

# The Death of Korean Air Lines Flight 007

By Peter Grier

**A 747 heading from the US to Seoul strayed into Soviet airspace. The USSR shot it down.**

As the fateful moment approached, Maj. Gennadiy Osipovich sounded tense and frustrated. It was an early morning hour on Sept. 1, 1983, and it had not been an easy time for Osipovich, an Su-15 fighter pilot assigned to the Soviet Union's Dolinsk-Sokol Air Base on Sakhalin Island, north of Japan.

He had been trying to find a target now looming a few thousand meters ahead of his aircraft. He was having no luck. Soviet tracking radars had produced inaccurate data, for one thing. For another, he and other scrambled pilots had been slow off the mark.

Now the target was close to leaving Soviet airspace after flying over Sakha-

lin, a sensitive and highly restricted zone. Osipovich radioed superiors for instructions but did not get an immediate response.

## **An Infamous Act**

He could see that the mysterious multi-engine aircraft with blinking lights was apparently unaware of his presence. Suddenly it began to climb, slowing its speed. Osipovich's air combat controller ordered him to open fire.

The authorization came too late. The speedy Su-15 was suddenly right next to the aircraft it was supposed to destroy.

"It should have been earlier. ... I'm already abeam of the target," radioed an agitated Osipovich, according to a

transcript of his communications released by the US government.

The Soviet pilot turned and dropped below his lumbering prey. Then he pulled his nose up, lit his afterburners, and locked on with his own radar. At 3:26 a.m. Tokyo time, he fired two AA-3 air-to-air missiles. One of them, proximity-fused, exploded behind the target, severing a crucial control line. The other hit the aircraft but its effect remains unclear.

"The target is destroyed," radioed Osipovich.

But it had not been. The aircraft, Korean Air Lines 007, remained airborne for at least 12 more minutes. Its pilots struggled to regain control until



Illustration by Zaur Eylanbekov

the airplane spiraled into the sea, near Moneron Island just west of Sakhalin.

The shutdown of KAL 007 three decades ago was one of the deadliest and most important events of the late Cold War. Two hundred sixty-nine passengers and crew died when the airliner hit the water. These included US Rep. Lawrence P. McDonald, a conservative Democrat from Georgia.

The infamous act pushed US-Soviet tensions to new heights and reinforced each side's worst assumptions about the other.

