

A Full Retaliatory Response

When President John Kennedy contemplated nuclear war, what went through the minds of the U.S. bomber crews?

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Thomas Jones



To boost launch, crews loaded B-47s with jet-assisted takeoff bottles. (Augustine R. Letto, USAF)

TANDING ON A STEPLADDER IN THE GLOOM of the B-52's cavernous bomb bay, I squeezed between the lower pair of torpedo-shaped nukes—B28F1 thermonuclear weapons—and aimed an inspection mirror and flashlight at the circular viewports on each: "safe" indicators visible, yield settings correct. Satisfied that our bomb load was dormant, the navigator and I connected the mechanical bomb door actuators and backed carefully out of the bay. With the pilot and gunner, we shouldered the heavy doors, sticky with hydraulic fluid, and slammed the latches home with a solid thunk.

In the crew compartment, the radar navigator—who on a B-52 serves as the bombardier—and the electronic warfare officer wrapped up their inventory of our code documents and strike folders. Then the six of us hopped into an Air Force-blue, six-passenger pickup and headed to "the vault." For the next three hours, we sat within a guarded, windowless, single-story, cinder-block bunker to study the inconceivable: the part we'd play in global thermonuclear war.

Our sortie was just one strike mission in the Single Integrated Operational Plan, a Strategic Air Command script for thousands of aircraft and missile attacks against the Russian homeland in response to a Soviet assault. Laid out in meticulous detail in our strike folder were flight routes, refueling tracks, bomb run airspeeds, our positive-control turnaround point—where we would turn back unless we received a radio order to strike—and finally, deep in the Soviet Union, four targets, one for each of our 1.1-megaton weapons.

In the vault, my crewmates, who ordinarily wouldn't go more than a few minutes without a joke or good-natured ribbing, were deadly serious. As we concentrated on the maps, the nav team explained how they would take us in and out of the target areas; we discussed countermeasures, fuel reserves, how we would link up if forced to bail out. I was on alert from 1979 until 1983, and each time we studied the SIOP, I knew our six-man combat crew was ready—skilled, trained, willing—to execute a mission from which we would likely not return.

I have wondered since then what went through the minds of other Strategic Air Command crews who, 20 years before my crew met in the vault, came much closer to flying those missions than we did. The bomber crews on alert during the 1962 Cuban missile crisis were studying the SIOP at the only time in the history of the cold war when U.S. forces reached Defense Condition 2. At DEFCON 1, those SAC crews would have been dropping bombs.

"I thought it was unlikely that we would complete the entire mission," says Augustine R. "Gus" Letto, who, when the missile crisis broke, was a captain and EB-47E copilot with the 353rd Bomb Squadron at Lockbourne Air Force Base in Ohio. "My personal hope was that we could complete enough of the mission to support the low-flying strike aircraft." The EB-47s were high-altitude jammers, exposed to fighters and surface-to-air missiles. "I decided that the world as we knew it would be at an end," Letto continues, "and that my family, if they were lucky, would not survive the initial nuclear exchange."

Letto, 30 at the time, was pulling the week-long ground alert tour required of every SAC crew member nearly twice a month. Crews on ground alert were expected to take off, ready for combat, within 15 minutes of the order to launch. For the entire week they were on alert, they lived in a partially buried, concrete-block alert shack. "We had spent the whole afternoon [of October 22, 1962] in the 'mole hole' when they announced a meeting for aircraft commanders only," he says. Outside, Letto saw crew chiefs and technicians at work on the wing's EB-47s: topping fuel tanks, loading 20-mm ammo for the twin tail cannon, installing JATO (jet-assisted takeoff) bottles—in short, preparing the bombers for combat.

