Publications thru 2009

Arthur H. Rosenfeld

Art's website will remain at the California Energy Commission
www.energy.ca.gov/commissioners/rosenfeld.html
or just Google “Art Rosenfeld”.
Art Rosenfeld received his Ph.D. in Physics in 1954 at the University of Chicago under Nobel Laureate Enrico Fermi, and then joined the Department of Physics at the University of California at Berkeley. There he joined, and eventually led, the Nobel prize-winning particle physics group of Luis Alvarez at Lawrence Berkeley National Laboratory until 1974. At that time, he changed his research focus to the efficient use of energy, formed the Center for Building Science at Lawrence Berkeley National Laboratory (LBNL), and led it until 1994.

From 1994 -1999 Dr. Rosenfeld served as Senior Advisor to the U. S. Department of Energy’s Assistant Secretary for Energy Efficiency and Renewable Energy. In 2000 California Governor Gray Davis appointed him Commissioner at the California Energy Commission, and in 2005 he was re-appointed by Governor Arnold Schwarzenegger. He is responsible for the Public Interest Energy Research program, with an annual budget of $82 M; for Energy Efficiency, including the California energy efficiency standards for buildings and for appliances; and collaborates with the California Public Utilities Commission to oversee California’s Energy Efficiency Program with an annual budget of $1 billion.

Dr. Rosenfeld is the co-founder of the American Council for an Energy Efficiency Economy (ACEEE), and the University of California's Institute for Energy and the Environment (CIEE).

He is the author or co-author of nearly 400 refereed publications, received the Szilard Award for Physics in the Public Interest in 1986, the Carnot Award for Energy Efficiency from the U.S. Department of Energy in 1993 and the Berkeley Citation in 2001 from the University of California. **He is most proud to have received the Enrico Fermi Award, the oldest and one of the most prestigious science and technology awards given by the U.S. Government.** He received this prestigious award on June 21, 2006 from the Department of Energy, Secretary Samuel W. Bodman, on behalf or the president of the United States, for a lifetime of achievement ranging from pioneering scientific discoveries in experimental nuclear and particle physics to innovations in science, technology, and public policy for energy conservation that continue to benefit humanity. This award recognizes scientists of international stature for their lifetimes of exceptional achievement in the development, use, control, or production of energy. As mentioned, this award is particularly important to Dr. Rosenfeld because he was Enrico Fermi’s last graduate students.


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ARE MAINLY RELATED TO:
ELEMENTARY PARTICLE PHYSICS

(pages 1-10)
Selected Publications of Arthur H. Rosenfeld, through March 1998.
This lists only refereed papers, and selected important testimony and documents; hence the gaps
in the numbers attached to each paper. Selection date Jan 359

1. Nuclear Physics, Fermi, Orear, Rosenfeld, Schluter (240 pp) Univ. of

3. Nuclear Y Absorption Cross-Section of Cu63, Marshall, Rosenfeld & Wright,

4. Search for V-Particles Produced by 430 MeV Protons, A. H. Rosenfeld and

5. Production of Charged Pions from Hydrogen and Carbon, A. H. Rosenfeld, Phys.
Rev. 96, 130 (1954).

6. Production of Pions in Nucleon-Nucleon Collisions at Cyclotron Energies,

7. Cross Section for Reaction C12 (p,pn) N11, S. D. Warshaw, P. A. Swanson,
& A. H. Rosenfeld, Phys. Rev. 103, 413 (1956).

8. Fallout - Some Measurements and Damage Estimates, Rosenfeld, Story and Warshaw,

9. Simple Consideration on the Lifetimes of Strange Particles, A. H. Rosenfeld
and H.L. Stevenson. UCRL 3914;

and Nuovo Cimento 5 1026 (1957).

Rev. 105 1127 (1957).

(with M. Gell-Mann) also UCRL 3799, also reprinted in "Selected Papers
in Physics" Phys. Soc. of Japan 110, 1961. UCRL version (3799) distribution
to December 1963: 1200.

