

letters

► In some official publications intended primarily for the general public, clarification of the meaning of the word "weight" would have been desirable. We agree and have taken steps to bring this about.

► AAPT has requested that a clear communication path be established with NBS to provide input on matters dealing with metric practice. Such a channel has been set up.

► AAPT feels that the past NBS actions have done widespread educational damage to metrication and metric education in the US. We, and other professional societies, find such a charge to be without substance. We are however, very concerned with the comfort given to professional gainsayers on the value of introducing metric practice when poorly substantiated statements emanate from an important segment of the scientific community.

DAVID T. GOLDMAN

National Bureau of Standards
Washington, D.C.

7/14/80

References

1. D. T. Goldman, J. of College Science Teaching, to be published.
2. "The Metric System of Measurement (SI)", NBS-LC1078 FR Doc. 77-310, (1977).
3. "Le Système International d'Unités (SI)", 3^e Edition, Bureau International des Poids et Mesures, Sevres (1977).
4. "The International System of Units (SI)", NBS Spec. Pub. 330 (1977).
5. Reference 4, page 16.
6. W. W. Leffin, "Going Metric; Guidelines for the Mathematics Teacher, Grades K-8," #66, National Council of Teachers of Mathematics, (Reston) (1975).
7. "Metric Guide for Educational Material," #225, American National Metric Council, Washington, D.C. (1977).

Long life for the oblate

F. P. Boynton's comment (September, page 98) on L. S. Finegold's discussion (June, page 78) of J. S. Garrow's longevity parameter, W/H^2 , only scratches the surface of strategies towards long life. W/H^2 (kg/m²) can be analyzed microscopically in the spheroidal model of human physiognomy. From the volume of a spheroid, $V = (4/3)\pi a^2 b$, assuming a density of water, it is trivial to show that for prolate people of girth G , $G^2/H < 0.5$ is required for greater longevity. This suggests that conventional decrease of the girth and increased length (Boynton's option) are required in the proper proportion to extend one's life span. Alternatively,

for the oblate solution, H drops out of the equation. In this case, $W/H^2 = 170$ G and $G < 0.15$ m should improve longevity. Thus, a new strategy, previously ignored by medical science, should be investigated by all physicists seeking the fountain of youth.

Note added in proof: Early in fetal development, the unborn child most nearly resembles the oblate spheroidal condition. Such individuals have long been known to have greater life expectancies than physicists.

RICHARD B. FIRESTONE

Prolate Physicist
Lawrence Berkeley Laboratory
Berkeley, California

10/20/80

Risks from solar energy

The September guest comment "Future energy alternatives in perspective" by Harvey Brooks (page 9) was an excellent addition to PHYSICS TODAY. He brought out many valid points that would be beneficial to the general public. I would like to comment on the health risks of solar energy mentioned in his discussion concerning uncertainty and risk. As a strong advocate of solar energy I am concerned with the consensus that solar energy can somehow solve a portion of the energy-supply problem without any harmful side effects. The numerous materials used in the construction of solar energy systems can, and under certain conditions do, exhibit thermal decomposition, mechanical breakdown resulting in particulate emission and outgassing. Unfortunately, the question as to whether or not toxic substances or gases are generated has not been studied in detail.

It is my recommendation that a research program to study these phenomena be initiated. The objectives of a possible research program would be to determine whether such products are present in the fluid medium, identify them, and then determine their concentration within the system. From previous research in environmental toxicology the toxicity of these products could be ascertained. The confirmation that toxic products are generated would indicate that system-design modifications should be completed prior to the extensive implementation of solar technology.

It would be disastrous to discover at a future date that toxic products were generated by such systems and we failed to identify these products and reduce their environmental effects.

DOUGLAS L. ROKKE

University of Illinois
at Urbana-Champaign

10/20/80

SUPERNOVAE SPECTRA

(La Jolla Institute, 1980)

Proceedings of a Workshop on
Atomic Physics and Spectroscopy
for Supernovae Spectra

AIP Conference Proceeding #63

EDITORS: R. Meyerott and G.H.
Gillespie, La Jolla Institute

Invited papers discussed observed supernovae spectra, plasma conditions in supernovae envelopes, and the present status and future requirements of atomic physics and spectroscopy that contribute to solutions of supernovae problems.

173 pages. 1980.
\$18.25 clothbound.
LC 80-70019. ISBN 0-88318-162-2.

For your copy of SUPERNOVAE
SPECTRA write to:
American Institute of Physics
Marketing Services
335 East 45 Street
New York, NY 10017

History of the ZGS

(Argonne, 1979)

Proceedings of the Symposium on
the History of the Zero Gradient
Synchrotron (ZGS)

AIP Conference Proceeding #60

EDITORS: J.S. Day, Argonne National
Lab., A.D. Krisch, University of
Michigan and L.G. Ratner, Argonne
National Lab.

Includes papers on the history of the ZGS
and its role in high energy physics. The
symposium was held at Argonne National
Laboratory, September 13-14 1979.

453 pages. 1980.
\$23.75 clothbound.
LC 80-67694. ISBN 0-88318-159-2.

For your copy of HISTORY OF THE
ZGS write to:

American Institute of Physics
Marketing Services
335 East 45 Street
New York, NY 10017