To the Brink

Six days earlier, on October 16, President John F. Kennedy's Executive Committee had begun to act on intelligence gathered by U.S. Air Force U-2 reconnaissance aircraft: The Soviet Union was preparing to deploy medium-range R-12 missiles in Cuba. The missiles had 2.3-megaton warheads and a 1,100-mile range. They could reach Philadelphia, St. Louis, Oklahoma City, San Antonio, and the Panama Canal. (Photo-interpreters discovered that Soviet technicians

were also preparing sites for 16 intermediate-range R-14 ballistic missiles, with a range of 2,300 miles.)

The U.S. Joint Chiefs began planning air strikes to destroy the missile emplacements and to support the invasion of Cuba that would follow. SAC's commander, General Thomas S. Power, was a hard-bitten veteran of the B-29 bomber campaign against Japan in World War II; his wartime superior and predecessor at SAC, Curtis E. LeMay, was now Air Force Chief of Staff. Both men saw two roles for the Strategic Air Command: to deter any Soviet offensive action and to meet any Soviet attack from Cuba with a massive retaliatory strike against Russia.

The feverish activity that Gus Letto witnessed from the alert shack on October 22 was a response to a message from the Joint Chiefs sent that afternoon: U.S. forces worldwide were to go to DEFCON 3 at seven that evening. At SAC bases around the world, both air and ground crews raced to get every flyable bomber and tanker "cocked."

The Strategic Air Command of the 1960s was a highly trained and disciplined organization. Aviation historian Alwyn T. Lloyd says that after LeMay took over as SAC commander in October 1948, he turned the command around. "He was appalled at the lack of readiness," says Lloyd, so he instituted rigorous training programs and competitions to keep the crewmen sharp. "He created the Spot Promotion program in which an entire crew was promoted one grade for winning the Bomb Comp," says Lloyd. "If any member of a crew committed a major operational infraction, the entire crew was busted back one grade."

Since May 1960, the command had been keeping more than 400 B-47, B-52, and B-58 strategic bombers—about a third of the fleet—on 15-minute ground alert. That posture, along with 10-hour-plus training missions and recurring ground instruction, pushed the average crew's workload to a crushing 60 hours or more a week. At Altus Air Force Base, in the desolate tablelands of western Oklahoma, B-52E tail gunner Clyde Ketcham, an airman second class, was one of the young men spending half of every month on alert. For Ketcham, then 20, the week began as the others had, but "I got up one morning and they had all these guys with carbines around the alert shack," he says. "They had cooks, civil engineers—they had everybody out there. They just locked down the base."

At 7 p.m. that evening, President Kennedy gave a 17-minute speech announcing "a quarantine on all offensive military equipment" headed to Cuba. The blockade was to begin at 10 a.m. on October 24. Kennedy warned Soviet Premier Nikita Krushchev that the United States would "regard any nuclear missile launched from Cuba against any nation in the Western Hemisphere as an attack by the Soviet Union on the United States, requiring a full retaliatory response against the Soviet Union." At Altus, Ketcham and his 26th Bomb Squadron crewmates were briefed by wing staff: "If the buzzer blows, it'll be the real McCoy."

Calling All Bomber Crews

Deep in the Canadian forest, 200 miles north of Michigan's Wurtsmith Air Force Base, Captain Dan Zahhos, a B-52H radar navigator, was wrapping up a successful hunting trip. He and a

friend pulled into a small town with their trophies and were relaxing in the bar, watching TV, when, Zahhos remembers, "here comes the president. It just blew us over." He drove straight back to his parents' home in Minnesota, where he "laid out a fairly detailed plan for my whole family on how to evacuate. I would get word to them," says Zahhos, then 28, "to get the hell out of Minneapolis if it got that bad."

The recall from the Wurtsmith command post came at 4 a.m. Within half an hour, Zahhos hit the road to the base, 400 miles to the northeast. Zahhos' colleague, Captain Bill Brown, was on leave in Iowa when he heard the president's speech. Recalled that night, Brown jumped in his 1960 Volvo. "I drove 640 miles in 10 hours," Brown says, "and didn't see a single cop."

