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and the NA35 collaboration reports evidence of a curvature in the negative-particle (mostly π^-) spectrum.⁴ Although one cannot conclude absolutely that dense matter was formed in these collisions, the shape of the transverse momentum spectrum is evidence in its favor.

References

1. T. W. Atwater, PhD thesis, University of Minnesota, Minneapolis (1986).
2. T. W. Atwater, P. S. Freier, J. I. Kapusta, Phys. Lett. B **199**, 30 (1987).
3. H. Löhner *et al.*, Z. Phys. C **38**, 97 (1988).
4. H. Ströbele *et al.*, Z. Phys. C **38**, 89 (1988).

JOE KAPUSTA

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3/88

Einstein auf Englisch: Warum Nicht?

Einstein has been dead now for over 30 years. While he was still alive, most of his publications were available in Japanese translation. Shortly after his death, his published papers were translated into Russian. Yet to this day almost none of his papers are available in English (apart from a few very famous ones). Partly, this is due to the shameful, well-known fiasco created by his heirs and Princeton University Press. But even now, when a careful, scholarly edition of his works is being prepared, the works themselves will be available only in German. The English translations will be available only to those who buy the German edition, at extra cost.

While this scholarly edition will be of value to historians of science and similar researchers, an English translation of his papers, even if not scholarly, would be of incredible value to working and teaching physicists. For example, on his way to general relativity he explored numerous clever ideas that he ultimately put aside but which are still of research value. Also, his ideas on statistical mechanics were not merely a rehash of Gibbs; his emphasis on nonequilibrium processes led directly to his insights into quantum theory. These papers are a gold mine to physicists, and yet not only are they still unavailable in English, but Princeton Press seems determined to keep them largely unavailable.

It is astonishing that there has been no cheap, paperback edition of Einstein's papers in English translation after all this time. This constitutes, in my opinion, one of the more pronounced intellectual disgraces of the 20th century. That Princeton Press

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doesn't seem to understand the nature and significance of the problem, let alone have any plans to solve it at this late date, seems almost beyond belief. To be cut off from Einstein's legacy to us in this way is very painful, partly because it is so unnecessary, and partly because it could be so easily remedied. But I guess that if those responsible had any sensitivity in the matter, we would not be in this situation.

DANIEL GREENBERGER
City College of New York

3/88

THE DIRECTOR OF PRINCETON UNIVERSITY PRESS REPLIES: Having been with Princeton University Press for only two years, I cannot speak from personal experience about the "well-known fiasco" and the long and tortured history of the Einstein papers project. It certainly is the most complicated and accident-prone venture I have encountered in over 25 years of publishing. Any decision regarding the Einstein papers must be made jointly by the Princeton University Press and the Hebrew University of Jerusalem (acting as legal heirs of the Einstein estate) after taking into account the advice of an international body of distinguished scholars. Certainly Daniel Greenberger's letter will be brought to the attention of these parties.

In any case, the complete scholarly edition of the Einstein papers is an immense task for all concerned. It involves the full- and part-time commitment of a number of scholars and enormous financial underwriting. While only one title has been published so far and another is in production, the edition will eventually run to at least 25 volumes. The original contract with the estate of Albert Einstein requires publication of these materials in the original language.

For each volume of the Einstein papers Princeton University Press is providing a separate paperback companion that contains a scientifically accurate translation of all materials not originally written in English. These paperbacks can now be purchased separately from the cloth edition, although they will not contain the English notes and annotations. The original decision to couple the paperback with the purchase of the cloth edition was reversed within a month or so of the publication of volume 1.

All this, however, is an entirely separate venture from providing an English-language paperback edition of Einstein's scientific papers. I personally agree that such a book would be extremely valuable, and hope that

with the support of the Hebrew University and the Einstein advisory board it might become a reality in the not-too-distant future.

WALTER H. LIPPINCOTT
Princeton University Press
Princeton, New Jersey

9/88

Does Pressure Pique Productivity?

I became a physicist, I suppose, because of the nature of my curiosity. I have a need to understand. More accurately, perhaps, I need to have an explanation for everything. So, much of what I do—like the work of most physicists, I believe—is self-motivated.

I find that to do well what I do, I need not only to work hard and long at the experimental or theoretical problem at hand but also to reflect, to talk to people, to speculate—in short I need time to think.

Since I have come to work in the United States, I have observed that professional physicists (in universities at least) do not have the pursuit of understanding as their primary goal. Rather, the primary aim they adopt—or, I would say, are forced to adopt by the environment in which they work—is that of success.

What physicists work hardest to achieve is not understanding but such things as a larger number of students, proposals that bring in more funds, the publication of more papers, getting invitations to more prestigious conferences.... It is, of course, a commonplace that scientists bitterly complain about the need to undertake these activities, but I want to go further. I want to suggest that the life style of physicists in the US is highly inefficient. I have come to believe that the productivity of scientists is far below what it could and should be, that physicists who are at the peak of their potential creativity and productivity in fact produce almost nothing. They may appear to be productive, but only because they attach their name to students' work—they are not doing much themselves. (Thank goodness that graduate students in the US are aggressive and, from time to time, demand our time—at least while talking to them we have to think about physics.) I am overstating this, perhaps, but to add plausibility and coherence to this discussion let me introduce the modified Laffer curve.

A physicist under no external pressure would still produce a certain quantity of useful physics out of self-motivation (perhaps not every physi-