



Aliens On Earth.com

Resources for those who are stranded here



[UFOs](#) | [Paranormal](#) | [Area 51](#)
[People](#) | [Places](#) | [Random](#)
[Top 100](#) | [What's New](#)
[Catalog](#) | [New Books](#)

Search... for keyword(s)

in Book Title/Author

Our Bookstore
is **OPEN**

[Mothership](#) -> [Book Catalog](#) -> [Deep](#) -> Here

[Book Catalog](#) An excerpt from Deep Black :

Preface

"I wouldn't want to be quoted on this," Lyndon Johnson told a small group of local government officials and educators in Nashville in March 1967, "but we've spent thirty-five or forty billion dollars on the space program. And if nothing else had come out of it except the knowledge we've gained from space photography, it would be worth ten times what the whole program has cost. Because tonight we know how many missiles the enemy has and, it turned out, our guesses were way off. We were doing things we didn't need to do. We were building things we didn't need to build. We were harboring fears we didn't need to harbor. "

By "space photography," Johnson had in mind the broader system of space reconnaissance and surveillance with which the United States each day takes the measure of the world electronically, monitoring vital signs from Soviet missile tests, Chinese and French nuclear weapons facilities, Nicaraguan ports and airfields, the Afghan army, terrorists training in Iran, Libya, and Syria, North Korean radar installations, and a large number of other places and activities in order to be able to assess developments that could figure prominently, if not decisively, in the fortunes of the United States and its allies.

To be sure, the technical intelligence systems are extraordinary, whether they are low-orbiting satellites that silently record images of events with remarkable clarity and relay them even as the action itself is occurring, or whether they are other spacecraft, some parked a tenth of the way to the moon, that point their mechanical ears in directions allowing them to listen to and pass on a crescendo of military and civilian communication signals and even eavesdrop on conversations taking place deep within the walls of the Kremlin.

But this is not solely the story of spaceborne robots and other exotic hardware. It most concerns the people who conceive, produce, and control the various intelligence-collection systems, who interpret and analyze the "product," and who formulate national policy accordingly. In one sense, cutting-edge technology drives the system, in that a stagnant intelligence-collection apparatus would soon be overwhelmed by events with which it could no longer cope and at the same time become increasingly vulnerable to exposure and countermeasures--to being fooled, spoofed, or simply missing the action. And not so incidentally, high-tech spy systems are challenging to design, prestigious to build, and carry a low-keyed, but unmistakable, panache that those who operate them and are privy to their secrets give every appearance of thoroughly enjoying. There is a kind of reconnaissance club, an unofficial secret society composed of "black hats" from the various contractors, military services, and the intelligence agencies and divisions, all of whom carry the appropriate clearances and are scrupulous about remaining in deep shadow. But they know who they are and they like it.

Yet in another, more fundamental sense, space reconnaissance and surveillance is about politics at the highest level. And politics is passionate stuff. While it is true that the photo and signals interpreters have honed their specialties into precise and coolly practiced arts, for example, those who use their pictures and taped intercepts to hammer out foreign policy--to shape responses to a threatening world--often do so with opposing convictions that on any dumber of occasions have aroused rage and set the stage for long-standing feuds. Those who use technical intelligence almost always do so with preconceptions that they bring to the analytical process. There is rarely disagreement over what a

picture shows, for example, but what it means is often the subject of intense debate .

Arms control is but one case in point. The process depends upon detailed agreements that specify what is permitted, qualitatively and quantitatively, in maintaining and developing certain kinds of weapon systems. Since the benefits of successful cheating on a large scale can be considerable, arms control agreements stipulate that their provisions be verifiable by so-called national technical means: that is to say, by assorted sensors on earth, in the air, and in space that listen, watch, and record vibrations in the mantle of the planet itself. Were it not for these machines, there could be no arms control because it is the technology that allows each side to satisfy itself that the various provisions are in the main not being contravened. But "cheating," particularly where treaty language is vague, is often very much in the eye of the beholder and tends to reflect his or her political inclination. Policymakers who are convinced that the U.S.S.R. is an evil empire bent on world domination at all costs view collected intelligence one way, while those who see the Kremlin somewhat more benevolently often interpret intelligence quite differently.

