

measures. As they picked up missile launches, the rockets would swarm to their targets and destroy enemy missiles in the slow, boost phase of flight. According to retiring SDI chief, James Abrahamson, Brilliant Pebbles would cost about US \$25 billion – significantly less than any other major SDI system discussed to date.

Critics, however, have raised familiar objections and one new one. The high IQ rockets might be fast enough to catch current Soviet missiles in the boost phase, but according to some scientists, would be easily defeated if the Soviets built fast-burn boosters which would need to fire their engines for only sixty seconds or less. The new objection is the pollution of space: tens of thousands of new objects in space would significantly add to the danger of collisions, and the accidental destruction of satellites would

produce even more space junk which might start a further round of collisions.

### ASATS – the Country Cousins

■ In his last Report to Congress, outgoing Defense Secretary Frank Carlucci made a determined pitch for anti-satellite (ASAT) weapons. "...a comprehensive ASAT capability," he said, "is an absolute necessity to prevent the Soviets from using hostile space systems to the detriment of our forces." ASAT weapons would provide an early pay-off to SDI research, since many weapons now under development as possible ABM systems would be effective against satellites where they might not be against missiles. The US depends heavily on satellites for military communications, early warning, and navigation, as well as for civilian uses.

For this reason an ASAT race

with the Soviet Union would bring mixed blessings. While Carlucci and the Pentagon emphasize the need to transform some Star Wars projects into ASAT capabilities, others argue that the best protection would be to negotiate a ban on ASATS. Most US satellites are in high orbit, and currently out of the range of the elementary Soviet ASAT system. In the middle of this debate is new National Security Advisor Brent Scowcroft, the co-author of a recent report recommending a ban on high altitude ASATS on the grounds that this would preserve for both sides a warning and communication capability in a time of nuclear alert.

### NATO's Mid-Life Crisis

■ NATO's fortieth birthday party in May will be mainly remembered for the family squabble over short-range nuclear forces (SNF). The controversy over these weapons has been slowly building since the signing of the Intermediate-range Nuclear Forces (INF) Treaty, which eliminated missiles with ranges between 500 and 5,000 kilometres. For NATO this left in place a variety of nuclear weapons deliverable by aircraft, sea-based cruise missiles, and Lance, a short-range, land-based missile. In the aftermath of INF, the United States, strongly supported by Prime Minister Thatcher, is committed to a follow-on to Lance which would produce a warhead with a longer range – about 450 kilometres – and improved accuracy. The new missile would be phased in around 1995 as Lance reaches the end of its effective life.

Washington, however, wants West German support for the programme before proceeding with the development. Faced with an electorate well aware that SNF are intended for use on German soil, West German Chancellor Kohl has declined any such commitment. Increasing West German sentiment supports negotiations

with the Soviets on SNF, and Kohl hopes to postpone the decision until after the 1990 election in order to limit the electoral damage which would result from support of the US position. Many of the European NATO countries, including Norway, Denmark, Belgium, Italy and Spain, appear to side with the Federal Republic in seeking a delay in the decision.

### New European Visions

■ While efforts were made to paper over the differences, however, influential politicians were raising more fundamental questions. Echoing Soviet calls for a "European House," West German Foreign Minister Hans-Dietrich Genscher appeared to lead the new thinking. In an April speech he described his vision of a new Europe:

The object is to demilitarize and de-ideologize East-West relations, and at the same time to expand and strengthen the co-operative elements. A peaceful order in Europe ... in which nations can live without fear of one another, and in which they can choose their own political and social system, is no longer merely a vision...

Meanwhile, in the country which gives its name to the Warsaw Treaty, Polish political leaders of all groups took part in a historic "Roundtable" at the beginning of April. The resulting agreement calls for elections in Poland in June. Thirty-five percent of the lower house is open to contest (the ruling Communist party has first claim on the rest), and all of the upper house will be contested. While the government cannot lose power, it is expected to suffer severe setbacks in the elections. Poland intends to remain in the Warsaw Pact, but it seeks stronger participation in pan-European discussions on security. In particular, the Government wants to make Poland the home of a European war-risk-reduction centre which would be a clearing house for all information on troop strengths and movements in Europe. □

– DAVID COX

The 1989 budget announced by Michael Wilson in late April has overturned or delayed all the main proposals of the White Paper. The 1989–1990 defence estimates provide for an increase of \$95.6 million, or 0.9 percent over the 1988 forecast expenditures. This represents a reduction of \$575 million from the anticipated 1989–1990 budget, which, following the White Paper, was intended to provide a 3.3 percent increase to compensate for inflation, and two percent growth. The Government has stated that \$2.74 billion will be stripped from defence expenditures over the next five years, but claims that in 1993–1994, at the end of the deficit-reduction period, the base of defence funding will be restored to the level that would have been achieved under the White Paper formula of two percent real growth per year.

Most of the major planned weapons programmes are affected by this reversal of policy. The nuclear submarine programme has been scrapped, leaving uncertain the question of a replacement programme for the three aging Oberon-class submarines now approaching the end of their useful life. Replacement CF-18 aircraft have been cancelled, as have additional long-range maritime patrol aircraft. The purchase of new tanks for Canada's European forces has been reduced by half, and delayed past the time when, according to the White Paper, the forces would need to be withdrawn from Europe for lack of equipment. The purchase of 820 all-terrain vehicles for the militia has been reduced by more than half, implying that the planned large increases in the militia will probably also be abandoned or reduced. While 1988 saw an increase in military personnel of 1,174 in accordance with the government's promise to increase the size of the armed forces, the new measures call for a reduction of 2,500 personnel. Finally, fourteen military bases in Canada will be closed or reduced in size.

The defence estimates note that despite the "short term" funding reductions, "the White Paper remains an accurate statement of Canadian defence policy and the objective which the Government intends to pursue." There will be no formal revision of the White Paper, therefore, even though its central proposals have been shaken by the budget cuts.