PROFESSOR ELIZABETH A. RAUSCHER, Ph.D.
President
Tecnic Research Laboratory
3500 S. Tomahawk Rd., Bldg #188
Apache Junction, AZ 85219

- Ph.D. and M.S. in Astrophysics, Nuclear Physics and engineering, B.S. Physics and Chemistry, University of California, Berkeley.
- Nuclear scientist and astrophysicist and researcher at Lawrence Berkeley National Laboratory (LBNL) (1962-1979).
- Navy grants through University of California, Berkeley (1970-1974) and through Tecnic Research Laboratories (1983, 1990-1991).
- Researcher at Stanford Research Institute (SRI International) Radio Physics Laboratory (1974-1978), concurrent position.
- Chairman, Fundamental Physics Group (FPG) at Lawrence Berkeley National Laboratory (LBNL) (1974-1977).
- Staff Researcher, Theory Group, Lawrence Livermore National Laboratory (LLNL) (1966-1969).
- Professor of Physics and General Science at John F. Kennedy University of California (1978-1984).
- Research Consultant to NASA (1983-1985), and Stanford SLAC (1971-1972).
- Professor and graduate student advisor, Department of Physics at the University of Nevada, Reno (1990-1998).
- Member of APS, IEEE, , AAAS, MAA, ANA, AAMI.
- Served on Congressional OTA Advisory Committee (1970-1980).
- Delegate and advisor to the United Nations (1979, 1989, 2002).
- President of Tecnic Research Laboratories (TRL), San Leandro, CA (1979-1988), and partner Tecnic Research Laboratory of Apache Junction, AZ (1988-2004) and sole proprietor (2004-present).
- Stanford University Grant in astrophysics (1997-1999), and Event Horizons (1999-present).
- President and board of directors of six non-profit 501(c)3 Organizations. Currently President of Electromagnetic Signal Laboratory of Arizona (2003-present).
- Consulting research and invited lectures in U.S., England, Europe, Korea, Japan, China, India, Africa, Singapore, Iceland, Canada, Mexico, Bermuda, and South America.
- Author of 275 scientific papers and 6 books, and 3 U.S. patents and one European patent.
- Co-inventor with W.L. Van Bise of non-superconducting magnetic detector; external magnetic pacemaker, and pulsed magnetic pain control system (issued patents in the U.S. and Europe).
- Main field of research: Nuclear and Atomic Physics, Astrophysics and Cosmological Models, Plasma Physics, Biomedical Engineering and Geophysics Monitoring and Data Analysis.
- Has received numerous awards and grants and is listed in eleven Who's Who, including Marquis' Who's Who, and Men and Women in Science and Technology.

QUALIFICATIONS FOR ADMINSTRATION, DIRECTORSHIP, RESEARCH AND TEACHING OF

Prof. Elizabeth A. Rauscher, Ph.D.

A. Academic Research

Dr. Elizabeth A. Rauscher was associated with the University of California, Berkeley (UCB), Lawrence Berkeley National Laboratory (LBNL) from 1964 until 1979, first as a graduate student and then as a research staff member. From 1964 until 1966 she was with the theoretical nuclear science division and from 1966-1969, with the Lawrence Livermore National Laboratory (LLNL) Theoretical Nuclear, Plasma and Astrophysical Program. From 1969 until 1974 she was associated with the theoretical particle physics group and from 1974 until 1977 she was associated with the Nuclear Science Theoretical and experimental Bevatron accelerator program from 1977 until 1979 she was on staff with the Nuclear Physics G.T. Seaborg research group.

Dr. Rauscher held concurrent invited positions at the Stanford Linear Accelerator Center (SLAC) from 1971 to 1972 and was a consultant of the Stanford Research Institute (SRI) Radio Physics Laboratory 1974-1977 in theoretical relativistic physics. She also held a Navy grant from 1970-1974 through U.C. Berkeley and also she held an Air Force consulting position in 1979 an antennae theory and in 1979 and 1989, she was a delegate to the United Nations on long term energy sources and environmental issues. As a consultant and adjunct professor at the University of Nevada, she conducted theoretical research and advised experimental programs on fast light ion-atom collisions, primarily helium to calculate high resolution extreme ultraviolet (EUV) emission cross sections 1990-1995 in which she worked with faculty and graduate students in completing their graduate programs. From 1997-1999 she conducted research on generalized quantum theory and relativistic invariance under a Stanford Engineering research grant.

