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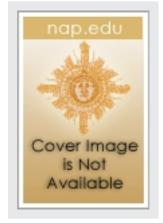
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On the Decision to Place the High Resolution Solar Observatory Project on Hold: Letter Report

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Approved by RRC and Sent to Fletcher on 9/21

NATIONAL RESEARCH COUNCIL

COMMISSION ON PHYSICAL SCIENCES, MATHEMATICS, AND RESOURCES

2101 Constitution Avenue Washington, D. C. 20418

SPACE SCIENCE BOARD

September 21, 1987

OFFICE LOCATION: Milton Harris Building Room 584 2001 Wisconsin Avenue, N.W. (202) 334-3477

Dr. James C. Fletcher Administrator National Aeronautics and Space Administration Washington, D.C. 20546

Dear Dr. Fletcher:

The Space Science Board (SSB) and its Committee on Solar and Space Physics (CSSP) have learned of the decision to place the High Resolution Solar Observatory (HRSO) on hold for a period of two years. First of all, I want to reiterate the position of CSSP and the Board that the HRSO is designed to address the highest priority scientific objectives in solar physics. High resolution observations of the solar plasma are critically and intricately linked to advancing our understanding of a broad range of fundamental problems in astrophysics and the physics of the interplanetary medium. It also would provide basic information about the environment of the earth that is indispensable for the complete success of such an undertaking as the International Geosphere Biosphere program.

The Board understands that no further funds will be allotted to HRSO for the next two years and no further contracts let, but that an attempt will be made to maintain the project at a low level of activity on existing funds. There is a serious risk that the consequence of this decision will be the loss of key scientists and professional members and of project and contract teams who have devoted as much as ten years to HRSO and its predecessor mission, the Solar Optical Telescope. Thus NASA and the nation will suffer a further degradation of its competence in an important area of space science. If the nation wants to maintain a position of leadership in solar physics research, a new plan to accomplish the scientific objectives of HRSO will have to be developed.

This action is the latest in a series of regrettable moves to cancel or delay scientific missions of the highest priority, such as the United States component of ISPM (Ulysses), Galileo and the Mars Observer mission to mention only three. As you know, in the case of HRSO as in the case of ISPM and others, there has been an impact not only on the credibility of our commitment to space science with our own scientific community but with our European colleagues as well. This may exacerbate an already alarming defection of our western scientific colleagues to the space science programs of other nations.

The Board appreciates the circumstances that have led the Office of Space Science and Applications to make difficult decisions. We are enthusiastic about the measures being taken by Dr. Fisk to restore the vitality of the OSSA programs. But we deplore the situation in which a lack of resources has apparently led him to proceed with new initiatives at the cost of an existing program of the highest scientific merit.

We urge you to attempt to release the resources needed to proceed with a viable scientific and technical program for HRSO. We note that the mission can be launched on an expendable launch vehicle (ELV) of the Delta class with a great improvement in the quality of its scientific return because of the fully sunlit orbit and the increased observing time that would result. Launching HRSO with an ELV would be in accord with the recommendation of the SSB, the Council of the National Academy of Sciences, the NASA Advisory Council and NASA's own policy to use the space shuttle as a unique resource for those occasions when the assistance of humans in orbit is a requirement.

We are confident that you share our concern about the slow pace of the recovery of our space science program and, as we have indicated in recent communications, applaud your recent effort to step up that pace. We trust that you will agree with us that supporting HRSO is an important element in that recovery effort.

Yours truly,

Thomas M. Donahue

Chairman

Space Science Board