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Pocket guide to Defence

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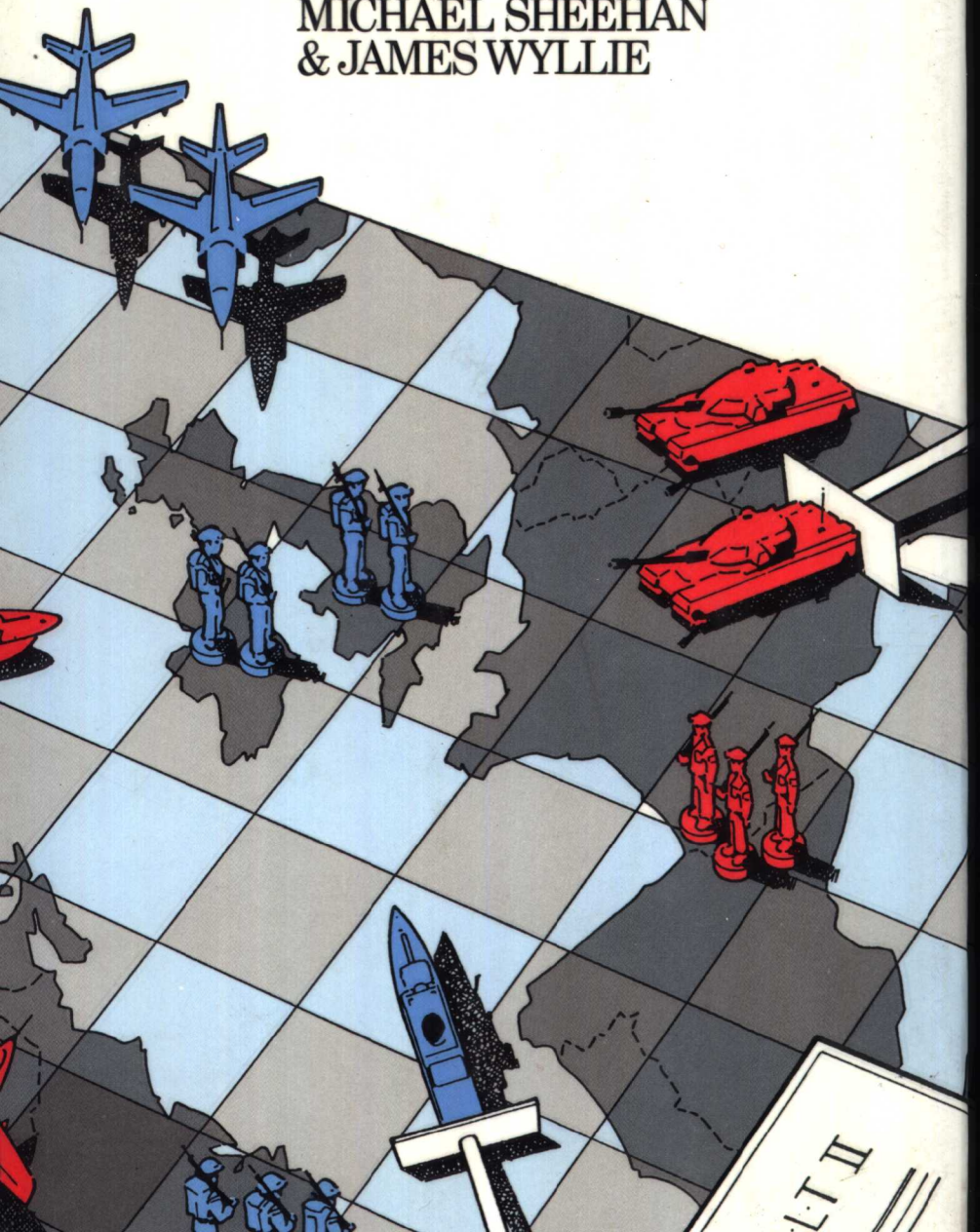

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Preface

Over the past 40 years the international state system has expanded in numbers more than four-fold, ideological and military competition have created a complex set of political and strategic relationships across the whole system, and recourse to military force or the build-up of military power in efforts to protect values and achieve objectives is commonplace. The presence of nuclear arms in the environment in which much of this behaviour occurs makes the understanding and management of the business of defence and international security all the more vital.

