Chapter 4

OPEN SKIES

Contents

Box

Figure

Tables

Chapter 4
OPEN SKIES

Summary

One example of how aerial surveillance might be used in a multilateral agreement can be found in the Open Skies Treaty intermittently being negotiated by the members of the North Atlantic Treaty Organization (NATO) and the now dissolved Warsaw Treaty Organization (WTO).[1]

The goals of the Open Skies Treaty are broad: to further international openness; to reduce tensions; to enhance military transparency and predictability; to further the progress of arms control; and to promote a more open Soviet society. In sum, the overall goal could be described as international confidence building. This is to be accomplished by opening the national airspace of the participants to relatively unrestricted overflights by aircraft carrying sensors and inspectors from other countries.

Designing a treaty to build confidence is a much more nebulous and subjective task than devising schemes for monitoring compliance with specific agreements. As of this writing, negotiations are stalled due to deep divisions between the United States and the Soviet Union over the degree of intrusiveness required to build an appropriate level of confidence. In general, the United States argues for maximal intrusiveness, while the Soviets hold out for tight restrictions on all aspects of the overflights. Other NATO and former WTO states tend to occupy the middle ground, but when pressed, lean toward the U.S. position.

Introduction

On May 12,1989, during a speech at Texas A&M University, President George Bush resurrected President Dwight D. Eisenhower's 1955 proposal for a multilateral Open Skies Treaty. The Open Skies agreement he proposed would send NATO aircraft carrying sensors over Warsaw Pact countries and vice versa. The purpose was to use the characteristics of aerial surveillance to promote openness and to further reduce tensions in Europe. While the original proposal in 1955 was suffocated by an unfavorable political climate, the closing days of the Cold War offered more propitious conditions. (See table 4-l.)

Despite an initial period of public skepticism, the superpowers agreed to begin negotiations on the Open Skies initiative. Gradually, experts in the arms control field began to reconsider the utility of aerial surveillance as a component in international treaties. Just as the Intermediate-Range Nuclear Forces (INF) Treaty paved the way for broader discussions of the utility of on-site inspections, Open Skies seemed to move aerial surveillance into the realm of the practical.

Open Skies offers a detailed example of the issues involved in negotiating multilateral overflights. While most of these issues will surface in any negotiation on aerial surveillance, Open Skies does have one unique quality: its goals have been defined so broadly that no objective standard exists for establishing what the characteristics of the flights should be. Unlike a monitoring measure intended to search for a specific weapon system, inspect a site, or warn of a particular activity, Open Skies flights would aim to build confidence among the signatory countries.[2] As is discussed below, the vagueness of the goals of Open Skies has given Soviet negotiators some basis for their attempt to limit the intrusiveness of the treaty.

Open Skies—1955

In the summer of 1955, an Iron Curtain separated East and West Europe. Hard information about the intentions and military capabilities of the Eastern bloc was difficult to obtain. Early American attempts at clandestine aerial surveillance had been met by ever-increasing Soviet air defense capabilities. Overflights of Soviet territory by the super-

[1]The military structures of the Warsaw Pact were abandoned Apr. 1, 1991. The final political remnan ts of the WTO were disbanded on July 1, 1911. (See "Warsaw Pact Formally Ends," *The Washington Post,* July 2, 1991, p. Al 1.

[2]As mentioned in ch. 2, the parties t. the Open Skies negotiations agreed in principle that an Open Skies Treaty should support other arms control agreements. However, as the negotiations now stand, no such support has been written into the treaty. The Conventional Armed Forces in Europe (CFE) Treaty and the Strategic Arms Reductions Talks (START) are but two of the treaties and potential treaties that might benefit from overlapping monitoring coverage with Open Skies. However, such coverage would tend to be haphazard and incidental, since it is not being formally addressed in the negotiations.

Table 4-I-Open Skies Chronology

Date	Event
July 21, 1955	President Eisenhower's "Open Skies" speech; series of proposals follows.
April 29,1958	Soviets veto final Eisenhower proposal for an Open Skies regime.
May 26, 1972	Strategic Arms Limitation Talks (SALT 1)legitimize national technical means (NTM) of verification.
May 12, 1989	President Bush's Open Skies speech.
September 23,1989	Soviet Foreign Minister Shevardnadze and U.S. Secretary of State Baker agree in principle to Open Skies concept and call for international conference on Open Skies.
September 25, 1989	Canada offers to host the Open Skies conference.
December 14-15, 1989	NATO ministers finalize a common Open Skies position.
January 4-7, 1990	Canadian-Hungarian mock overflight.
February 12-28, 1990	Open Skies first round, Ottawa, Canada.
February 13, 1990	Open Skies Communique.
April 24 to May 10,1990	Open Skies second round, Budapest, Hungary.
May 12, 1990	One-year anniversary of Resident Bush's Open Skies speech; possible date for signing Open Skies Treaty passes without an agreement.
October 3, 1990	Unification of Germany.
April 1,1991	Warsaw Treaty Organization's military organization is officially disbanded.
July 1, 1991	Warsaw Treaty Organization informally dissolved.

SOURCES: *The Arms Control Reporter 1990; The Disarmament Bulletin,* Canada, External Affairs and International Trade, no. 12, winter 1989/90; "Warsaw Pact Formally Ends," *The Washington Post,* July 2, 1991, p. Al 1; and the Office of Technology Assessment, 1991.

secret, high-altitude U-2 aircraft and GENETRIX reconnaissance balloons[3] were still a year away; and only in March of 1955 had the U.S. Air Force issued a formal system requirement for a reconnaissance satellite.[4] This situation fostered Western concerns about the potential for a surprise attack by the Soviet Armed Forces, newly equipped with nuclear weapons.