B. Program Development, Administration and Committees

Administrative experience, program and group leadership and committee activities are listed. These projects involved the knowledge and ability to coordinate, integrate, organize and deal with interpersonal relationships of administrators, faculty, students and employees, as well as budgetary programs. Also utilized was the ability to present information in written, graphical and oral presentation for.

Dr. Rauscher served on the academic oversight committee on women in academia at UCB (1969-1971), was on the Radiation Safety Committee (1972) at LBNL, set up successful training and advancement programs for LBNL employees (1969-1973), organized and chaired coordinating and review committee for minority students and employee programs for recruitment and training at UCB and LBNL (1970-1973) and met on a regular basis with LBNL Directors Edwin McMillan and later with Andrew Sessler on laboratory policy issues, organized and chaired the Fundamental Physics group at LBNL (1974-1977) in which over forty physicists, biophysicists and sociologists participated, directed solar physics research program at LLNL (1966-1967), vice president academic senate at JFK University (1980-1982), elected president of the PRG psychology and interdisciplinary nonprofit program in San Francisco, CA (1980-1986), board of directs MIT habitat research program, conducted in Santa Barbara, CA (1975-1978), organized new section of the IEEE, Tesla Centennial (1984-1988), elected president of the N.W. Center for the study of Non-Ionizing Radiation (1991-1993), delegate and adviser to the United Nations (1979, 1989) as previous stated, President and Research Director of Tecnic Research Laboratories of California (1979-1988) which held NASA, Navy, Air Force and academic and industrial consulting contracts and also DOE, DOD and private industry grants, vice president Magtek laboratories, Inc. of Nevada conducting biomedical and bioengineering research and conducting FDA studies (1988-1993), advised Reno City Planning Commission (1992) and partner Tecnic Research Laboratory of Arizona (1998-present).

Dr. Rauscher has given invited talks and chaired technical meeting sections as well as conducted consulting projects internationally in the United States, Canada, Mexico, Brazil, England, France, Spain, India, North Africa, Korea, Japan, Singapore and Iceland. She has published over 200 papers, talks, books, book chapters, patents, and has participated in extensive public lecturing, television, and radio interviews on science topics, science and society and the sociology and history of science.

C. Government and Industrial Positions

In 1979, she started her own company, Tecnic Research Laboratories (TRL) of California which held a number of government and private industrial grants and contracts. She held a Navy contract in 1983, 1990, 1991 on ionospheric studies and from 1983 until 1985, she had a NASA space shuttle project contract under TRL to increase the integrity of welds under plasma are welding. Also she had, under TRL, a contract with Primary Energy Technology on quantum effects in semiconductors from 1980 to 1982 as well as a number of other contracts and grants under TRL. The Navy and NASA projects were conducted with Dr. William Van Bise.

Dr. Rauscher held a number of other consulting positions in private industry, such as DuPont Control Corporation, Los Angeles, renewable energy systems, 1979, Primary Energy Technology, LA, solid state quantum electronics (1980-1982), Bioelectronic Corp., LA, high temperature superconductors, 1981-1982, Technion Corp, New York, quantum electronics, 1977, Assentia Research Associates, Amherst, Wisconsin, plasma gas discharges (1977-1981).

Dr. Rauscher and William Van Bise, D.Sc. developed a sensitive non-superconducting magnetic field detector, rivaling the sensitivity of the "SQUID", about 10^{-11} Gauss, which is patented. They have conducted over twenty years of extensive research on low frequency, low intensity magnetic field measurements and theoretical model development.

Dr. Van Bise and Dr. Rauscher coinvented and developed devices and procedures to normalize cardiac functioning and reduce pain utilizing pulsed magnetic fields. She conducted detailed data analysis and developed the detailed mathematical models for these patented inventions and protocols for clinical studies.

