

COMPAS hopes to extend the study with a followup questionnaire, perhaps in June, and would include specific questions about the influence of draft regulations at that time.

Because the survey was limited to PhD-conferring departments, a large area of opinion and probable impact was not covered, said Slack. "We have not surveyed the non-PhD schools. We plan to do so because although they receive a smaller fraction of federal money, they do turn out a sizeable percentage of the physics majors."

Slack said copies of the completed survey would be sent to all physics department heads, to society officials and to some government agencies. He noted that the financial support survey was the first of its kind to be undertaken by the AIP. It was conducted by the Education and Manpower Division.

### *New Draft Rules May Take Half of Graduate Students*

While the uncertainties facing graduate students and departments about the draft have ended with the National Security Council's new no-deferment regulations, the certainties are no less worrisome.

Instead of being up in the air about what the new rules might be and so putting off hard decisions about the fall, both students and administrators can now face the coming year with the expectation that 50% to 70% fewer first-year graduate places will be filled in September than were occupied in June.

The new regulations started a wave of protests on campuses across the country and even in Washington, but the chances of any immediate changes are not bright. Just last year Congress passed legislation ending deferments for beginning graduate students, but left it up to the National Security Council to determine whether some deferments should be granted in disciplines essential to the national welfare. Now the council has decided that no graduate field, except medicine and its related specialties, is to be considered that essential.

Basically the National Security Council decided that:

1. Graduate deferments would end. Exceptions are medical, dental and related studies as well as graduate stu-

dents completing at least their second year of studies this year.

2. Callup on the basis of the oldest first would continue. This means that the newly vulnerable graduate student being older than the fresh crop of high school or college graduates would be drafted first.

3. Lists of essential activities and critical occupations would be abandoned. This leaves it up to local boards to base occupational deferments, such as those for teachers, entirely on local conditions.

The council based its decision on a number of considerations including "the unfairness that would result from exempting men in some fields of graduate study and not in others, as well as the accompanying distortions that would result from the tendency to select draft-deferred fields of study." It also reasoned that graduate-student deferments were "unfair—particularly in time of armed conflict—to all young men who do not have the opportunity or the finances to attend graduate school."

**Reaction.** Educators and university administrators have attacked the new rules. Logan Wilson, president of the American Council on Education, summing up the majority opinion, said,

## RESONANCES

**Secrecy and classified research** will be the topics for discussion at a special evening session added to the program of the American Physical Society meeting in Washington this month. The title of the session scheduled for Monday, 22 April, is "University Research and the National Defense." John Wheeler of Princeton University and John Rasmussen of the University of California will speak about whether a university should engage in classified research. Richard Garwin of Columbia University and IBM and William Davidon of Haverford College will put the case for and against Department of Defense support of research. The chairman for the meeting will be Dale Corson, provost of Cornell University.

**The Society of Physics Students** has been born with the completion of the merger of Sigma Pi Sigma and the Student Sections of the American Institute of Physics, the two undergraduate physics organizations. Mail ballots returned by Sigma Pi Sigma chapters early in March approved some last-minute changes in the articles of agreement. The AIP governing board added its final approval at the end of March. The new society will begin its activities by the start of the new academic year in September. Sigma Pi Sigma, with its 50th anniversary not many years off, continues as an honor component within the framework of the Society of Physics Students.

"This is a short-sighted decision. If it remains unchanged it inevitably will cause serious shortages in the trained manpower on which the future of the United States vitally depends."

Among the most outspoken critics of the new regulations was Betty Vetter, executive director of the Scientific Manpower Commission, who said the decision gives the United States "the best educated army in history." She noted that the shift in deferments results in "a policy that will draft nobody except college graduates."

The Scientific Manpower Commission estimates that 433 000 students will be added to the draft pool. Of these 187 000 are now seniors, 144 000 are first-year graduate students, 74 000 have not yet begun their second year of study and 28 000 are graduate students due to receive their master's this spring and summer. The draft call for the next fiscal year, for comparison, is currently estimated at about 240 000.

The dropping of occupational deferment lists may hit some physicists in industry, especially in the aerospace field. However, the shifting of the burden of deferment justification from the nationally distributed Selective Service lists to the local boards is not expected to make a great deal of



# Introducing the problem solver.



## Isomet's New Laser Light Modulator.

# \$385.

Model EOLM-400 solves the budget problem in four important areas:

**System Design**—Allows evaluating or bread-boarding a system concept without sacrificing quality.

**Production Problems**—Compact, easy to package, easy to align and install.

**Research Projects**—The EOLM-400 delivers a wide range of high performance characteristics with reliable results.

**Teaching**—The EOLM-400 permits dynamic instruction on quality equipment.

The EOLM-400's profile is a compact  $1\frac{3}{4}$ " dia. x  $2\frac{1}{2}$ " length. Easy to install, align and change. Operates at reduced voltage. Has high frequency response, and a broad optical bandwidth. Useful with lasers in the visible and near IR regions. Input capacitance is low and rise time fast. "Another ISOMET First", solves the budget-plus-quality problem with the new Model EOLM-400. For additional information write: Isomet Corporation, 433 Commercial Ave., Palisades Park, N.J. 07650, or call (201) 944-4100

### SPECIFICATIONS

Half-wave voltage: 1800v @ 632.8 nm

Capacitance: 5 pf (typ.)

