate Energies," Seance Publique du Comité des Experiences, Laboratoires National Saturne, Saclay, France, November 24, 1980.
7. R. R. Silbar, "Summary Talk," Workshop on Intense Polarized Beam Physics at LAMPF, Los Alamos, November 9, 1983.
8. R. R. Silbar, "Unitary, Unified Models for $NN \rightarrow NN\pi$," Conf. on Intersections Between Part. and Nucl. Phys., Steamboat Springs, AIP Conf. Proc. 123, 645 (1984).
9. R. R. Silbar, "Unified Unitary Models for Coupled NN and $NN\pi$ Systems," 9th Eur. Conf. on Few Body Problems in Phys., Tbilisi, Georgia, USSR, July 1984. (Unable to attend.)
10. R. R. Silbar, "Theoretical Aspects of the Nucleon-Nucleon Workshop," plenary report, Marseilles Conference on High Energy Spin Physics, September 1984. See also *Le Journal de Physique Colloques*, December 1983.

11. R. R. Silbar, A. Erell, and J. M. Eisenberg, "The Nucleon-Nucleon Force from a Chiral Lagrangian with Omega-Stabilization," HPANI Conference, Tempe, AZ, March 1985.
12. R. R. Silbar, "Skyrmions", lectures at Hampton University Graduate Studies (HUGS) at the Continuous Electron Beam Accelerator Facility (CEBAF), Newport News, Virginia, June 1986.
13. R. R. Silbar, "Nucleon-Nucleon Spin Dependence—Theory," Int. Conf. on High-Energy Spin Physics, Protvino, U.S.S.R., September 1986. (Unable to attend.)
14. R. R. Silbar, " $NN \rightarrow NN\pi$: The New Frontier in Nucleon-Nucleon Scattering," Int. Conf. and Symp. on Unified Concepts of Many-Body Problems, Stony Brook, NY, September 1986.
15. R. R. Silbar, "Skyrmions and Nuclear Physics," lectures at National Nuclear Physics Summer School, Georgetown University, June 1987, notes ed. by P. A. Treado, pp. 31-61 (1988).
16. Richard R. Silbar, "An Interactive Interface to the Beam Optics Code TRANSPORT," presented at Workshop on Linear Accelerator and Beam Optics Codes, LaJolla, January 1988, AIP Conf. Prof. 177, 109 (1988).
17. R. R. Silbar and D. E. Schultz, "Automation of Particle Accelerator Control," ASME Int. Conf. on Computers in Engineering, San Francisco, August 1988, published in *Computers in Engineering 1988 - Volume One*, ed. by V. A. Tipnis and E. M. Patton, (American Soc. of Mech. Engineers, New York, 1988), pp. 79-83.
18. D. E. Schultz and R. R. Silbar, "Toward Automatic Control of Particle Accelerator Beams," Third Int. Conf. on Applications of Artificial Intelligence in Engineering, Stanford, August 1988, published in *Artificial Intelligence in Engineering: Diagnosis and Learning*, ed. by J. S. Gero (Elsevier/Computational Mechanics Publ., Southampton, 1988), pps. 161-174.

19. R. R. Silbar, W. M. Kloet, L. S. Kisslinger, and J. Dubach, "Pion-Exchange Contribution to the Parity-Violating Asymmetry in pp Scattering," Eighth Int. Symp. on High Energy Spin Physics, Minneapolis, September 1988, and LA-UR-88-3030.
20. R. R. Silbar, "Summary Talk for Intermediate-Energy Hadron Interactions Parallel Session," Eighth Int. Symp. on High Energy Spin Physics, Minneapolis, September 1988, and LA-UR-88-3320.
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