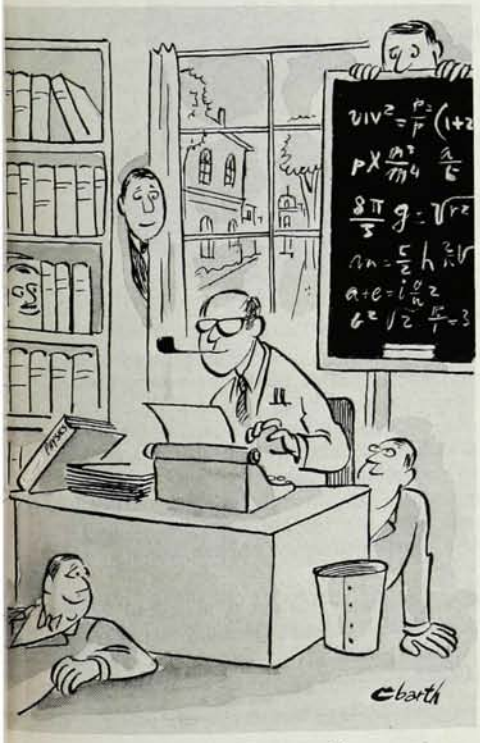
ager. "On a first printing of say, 40 000, you hope only to break even."

All the book houses agree that increased competition is a major factor in limiting sales. The number of really active physics publishers has grown rapidly in the last few years, and many companies have introduced a much harder sell than they had 15 years ago. "The pie is being cut smaller as more publishers bring out more physics books," said another sales manager. "No one has a corner on good authors any longer. Consequently you are going to see fewer Halliday and Resnick's selling at 100 000 a year and more titles selling at 20 000."

Increased competition has redounded to the benefit of authors, who are demanding and often getting higher royalty rates. Many publishers complained that not enough physics books are written to supply the demand. "There are not the great gaps that existed five or ten years ago," said one, "but we still have broad areas for which we are seeking authors." As a consequence, most houses employ numerous field editors who attend American Physical Society meetings, visit campuses and keep the grapevine alive. "If a physicist is writing a manuscript," said Dickinson, "you can be sure there will be a half dozen publishers who know about it. Each author now has an opportunity to talk to publishers' representatives not only for ways to organize his book but also for the best business deal. This makes life tough for the publishers."



"IF A PHYSICIST is writing a manuscript, you can be sure there will be a half dozen publishers who know about it. . . . This makes life tough for the publishers."

The more successful books are now invariably commissioned. Publishers have grown in sophistication in the last ten years and have better grasp of the need for a book, of the size of the market and of potential authors. "You can't just write a book any longer," noted an editor. "An introductory physics text is going to compete with many extremely good ones and must be well written and well illustrated." Increased collaboration between author and publisher has resulted in an improved product, say the publishers. "Physics books are being better written and easier to sell," was the general comment.

European Physical Society Slated to Operate in 1968

A federation of European national physics organizations with provision for individual membership will probably come into existence in 1968 (PHYSICS TODAY, Aug. 1966, page 89). Louis Cohen, secretary of the British Institute of Physics and the Physical Society, reports to PHYSICS TODAY that a steering committee of the proposed European group "after considerable discussion had produced a draft resolution which has been sent to some 12 national societies for consideration. The Council of my own Institute and Society have accepted the constitution with certain financial provisos, and the other countries . . . are expected to do so shortly.

"It still remains for us to put the question of support to our members formally but informal soundings have shown a considerable degree of support. There are problems in our participation; for example, our membership (at 12 000) is at least as great as the total of all other European societies.

"We are, however, fully convinced that we should participate fully in this venture and feel that the resultant rationalization of conferences, publications and information flow will be for the general good."

Radiation Dynamics Sells First Tandem to Argonne

Radiation Dynamics has sold an 8–MeV tandem accelerator to Argonne National Laboratory at a price of $1.1 million, the first such machine sold by the company. With this sale, nuclear specialists say that for the lower end of energy range of the common-usage tandem, physicists can now go out and get competing bids on devices to meet their needs. This RDI sale follows several similar ones in recent months, including a single-ended 4-MeV device to Argonne, another 4-MeV accelerator to NASA Goddard Space Flight Center and one 300-kV machine to Kohlsmann Instrument Co. RDI is now engaged in a stiff fight with other manufacturers to win a tandem contract from Ohio University.

