

freedom without a tenure system that effectively prevents many schools at all levels from keeping up with changing times.

It should come as no great surprise that many of the most capable teachers are leaving universities, colleges, and secondary schools for more rewarding jobs in industry. Having been compelled to go into industry because of the job market in academic physics and astronomy in the early 1970's, I would not now return to the academic community even though I love teaching. This is partly due to the financial rewards and the more challenging environment of industry and partly due to the lack of any real interest (reflected in hiring, promotions, and salary) on the part of universities in providing the product which is so desperately needed—quality education at a reasonable price. That educational programs are as good as they are in the face of institutional disinterest is a credit to the strong personal commitment of many faculty members. It is largely up to the college and university administrators themselves to find solutions to problems which they have in large part created.

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Space Shuttle:

Remote Manipulator Arm

The article "Shuttle launch expected soon" (News and Comment, 9 Oct., p. 160) by R. Jeffrey Smith contains a description of the remote manipulator arm that requires elucidation. Smith describes the arm as having three joints. Technically speaking, the arm has six joints: shoulder yaw, shoulder pitch, elbow pitch, wrist pitch, wrist yaw, and wrist roll.

The \$100 million (Canadian dollars) for the development of the remote manipulator arm was contributed entirely by Canada to the U.S. Space Shuttle Program. The National Aeronautics and Space Administration will procure the next three arms for only \$25 million (Canadian dollars) each.

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Erratum. In the report entitled "Autoimmune encephalomyelitis: Simultaneous identification of T and B cells in the target organ" by U. Traugott *et al.* (11 Dec., p. 1251), the name of the fourth author should have been S. H. Stone.

ENVIRONMENTAL SCIENCE AND ENGINEERING FELLOWSHIPS

Applications Invited

The American Association for the Advancement of Science (AAAS) invites applications for summer environmental science and engineering fellowships. Applications are invited from postdoctoral to mid-career scientists, engineers, and other appropriate professionals. Six such fellowships are available for the summer of 1982. *The deadline for applications is 1 February 1982.* The 10-week appointment begins approximately 1 June 1982 and lasts until approximately 15 August 1982. The awards will be announced prior to 15 April 1982.

The persons selected will work closely with the Environmental Protection Agency's Office of Strategic Assessment and Special Studies (OSASS) and assist it in identifying and assessing the significance of long-range environmental problems and opportunities. The award consists of a taxable stipend of \$550 per week and a nominal additional amount for temporary relocation expenses and travel in connection with the fellowship.

Each awardee will undertake a focused, future-oriented research project of mutual interest to the Fellow and one of EPA's research or program offices and prepare a report at the completion of the summer's work. The selection of projects and research approach will be designed to meet the purpose of the program stated above as well as to fit the individual Fellow's professional goals. Broad areas of research interest within EPA include mobile source air pollution; oxidants, gases, and particles; hazardous municipal wastewater and spills; drinking water; solid hazardous waste; chemical testing and assessment; pesticides; radiation; and energy.

Candidates are expected to be postdoctoral to mid-career professionals, to be critical thinkers, articulate, adaptable, and able to work with a variety of people from different professional backgrounds. Persons may apply from any physical, biological, or behavioral science or any field of engineering or any other relevant professional field.

Persons interested in further information and details on selection criteria and requirements should write to: **Environmental Science and Engineering Fellowship Program, American Association for the Advancement of Science, 1776 Massachusetts Avenue, NW, Washington, D.C. 20036.**

FILMS IN THE SCIENCES

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Michele M. Newman and
Madelyn A. McRae

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