

# THE TIME OF THE ANGEL

## The U-2, Cuba, and the CIA

Don Moser

CIA 4 Cuba: Missile Crisis



In the still of the October night, the slender, birdlike plane lifted into the sky from its base in California, climbed sharply on a column of flame, and headed east through the darkness. Pilot Richard Heyser, in the cramped, tiny cockpit, had good reason to be apprehensive, but he had little time to worry. He was totally occupied with the intricacies of navigation and with the exacting task of keeping his sleek aircraft aloft; for this plane was so specialized, so refined, that in the rarefied atmosphere that was its element it hung in the sky only tentatively, as if suspended from a wisp of spider's silk. As the plane climbed above fifty thousand feet it entered a critical altitude level called the "chimney." Once in the chimney, if the pilot flew a shade too slow, the plane would go into a stall and a spin from which it would never recover. If he flew a shade too fast, the fragile craft would come apart in mid-air.

For several hours the aircraft arrowed across the continent, gradually climbing higher and higher into the chimney. Periodically the pilot adjusted his airspeed, for as the plane climbed, the razor's edge between stall and disintegration grew ever finer, sharper. Dawn came, then sunrise. Now the Gulf of Mexico shimmered below.

The island came into view, tropical green rimmed by bright sand beaches. The pilot flew south of the island to a predetermined point in space, then turned back north. Pursuit might come at any time now, quick death slanting upward like an arrow.

There was a switch on a panel at his right hand. He had already thrown it from "off" to "stand by." Now as the plane passed high over the island's shore the pilot looked into his drift sight, a periscopelike device that peered through the belly of the plane. Then his hand moved once again to the switch on the panel. . .

During a period of thirteen days in October, 1962, the United States and the Soviet Union stood at the brink of war. In a confrontation over Russia's placing nuclear-tipped strategic missiles in Cuba, American aircraft, naval vessels, and assault troops went on alert and prepared for battle, while in Cuba Soviet technicians rushed to complete the installation of missiles that could reach almost any point in the United States. During the two-week crisis, President Kennedy estimated that the chance of armed conflict was "between one in three and even." Of course that potentially catastrophic war did not occur. Kennedy took a

threatening stance and imposed a naval blockade; Soviet premier Khrushchev ultimately backed down, and the missiles were dismantled and returned to Russia.

As the missile crisis unfolded, a critical factor was Kennedy's certainty, beyond any shadow of doubt, that nuclear missiles were indeed being installed just a hundred miles from American shores. Kennedy was certain enough to take the grave risk of imposing a blockade—in itself an act of war—certain enough to contemplate the even graver risk of launching an air strike against Cuba, an act that might well have brought Soviet retaliation. How could Kennedy have been so sure?

The answer lies in a secret airplane flight and in the technology that made it possible—a technology of spying developed under the aegis of the Central Intelligence Agency. This technology wrapped American spies in a new cloak, ending the Mata Hari era and ushering in an age of optics and electronics. The technology also gave the U.S. an enormous intelligence-gathering advantage over the Soviet Union at the height of the Cold War. At times, as in the missile crisis, this intelligence allowed the U.S. to anticipate threatening moves by Russia. Equally important, the intelligence also dispelled groundless fears about Russian military superiority. Given the touchy temperament of the times, had the U.S. not possessed such intelligence, events might have taken an even more frightening turn.

The development of sophisticated intelligence-gathering tools began in the early 1950's, a time when the climate for such development was very favorable. For one thing, the President of the United States was a former general of the Army who had a professional soldier's familiarity with photographic intelligence. During World War II, aerial reconnaissance had been carried out by ordinary bombers and fighters stripped down and equipped with cameras instead of guns. These unarmed planes were highly vulnerable and extremely unpopular with their pilots, whose motto could be paraphrased as: "Get your pictures and get your tail out of there." The recon planes had to fly at low altitudes in turbulent air; since the cameras had no gyrostabilizing mechanisms to cushion them against shock, the quality of the photographs was generally poor, and even the quantity of information was limited by the film, which had a thick, space-consuming backing. In spite of these shortcomings, postwar analysis revealed that some 80 per cent of all useful military intelligence



Kennedy explains his stand . . .

U.P.A.



. . . and Castro explains his.

WIDE WORLD

came from aerial reconnaissance photographs.

Dwight Eisenhower entered the Presidency with a strong bias toward photographic reconnaissance. He felt that the intelligence-gathering services of the U.S. placed far too much reliance on "humint" (the spy trade's term for intelligence gathered from human sources) and "sigint" (the interception of radio and other electronic signals). Humint was prone to errors of judgment, bias, and exaggeration. As for sigint, most sensitive radio traffic was encrypted, and thus had to be decoded. Photographs neither lied nor required code-breaking.

Another factor made the time ripe for a breakthrough in the techniques of spying. In recruiting agents during the war, the Office of Strategic Services—the CIA's predecessor—had turned to the academic community, particularly to Ivy League and other prestigious universities. The reason was simple enough: the OSS needed people who had traveled abroad and who had proficiency in foreign languages; with the U.S. just emerging from the Depression, only the highly educated were apt to have such experience. This alliance of spies and scholars remained intact during the Eisenhower and Kennedy years, indeed remained intact until the academic community grew disillusioned over the war in Vietnam and over revelations of assassination plots and other dirty tricks carried out by the CIA.

