Iowa physicist and chairman of the committee on small planetary probes of the National Academy of Sciences' Space Science Board, has gone even further. In an appearance last January before a congressional committee, Van Allen said Voyager should be preceded by a number of small planetary missions. "We [his Space Science Board committee] favor sending a number of well-equipped scouting parties to the several planets before we send out the wagon train with all of our women and children and a full set of household furnishings as Voyager proposes to do eventually," he said.

Voyager won't have women and children aboard, but it will have at least $2.3 billion riding on it, and possibly a great deal more if this NASA estimate of the total program cost is over-optimistic. Voyager was to have benefited from the 1971 Mariner in a variety of ways, although, with the missions only 2 years apart, major alterations in the Voyager hardware on the basis of the Mariner flight experience would not have been possible. Some of the principal advantages seen in Mariner as a precursor mission are these: Mariner would test sterilization techniques for the landing capsule; test capsule delivery and landing techniques and test relay telemetry from the capsule to the spacecraft and back to earth; provide photographic data on suitable landing sites; and produce information on such questions as the Martian atmospheric temperature and pressure—data of value in selecting and conducting Voyager experiments.

According to Harry H. Hess, Princeton geologist and chairman of the Space Science Board, a sure consequence of the elimination of Mariner (which Hess hopes can be resurrected in next year's budget) will be to "degrade" the scientific information obtained from Voyager. This will be true, he says, in part because, without Mariner, much more of Voyager's data-gathering will be taken up with the mission's operational requirements (such as selecting a landing site) than would otherwise have been the case.

In February, the President's Science Advisory Committee space science and technology panels, in a study chaired by Franklin A. Long of Cornell, endorsed the NASA program for the exploration of Mars and called for other unmanned missions during the 1970's to Venus, Mercury, and Jupiter. Now, Long, though not suggesting that it is

NEWS IN BRIEF

● **THEMIS AWARDS**: The first 50 Defense Department (DOD) Project Themis awards (*Science*, 3 Feb., 7 and 21 April) will go to universities in 30 states and the District of Columbia. Total funding for the program is $20 million. Themis was established to create "new academic centers of excellence in research areas important to the [Defense] Department's long-range scientific and technological goals." A second objective is to distribute DOD research funds over a wide geographical area, favoring institutions which previously had not received significant amounts of DOD support. Of the states receiving Themis grants, Texas received the most, with five. According to a DOD announcement, all research programs under Themis will be unclassified. All grants are for a 1-year period, begin in the fall, and are renewable.

● **COMMERCE SCIENCE POST**: The top science post in the Commerce Department will be temporarily filled by Allen V. Astin, director of the National Bureau of Standards, pending a permanent appointment. Astin, who has headed the Bureau since 1952, will be the interim replacement for J. Herbert Holloman, who resigned as assistant secretary of commerce for science and technology to become president of the University of Oklahoma.

● **UNIVERSITY STAFF NEEDS**: The number of scientists and engineers with doctorates who will be available for university employment in the early 1970's is expected to fall short of the institutions' needs, according to an NSF report. The study estimates that institutions will need an additional 12,000 staff members with doctorates in the 1969–70 academic year and only 8000 will be available. However, the shortage is expected to be resolved by 1974 when the requirements and the doctoral candidates available for university employment should be about equal. The report, *Science and Engineering Staff in Universities and Colleges*, estimates that within the next 10 years employment of science and engineering staff in U.S. universities will double. It also indicates that university and college staff needs, excluding employed graduate students, will be 369,000 in 1975, 179,000 more than in 1965. Universities are also expected to require an additional 56,000 doctorates during the next decade to restore losses from attrition. The NSF report may be obtained from the U.S. Government Printing Office, Washington, D.C., for 30 cents a copy.

● **NEW YORK'S $100,000 CHAIRS**: An Albert Einstein Chair in Science has been assigned the State University of New York at Buffalo, while Columbia University has been granted an Albert Schweitzer Chair in Humanities. The chairs were created by the 1964 New York Legislature and provide annual funds up to $100,000 each to support scholars and their staffs. The Einstein Chair at Buffalo will be filled by a scholar in molecular biology while the Schweitzer Chair at Columbia will go to a scholar of advanced study and research in international relations. Neither recipient has been named. Einstein professorships previously were awarded to Efraim Racker, biochemistry, Cornell University; Elliott W. Montroll, mathematical physics, University of Rochester; C. N. Yang, theoretical physics, State University of New York, Stony Brook; Joaquain B. Diaz, applied mathematics, Rensselaer Polytechnic Institute. Schweitzer Chairs have been granted to Arthur M. Schlesinger, Jr., history, City University of New York; Conor Cruise O'Brien, contemporary literature and culture, New York University; Marshall McLuhan, mass communications, Fordham University; and Dwight Waldo, public administration, Syracuse University.

● **SOVIET-CERN AGREEMENT**: Scientists from the European Nuclear Research Organization (CERN) will participate in the use of the new Soviet 70-Bev proton accelerator nearing completion at the Serpukhov Institute of High Energy Physics (*Science*, 28 July). The 5-year agreement, which was signed in July, provides for the mounting of a series of counter experiments to be run by mixed teams of CERN and Soviet scientists. CERN has agreed to provide beam ejection and separator equipment worth nearly $2 million. Results obtained under the cooperative program will be published jointly by the two laboratories.