In an effort to lift the curtain, President Eisenhower proposed, at the Geneva Conference of Heads of Governments (United States, United Kingdom, Soviet Union, and France) on July 21, 1955, the establishment of a system of mutual overflights by unarmed reconnaissance aircraft. In this well-known "Open Skies" speech, Eisenhower evoked the specter of nuclear war in his call for a system of mutual aerial surveillance:

> I should address myself for a moment principally to the delegates of the Soviet Union, because our two great countries admittedly possess new and terrible weapons in quantities which do give rise in other parts of the world, or reciprocally, to the fears and dangers of surprise attack.[5]

But Eisenhower saw Open Skies as more than simply a warning mechanism. He also believed that Open Skies would lead to a lessening of tension and general danger, and eventually to 'a comprehensive and effective system of inspection and disarmament."[6]

The specifics of Eisenhower's proposal included an exchange of "a complete blueprint of. . . [each side's]. . . military establishment,' identical facilities for aerial photography, and allowance for the removal of photographs for study. The French and British Governments quickly agreed to join in this system.

At the time of its announcement, Open Skies was a revolutionary concept that offered to enhance radically the quantity and quality of information available to each superpower about the other. However, the Soviet Government still equated its security with absolute secrecy, and therefore eventually rejected the U.S. proposal as an effort to spy on the Soviet Union.

Over the next 2 years, the United States, through the United Nations and bilaterally, sought to find some way to make Open Skies work. These efforts focused on limiting the regime geographically to the Arctic countries, including the United States, the Soviet Union, Canada, and the Nordic states. The

[3]See box 6-1 inch. 6.

[4]Merton E. Davies and William R. Harris, *RAND's Role* in th *Evolution of Balloon and Satellite Observation Systems and Related U.S. Space Technology (Santa* Monica, CA: The RAND Corp., 1988), p. 61.

[5]Dwight D. Eisenhower, "Statement on Disarmament Presented at the Geneva Conference," July 21, 1955 as cited in Dwight D. Eisenhower, *Public Papers of the Presidents of the United States 1955, No. 166,* p. 715.

[6]Ibid., pp. 715-716.

[7]Ibid., pp. 715.

Photo credit: U.S. Air Force

Lockheed U-2R aircraft in flight.

Soviet representative at the United Nations Security Council vetoed the final American attempt to find some basis for an Open Skies agreement on April 29, 1958.[8]

Open Skies—1989

The original Open Skies proposal lay dormant for nearly three and a half decades. Then, President Bush judged that the international political climate had changed sufficiently for another attempt at negotiating a mutual overflight agreement. This time, the Soviet Union appeared to decide that its security would not be severely undermined by an Open Skies regime and might in fact be strengthened. Part of the reason for this changed attitude was undoubtedly the fact that the superpowers had essentially already had their skies opened with the orbiting of sophisticated reconnaissance satellites beginning in the 1960s.[9]

Moreover, in 1989 the world community was receptive to a resumption of Open Skies talks. In particular, the acceleration of reforms in the Soviet Union and Eastern Europe and the completion of an agreement on intermediate-range nuclear missiles in Europe, which included a verification regime of unprecedented intrusiveness, invoked both the optimism and cooperative spirit necessary for a pan-European agreement. Simultaneously, fears of instability and of the threat from residual military capabilities made monitoring important to a growing list of nations. Without the changed political climate, Open Skies would remain nonnegotiable; without the fears, Open Skies would not be necessary.

On May 12, 1989, in an address to graduating students at Texas A&M University, President Bush revived President Eisenhower's proposal for an Open Skies agreement:

> Thirty-four years ago, President Eisenhower met in Geneva with Soviet leaders who, after the death of Stalin, promised a new approach toward the West. He proposed a plan called Open Skies, which would allow unarmed aircraft from the United States and the Soviet Union to fly over the territory of the other

[8] *The Arm Control Reporter: A Chronicle of Treaties, Negotiations, Proposals, Weapons, and Policy* (Brookline, MA: Institute fOr Defense and Disarmament Studies, 1990), p. 409.B.1.

[9] These overflights were legitimized with the ratification of the Strategic Arms Limitations Talks agreements in 1972 which recognized the use of national technical means (NTM) of verification. The Soviet Union accepted the principle that national sovereignty does not extend into outer space in a 1963 United Nations resolution. (See Michael B. Beschloss, *Mayday: Eisenhower, Khrushchev, and the U-2 Affair* (New York, NY: Harper & Row, 1986), p. 393).

Box 4-A--Canadian-Hungarian Trial Overflight[1]

Outside the United States, perhaps the strongest advocate for an Open Skies regime has been the Canadian Government. This interest goes back to the inception of the idea in 1955 when Canada became the first Western nation to endorse formally President Eisenhower's proposal.[2] In September 1957, Prime Minister John Diefenbaker made this statement:

> . . . **the Canadian Government has agreed, if the Soviet Union will reciprocate, to the inclusion of either the whole or a part of Canada in an equitable system of aerial inspection and will do its utmost to ensure that the system works effectively.** [3]

This interest has carried over to the present. Prime Minister Brian Mulroney made his support of Open Skies clear to President Bush even before the public address.[4] And as mentioned above, the Canadian Government quickly offered to host the first round of the talks.

In an effort to get the conference off on the right foot, the Canadian Government proposed, and the Hungarian Government accepted, a mock aerial surveillance flight over each of their countries. The purpose of the flights was to demonstrate that the procedures involved in Open Skies would be safe, nondisruptive, and practical. The two countries opted not to allow sensors on the test plane and instead concentrated on facilitating the preflight inspection for contraband and on gauging the success of air traffic control of an airplane with an unconventional fright plan (outside commercial air corridors).