Then of course there was the Cold War itself. During the early 1950's there was widespread concern about Russian nuclear superiority. In 1953 the Soviet Union exploded a hydrogen bomb. Shortly afterward it became clear that the Russians were working on the production of long-range aircraft, and in 1955 they unveiled an intercontinental bomber, the Bison, which was capable of striking the U.S. The Russians took pains to suggest that they were far along in their bomber program by skipping numbers in the serial designations on the planes they publicly displayed. When Western observers saw planes numbered, say, 19 and 21, they assumed that there was a bomber number 20, which did not in fact exist.

At the time, the U.S. had no reliable way of determining whether or not the Soviet Union had achieved superiority in nuclear weapons and delivery vehicles. Grasping at straws, American spies launched camera-carrying balloons that soared across Russia at sixty thousand feet or more, and then, over western Europe, dropped their camera mechanisms by para-

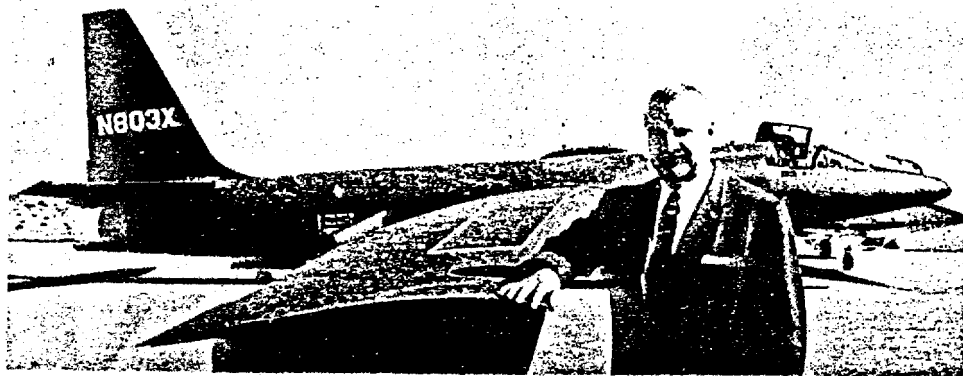
chute—with luck into the hands of waiting intelligence agents. But some of the spy balloons went astray, and others drifted down inside Russia where they provided grist for Soviet propaganda. In any case, the balloon cameras produced pictures that, while adequate for making maps, did not provide enough detail to enlighten the U.S. about Russian weapons development.

Eisenhower was appalled at the lack of sound information about Russian capabilities. Thus in 1954 he created a special presidential committee to study the subject of surprise attack. Chaired by James Killian, the president of MIT, the committee was charged with determining whether or not the U.S. might be facing another Pearl Harbor. At a meeting in the fall, the committee decided that the U.S. should begin reconnaissance overflights of Russia and the Soviet-bloc countries.

The only problem was that no aircraft existed that could carry out such a mission. But in the course of its investigations the committee learned that a conceptual design for a high-altitude reconnaissance plane had recently been submitted to the Air Force by Clarence "Kelly" Johnson, the chief aircraft designer for Lockheed. Johnson's proposed design was so extraordinary that the Air Force turned it down on the grounds that such a plane simply could not be built. But the President's committee was more sanguine, and they passed on their views to Eisenhower, who immediately told Allen Dulles, then head of the CIA, to get that airplane built—urgently and secretly.

Dulles appointed one of his top deputies, Richard Bissell, to ramrod the project. A recent CIA recruit, Bissell was an economist who had taught on the faculty of Yale and MIT, and who had served as an administrator in the Marshall Plan. Bissell started things moving that very day. With an opposite number from the Air Force, he hatched a scheme to finance the project secretly. The CIA had a special reserve fund for which it had to make no specific accounting. From this fund the agency would pay for the air-frame development. The Air Force already had on order a large number of Pratt and Whitney engines that could power the Lockheed design. The Air Force would buy a few more engines and bury the extras in their larger order. Financing settled, Bissell phoned Kelly Johnson at Lockheed and told him to get to work.

Kelly Johnson was a shy, chubby genius who looked rather like W. C. Fields, and whose idea of recreation was working calculus



Above: Clarence "Kelly" Johnson, brilliant designer of the U-2, at the wingtip of one model, ca. 1962. Right: Tony Levier, Lockheed test pilot, who was the first man to fly the extraordinary new airplane when it was built in 1954.

ABOVE: LOCKHEED. RIGHT: LOS ANGELES Times



problems. He was probably the most brilliant aircraft designer alive. During his long career he created the famous P-38 of World War II, the F-80, which was America's first jet fighter; the C-130 Hercules, which is still an Air Force cargo workhorse; the F-104 Starfighter; and the high-altitude SR-71. A man who liked to work with a compact staff and a minimum of fuss and red tape, his stature with Lockheed was such that he had almost total autonomy. Now he hand-picked a small team of twenty-three engineers and technicians and moved them into a Lockheed hangar in Burbank, California—a secret workshop that Johnson named "the Skunk Works," after the spot in Dogpatch where Hairless Joe brewed up his famous Kickapoo Joy Juice.

