

At long last, Graham becomes Reagan's science adviser

By taking three months to send the formal papers to the Senate after announcing the nomination of William R. Graham to be the President's science adviser and director of the Office of Science and Technology Policy, the White House sent a message that science is not at the top or even near the top of its agenda. The papers reached the Senate just prior to the Labor Day recess. So it was 11 September before Graham appeared before the Senate Committee on Commerce, Science and Transportation for a polite, somewhat perfunctory, hearing. The committee got around to voting on the nomination on 24 September, approving Graham by a 10-to-3 vote—the first nays cast against a nominee for the White House science position since it became subject to Senate confirmation 25 years ago.

The three nay-sayers were two Democratic senators, Albert Gore Jr of Tennessee and Ernest F. Hollings of South Carolina, and a Republican, Ted Stevens of Alaska. Gore's vote turned on his opposition to the Strategic Defense Initiative, which Graham defends with the unabashed loyalty of his White House predecessor, George A. Keyworth II, who left at the end of last year to enter commercial consulting. What's more, argued Gore, Graham lacked the scientific background for the job.

Objectives. Hollings's objections go back to Graham's prior confirmation hearings to become deputy to NASA's administrator, then James M. Beggs. As someone who had Hollings's ear, Beggs voiced heavy opposition to Graham as inexperienced in systems management and dedicated to militarizing space. Hollings cast his vote against Graham on those grounds. This time Hollings claimed Graham had given "misleading" testimony before the Senate Commerce Committee last 18 February on events leading up to the decision to launch the Challenger space shuttle. At the time of the ill-fated launch, Graham was NASA's acting administrator, Beggs having resigned to face criminal charges connected with an Army contract while he was an executive at General Dynamics. Asked

at the hearing whether any opposition had been voiced to launching the Challenger, Graham replied, "No, sir, the evidence is in the other direction." When the prelaunch arguments between Morton Thiokol engineers and NASA managers were revealed during the investigation by the Presidential commission led by William Rogers, Hollings said Graham was either inexcusably uninformed or lying. Observing that the Kremlin had fired the managers of the Chernobyl nuclear plant that exploded last April, Hollings proclaimed that Graham merited dismissal rather than promotion to the White House.

As for Stevens, who is chairman of Congress's Office of Technology Assessment, his opposition rested on arguments by eminent scientists against Graham's appointment because he had little or no academic or research experience (PHYSICS TODAY, July, page 45). Stevens had no objection to Graham's support of SDI. In fact, as chairman of the Senate appropriations subcommittee on defense, Stevens tried valiantly to maintain President Reagan's full \$5.3 billion budget request for "Star Wars" in fiscal 1987 but failed to get more than \$3.5 billion.

At the confirmation hearing Graham was introduced by Senator Slade Gorton, Republican of Washington, who

heads the committee's science, technology and space subcommittee. After heaping credit on Graham for running NASA during the Challenger catastrophe, Gorton resorted to black humor in wishing that Graham's "tenure at OSTP is more peaceful than at NASA."

Gore was relatively gentle in questioning Graham, concerning himself mainly with Graham's views on acid rain and the "greenhouse effect." The hearing, attended only by Gorton and Gore, produced no surprises other than Graham's exceptional ability to avoid discussing the directions of his eventual advice to the President on scientific and technical issues.

Gore said Graham "has an opportunity to make a tremendous difference in the science advice the President receives." He noted that "many observers of the US scientific effort have concluded that it is likely to be dominated by SDI for the next few years. . . . The program is considered wildly unrealistic because it is not scientifically feasible. . . . Do you believe SDI is feasible at a cost of achieving countermeasures capable of overcoming the defense?" As expected, Graham's response was yes. Gore shook his head.

Challenges. In his opening statement, Graham spoke of "the challenges we face" in setting priorities for science in the present era of large government

APS sends directed-energy-weapons study to Pentagon

The eagerly awaited report of The American Physical Society's 18-month study of directed-energy weapons was delivered to the Pentagon on 25 September for security-classification review. The report has taken on increased significance since the meeting between President Reagan and General Secretary Gorbachev in Iceland became stuck on the issue of SDI research and development. Now running to more than 800 pages, the report was reviewed by an independent panel headed by George Pake of Xerox before the study committee's cochairs, Nicolaas Bloembergen of Harvard and C. Kumar N. Patel of AT&T Bell Labs, handed it to the Strategic Defense Initiative Organization.

Although the committee was privy to classified data and visited several labora-

tories where SDI work is performed, it has prepared a document it considers unclassified. APS wants to issue a document that can be useful in coalescing scientific thought and informing public opinion about "Star Wars" research (PHYSICS TODAY, June 1984, page 53). From the outset of the study in February 1984, DOD officials, including SDI's director, Lieutenant General James A. Abrahamson, agreed to provide the APS panel with classified information and access to laboratories to gain complete understanding of the research and technology. When Bloembergen and Patel turned over the report to Louis Marquet, deputy for technology at SDI, they were assured that the classification review procedure would be expedited to ensure its prompt release.

deficits and constrained budgets. "We must necessarily decide these priorities among the multitude of possible research and development areas: which ones to initiate, encourage or support and which ones to terminate or redirect in channels more in keeping with the effective use of the nation's capabilities and resources." Graham's statement covered all the bases in OSTP's field: national security, higher education, industrial productivity, high-tech advances, international trade and cooperation, technology transfer and relations with Congress. Later, answering questions asked by Gorton, he voiced his concerns about pre-college science and mathematics education.