As SAC airmen streamed back to bases across the country, the command was readying Atlas and Titan intercontinental ballistic missiles for firing. Bomber crews based at southern airfields were redeployed north, both to get out of Cuban missile range and to free up ramp space for tactical aircraft supporting a Cuban airstrike option. First Lieutenant Harold W. "Bud" Andress, a 524th Bomb Squadron navigator at Wurtsmith, remembers what the base looked like in the week following the president's address. "The 19th Bomb Wing from Homestead [Florida] joined us. We had airplanes parked all over, on every piece of concrete we had. Their alert crews bunked in the bachelor officers' quarters, the fire house, wherever...."

First Lieutenant E.G. "Buck" Shuler, today a retired general, was on alert with his B-52F crew at Carswell Air Force Base, near Ft. Worth, Texas. "We cocked every airplane we had," he says. "Everybody was target-studied. There were no training flights, no ground training, no nothing. We were ready to go to war."

Wary of a nuclear Pearl Harbor, SAC had, since 1961, been keeping about a dozen B-52s in the air at all times—armed and ready to strike. At noon on the 22nd, the command began launching additional Stratofortresses, and by the time of President Kennedy's TV address, 66 B-52s were in the air, each carrying up to four hydrogen bombs, some with a pair of Hound Dog nuclear-tipped cruise missiles. The 66 bombers made up the first wave of a continuous airborne alert posture that was sustained for four weeks.

Flying in pairs, the Stratofortresses cruised to holding zones in the Mediterranean, north of Greenland, and along the Alaskan frontier. Each would remain on station for 24 hours until relieved by a fresh aircraft. The long-duration missions were known by the call sign "Chrome Dome."

"The mission wasn't that demanding, believe it or not," says Craig A. Mizner, a captain and experienced B-52F copilot in October 1962. "We took turns at the controls." On one mission, Mizner's crew headed across the Atlantic, past Gibraltar, and refueled over the Mediterranean. "We got as far east as Crete. The EW [electronic warfare officer] reported being scanned by radars out of Libya. I remember seeing some aircraft north of there that we later heard were MiG-17s."

First Lieutenant Gary M. Jacoby, an EW on an Oklahoma-based B-52E, took off on a northern route, his flight lasting more than 23 hours. "We went out over the east coast, up to within two or three hundred miles of the North Pole, then over to Alaska, down, and came in over the California coast," he recalls. If ordered to attack, "we knew we'd probably encounter hundreds of SAMs [surface-to-air missiles]. We knew we were going to have a job ahead of us if we ever did go to war, but we felt very confident that we could get the job done."

Jacoby's crew refueled at least twice during their sortie; aerial fill-ups from SAC's KC-135 and KC-97 tanker force were critical to the airborne alert mission. By 1978, when I was flying the B-52D, pilots got an assist from the autopilot's aerial refueling mode, which gave the yoke a "power steering" feel and automatically trimmed the airplane as fuel coursed into my bomber's wing and fuselage tanks. Still, the intense concentration and hard work left me drenched in sweat.

The B-52s of 1962 lacked that modification, and pilots had to muscle their way through an hour behind the tanker, jockeying the aircraft as they took on every last drop of JP-4 they could carry. (The tankers had wartime orders to keep "passing gas" until their own engines were about to flame out.)

"You were trying to get 128,000 pounds of gas on the airplane, and trying to do it in one gulp," Buck Shuler remembers. "We went to full tanks over the Med. It was a very physical thing. You were on that boom 28 or 30 minutes. I can recall practically slumping over the column after backing off."

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thing. You were on that boom 28 or 30 minutes. I can recall practically slumping over the column after backing off."

Orbiting at their positive-control turnaround points, the crews monitored radio traffic, listening for the Emergency War Order from SAC headquarters in Omaha to come crackling over the bombers' long-range, high-frequency sets. At least two crew members were to copy the message, then compare its numbers and letters to onboard decoding documents. The voice messages would either recall them or commit them to strike their targets.