It was no wonder the Air Force had considered the plane impossible to build. To be safe from interception it had to fly at an altitude of seventy thousand feet—some twenty-five thousand feet above the operating ceilings of contemporary aircraft. In the thin air at that altitude, a jet engine would barely run at all, and it would produce only 6 per cent of its sea-level thrust. The plane had to stay in the air for over ten hours and cruise as far as a B-52, and its fuel capacity was so limited that it had to get an incredibly efficient five miles per gallon of fuel while flying at five hundred miles per hour. And since the crash landing of a spy plane on foreign soil would have serious diplomatic repercussions, the new aircraft had to be highly reliable.

Under tight security, Johnson's team went to work on the project, which was code-named "Aquatone." The plane that soon took shape in the Skunk Works was a marvel of elegant simplicity, a sleek machine with an eighty-foot span of slender, tapering wings. It looked more like a glider than a conventional airplane, and indeed from seventy thousand feet it would glide for three hundred miles before touching the earth. Johnson's engineers struggled to pare away every ounce of excess weight. They designed a wing that weighed only three pounds per square foot—a third that of a normal aircraft. They attached the tail assembly to the fuselage with just three bolts. They designed the canopy above the cockpit to be operated by hand. Instead of heavy conventional landing gear the plane had "pogos"—tiny wheels suspended from the wingtips by slender rods. On takeoff, the pogos dropped off as soon as the plane was airborne. On landing, the pilot coasted in on a belly wheel and lightweight skids on the wingtips. Disassembled, the entire aircraft could be stowed away in

a cargo aircraft or transported to a take-off point by truck.

The plane would ultimately become known as the U-2. But the men in the Skunk Works had a nickname of their own for the graceful machine they were creating. They called it "the Angel."

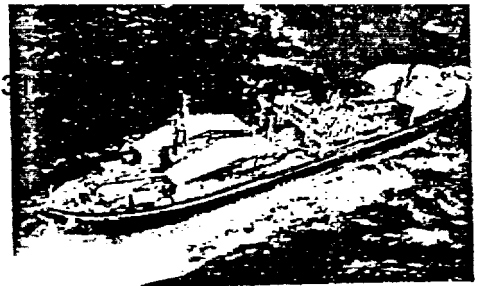
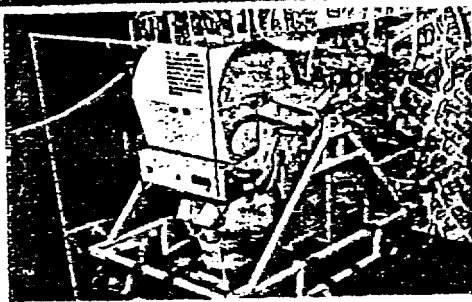
As the first Angels were built in the Skunk Works, Bissell, Kelly Johnson, and Lockheed test pilot Tony Levier armed themselves with topographical maps and made scouting flights over the western deserts, looking for a location so remote that the Angel could be test flown in total secrecy. Finally they found a dry lake bed that could serve as a landing strip. Now roads had to be built, a well dug, hangars and living quarters erected at the hidden site. The construction crews who did this job had no idea what they were working on, and indeed everything about the Angel was shrouded in secrecy. In discussions the plane was known as "the article," the pilot was called "the driver," and the secret desert base was called "home plate." In Burbank, disassembled Angels were loaded into covered trucks, which pulled out at dusk and traveled to "home plate" during the night.

On August 6, 1955, just under eight months from the day that Kelly Johnson got the go-ahead from Bissell, the Angel was ready to fly. On its first taxi test the plane popped thirty-six feet into the air—with its ultralight construction and enormous wingspan, the Angel simply wanted to fly. When Tony Levier took the plane up on its first flight, he had to try five times before he could force the eager Angel back to earth.

Until the pilots got accustomed to the plane, the Angel's determination to stay airborne caused them considerable difficulty. There were other snags too. Condensation formed on the faceplates of the pilots' pressure suits, blurring their vision, and the Pratt and Whitney engine that powered the plane proved subject to flameouts at high altitudes. Before all these problems were solved, one Angel crashed, a second disintegrated, and a third disappeared along with its pilot.

Eventually the difficulties were overcome. Angels started making long endurance flights to the Canadian border and back, to the Tennessee mountains and back. A training program was set up for pilots, both "blue suiters" (Air Force officers) and "the other guys" (men from the CIA). These pilots were an elite group. Candidates had to have a thousand hours of single-engine time even to be considered for the U-2 program. Of those accepted,

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Above, left: the U-2 camera. Left: "Automat," the secret photo-interpretation center in Washington, D.C. Above: Art Lundahl, master photo-interpreter.

