ing, subscription rates, bibliographies, ownership, abstracts and geographical distribution. All important data are compared and percentage results given. For example, although US journals have the lowest percentage of scientific articles per journal (85% as compared with 99% in Indian and Dutch journals), the number of scientific articles published in the US is one third the world total. Total number of major journals in each country is: US (22), Great Britain (20), Germany (15), USSR (10), France (8), Japan (7), India (4), Netherlands (4). The book gives proof to the so-called "age of journals": Each year three new journals appear in mathematics and physics. A copy of the book, entitled *Some Characteristics of Primary Periodicals in the Domain of Physical Sciences*, can be obtained by sending $5.00 to ICSU Abstracting Board, 17 rue Mirabeau, Paris 16, France.

AEC May Support Fusion Work at General Atomic

The General Atomic fusion program, one of the major private thermonuclear projects in the US, has lost its primary backer and is seeking Atomic Energy Commission support. For the past ten years, a private utility group, the Texas Atomic Energy Research Foundation, has provided substantial support to the General Atomic fusion program, several times renewing its contract with the company. But on 1 May this support came to an end. Sources indicate that the utility group had hoped that the GA fusion project might transfer to Texas.

The AEC told PHYSICS TODAY they are particularly concerned that the GA fusion work not founder. "We have already had some talks with General Atomic on the matter," said AEC fusion chief Amasa Bishop. "Exactly how this is going to resolve itself is not clear. We have told GA we would be willing to provide interim support for two general areas of interest to us, their theoretical as well as their toroidal-multipole work. It all depends on the core of the staff that GA will be able to keep."

Thus far four key scientists have left the GA fusion program to return to academic work: Marshall Rosenbluth, who has been named professor of plasma physics at the Institute for Advanced Study, Norman Rostoker, who will become head of the applied physics department at Cornell University, Charles Wharton, who will be professor of electrical engineering at Cornell and Robert Scott, who will assume the post of professor of physics at the University of Tennessee.

But GA officials point out that their leaving is part of a normal turnover among the GA plasma and fusion staff of 40, including 22 physicists. "GA fully intends to carry on in the fusion field," said company president Frederic DeHoffmann.

Theoretical areas that GA has recently worked in are light scattering by plasmas, plasma energy loss by synchrotron radiation, universal instability due to spatial inhomogenities, and weak turbulence. Their toroidal-multipole operation provided experimental demonstration of magnetohydrodynamic stability and reduction of plasma noise level to 1% of the electron temperature. GA physicists have controlled instabilities in the toroidal field by shaping the field and have also shown that mechanical supports within the toroidal multipole could be magnetically shielded to decrease their effect on the plasma.

With the ending of the Texas utilities contract, General Electric remains the only company having a major fusion project that is wholly privately supported. AEC noted, however, that it has already discussed partial assistance with GE.

Congress Acts to Tighten Federal Science Planning

Despite misgivings from many in the academic and scientific communities, the House of Representatives is slowly but inexorably converging on tighter coördination for government science and technology. The Military Operations Subcommittee, headed by Rep. Chet Holifield (D-Cal.), has taken the first steps to strengthen policymaking functions of the President's Office of Science and Technology. Meanwhile the House recently passed by a vote of 391-22 the National Science Founda-

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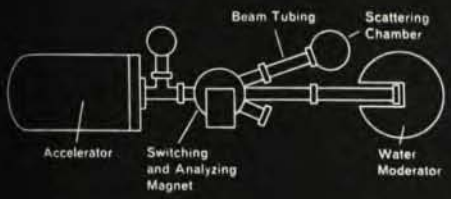

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tion reorganization bill (HR 5404), which will provide the NSF National Science Board with increased policy influence over academic and basic research. Both lines of action duplicate similar attempts in the past by a continually frustrated Congress to achieve improved coördination of federal R&D.

OST. The Holifield subcommittee has issued a Library of Congress report on OST that, although it does not evaluate or criticize the office, unmistakably suggests that OST has not fulfilled congressional expectations for greater Administration control over science planning. Established by President Kennedy in 1962, OST (in the view of many Washington scientists) has eminently succeeded in its dual aims of providing advice and assistance to the President on national science policy (independent of vested agency interests) and of providing accountability to Congress on this policy. The Library of Congress report, however, questions whether OST "provides the necessary assistance to the President to identify the role of science and technology in meeting different national goals, illuminate alternatives for investment and criteria for choice, facilitate allocation of resources between these alternatives . . . and whether OST is hampered by inadequate statutory authority."

That Congress may give statutory underpinning for OST to accomplish its science policy roles was indicated by spokesmen for the Holifield subcommittee. Herbert Roback, staff administrator and a prime initiator of the OST report, told PHYSICS TODAY that such legislation was indeed a possibility following hearings. "As an alternative to a stronger OST, we will consider setting up a Department of Technology to include the National Bureau of Standards and Environmental Science Services Administration. Another possibility will be to provide the Federal Council for Science and Technology with a formal charter."

OST officials were somewhat less than happy about the prospects for tighter control over science policy. Raymond Bowers of the OST staff told PHYSICS TODAY, "The issues implied in the OST report are serious ones and will be given serious study by this office. I would like to point out, however, that the OST report has something of a 'Gosplan' implied in it for science and technology. The whole concept of planning is very shaky. What we do in science has many inputs; Congress, the President and the science community. Nobody is really wise enough to formulate a consistent R&D plan. Our system without tight planning is much more responsive to national goals than other tighter systems such as the British have."

NSF. As Congress and federal scientists digested the OST report, other legislators and scientists discussed the implementation of the NSF bill when it soon becomes law. A key section of the bill provides for increased policymaking authority by the National Science Board. Just how this expanded authority will operate is still uncertain but NSB chairman Philip Handler foresees the board's annual report on science as "an analysis of one or more major aspects of science policy together with the board's recommendations. This should develop into a major instrument for the formulation and expression of federal policy for science by the board. . . . NSB recommendations cannot be binding upon [federal agencies]. As the board assumes [its new role] its policy recommendations can be given the force of a presidential executive order or the force of law by the Congress." Handler's suggestions thus overlap those of the OST report: NSB should concentrate on academic research and education while OST should hold sway over civilian-related programs and issues in science and technology.

But here again there are expressions of skepticism from the academic community. "Policy," says Don Price of Harvard, "is not something you can divide up neatly, even by statute and put in one place or another. If it means the broader aspects of any government agency's business, the aspects that excite the attention of the public and Congress . . . it cannot be defined in advance and assigned conclusively to anyone. The basic decisions will have to be made, if not by agreement among the agencies, then by the President and Congress." —BH □