In this pocket guide we have selected what we deem to be the salient strategic concepts, political relationships, military alliances, historical events, technologies, military bases and other factors which have shaped and continue to influence defence and international security throughout the world. No guide can be definitive, but we have made every effort to include what we think has been, is, and will be important in our security environment. Large-scale quantitative analysis has been eschewed because there are other well-known publications that devote themselves solely to that task, for instance the excellent *Military Balance*, published annually by the International Institute for Strategic Studies in London. Nor was it our intention to give detailed descriptions of particular weapon-systems as there are many specialist publications in that narrow field. We did not want this guide to be a dictionary of biography, so personalities are mentioned only when apposite to a particular entry.

We hope that this pocket guide will assist all students of defence and international security – journalists, military officers, civil servants, undergraduates, politicians and interested members of the public – to appreciate better the roots, characteristics, language and problems of one of the most vital and sensitive areas of contemporary government.

We are grateful to *Punch* magazine for permission to reproduce the cartoons on pp. 66, 70 and 183; to *The Washington Post* for permission to reproduce the cartoon on p. 228; to *The Disarmament Times* for permission to reproduce the cartoons on pp. 30 and 204;

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Michael Sheehan
James H. Wyllie

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Acetylcholinesterase inhibitors. V-agent NERVE GASES, such as Tebun and Sarin. They work by inhibiting the action of a body chemical called cholinesterase which breaks down acetylcholine, the chemical that causes muscular contraction. If the action of cholinesterase is interfered with, the body cannot control its muscular motions and goes into violent contractions. The victim, unable to control his breathing, dies of asphyxiation.

See VX AGENTS.

Action–reaction. An enduring image of the ARMS RACE and a phenomenon well described by President John F. Kennedy's Secretary of Defense, Robert McNamara, in 1967:

> It is essential to understand that the Soviet Union and the United States mutually influence one another's intentions. Actions – or even realistically potential actions – on either side relating to the build-up of forces necessarily trigger reactions on the other side.

It is clearly true that states to a large extent do assess their military requirements with the power of the most likely adversary in mind and to that extent developments in the military power of one state are likely to affect those in the other. The action–reaction sequence is not automatic, however, and other explanations of weapon development are important.

States accumulate military power for a number of reasons. During the 1960s, for example, the USA and USSR increased the size of their conventional and nuclear forces dramatically, but the increase in US conventional forces was a result of the demands of the VIETNAM WAR, whereas Soviet increases were fuelled by clashes with China and the need to garrison CZECHOSLOVAKIA as well as the desire to 'show the flag' with an ocean-going navy. The increases therefore involved no action–reaction between US and Soviet forces *directly*. In strategic weaponry, however, the USSR *was* responding to a perceived inferiority *vis-a-vis* the USA, a perception reinforced by the debacle of the 1962 CUBAN MISSILE CRISIS. A delayed action–reaction process was operating.