D. Teaching Positions and Classes Taught

Dr. Rauscher has taught lower and upper division mechanics, graduate course in classical mechanics and general relativity and a seminar series in astrophysics, undergraduate electromagnetism, lower division mathematics and undergraduate laboratories, and upper division and graduate thermodynamics at the University of California, Berkeley (UCB), 1964, 1971-1974. She also proposed, developed and taught a course in scientific method and the philosophy and history of science at UCB 1971 and 1973 and by invitation at Stanford 1972 and also by invitation and also at J.F. Kennedy University, CA, 1978 through 1984. Dr. Rauscher conceived, started and chaired the Fundamental Physics seminar group at LBNL on the foundations of quantum mechanics and Bells theorem from 1974 to 1977. She supervised Ph.D. students, M.S. students and numerous undergraduate students on special projects at UCB, JFK University and University of Nevada, NV, UNR. She received excellent recommendations from faculty and students and many research papers and several books resulted from the Fundamental Physics Group.

E. Thesis Topics

1. M.S. Thesis, "Effects of Collective Excited States on Alpha Particle Barrier Penetrability," University of California, Lawrence Berkeley National Laboratory, UCRL-11875, 1965.
2. Ph.D. Thesis, Coupled Channel Alpha Decay Theory for Even and Odd-Mass Light and Heavy Nuclei," University of California, Lawrence Berkeley National

Laboratory, LBL-7194, 1978. Thesis advisor Glenn T. Seaborg (three Nobel prize Winners on thesis committee).

F. Books and Manuals

1. A Unifying Theory of Fundamental Processes: Nucleo-Abundances and Cosmological Models, University of California LBNL Press, UCRL-20808, 1971.

2. The Philosophy of Science, History and Methodology of Scientific Research and Technological Application, Science and Society, textbook syllabus and courses taught at U.C. Berkeley, Stanford and J.F. Kennedy University, University Press, 1971.

3. The Iceland Papers: Frontiers of Physics, Coeditor and contributor, forewords by B.D. Josephson and E.A. Rauscher, Assentia Research Associates, Amherst, Wisconsin 54406, 1979, 1995.

4. A Short Course in Algebra with an Introduction to Trigonometry, Syllabus for LLNL Course 1966, TNC-17 (UCID), 1966.

5. AIP Encyclopedia of Applied Physics with co-authors, Molecular and Atomic Collision Process with Ion Beams UNR, Volume 10, pp. 437-470, November 1994.

G. Holder of Four Patents

1. E.A. Rauscher and W. Van Bise, Non-Superconducting Apparatus for Detecting Magnetic and Electromagnetic Fields U.S. Patent Number 4,724,390, issued February 9, 1988.
2. E.A. Rauscher and W. Van Bise, External Magnetic Field Impulse Pacemaker, Non Invasive Method and Apparatus for Modulating Brain Signals through External Magnetic or Electric Field to Pace the Heart and Reduce Pain, U.S. Patent Number 4,723,536, issued February 9, 1988.
3. E.A. Rauscher and W. Van Bise, Non-invasive Method and Apparatus for Modulating Brain Signals through an External Magnetic or Electric Field to Reduce Pain, U.S. Patent number 4,889,526, issued December 26, 1989.
4. E.A. Rauscher and W. Van Bise, Apparatus for Modulating Brain Signals through an External Magnetic Field to Reduce Pain European Patent Number 0223354, granted September 1, 1993.

H. Memberships in Professional Organizations

American Physical Society, The Mathematical Society of America, The American Association for the Advancement of Science, American Nuclear Society, Institute of Electronic and Electrical Engineers, International Society for the Study of Energy Medicine, American Associates of Medical Instruments and American Association of Mathematics.

I. Honory Membership and Recognition

Marquis Who's Who of Men and Women in Science, Golden State Who's Who in the West, Who's Who in California, Who's Who in Technology Today, Leading Consultants in Technology, Who's Who Historical Society, Men of Achievement, Community Leaders of America, Who's Who of American Inventors, World Leadership Award (England), Outstanding Teachers Award, Award for Significant Research Joint ABC/USA, DOE top ten women in USA in science award, USPA Leaders of America Life Time Membership Award, Iota Sigma Pi fellow, Delta Delta Delta scholarships at UCB. She graduated with Honors and presidential Commendation for service to the University of California, Berkeley.

