

FINDINGS OF THE NASA SOUNDING ROCKET WORKING GROUP

May 20, 1992

PROPOSALS TO UPGRADE THE POKER FLAT RESEARCH RANGE

We recognize that certain actions must be taken immediately to keep the range in operation and support NASA's actions to do so. We also urge NASA to support such efforts as will provide a reliable down-range site for all-sky TV camera, meridian scan photometer, and magnetometer measurements, with appropriate data transmission to the launch site. These data are needed to make timely launch decisions, and actions should be taken to plan for and obtain the most immediate transmission of data to the launch range consistent with reasonable cost.

A suitable display of optical and magnetometer observations needed by principal investigators to make launch decisions at the Poker Flat Optical Observatory is highly desirable. We understand that the present observatory has been conditionally condemned and will need to be replaced. We urge that any new facility include accommodation for an appropriate console that will support the NASA science program.

In addition to the improvements addressed above, we recognize that additional scientific instrumentation could significantly upgrade the value of the site both as a launch range and an arctic research facility. Facilities not integral to NASA's requirements might appropriately be funded via grants from other agencies.

ALLOCATION OF RESOURCES FOR SUBORBITAL SCIENCE IN CONNECTION WITH NASA'S SMALL EXPLORER AND LARGER MISSION PROGRAMS

The Working Group has reviewed several examples of suborbital science that support and enhance observations of the Earth's upper atmosphere, ionosphere, and magnetosphere that will be made by the SAMPEX and FAST small explorers and by spacecraft in the ISTP program. Support of NASA's major flight program objectives, via complementary or supporting suborbital observations, has been identified as a major aspect of the sounding rocket program. We urge that NASA identify and/or solicit concurrent suborbital observations that could support or enhance its other missions, particularly the small explorer missions, and that could be carried out with existing payloads at existing launch sites. We believe that such "target of opportunity" science should be supported by NASA, if only at a low level of effort, without competing with the ongoing suborbital program. A relatively small amount of money could be held in reserve by NASA's Suborbital Program Office for this activity.

SUBORBITAL SCIENCE WORKSHOP

The Working Group recognizes the benefits to space physics of close

collaboration between experimenters on orbiting space missions, suborbital and ground-based observers, and theoreticians. Such synergism can be advanced by appropriately focussed workshops and discussion groups, as has been the case in the proposed Solar Research Base Enhancement. The possibilities of accomplishing or enhancing major NASA Space Physics objectives using sounding rockets can also be explored effectively at such meetings. We therefore urge the space physics community to consider how it might address the objectives of the NASA program in the context of such workshops.