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letters

computer codes may ultimately rival Galileo's telescope in providing insights and solutions to astrophysical phenomena.

Puzzles in the study of auroras; planetary magnetospheres; comets; the solar atmosphere; in such generally inaccessible subjects as double radio galaxies; the evolution and morphology of peculiar and spiral galaxies; the large-scale structure of the universeall these appear decipherable when a large computational resource is available.3 The need for an astrophysical computation center to provide more universal access is apparent.

It is important to emphasize that while some computational astrophysics is possible at 300 or 1200 baud over voice-grade telephone lines, this mode of operation is severely handicapped in light of the many scientists, physical and computational, usually required to maintain and validate a large MHD or plasma code. Furthermore, the logistics of handling the many tens of setup, debug, controller, historian and data files are aggravated when a calculation is carried out in all three dimensions. In this regard, a numerical astrophysical observatory might operate in a mode similar to that of the National Magnetic Fusion Energy Computer Center,4 tying far-flung research centers together with wide-band 56kilobaud or 256-kilobaud satellite

References

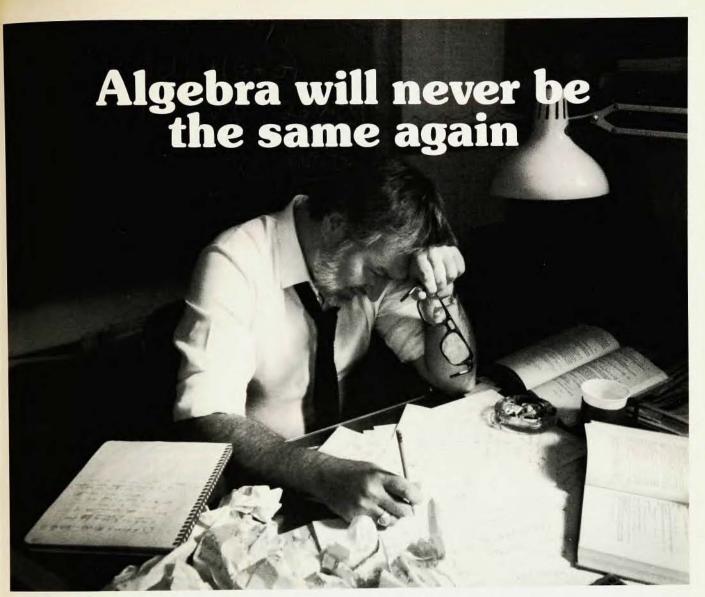
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ANTHONY L. PERATT Los Alamos, Scientific Laboratory 3/84 Los Alamos, New Mexico

Worth of a BS

I read with great interest the news story, "Department chairs confront issues in education of physicists" (February, page 57). We have been wrestling with some of these problems for many years. It is still difficult to find a young promising physicist who is interested in a teaching career when he or she could command a considerably higher salary in industry. And of course it is not a simple matter to direct a young physicist towards the teaching profession under these conditions.

I know of a department chair who,



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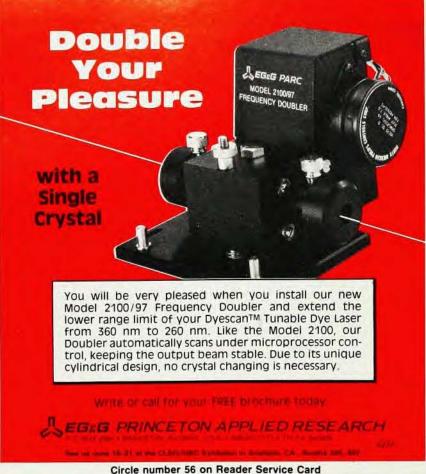


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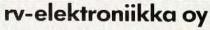






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letters

while interviewing a candidate for a faculty position, describes the conditions in his department and university, then asks: "Why do you want to teach here? What is wrong with you?"

The problem is grave. It requires serious consideration, tremendous efforts and a much-needed national and public awareness; but above all it requires a solution.

I thought the notion of introducing a series of mini-courses on "hot" topics in modern physics would be valuable, not only because it would acquaint students with current topics and eliminate the perception that physics is neither new nor exciting, but also because it would tend to reactivate and rejuvenate some of the faculty in institutions where research is not the prime function. It is certainly an idea that deserves serious consideration.

I strenuously disagree with the statement that "the physics BS is not seen as a particularly useful degree, either by employers or by students." The active recruitment of our graduating seniors by the local industry practically depleted our graduate program and forced us to offer all our graduate courses in the evenings. The problem is compounded by the fact that the salaries of these young scientists are generally higher than what we offer to a PhD seeking a faculty position at the assistant professor level.

I have another illustration of the worth of a BS in physics: Recently, while celebrating the successful conclusion of an industrial associate contract between TRW and California State University, Long Beach, the master of ceremonies, Berry Yolkin, an engineer himself and the Manager of TRW Ground System Development, introduced one of our recent BS graduates by saying, "And our best engineer is a physicist." There were at least twenty engineers in the audience.

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Editorial changes

3/84

Burton Brody (March, page 11) is not alone. Those of us who are merely authors are often infuriated by editorial changes. We, too, have an ear for good English. Rejoice in individuality, and let our prose be. (I ceased reading Scientific American because every article sounded just like all the others I had read.)

Nowhere have I seen the issue put more clearly than in Arthur Plotnik's The Elements of Editing (Macmillan, 1982, page 32):

All too true. The first impulse we