"As a 21-year-old I was very confident in the B-52H," recalls Lee T. McCoy Jr. of Endwell, New York, who was an Airman Second Class tail gunner in the early 1960s. "My aircraft commander had survived World War II—and I thought he was the best—our EW was good, the navigator was excellent, the radar navigator [bombardier] never missed, and I had a Gatling gun in the tail that could take out air-to-air missiles. I had extreme confidence in the aircraft and the crew. Looking back, I was probably very naive. I thought I'd be coming home."

Just One Reason

Bombs on target: For every member of a SAC crew, that's what mattered. The plan was to penetrate Soviet airspace at low level and high subsonic speed, to stay below Russian radar, and to skirt known defenses. Approaching the target, B-47 crews would zoom upward, toss their H-bombs toward the aim point, and complete a 180-degree Immelmann maneuver to escape the blast (see "Exit Strategy," Apr./May 2003). In the less agile B-52, crews delivered their weapons from 400 feet or lower, running in at 400 to 440 mph. With the bombardier fixing his radar scope cross-hairs on a nearby building or terrain feature—an "offset"—that gave a bright return, the B-52's analog bombing computer would crank in the offset-to-target distance, speed, heading, and weapon ballistics, then send steering signals to the pilot data indicators on the flight deck instrument panel. Upstairs, the aircraft commander flew the airplane so as to keep the PDI needle centered at the top of its instrument case. Twin second hands on either side of the needle ticked off the time to bomb release. At 10 seconds to go, high-pressure hydraulics snapped the bomb bay doors open into the slipstream.

It happens very fast: You can hear and feel the subdued roar of extra drag in the slipstream, confirming the gleaming yellow warning light on the pilot's panel: "Bomb Doors Open." The radar-nav's call of "Bomb Away!" is followed quickly by the thump of the doors closing, and the Stratofortress once again slips smoothly through the dangerous air, racing over—and away from—the target. The bomb's delay fuse would allow the B-52, running flat out at 400 mph, to escape the fireball, blast, and intense heat. At least that's what the tactics manual promised.

"I felt it would be a one-way trip," says Clyde Ketcham. "Even if not shot down, after flying through all the radioactivity, I don't think we would have lived very long, and on most missions, we had very little fuel left and really no friendly places to go after the last target. I

think most crew members held down at the very bottom of their soul [the thought] that God wouldn't let this happen. That's how I kept my sanity."

Buck Shuler remembers four main target "sets" in the SIOP, designed to erode the Soviets' ability to cause further damage to the United States. "We would strike the leadership, their strategic retaliatory capability, general military [targets], and then their industry and ability to reconstitute. I can remember vividly the aiming point of the first weapon was the southwest corner of the Kremlin."

After the president's television address, SAC dispersed many of its B-47 squadrons to civilian airfields. The move complicated Soviet targeting and made room at crowded SAC bases for bombers displaced northward by U.S. invasion preparations.

Gus Letto came off alert in Ohio and joined other crews on a C-47 transport bound for Philadelphia International Airport. There they found three EB-47 jamming aircraft, which would penetrate the Soviet Union ahead of the bomber force, cocked and ready on the Air National Guard ramp. "SAC had taken over the [Guard] command post and quartered us in an airport motel," Letto recalls. "They handed us credit cards and arranged for the B-47 crews to run a tab at the main terminal's dining room. We ate in flightsuits, loaded .38s in our shoulder holsters."

A portable radio monitored emergency message traffic. Letto says crews listened for a coded signal to be broadcast over the airport PA system: "Dr. Mordecai, please call your office" would signify "Start engines."

Letto is still amazed at the war footing SAC went to in 1962. His friend Jim Griggs, a B-47 navigator for the 310th Bomb Wing at Schilling Air Force Base in Kansas, spent almost the whole crisis period at Port Columbus Airport in Ohio with nuclear-armed aircraft ready to launch on the retaliatory mission. "I can't imagine Americans' reaction today," says Letto, "if we scattered nuclear-armed bombers to dozens of airports around the country."