Crossing Czechoslovakia, a Canadian Forces C-130 airplane arrived in Budapest, Hungary on January 4, 1990 for the first of the two flights. The time intervals for each aspect of the flight from arrival to departure were expanded somewhat to allow a detailed analysis and discussion of the proposed procedures. Hungarian authorities, watched by the Canadian aircrew, inspected the plane for armaments for about 4 1/2 hours (normally, this inspection would also look for illegal sensors and, perhaps, verify the specifications of the legal sensor suite). At the same time, the Canadian crew submitted its intended flight plan to the Hungarians, who had 24 hours to clear the route and ensure its safety.

On the morning of January 6, 1990, the C-130, along with its Canadian crew and Hungarian observers,[5] flew a figure-8 route over Hungarian territory for about 3 hours. The plane changed altitude several times during the flight from approximately 5,000 to 16,000 feet.[6] The flight plan took the plane over a variety of commercial and residential areas as well as Hungarian and Soviet military installations.

Declared a general success by the participants, the trial flight was said to demonstrate that Hungarian air traffic control could handle the unusual flight path without undue effort or expense. One concern raised was that host-country escorts during the preflight inspection might inadvertently damage the plane and undermine flight safety. The participants felt that providing manuals for the plane and appropriate tools for opening flight instruments could be a partial solution to this safety problem. On January 7, 1990, the Canadian plane left Budapest.

Neither Hungary nor any other WTO member has taken advantage of Canada's offer of a reciprocal overflight of Canadian territory.

---

[1] Details of the aerial surveillance exercise can be found in the following sources: Canada, External Affairs and International Trade, "Report on the Canada-HungaryT rial 'Open Skies' Overflight, Jan. 4-6, 1990, *Open Skies: Preparing for the 1990s*, Backgrounder No. 3, Feb. 1, 1990; "Canada Conducts Trial Open Skies Overflight of Hungary," *The Disarmament Bulletin*, Canada, External Affairs and International Trade, No. 12, winter 1989/90, pp. 7-8; "Open Skies Treaty Will Give 23 Nations Surveillance R@%" *Aviation Week and Space Technology*, Feb. 19, 1990, p. 21; *The Arms Control Reporter 1990*, p. 409.B.6-8; and "CanadianFlight Over Hungary Marks Trial Run of U.S. Open Skies Initiative," *Defense News*, Jan, 15, 1990, p. 25.

[2] Michael Slack and Heather Chestnutt (eds.), *@en Skies: Technical, Organizational, Operational, Legal, and Political Aspects* (Toronto, Canada: Center for International and Strategic Studies, York University, February 1990), p. 105.

[3] "What Canada Said," *The Disarmament Bulletin*, Canada, External Affairs and International Trade, No. 12, winter 1989/90, p. 4.

[4] Ibid., p. 4.

[5] The escorts were &M t. move about the plane as they saw fit. However, since there were no sensors aboard the plane, there was little for them to observe besides that the plane did not stray from itsplanned course.

[6] It was concluded that for reasons Of safety the minimum altitude for any overflight should be 2,000 feet above the highest obstacle within 10 nautical miles of the flight path.

country. This would open up military activities to regular scrutiny and, as President Eisenhower put it, "convince the world that we are lessening danger and relaxing tension. "

President Eisenhower's suggestion tested the Soviet readiness to open their society. And the Kremlin failed that test.

Now, let us again explore that proposal, but on a broader, more intrusive and radical basis, one which I hope would include allies on both sides. We suggest that those countries that wish to examine this proposal meet soon to work out the necessary operational details, separately from other arms control negotiations.

Such surveillance flights, complementing satellites, would provide regular scrutiny for both sides. Such unprecedented territorial access would show the world the true meaning of the concept of openness. The very Soviet willingness to embrace such a concept would reveal their commitment to change.[10]

As a side effect, the proposal generated renewed interest in using aerial surveillance for a wide variety of other monitoring and confidence-building tasks. (Some of these are discussed in the next chapter.)

On September 22-23,1989, Soviet Foreign Minister Eduard Shevardnadze and U.S. Secretary of State James A. Baker III met in Jackson Hole, Wyoming, where they released a joint statement agreeing in principle to the Open Skies concept and calling for an international conference. Two days later, the Canadian Government offered to host the conference in its capital.[11]

Then, in mid-December in Brussels, the 16 NATO foreign ministers gathered at NATO headquarters and hammered out the final details of a joint NATO position that covered virtually all aspects of a potential accord. They sought to keep the agreement flexible, simple, and, above all else, minimally constrained. 12

In January 1990, the Canadian and Hungarian Governments set the stage for the Ottawa Conference by conducting a mock Open Skies overflight of Hungarian territory (see box 4-A). When the first round of talks began, a wide gap appeared between NATO's opening position and that of the Warsaw Pact. The resulting draft treaty did little to narrow the significant differences.[13] The principal outcome of the Ottawa meeting was a joint communique on the second day. This statement laid the foundations both for future agreement and disagreement.

The second round (Apr. 24 to May 12, 1990) of Open Skies talks in Budapest, Hungary produced no further progress and quashed hopes for a signing ceremony on the l-year anniversary of President Bush's Open Skies speech. Publicly, at least, the Open Skies negotiations have been stalled since the Hungarian Conference. As of this writing, no date has been set for a third round.