ALL: CIA

A Soviet freighter heads for Cuba carrying crated guided-missile patrol boats in August, 1962. Such pictures, although not taken by U-2s, convinced American intelligence experts that U-2 flights over Cuba must be made.

U.S. NAVY

many had problems with the special pressure suits they had to wear at high altitude. These garments were so precisely fitted that if a pilot gained or lost two pounds, his suit was useless. And the suit forced a pilot to breathe artificially; that is, he had to consciously suck in a breath—then the suit would force him to expel the air. Before they could fly the tricky U-2, the pilots spent hours in pressure chambers, learning to breath this way naturally and unconsciously. Some simply could not acquire the knack, and perhaps half the trainees washed out for this reason.

Even as the Angel was under construction and the pilots were being trained, other components necessary for a spy plane were being rushed to completion. Among the breakthroughs was a new Mylar-based film developed by Eastman Kodak. Hardly thicker than Saran Wrap, this film could be loaded into a compact aerial camera in enormous quantities. Another crucial component was a revolutionary new lens designed by Dr. James Baker, a Harvard astronomer. The resolving power, or sharpness, of a lens is measured by the number of lines it can distinguish per millimeter. World War II aerial lenses could resolve from twelve to fifteen lines. Baker's new lens could distinguish from fifty to sixty lines. When mounted in a telephoto camera in an airplane flying at an altitude of about eight miles, the Baker lens could read the headlines on a newspaper lying on the ground. At thirteen miles, it could see an object the size of a sport jacket. Not only was this lens superior to anything that had existed before, but it could now be produced in quantity, and quickly. Previously, lenses had to be ground by hand—a laborious, slow process. But now, in the new electronics age, computers could take over the task of lens making.

Something else was needed: a new camera. With Dr. Edwin Land, the innovative head of Polaroid, functioning as a general catalyst, a series of camera designs were created by the Hycon Corporation, a California optical company. Chief among these was the "B-camera." This rapid-fire machine swung its lens from side to side, producing strips of pictures that, when overlapped, formed a stereo image. Weighing 450 pounds, the camera was designed to fit snugly into the slender fuselage of the U-2.

There was still one more ingredient necessary for a completed spy system: someone had to make expert sense out of the enormous quantity of photographic intelligence that the U-2 would soon be bringing home. In 1953 the CIA had acquired just

such an expert in Art Lundahl, a teacher of photo-interpretation from the University of Chicago. A friendly, ebullient man with boundless enthusiasm for his arcane craft, Lundahl had worked on the Bikini atom bomb tests, determining from photos the damage done to ships that were still too radioactive for close-up inspection. He was a master both of photo-interpretation—the qualitative art of identifying photographed objects—and photogrammetry—the quantitative art of determining their dimensions.

In Washington, Lundahl set up a small photo-intelligence unit, and in December, 1954, he got a cryptic phone call from Allen Dulles' office, relieving him of all duties and telling him to report to the director immediately. He met with Dulles and Richard Bissell, who unveiled the plans for the U-2 and told Lundahl to establish a photo-interpretation shop capable of handling large quantities of film. He was to keep what he was doing an absolute secret—not even his immediate supervisor was to know what he was up to.

Lundahl set up his laboratory in the last place anyone would think to look—above an auto repair shop in a seedy section of Southeast Washington. He and his team kicked their way through garbage to get to work and risked muggings on their way home, but they had plenty of room and a high degree of inconspicuousness. Lundahl foresaw the day when his lab would be able to provide an unprecedented amount and variety of information to suit any intelligence appetite, and so he gave his operation an appropriate code name: Automat.

Plane, film, lens, camera, interpretation—the greatest intelligence-gathering tool in history was now complete. From a height of thirteen miles the U-2 could photograph a swath of country 750 miles wide, about 150 miles of that in high-resolution stereo. Carrying twelve thousand feet of film in its magazines, the plane could scan a path from Washington to Phoenix in a single flight. And in just twelve missions, the inquisitive Angel could gather all significant information on a land mass the size of the United States.

The first U-2 flight over Russia took place on July 4, 1956. By the second or third mission the Russians had picked up the plane on their radar, which was more sophisticated than U.S. analysts had thought, but the Soviets had no weapon capable of bringing down the high-flying intruder. For four years the Angels criss-



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quarantine, President Kennedy put Air Force, Navy, and Marine Corps units on stand-by to react to the reaction of the Soviet Union. Left: jet fighters at Patrick Air Force Base in Florida, ready for action.  
U.P.I.

crossed the Russian skies, until May 1, 1960, when a U-2 piloted by Francis Gary Powers was shot down over Russia by a SAM—a surface-to-air missile. The Powers incident brought a storm of protest from Russia, and resulted in a cessation of overflights. But in those four years the spy planes had gathered an enormous amount of information. First they had proved that a “bomber gap” did not exist; the Russians were not ahead of the U.S. in long-range bomber capacity. Later, they proved that the much-feared “missile gap” did not exist either.

