

Navy which his predecessor, John Lehman, had coined as a slogan when taking office. Although the Carlucci budget is seen as an attempt to make a more realistic start in the coming negotiations with Congress, it is expected that major belt-tightening lies ahead as the Pentagon seeks to meet the Administration goals for spending reductions in the years ahead.

### **Air Defence Initiative**

■ The development of the Air Defence Initiative (ADI) research programme has assumed greater significance to Canada following the White Paper announcement that the government was prepared to participate in ADI research. In contrast to SDI, ADI is a very small programme, with planned funding of under US \$300 million in fiscal year 1988. The programme appears to be concentrating on research into radar technologies that offer the promise of reliable detection and tracking of cruise missiles with stealth characteristics. In the future, submarine-launched cruise missiles will greatly complicate this task since, unlike the bomber, the submarine itself will be difficult to locate. At the moment there is little room for optimism about the prospects of intercepting future generations of Soviet cruise missiles. However, the ADI programme appears to be placing increasing emphasis on anti-submarine warfare, which may be of considerable interest to Canada, particularly in the light of the White Paper's concern with the surveillance and control of Canada's three-ocean coastline.

### **New Radars**

■ In January the United States Air Force announced that the Over-the-Horizon-Backscatter (OTH-B) radar facility located in Maine, and intended to give long-range surveillance of the Atlantic approaches to North America, was operational. The OTH-B radar achieves its wide-area coverage by bouncing signals off the ionosphere. This gives it a long range, but also leaves a large "dead space"

(about 800 kilometers) adjacent to the radar itself. This will be covered either by another OTH-B radar located in the centre of the United States, or by coastal radars working in co-ordination with the OTH-B.

The Maine facility has tracked Soviet air reconnaissance flights at a distance of 2,000 kilometers. It is now about to be tested against drones with much smaller radar cross-sections than Soviet bombers. However, the real test of the OTH-B radar in the future will be against aircraft or cruise missiles with stealth characteristics. The OTH-B radar was not designed to cope with objects as small and difficult to identify as twenty-foot long cruise missiles, but this increasingly is the surveillance challenge ahead. In particular, Soviet submarines deployed off the US and Canadian coasts, and armed with cruise missiles, will constitute a formidable detection problem in the 1990s.

### **Satellite Surveillance Systems in Doubt**

■ While the capabilities of the OTH-B radar and the North

Warning System against predicted Soviet cruise missile developments remain to be fully determined, two futuristic surveillance systems seem to have fallen into limbo. Teal Ruby is an infra-red satellite surveillance system. In the early days of SDI it attracted some attention because, although it was already under development, it was brought into the SDI programme. Teal Ruby was intended to demonstrate the capability to identify airplanes and cruise missiles from space. Although not directly involved in the research, Canada was to participate by providing chase planes for the experiment.

However, with the demise of the Challenger Shuttle in January 1986, Teal Ruby lost its launch position, and now has no scheduled launch date. Expensively warehoused, the multi-million dollar satellite appears to be obsolescent before even being launched. Follow-on experiments based on infra-red sensors do not seem to be imminent. Similarly, space-based radar, once thought likely to be ready for initial demonstration tests in the early 1990s, also seems

to have lost favour. The uncertainties of the technology, the costs, and the competition for launch positions have combined to make space-based radar a distant prospect.

### **Advanced Cruise Missile**

■ In January, press reports indicated that the production schedule of the advanced cruise missile was significantly delayed. Prototypes of the missile are now being tested, but scheduled deployment at B-52 bases may not now take place until 1989. The performance of the Advanced Cruise Missile against the OTH-B and North Warning radars will be a major test of the surveillance systems being built for the 1990s.

### **The Persian Gulf**

■ The United States Navy has begun to reduce its naval forces in the Persian Gulf. The move was precipitated by the need to reduce the costs of maintaining a large task force in the area, and military analysts have also noted that the British and Soviet navies are protecting shipping with considerably fewer warships than is the United States. But there seems little inclination in Washington to follow up proposals that the United Nations create a naval peacekeeping force.

### **Soviet Withdrawal From Afghanistan?**

■ On 8 February General-Secretary Gorbachev proposed a timetable for Soviet withdrawal from Afghanistan. Subject to agreement in Geneva on a settlement of the Afghan issue, Soviet troop withdrawals will begin on 15 May, and be completed ten months after. The package proposal under discussion would include international guarantees that the agreement be honored, but there are no indications that there would be a UN or international presence in Afghanistan. □

- DAVID COX

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## **ALLIANCE NEWS**

### **Conventional Balance After INF**

■ In the aftermath of the Intermediate-range Nuclear Forces (INF) Treaty, the US is preparing to present to NATO a plan to offset the alleged conventional imbalance of forces in Europe. The plan emphasizes technological advances in unmanned drones, electronic warfare systems and precision guided missiles rather than tanks and aircraft, and is described as a modernization and upgrading of forces rather than a build-up. However, NATO is also discussing new nuclear-armed missiles with ranges up to 500 kilometers – the range not covered by the INF Treaty. Air-to-surface missiles with ranges of 160 kilometers and an increase in the number of nuclear artillery shells are also under discussion.

### **British/French Nuclear Co-ordination**

■ Britain and France continue to discuss co-ordinated nuclear planning, but with little progress. The issues include the joint construction of a air-launched cruise missile, and the co-ordination of nuclear targeting by their respective submarine fleets. France is not a participant in the NATO nuclear planning group – a consultative body which discusses NATO nuclear weapons deployment.

### **Relocating the US Air Force in Spain**

■ With the decision by Spain to require withdrawal of the 72 US F-16 fighters from Torrejon within three years, the future basing of the aircraft remains a matter for NATO consideration. The European allies have been asked to share the cost of relocating the F-16s, which are capable of carrying nuclear weapons. The most likely move is to Italy, which has indicated that it is willing to accept the aircraft.