The Goals of Open Skies

According to the joint communique released at the Ottawa Conference, the 23 nations (22 nations after the unification of Germany) participating foresaw many benefits arising out of an Open Skies agreement:

> . . . although an "Open Skies" regime is neither an arms control nor a verification measure per se its successful implementation would *encourage reciprocal openness* on the part of participating states. It would ***strengthen confidence*** among them, *reduce the risk of conflict*, and ***enhance the predictability of military activities*** of the participating states. Finally it would ***contribute to the process of arms reduction and limitation*** along with verification measures under arms limitation and reduction agreements and existing observation capabilities. The Ministers noted further that the establishment of an "Open Skies" regime may ***promote greater openness in*** the future in other spheres.[14]

[10]President George Bush, "Remarks at the Texas A&M University Commencement Ceremony in College Station, Texas," May 12, 1989 as cited in *Weekly Compilation of Presidential Documents,* vol. 25, No. 20, May 22, 1989, p. 702. (Paragraph breaks not in original text.)

[11]Ottawa Conference participants were the NATO countries (Belgium, Canada, Denmark, France, West Germany, Greece, Iceland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Turkey, the United Kingdom, and the United States) and the Warsaw Pact state (Bulgaria, Czechoslovakia, East Germany {until reunification}, Hungary, Poland, Romania, and the Union of Soviet Socialist Republics). Observers from Austria, Cyprus, Finland, Ireland, Monaco, Sweden, Switzerland, and Yugoslavia also attended.

[12]See app. D, U.S. Arms Control and Disarmament Agency, "NATO's Proposed Basic Elements for Open Skies," *Official Text,* Dec. 14-15, 1989.

[13]Jonathan B. Tucker, "Back to the Future: The Open Skies Talks, " *Arms Control Today,* October 1990, P. 22.

[14]U.S. Arms Control and Disarmament Agency, " 'Open Skies' Communique," *Official Text,* Feb. 13, 1990.

From this passage and other statements by Open Skies participants, a general list of goals set for the treaty can be distilled:[15]

. enhance military transparency and predictability,
. reduce international tensions,
. further the progress of arms control, and
• pl-emote a more open Soviet society.

As a whole, these broad goals can be described as confidence-building measures. The aerial surveillance provisions of the treaty are not intended to count treaty-limited items (TLIs), measure specific quantities, or monitor restricted behaviors; instead, they are primarily meant to provide assurance that the current political warming is continuing apace by making widely available information that demonstrates good intentions and nonthreatening capabilities. This vagueness has led to a debate (primarily between the Soviet Union and the other participants, but also among the other participants) as to the level of intrusiveness needed to accomplish the declared goals.

The Initial NATO Position

As mentioned above, the 16 NATO foreign ministers gathered December 14-15, 1989 at NATO Headquarters in Brussels to finalize a joint proposal for Open Skies. This proposal formed the basis for negotiations with the seven WTO member states. To limit the complexity of the talks and facilitate unanimous consent, the NATO ministers decided to restrict the Open Skies discussions to these two alliances.

Here, in brief, are the key operational details of the original NATO proposal. They are referenced by letter to ease comparisons between NATO and non-NATO positions in the following section. The bracketed citations correspond to the official text in appendix D.

A. Initially Open Skies negotiations will be between the NATO and WTO alliances {III}, but later they might include any other European nation {1.3}.
B. Open Skies flights will encompass the entire territory of the participants[16] and, in principle, will be limited only for reasons of safety or international law {1.4 and VIII.7}.[17]
C. An unarmed, freed-wing military or civilian aircraft will be provided by the inspecting party. The plane will carry host-country observers during its overflight {V and VIII.6}.
D. Overflights may be conducted individually or jointly within alliances {1.4 and IV.1}.[18] Equipment and aircraft may be shared among allies {VII}.
E. The planes will be allowed to carry a wide variety of sensors. Only signals intelligence (SIGINT) devices will be banned {VI}.
F. All participants share a commitment to conduct and receive overflights on the basis of national quotas {1.4}. These quotas will set both the number and duration of overflights. The standard for the quota apportionment will be national geographical size {IV.1}. There should also be rough parity of quotas between NATO and the WTO and between the Soviet Union and the combined territories of the United States and Canada {IV.3}.[19] Larger countries should be subject to several overflights per month {IV.1 }, and all nations must receive one flight per quarter {IV.4}. Smaller allied states may group themselves and act according to their combined geographical size {IV.5.}.
G. Overflights will begin and end at a Point of Entry (POE) and a Point of Exit, respectively {VIII.1}. These points can be the same {VIII.7}.
H. The host country will arrange service as for a commercial airliner {VIII.2}.

[15] As a proximate and unstated goal, Open Skies would add to the information-gathering capabilities of the participants, particularly the nonsuperpowers. These expanded capabilities, depending on their final negotiated parameters, could benefit the verification of other current and future treaties, provide a broad range of collateral intelligence, and add to strategic, and perhaps tactical, warning.

[16] For the United States this includes the 50 states, Guam, Puerto Rico, and the U.S. Vi@ Islands.

[17] As spelled out by the United Nations-sponsored International Civil Aviation Organization (ICAO) and bilateral and multilateral accords.

[18] The Netherlands announced on Feb. 12,1990, that it would conduct joint flights with Belgium and Luxembourg in order to reduce costs. paid Lewis, New *York Times,* Feb. 13, 1990 as cited in *The Arms Control Reporter 1990,* op. cit., footnote *8,* p. 409.B.9.

[19] At the Budapest Conference, the United States proposed to allocate quotas on a bilateral basis among all parties, superseding the original NATO proposal to allocate them by alliance. This was done in recognition of the gradual dissolution of thWTO. The new proposal raised the possibilitythat East European countries might be able, with Soviet permission, to overfly the Soviet Union. (Tucker, op. cit., footnote 13, pp. 22-23 and personal communication Apr. 5, 1991.)

