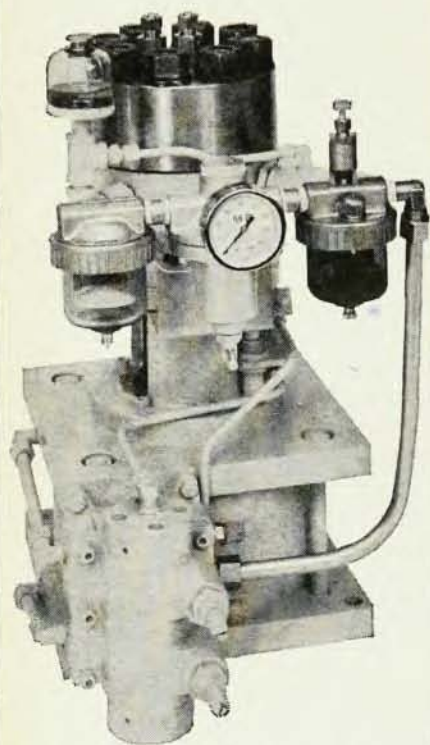


new catalog of superpressure equipment



**pressures to 100,000 psi
temperatures to 1000°F**

At your fingertips, over 100 pages of updated detailed information on Aminco's standard line of Superpressure Equipment.

Described is an expanded line of Pumps and Compressors now including hand-operated, motor-driven and air-operated units with pressures up to 100,000 psi. Another section fully describes everything needed to order Valves and Fittings. Also covered are Pressure Balances, Reaction Vessels, Custom-Built High-Pressure Equipment, and many accessories.

WRITE FOR YOUR FREE COPY OF CATALOG 466, PT 4

Shown above is the 46-14060 Air-Operated Single-End 30,000 psi Compressor, one of many compressors described in this new catalog.



**AMERICAN
INSTRUMENT
CO., INC.**

8030 Georgia Ave., Silver Spring, Maryland

tails in a month or two.

One conspicuous cut in the 1967 NSF budget is directed at support for graduate science facilities. This support will decrease from \$31.6 million to \$20 million and from 90 to 60 grants. Another significant decline will be in grants for instructional equipment for undergraduate education. The amount budgeted for such grants slipped from \$7.5 million (904 grants) to \$4 million (485 grants).

Congress continues science probes

As the second session of the 89th Congress neared its Easter recess, subcommittees headed by Sen. Fred R. Harris (D-Okla.) and Rep. Henry S. Reuss (D-Wis.) intensified their probes into government-supported scientific research in this country and abroad.

The Senate recently approved a \$66,000 budget for the Harris subcommittee on government research,



HARRIS

and the senator has proposed the following questions that his group will ask the government science establishment: Are the expenditures for research and development necessary and justified? Are improved administrative procedures needed to guard against overlapping among federal agencies? How can we establish national policies for the support of various fields of research? How can we provide for better dissemination of research results? How can we be certain of fairness in distributing government research contracts?

Some flavor of the congressional mood can be gathered from what Sen. Harris told PHYSICS TODAY. "If America decided to make national policy for science by accident," he said, "then we would just continue to go on as we are doing. Our policy is

scattered over many agencies and departments. The President's Science Advisory Committee, the Office of Science and Technology, and the Federal Council for Science and Technology are all very inadequate. Congress simply has not exercised its policy-making role in this area, and we are unhappy with the present decision-making setup. It is Congress that should be making all our policy in the research and technology field."

Meanwhile in the House of Representatives, the Reuss subcommittee on research and technical programs was questioning representatives of five agencies "principally responsible for the dollar drain caused by support of foreign scientists." Alluding to foreign research projects supported by the US, Reuss asked, "Couldn't Britain pay to study the role of the English family doctor? Couldn't we wait for a few months until the gold crisis is over to do the study of East African monkeys? I love science and I love the world, but I think prudence is in order until our balance of payments is under control."

In his testimony before the Reuss subcommittee, Donald Hornig, the President's science advisor, provided a balanced review of our support of foreign research. Said Hornig, "There is research of interest to this country that can be carried on only outside the United States. This country is not self-sufficient in science. Special competence not found in the US is found elsewhere, generally but not always in advanced countries. It is of direct concern and interest to this country to ensure that these foci of unique competence flourish. Work done in such laboratories . . . sets standards for fields of science whether they are located at home or abroad. Moreover we are well advised that these laboratories are both able and willing to accept advanced students and senior investigators from this country. Otherwise our development is handicapped.

"The essential problem is to reconcile goals. On the one hand, it is important to secure the benefits of research. On the other hand, it is important to restrain expenditures in general and expenditures that adversely affect the balance of payments.



REUSS

No single factor, including balance-of-payment considerations, is overriding."

Both Sen. Harris and Rep. Reuss are eager to learn the views of individual physicists concerning the work of their subcommittees.

