

ronmental Studies, Harold A. Feiveson and Robert H. Williams, favor use of the advanced converter. In a report, *An Evolutionary Strategy for Nuclear Power (Alternatives to the Breeder)*, issued last September, they recommend continued reliance (where practical) on once-through fuel cycles, with a shift to more uranium-efficient advanced converters after the year 2000. They also advocate the maintenance of an option to shift this type of reactor to an isotopically denatured uranium-thorium recycle mode if the uranium supply becomes limited. Feiveson, von Hippel and Williams point out that if advanced converters and the denatured uranium-thorium recycle both were introduced shortly after the year 2000, it would take 50-100 more years before the greater uranium efficiency of the breeder would be significant.—CBW

OMB regulations

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would take precedence over university special cost studies.

The OMB received such an influx of comments on that proposed revision that they extended the period of comment beyond the July deadline. The comments were primarily from universities and organizations representing universities and were primarily negative. The OMB, according to John Lordan, chief of OMB's Financial Management Branch, was surprised by the reaction. Lordan, who wrote the revisions, feels that the universities "overinterpreted" them. He said that if the old circular were subjected to the same scrutiny as the revised version, the same criticisms would probably apply.

Last month the OMB released a final version of A-21. The circular will probably become effective 1 October and will be implemented by the institutions at the start of their first fiscal year beginning on or after that date. The primary difference between the March and the current documents, according to Lordan, is that much of the ambiguous language of the March version has been replaced by language that is less subject to conflicting interpretations. For example, a strong objection the universities had to the March revision was that it appeared to severely restrict the portion of the operating funds of the university library that could be allocated to research grant budgets. The new version makes it clear that this is allowed, provided a government-approved accounting technique is used.

One of the major objections to the new A-21 is that it will involve an excessive amount of bookkeeping and accounting on the part of the universities. Milton Goldberg, assistant executive director of the National Association of College and University Business Officers Committee On Governmental Relations, said that the

revision is likely to increase the number of audit disputes and the amount of paperwork needed to run university research. Although he conceded that in some areas the OMB had reduced the amount of paperwork (for example, many reports previously filed monthly by faculty members can now be submitted only once a semester), Goldberg said that enough documentation has been added to the processes so that, on balance, he expects paperwork to increase. This is in direct conflict, many critics are quick to point out, with President Carter's promise to reduce red tape in the government. And, while it is difficult to say at this point whether an individual university will end up receiving less money from the government, it is clear, Goldberg said, that the universities will have to pay much more money for clerical and accounting services. Lordan refutes this assertion, saying that, since the new circular doesn't change the reimbursement principles so much as clarify them, only those universities or researchers who were "abusing" the old rules will be hurt by the change.

Many university officials resent being treated like commercial contractors by the Federal government. Jerome Wiesner, president of MIT, made this point in a recent speech before the National Council of University Research Administrators. Speaking of the March A-21 revision, he said, "In short, the proposed revisions would move us closer to the concept that universities are simply vendors—and vendors that are essentially indistinguishable from the industrial or commercial organizations—from which the Federal government can procure services."

The question of whether or not the universities have been "cheating" the government is a complicated one. As Yale University's D. Allan Bromley reasoned, the US is probably the only highly developed country where there is no direct method for Federal support of higher education. Up until now, an implicit understanding had existed, says Bromley, that the government would informally support the universities through the grant and contract structure by supporting graduate students as research assistants and through payment of indirect costs without rigid definitions of either. This provided an important source of support for the schools that is now being threatened.

Current version. Wiesner told us that the present version of A-21 "comes a long way toward meeting our objection [to the March version]." He sees a change in the mood of the OMB that he feels reflects a concern for research that is greater than the fiscal concern. He hopes that Congress and the granting agencies will act with the same priorities.

Newton Cattell, Executive Director for Federal Relations at the Association of American Universities (a group repre-

senting the major research and graduate universities) feels that universities are still losing ground in the transition from the old regulations to the new. Had the present version been published in March, he said, the reaction would have been much the same. The issues of tuition remission, payroll distribution, cost-sharing and specialized service facilities were decided against the universities, Cattell said, and he is concerned about the increase in audit dispute negotiations that he is certain will follow.

The NSF salary ceiling is another Federal action with which university administrators are unhappy. The law sets the ceiling at the highest salary paid to Federal civil servants. While this ruling will affect only the very well-paid researchers—the NSF estimates that only seven percent of its grantees presently make more than \$47 500—the universities still see the new law as an important threat.

The biggest problem, according to Herman Feshbach, chairman of the MIT physics department, occurs with salaries paid during the summer months to researchers. In the past, most universities have used NSF funds for summer salaries, he explained. The universities will now have to make up the difference between the NSF maximum monthly salary, \$3958, and what a researcher is accustomed to being paid.

The burden is expected to increase. AAU's Newton Cattell told us that the government salary limit does not usually rise as quickly as inflation; therefore, in order to provide a professor with the expected cost-of-living increases—to say nothing of raises—the university will have to assume more and more of the burden. There exists also the danger that this ruling will spread to other granting agencies in the government, such as the Departments of Defense and Energy. "That," according to Feshbach, "would be a disaster." Because those agencies provide a great deal of salary support during the academic year, he said, the impact of them adopting a salary ceiling would be much larger than the NSF ceiling alone. Medical schools particularly fear a National Institutes of Health salary maximum, because medical professors are generally paid much more than those in most other fields, Cattell said.