One Step Closer

On the morning of the 24th, a pair of Soviet freighters approached the 56 U.S. warships that had set up a quarantine line 500 miles from Cuba. The Navy reported that a submerged Soviet sub was escorting the two cargo ships headed toward the line. A confrontation appeared inevitable, and, at the direction of the Joint Chiefs, SAC went to DEFCON 2.

Generals LeMay and Power believed that SAC's deterrent value lay largely in convincing Soviet leaders that the United States had an unstoppable nuclear striking force and would not hesitate, if threatened, to employ it. When the alert level reached DEFCON 2, Power decided to make sure that Krushchev understood its significance. He broadcast, on his own authority, an "in the clear" radio message to SAC commanders worldwide—a message certain to be heard by the Soviets: "We are in an advanced state of readiness...and I feel that we are well prepared. I expect each of you to maintain strict security and use calm judgment during this tense

period... Review your plans for further action to insure that there will be no mistakes or confusion...."

It was a controversial action; some historians of the crisis believe the broadcast was a dangerous provocation instead of an attempt to demonstrate to the Soviets the terrible consequences of a wrong move. But the rank and file were also making their presence known. As Alwyn Lloyd writes in his SAC history *A Cold War Legacy*, to impress the Soviets, Chrome Dome bombers transmitted twice the normal number of position reports. To Dan Zahhos, an experienced bombardier, "the radio traffic sounded like Grand Central Station—there were so many aircraft up there! Once in a while we'd get interference from a poorly disguised Russian [voice] trying to disrupt our operations." Zahhos had minored in Russian in college; "I got on the radio and started speaking Russian to him." The imposter laughed, answering, "Over here, we're ready for whatever you're trying to do."

On October 24, the United States had 2,952 nuclear weapons on alert, with a total explosive yield of well above 5,000 megatons. A single megaton is roughly 77 times the explosive power of the bomb dropped on Hiroshima in 1945.

Lee McCoy recently reflected on what it was like to be carrying part of that load: "This realization really came home to me on an airborne alert mission out over the Mediterranean. I was in a huge airplane carrying several nuclear weapons, and within an hour of killing maybe several millions of people very much like my own mom and dad."

In Texas, Buck Shuler had told his wife and visiting mother-in-law that if war came, the Carswell base would be targeted. "I kind of drilled her on it, and we kept a kit together," he says. "When we went to DEFCON 2, Annette had the car packed with blankets, extra baby formula"

Of course the bomber crews had also drilled for that eventuality. A Soviet missile attack would give them only minutes to save as many bombers as possible for the counterpunch. The crews practiced MITO, or minimum interval takeoff, designed to get the maximum number of aircraft launched in the minimum amount of time (see "Gone in 144 Seconds" at www.airspacemag.com).

One Step Back

The Soviet freighters bound for Cuba altered course at the last minute, and Secretary of State Dean Rusk whispered his now-famous observation to Kennedy advisor McGeorge Bundy: "We're eyeball to eyeball, and I think the other fellow just blinked."

But U.S. forces couldn't be sure: In Cuba, Soviet technicians continued to rush the completion of launch sites for R-12 medium-range ballistic missiles. On October 25, the U.N. Security Council convened an emergency session at its headquarters in New York. There U.S. Ambassador to the United Nations Adlai Stevenson displayed the U-2 reconnaissance photographs showing the placement of Soviet offensive missiles in Cuba. Then, on October 27, SAC U-2 pilot Major Rudolph Anderson Jr. died when his aircraft was shot down over Cuba by a

Soviet SA-2 "Guideline" missile. The White House mulled an air strike to destroy the responsible SAM battery, and the Kremlin braced for Kennedy's response.

Mike Jones, today a retired master sergeant who was a B-52E assistant crew chief at New Mexico's Walker Air Force Base in 1962, worked an endless string of 12-hour shifts during those late October days. "In that hair-trigger atmosphere, I thought we were very likely to have a war," he says. "We slept at the airplanes, ate box lunches brought out to the flightline. We were working at a fever pitch."

