under way at AIP: For the short run, a procedure has been established for revising and updating PACS at regular intervals to take into account new developments in physics. For the long run, a study has been undertaken of the usefulness of PACS and possible alternatives to it in various contexts (journal subject indexes, abstracting journals, computer-assisted literature searches). While I cannot promise Hecht that he will find journal subject indexes more to his liking in the future, I can assure him that the editors do take his complaints and those of others seriously.

STANLEY G. BROWN
Editor, Physical Review D
11/82 *Chairman, AIP Publication Board*

Founding of the SSRL

I appreciate the notice concerning me in the "We Hear That" section in May (page 96). However, I should not have been mentioned in the context of "... founding the Stanford Synchrotron Radiation Laboratory." Rather, it should have been noted that I was cofounder of that laboratory with Professor Sebastian Doniach of Stanford University's Department of Applied Physics.

WILLIAM E. SPICER
Stanford University
7/82 *Stanford, California*

Trends at PRL

It was most interesting to read the analysis of trends in research output and funding in November (page 9). I am particularly gratified at having statistics—without having to collect them myself—showing the steadily increasing part played by foreign authors in our journal.

My real reason for writing, however, is to correct a presumption made by the authors. The approximate constancy of the total number of letters per year published in PRL was not a matter of editorial mandate. There was one year in which the financial status of The American Physical Society induced the treasurer to request that we keep the journal at the same size it had been the year before, but that was after the plateau had been reached, and we had to make no special effort to implement the request. I could suggest several possible contributing causes, but that is beside the point. The plateau was maintained from outside the journal.

It should be noted that this correction does not vitiate any conclusions of the article. Rather, it strengthens the case for a tendency toward decline in the vigor of the US physics in general, and of our industry-based physics in particular.

GEORGE L. TRIGG
Editor
11/82 *Physical Review Letters*

Heat from junk mail

Having published three letters opposing junk mail (Blosser, April 1981, page 74; Vossen, August 1981, page 71; Elmer, November, page 13) I hope PHYSICS TODAY will air another view. I find and purchase several products per year through junk mail. Others must also, or else advertising this way would not be worthwhile for the companies doing it. Eliminating this mail would force such companies to use other presumably more expensive means of advertising, which would then be reflected in higher prices for their products. Thus eliminating junk mail would raise the price of doing experimental physics. I am opposed to that.

There is another benefit from junk mail on our campus. Combustible trash is used to produce energy for heating and cooling. Burning such trash saves directly on fuel costs, and it also saves on the cost of trucking trash away. Our program has been so successful that we are making arrangements to obtain such material from nearby industries and a junior college. Technical details may be obtained by writing the Utilities Department, University of North Florida, Jacksonville, Florida 32216. Instead of being annoyed by junk mail, we are thankful for the contribution to our heating and air conditioning.

JAY S. HUEBNER
University of North Florida
12/82 *Jacksonville, Florida*

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I find William Elmer's complaint rather devoid of imagination; for many physics- and technology-minded fireplace owners, the arrival of junk mail is an energy-blessed happening for the winter months. It provides an average monthly intake of about 20 kg solid fuel with a combustion heat of roughly 8 liters (2 gallons) of heating oil.

The accompanying gift of business reply cards will not only perpetuate this welcome supply, but also helps to provide job security for the mailman.

R. GERHART
USANVL/ACD
12/82 *Ft. Belvoir, Virginia*

Chandrasekhar and Eddington

With the turn of the year 1982–83 we remember Eddington's 100th birthday.

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letters

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Relativity theory was introduced to the western world through Eddington's brilliant grasp of differential geometry, leading from Gauss, Riemann, Weyl to Einstein, and his successful test of the deflection of light. His contributions were equally important to bring an understanding of the dynamics of stellar systems. And, what is mainly remembered, he laid the groundwork for the theory of the internal constitution of the stars, with an understanding of the mass-luminosity relation. Apart from these scientific contributions we know Eddington's merit in helping the friendship of scientists withstand the hatred flaming up during World War II. Many a university town owes being spared destruction during the war through the intervention of a few courageous and human-hearted scientists, Eddington one of them.

The scientific controversy discussed by Kameshwar Wali (October, page 33) is part of regular scientific life. The author presented this episode in history in a disproportionate manner. The really significant part of this piece is a quotation from Chandrasekhar: "It was easy to disagree with him [Eddington] on scientific matters. You can always be certain that he would never misjudge you or think ill of you on that account."

HERBERT JEHLE
University of Munich
12/82 *Munich, West Germany*

THE AUTHOR COMMENTS: I would like to thank Herbert Jehle for pointing out that in this centennial year of Eddington's birth, we must remember his great contributions to astrophysics, General Relativity, his humanism, and his internationalism in science. Who can forget his extremely moving obituary note [*Observatory* **39**, page 336 (1916)] about Karl Schwarzschild (an enemy scientist?)

However, I do not agree with Jehle that what transpired between Chandrasekhar and Eddington is a *part of regular scientific life.* There was another streak to Eddington's personality which reveals itself, not only in this controversy, but also his controversies with James Jeans and E. A. Milne. I have ventured to discuss this, not with the intention of discrediting Eddington, but to emphasize the human aspects of science which one should be aware of—the role of prestige and authority, subjectivity, and so on. Eddington, who had once said that in science "there is a kind of sureness which is not cocksureness," was increasingly becoming cocksure in his scientific thinking in the 1930s. This affected not only his scientific creativity, but because of his established reputation, influenced a great deal the thinking of others. Is it not ironical that Eddington could have, but did not, entertain the possibility of gravitational collapse, existence of black holes, and much other work in astrophysics involving General Relativity in the thirties? These problems were completely within the range of his interest and capabilities.

KAMESHWAR C. WALI
Syracuse University
12/82 *Syracuse, New York*

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Wali's account of the Chandrasekhar–Eddington confrontation was fascinating to read. But some slip-ups in basic astronomy caught my eye. The word "comes"—Latin for "companion"—is not unique to Sirius; it is a now-obsolete term used to indicate the faint component of any double star. Sirius B (as the white-dwarf companion of the Dog Star is most commonly known) is also called the "Pup" in popular literature. And Sirius' absolute magnitude of +1.4 makes it some 25 000 times dimmer than the intrinsically most luminous star in our galaxy. Of course, Sirius remains the brightest star in our nighttime sky.

LEIF J. ROBINSON
Editor
Sky & Telescope
11/82 *Cambridge, Massachusetts*

Stop the MX

The MX missile system is unnecessary and destabilizing. This conclusion does not rest solely upon the vulnerability of the proposed dense-pack basing mode.

The accuracy and kilotonnage of the MX warheads make them useful for a preemptive strike upon the land-based nuclear forces of the Soviet Union. This threat to the survivability of the Soviet nuclear deterrent will inspire the Kremlin to seek countermeasures. A likely response is to put Soviet missiles in a launch-on-warning mode. This means that Soviet missiles would be launched upon a warning that a nuclear attack is in progress. The warning would be provided by computers. Our NORAD computers are known to give frequent false warnings. It is safe to assume that Soviet warning systems are at least as fallible. Thus, the chance of a nuclear war beginning by accident is increased enormously.

Due to the large number of warheads per missile, the MX is an attractive target for the Soviets. Unless it is deployed in a manner that convinces the Kremlin that it is invulnerable, the existence of the MX increases the incentive for a Soviet first strike. At least thirty basing schemes have been examined, and none of the land-based schemes among them is widely believed