J. Honors Received

1. Lifetime Achievement Award for the Study of the Foundations of Quantum Theory and Conscious Observer Presented by the ISSSEEM Medical Group, Colorado 2007.
2. USPA for the USA Man of the Year Award for Fundamental Contributions to Science, particularly Electromagnetic Theory, 1989.
3. Rosebridge Graduate School of Psychology Certificate of Contribution to Scientific Knowledge in Medical Science and Education (1988-1990).
4. ABC/USA Award for contributions to Theoretical Scientific Knowledge, 1991.
5. For Contributions to Fundamental Knowledge in History, Who's Who in History of the Western United States, 1985.
6. The Golden State Award in Recognition of Outstanding Professional Achievement in the Sciences, Superior Leadership in Education and Exceptional Services to the Success of the state of California, 1988.
7. Invited Speaker at the Special Ceremonial, 50^{th} Anniversary of the isolation of Plutonium, Lawrence Berkeley National Laboratory, November, 1991.
8. Invited Speaker, American Physical Society, Accelerator Conference, November 1992, Awards in Contribution to Atomic Physics.
9. Award for Outstanding Contribution to Astronomy and Astrophysics, American Astronomical Society Meeting, Lawrence Hall of Science, 1978.
10. CSPS Hall of Fame Award by the California Society for Psychical Studies for Outstanding Research in Bioelectromagnetism, The Foundations of Quantum Theory, and Contributions to Humanity, 1990.
11. Received the Medal of Honor for contributions in Unity of the Sciences, Seoul Korea, November 13, 1981.
12. The advanced Institute of Noetic Sciences award for Frontier Sciences award for 2005.
13. The Albert Einstein ARE acknowledgment for the most outstanding woman in science, 2004.
14. Graduated from the University of California, Berkeley, California with presidential Commendation for Service to the University of California, Berkeley, 1962.
15. Certificate of Merit in Outstanding Work in Photography, First Place Winner Award "The Farm" N4C Interclub Competition in Amateur Photography, July 1992.
16. Iota Sigma Pi Honor Fraternity, 1962.
17. Delta Delta Delta Scholarship, 1958.
18. Tower and Flame honor Society, 1962.

K. Additional Activities

Dr. Rauscher taught skin and scuba diving (1966-1971) and has dove extensively in California, Hawaii and Bermuda, also climbing and spelunking, climbed Half Dome in Yosemite (1964), Piloted Cessnas 150's and 175's (1966-1981) and is also a prize winning photographer (1964-1978). Interviewed numerous times on television and radio in the U.S. and other countries on her research, and science education.

Grants: Research Projects
E.A. Rauscher, Ph.D.

