Recommendation 5

The Committee recommends that the Federal Government's funding for the communications component of the Space Program be gradually decreased and that the principal responsibility for research and technology development in this field be assumed by private industry.

The Committee views the MSAT program as having great value for Canada and we believe the Federal Government should continue to provide funding for technology and market development for that project, as indicated in the Space Plan. The Federal Government has stated that it will be a major user of MSAT services when the system is operating. This, however, is an operational decision by those departments and agencies of government which will use the service and the Committee does not believe that such leasing arrangements are appropriate for inclusion as part of Canada's Space Program.

Recommendation 6

The Committee recommends that the Federal Government continue to support the MSAT project but that funds for leasing MSAT services should be drawn from the budgets of user departments and not be charged against the Space Program budget.

The Committee has received a considerable body of disturbing testimony on the decline of space-science funding in Canada. As noted earlier, funding has declined from approximately 15% of the Space Program budget to less than 10%. This level of funding is significantly lower than that provided in the space budgets of other Western countries. In the United States, for example, NASA spends 20% of its total budget on space science.

The Committee is aware that there is generally insufficient funding for basic scientific research in Canada. The situation which exists in space research is perhaps instructive in indicating the severe negative effects that may accrue to a science program when research funding is inadequate.

Canada's initial, and very successful, ventures into space were science-based and by the early 1970s the Canadian space-science community included almost 100 researchers in government laboratories and universities. Since then, however, the situation has gradually, but markedly, deteriorated. Since 1971, not a single Canadian scientific satellite has been launched. Moreover, there has been a lack of hiring of space scientists over the last fifteen years and the physical infrastructure supporting the activity has deteriorated. This decline in support for space science has discouraged many high-calibre graduate students from seeking a career in space research. As a consequence, Canada is facing a critical shortage of space scientists and engineers in the years ahead.

The Committee is convinced that a substantial increase in funding for space science is needed if Canada is to be able to participate effectively in international space projects in the future. Professor R.P. Lowe of the University of Western Ontario has summarized the situation in succinct terms:

> Canada is not only unique in having a space science budget that is small by both absolute and proportionate standards; it also is unique in not having an independent launch capability to which it has guaranteed access on a continuing basis. This handicap is a continual constraint in the formulation of Canadian activities in space although it potentially could provide some advantages. It forces our space scientists to seek out