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letters

of this program represents a gratuitous insult to the physics community.

The cuts in the social-sciences budget, as well as in such programs as the history of science, are only one part of a well-orchestrated anti-intellectual campaign. Other parts are the cutbacks in support of education at all levels and of the Endowment for the Humanities. Some of the motivation lies in the desire to please those who would replace the theory of evolution with biblical myths. In this sense the motivation resembles that of the anti-intellectual campaigns of Hitler and Stalin. As in those cases the physicists have a somewhat privileged position because they are thought to be needed to help build a huge aggressive war machine.

I believe it is incumbent on the physics community to play a leadership role in combatting this anti-intellectual campaign.

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9/81

Nobel cover

The cover of the AIP 50th Anniversary Issue (November 1981) contains several errors.

If you intended to put the Nobel Prize winners in chronological order by decades, as you say on the cover, then note the following misplacements:

Bethe 1967; Van Vleck 1977; Mayer (Goeppert-Mayer) 1963; Rainwater 1975; Gell-Mann 1969. There are possibly several other errors.

Furthermore, it seems to me that you stretch the case by including Fermi, who got the prize while in Italy, for work done there while still an Italian citizen. If you include him you should include J. Franck, O. Stern and several other physicist of European origin.

EMILIO SEGRÈ
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12/81

The arrangement was—when possible—to reflect the time of the active research rather than the date of the prize. The Editors.

More on gyroscopes

The news story on fiber-optic gyroscopes in October (page 20) leaves the impression that the first fiber gyros had such a low response that a rapidly rotating table was required. In our 1976 paper¹ it is shown experimentally that the wavefront does not get scrambled in long fibers, making it possible to

build not only fiber gyroscopes but other fiber sensors (acoustic, magnetic, temperature, and so on). Subsequently² several gyroscopes were built, including one with 1.5-km-long, single-mode fiber. Its diameter was one meter. From $\Delta Z = 2\omega LR/\lambda c$ one gets, for one complete fringe ($\Delta Z = 1$) or 2π phase shift in the interference pattern, $\omega \approx 5^\circ/\text{sec}$. This is less than one RPM for a full fringe. The noise level of that instrument was equivalent to about ten times the earth's rotation rate for 0.1 second averaging time.

One of the important objectives in building fiber gyroscopes is to eliminate all active optical components in the beam path. This would increase its reliability and make it virtually maintenance-free. It was done only partially in both Shaw's and Ezekiel's experiments. I think that it is possible to approach this goal with the new polarization-maintaining single-mode fibers and super-radiant or LED light sources.

References

1. V. Vali and R. W. Shorthill, Appl. Opt. 15, 1099 (1976).
2. V. Vali and M. F. Berg, Proceedings of SPIE, San Diego (1978).

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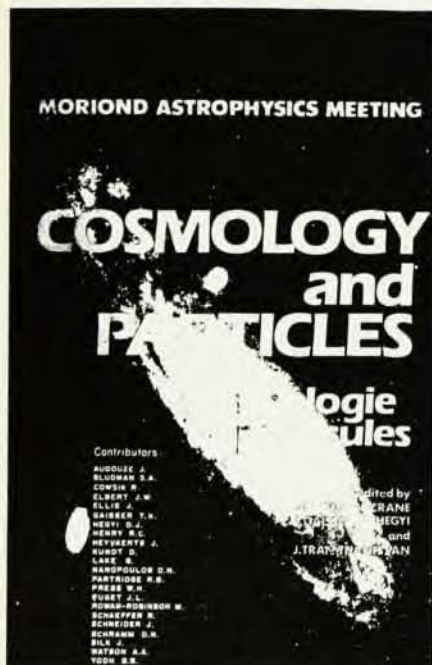
11/81

More on coining words

In a recent letter (September, page 13) Kenneth Sassen describes the introduction of the word "monochrombow" for Airy's rainbow, to emphasize the "chromatic pureness of the laser generated variety." Some neologisms tickle the ear with euphony and grace the English language by filling in a void. "Monochrombow," heaven spare us, does neither; instead it bludgeons the ear and inflates the language. Furthermore, it is a bastard neologism, a grotesque offspring of a forced wedding between the Greek root *monochromatos* and the Old English root *boga*. Let us hope for the blessing of an early natural death for the unfortunate progeny, lest we find ourselves searching for an "aurumpot" at the end of a "polychrombow."

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