Afghanistan. Became a focus of attention following Soviet invasion of December 1979. In April 1978, in the process of crushing left wing opposition, the republican government of Muhammad Daud was overthrown in a coup by left wing military officers. The new Marxist regime, which suffered from internal feuding, had little support outside the capital, Kabul, and throughout 1979 faced a deteriorating internal security situation. Radical land reform and social policies were very unpopular, and tribal leaders often used religious sentiment to coalesce opposition to the government. The opposition was anti-modernist and anti-Marxist, and there was sporadic guerrilla activity against the government. During 1979 the USSR became alarmed at the level of unrest in Afghanistan, and pressed for less radical policies and the incorporation of opposition elements into a broader-based government. The Afghan leader, Amin, overcame a coup attempt (probably prompted by Moscow) in September 1979. From the autumn of 1979 onwards there was a slow but steady build-up of Soviet forces in Afghanistan, with about 5,000 Soviet troops in the country by Christmas. Between 25 and 27 December a further 5,000 Soviet troops with heavy equipment were airlifted to Kabul. On the night of 27 December Soviet forces took over key positions in Kabul and began to invade across the border. Within a week, more than 50,000 heavily armed Soviet troops were in Afghanistan. Amin was assassinated, and Karmal, a former deputy prime minister and amenable to contol from Moscow, was placed in control of the government.

Given that the Soviet intervention was intended to slow down the modernization process, it is ironic that the Soviet-backed Karmal government has encountered such opposition since December 1979, especially in the countryside. About half the Afghan army deserted to the guerrillas, the *mujaheddin*. It is estimated that there are about 100,000 Soviet troops in Afghanistan, and that there are large tracts of the countryside where the Kabul government exercises little or no authority. Estimates of Soviet casualties vary considerably.

There were fears among some conservatives in the West that the Soviet invasion was the first step in an offensive towards the Gulf and the Indian Ocean. In reality, the occupation of Afghanistan does not improve the Soviet strategic position in

south-west Asia significantly, particularly given that 100,000 troops are bogged down in a protracted guerrilla war. The effect of the Soviet action in December 1979 on East–West relations was to give critics of DETENTE considerable ammunition. US–Soviet relations deteriorated to their lowest level since the Cuban Missile Crisis – a level from which they have not yet fully recovered. In Afghanistan the military and political stalemate continues. UN-sponsored negotiations in Geneva have proved fruitless, and the Soviet Union seems prepared to suffer the economic and military costs of sustaining a pro-Soviet government in Kabul.

See CARTER DOCTRINE; DETENTE

Agent Orange. Chemical agent based on trichlorophenoxyacetic acid (245T) used by USA as a defoliant during the VIETNAM WAR. Sprayed from C123 transport aircraft, the chemical was designed to destroy the dense jungle cover from which the VIETCONG mounted their attacks, and on occasion was used also to destroy Vietcong food plantations. The US Department of Defense stated in 1966 that the chemical was 'not harmful to people, animals, soil or water'. However, Agent Orange contained minute quantities of the poison dioxin and during the course of the war enormous quantities were sprayed. The dioxin has been held responsible for the subsequent high incidence of still-born or deformed children born in Vietnam and for the abnormally high cancer rate, and birth deformities in the progeny, of former American servicemen with Vietnam experience. In 1984 the American manufacturers of Agent Orange agreed to pay $180 million to a medical trust fund for Vietnam veterans and their families.

Agreement on Measures to Reduce the Risk of Nuclear War between the USA and the USSR (1971). The first visible outcome of the SALT talks; a treaty designed to reduce the risk of 'accidental' nuclear war. The agreement, signed at Washington on 30 September 1971, provided for

- Improvement of each side's 'fail-safe' devices and techniques.
- Immediate notification of the other party in the event of an accidental or unauthorized incident involving possible detonation of a nuclear weapon.

- Immediate notification of the other party in the event of a missile warning alert and advance notification of planned test missile launches.

The treaty is of unlimited duration.

Agreement on Prevention of Nuclear War (1973). Agreement signed at the WASHINGTON SUMMIT on 22 June 1973, and viewed by many as a watershed in East–West relations. Enthusiasts for DETENTE have argued that it demonstrated the fundamental common interest of the superpowers in avoiding conflict and promoting a more stable and secure world. *Inter alia*, it binds the USSR and the USA to 'proceed from the premise that each party will refrain from the threat or use of force against the other party and against other counties, in circumstances which may endanger international peace and security'. Many commentators believed the agreement made an oblique reference to Sino-Soviet problems by stating:

> If at any time relations between the parties or between either party and other countries appear to involve the risk of nuclear war between the USA and the USSR or between either party and other countries, the United States and the Soviet Union . . . shall immediately enter into urgent consultations with each other . . .