The RDI accelerator achieves its high voltage through a number of electrical power conversion stages. Starting with 220-volt or 440-volt, three-phase power, it makes 12-kV and then 150-kV radio-frequency power (130 kHz) and by rectification produces its eventual high-voltage direct current.

Radiation Dynamics spokesmen as well as physicists familiar with the Argonne operation disclosed that the tandem sale proved exceedingly difficult to consummate. RDI, which had never built a tandem before, had been trying to break into the market for over two years, at a time of tightening government research support. Moreover, their single-ended machines are generally 25–30% more expensive than other facilities of comparable energy. Argonne, it is said, had to take a gamble with a relatively untried device and had also to withstand intense bidding of other firms.

The RDI tandem is expected to give Argonne a very powerful tool for research in neutron physics. The principal advantage of the RDI devices, say nuclear physicists, is their current capabilities, approximately 0.280 milliamperes in the tandem and, in many of the single-ended devices, often greater by a factor of ten over other facilities of comparable energy. The

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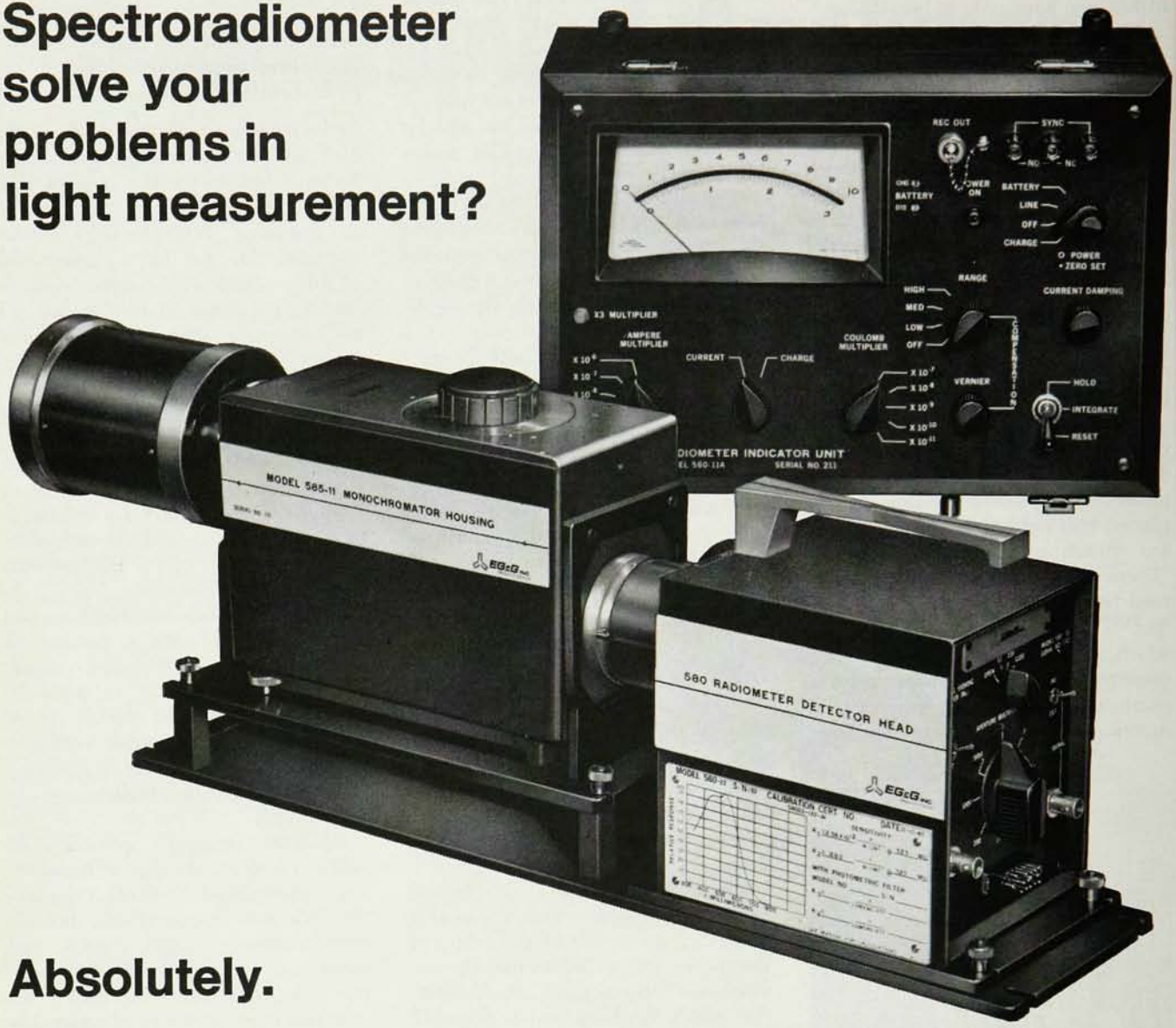

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technology is advancing so rapidly, say these physicists, that commercial suppliers are now able to make negative ion sources and quote prices according to the number of fractional milliamperes desired. And for such work as solid-state damage studies or neutron physics, where the source can be a major problem, one needs beams of high intensity.

