center would perform as a source of power not only for propulsion but for low-wattage communications equipment and power tools.

Hoke left AID in June of 1963 to join a private research firm in Alexandria, Virginia, but the boat, based on a Haitian design, and its expensive custom-built solar panels, were completed under the original $28,000 contract. The solar boat, however, was not tested in the tropics.

Last January AID suggested that the Army Materiel Command consider military applications of the boat, and the Army took up the idea. Tests to evaluate the military potential of the borrowed solar boat were conducted between the end of July and the end of October, and a final report was submitted in December.

The Army concluded that "the use of solar cells for propulsion of lightweight watercraft is feasible; the Solar Boat may have potential military application where it is necessary to operate quietly and without using conventional fuel. . . ."

Because the Army was interested in the performance of the collapsible, canvas-covered boat, the test centered on the boat and its limitations and did not emphasize the performance of the solar cells. The report, for example, does not indicate detailed testing of the solar cells, connected, as they may be, either directly with a motor or indirectly through batteries to one or two motors.

Apparently the cells are capable of an output of 150 watts in good weather, which means that they could supply a total 1000 to 1500 watts of power a day in the tropics. According to Hoke, the AID boat should be able to operate on both motors at a speed of about 5 miles an hour if wind and current are not taken into account.

The main obstacle to the use of solar energy for lower-power applications remains the high cost of solar cells. AID lent the boat for the Phoenix meeting, and is currently considering ways to make the prototype propulsion system available to researchers in order to encourage work that will result in the reduction of costs.

Hoke still thinks that solar energy is particularly adaptable to use in underdeveloped areas where power is a problem, and he would probably like nothing better than to see his original solar-boat idea tried out in some place with sluggish rivers and lots of sunshine—like Surinam.—JOHN WALSH

Announcements

Illinois Institute of Technology Research Institute has announced a **medical engineering** center. Its major purpose will be to coordinate IITRI's skills in the physical sciences and engineering to help medical researchers devise needed instrumentation. The new facility is headed by William E. Reynolds, assistant director of mechanical engineering, and will include representatives of all the school's research divisions.

Courses

The University of Texas and Varian Associates will sponsor a course on **nuclear magnetic resonance and electron spin resonance spectroscopy** 31 May to 4 June. It is designed for beginners in the field and will include lectures, demonstrations, and laboratory work. The course fee is $35 for teachers, $75 for others. (NMR–ESR Course, Department of Chemistry, University of Texas, Austin 78712)

The U.S. Public Health Service and the U.S. Bureau of Mines will sponsor a symposium on **photochemical aspects of air pollution**, 20–22 April in Cincinnati, Ohio. Discussion will be centered on the following: ultraviolet solar radiation measurements in the lower atmosphere, photochemical primary processes and secondary reactions in the photolysis and photooxidation of various simple and complex systems of interest in lower atmosphere reactions, aerosol formation, plant damage and eye irritation as indicators of photochemical air pollution, and reactivity concepts and the relation of laboratory measurements to aerometric data. (A. P. Altshuller, Taft Sanitary Engineering Center, 4676 Columbia Parkway, Cincinnati, Ohio 45226)

The Marine Biological Laboratory at Woods Hole, Mass., will conduct a training program in **comparative physiology** 15 June to 30 August. It will consist of informal lectures and discussions, along with research work on the physiology of marine animals, with emphasis on osmotic and ionic regulation, endocrinology, circulation, and muscle physiology. Traineeships for postdoctoral and advanced predoctoral students are available. Deadline for receipt of applications: *20 April*. (Marine Biological Laboratory, Woods Hole, Mass. 02543)

Two courses on **epidemiology** will be presented at the University of Wisconsin, 21 June to 30 July, for medical school teachers, public health officials, graduate students, and residents. The introductory session, 21 June to 9 July, will consist of fundamentals of epidemiology and of biostatistics, and teaching methods. The second session, 12–30 July, will include the epidemiology of infectious diseases and of chronic diseases, and human heredity. Applicants may register for either or both courses; for the second, basic courses in basic epidemiology and statistics or equivalent experience are prerequisites. Travel and subsistence grants are available for U.S. citizens. Deadline for receipt of applications: *30 April*. (A. S. Evans, Department of Preventive Medicine, 437 Henry Mall, Madison, Wis. 53706)

Meetings

General Atomic division of General Dynamics Corporation, San Diego, will present a seminar on **activation analysis** 26–28 April. Papers will be presented on techniques and applications. A tour of the General Atomic activation analysis facilities will include the TRIGA reactors, 45 Mev Linac, 14 Mev neutron generators, gamma-ray spectrometry laboratories, and the new activation analysis building. Demonstrations will include a 1000-megawatt reactor pulse (giving a peak neutron flux in the range of 10^{16} to 10^{17} neutron/cm^2 sec), and an automatic oxygen determination. (V. P. Guinn, General Atomic, Box 608, San Diego, Calif.)

Scientists in the News

William L. Ford, chief of personnel at Canada's Defence Research Board, has been appointed director of the Bedford Institute of Oceanography, Dartmouth, Nova Scotia, effective about 1 April.

Robert S. Gordon is the new clinical director of the National Institute of Arthritis and metabolic diseases at NIH. Formerly a senior investigator in the National Heart Institute's metabolism laboratory, he succeeds **Joseph J. Bunim**, who died in July.

Francois Mergen, professor of forest genetics at Yale, has been named dean of the forestry school as of 1 July.