1. U.S. Navy Grant – Engineering and Space Sciences contract no. NONR-222(87), University of California, Berkeley, CA 96720, 1971 – 1974, GV-25957 ONR Navy Grant Prof. P. Lieber, (Principle Investigator) P.I. and Contract Monitor, E.A. Rauscher, 2nd P.I. – Engineering Office of Research. Research Topic: Formulation of geometrical constraints applied to Einstein's field equation's and quantum gravity in cosmogenesis and cosmological curvature calculation using nucleosynthesis equations.
2. SRI (Stanford Research Institute) International, Radio Physics Laboratory 1975-1977, E024-F1856 Navy Grant with R. Targ, PI, EA. Rauscher, Ph.D., P.I. and director of research on the theoretical formulation of complex Minkowski space, M_4 for nonlocality.
3. Psychology Foundation, Inc. New York, NY 10010, E.A. Rauscher, P.I. – Principle Investigator, WVC – 2V2 (25056) R.R. Coley administrator 1976, 1977, 1981, Study of fields and remote sensing systems.
4. Holms Foundation of the Los Angeles Health Institute (501-c3), 1979, 1980, QC – 4128 carried through San Francisco State University, San Francisco, CA Study of field effects on bacteria motility and growth, E.A. Rauscher, Ph.D. P.I. and B. Rubik, P.I.
5. Primary Energy Technologies Century Blvd., Los Angeles, CA 90045, 1980, 1981, 1982, J. Reynolds, contract monitor E.A. Rauscher, P.I., PSRL-3107 AND PSRL-8524, Formulation and application of soliton and nonlinear coherent phenomena to plasma MHD and superconductivity – BCS for possible sources, storage and transmission of power in free space and matter.
6. Korean Center for Interdisciplinary research, Medal of Honor Korea 1981.
7. R.M. Banks and associates of California PSRL-6402 and UCB-LBNL contract W-7405-Eng 48, 1983-1984, Coherent Martensitic phase transitions in shape memory allays, work functions and other coherence matter phenomena, R.M. Banks and Dr. McMillian contract monitors and E.A. Rauscher, P.I.
8. Martin Marietta now Lockheed Martin, NASA grant AS3-756244, 183, 1984, 1985, contract monitor J.B. Beal, E.A. Rauscher, P.I, and W.L. Van Bise, researcher, Theoretical and experimental and main hydrogen – oxygen tank aluminum 2219-187 Welment and pulsed field designs.
9. Naval Surface Weapons Center, White Oak, 70-126, Silver Spring, MD 20910, 1982, R34-2-0176 contract monitor E. Byrd, E.A. Rauscher, P.I. and W.L. Van Bise, P.I. Solving Maxwell's equations in complex space relating to the space relating to the solutions to solitons and nonlinear Schrodinger equation and other nonlinear phenomena and the study fo field phenomena.
10. Washington Research Center, San Francisco, CA 501-c3 for the Buck Foundation, 1988, H. Dakin, contract monitor, E.A. Rauscher, P.I. and W.L. Van Bise, researcher, PSRL-60788 Man Machine Systems Division TRL Laboratory, Nonlinear analysis of complex machine mode operations and external influences to their operations.
11. Olive Garvy Foundation for Health, Topeka, KS 1992, contract monitor Dr. Hugh Reordin, Dr. E.A. Rauscher, Ph.D., P.I. complementary, less invasive medicine, FDA studies and theoretical analysis.
12. Naval Ocean Systems Command, San Diego, CA 92152 1992-1993, Dr. W. Bruner, N66001-91-M-2621 contract monitor, E.A. Rauscher, P.I. and W.L. Van Bise, P.I. Data acquisition and analysis of ionospheric resonance phenomena from natural and man made sources with multistation deployed ground space stations.
13. Stanford University, Stanford California and Ditron, LLC of Excelsior, MN 55331, #41-1862841 dates 1997-2000, Theoretical finite discrete and infinitesimal group generators and their algebras: theoretical analysis and comparison to experimental data.
14. The Resonance Project Foundation 501c3, Holualoa, HI 2002 - present, Astrophysics and cosmological models, N. Haramein and E.A Rauscher.

SELECTED TECHNICAL PAPERS, PUBLICATIONS, REPORTS AND INVITED PRESENTATIONS BY

E.A. Rauscher, Ph.D.