The agreement is of unlimited duration.

Ailleret Doctrine. French deterrence strategy intended to complement President de Gaulle's political–diplomatic objectives. The Ailleret Doctrine, or '*tous azimuths*' (all horizons) doctrine, which threatened nuclear retaliation against any global target without specifying or excluding a target, was enunciated by General Charles Ailleret in December 1967. It was meant to symbolize French political independence and French global interests and was not based on purely military criteria. President de Gaulle foresaw – mistakenly as it turned out – the imminent disintegration of the bipolar East–West system, the diminution of US and Soviet influence in Europe and elsewhere and a world without 'superpowers'.

The Ailleret strategy required considerable concentration of French defence resources on the procurement of a credible,

long-range nuclear deterrent force and this led to the relative neglect of French conventional forces for many years, even after the departure of de Gaulle from office. The vision of a multipolar world suffered a severe setback in 1968 with the imposition of Soviet discipline on CZECHOSLOVAKIA. A doctrinal consequence of this event was the modification of the Ailleret Doctrine by the FOURQUET PLAN of 1969.

See FORCE DE FRAPPE.

Air superiority. The ability to control the airspace above a certain zone to the extent that one's own forces can carry out their assigned tasks without serious interference from enemy aircraft.

Air-launched cruise missile (ALCM). See CRUISE MISSILES.

Air-to-surface ballistic missile (ASBM). A ballistic missile launched from an aircraft against a target on the Earth's surface, ground or sea. For strategic nuclear purposes, an ASBM is considered to be such a missile with a range in excess of 600 km once launched from an aircraft.

Air-to-surface missile (ASM). A missile designed to be fired from an aircraft against a target located on the ground or on the surface of the sea.

Airborne warning and control system (AWACS). Early warning radar equipment fitted to specialist aircraft to enable detection of reconnaissance and strike aircraft approaching fast and very low to outwit conventional defending radar. Such airborne systems operate inside aircraft circling deep inside friendly airspace. The AWAC system uses look-down radar and powerful computers to detect low-flying hostile aircraft.

The best-known AWAC aircraft is the Boeing E-3A, which employs a modified Boeing 707 airframe with a Westinghouse APY-1 radar mounted in a 30 ft revolving dome on top of the fuselage. NATO states are purchasing 18 E-3As for duties in Europe. Britain opted to develop its own aircraft, the Nimrod, which uses a Comet airframe. The programme is behind schedule and over budget and is failing to live up to performance expectations.

Aircraft. Fixed-wing aeroplanes and rotary-wing helicopters. These may be land-based, sea-based or amphibious.

See AIR SUPERIORITY; ANTI-TANK AIRCRAFT; AWACs; BOMBER; COUNTER-AIR; IFF; PAVE MOVER; REMOTELY-PILOTED VEHICLE; STEALTH; STRATEGIC BOMBING.

Airland Battle. A US Army concept of operations, not yet officially endorsed by NATO. Airland Battle is centred upon combat operations at the Corps level, that is, the level below that of a field army. A Corps would consist of two or more divisions, with supporting services. Like other DEEP STRIKE concepts, it assumes that NATO has the forces capable of holding the initial thrust by the WARSAW TREATY ORGANIZATION (WTO) first echelon and that therefore the key to victory lies in disrupting and destroying WTO follow-up forces. Airland Battle involves tactical concepts; it is about winning battles in the area for which the army Corps is responsible.

Airland Battle represents a change in emphasis. Prior to 1980 US Army thinking was based on tactics of ATTRITION – a dangerous tactic when facing a more numerous opponent. The new doctrine is based on speed and manoeuvre. Corps commanders would use powerful, mobile forces to seek out and destroy WTO SECOND ECHELON units.

