

POWER
P

STANDBY
S

OPERATE

GAS LOW
G

Push this button for

UP TO 250

~~75~~ watts

cw Laser

power at

IT'S MODULAR!

10.6 μ

SEND FOR DATA FILE 007G3
ON THE KORAD ~~200~~ **K-64**
COMPLETELY SELF-CONTAINED
CO₂ LASER

KORAD UNION CARBIDE

A Subsidiary of Union Carbide Corp.
2520 COLORADO AVENUE
SANTA MONICA, CALIFORNIA 90406
Union Carbide, Ltd.
8 Grafton Street, London W-1, England

STATE AND SOCIETY

entist. And a low-temperature physicist remarked, "The subjects at meetings in my field overlap. We see the same people most of the time."

Small topical meetings were preferred by the sample over large interdisciplinary conferences, with optimal size ranging from 40 to 200 participants, depending on the length of the gathering. "There is better rapport at the small meetings. The people are more open about their ignorance and more is accomplished," were the general comments. But large conferences were held up as valuable employment market places and as opportunities for physicists to learn of other disciplines and meet colleagues.

Mössbauer and Alfvén Seek to Emigrate to US

The British are not the only ones who have difficulty keeping their physicists. In recent weeks Rudolf Mössbauer of West Germany has expressed a desire to migrate to the US, and Hannes Alfvén of Sweden has said he will definitely come.

Cooling down of many European economies has caused a leveling out in the growth rates for research in several European nations. Consequently the US is becoming once again the only nation that can offer adequate support to its scientists.

Nobel laureate Mössbauer, who is professor of physics at Munich Technical University, said that he is thinking of migrating to the US out of "disgust over budget cuts, unkept promises and administrative obstacles" that are hindering his work. Alfvén, professor of plasma physics at Stockholm Technological Institute, said that he would emigrate to a US university in the fall. He is leaving Sweden, he noted, to protest what he considers insufficient funds for research. "My work is no longer desired in this country," he said. "The essential parts of the research I have built up during more than 25 years may now be broken down because of this reduction [in support]." But the Swedes had apparently provided Alfvén all the support they could afford. Said the Swedish minister of

education, "Alfvén is one of the most favored scientists in the country and thus had little cause for complaint." Bo Lehnert, an associate of Alfvén's, indicated he might accompany Alfvén to the US.

NSF Will Fund Research At Texas, Duke, Indiana

Plans are under way to build a fusion laboratory at the University of Texas, a semiautomatic scanning and measuring facility for bubble-chamber film at Duke University and a 200-MeV cyclotron at Indiana University. These new facilities are some of the projects earmarked for physics and other disciplines under new National Science Foundation university science development grants totalling \$11.3 million.

Texas intends to strengthen its resources in relativity, astrophysics and plasma science. Besides opening eight new faculty posts in these areas, Texas plans to build a fusion laboratory and a high-resolution radio telescope capable of making unambiguous correlations between light and radio sources.

Duke will use over \$500 000 of NSF funds to support two new appointments in high-energy physics and construct an up-to-date device for recognizing and encoding patterns. PEPR (precision encoding pattern recognition), developed by Irwin Pless of MIT in 1961, will enable the four members of the Duke high-energy group under Earle Fowler to measure more than 50 000 events per year from bubble-chamber film. Provided additional support is forthcoming, Fowler hopes to incorporate a PDP-6 computer (48 000, 36-bit words of magnetic-core memory) into the facility. The Duke PEPR is expected to become operational in about two years. During the past year, the Duke group have performed experiments using film from the Berkeley and Brookhaven bubble chambers.

A new cyclotron, a pattern recognition facility, a new solid-state program and expansion in theoretical physics are contemplated by the Indiana physics department. The NSF grant provides for large-model studies of a 200-MeV sector-focused cyclotron to replace Indiana's prewar 1.1-meter cy-

clotron. An additional \$2.1 million has also been set aside for construction of the machine when Indiana completes its design. The new facility is expected to be a variable-energy multiparticle ($0.25 < e/m < 1$) machine capable of extending precision range in nuclear investigations into the 100–200-MeV region. A new pattern-recognition facility, similar to PEPR, will be designed to process film from the 3.7-meter bubble chamber at Argonne.