1. E.A. Rauscher, "Fundamentals of Fusion," The University of California Engineer, pp. 20-49, November 1960 (undergraduate publication).
2. E.A. Rauscher, "Effects of Collective Excited States on Alpha Particle Barrier Penetrability," Lawrence Berkeley Laboratory, UCRL-11875 (DOE sponsored), M.S. thesis, January 1965.
3. E.A. Rauscher, J.O. Rasmussen and K. Harada, "Coupled-Channel, Alpha Decay Rate Theory Applied to Po^{212m}," UCRL-16351 and Nuclear Physics A94, 33, 1967.
4. K. Harada and E. A. Rauscher, "Unified Theory of Alpha Decay," Physical Review 169, 818, 1968.
5. K. Harada and E.A. Rauscher, "Alpha Decay of $Po^{212} \rightarrow Pb^{208}$, $Po^{210} \rightarrow Pb^{206}$, Treated by the Unified Theory of Alpha Decay," UCRL-70513, May 1967.
6. E.A. Rauscher, "Electron Interactions and Quantum Plasma Physics," Journal of Plasma Physics 2, 517, 1968.
7. K. Harada and E.A. Rauscher, "Unified Theory of Alpha Decay," Contributions International conference on Nuclear Structure, September 1967, Tokyo, Japan.
8. E.A. Rauscher, "Coupled-Channel, Alpha Decay Rate Theory Applied to Po^{212m}," Bull. Amer. Phys. Soc. 11, 915, 1966.
9. E.A. Rauscher, "Unified Theory of Alpha Decay," Bull. Amer. Phys. Soc. 13, 1665, 1968.
10. E.A. Rauscher, "A Unified Theory of Fundamental Processes," University of California, Los Angeles, Bull. Amer. Phys. Soc. 13, 1643, 1968.
11. E.A. Rauscher, "Einstein's Field Equations and the Quantal Force," Lawrence Livermore National Laboratory, UCRL-71435, October 1968.
12. E.A. Rauscher, "Taming the H-Bomb: Comprehensive Study of the Need for Fusion Power," Energy Conference Colloquium and panel discussion with Charles Townes and others, Stanislaus State College, November 1968.
13. E.A. Rauscher, "Atomic Physics and a Fundamental Frequency," New York, Bull. Amer. Phys. Soc. 14, 1190, 1969.
14. E.A. Rauscher, The Philosophy of Science: History and Methodology of Science, (textbook syllabus and course developed and taught at LBNL/UCB, Stanford, SLAC, J.F. Kennedy University, 1971-1983.
15. E.A. Rauscher, A Unifying Theory of Fundamental Processes, UCRL-20808 book, LBNL University of California Press, June 1971.
16. E.A. Rauscher, "Closed Cosmological Solutions to Einstein's Field Equations," Lett. Nuovo Cimento 3, 661, 1972.
17. E.A Rauscher, "A Set of Generalized Heisenberg Relations and a New From of Quantization," Lett. Nuovo Cimento 4, 757, 1972.
18. E.A. Rauscher, "A Possible Group theoretical Representation of the Generalization Heisenberg Relations," Lett. Nuovo Cimento 5, 925, 1972.
19. E.A. Rauscher, "Bootstrap and a Uniform Formalism of the Four Force Fields," UCRL-20068, October 1970 (LBNL and a chapter in the book of ref. 15).
20. E.A. Rauscher, "Quantized Plasmas," Bull. Amer. Phys. Soc. 15, 1639, 1970.
21. E.A. Rauscher, "Quantized Force and Length and the Structure of Space-Time," California Institute of Technology, Bull. Amer. Phys. Soc. 16, 505,1971. This paper was also presented at the University of California, Department of Mathematics Colloquium on General Relativity, February 19, 1971.
22. E.A. Rauscher, "A Possible New Form of Quantization of Atomic Quantities," Lawrence Berkeley National Laboratory UCRL-20627, March 1971.
23. E.A. Rauscher, "The Minkowski Metric for a Multidimensional Geometry," Lett. Nuovo Cimento 7, 361,1973.
24. E.A. Rauscher, "Early Universe Cosmological Models," Lawrence Berkeley National Laboratory LBL-1152, September 1973.

