

Halley's comet

Closet US-Soviet collaboration in space

Washington

US research groups, working "under the table" for over a year, have designed and developed several instruments to be flown on two Soviet spacecraft headed for Halley's comet. The unusual collaboration, although unofficial, has involved extensive contacts between US and Soviet scientists, including a visit by a University of Chicago physicist to the Soviet Space Research Institute laboratory in Moscow, where he supervised the installation of his instruments.

An official agreement between the United States and the Soviet Union covering cooperation in space was allowed by the Reagan administration to lapse in 1982, after the imposition of martial law in Poland. Low-level contacts between US and Soviet government officials have continued, however, and the collaboration on the Halley's comet mission is said to have had the blessing of the US Departments of State and Defense. And the National Aeronautics and Space Administration (NASA), provided financial support to the University of Chicago group, which designed and built two comet-dust detectors.

The director of that group, John Simpson, had received an invitation from Academician R. Z. Sagdeev of the Space Research Institute in September 1983 to build the detectors for the Soviet mission. Earlier that month, at a scientific meeting in the Netherlands, Simpson had described his new detector design, which measures density of dust; Simpson was too late to have his instrument included in the Giotto spacecraft — the European Space Agency

(ESA) mission to Halley's comet.

Simpson's laboratory began construction of the new instruments in March 1984, delivering the first prototype in May. The two spacecraft were launched a week apart last month, and will be the first of the five missions planned to reach the comet.

The collaboration was announced only after the first launch, apparently for fear of second thoughts by the Soviet or US governments in the face of extensive publicity. The University of Chicago group used as a go-between the Max Planck Institute in Lindau, West Germany, where

several instruments were designed for these and other Soviet spacecraft. The Central Research Institute in Hungary was also credited by Simpson, for "facilitating the incorporation of the US experiments" into the Soviet spacecraft.

Other US groups are involved in the Soviet mission. John Hsieh, a physicist at the University of Arizona, designed a neutral mass spectrometer, built at Lindau, while scientists at Arizona and Michigan are participating in the analysis of imaging and plasma-physics data.

The comet-dust analyser will be the only entirely US-built experiment on any mission to Halley's comet. The spacecraft are to rendezvous with the comet in March 1986. The initial findings on dust density may be of particular importance in determining how closely the other spacecraft may safely approach the comet.

Stephen Budiansky

Research secrecy

US agencies hamstring contracts

Washington

THE US government is increasingly using prepublication review of research results to restrict the free flow of academic information, according to a new report from Harvard University. The report finds that recent secrecy regulations "go far afield of any reasonable definition of national security", and suggests that prepublication review is being used by federal agencies that have nothing to do with national security to suppress unwelcome research findings.

A directive issued by President Reagan in March 1983 (National Security Decision Directive 84) required government employees to submit work for prepublication review as a condition for access to classified material. But, says the Harvard report, of federal agencies are increasingly including prepublication review clauses in university research contracts not involving classified

material. The National Institutes of Health, the Environmental Protection Agency and the Food and Drug Administration have all presented contracts containing such clauses. And although the restrictions are, in theory, aimed at halting the flow of valuable technology to the Soviet Union, some of the most restrictive clauses have appeared in contracts for social-science research.

The Harvard report notes that some agencies have begun to insist on the right to modify the scope of contracted research without the researcher's assent; others even insist that agency officials be allowed to participate directly in the research.

Another way in which the government agencies have been tightening restrictions on the free flow of information is in security classification. An executive order issued in 1982 (no. 12356) allows government officials to impose classification restrictions after a project has started; this, according to the report, has deterred academic researchers from taking on certain non-classified projects that they fear might be classified later on. The order also required officials to err on the side of stricter classification when in doubt.

Although the Department of Defense last year agreed not to use export control regulations to control fundamental research, it is not yet clear whether this principle applies to other federal agencies. A major policy statement on technical information restrictions is expected from the White House early this year.

Harvard denies that its report is a "call for action", although it is sure to become a focus for discussion in the academic community, especially as Harvard plans to update the document periodically. The report was prepared by John Shattuck, vice-president for government, community and public affairs.

Tim Beardsley

Press on pork-barrel laboratories

Washington

DR Frank Press, president of the National Academy of Sciences, has taken the unusual step of writing to all 1,428 members of the academy, urging them to "play a leadership role" in opposing so-called pork-barrel appropriations for scientific facilities. "None of these direct political approaches to secure funds from the research budget would have occurred if they were not initiated by members of our own community", the letter states.

In the past two years, half a dozen universities — several with the aid of a Washington lobbying firm — have taken their appeals for construction grants for new laboratories directly to influential congressmen, bypassing the usual peer-review process. The first and most notorious were Catholic University and Columbia Univer-

sity. All told, pork-barrel appropriations for scientific facilities come to nearly \$100 million over the past two years.

Most of these special appropriations have been taken out of the budget of the Department of Energy (DoE); there appears to be greater reluctance in Congress to earmark the budgets of the National Institutes of Health or the National Science Foundation, which award most of their funds through well-established procedures of peer review of investigator-initiated proposals. DoE has a more informal review process that relies on advisory panels to recommend priorities to the agency. None of the pork-barrel projects in question had been considered by these panels, nor had the appropriate congressional committees held hearings to look into them.

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