The sensors that are used to monitor compliance with arms control agreements are precisely the same that gather military intelligence, so the collection process would go on with or without treaties. Although the "take" is the same, however, the purposes for which it is used vary widely. The testing of a Soviet ballistic missile is a case in point. With an arms control treaty that limits ICBMs in effect, the State Department must know whether the weapon violates size, range, throw weight, and other restrictions. The CIA and the Air Force need to know about the missile's performance characteristics and about the silo in which it is kept so it can be jammed in flight, or perhaps intercepted, or even successfully attacked on the ground if possible. The sum of the intelligence--all of the collected data on that missile is the same, though it is used for varying purposes.

In the case of arms control, it is important for the citizens of the Western democracies to grasp enough of the process of the national technical means of verification and about space surveillance in general so that they can make informed judgments on the matter, rather than abandon such an important subject to the whims of successive politicians and their subordinate ideologues. A basic understanding of the technical collection process leads to some pointed questions. There is an apparent contradiction, for example, in the frequent assertions by the Reagan administration that the Soviet Union has consistently cheated on strategic arms control agreements while simultaneously asserting that those agreements are not adequately verifiable. If the United States does not have reconnaissance and surveillance systems that are precise enough to monitor arms control treaties with reasonable certainty that they are being adhered to, how can it be so certain that those treaties have been violated?

That question and others need to be raised. But answers from Washington have not been forthcoming. Attempts to get to the heart of the matter quickly run headlong into the national security shibboleth, which has it that since arms control verification and the collection of pure military intelligence are part of the same process and involve the same systems, revelations about one must necessarily expose the other to a dangerous extent.

The rule, therefore, is not to talk about anything having to do with space reconnaissance, at least officially and for the record. Yet it must be noted that those who are the most vociferous about maintaining the absolute secrecy of U.S. space reconnaissance operations also tend to be the most persistently hostile toward arms control.

One of the places I visited for the preparation of this book was the North American Aerospace Defense Command headquarters in Cheyenne Mountain, outside Colorado Springs. There, one afternoon in late June 1984, I interviewed Brigadier General Paul D. Wagoner, who was in charge of NORAD's combat operations. Early in the conversation, I mentioned the names of some space reconnaissance systems (the KH-11 imaging satellite being one of them) and asked the general if he would provide some details about them that I did not have.

General Wagoner provided not a scrap of additional information about the systems I mentioned, yet the interview was one of the most interesting and instructive I had because it got to the heart of the politics of the situation.

The general began by explaining, in a polite and carefully modulated way, that the subject about which I was writing is so secret that it is governed by a classification system known as Sensitive Compartmented Information, or SCI, and that SCI is even more rigorously classified_is even "blacker"--than the top-secret category. "Compartmented" is the operative word. Those who hold SCI clearances, General Wagoner explained, have access to extremely important information but are permitted to know only what is necessary for them to do their jobs. That way, he added, damage to

national security can be kept to a minimum in case some traitor or casual talker spills secrets (Colorado Springs is fairly infested with Communist agents who are assigned to pry sensitive information out of the unwary and turn the gullible or gluttonous into spies, General Wagoner warned, his voice rising).

He next turned to the danger that could come to the nation because someone--a writer, for example--sifted through the open literature, talked with those knowledgeable on the subject, and then made inferences that might give away secrets and endanger the national security. General Wagoner was now angry and began whittling his words to a finer point. "That's what's so dangerous about guys like you having too much knowledge, because you don't really know what you might be giving away. You're still fishing and you're dangerous from that standpoint. I'm dangerous when people don't clear me into compartments," Wagoner added, "because I damned near know what's in there, but I don't, so I feel like I can speak from conjecture."

Next to actual espionage, it is conjecture that most worries those who guard the secrets of the strategic reconnaissance systems. They worry because of the possibility that a single individual doing in essence what they do--fitting thousands of pieces of information into a mosaic until a meaningful picture begins to materialize--will unintentionally hand the opposition secrets that it could not otherwise obtain.

