

letters

is repetitious and confusing, and it interferes with the students' understanding of and interest and proficiency in the separate fields of mathematics and their applications.

A second consideration is that the "new math" books have been designed for the purpose of educating the average student who would not have been able to grasp the subject as the "old math" was taught. The material has been simplified, spelled out and made repetitious to such an extent that the naturally talented student *must* lose interest. Thus these students are not recognized by their teachers, and many high IQ (160 to 170) are lost in the so-called "slow" classes.

An additional factor, and perhaps the most important (in California, at least), is the practice of sorting out the students according to their supposed intellectual capabilities when they are in the third grade. The students are separated into several categories, which are then labeled ranging from "bright" to "slow." The students labeled "bright" in this way are given the most talented teachers, most advanced curriculum and the most outside enrichment for the rest of their school careers. The students labeled "slow" receive the leftovers. These decisions are made at a time when mathematical ability cannot yet be recognized and are made primarily on the basis of reading ability by teachers who are not qualified to make decisions so critical to the students' future. Through misjudgements of these third-grade teachers, many potential physicists, engineers and mathematicians are undoubtedly lost to the higher education system, while those who do arrive show no interest in these fields.

P. K. KIRKWOOD
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Material shortage

In your April issue, which I have only just seen, there is a dispute about the situation in developing countries (pages 15, 77, and 79). It seems to me that both Michael Green ("material resources tend . . . to be woefully inadequate") and Michael Moravcsik ("the surfeit of equipment there that stands idle") are right. In our own case, for example, we are well equipped (though not, we feel, a surfeit) with an ultra-high vacuum plant, high and low-energy electron diffraction, an Auger spectrometer, a quadrupole mass analyser, an electron microscope with television chain and other major accessories and so on, but we were so desperately short of material resources, such as pure ma-

terials, chemical reagents, spare parts, photographic materials and electronic components, that there is a real danger that our experimental work will soon grind to a halt. And this is not the fault of bad planning on our part, so much as the result of a policy on the part of most funding agencies that prefer non-consumable over consumable purchases and the setting up of new projects over the maintenance of established groups.

J. A. EADES
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Santiago, Chile*

Sakharov's accusers

Your recent news story (November, page 69) reported that letters appearing in the Soviet press denouncing Sakharov's position were signed by scientists in great number (names added). Let me point out a fact that is probably unknown to your readers.

Let me assure you that I can tell from first-hand experience that those scientists had to sign these letters. They had no other choice unless they were willing to lose their jobs and be "separated" from their families.

I lived 15 years in the "Communist Paradise" and I *had* to sign things 180 degrees against my will and conscience.

NAME ON FILE

Physicist for Congress

In your editorial in November (page 88) you deplored the fact that there are no proper physicists in the Congress, and for that matter few in Congressional circles of any sort.

I thought that your readers would be interested to learn that a former student of ours, George Wayne Brown, is likely to run for Congress in the 7th Congressional District of Tennessee next year. His present occupation is Vice President for Academic Affairs at Union University, Jackson, Tennessee, and he teaches physics and astronomy part-time. His birthplace was also in the 7th District, which sounds helpful. My knowledge of Tennessee politics is slight, but I know that Brown would not go into a time-consuming and laborious campaign unless he felt there was some possibility of success. Brown finished his PhD in astronomy in August 1970. His research and publications are in radio astronomy; he is well grounded in physics.

I surely agree with the sentiments expressed in your editorial, and I hope we can find ways to assist well trained physical scientists like Wayne Brown in the commendable effort of trying for a seat in the House of Representatives.

STANLEY S. BALLARD
University of Florida □

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