But the ultimate employment of the U-2 was not to occur for two more years, during the administration of John Kennedy. In the summer of 1962 it became evident that Russia was sending massive arms shipments to Cuba. The U.S. intelligence community had a worldwide ship-watching network, and as Russian vessels passed through choke points like the Bosphorus, U.S. military attachés in Istanbul simply stood on the shore, observed the ships, and photographed them. Many of the ships had large crates on their decks, and these were a dead giveaway, for back at Automat Lundahl’s interpreters had developed a new skill they called “cratology”—which was the science of deducing the identity of objects concealed inside crates. For years CIA agents had been observing the kinds of packages the Russians used to wrap their military equipment. During May Day festivals in Moscow, when the Soviets traditionally paraded their new weapons, agents observed and photographed missiles, tanks, planes, and other hardware. Now when photographs of the Russian deck cargo arrived in Washington, Lundahl’s photography experts needed only a single known dimension—such as, say, the height of a deckhand—to measure accurately everything else in view. By August some seventy-five Soviet or Soviet-chartered ships had reached Cuba or were en route, and the cratologists had determined that they were transporting missile-carrying PT boats, cruise missiles, MIG fighters, and other sophisticated weapons.

Along with this evidence, the CIA was also gathering a great deal of “humint” on the Cuba buildup—too much of it, in fact. At the time, refugees were pouring out of Cuba and into Miami. The new arrivals were taken to Task Force W, a CIA debriefing station established at Opa-Locka, Florida. There they were interrogated by Spanish-speaking analysts; those who seemed to have useful information were held for further questioning. The

refugees were full of gossip, rumors, hysteria, and a generalized hatred of the Castro regime that caused them to see apocalypse around every corner. They flooded the system with reports of SAMs and nuclear missiles. Again and again these reports proved false. (Indeed, by January of 1962, months before the arms shipments began, the CIA had received 211 refugee reports of missiles in Cuba.) Confronted with so much bad information, so much “background noise,” the CIA’s intelligence analysts became skeptical about all refugee reports.

Intelligence from agents in Cuba would have been more reliable, but such intelligence was in short supply in 1962. Following the Bay of Pigs, Castro had declared a “war on traitors,” rounding up thousands of Cubans with doubtful loyalties; among them were most of the CIA’s Cuban spies. With those informants lost, analysts had no way of corroborating the refugee reports.

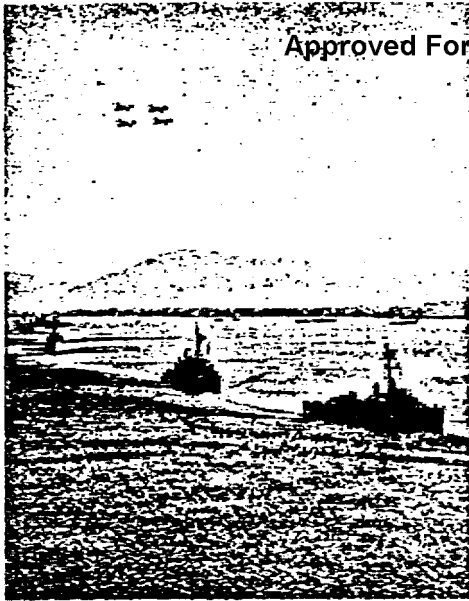
Harder information was needed—the kind that could be provided only by the U-2. A mission was flown, and when the film was inspected on August 29, Lundahl’s interpreters saw something new, and sinister—the familiar Star of David pattern of a Russian SAM site. Indeed, in ensuing days they found eight such sites under construction. The key question was: were the SAMs simply part of an anti-aircraft defense system, or did their presence have more menacing implications? Could they be there to protect other missiles—nuclear missiles?

The discovery of the SAMs caused consternation in the White House, but on September 4 Khrushchev sent a message via Russian ambassador Dobrynin to Robert Kennedy, for relay to the President. The message said, in effect, that Khrushchev had no intention of creating any problems for Kennedy during 1962, an election year. In response, Kennedy issued a public warning that if offensive missiles were introduced into Cuba, “the gravest issues would arise.” A few days later, the Kremlin made another mollifying statement indicating that there was no plan for installing missiles in Cuba.

Most members of the American intelligence community accepted the Russian denials—not because of faith in the Kremlin’s honesty, but because it simply did not seem rational for the Russians to place offensive nuclear missiles in Cuba. They had never placed such missiles in Soviet-bloc countries in Europe, although they could have done so with impunity. Why would they

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At Guantánamo, the big American naval base at Cuba's eastern end, ships and planes performed "exercises" during the crisis, while Marines in fighting gear awaited orders to move.

BOTH: ROBERT W. KELLEY, Life MAGAZINE © TIME, INC.

now place them in the Caribbean, where the U.S. was sure to regard their presence as extremely provocative, and where the U.S. had total military superiority? Cuba was important to Russia; the United States had already backed one botched invasion of the country. Why provide the Americans with an excuse to launch an all-out attack?