Choosing research proposals

Lately there has been some talk charging that federal agencies, when deciding on individual project support, give greater weight to proposal content than to individual accomplishment, to proposal pressure in a field than to the needs and opportunities in the field. *PHYSICS TODAY* sought to determine whether government agencies, such as the National Science Foundation, do in fact follow such criteria. We also tried to find out whether the agencies have established adequate followup evaluation of research results.

Do NSF panelists give too much importance to the ostensible merits of a research proposal and too little to the worth of the individual researcher? Interviews with panelists and reviewers indicate that the answer is "no." The consensus is that anyone who has participated in the evaluation process knows that individual past performance counts heavily with both reviewers and panelists. In fact it is often the main aspect of a research proposal to which these evaluators address their comments.

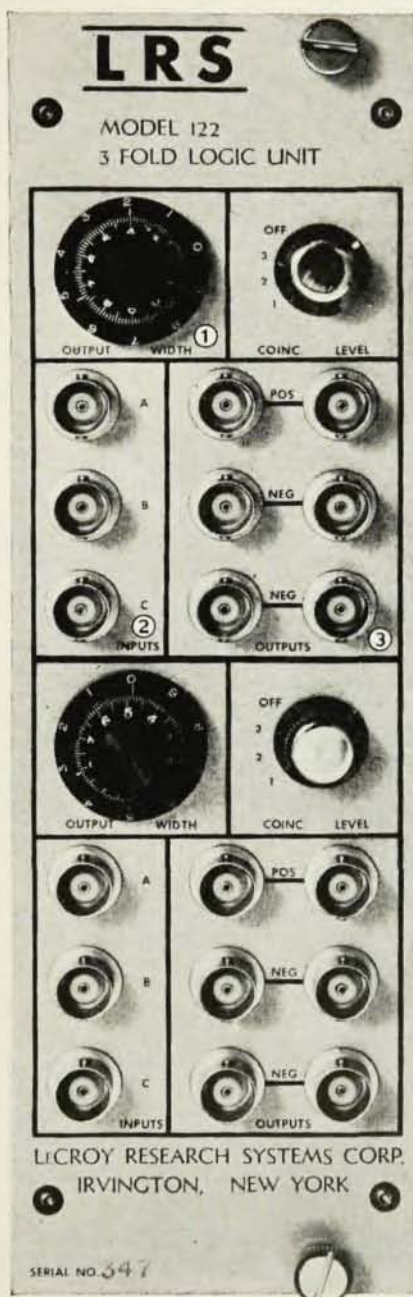
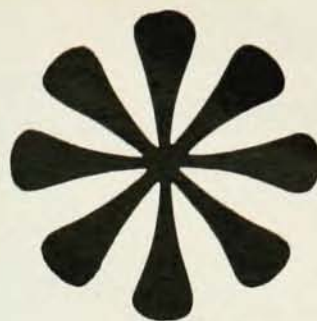
Does proposal pressure largely determine NSF support of a particular field? NSF director Leland Haworth says "The foundation constantly receives information from the scientific community which bears on the adequacy of support being provided. The foundation's program directors are especially sensitive to these error signals and make certain that this information is passed to the director.

NEW

HIGH-SPEED LOGIC UNIT

for faster, more efficient data collection in

HIGH and LOW ENERGY PHYSICS



Meet the Model 122, versatile member of the LRS Series 100 family, an all-new, high-performance nanosecond logic system for experimental nuclear and particle physics. The new Model 122 dual, 3-fold logic unit is the "workhorse" logic unit of the LRS pace-maker line. It offers significant improvements in time resolution, speed, and efficiency... together with exceptional flexibility and ease of use.

The unit performs the logical functions of **fan-in, coincidence, inhibit, and majority logic** at rates in excess of 100 MHz, using extremely flexible complementary input logic. Input pulses may be logic signals from other high-speed LRS modules, conventional "fast" logic, or unshaped signals directly from photomultipliers. Output pulse duration is independent of input overlap time.

'Way ahead, this advanced-design LRS logic unit sets a new standard for fast logic efficiency and extreme versatility...

- ① Continuous output duration control with 10-turn potentiometer from 6-150 nSec.
- ② Practically indestructible inputs — full ± 100 V protection.
- ③ Multiple complementary outputs — high fanout; direct-coupled; built-in scaler driving.

Speed — 125 MHz. Resolving times from 1 nSec fwhm up.

Deadtimeless operation — No recovery time following output pulse.

No multiple pulsing.

AEC standard nuclear module packaging.
(AEC Report TID-20893.)

Write or call for full details on the new Model 122 or other compatible LRS instrumentation. Bring your system up to state-of-the-art. — **LECROY RESEARCH SYSTEMS CORP.**, 8 Station Road, Irvington-on-Hudson, New York 10533. Phone: (914) LYric 1-7668.



SEND FOR
DETAILED PRODUCT DATA.

LRS

Innovators in Instrumentation