But it is a mistake, they point out, to say that current is the only factor for all people. Some workers, such as those in charged-particle physics, are interested in a given voltage and not in extra current, which may cost an additional $125 000. In many places, therefore, and particularly in a university, where emphasis is on charged particles and operating expenses are severely limited, other systems of particle acceleration may be preferred.

Daddario Urges Societies to Volunteer Technical Advice

Congressman Emilio Daddario (D-Conn.), chairman of the House Subcommittee on Science, Research and Development, wants the scientific societies to step forward and help Congress assess the impact of science and technology on national problems. This is not the first time Daddario has sought the assistance of scientific societies, but in recent months he has once more, and with particular stress, repeated his plea for the authoritative technical advice that scientific councils can provide.

In a recent address before the National Association of College and University Business Officers, the congressman noted, "There is one important source of advice to the Congress which I do not believe has been sufficiently tapped. I refer to the professional society. . . . We believe there is no limitation to the extent to which professional technical societies may communicate with Congress. . . ."

It is known from congressional studies, however, that scientific groups are generally loath to communicate with Congress for fear of losing their tax-exempt status. Section 1.501(c), paragraph 3, of the Internal Revenue Code contains the limitation that no substantial part of a scientific organization's activities may be for carrying on propaganda, or otherwise attempting to influence legislation. And at least one society president has noted that although there are times when his society could be a definite aid to Congress, the society's legal counsel has cautioned against such action as a general rule.

DADDARIO: "If the societies do not, in fact, involve themselves in problems of our society—then I wonder what real value these societies have."

In an interview with PHYSICS TODAY, Daddario stressed that there is a world of difference between lobbying and giving advice to Congress. "I am not advising the societies to fly in the face of the Internal Revenue Service," he said. "But if they mistakenly feel the IRS prevents them from giving expert advice to Congress—if the societies do not, in fact, involve themselves in problems of our society—then I wonder what real value these societies have.

"Scientific organizations ought to do more than merely discuss problems among themselves. They ought to get to the point where they make some strong recommendations on issues to which their technical competence has particular relevance. It is becoming harder for us in Congress to know where the information is.

"Societies interpret the Internal Revenue Code only in the strictest sense. But is it lobbying if there are issues that Congress is discussing on which the American Physical Society or American Chemical Society can provide expert counsel? The question of who first approached whom is irrelevant. If the societies were to come and say to us, 'We would like you to find something for us to do,' that would be lobbying. But if Congress makes proposals on which a scientific group has been working for a long time, and if the organization would like to comment to us, then, for heaven's sake, do they have to depend on my ability to know that they, as scientists, are able to do this?"

Over $5 Million in NSF Grants To Five Physics Departments

Reports gathered by PHYSICS TODAY from department chairmen at Vanderbilt and Carnegie-Mellon Universities, and the Universities of North Carolina (Chapel Hill), Notre Dame and Maryland, indicated that their departments will receive a total of more than $5 million in National Science Foundation funds. The support will be channeled to the five departments through recent NSF university science development grants totaling $21.9 million to their respective institutions. The following is an account of the various ways in which these department heads intend to use the NSF funds.

The Vanderbilt physics-astronomy department will use its funds to add eight faculty members as specialists in optical astronomy, high-energy and nuclear physics and radiation biophysics. Emphases in the department will relate to energy deposition and primary molecular effects of radiation in biomolecules and x-ray crystallography of biomolecules. The department will also obtain a high-resolution beta-ray spectrometer, a multiparameter analyzer for gamma spectra, an on-line computer for measuring bubble-chamber particle tracks and a microphotometer for stellar spectra intensities. About 20 000 square feet of research space will be added, and a new science library will be built. Vanderbilt will also work on broadening its curriculum with particular interest in prospective secondary-school teachers.

Carnegie-Mellon will spend half its physics grant to construct 44 000 square feet of additional space for physics in a new science and computer building. New appointments in its theoretical and experimental solid-