I responded by explaining that my technical background was modest, that I possessed little hard information about secret space systems at that stage, and that since the Soviet Union has its own flourishing space reconnaissance program, the Russians must know quite a bit more about the subject than they would ever be likely to learn from my writing. "They've got electro-optical and real-time imaging capability," I pointed out. "So what are they going to find out from me?"

"Well," Paul Wagoner answered, a look of consternation on his face, "you've talked about a number of things here, and I don't know whether you know much or not. But you throw around terms that scare the shit out of me. I'm not trying to discourage you, but I'm telling you that what you're treading on is very, very dangerous to national security."

But did the general not think that the people of the United States ought to know at least enough about space reconnaissance and surveillance so that they could make intelligent decisions about arms control verification, rather than take political pronouncements about it as an article of faith?

Wagoner, a self-described "farm boy from Indiana" who was sitting deep inside NORAD's command bunker--a place almost certainly earmarked for obliteration by the first Soviet warheads to come down on the United States--grew alarmed at the subject and became shrill. "Any treaty with the Soviet Union is one-way," he snapped, his voice rising again as he skirted the question. "They do not honor treaties. You show me how goddamned many they do. And we honor treaties. Every time we sign something, we compromise; every time they sign something, it's because they've gained something. Goddammit, the Soviets have never given us anything that I can find in any of my readings," Wagoner said vehemently. "I have never seen them want anything that was to their disadvantage," he added, claiming that the United States, by comparison, has become a "socialist giveaway state" that is being victimized by the arms control process. Treaties are not verifiable, General Paul D. Wagoner insisted, because the Kremlin does not want them verified. "They lie intentionally," he said, unable to suppress his anger.

Hans Mark, who was under secretary of the Air Force in the Carter administration before becoming the chancellor of the University of Texas, takes a different view of arms control but not of national security considerations and the need for absolute secrecy where space reconnaissance is concerned. Mark believes that the provisions of SALT II, which was concluded during Carter's term in office, are verifiable, though he has reservations about future treaties, particularly those relating to cruise missiles, which are small, and anti-satellite weapons, which can appear ambiguous in space imagery.

Following a brief discussion we had in the spring of 1985, Mark sent me a letter expressing sympathy for this project and pointing out that publicizing some information about U.S. space reconnaissance systems "would make it very much easier for our political leaders to justify a number of important military and foreign policy initiatives if people really knew what our adversaries around the world are doing."

But Hans Mark went on to warn that publishing "classified" information would "give direct aid and comfort to our

adversaries around the world" and therefore ought not be done. Others agree. Their concern, as most commonly expressed, comes down to this: we don't know what the other side knows about the systems we use to watch and listen to them, so prudence dictates keeping as much of that information as possible safely under wraps (or, at any rate, under the cloak).

Every nation, of course, has secrets that must be kept. Important elements of the U.S. strategic reconnaissance system certainly fall into that category and ought to be well protected, since laying them bare can only minimize their effectiveness and make the whole reconnaissance process pointless. Working details of how reconnaissance planes and spacecraft gather foreign data, including most of the frequencies and codes they use and specific ways in which they are hardened against attacks by nature and the political opposition, are not in this book. Such engineering data are not here because they are not needed to tell the story, they would encumber the average reader with useless minutiae, and they would provide valuable information to the nation's adversaries. To seek such information in order to publish it would be inespensible .

At the same time, Washington's penchant for classifying almost everything military, which began in earnest even before World War II, has grown to such overwhelming proportions that it has long been the butt of jokes. At last count, more than two million American citizens were either stamping assorted documents as classified or were almost arbitrarily cleared to read them. Christopher Boyce obtained a high-level security clearance with ludicrous ease and went on to sell operational data about Rhyolite, one of the nation's most secret reconnaissance satellites, to the KGB. Ronald W. Pelton, a highly knowledgeable National Security Agency technician who sold the Kremlin a wealth of information about secret U.S. communications intelligence activities, possessed far more "compartmented" operational data than his mid-level rank justified; the blunder was compounded by the fact that counterintelligence ignored him after he left the NSA even though, by his own admission later, he was "broke and desperate." And the John A. Walker, Jr., Navy spy-ring case so underscored the excesses of this madcap process that even Pentagonians were finally moved out of sheer embarrassment to trim the number of persons having access to classified documents and reappraise the notoriously ill-defined rules governing what really needs to be classified and what does not. The current system's pervasiveness and often arbitrary nature have had a numbing effect and has therefore become counterproductive. So many documents are classified top secret and higher that the designations tend to be shrugged off and even ridiculed. To classify almost everything is to classify almost nothing.