Rise time: 1 n sec

Optical bandwidth: 200-1800 nm

Optical power handling capability: 100 W cw (visible, near IR)

Aperture: 2.5 mm

Optical insertion loss: 14% (with AR Coating)

Size:  $1\frac{3}{4}$ " x  $2\frac{1}{2}$ " in length



Leaders in Electro-Optics  
through creative crystallography.

HARMONIC GENERATORS/OPTICAL CRYSTALS/Q-SWITCHES/DRIVERS AND PULSERS  
ELECTRO-OPTIC LIGHT MODULATORS/ELECTRO-OPTIC CRYSTALS/TRANSVERSE FIELD MODULATORS



difference. In fact the National Security Council pointed out in dropping the lists that "more than half the occupational deferments actually granted are to men in occupations not on the [lists]."

### AIP Education Activities To Move to Stony Brook

Come September the education activities of the AIP education and manpower division will move to a university campus from AIP headquarters in Manhattan. The move will have several advantages, the major ones stemming from the expected "close coupling of the AIP education program with the academic experience," according to AIP director H. William Koch.

Under a plan worked out with the State University of New York at Stony Brook Arnold A. Strassenburg and education-activities staff members will move into campus quarters provided by the school. The details of the move, to be spelled out before the end of summer, will necessitate some staff rearrangements since it is planned to continue the manpower activities at the AIP headquarters building.

The decision puts the program in closer touch with teachers and students and so shortens the "feedback loop" essential to the operation of such programs. In addition the inducements of a campus setting should ease some problems of recruiting the type of staff required by the education program, said Koch.

### Baltimore Sun Editor Wins AIP Science Writing Award

A series of eight articles on the planned antiballistic missile project won the 1968 Science Writing Award in physics and astronomy. Judged the best written of the 70 entries, the articles were by William J. Perkinson, science editor of the Baltimore Sun. He will receive the \$1500 award, sponsored by the American Institute of Physics and the United States Steel Foundation, at the American Physical Society Washington meeting this month.

One of 40 people to submit articles, television and radio tapes, and a movie, Perkinson entered his series titled "The ABM—Physics for Defense." W. Lewis Hyde of the University of

Rochester, chairman of the judging committee, said in his summary of the judges' deliberations that the series "contained descriptions of physics-based research countermeasures including the use of bursts of x rays and other electromagnetic radiations to nullify incoming nuclear warheads."

The other judges were Dennis Flanagan, editor of *Scientific American*; John Foster, director of advanced programs for the Columbia University School of Journalism; Patric McGrady, scientific editorial consultant for the American Cancer Society; and Earl Ubell, WCBS-TV science editor.

### Experiment Under Way To Film Tutorial Sessions

"Why not film some of our best tutorial lectures and show them to undergraduate and graduate students?" suggested members of the APS New York State section recently. For the past seven years, the section has conducted semiannual tutorial meetings (PHYSICS TODAY, March 1966, page 43); now an experiment is in progress to make these meeting lectures available to a wider audience through films.

In the fall of 1966, the section joined with the State University of New York Instructional Resources Center in filming lectures from a symposium on the physics of new materials. The National Science Foundation later provided support for the filming of 1967 meetings on the interaction of light with matter and on elementary particles.

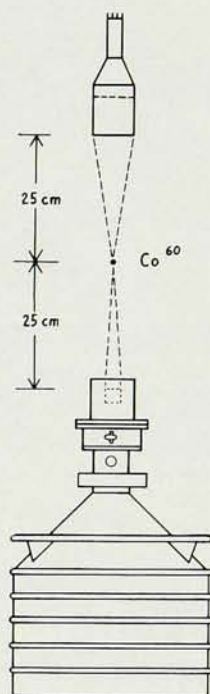
The project is addressed to three questions: (1) Is it technically feasible to obtain acceptable motion pictures by simply shooting over the heads of the audience? (2) Can filming be accomplished without disturbing the audience? (3) Will the resulting films capture the flavor of the meeting and have instructional values to justify the cost?

Thus far, the first two questions have been answered affirmatively, according to section vice chairman, Milan D. Fiske. What is not clear is whether the instructional and inspirational values of the films are worth the considerable costs involved.

To gather more data on the value of these films, the section is offering to make them available without charge (except return postage) for educational purposes. Users will be asked to complete a short questionnaire describing the use and evaluating the re-

## CAN YOU COUNT ON YOUR EFFICIENCY?

If you buy Ge(Li) detectors on a basis of volume (30 cc, say), you probably are not receiving true value. What you're really interested in is: "How many gamma rays of a given energy will be counted in a given period of time?" Nuclear Diodes guarantees a "Relative Peak Efficiency" which is a figure of merit everyone can understand and verify in his own laboratory. Here is what we mean:



$$\text{Relative Peak Efficiency} = \frac{N_{\text{Ge(Li)}}}{N_{\text{NaI}}} \times 100\%$$

$N_{\text{Ge(Li)}} \& N_{\text{NaI}}$  = Total number of counts per unit time, from a Ge(Li) detector and a 3" x 3" NaI crystal, 1.33 MeV gammas.

If you want a Ge(Li) detector with the best possible combination of guaranteed, meaningful, and honest specifications, contact us.

Telephone: 312 - 634-3870

**nuclear  
diodes inc.**  
box 135, prairie view, illinois 60069