and that the administration had no indication the Safeguard decision would hurt the talks. He asked for the results of the questionnaire and the number of marchers outside.

Later that afternoon a second delegation, this one of FAS officials, called on DuBridge to argue against the ABM and to resubmit a petition first circulated two years ago calling for an end to the use of chemical weapons in Vietnam and a declaration that the US will not use chemical and biological weapons first.

In a separate drive Wednesday, Charles Schwartz and other SSPA organizers presented a group of congressmen with a petition bearing 729 signatures calling for open congressional hearings on the direction of all military research and development programs.

What was accomplished? At a windup news conference Thursday, the activists said they were satisfied they had done what they could to bring their position to the attention of the administration, the Congress, the public and their fellow physicists.

-JPW

College Physics Commission Reports Results in 1966-68

Achievements in introductory and major courses, training of physics teachers, courses for the nonscientist and physics for the two-year college highlight the 1966–68 Report of the Commission on College Physics (Am. J. Phys. 36, 11, 1969).

Many of the commission's activities had visible effects in 1966–68. Introductory courses have been extended in many schools and modern topics introduced. A 1968 summer workshop tried to improve laboratory work for the physics major. Two ideas emerged: the divergent laboratory, for students with a variety of goals, and the highly instrumented laboratory. Articles on each appear in the report.

Another workshop, in 1967, attempted to enhance the curriculum of future high-school teachers and to recruit more students. Its report resulted in new programs at the University

sity of California at Berkeley, the State University of New York at Stony Brook and the University of Massachusetts. CCP also supported the Physical Science for the Nonscience Student project at Rensselaer Polytechnic Institute, which in 1967–68 was given at 40 colleges.

For two-year colleges, a CCP panel in June of 1968 developed resource packets as teacher aids for difficult topics. Also as an aid, CCP sponsored the University of Washington's film Symmetry, which so far has received six awards. In 1968 the commission explored the use of computers in physics courses. A year earlier a consultant service was created to evaluate and revise physics departments.

Active since 1960, the autonomous commission is assisted by the American Association of Physics Teachers and the American Institute of Physics; it is sponsored by the National Science

IN BRIEF

A list of foreign scientists available for exchange in 1969–70 under the Fulbright-Hays Act may be obtained from the Committee on International Exchange of Persons, 2101 Constitution Ave., N. W., Washington, D. C.

The Italian Physical Society has begun quarterly publication of a review journal, La Rivista del Nuovo Cimento. The former Supplemento al Nuovo Cimento will be discontinued. For details write Italian Physical Society, Instituto di Fisica, Universita di Bologna, via Irnerio 46.

The Instrument Society of America has prepared a 28-page catalog of current instrumentation publications. Free copies are available from the ISA Publications Department, 530 William Penn Place, Pittsburgh, Pa. 15219.

The Chilean Nuclear Energy Commission has ordered a \$1.4-million research and training reactor from Fairey Engineering Ltd of Great Britain.

Catalogs of cores obtained during the Deep Sea Drilling Project now under way will begin to become available from the National Science Foundation about 1 July.

Formation of a computational physics group has been approved by The Institute of Physics and The Physical Society in Great Britain. K. V. Roberts is chairman of the provisional group committee.

PHYSICON'S TOOLS for ELECTRON & ION BEAM APPLICATIONS



Heavy Ion Source

1 to 260 amu to 1000 #A

Ion beams from hydrogen to the heaviest masses can now be formed routinely. The Model 910 produces positive ion beams of most elements from hydrogen to the transuranium group, including the gases, alkali metals, alkaline earths, transition metals and rare earths. It operates on the principle of an oscillating electron ion source. Beams are well defined and may be accelerated further for atomic beam studies, surface effects, ion implantation, target preparation, isotope separation and injection into high energy accelerators.



ION or ELECTRON BEAM SCANNER SYSTEM

An analog transducer for determining exact intensity, profile and position of ion electron beams for an oscilloscope display at the control console.