Certainly it was plausible that the Kremlin believed it necessary to beef up Cuba's anti-aircraft defenses. The U.S. had supported the Bay of Pigs attack the previous year, and the CIA had been busily hatching bizarre schemes for doing away with Castro. The U.S. also had allowed some publicity about a forthcoming military exercise planned for the Caribbean in the fall of 1962. This operation, code-named "Philbriglex-62," was to involve an assault by seventy-five hundred Marines, heavily supported by aircraft carriers and other vessels, on an island off the coast of Puerto Rico. According to the scenario, the Marines were to "liberate" a small country called Vieques from a dictator named Ortsac—which, of course, is Castro spelled backward. Russia was aware of this operation, and might reasonably have suspected it was a practice run for the real thing.

There were some dissenters from the generally sanguine outlook shared by most U.S. intelligence experts. Chief among these was John McCone, who had taken over from Allen Dulles as head of the CIA in the aftermath of the Bay of Pigs fiasco. McCone, who always took the dimmest possible view of Russian intent, felt that the Kremlin might indeed install offensive missiles as bargaining chips for future negotiations. McCone accounted for the fact that Russia had not given such missiles to its eastern European allies on the ground that Russia did not trust its satellites, and feared the missiles might be turned back on Moscow. Placed in Cuba, medium-range ballistic missiles could not reach back to Russia. But they could reach the United States.

The truth could best be learned through the hard data produced by more overhead reconnaissance. But now there was an obstacle to sending the Angels winging over Cuba. With SAMs now in place in Cuba, there was a strong possibility of losing a plane, and the resulting international uproar could severely limit the future use of America's most effective spying tool. The Committee on Overhead Reconnaissance, made up of representatives from the CIA and various military intelligence branches, finally decided on a compromise course. They would send the U-2s on "sheep-

dipping" missions—that is, the planes would fly off the island's shore, briefly dipping inland to take quick photographic peeks, then high-tailing it away. None would fly directly over the western end of Cuba, where the SAMs were being installed.

The sheep-dipping flights failed to turn up any new evidence, and on September 19 the U.S. Intelligence Board met in Washington to try to draw some conclusions. The board, made up of members from the CIA, the National Security Council, and the State and Defense Departments, weighed all available evidence and advised the President that it was extremely unlikely that the Russians were installing strategic nuclear missiles. Pessimistic as always, John McCone, who was honeymooning on the Riviera, cabled his dissent.

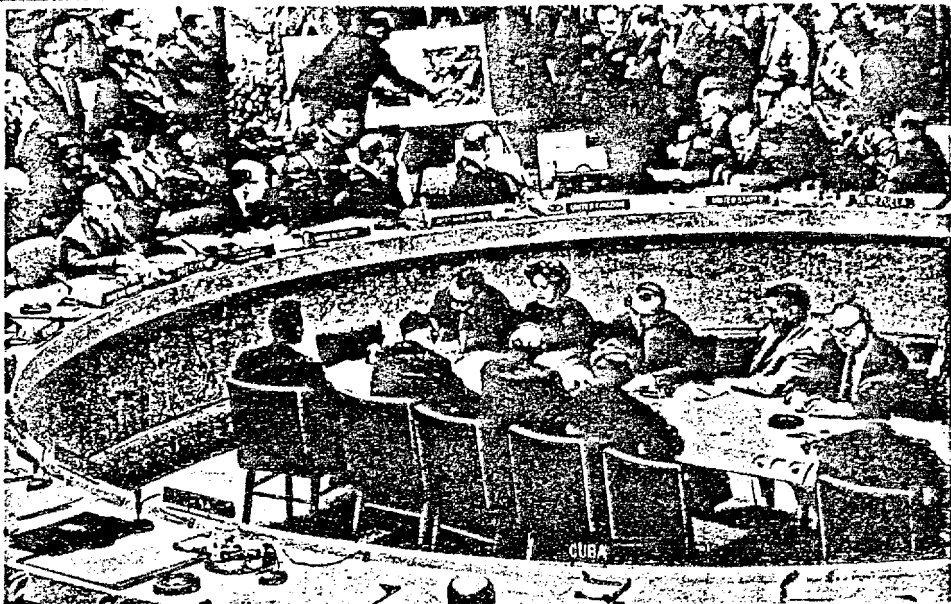
But nosooner had the board reported to the President than new information surfaced—information with disturbing overtones. For one thing, large-hatched ships were seen arriving in Cuba. Ordinarily these ships were used for transporting such bulk cargo as lumber, but the vessels approaching Cuba were riding high in the water, as if carrying light but bulky loads. Then intelligence analysts received a report that Fidel Castro's personal pilot had drunkenly boasted that "We will fight to the death and perhaps we can win because we have everything, including atomic weapons." On September 21, two days after the Intelligence Board meeting, a crucial report finally reached Washington: nine days earlier, a CIA agent in Havana had spotted a truck carrying what appeared to be a shrouded long-range missile. The agent managed to get onto a refugee flight to Florida, where he met with intelligence analysts. His sketches of the truck's rear profile and other information he gave suggested that the truck was indeed carrying a large strategic missile. Corroboration for his story followed quickly, with another report that similarly laden vehicles had been seen in the area of San Cristóbal, about fifty miles southwest of Havana.

