

- (4) that world space activities will continue to be dominated by the United States and the Soviet Union.

In the situation which I just described, those technologically-advanced countries desiring to pursue active space programs appear to have three practical options open to them in the short- and medium-term:

- (1) Individual countries could work out bilateral co-operative arrangements with one of the super-powers (the Canadian *Alouette* program, the proposed earth-resource satellite "read-out" arrangements and the proposed launch of a domestic-communications satellite are typical of this kind of co-operative endeavour with the United States).
- (2) A number of countries could join forces to provide the necessary resources for a full-fledged space program comparable to those of the super-powers (there are proponents of this approach within the European Space Conference).
- (3) A group of countries could work out a joint approach to provide a framework for co-operation with the United States.

The United States is now proceeding with the so-called post-*Apollo* program, the principal feature of which would be the development of a re-usable launch-vehicle, described as the "space shuttle", designed to place large payloads in orbit (for space-stations and other uses) at substantially reduced cost. In late 1969, Dr. Paine, the former head of NASA, outlined in very general terms a proposal to a number of countries which would permit co-operative participation in the post-*Apollo* program. This offer has led most advanced countries to review the scope of their space activities.

There were indications at the July ministerial meeting of the European Space Conference that they may be inclined to adopt the third option of a collective approach to the post-*Apollo* offer as they have been encouraged to do so by the United States, provided they can negotiate for the provision of a guaranteed launcher service for their own scientific and applications satellites. While not losing sight of the great disparity between the United States and European space efforts, they are also anxious to identify some discrete and essential components which Europe could contribute to the future space system so that the general relationship would embody a measure of true interdependence between the partners.

However, at a recently concluded 13-nation conference of the two European organizations for space and launching research, Britain took the lead in rejecting the United States proposal for a European contribution to the post-*Apollo* program. Only France, West Germany and Belgium appear to be prepared to open talks with NASA at this time. This new development must be seen in the context of the currently accelerating evolution towards a single European space organization.

This unifying trend coincides with the reopening of negotiations for Britain's (and other) applications to join the European Economic Community, and this pressure of political and economic motivation could result in remedying some of the shortcomings of the past disjointed efforts in space.