JOHN LOHR

Bomb damage at University of Wisconsin. Above: Paul Quin (left), who suffered minor injuries from the explosion, and Robert Borchers survey damage at the low-energy end of tandem Van de Graaff. Heavy cast aluminum vacuum valves were sheared off by explosion, and the alpha-particle and direct extraction ion sources, which formerly stood in the area between Borchers and Quin, are completely missing. Accelerator is in an underground vault; bomb was at ground level. Photo was taken one day after blast during salvage of important items such as computer tapes. Later the lab was declared off limits. Below: Exterior of Sterling Hall.

UPI

tions of separated isotopes. That morning he was studying aluminum. Fassnacht, 33, and the father of three children, had earned his PhD under Dillinger.

The bomb explosion left Fassnacht dead (see obituary on page 69). David Schuster was severely injured, suffering internal injuries. Paul Quin, another nuclear-physics postdoc, required stitches. Also injured were a night watchman and a patient at a nearby hospital.

Barschall said that he did not know whether or not the nuclear-physics project would ever go back into operation. His experimental program, supported by AEC for 22 years, is led by Barschall, Willy Haeberli, Robert Borchers and Hugh Richards. There are 30 graduate students and six postdocs. Barschall said the tandem was damaged (extent unknown) but not destroyed. A Honeywell DDP-124 computer, used on line with the accelerator and located closer to the blast, was apparently destroyed. The CDC-3600 was either severely damaged or destroyed.

Whether or not notebooks, data, magnetic tapes and so on can be found or deciphered was not yet known. Mathematics offices had been badly damaged; the amount of damage to astronomy offices and equipment was still unknown.

Dillinger, who leads Wisconsin low-temperature research, said that all his best equipment, which had been in the lab where Fassnacht was working, was apparently destroyed. Apparatus included a He^3 refrigerator with very large cooling capacity and working space and a He^3–He^4 dilution refrigerator, both built at Wisconsin, and all his measuring equipment. Dillinger, who has been at Wisconsin for 24 years, now has five graduate students and a postdoc. —GBL

Kennedy

continued from page 73

agencies of the Government should continue to support basic research in particular fields. "I don't think there can be any question about that."

The case for research support, Kennedy thinks, must depend largely on "relevance" both in NSF and in the mission agencies. Science budgets have grown to the point where "Congress is not likely to support much research just as a means of satisfying intellectual curiosity." But he emphasizes that justifying research on the basis of its ultimate value to society does not mean stressing applied R & D at the expense of basic research. His broad concept of "relevance" extended to the unexpected yet certainly predictable benefits that may arise from basic research in many fields.

Commenting on what some have called an "antiscience" reaction on the part of the public, Kennedy had two observations. He thinks that US science has suffered from a popular overidentification with military research and expensive new weapon systems, "as unjustifiable as that might appear." Also, he believes "many people equate a kind of dehumanization and depersonalization with scientific and technological progress." Kennedy spoke eloquently of the need to "bring home to the American people and to Congress" what science can do to help solve "many of the critical and crucial problems that we face, here at home and around the world . . . if we can bring to bear on these problems the extraordinary creativity, concern and commitment of members of the scientific community."

The present level of communication between scientists and Congress leaves much room for improvement, in Kennedy's view. He thinks that communication is good enough between the scientific community and the relatively few Senators and Representatives whose committee assignments involve them with science questions. But otherwise, "science has no real constituency." Kennedy notes that Congressmen received very little mail support of this year's NSF appropriation. This contrasts sharply with the volume of messages received when, for instance, money for education or for urban renewal is at stake. Also, "we hear a lot from scientists on issues like ABM, but relatively little about how we're maintaining and using our scientific resources." —JBP

Users group is formed for Oak Ridge nuclear facilities

A University Users Group will develop an on-line isotope separator facility to study nuclei far off stability with heavy-

ion beams at the Oak Ridge Isochronous Cyclotron. Georgia Tech, Louisiana State, University of Tennessee, Vanderbilt, and the State of Tennessee have pledged support, other universities are planning to participate, and federal funds will also be sought. Other groups are invited to join the project. Details are available from Joseph H. Hamilton, Physics Department, Vanderbilt University, Nashville, Tenn.

