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Two Cheers for West Ford

At its recent assembly in Berkeley, California, attended by some 1000 astronomers from all over the world, the International Astronomical Union passed a resolution urging openness of procedure and great caution in the conduct of experiments that might affect the observations of optical and radio astronomers. This was quite right, but there was a second resolution opposing immediate carrying out by the United States of its project West Ford, a plan to place temporarily in orbit about 75 pounds of fine copper filaments to serve as a reflector of radio signals. The second resolution offers, in passing, one cheer for this country's behavior in the matter, but, so it seems to us, the United States deserves two cheers at least.

The International Astronomical Union was at pains to make clear just how any government should proceed when conducting an experiment that, in effect, uses the earth as a laboratory. It states that the government should make public its plans and the calculations justifying those plans, so that all interested scientists will be in a position to evaluate the program. The government should also invite interested scientists throughout the world to participate in making observations. But this is very much what the United States has done. Articles by American scientists published in the April issue of *The Astronomical Journal* describe the project and invite the cooperation of interested scientists.

The union is also concerned that no further launchings of reflecting belts be undertaken until the effects of the first experiment have been analyzed by project scientists in cooperation with other scientists. But again the United States had announced plans along the lines subsequently recommended by the union. In stating these requirements, the union acknowledges the actions of the United States, and this constitutes the one cheer offered.

There seem to be no difficulties about the effects of West Ford on the kinds of astronomical observations now possible. Opposition by the union arises out of fear that the belt might remain indefinitely in orbit, and so interfere, at some future date, with methods of astronomical observation yet to be developed. West Ford scientists intend, however, to orbit the belt in such a way that in a year or two solar radiation pressure will bring it into the atmosphere where it will be destroyed. The union wants more public discussion of this matter, and it is here that the United States could be in a better position. The calculations on which the contention of short life is based, although involving nothing particularly abstruse or secret, have not been published.

Failure to publish this material is an oversight that can easily be corrected, and there is reason to believe that this is soon to be done. In evaluating American conduct, however, the basic point to remember is that if our policy had been to run the entire experiment secretly, detection of the belt, according to informed sources, would have been unlikely in the extreme. Lacking advance notice of the project, no one would have been the wiser. The present American approach contrasts favorably with our handling of project Argus, in which, in 1958, without public notice, several atom bombs were exploded at low altitudes to create temporary radiation belts. It also contrasts favorably with the general Soviet practice of announcing launchings as accomplished facts.

For comments on another kind of experimentation that has worldwide effects, it will be interesting to see, at the forthcoming Pugwash-type conference in Colorado on nuclear weapons control, what Russian scientists have to say to their American colleagues.—J.T.