25. A.J. Soinski, E.A. Rauscher and J.O. Rasmussen, "Alpha Particle Amplitudes and Phases in the Decay of ^{253}Es," Bull. Amer. Phys. Soc. 18, 768, 1973.
26. E.A. Rauscher, "Geometrical Constraints in Quantum Mechanics and Cosmology," LBL-1725, August 1973.
27. E.A. Rauscher, "Early Universe Cosmological Models," Bull. Amer. Phys. Soc. 18, 1570, 1973.
28. E.A. Rauscher, "Science for the Non-Scientist: Need and Challenge," Research Progress Meeting, Bldg. 50 Auditorium Lawrence Berkeley National Laboratory, August 30, 1973.
29. E.A. Rauscher, "Some Concepts on the Scientific Revolution – Copernicus to Einstein," and "The Challenge of Science," a series of three Public Broadcasting Educational Programs, (PBS) Corvallis, Oregon, September 1973.
30. E.A. Rauscher, A. J. Soinski, and J.O. Rasmussen, "Coupled Channel Alpha Decay Theory for Odd-Mass Nuclei," LBL-2366, Annual Report, Nuclear Science Division, Lawrence Berkeley National Laboratory, p. 172.
31. E.A. Rauscher, "Early Universe Cosmologies and Nucleo-Abundance (Some X-Ray Studies)," Departmental Seminar Series – Joint Chemistry-Physics and Astronomy Seminar, University of California, Berkeley, December 4, 1974.
32. E. A. Rauscher, USA-DOE film on the "Role of Women in Science in the United States," one of ten women in the U.S. interviewed for the educational film for high schools and colleges, January 29-30, 1975.
33. E.A. Rauscher, "Covariant Conditions in Multidimensional Geometries," presented at SRI International, Stanford, CA, June 25, 1975.
34. E. A. Rauscher, "Bell's Theorem, Remote Interconnectedness, and Quantum Physics," University of California, Santa Barbara, August 21-23, 1975.
35. E.A. Rauscher, "Copenhagen and Bohmian Quantum Mechanics and Possible Models of Reality," featured speaker, Sierra College, Education Alliance, Sacramento, Sept. 28, 1975.
36. E.A. Rauscher, "New Discoveries in Astrophysics," Interview on KPFA radio station, Berkeley, with R. Reis, Senior Astronomer, Astronomical Society of the Pacific, Oct. 1975.
37. E.A. Rauscher, "New Concepts in Astrophysics: Multidimensional Geometric Models," presented to the Physics Department series on What Physicists Do, Sonoma State College, California, November 4, 1975.
38. E.A. Rauscher, "Scientific Knowledge and Its Use," Santa Rosa Junior College, Santa Rosa, CA, November 5, 1975.
39. E.A. Rauscher, J. Millay and M. King, panel, "New Directions in Education," panel discussion, KPFA Radio, Berkeley, CA, December 31, 1975.
40. E.A. Rauscher, "A Uniform Formalism of the Four Force Fields," Bull. Amer. Phys. Soc. 20, 1504, 1975.
41. J. Ioannow-Yannou, E.A. Rauscher and J.O. Rasmussen, "X-Ray Production by Relativistic Heavy Ions," (accelerator physics, LBNL Bevatron), Bull. Amer. Phys. Soc. 20, 1500, 1975.
42. E.A. Rauscher with TOSABE Group, LBNL, "In-Beam Gamma Rays from Relativistic Proton and Carbon Ions on Various Targets," Bull. Amer. Phys. Soc. 20, 1497, 1975.
43. E.A. Rauscher, "Speculations on the Evolution of a Schwarzschild Universe," Lawrence Berkeley National Laboratory LBNL/UCB, LBL-4353, pp. 331-333 December 1975.
44. E.A. Rauscher, with TOSABE Group, LBNL, "Atomic K-Vacancy Production with 3 GeV Carbon Ions," LBL-4359, 1975 and LBL-5075, pp. 196,217,218,296 and Phys. Lett. 59A, 429, 1977.
45. E.A. Rauscher, with TOSABE Group, LBNL, K-Vacancy Production by 4.88 GeV Protons," Phys. Rev. A14, 2103, 1976.
46. E.A. Rauscher, chair, featured speaker at conference sponsored by Stanford University Education Department, CA, "Educating Women for Science: A Continuous Spectrum," April 24, 1976. (Published as a book by Syntex Corporation, Stanford, November 1976).
47. E.A. Rauscher, with TOSABE Group, LBNL, "In-Beam Gamma Ray Spectroscopy with Relativistic Carbon Ion Beams," Bull. Amer. Phys. Soc. 21, 681, 1976.
48. E.A. Rauscher, "Where are the Women in Astronomy? The Role of Education," featured speaker, Scientific Meeting of the Astronomical Society of the Pacific, Lawrence Hall of Science, LBNL, CA, May22, 1976.