In 1955, James R. Killian's Technological Capabilities Panel produced a report on national strategic intelligence requirements that laid the foundation for the U-2 aerial reconnaissance and early space reconnaissance programs. Details of the report remain classified to this day despite the fact that the Soviet Union recovered Francis Gary Powers's U-2 (including its camera system and exposed film) in 1960 and the early satellite reconnaissance operation was heavily publicized by the government at its inception. General Wagoner, to take another example, steadfastly refused to allow even the name KH-1 1 (one of the reconnaissance satellites whose mere mention scared "the shit" out of him) to pass his "zipped" lips while almost simultaneously Admiral Stansfield Turner, the former director of Central Intelligence, referred to the same spacecraft by name in a memoir that was allowed to be published only after a long (and bitterly contested) censoring by the CIA. A satellite that does or does not exist, depending upon which source is consulted, is reduced to the role of a mere prop in the theater of the absurd and makes a mockery of the bloated, though leaky, system in which it functions.

The most frequently heard response to the suggestion that the Kremlin must surely know a great deal more about U.S. space. reconnaissance activities than are described in these pages is that we really don't know what the opposition knows in this game of cat and mouse. It is therefore better to write nothing, the argument goes, than to chance the accidental disclosure of information that the Kremlin does not already possess. This is yet another misleading notion.

In fact, the national technical intelligence establishment does know just about everythir;g the Russians know about its collection systems, according to several knowledgeable sources who were interviewed for this book.

Space reconnaissance has quietly evolved into an immense and extremely intricate electronic contest that elite intelligence organizations on both sides of the East-West political chasm play by a gentleman's agreement that excludes their respective citizenries. The contest's purpose, of course, is to gather useful intelligence and in the process be able to monitor compliance with arms control agreements. The means of accomplishing those goals entails the use of many

diverse collection systems, some of which masquerade as other things, in order to obtain specific information. A ferret satellite is orbited to establish certain characteristics of some type of Soviet radar, for instance. Since the Russians don't want their radar's characteristics established, they change frequencies as soon as they discover the ferret and guess its mission. (They might also maintain the frequency to fool the ferret's operators into believing that they had not guessed its mission and instead prepare to change frequencies suddenly in the event of war. The alternate frequency would have to be tested, though, and that too would probably be picked up.) Were that ferret to remain -in orbit and do its job for five or six years without the radars it was monitoring changing frequencies or testing for an emergency change, it might reasonably be supposed that the ferret, or at least its mission, had gone undetected.

What, then, do the Russians know about American space reconnaissance systems in general? As it turns out, they know quite a bit about U.S. low-orbiting spacecraft, such as the reconnaissance types that constitute the core subject of this book.

The low orbiters are easier to see, easier to listen to, and easier to track than satellites higher up. In the case of the obsolescent KH-11, which takes pictures and taps into some communications signals, they also own an operations manual purchased from a CIA traitor for a paltry three thousand dollars. Finally, the Kremlin has its own long-standing space reconnaissance program, and although Washington's systems are in general superior technologically, the basic hardware is more similar than different.

The opposition knows a fair amount about the medium orbiters, which include most of the radar ferrets, ocean surveillance types, and some of the eavesdropping signals intelligence satellites. It knows relatively little about the high orbiters out at 22,300-mile geosynchronous range and beyond, which carry the brunt of surveillance for early warning of attack, navigation, communications relay, missile telemetry and electronic signal interception, and specialized ABM radar ferreting. This appraisal was made by one who has good reason to know.