In 17 pages of responses to written questions submitted by Senators Hollings and Donald W. Riegle of Michigan,

Graham expressed his idea that OSTP should serve to coordinate government R&D and advance the nation's science and technology priorities in three broad sectors: upgrading the country's talent base in science and technology, expanding basic science and improving the transfer of new knowledge from labs to industrial users. He said he would foster "closer interactions between industry and universities" so that industrial needs are more clearly understood and reflected in university research and educational programs. He cited NSF's program for engineering centers as exemplifying how to enhance the interaction.

The Senate confirmed the nomination by an unrecorded voice vote on 1 October.

—IRWIN GOODWIN

Washington Ins and Outs:

Changes at DOE, Pentagon and Academy

Wilmot N. (Bill) Hess, director of the National Center for Atmospheric Research at Boulder, Colorado, became the Department of Energy's associate director for high-energy and nuclear physics on 11 August. Hess earned his PhD in nuclear physics at the University of California, Berkeley. He has held a succession of top research-management jobs at NASA and the National Oceanographic and Atmospheric Administration since 1961, when he left the Lawrence Radiation Labs at the University of California. He was chief of theoretical studies at Goddard Space Flight Center, director of science and applications for the Apollo program at the Manned Space Flight Center in Houston and head of NOAA's Environmental Research Labs before joining NCAR as director in 1980. At DOE he fills the position held by James E. Leiss, who retired more than a year ago. William Wallenmeyer, who had been acting associate director since then, continues as director of high-energy physics under Hess. DOE officials call Hess's appointment a "masterstroke" because he is considered an effective manager with a reputation on Capitol Hill for direct and decisive actions. But equally important, according to DOE people, Hess is not "a quark hunter" nor does he "carry any coloration" for or against the Superconducting Super Collider.

In early October the Pentagon lost two of its top officials: James P. Wade Jr, assistant secretary for acquisition and logistics, and Donald A. Hicks, undersecretary for research and engineering. Both resigned in the turbulent wake caused by the launching of a

new post—that of undersecretary for acquisition, now occupied by Richard Godwin, a former senior executive at Bechtel Corp. Godwin was the personal choice of Defense Secretary Caspar W. Weinberger, once in the upper echelons at Bechtel. Under the new lineup, Wade and Hicks would have reported to Godwin, whose office was created in hopes of improving weapons procurement—a need recognized by a recent Presidential study under the chairmanship of David Packard, chairman of Hewlett-Packard. In the new post Godwin will rule over all DOD procurements, which had been in the hands of the separate services. The services had strongly opposed such a consolidation, but Congress welcomed it. The White House announced it will nominate Robert B. Costello to replace Wade. Costello comes from General Motors, where he was executive director for purchasing. No successor has been named for Hicks, who has been at the center of controversy since he popped off in an interview a remark about not funding scientists opposed to Pentagon policies and programs (PHYSICS TODAY, July, page 48). Neither Hicks nor Wade has indicated what he will do next.

After nine years with the House Committee on Science and Technology, the last two as staff director of the important subcommittee on science, research and technology, Ezra D. Heitowit became vice-president of the Universities Research Association, which serves as the board of directors for Fermilab and SSC's Central Design Group. URA's president is Edward A. Knapp, who was director of the Nation-

al Science Foundation early in the Reagan Administration, before returning to Los Alamos. Heitowit, who holds a PhD in applied physics from Cornell University, has worked in research at NASA's Ames Research Center and the Von Kármán Institute for Fluid Dynamics in Belgium. He is expected to serve a vital function: improving chances of Congressional support for SSC.

Members of the National Academy of Sciences elected William Edwin Gordon, professor emeritus of space physics at Rice University, as foreign secretary. His four-year term began 1 July, when he succeeded Walter A. Rosenblith, former provost at MIT. While Gordon was at Cornell in the 1960s, he designed the Arecibo Ionospheric Observatory, a radiotelescope with the largest single collecting dish, located in a natural valley in Puerto Rico. In addition to dealing with foreign academies, the NAS foreign secretary serves as chairman of the office of international affairs of the National Research Council. Gordon's counterpart at the National Academy of Engineering is H. Guyford Stever, former president of Carnegie-Mellon University, director of the National Science Foundation and science adviser to President Ford.

Sally K. Ride, the only woman astronaut who has flown on two shuttle missions and a member of the Presidential Commission on the Space Shuttle Challenger Accident (PHYSICS TODAY, August, page 41), is now special assistant for strategic planning to NASA Administrator James C. Fletcher. The holder of a PhD in physics from Stanford University, Ride is responsible in her new job for evaluating NASA's current program goals to improve future planning.

A. David Rossin, who directed the Nuclear Safety Analysis Center at the Electric Power Research Institute in Palo Alto, California, the past 4½ years, became the Department of Energy's assistant secretary for nuclear energy on 19 August after being confirmed by the Senate three days earlier. In his new post, Rossin is principal adviser on nuclear-energy policy to DOE Secretary John Herrington and responsible for advanced reactor R&D, reactor development and demonstration programs, uranium enrichment operations, nuclear-waste technologies and nuclear power systems for space and defense projects, including the Strategic Defense Initiative. He received his BSc degree from Cornell in engineering physics, a master's degree in nuclear engineering from MIT and his PhD in metallurgy from Case Institute of Technology.

—IRWIN GOODWIN □