Airland Battle is clearly superior to a static, attrition-based, FORWARD DEFENCE strategy in many respects, but it involves great risks. US forces moving forwards would be operating with reduced artillery and air support in areas probably dominated by enemy aircraft. Moreover, while the forces could do great damage to enemy reserves, command posts, supply dumps and so on, they would themselves probably be drawn from units that would normally constitute the Corps reserve, leaving vulnerable gaps at the rear for the WTO forces to exploit. If the advancing forces ran into a Soviet OPERATIONAL MANOEUVRE GROUP, they could be destroyed in detail well forward of the main battle zone.

The concept relies heavily upon reliable intelligence from the battle zone, and the US Congress has shown a tendency to cut back the development programmes of the intelligence-gathering technology which is essential to the success of the Airland Battle doctrine.

See ASSAULT-BREAKER.

Alamagordo. Site of the first atomic explosion. It was here in the New Mexico desert that the atomic age began. On 16 July 1945 a plutonium bomb exploded with a blast equivalent to 14,000 tons of TNT.

Albania. The only member of the WARSAW TREATY ORGANIZATION of 1955 to have withdrawn from the alliance. In 1961 Albania announced that it was ceasing to be an active member. The ultra-orthodox Communist regime in Tirana chose to align with Peking rather than Moscow in the growing SINO-SOVIET SPLIT. Moscow could not bring effective political or military pressure to bear on Albania, which is isolated from the rest of the Warsaw Pact by Yugoslavia and Greece on its land borders, and with a coastline on the Adriatic facing west towards Italy. Albania was never expelled from the Warsaw Pact, and did not formally withdraw until September 1968, in protest over the invasion of CZECHOSLOVAKIA the previous month. While the defection of Albania could be viewed as a 'loss' for Soviet Communism in Europe, it most certainly was not a gain for the West. Albania has, in isolation, continued along an idiosyncratic, autarkic, Stalinist path. Peking derived little political advantage from its political bridgehead in Europe. Owing to Albania's geographical position and minimal political and economic importance, her defection from the Warsaw Pact has had no significant effect on European security.

Aldermaston. Site of the UK Atomic Weapons Establishment. At the Aldermaston site in Berkshire Britain develops the warheads for the UK independent nuclear deterrent, such as those on the POLARIS and Polaris–CHEVALINE missiles, and the gravity bombs carried earlier by the now defunct V-bomber force. Tactical nuclear warheads for service with the British Army of the Rhine and RAF Germany are also designed at Aldermaston.

See INDEPENDENT NUCLEAR DETERRENT; TRIDENT.

Algeria. Former French colony granted independence in 1962 following prolonged guerrilla warfare. Colonial Algeria was administered as a part of metropolitan France by the Ministry of the Interior. French governments were loathe to contemplate secession by Algeria and throughout the 1950s a bloody and

indecisive war was waged between the nationalist guerrilla forces and the French Army, which at one time numbered half a million men in Algeria. The situation was complicated by the existence of a long-established, large and belligerent French settler community.

The Algerian problem led to the fall of the Fourth Republic in 1958 and the elevation of Charles de Gaulle as President of the Fifth Republic. Resolving the Algerian question became a top priority for de Gaulle. In January 1961 a popular referendum in France voted 2 to 1 in favour of granting Algeria self-determination. Against rebellious elements in the French Army and the settler community, who resorted to terrorist tactics in France, de Gaulle proceeded with negotiations with the Provisional Algerian government, which led to the EVIAN ACCORDS of March 1962.

The Accords provided for:

- A cease-fire and complete independence for Algeria following referenda in France and Algeria.
- The protection of certain French interests in return for a French financial and technical aid package.
- Reduction of French troops in Algeria to 80,000 within a year after the referenda and their complete withdrawal within another year.
- Permission for France to use its nuclear and missile testing sites in the Sahara up until 1967.
- Permission to use the naval base at Mers-el-Kabir for 15 years.
- French access to Algerian communication facilities for an unspecified period.