An attempt will be made, according to Cattell, to have this "paycap" lifted from the FY 1980 NSF appropriations bill: "We think that we can justify the removal of the paycap, and we will ask the appropriate committees to consider our case. We are, however, not optimistic."—MEJ

DOE establishes energy research advisory board

An Energy Research Advisory Board has been established to advise the Department of Energy on its overall R&D

policies and programs and to provide long-range guidance. The Board is headed by physicist S. J. Buchsbaum, vice-president for network planning and customer services at Bell Labs. The vice-chairman is James Fletcher (also a physicist) of the University of Pittsburgh, who formerly headed NASA.

The Board is to advise Secretary James Schlesinger, the deputy and undersecretaries, John Deutch (the director of energy research), the assistant secretaries and key managers. Deutch noted that the Board also will serve as a link between the technical community and the Department of Energy.

Buchsbaum was chairman last year of an ad-hoc working group set up by Frank Press's office to examine DOE basic research (PHYSICS TODAY, September, page 85).

At the new Board's first meeting, held in November, the members were briefed on fusion, fission (including the need for the breeder), solar energy and coal. The next meeting was to be held on 1 and 2 February. Buchsbaum told us that "the Board is getting its feet wet. Once we understand the key policy issues, we will select the topics to which the Board can contribute."

Among the 22 Board members already

appointed are Edward David Jr (president of Exxon Research and Engineering Co. and formerly science adviser to Nixon), Sidney Drell (deputy director of SLAC), Eugene Fubini (current chairman of the Defense Science Board), John Gibbons (director of the Environment Center at the University of Tennessee), Charles Hitch (former president of the University of California and former chairman of the General Advisory Committee of the AEC), John E. Holdren (University of California at Berkeley Energy Resources Program) and Margaret Kivelson (UCLA Space Sciences Center). —GBL

the physics community

AAPT chooses John Rigden as editor of AJP

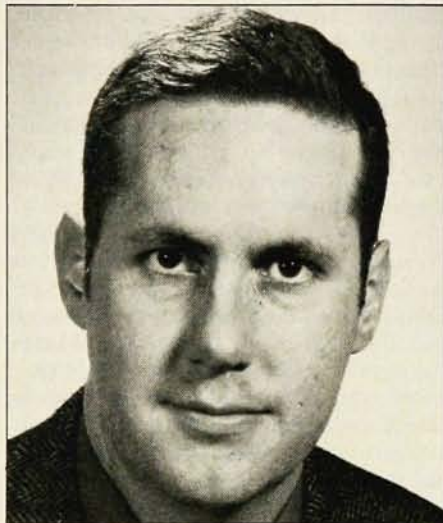
The executive board of the American Association of Physics Teachers has elected John S. Rigden, chairperson and professor of physics at the University of Missouri-St. Louis, as editor of *American Journal of Physics*. Rigden received his baccalaureate degree from Eastern Nazarene College in 1956 and his PhD from Johns Hopkins University in 1960. For many years he has been actively involved in curriculum development and physics education on both the national and international levels.

Rigden selected Philip B. James, an associate professor at the University of Missouri-St. Louis, to serve as assistant editor. James received his PhD from the University of Wisconsin and has been active for several years in elementary-particle theory and the theory of molecular reactions.

Vossen will succeed Duke as AVS president

American Vacuum Society members have elected John L. Vossen Jr as the 1979 president-elect. Vossen, manager of thin-film technology at RCA Laboratories in Princeton, succeeds Charles Duke (Senior Research Fellow and manager of the Materials Sciences Laboratory, Xerox-Webster Research Center), who assumed the presidency on 1 January. Jack H. Singleton (Westinghouse Research Laboratories, Pittsburgh) and J. Roger Young (General Electric R&D Center, Schenectady, N.Y.) have been reelected as clerk and treasurer, respectively.

Elected to two-year terms as directors are J. Peter Hobson (head of electron physics section, Division of Electrical Engineering, National Research Council of Canada, Ottawa), Donald M. Mattox (supervisor of Surface Metallurgy Division, Sandia Laboratories) and William E.



DUKE

Spicer (professor of engineering, Stanford University).

Susan D. Allen (research scientist at the Center for Laser Studies, University of Southern California) and John R. Arthur (project scientist at Physical Electronics Industries, Eden Prairie, Minnesota) have been elected trustees of AVS.

Vossen received a BS degree in physics



VOSSEN

from St. Joseph's College in 1958. His responsibilities at RCA include exploratory and development work in all thin-film deposition and etching processes involving a vacuum environment. He was a member of the *Journal of Vacuum Science and Technology* Editorial Board from 1975 to 1977. He currently serves as an Associate Editor for thin films for that journal.

AIP expands its current physics-staff directory

The American Institute of Physics has announced the publication of its 1978-79 *Directory of Physics and Astronomy Staff Members*. This extensive listing includes staff of North American colleges and universities, Federally funded research and development centers, government laboratories, and for the first time this year, industrial and not-for-profit laboratories. The seven appendixes provide information on institutions, such as type of physics and astronomy programs offered, number of faculty by rank, source of support and research programs on the doctoral level.

The prepaid cost of the directory is \$20.00 plus \$2.00 for handling, and orders should be sent to Back Numbers, American Institute of Physics, 335 East 45 Street, New York, N.Y. 10017.

in brief

Einstein's Universe, the BBC's contribution to the Einstein centennial celebration, will air on public television stations 13 March. The film includes commentaries by Nigel Calder, Harlan Smith, Roger Penrose, John Wheeler, Dennis Sciama, Sidney Drell, Ken Brecher, Wallace Sargent and Irwin Shapiro. Check your local TV listings for times. □