There was yet another worrisome bit of intelligence: Colonel John Wright, an analyst with the Defense Intelligence Agency, had carefully studied the earlier U-2 photos of the SAM installations. There was something peculiar about the SAM sites in the San Cristóbal area: the missiles were laid out in a pattern similar to that the Russians had used when setting up defenses for strategic missile sites in the U.S.S.R.

By October 4, the accumulated evidence was so suggestive that

At an emergency session of the United Nations Security Council on October 25, the U.S.A. shows convincing U-2 evidence; Ambassador Zorin of the U.S.S.R. (behind "President" sign) ignores it.

NEAL BOENZL THE New York Times



the Committee on Overhead Reconnaissance decided to authorize a U-2 flight over the San Cristóbal area, in spite of the considerable risks involved. But instead of launching a spy plane immediately, the intelligence community now got involved in a time-consuming bureaucratic squabble over which agency should run the operation, the CIA or the Air Force. In case the plane was shot down—and that was a strong possibility—the difference would be by no means academic. If the pilot was a CIA man he could be treated as a spy, even shot. But under what is known in the spy trade as the "theory of plausible denial," the U.S. could disavow any connection with the mission. While such a disavowal would be a transparent fiction, it would have a certain diplomatic utility. On the other hand, if the pilot was an Air Force officer the overflight could be construed as an act of war.

For these reasons, sensitive missions such as the one now planned were customarily flown by CIA pilots. In this case, however, with actual armed conflict now a clear possibility, the Air Force lobbied for the right to fly the mission, and eventually won out. The pilot would, however, fly a CIA plane, for the agency's U-2s were souped-up models carrying electronic countermeasures against SAMs.

More time was lost because of cloud cover over Cuba, but finally, on October 14, Mission G3101 Victor was launched. Major Richard Heyser, the pilot, was a 35-year-old Floridian. An experienced flier, he was an old friend of Francis Gary Powers, and he was skilled in a variety of maneuvers designed for evading SAMs. Just in case he was shot down he carried plenty of Air Force identification to ensure that he was not treated as a spy. He did not carry cyanide pills or other suicide devices. If captured and interrogated, he would divulge no more information than necessary, but he was not expected to remain silent in the face of torture.

About 8 A.M. on the fourteenth, Heyser approached Cuba from the south across the Isle of Pines. He passed over Cuba in six minutes, while the camera behind him in the fuselage, its lens rotating from position to position, took 928 photographs. No SAMs were fired at him. His work done, Heyser flew back to the U.S. and landed in Florida.

The film was rushed to Lundahl's Automat operation in the Washington slums, and the next morning, in a high-ceilinged room painted battleship gray, a team of photo-interpreters went

to work. Late that afternoon Lundahl got a call from one of his men. "We want you to come and look at something."

When Lundahl reached the room, the interpreters said nothing about what they had found, for it was customary in this business to let each man draw his own conclusions. Lundahl went to the light table, where he adjusted the twin stereoscopic eyepieces to suit his vision. There on the film he saw an area of palm trees and jungle vegetation slashed by the track marks of heavy equipment. In a clearing he saw empty missile transporters, blast deflectors, cherry-picker cranes, wires and cables strung along the ground. Most significantly, he saw rectangular tents designed to cover something very long and narrow, and some special vans like those the Russians used to transport nuclear warheads.

After examining the film carefully for five minutes, Lundahl turned to the interpreters and said, "OK, I know what you guys are thinking, and you're right. These are medium-range ballistic missiles. I don't want anyone to leave this room. Call your wives, break up your car pools. Do it casually. But stay in this room."

It was 5:30 P.M. Lundahl picked up a secure "gray phone" and called the CIA headquarters in Langley, Virginia. McCone was out of town attending a funeral, and Lundahl got Ray Cline, the agency's deputy director for intelligence. "Ray," he said, "sorry to break up your day, but we're looking at MRBMs going into Cuba, and even out here in the boondocks we know what that means."

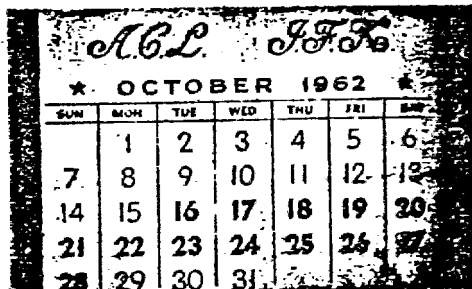
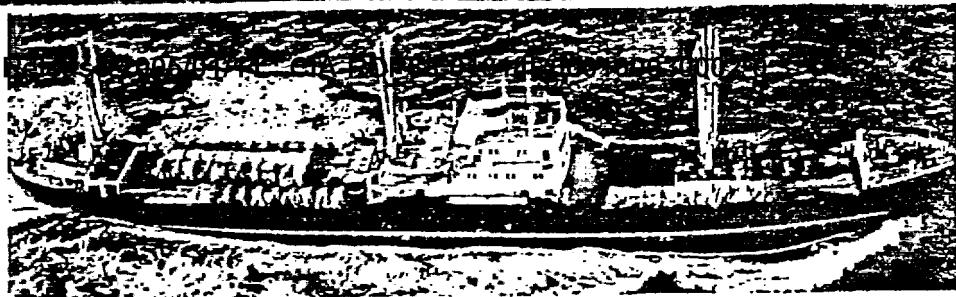
Cline was dumbfounded. "Are you sure? You aren't imagining it?"