Table 4-2—Asymmetric Advantages and Disadvantages in Open Skies

Region/state	Advantages	Disadvantages
Superpowers	Superpowers have more resources and better intelligence apparatuses; Open Skies data can cue NTM.	NTM already provides much of the information that Open Skies would provide, thus superpowers gain relatively less and lose relatively more than other nations.
Nonsuperpowers	Treaty puts superpowers and nonsuperpowers on equal political footing; gives these countries an independent means of surveillance.[a]	Fewer resources than superpowers.
NATO	Access to more closed societies.	No technology gain; technology loss to WTO.
Soviet Union	Might gain access to Western sensor and processing technology.	Least open society has the most information to be revealed.
Non-Soviet WTO	Might gain access to Western sensor and processing technology.	Least-capable sensor and processing equipment.

a France *Currently operates the commercial grade* SPOT-image photoreconnaissance satellite and is developing the *Helios* military reconnaissance satellite system with Spain and Italy.

SOURCE: Office of Technology Assessment, 1991.

I. The inspecting party must transmit an inspection notification 16 hours before arriving at the POE {VIII.3}. After arrival, the flight crew has an additional 6 hours to file a flight plan for the overflight { VIII.4 } .[20] This done, the host country has 24 hours in which to inspect the plane for illegal devices and arrange for the flight {VIII.5 }. (See figure 4-l.)
J. Loitering by aircraft over one spot is not permitted {VIII.6}.
K. Alliances will decide amongst themselves how to share overflight information {IX}.

The NATO position, as embodied in a U. S.-Canadian draft treaty, served as the basis for the joint working draft at the Ottawa Conference.

Points of Disagreement 21

According to press reports, the Open Skies negotiations often did not follow the usual pattern of alliance versus alliance differences. Instead, individual nations-including for the first time the newly independent Eastern European countries--made proposals on their own initiative. The result has been a series of disagreements with and departures from the NATO baseline identified above.

In general, the United States has sought to maximize the openness of Open Skies arrangements as defined in the NATO Basic Elements. Although there have been signs of compromise, the United States continues to advocate relatively unrestricted overflight procedures and equipment. The other NATO allies, as well as the non-Soviet WTO member states, have been more flexible in the negotiations, but, "when push has come to shove, " have tended to adopt the U.S. point of view. The Soviets, on the other hand, have so far blocked most efforts to reach a grand compromise (see table 4-2). In all areas, the Soviets consistently argue for the least intrusive regime, leading many observers to question whether the Soviet Union has really abandoned its historical demand for secrecy. That the goals of the treaty are so ambiguous and hard to translate into concrete terms (e.g., how many flights are needed to "reduce tensions? '')22 has left the Soviet negotiating team room to maneuver and stall.

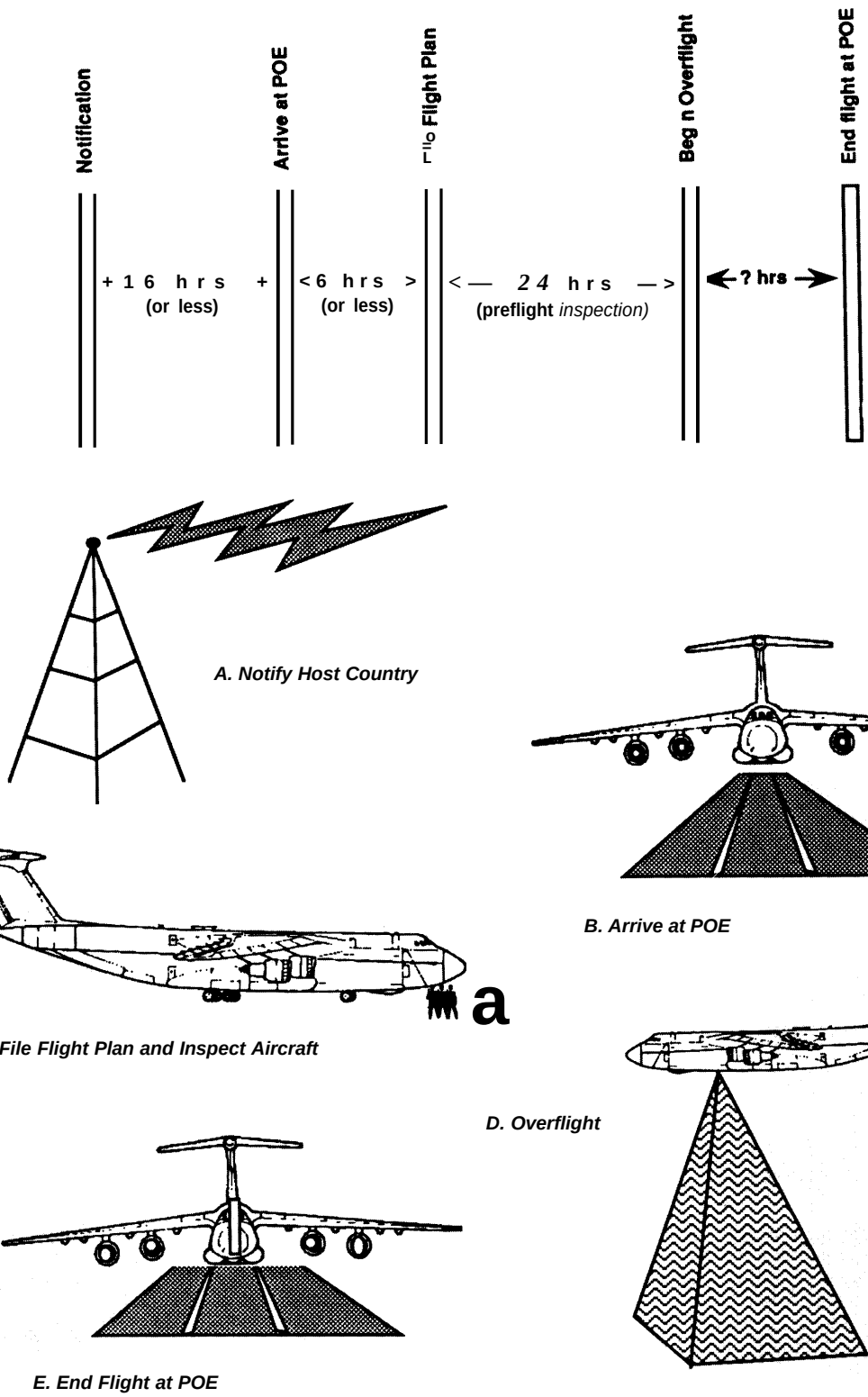
The Soviets disagreed with points throughout the NATO proposal. It is ironic, though, that in most cases the Soviets cited as the basis for their dissent two agreed phrases from the joint statement of the Ottawa Conference:

[20]The periods listed in this bulletfor notification and flight planfiling are maximum values. The host country, incooperation with the inspecting party, would retain the option to shorten these periods.

[21]This section (and indeed the entire report) is based on unclassified sources and therefore covers only those disagreements that have been expressed publicly.

[22]One analyst suggesta that an unstated standard of adequacy for an Open Skies agreement is in fact emerging from the negotiating process: it is "to enable participants toidentify rapidly massing military formations by the generic types of vehicles within them. ' Furthermore, participants should be able to accomplish this mission day or night, and in all weather conditions. This warning function for Open Skies gives negotiators a more definite target in their discussions. However, the Soviets have not formally recognized this standard for the agreement. See Peter Jones, "CFE? Aerial Inspections and Open Skies: A Comparison" in Heather Chestnutt and Michael Slack (eds.), *Verifying Conventional Force Reductions in Europe: CFE I and Beyond* (Toronto, Ontario: Center forInternational and Strategic Studies, York University, 1991), p. 90.

Figure 4-I—NATO Proposed Timeline



SOURCE: Office of Technology Assessment, 1991.

- "implemented on a reciprocal and equitable basis"; and
- ''maximum possible openness and minimum restrictions.

The United States views the first point as a statement of equal opportunity and equal application of the rules. The Soviet Government argues that equality means a leveling of capabilities and minimizing burdens. On the second point, the United States maintains that openness should apply predominantly to territorial and sensor access, while the Soviets stress the sharing of equipment and collected information. These differing emphases are evident at each point of disagreement.

Participation in the conferences themselves has been one such point of contention. In item A of the above listing of NATO's position, the alliance insisted that the first phase of negotiations be open only to WTO and NATO members. The rationale was that fewer participants would make it easier to obtain a unanimous and relatively uncomplicated treaty. The Soviets, on the other hand, have questioned this rationale, with Soviet Deputy Foreign Minister Viktor Karpov declaring atone point,' 'Our opinion differs: All neutral and nonaligned CSCE [Conference on Security and Cooperation in Europe] countries should be included in this process if they so wish."[23] Thus, the Soviets argue for greater openness.

A second, and major, topic of dispute has been restrictions on the territory subject to overflights. As indicated in item B above, the NATO position calls for maximal coverage of national territory with restriction based solely on safety and international law. The Soviets, on the other hand, have sought to both restrict and expand the covered territories. First, they have argued for several types of exclusion zones:

> There are such zones in virtually all countries. And here neither military or civilian aircraft can fly-for example, over major cities or chemical or other ecologically dangerous enterprises, or nuclear power stations or water installations except in emergency situations. Why then should we make an exception to this rule for foreigners, thus subjecting the lives of our fellow citizens to extreme danger? Moreover, we still have regions that are closed in the interests of preserving state secrets.[24]

Not surprisingly, some of these restricted zones (particularly the ones preserving state secrets) are precisely the ones that NATO would like to see to advance the stated purposes of the treaty.

Then, the Soviets have argued on the grounds of equality and greater openness for the inclusion of member nations' military bases in other countries.[25] NATO has flatly rejected this proposal, because these countries would not be party to the treaty and their airspace is sovereign.

Soviet exceptions to items C, D, and H all revolve around the issue of whose planes will be used for overflights. The Soviet Government has sought to avoid being overflown by foreign aircraft. One reason for this was laid out by Soviet Deputy Foreign Minister Karpov:

> The present level of the development of electronics makes it possible to fit an aircraft with a tiny sensor which could collect a vast quantity of information having nothing to do with "Open Skies" and would be very difficult to detect by inspectors when checking someone else's aircraft.[26]

Moreover, the Soviets have argued that the cost of flying airplanes from the Soviet Union to North America would be prohibitive and unequal.[27] For these reasons, the Soviets have proposed alternatives to the NATO plan:

> We proposed the setting up of a single pool-we found no support. But our main idea" is that there should be freedom of choice. If some state wishes its territory to be overflown by aircraft of its own design with standard equipment, a mixed crew, and a group of observers, this wish ought to be respected. If it wants an aircraft belonging to some third country—

[23] S. Guk, "Does the USSR Advocate 'Open Skies' With Exclusion Zones? The Soviet Position Has Been Distorted. USSR Deputy Foreign Minister Viktor Karpov Replies," *Izvestiya*, *Mar.* 5, 1990, p. 3, as translated in Foreign Broadcast Information Service, *Soviet Union Daily Report*, FBIS-SOV-90-043, *Mar. 5, 1990, p. 2.*

[24] *Trud*, "The Spy Place 'Within the Law': An Interview With Major General V. Kuklev, First Deputy Chief of the General Staff," Mar. 27, 1990, p. 3, as translated in Foreign Broadcast Information Service, *Soviet Union Daily Report*, FBIS-SOV-90-063, Apr. 2, 1990, p. 3.

