

DRAFT

RECOMMENDATIONS OF THE
SOUNDING ROCKET WORKING GROUP, MAY 23, 1995

(TO BE MARKED UP AND RETURNED TO R. PFAFF BY AUGUST 28, 1995)

1. On the Re-structuring of the Sounding Rocket Program by NASA HQ:

Despite the fact that sounding rockets continue to provide vibrant, cutting-edge, and cost-effective scientific return to NASA, the committee understands the reasons to re-structure the sounding rocket program at NASA HQ and that one way to do this is via a new program entitled, "Frequent, Low Cost Access to Space". Although such an "overarching" program provides considerable programmatic flexibility, we are concerned that the sounding rocket program may become diluted in the process. Consequently, we urge our program leaders not to allow the essence, vitality, and long-standing advantages afforded by sounding rocket missions to be compromised within the new programmatic context.

The Sounding Rocket Working Group also strongly believes that a baseline effort for the sounding rocket program must be established and maintained. This appears to be a necessity both for planning purposes at Wallops, so that the project office can maintain its necessary and vital manpower skills and contractual agreements, and also for the scientific community, since the users must be able to plan and execute research programs (that include instrument testing and graduate student training) within a reasonably steady programmatic infrastructure.

We also have a special concern for all shuttle-related missions which are to be included in the "Frequent, Low Cost Access to Space" program: The committee feels that the costs involved in the "human-rating" requirements of the shuttle for various experiments as well as the time uncertainties due to Shuttle manifest irregularities, should not be underestimated.

2. On the Recent Space Vector Digital ACS Failures for Space Physics Missions:

The committee appreciates the thorough presentation by the Wallops Flight Facility on the many recent Space Vector digital ACS failures. It appears that more and more space physics missions are utilizing this type of ACS system, particularly since a well-working ACS enables a significant increase in the science return from many such experiments. However, it is also clear that serious ACS malfunctions can seriously impede the quality of the data gathered and can furthermore easily instigate a mission failure. The committee shares the frustration of the Wallops engineers that no consistent cause of the problems has been identified. Nevertheless, we urge Wallops to place extra attention on this matter. Although we were told that additional testing would only have caught a few of the problems identified, it seems that a more extensive test procedure and software checking is a reasonable and prudent approach to better understanding the systems. Since the ACS staff at Wallops has been reduced, it appears that Space Vector must become more responsible in the evaluation of their systems as well.

3. On the Accessibility of Wallops Sounding Rocket Personnel via Electronic Mail.

In the last 5 years, electronic mail (E-mail) has emerged as an affordable, highly efficient, and very accessible medium to communicate between remote sites. Such mail is near-instantaneous and provides a very useful way to exchange information about rocket

experiments. As all of the rocket users in the scientific community are already linked together via E-mail, we encourage all Wallops sounding rocket personnel, including managers, engineers, and, where appropriate, technicians, to be provided E-mail addresses with regular access to terminals and to use this medium to exchange technical information, whenever possible.