49. E.A. Rauscher, "Applications of Einstein's Special and General Relativity to Current Cosmological Models," Part I, presented to the Fundamental "Physics" Group seminar at Lawrence Berkeley National Laboratory, May 28, 1976, the Fundamental Physics Group developed and chaired by E.A. Rauscher.
50. E.A. Rauscher, "General Relativity, Cosmological Models and Multidimensional Geometries," Part II, presented to the Fundamental Physics Group LBNL, June 4, 1976.
51. E.A. Rauscher, "Multidimensional Geometries and their Tests, D-Abundance," Part III, presented to the Fundamental Physics Group at LBNL, June 17, 1976.
52. E.A. Rauscher, "A Look at the Foundations of Quantum Mechanics and Relativity," Featured Speaker Physics-Mathematics Colloquium, Kent State University, Kent, Ohio, September 14, 1976.
53. E.A. Rauscher, "Some Recent Studies in Relativity and Astrophysics and Models of Reality," WKNT radio interview, Kent, Ohio, September 13, 1976.
54. E.A. Rauscher, "The Scientific Method and the Study of Models of Reality," Kent State University Honorary Seminar, September 13, 1976.
55. E.A. Rauscher, "Experiments in Remote Connection – Bell's Theorem", WKDD radio interview with Debbie Welmond, Akron, Ohio, September 19, 1976.
56. E.A. Rauscher, "Geometrical Models in Astrophysics and Quantum Mechanics," Xerox Research Corporation Research Seminar, Palo Alto, CA, December 3, 1976.
57. E.A. Rauscher, "New Directions in Science: I. Quantum Mechanics and Relativity; Observer as Participator," Canadian Radio, Ontario, interview with H. Eisenberg, York University, Canada, May 1977.
58. E.A. Rauscher, "Physical Models of the Structures of Space-Time," Physics Department Seminar, University of California, Santa Cruz, June 7, 1977.
59. E.A. Rauscher, "Frontiers of Science: The Observer and the Observed," Conference on Science and Consciousness, Museum of Man, The Palace of Chaillot, Paris, France, November 15, 1977.
60. E.A. Rauscher, "Conference on New Directions in Science: New Discoveries and Paradigms," Hotel Concorde, Paris France, November 17, 1977.
61. E.A. Rauscher, "Speculations on the Evolution of a Schwarzschild Universe," Birbeck College, University of London, November 23, 1977. Invited Summer Teaching and Research Seminar and Program by David Bohm and John Hasted.
62. E.A. Rauscher, "Speculations on the Foundations of Physics: (Quantum Mechanics and Relativity)," Radio Monte Carlo, interview with William Heihler, France-Switzerland-Italy, November 16, 1977.
63. E.A. Rauscher, "Sociological Implications of Scientific Discoveries," invited lecturer Sociology Dept., University of San Francisco, San Francisco, CA, December 7, 1977.
64. E.A. Rauscher, "Nuclear Structure Studies and Unique Properties of Materials," Material Science Dept., Engineering Services, Lawrence Livermore National Laboratory, CA, January 8, 1978.
65. E.A. Rauscher, A.J. Soinski and J.O. Rasmussen, "Coupled Channel Alpha Decay Theory for Odd-Mass Muclei," Bull. Amer. Phys. Soc. 23, 37, 1978.
66. E.A. Rauscher, "Complex Coordinate Geometries in General Relativity and Electromagnetism," Bull. Amer. Phys. Soc. 23, 84, 1978.
67. E.A. Rauscher, with TOSABE Group, LBNL, CA, "In-beam Nuclear Gamma-Ray Studies of Relativistic Heavy Ion Reactions," Nucl. Phys. A308, 513, 1978.
68. E.A. Rauscher, with TOSABE Group, LBNL, CA, "Nuclear Gamma Rays Following Interaction with Relativistic Carbon Projectile Target Fragmentation," Nuclear Science Dept. Annual Report (LBL-5075), p. 196, 1975.
69. E.A. Rauscher, with TOSABE Group, LBL, CA, "Atomic K-Vacancy Production by Relativistic Carbon Ions," Nuclear Science Annual Report, page 217, and "K-Vacancy Production by Relativistic Bevalac Protons," Nuclear Science Annual Report, page 218, 1975.
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