Operates on principle of an intercepting probe, motor driven at 18 cps. Scan amplitude is controllable up to $6^{\prime\prime}$ maximum and has a $\pm 30^{\circ}$ phase adjustment. Scanners are available with single sensors for scanning X or Y, or dual sensors for X and Y. Scanners are available with or without electronics, fiducial markers or vacuum housing. Used on Van de Graaffs, Tandems, Dynamitrons, cyclotrons, isotope separations, mass spectrometers and ionmolecule systems. Manufactured by Danfysik AS.

EV PARTS for ION and ELECTRON OPTICS

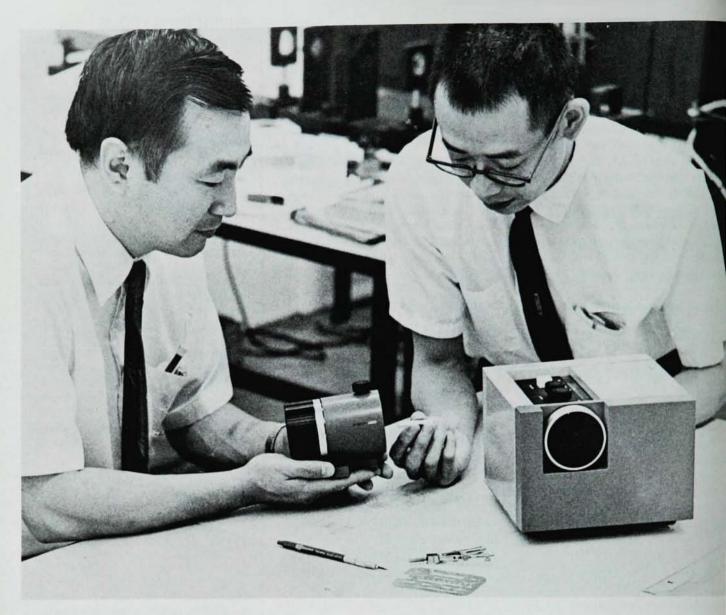
in the eV-keV region UHV materials, bakeable; tolerances to .001 inch, by INTERNATIONAL ION SYSTEM CORP.

BEAM PROFILE MONITOR • MAGNET POWER SUPPLIES • BETA RAY SPEC-TROMETERS • HEAVY ION ACCELER-ATORS • ISOTOPE SEPARATORS

Write for Brochures

Physicon Corporation

P. O. Box 9186, Boston, 02114 Mass. Telephone: (617) 491-7997



LiNbO₃ Crystal Oven to 450°C!

Designing a Lithium Niobate oven that will scan temperature from 50°C to 450°C while maintaining a $\pm 0.05^{\circ}\text{C}$ gradient along the full crystal length is a difficult engineering problem. If it were not, there would be several ovens on the market today instead of only one.

Shown above is the Chromatix Model 400 Crystal Oven and the Model 300 Temperature Controller. Electronic, mechanical, and thermal engineering, combined with over 25 years instrument development experience, have created this professionally engineered product.

What does this mean to you? It means that you can put your attention squarely on your nonlinear optics experiment, instead of worrying about thermal gradients and drifts.

There isn't much more to say. The specifications and features speak for themselves.

The Essential Data ...

CHROMATIX MODEL 400 CRYSTAL OVEN with MODEL 300 TEMPERATURE CONTROLLER

- Low gradient: ±0.05°C along central 6 cm of oven.
- Automatic temperature scanning: 50-450°C.
- Excellent temperature stability: short term ±0.05°C; long term ±0.1°C per day.
- Designed to maintain oxygen-enriched environment during extended high temperature operation.
- Angular adjustment about X and Y axes; rotation about Z axis.
- Thermocouple sensing with automatic cold junction compensation.
- Direct temperature readout by digital counter.

for the control of light...