[25] See, e.g., *Trud*, ibid., p. 3; and Guk, op. cit., footnote 23, p. 3.

[26] V. Shelkov, "Interview for Pravda," *Pravda*, Mar. 4, 1990, as translated in Foreign Broadcast Information Service, *Soviet Union Daily Report*, FBIS-SOV-90-043, Mar. 5, 1990, p. 1.

[27] *Trud*, op. cit., footnote 24, p. 3.

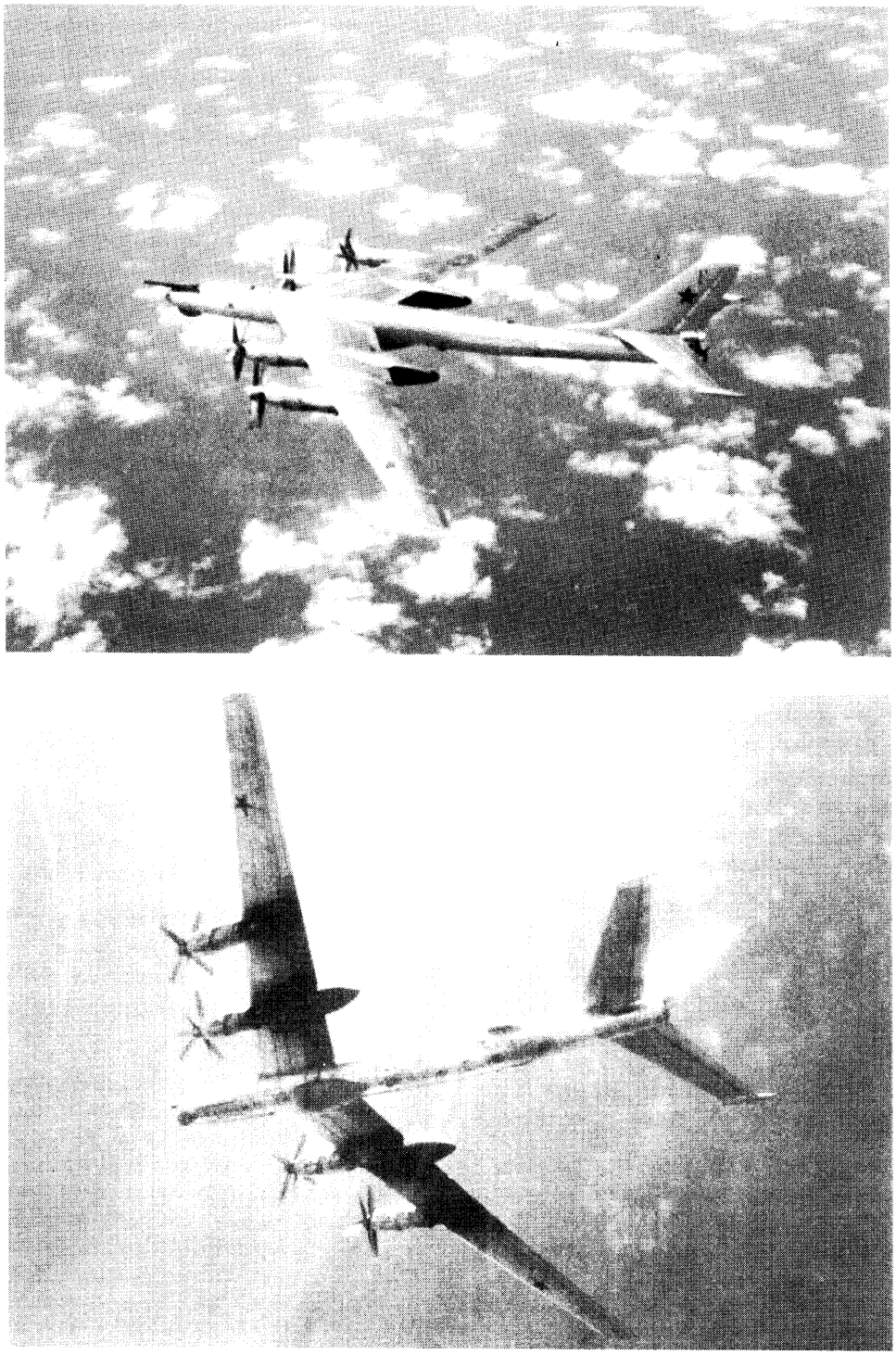


Photo credit: U.S. Air Force

Source: Jane's A// the Wor/d's Aircraft: 1990-91, Mark Lambert (cd.) (Coulsdon, Surrey, United Kingdom: Jane's Information Group, 1990), p. 281.

The Soviet Tu-95D Bear maritime reconnaissance aircraft, a variant of the Bear strategic bomber, is outfitted with radar domes (radomes) under its nose and midsection and electronic intelligence collectors on each side of its rear fuselage.

