

LETTERS TO THE EDITOR

Letters are selected for their expected interest for our readers. Some letters are sent to reviewers for advice; some are accepted or declined by the editor without review. Letters must be brief and may be edited, subject to the author's approval of significant changes. Although some comments on published articles and notes may be appropriate as letters, most such comments are reviewed according to a special procedure and appear, if accepted, in the Notes and Discussions section. (See the "Statement of Editorial Policy" in the January issue.) Running controversies among letter writers will not be published.

THE SAGA OF THE SI JELLY DONUT (CONTINUED)

Editor's note-

In my January 1999 editorial,¹ I asked if any readers knew of the origin of the Jelly Donut as a unit of energy ($1 \text{ JD} \equiv 10^6 \text{ J}$). After several readers wrote to tell me that the Jelly Donut unit had its origins in Philip Morrison's TV series ("The Ring of Truth") and the companion book from the 1980s, I returned to the subject in the June issue,² where I observed that I had used the JD in my own 1976 book, and that neither Morrison nor I could recall where we had first heard of it.

Some further correspondence with Morrison finally led me to a Scientific American article³ on "Ball Lightning" (sic) by Harold Lewis, who wrote (in part): "An average lightning ball 25 centimeters (10 inches) in diameter and singly ionized at normal atmospheric density would contain about one megajoule (million joules) of energy. I am indebted to M. L. Goldberger of Princeton University for pointing out to me that a megajoule can be visualized as the amount of energy that would be released by the chemical combustion of a large jelly doughnut."

I of course then wrote to Goldberger whose reply is printed below. In the meantime, I found myself for a week or so the target of a listserv discussion group of Certified Advanced Metrication Specialists (a humorless crew if ever there was one), who had belatedly found my January editorial and who proceeded to exchange messages labeling me as a "pseudo-physicist" (among other terms, such as "holdout," "unprofessional," and "renegade") and suggesting that since the preponderance of the letters I published in the June 1999 AJP were sympathetic to unit diversity, I must have dishonestly selected the ones I agreed with and discarded many that endorsed the "SI-Only" position. Not so. The June issue contained *all* the letters and emails I had received on the subject. (Well, I did get several messages commenting on the excessive length, up to 17 meters, of the iguanas I had referred to in my editorial, and I printed only one of those iguana letters.)

Some of these CAMSs threatened to cancel their subscriptions, a somewhat hollow threat since none of them seemed to be subscribers, and one suggested that I would no doubt henceforth automatically reject any manuscripts, on any subject, submitted by known SI advocates. I offered to print any further (reasonable) letters on the subject that I might receive, but their response was disappointingly nonexistent.

After that digression, herewith Professor Goldberger's letter.

¹Robert H. Romer, "Units—SI-Only, or Multicultural Diversity?," *Am. J. Phys.* **67** (1), 13–16 (1999).

²Robert H. Romer, "'You've got mail!'—The SI Jelly Donut," *Am. J. Phys.* **67** (6), 470 (1999).

³Harold W. Lewis, "Ball Lightning," *Sci. Am.* **208** (3), 106–116 (1963).

Robert H. Romer, *Editor*

Dear Dr. Romer,

I am indeed the person Hal Lewis referred to in his Ball Lightning article. I cannot, of course, make any claim as to being the originator of the profound observation that the energy content of a large jelly donut is, in fact, one megajoule. I can say that, regardless of whoever preceded me, I made the discovery independently.

Hal Lewis and I were members of a group called Jason that had summer studies beginning in 1960 (and in fact continues, the fortieth consecutive one going on right now). It was our custom to provide donuts along with morning coffee. On one occasion, deploring the caloric content of a large jelly donut which I took to be about 250 kilocalories, I made the deep observation ($\sim 4 \times 250 \times 10^3 \text{ joules} = 1 \text{ megajoule}$). In either 1961 or 1962, this became a joke between Hal and me.

I enjoyed your editorial. I should add that I enjoy the *American Journal of Physics*. I am sorry the donut story is not more exciting, but now you know everything I do.

With regard to SI units—I first encountered them in my introductory physics course at Carnegie Tech and have not used them since. The greatest concession I have

ever made in deviating from cgs is to remove some ugly 4π 's from Maxwell's equations by using so-called Heaviside units. Good luck in your crusade. May the force (in dynes) be with you.

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10 July 1999

SI AND OTHER UNITS

In the July–August issue of *Metric Today* I read that the editorial¹ you wrote in the January issue of your *Journal* gives the impression that you are a proponent of "moving back in time," favouring a mixture of units. You stated "clear thinking can be presented equally well in miles or meters." That certainly would depend on the language (pertaining to measurements) we are speaking; if you tell me *A* and *B* lie five miles apart, and I only know what meters are, it wouldn't be clear at all. You seem to forget that the metric system and the inch–pound system are not the only ones that existed. Japan had a totally different system, so did Russia, the Sudan, Taiwan, Cuba, and hundreds of other countries before they converted to the metric system. Even in the Netherlands, small as it is, the ell, the voet, the roede each had ten to twenty different measurements when compared to the meter. Please see "The World Measurement Guide" issues by the *Economist*. Let's go back to trading in rocks and shells, or even the obsolete units. As for writing sec i.s.o. s, that is like always writing dollar i.s.o. \$. The simpler it is, the more people will understand the system. If you paid with a \$100.00 bill you would not like to get change with francs, lire, guilders, and markens, right? For the reader² who thought metric was "bad" because it has a base-10 instead of the base-12 of the old system; the answer to that is that only the inch–foot has a base of 12, nothing else. At 83 I have used both systems, each for about 40 years so I can say "Metric SI is the simplest system anyone can think of and everybody can learn in a few hours."

¹Robert H. Romer, "Units—SI-Only, or Multicultural Diversity?," *Am. J. Phys.* **67** (1), 13–16 (1999).

²E. T. David, "SI Units—Misdirected Zealotry. First Change the Number System!," *Am. J. Phys.* **67** (6), 470 (1999).

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13 September 1999

REPENT!

Repent! Repent! Surely you now see the error of your ways!¹ Were it not for the continued use in some quarters of English

units, encouraged by those such as yourself who make flabby arguments for "diversity," the Mars Climate Orbiter would still be on course. The work of a talented and dedicated group of space engineers has gone down the drain, all because you and others of your ilk perversely enjoy using both feet and meters. If our engineers and scientists were all committed to the SI-Only philosophy, and protected from the nonsensical use of other unit systems, our space program would never have suffered that disaster.

¹Robert H. Romer, "Units—SI-Only, or Multicultural Diversity?," *Am. J. Phys.* **67** (1), 13–16 (1999).

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3 October 1999

And a note from the editor:

Sure. And a bunch of engineers or scientists dumb enough or careless enough not to know or care about their units could be relied on with total confidence to get their decimal points right, to include g in going from kilograms to newtons, never to confuse, say, cubic meters with cubic centimeters, to know what time zone they are in, and to get their signs right so as to make sure that their rockets will go up and not down.

Robert H. Romer, *Editor*

PUBLISH EARLY AND OFTEN

We used to be able to say things once; if the message was reasonable, it had a good chance of becoming a permanent part of the structure of the field. Today, a single publication is lost; if we say it only once, it will be presumed that we have changed our mind, and we therefore must publish repeatedly.

Rolf Landauer, "Fashions in Science and Technology," *Phys. Today* **50** (12), 61–62 (1997).