Then there is the matter of national security. "I have a feeling you're going to write an exciting book," said General Wagoner, "but I hope it is one that adds to national security, rather than detracts from it." So do I. Yet "national security" is an exceedingly ambiguous term and one that, paradoxically, has come to have abidingly pernicious implications. The late Charles Yost, a gentle, perceptive, and cultured diplomat who spent a lifetime pondering relations among nations, observed that the more tenaciously the superpowers grapple for national security through arms stockpiling, the less secure they become. Adults, and many children, throughout the industrialized world carry with them the persistent (though usually sublimated) fear of a nuclear attack and annihilation that could come at any time. We are in fact not very secure at all.

But space-based reconnaissance and surveillance play a key role in three areas that really do relate to national security in its truest sense.

First, to echo Lyndon Johnson, the technical collection systems provide in abundant detail information on what the opposition has in the way of weapons (not to mention industrial productivity, agricultural output, civil projects, and so forth) and also what it does not have. To the extent that an effective defense posture is necessary, space and related intelligence systems provide sufficient data so that real threats can be checked. At the same time, they also help us to decide what not to build because of the absence of a threat, thereby saving untold billions of dollars. Technical intelligence pointing to a curtailed Soviet strategic bomber force in the 1970s, for example, allowed the Air Force to cut back on its fighter-interceptors and put the funds it saved elsewhere .

Second, the system virtually eliminates the possibility of a surprise attack by the Soviet Union or any other major power (nuclear terrorism by some Third World nations is a different matter, however, and is taken more seriously than the Soviet threat by many in the intelligence community). The remote sensing systems with which each side monitors the other and most of the rest of the world are so many, so redundant, and so diffuse that no preparation for an all-out attack could take place without triggering multiple alarms, many of them coming from space. Orders for armies to march, planes to fly, and civilians to hide must be communicated relatively quickly over vast areas, and what is communicated can be intercepted; everything necessary to wage the war must be moved, and what is moved can be photographed. Similarly, the technical collection systems permit effective crisis management and in the process can prevent the sort of runaway escalation that has often propelled other generations into war almost by accident. Surprises tend to make

generals jumpy; space reconnaissance and surveillance reduce the element of strategic surprise to practically nil, which, as was the case during the Cuban missile crisis, gives each side time to take the other's measure and consider responses rationally.

Finally, even the anemic level of arms control that currently exists, denigrated and undercut as it has been of late, would be impossible without the space-based monitoring capability described here. This is no place for a discussion of arms control. But there are two arguments against it, both currently gaining fashion, which relate to the subject of this book and therefore bear challenge .

There is the allegation that arms control is dangerous because it rewards the cheater to the point of making an attack against the side that adheres to the agreement seem feasible. Therefore, the argument goes, both sides ought to build as many weapons as they deem necessary in order to ensure an indefinite standoff. This presumes that cheating on a significant scale can go undetected, which is untrue, and that the more nuclear weapons there are in the world, the safer it will be, which is absurd. Further, there is the assertion that smaller weapons--cruise missiles and mobile ICBMs, for example--make treaty verification virtually impos- sible. Those weapons make monitoring more difficult, it is true, but far from impossible. To the contrary, the record shows that reconnaissance and surveillance technology have kept pace with weapons technology and give every indication of continuing to do so.

A freeze on weapons testing, on the other hand, would J.accomplish the stated purpose of the Strategic Defense Initiative--to make nuclear weapons obsolete--at relatively minuscule Cost and without the provocation that "Star Wars" will necessarily entail. So would effective mutual strategic force reduction. It may be determined that neither of these is in the best interest of the United States. But the assertion that neither is possible because the nation's technical intelligence systems are unequal to the task of guaranteeing adequate compliance is blatantly false. Like SDI itself, publicly stated concern regarding the alleged inadequacy of U.S. verification capability smacks of nothing less than a desire to disrupt and destroy arms control once and for all. But treaties or not, the world will continue to be scrutinized by a pervasive, highly advanced armada of spaceborne sentinels that constitutes the Western alliance's first line of defense. This book is an account of how they came to be, what they are, and who controls them.

-- W.E.B.
Stamford, Connecticut
June 1, 1986