> by all means. And finally, aircraft belonging to the monitoring side could overfly another state's territory only subject to its consent.[28]

Sensors (item E) have been a particular source of concern for the Soviets.[29] Up until the Budapest Conference, the Soviet Union wanted only standardized optical and electro-optical cameras; NATO advocated a wide variety of sensors with only a few listed restrictions (the primary one being a ban on SIGINT devices). NATO argues that the language of the Open Skies Communique on this issue is very clear: "The agreement will have provisions concerning the right to conduct observation flights using unarmed aircraft and equipment capable in all circumstances of fulfilling the goals of the regime.' '[30] The key phrase here is "equipment capable in all circumstances," which can reasonably be interpreted to encompass sensors that can function effectively day or night, rain or shine. Optical cameras that can see neither in the dark nor through clouds would clearly not suffice.[31]

At the Budapest round, the Soviets accepted the use of synthetic aperture radar (SAR) to achieve an all-weather capability. However, the SAR they proposed had a resolution of only 10 meters, compared to the 3-meter resolution thought necessary by most NATO states.[32] The Soviet compromise of 30 centimeters on optical resolution also exceeded the Western-proposed maximum of 15 centimeters.[33] The Soviets maintain that these resolutions are sufficient for the purposes of the treaty, and that any more information would begin to harm national security.

Some countries, particularly in Eastern Europe, are concerned about the inequality of sensor technology between the more advanced (typically Western) nations and the rest. On this basis they have called for standardized and simple hardware. This seems to be a natural request. On the other hand, these countries may be doing themselves a disservice. The NATO countries (through the United States) and the Soviets already have extensive intelligence capabilities outside of Open Skies. If advanced sensors were permitted in Open Skies, the less-capable nations would have the opportunity to develop and eventually deploy advanced and independent sensor systems. The United States has compromised on this issue, and is looking to ease trade restrictions in order to supply these countries with commercially available sensors.[34] Since sensors will most likely be subject to preflight inspection, the United States itself is inclined to adopt commercial technology for Open Skies to avoid compromising classified technologies.

On a related issue, the Soviets believe that sharing collected sensor data (item K) is the best way to fulfill the goals of the treaty:

> The "Open Skies" system must be imbued with the principle of universal and full equality. Equality in gaining access to information which cannot be used to the detriment of any of the parties.[35]

Information obtained during overflights would be shared at a new international agency:

> The data would be processed in a single center sited in any country. Parties to the agreement would pay for this also according to an agreed scale. The information arriving in this center should be available to all regardless, of course, of the financial contribution made by the different countries. This proposal of ours was rejected out of hand.[36]

The Soviets believe the NATO approach would be "detrimental":

> . . . the main content of the position expounded by U.S. representatives in Ottawa boils down to the fact that the United States, taking advantage of its technological potential, intends to overfly other

---

[28] Guk, op. cit., footnote 23, p. 2.

[29] For a more complete discussion of sensors and sensor issues see ch. 3.

[30] "'Open Skies' Communique," op. cit., footnote 14.

[31] Any country that had particularly overcast weather with low-level clouds would have an asymmetrical advantage if only optical cameras were used.

[32] *Arms Control Reporter 1990*, op. Cit., footnote 8, p. 409.B.16

[33] Tucker, op. cit., footnote 13, p. 23-24.

[34] Jones, op. cit., footnote 22, p. 91.

[35] Eduard Shevardnadze, Soviet Foreign Minister, speech at Ottawa Conference, from Tass International Service, Feb. 12,1990, as translated in Foreign Broadcast Information Service, *Soviet Union Daily Report*, FBIS-SOV-90-030, Feb. 13, 1990, p. 3.

[36] Shelkov, op. cit., footnote 26, p. 1.

countries' territory, collect information, and tuck it safely away. So where is the "openness?"[37]

The NATO proposal would allow sharing information within alliances. The primary reason for not sharing information with nonallies is that it might help the observed country improve its camouflage, concealment, and deception techniques, because the inspected party could see precisely what the inspector could see. A second reason is that it could give some idea of just what objects the inspecting party was looking for. There has been some movement toward common ground by all the participants, except for the Soviets, who have yet to officially respond to the latest proposals. Raw data might be shared before it is processed.[38]

Finally, there have been disagreements on some of the specific numbers in the treaty. The Soviets have generally argued for fewer overflights (item F) than NATO. The Soviet Union has proposed 25 to 30 flights per year for each alliance,[39] of which 16 would be over the Soviet Union;[40] the United States has offered to receive about 52 flights per year with as many as 130 to 140 overflights per alliance .41 (Complicating matters is the breakup of the Warsaw Pact and a possible shift to a matrix of bilateral quotas.) The Soviets also advocated at one point expanding the prearrival notification period (item I) up to 48 hours[42] and holding the time the sensors are activated to 3 hours.[43] It can be argued that these limitations would lessen the value of the overflights, and thus perhaps that of the treaty as well.

Conclusion

Soviet proposals and those of the other negotiating parties seem to reflect differing ideas about what is required to build confidence under Open Skies. The Western allies argue that Open Skies will be most effective in building confidence if restrictions on overflights and sensors are kept to a minimum. They believe that at a minimum the regime probably needs to provide some degree of warning of large-scale hostilities. The non-Soviet former WTO members are enjoying new freedom in the exercise of international diplomacy, but tend to agree with NATO on the details of an agreement.

The Soviets do not appear ready for the degree of openness sought by the West. In sum, negotiations remain stalled at this time.

[37] 1bid., p. 1.

[38] Jones, op. cit., footnote 22, p. 98.

[39] Shelkov, op. cit., footnote 26, p. 1.

[40] *Arms Control Reporter 1990,* op. cit., footnote 8, p. 409.B.11.

[41] Shelkov, op. cit., footnote *26,* p. 1.

[42] *Trud,* op. cit., footnote 24, p. *3.*

[43] Shelkov, op. cit., footnote *26, p.* 1.