13. Interactions of K- Mesons in Hydrogen, with L. W. Alvarez et al., UCRL 3775,

14. Leptonic Decays of Hyperons, Phys. Rev. Letters, 1, (11/15/58), with Nordin,
Orear, Reed, Solmitz, Taft and Tripp.

15. Data for Elementary Particle Physics, UCRL 8030, with Barkas. (1958)


with Solmitz, Tripp and Watson.
19. What About the Undetectable Tests? Bulletin of the Atomic Scientists, 15
98 March (1959).

20. Angular Distributions in Z Decay, UCRL 8727, April (1959) with Leitner,

Leitner, Nordin, Solmitz and Tripp.

22. Proposals to Ban Bomb Tests, Chapter X of "Fallout, A Study in Superbombs,
Strontium 90, and Survival" Ed. by John M. Fowler; published by Basic Books,

23. An Explanatory Statement on Elementary Particle Physics, with M. A. Ruderman

24. Digital computer Analysis of Data from Hydrogen Bubble Chambers at Berkeley,

25. Digital-Computer Analysis of Data from Bubble Chambers: IV. The Kinematic
Analysis of Complete Events, Rosenfeld and Snyder, UCRL 9098, February 16, 1960,

27. KCK, and IBM 704/9 Program for the Kinematical Analysis of Bubble Chamber

28. Evidence for Low Rates of Z - Decay of Z and A Hyperons with Humphrey, Kirz,
Leitner and Rhees. F. R. L. 2, 475, 1961 - 197


30. Data for Elementary Particles with W. H. Barkas revised and enlarged. UCRL 8030

31. Sigma Decay Modes of Pion-Hyperon Resonances (the \( Y^* \)) with Bastien and Ferro-

32. Analysis of 137 \( \gamma \) Decays, with M. Ferro-Luzzi, D. H. Miller, J. J. Murray

33. Scientific Editor of "Instrumentation for High-Energy Physics," Proceedings
of the International Conference, Berkeley, September 1960; Interscience,

34. Evidence for a \( \Xi \), \( \Xi^* \) Meson, B. C. Maglic, L. W. Alvarez, A. H. Rosenfeld, and

35. Spin and Parity of the \( \omega \) Meson, B. C. Maglic, L. W. Alvarez, A. H. Rosenfeld,

37. Evidence that the $\Sigma$ Meson has Isospin 0, D. Duane Carmody, A. H. Rosenfeld, Remy R. Van de Walle, Phys. Rev. Letters 8, 114 (1962).


39. Search for $\Sigma$ Meson Decay into $\Lambda + \pi^0$, A. Rosenfeld, D. Carmody, R. Van de Walle, Phys. Rev. Letters 8, 293 (1962).


46. A Possible Classification of Particles and Resonances. A. H. Rosenfeld CERN 1962 Page 325.

47. $\Sigma - \Xi$ Interactions in the Reaction $\bar{p}p = \Xi^+ 2\pi^- \pi^0$, with Button et al. Phys. Rev. 126, 1558 (1962).

50. Wallet Card No. 2 from UCRL 8030 Revised Nov. 1962.


67. Data on Particles and Resonant States, A. H. Rosenfeld et al., Rev. Mod. Phys. 27, 633, 1969. [Distribution of Wallet Cards thru 1965, - 60,000.]


- Rosenfield publications, continued.


70. The Riddle of Matter, with Daniel Wilkes, THINK, July-August (1966), IBM.


Note on 58.) An Elementary Guide to Elementary Particles has been translated into Polish, Czechoslovakian, and Spanish. See e.g. Cienca E Investigacion (Argentine AAPC). Febrero 1967, 22, 49-56; Cz. J. Phys. 18A, 408 and 540 (1968).


83. Total and Partial Photoproduction Cross Sections at 1.44, 2.8, and 4.7 GeV, with J. Ballam et al. PRL 25, 490 (1969), 144.


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87. K°N Cross Sections with N. Barash-Schmidt et al. UCRL 20,000 K°N.


97. Analysis of $\Delta$, $\rho$, and $A_2$ Production in the Reaction $\gamma p \rightarrow N\Delta$, with J. Ballam et al., contributed to XVth Intl. Conf. on NEP at Kiev, 1970.