Other SAC personnel found themselves suddenly reassigned. James D. Rusher was an 18-year-old "two-striper" (airman second class), fresh out of basic and attending the B-47 crew chief school at Amarillo Air Force Base in the Texas panhandle. The Saturday that Anderson's U-2 went down, Rusher and hundreds of other SAC trainees assembled in front of a flatbed truck rigged as a speaker's platform. "We watched an Army staff car roll out of a cargo plane and drive across the ramp," he says. The group snapped to attention; the base commander announced a ban on "all letter-writing, all phone calls, all passes, and all leaves." Next a brigadier from Ft. Benning (home of the Army's Rangers) addressed the airmen. "He told us that as of right then, we were on two hours' notice for deployment to Benning," says Rusher. "There we'd get two days of rifle and infantry training, then join the invasion force headed for Cuba."

Gus Letto imagines that in the last days of October 1962, Krushchev was like a man looking down the barrel of a loaded gun. "In the final determination he knew that if he made a wrong move, three hours later he'd have B-47s and B-52s appearing on his radar."

On Sunday morning, October 28, the CIA reported to the White House that all 24 R-12 missile sites were now operational. But later that morning, in return for Kennedy's promise to lift the quarantine and the invasion threat, Krushchev drew back from the brink. In a Radio Moscow broadcast, he announced that the "so-called offensive weapons" in Cuba would be dismantled, crated, and returned to the Soviet Union. U.S. forces remained on high alert, but in Washington, there was a sense of relief and exultation.

SAC remained at DEFCON 2 as Kennedy pressed for the removal of Soviet Ilyushin Il-28 "Beagle" bombers from Cuba. When Krushchev finally agreed to withdraw them, the president reciprocated by ending the naval quarantine. Shortly before noon on November 20, after 27 days at DEFCON 2, SAC stepped back from the nuclear threshold.

During the Cuban crisis, over 90 percent of SAC's bomber force had been poised to launch within 15 minutes of the klaxon sounding. According to Alywn Lloyd's *A Cold War Legacy*, the command flew 2,088 sorties during the affair. Eight airmen died. The same day Major Anderson's U-2 was downed, an RB-47 crashed on takeoff from Bermuda; all four crew members were killed. Another Stratojet crashed at MacDill Air Force Base near Tampa on November 11, killing three more.

During those weeks of enormous strain, SAC crewmen found comfort in the commonplace: a rare family meal, the welcome routine of household chores. At the height of the crisis, Letto

rotated off alert duty to go home and get some rest. He remembers going out to his front yard to mow the lawn—"just to do something useful," he says. "One of our neighbors saw me, came straight across the street, and gave me a big hug. I asked her, 'What was that for?' " Letto still laughs at her answer. "If the Air Force can afford to let you guys come home and cut the grass," she said, "maybe we're going to live through this."

The U.S. bomber fleet, nearly 10 times the size of the Soviet Union's, consisted of 1,300 Boeing B-47 and B-52 aircraft (a few B-58 Hustlers were also operational). The B-47 Stratojet, first flown in 1947, was a revolutionary swept-wing medium bomber; six turbojets gave it a maximum speed of 610 mph. The three-man crew could deliver 10,000 pounds of bombs to targets 3,500 miles away at near-supersonic speeds; it was faster than most jet interceptors of the day.

Boeing followed the B-47 with history's longest-flying strategic bomber, the B-52 Stratofortress. In the decade before intercontinental missiles became dominant, the B-52 was SAC's roundhouse punch, capable of flying from the continental United States and striking the Soviet Union. At twice the gross takeoff weight of the B-47, it had a top speed of more than 620 mph and could reach a target 3,300 miles away. The BUFF (an acronym politely translated to "big ugly fat fellow") entered service in 1955, and by October 1962 Boeing was delivering the final Stratofortress version, the B-52H. Its turbofan engines gave it a combat radius of 4,300 miles and a top speed of 650 mph.