The referenda held in France and Algeria in April and July 1962 respectively overwhelmingly endorsed the Accords.

Allied Command Europe (ACE) Mobile Force. Highly mobile land and air units assigned by various NATO countries to SACEUR for despatch to any threatened area of NATO Europe at short notice. The vulnerable flanks of NATO Europe were very much in mind when the force was formed in 1960 and today exercises are most often held in northern Norway and the eastern Mediterranean. The primary purpose of the ACE Mobile Force is to demonstrate NATO solidarity in times of crises and to

deter any adversary from launching a limited attack with limited objectives in the hope of facing NATO with a 'fait accompli' acquisition of Alliance territory. Any aggressor knows that it will face the soldiers of many NATO members, including the USA, regardless of the location of an attack.

Allied Control Council (1945–8). The quasi-central government for defeated Germany composed of the commander-in-chief of the four occupying forces – Britain, France, the USA and the USSR. The declaratory objective of the council was to govern Germany in a uniform manner in each zone with all council decisions unanimous. The council's jurisdiction governed all economic, social and political matters that would normally be the remit of government but, inevitably, there were strong differences of opinion and practice. Initially France resisted attempts to revive a central administrative structure for Germany, but of greatest consequence in the long term were the differences between the Western Allies and the USSR over economic and political issues. The Allied Control Council met for the last time in March 1948. The breakdown of four-power administration was a manifestation of the considerable distrust between East and West which contributed to the COLD WAR.

See POTSDAM SUMMIT 1945; YALTA SUMMIT 1945

Aluminium. See STRATEGIC MINERALS.

Amur. Scene of the first clash between the regular armies of the two communist states – China and the USSR. Following the SINO-SOVIET SPLIT, relations between the two countries deteriorated steadily throughout the 1960s. In March 1969 fighting broke out between Soviet and Chinese troops at the confluence of the Amur and Ussuri rivers south of the Soviet city of Khabarovsk. The area in question is swampy and largely uninhabited, marked by rivers whose courses are prone to change. Conflict over the exact line of the riverine border at Damansky Island was the specific cause of the fighting.

See SINO-SOVIET SPLIT; SIANKIANG PROVINCE.

Angola. Former Portuguese colony, scene of guerrilla warfare since independence under a Marxist government in 1975.

Fighting against Portuguese colonial rule in Angola broke out in 1961. Insurgent groups fought from bases in the Congo (Zaire), and by the time of the revolution in Portugal in 1974 there were more than 50,000 Portuguese troops attempting to sustain Lisbon's rule in Angola. In 1974 the new Portuguese government promised Angola independence in June 1975. In 1975 fighting broke out between three rival nationalist factions: the National Front for the Liberation of Angola (FNLA), the National Union for the Total Independence of Angola (UNITA), and the Marxist Popular Movement for the Liberation of Angola (MPLA). By 1976 the MPLA was clinging to a small central sector of the country and the capital Luanda until the arrival of 8,000 Cuban troops, with heavy Soviet military equipment, turned the tide in their favour. The Ford administration in Washington failed in its attempts to persuade the US Congress to send aid to the non-Marxist forces. By the spring of 1976 the MPLA seemed to control the majority of the country, and received the recognition of most of the international community as the legitimate government of Angola. Over the past ten years UNITA has continued to struggle against the MPLA, and with covert aid from Washington and often not-so-covert aid from South Africa it has succeeded in regaining control of considerable swathes of countryside to the south and east of Luanda. About 14,000 Cuban troops remain in Angola to provide support for the MPLA government. It is the presence of these troops which the South African government claims is providing the major obstacle to the resolution of the problem of NAMIBIA.