The Nobel Prize—Improved Selection Methods Sought

The Nobel Foundation, which has used the same methods of choosing laureates for more than 65 years, is going to update its selection process. The Nobel institutions will now have more funds at their disposal to help members of the prize-awarding bodies keep themselves up to date. One new activity planned by the foundation is the organization of international symposia where experts in physics or other disciplines will indulge in a frank exchange of views on the merits of current research. Other new moves include greater use of Swedish and foreign experts and the inviting to Sweden of guest lecturers and research workers.

Medical Physicists Become AIP Affiliated Society

The American Association of Physicists in Medicine has recently joined the American Institute of Physics as an affiliated society. The request made by Lawrence Lanzl, society president, in behalf of the society was accepted by the AIP Governing Board on 18 March.

Although formed in 1958, AAPM traces the origins of medical physics back to Leonardo da Vinci, who was profoundly interested in the mechanics of human locomotion. Since then, the rapid growth of modern science has expanded the range of medical physics. The society has a membership of approximately 400, with a growth rate of about 40 members per year. Most of the members are from the US, although a few are from Canada and England. Two thirds of the membership hold university appoint-

ments, mainly in clinical departments. At present, there are only three medical physics departments in the country: Memorial Hospital (NYC), M.D. Anderson Hospital (Houston) and Mayo Clinic (Rochester). Nevertheless, about 60% of the membership hold professorships in related fields with about a third of that number at the full or associate level.

Objectives of the association are to encourage interest and training in medical physics and related fields, to secure and maintain high professional standards for physicists in medicine and biology, and to serve and represent their professional interests. Their concern with the application of physics to medicine and biology in medical installations or research or educational institutions is evident from their recent arrangement with the National Bureau of Standards to measure standard radiation doses by using electron beams. Also, AAPM publishes a quarterly journal, *Physics in Medicine and Biology*, which is associated with the Canadian Hospital Physicists Association and the Canadian Association of Physicists. The society holds two meetings a year, one in December and the other in June. By joining AIP its members hope to establish a closer liaison with the physics community in order to fulfill their objectives.

AIP affiliates. AAPM is the 18th affiliated society to join the institute. As an affiliated society, it has no monetary responsibilities to the institute and is not entitled to elect directors. Privileges enjoyed by an affiliated society are subscription to AIP publications at member rates and access to any special services that AIP offers. The other affiliated societies are American Institute of Aeronautics and Astronautics, American Society for Metals, American Vacuum Society, Cleveland Physics Society, Electron Microscopy Society of America, The Geological Society of America, Instrument Society of America, Philosophical Society of Washington, Physical Society of Pittsburgh, Physics Club of Chicago, Physics Club of Lehigh Valley, Physics Club of Milwaukee, Physics Club of New York, Physics Club of Philadelphia, Physics Club of Richmond, Sigma Pi Sigma, Society for Applied Spectroscopy. □

Heavy Ion Source



1 to 260 amu

1 to 1000 μ A

IN USE ON ACCELERATORS, ISOTOPE SEPARATORS

Ion beams from hydrogen to the heaviest masses can now be formed routinely, opening wide regions of the periodic table for new fields of research and application of charged particles.

WIDE MASS RANGE

The Model 910 produces positive ion beams from a broad range of 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.

WIDE CURRENT RANGE

Typical beam currents are 1 to 1000 μ A. The 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.

READY FOR INSTALLATION

The Model 910 is a complete mechanical assembly; power supplies and controls can be furnished at extra cost.

Manufactured by Danfysik, the Model 910 and other products are available in the USA and Canada from Physicon. Boston, Massachusetts. Other products are:

- **BEAM PROFILE MONITOR SYSTEM, Model 510, scanner type**
- **MAGNET POWER SUPPLIES 10 ppm, solid state**
- **BETA RAY SPECTROMETERS single and six gap**
- **HEAVY ION ACCELERATORS to 90 keV, 250 amu**
- **ISOTOPE SEPARATORS 150 cm, electromagnetic.**

WRITE FOR BROCHURES

Physicon Company

P. O. Box 232
Boston, Massachusetts 02114