1145 Terra Bella Ave., Mountain View, Calif. 94040

Foundation. Cuts in NSF funds are forcing CCP to reduce future activities, especially in high schools and two-year colleges.

Because it is a temporary organiza-

tion, CCP encourages formation of other physics-related organizations. In 1966-68 three regional groups were created: the Pacific Northwest Association for College Physics, the Chesapeake Physics Association and a Ohio-Michigan-Indiana group.

ASA Splits Waterfall Post, Adds Vice President-Elect

At its April meeting the Acoustical Society of America amended its bylaws to redistribute responsibilities of its officers, creating new positions and revising the nature of others.

The office of secretary is replaced by an administrative secretary; treasurer and editor-in-chief, formerly elected, are now appointed; and the office of vice president-elect was added. The council now can adjust dues, which previously were static, according to growing society costs.

The administrative secretary, a full-

time employee, is appointed by the council for an indefinite time. Betty Goodfriend was named to fill the position, and Wallace Waterfall, secretary since 1929 (see page 99), is continuing as treasurer. The treasurer and the editor-in-chief are also named by the council, but each for a threeyear term, Appointed officers have no vote on the council.

The vice president-elect, now John Bouyoucos, will provide continuity within the office and serve as chairman of the technical council.

Sociosystems Laboratory Explores Urban Problems

A new sociosystems laboratory at Sylvania Electric Products Inc in Mountain View, Calif., is trying to solve some urban problems by using military-systems technology. Reuben H. Krolick, head of the laboratory, feels this approach will define many nebulous problems, provide a solution and most importantly effect implementation.

The laboratory is concentrating on law enforcement, highway safety and traffic control. Equipment for electronic engine-speed control and automobile guidance systems for future electronic highways already have been developed, and a vehicle-locator system that pinpoints police patrol cars is being explored.

Other projects include two-way police radio, a monitoring device to measure and control highway traffic and a statistical analysis of driving habits and causes of accidents.

SLAC and APS Division Publish New Preprint List

A weekly list of Preprints in Particles and Fields is being published by the Stanford Linear Accelerator Center Library and the Particles and Fields Division of the American Physical Society. Brookhaven National Laboratory is discontinuing its preprint list to avoid duplication.

The new list is sponsored by the

Atomic Energy Commission division of technical information. It includes an antipreprint section that lists published preprints. Relevant reports, theses, conference proceedings, lecture series and data compilations also are For further details contact SLAC, Attn: PPF, P. O. Box 4349, Stanford, Calif. 94305.

New APS Division Will Focus on Cosmic Radiations

A division devoted to cosmic radiations and related problems is being formed by the American Physical Society. After receiving a petition with 200 signatures, APS named an organizing committee last March, headed by Maurice Shapiro of the Naval Research Laboratory. The committee is now drafting by-laws for council and division approval and a slate of nominees for office.

The division should be functional by early 1970. It will emphasize composition and energy spectra of the various cosmic radiations, modes of production and sites of origin, propagation through space and interactions with particles and fields, and their astrophysical implications. Planning to meet at least once a year, the division hopes to cooperate with related divisions in APS and other societies.



The development of a new Hall Generator now makes it possible to offer with the Bell Gaussmeter a new series of high performance Hall probes.

■ HIGH FIELD PROBES (HF Series)

- Measure Fields to 150 kG
- ± 1.5% Accuracy (Model 660)
- 50 PPM/°C Temperature Stability

■ LOW TEMPERATURE PROBES (CT Series)

- Measure Fields at 4.2 K
- Indefinite Probe Life
- Small Sensing Package

■ HIGH LINEARITY PROBES (HL Series)

- + 0.1% Linearity to 30 kG
- 15 PPM/°C Temperature Stability
- No External Temperature Compensation

A most dynamic feature of this new Hall-Pak Probe Series is the temperature stability. It has been accomplished without the need for external compensation of the Hall voltage or the use of a temperature controlled package For the latest breakthrough in Hall Effect technology write Bell — Hall Effect Headquarters.