Antarctic Treaty (1959). The first successful international attempt to remove superpower nuclear confrontation from a significant portion of the Earth. Signed on 1 December 1959, the treaty prohibits *inter alia* any measures of a military nature, such as the establishment of military bases and fortifications, the carrying out of military manoeuvres and the testing of any type of weapons within Antartica. The treaty paved the way for subsequent 'non-armament' agreements affecting: Latin America (1967), outer space (1967) and the seabed (1971). The treaty is also significant in that it allowed for VERIFICATION by 'on-site inspection' and on a number of occasions since 1959 the

USSR has allowed US personnel to carry out checks of its Antarctic bases.

Anti-ballistic Missile (ABM) system. A system designed to counter strategic ballistic missiles or their warheads in flight trajectory by intercepting them with defensive missiles. The term 'ABM system' also includes the launchers for firing the interceptor missiles and/or warheads and associated radars. The only currently deployed ABM system is the Soviet GALOSH system designed to defend Moscow, and consisting of 32 nuclear armed missiles.

See BALLISTIC MISSILE DEFENCE; SALT I TREATY; STRATEGIC DEFENSE INITIATIVE.

Anti-ballistic Missile (ABM) Treaty (1972). This limited the superpowers to the following ABM capabilities:

- No more than 100 ABMs and 6 ABM radars around the national capital.
- No more than 100 ABMs and 18 ABM radars, plus 2 large phased array ABM radars at an INTERCONTINENTAL BALLISTIC MISSLE (ICBM) silo field.
- No sea-based, air-based, space-based or mobile land-based ABM systems.
- Research, development and testing and system modernization permitted.
- In the event of ABM systems based on 'other physical principles' being developed, specific limitations on such systems and their components would be subject to discussion and agreement in accordance with the treaty.

In July 1974 a Protocol to the treaty was signed which further restricted the two sides to a single ABM site each. The USA chose to defend an ICBM field, but in fact never completed the installation of an ANTI-BALLISTIC MISSILE SYSTEM. The ABM Treaty is of unlimited duration.

See BALLISTIC MISSILE DEFENCE; GALOSH; INTERIM AGREEMENT ON THE LIMITATION OF STRATEGIC OFFENSIVE ARMS; LASER WEAPONS; PARTICLE BEAM WEAPONS.

Anti-satellite weapons (ASATs). Weapon systems designed for destroying or interfering with the normal function of artificial

Earth satellites. Both the US and Soviet armed forces are highly dependent upon satellites for early warning of attack, verification of arms control agreements, photographic and electronic reconnaissance, communication, weather forecasting, navigation and weapons targeting. Previous methods of doing the same jobs have been abandoned to an extent that would make it very difficult now to turn away from the convenience of satellite-based systems. Any threat to satellites is therefore of enormous military and political significance.

In 1968 the USSR began testing an ASAT system, and has since refined this system in a series of orbital tests. The straightforward technique is to fly another satellite into the vicinity of the target and then detonate explosives on board, turning the satellite into a mass of fragments which shatter or incapacitate the target. To date, however, the Soviet system has not been tested in orbital planes or at heights characteristic of US satellite paths.

The US ASAT system is more recent, but more sophisticated and potentially far more effective. It consists of a rocket fired into space by a high-flying F-15 aircraft. Guided by infra-red sensors and an on-board computer, the miniature homing vehicle destroys its target by ramming it. The US Air Force has established a new Consolidated Space Operations Centre (CSOC) in Colorado to coordinate any future ASAT operations. The ability of the US space shuttle to retrieve satellites in orbit or to mount lasers in its cargo bay gives it a potential ASAT capability.

Anti-submarine warfare (ASW). The NATO navies tend to characterize ASW in terms of five requirements:

- Detection – the ability to determine that a submarine actually exists in the area under observation.
- Classification – determining whether the target is real or false, whether it is hostile or friendly and if hostile, what type of submarine it is.
- Localization – acquiring an accurate 'fix' on the target.
- Attack – the use of weapons capable of attacking the submarine at various depths.
- Destruction – rendering the submarine inoperable.

All five steps require a high degree of technical sophistication.