99. $\rho \rho$ Interference Parameters, with K.C. Moffett et al., UCRL 19,753 and Nuclear Physics B29, 349 (1971).


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(Meeting abstracts are NOT included)


105. Bubble Chamber Study of Photoproduction by 2.8 and 4.7 GeV Polarized Photons -- I. Cross Section Determination and Production of $\rho^0$ and $\Delta^{++}$ in the reaction $\gamma p \rightarrow \rho^0 n$, with J. Ballam et al. SIAC Pub. 941 and Phys. Rev. 75, 545 (1972)

108. Bubble Chamber Study of $\omega$-Meson Photoproduction with $\pi^0$ at 0.3 GeV, with J. Ballam, et al., SLAC-PUB-980, LBL-509 Nov. 1971


125. Partial Wave Analysis of $\pi N \rightarrow N\pi$ and $N N \rightarrow N\pi$ from 1300 to 2000 MeV, with D. J. Herndon et al., LBL 1065 (rev.) submitted to Phys. Rev. (1974).


131. Baryon Resonance Couplings in the Reactions $\pi N \rightarrow \pi\pi$ and $\pi N \rightarrow \pi\Lambda$: Comparison with Theory and Related Reactions. R.J. Cashmore et al., LBL-2635, SLAC-PUB-1388, 1974. Nucl. Phys. B.


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(pages 11-39)


144b. "Notes on Residential Fuel Use" A. H. Rosenfeld, Chapter 3a. // EEB 77-3


144e. "Dual Solar-Control Venetian Blinds" A. H. Rosenfeld, Chapter 7a. // EEB 77-6.

145. ERDI/California, An Energy R and D Inventory. LBL 3281, 1976.


157. **Inclusive \( p \) Production in \( pp \) Interactions**, Kogan et al. 1976, LBL 5590.


170. **Energy Savings Due to Night Thermostat Setback at an Elementary School:**
   UCID 8604, EEB-SCH-78-3.

171. **DOE-1 Simulations of Ten Elementary Schools-Base Case Reports.**

172. **DOE-2 Users Guide** Building Energy Analysis Group, Lawrence Berkeley Laboratory.

173. **DOE-2 BDL Summary** Building Energy Analysis Group, Lawrence Berkeley Laboratory.

174. **DOE-2 Sample Run Book** Building Energy Analysis Group, Lawrence Berkeley Laboratory.
    LBL 8678, February 15, 1979, EEB-BEAG 79-3.

175. **DOE-2 Reference Manual** Building Energy Analysis Group, Lawrence Berkeley Laboratory.
    LBL 8706, EEB-BEAG 79-4.

176. **DOE-2 Program Manual** Building Energy Analysis Group, Lawrence Berkeley Laboratory.
    LBL 8705, EEB-BEAG 79-5.

177. **DOE-1 Simulations of Nine Elementary Schools-Retrofit Reports.**


179. **Building Energy Use Compilation and Analysis (BECA)-An International Comparison and Critical Review.**
    Published in *Energy and Buildings, 3, 315 (1981)*, LBL 8912, EEB BECA 79-1. Revised as EEB BECA 80-1.


Shell Answer Book #22 (public distribution = 6.5 million copies). Sheldon Lambert, author, with assistance from A. H. Rosenfeld. [Copies can be obtained from the Shell Oil Company.] 1980.


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[Note: EEB 88-3 is pub #229. Scientific American, April, 1988, "Energy-Efficient Buildings," A. Rosenfeld and D. Hafemeister.]


268. Testimony on behalf of the Conservation Law Foundation to the Massachusetts Department of Public Utilities investigation into the pricing and ratemaking treatment to be afforded new electric generating facilities which are not qualifying facilities. A. Rosenfeld. Boston, MA. May 2, 1988.


1989

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THE FOLLOWING PAPERS

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WERE WRITTEN WHILE DR. ROSENFELD WAS A SENIOR ADVISOR AT THE
U. S. DEPARTMENT OF ENERGY (DOE)

(1994-1999)

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THE FOLLOWING PAPERS
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WERE WRITTEN WHILE DR. ROSENFELD WAS A COMMISSIONER AT THE CALIFORNIA ENERGY COMMISSION
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