Suggestion for graduate aid in exchange for national service

Philip Handler, president of the National Academy of Sciences, has suggested a plan under which the Government would offer financial support to all graduate students in all fields in exchange for two, three or more years of national service. The suggestion was made as Handler testified, on 21 July, at the science-policy hearings of the House Subcommittee on Science, Research and Development. "I can think of no program," said Handler of his proposed National Youth Service Program, "which would find a warmer welcome among the highly motivated young people of our time." Handler suggested that humanities graduates could teach, especially in disadvantaged areas; social scientists and lawyers could teach or serve in local or federal government; doctors could work in "a modernized Public Health Service;" natural scientists and engineers could serve in Federal laboratories or multidisciplinary university laboratories.

"The impact of this flow of motivated, highly trained young men and women throughout the diverse elements of our national life would be profound, exhilarating and undoubtedly effective . . . And it would surely more than compensate for the cost of their graduate educations." Handler noted that limited precedents for his proposal were to be found in the GI Bill and in the draft liability of doctors. But, "I know that this would be a major change in our national life, and I appreciate the unlikelihood of such legislation in the very near future. But if we open such discussions today, we shorten the time until this becomes 'an idea whose time has come,' the next extension of the historic process which began with publicly funded primary-school education for all."

Among views on science policy presented to the Subcommittee, Handler's statement was notably specific on various points. Handler would continue the post-World War II tradition of mission-agency research support, and give up the search for "a rational formula by which to establish how much science should be supported . . . This now seems an intrinsically unanswerable and probably meaningless question." For "fundamental research, whose relevance to agency missions is not immediately discernible," Handler suggested that the main funding level criterion be simply the cost of utilizing fully the research talents of the "national pool of available, truly competent scientists . . . I can only advocate support of all the competent research of which we are capable."

Handler would like to see universities undertake multidisciplinary, problem-oriented research on campus, but in separate physical and administrative units, and without damage to their traditional disciplinary structures.

Handler opposes a "Department of Science," but favors a federal agency, built on NSF as a cornerstone, whose principal mission is research and higher education.

UPI

EDWARD E. DAVID, JR (left) who was chosen by President Nixon to succeed Lee A. DuBridge (right) as the President's science adviser, has been a Bell Labs' administrator with interests in computers, acoustics and communications. DuBridge, 69, retired from his post (effective 31 August) after 19 months of service, saying "I have always been convinced I should retire well in advance of my 70th birthday in 1971."

David, 45, was most recently executive director of Bell Labs' Research, Communication Principles Division, which made him responsible for the Electronic Systems Research Laboratory, the Computing Science Research Center and the Communication Principles Research Laboratory. He has worked in communication theory, speech, hearing, speech recognition and processing, vocoders and computing.

David joined Bell Labs after receiving an ScD in electrical engineering from MIT. Last April he was elected to the National Academy of Sciences.

the physics community

Indians and Americans evaluate physics education in India

Less rigidity in physics curricula and teaching and more applied research are the prevailing recommendations of about 60 Indian and US physicists meeting to discuss physics education in India. Norman Ramsey of Harvard University headed the 18-member US delegation attending the July conference in Kashmir, which was sponsored by the Indian University Grants Commission, its National Council for Science Education, the US Agency for International Development and the National Science Foundation. The Indian delegates were headed by B. Ramachandra Rao of Andhra University.

Teaching procedures in undergraduate and graduate school dominated the meeting. In the present system, a board of studies outside each school determines course content and an annual uniform final, given by external examiners, evaluates each student. To create greater flexibility, the conference advo-