"I'm sure."

"I hope you're holding the ceiling on."

"I've got everybody buttoned up in the room."

"Don't go off half-cocked." Cline said. "Go back and do your homework again." After telling Lundahl to recheck the film, Cline faced an awkward couple of hours. The CIA was hosting its counterparts from England, Canada, and Australia at a Commonwealth intelligence conference in Washington, and Cline was expected to appear at a cocktail party that evening. He bluffed his way through the party, got home by eight, and talked once more to Lundahl, who confirmed the existence of the MRBMs. Lundahl had found two sites containing SS-4 missiles. Known to U.S. analysts as "Sandals," they had a range of 1,020



As things calmed down, Soviet freighters left Cuba carrying crated bombers (above, left) and missile launchers (above); J.F.K. gave Art Lundahl and others silver souvenir calendars (left).

CLOCKWISE FROM TOP LEFT: U.P.I., WIDE WORLD, ART LUNDAHL

nautical miles—which put them within striking distance of Washington, D.C.

Cline's first action was to call presidential assistant McGeorge Bundy at his home. Since he had no scrambler phone, Cline felt it necessary to be circumspect. "You know that island we were talking about a few days ago?" he said. "Well, they've got some big ones."

Bundy caught on immediately. He was staggered by the news. "Are they ready to shoot now?" he asked.

"No, but they are rapidly approaching it."

Next, Cline tried to alert the State Department. He reached Roger Hilsman, the department's chief of intelligence, at a cocktail party. Once again Cline described the missiles circumspectly, but this time his cryptic references were less effective. Hilsman thought he was talking about bombers, not missiles, and it took some time for Cline, using circumlocutions, to make himself understood. As soon as he hung up, Cline found out he wasn't so clever as he thought. His fourteen-year-old daughter, who had happened to be in the next room, came in and said, "Where are the missiles—in Cuba or China?"

Through the rest of Monday evening, other top-level officials of the government were tracked down at home or at social functions and were told the news. Meanwhile, all through the night, Lundahl's team kept checking the film over and over again. Everything they saw strengthened their convictions.

Early the next morning, McGeorge Bundy went to the White House and informed the President: "There is now hard photographic evidence that the Russians have offensive missiles in Cuba." Realizing that Khrushchev had lied to him, Kennedy reacted with surprise and anger. "He can't do that to me!"

Meanwhile, Lundahl and Cline were preparing their briefing for the President at the CIA's Langley headquarters. Just as they were walking out the door with a big black case full of photographs, a bus carrying the delegates to the Commonwealth intelligence conference pulled up. Cline, who was supposed to address the opening conference session that morning, was caught in an embarrassing spot—anyone could see that he was going off on some important errand. (Later, as the feverish comings and goings around Washington became increasingly obvious, Cline dropped hints that convinced the foreign intelligence officers that the crisis was over Berlin).

At the White House, Lundahl and Cline went to the Oval Office and spread the pictures out on the President's desk. Lundahl handed Kennedy a big Sherlock-Holmes-style magnifying glass and pointed out the incriminating evidence. Kennedy took a long time examining the pictures. Then he turned to Lundahl, fixed him with a hard stare, and said, "Are you sure?"

"It can be a papier-mâché world out there," Lundahl replied. "But I'm as sure of this as a photo-interpreter can be."

Over the following days there were more U-2 flights, and the photo-interpreters were able to pinpoint a total of six MRBM sites. They also found three sites for intermediate-range ballistic missiles, which could carry nuclear warheads for twenty-two hundred nautical miles to strike at any point in the United States except for a small section of the Pacific Northwest. At the United Nations when Adlai Stevenson accused the Russians of installing the missiles, Soviet Ambassador Zorin tried to deny their existence, but Lundahl's deputy was waiting in the wings with huge enlargements of the photographs. When he wheeled the pictures onto the floor of the Security Council, there was no contesting the evidence. Representatives of the CIA flew to the capitals of major Allied nations with copies of the pictures and convinced the foreign chiefs of state that the U.S. was acting on hard fact. Confronted by all this, Khrushchev ordered the missiles removed from Cuba. Later, when the Russians began to withdraw the missiles, U-2s confirmed that they were gone.

Today, of course, all this seems almost primitive, for things have changed a lot in the last fifteen years. The technology of spying is much advanced, with Russian and American satellites orbiting the earth and sending back intelligence from altitudes far beyond any achieved by the U-2.

John F. Kennedy and Nikita Khrushchev are gone—and most of the experts who played key roles in the development of the Angel and its associated technology are now fully or partly retired. But they must look back, from time to time, to a brief moment when it and they were in charge of history.

*Don Moser, who was formerly an assistant managing editor of LIFE, is now a free-lance writer who lives in Washington, D.C. He is currently working on a book about the China-Burma-India theater in World War II.*