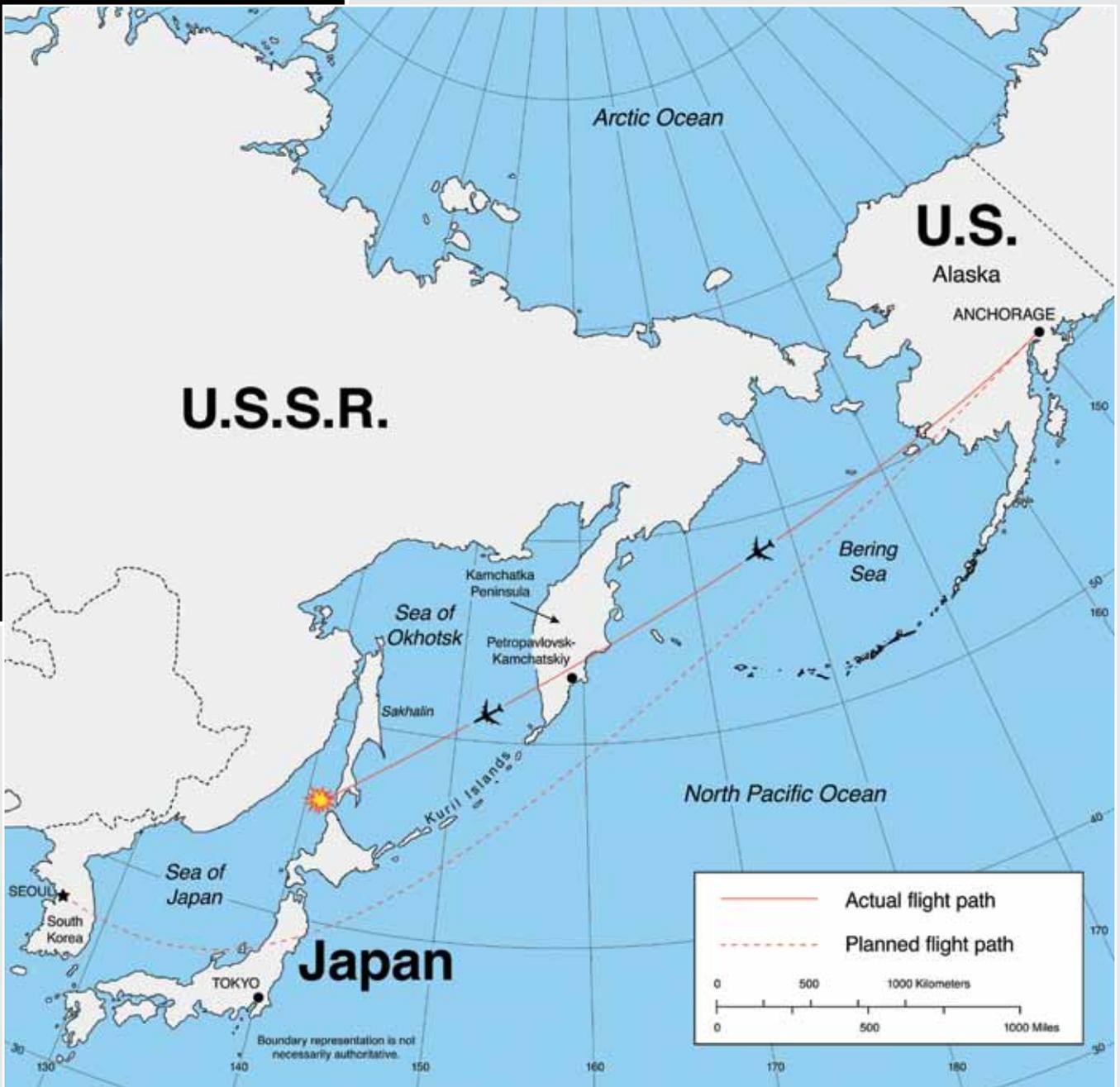
Initially, Moscow denied the incident had taken place. Confronted by the US

with intercepted air defense communications and other evidence, Soviet leaders admitted what had happened but said the aircraft was a spyplane sent to gather intelligence from sensitive military installations in the region.

The Reagan Administration, for its part, charged that the USSR had knowingly shot down an airliner and thus killed defenseless civilians in cold blood. President Reagan called the shutdown a "massacre" and an "act of barbarism."

But US intelligence quickly discovered that the story was more complicated. National Security Agency intercepts showed that the Soviet Union had indeed

**Below: A map showing simplified divergence of the planned flight path (dotted line) and the actual flight path of Korean Air Lines Flight 007, Sept. 1, 1983.**



Mgarin73 via Wikipedia



US Congress photo

**Top to bottom: US Rep. Lawrence McDonald (D-Ga.), who was killed on KAL 007. Soviet pilot Gennadiy Osipovich in the cockpit of a Soviet fighter. Osipovich during a Soviet television documentary about the shootdown. Marshal Nikolai Ogarkov during a Sept. 9, 1983, press conference in which he claimed the shootdown was justified.**

thought the aircraft to be a spyplane, most likely an RC-135 eavesdropping aircraft that had been flying lazy-eights off the Sakhalin coast in advance of a forthcoming missile test.

Furthermore, US intelligence showed that, from the point of view of the Soviet military, anyway, the episode had been a messy disaster. A Boeing 747 had flown a slow and predictable path over Soviet territory for hundreds of miles, overflying the Kamchatka Peninsula, re-entering international airspace, then crossing above Sakhalin.

### What Happened—Probably

Meanwhile the USSR air defense system had descended into “something bordering on chaos,” according to intelligence historian Mathew M. Aid. Fighters were vectored poorly, radar data was wrong, and pilots and their superiors on the ground filled the airwaves with expletive-laced rants directed at each other.

“Arguably the most significant revelation coming out of the KAL shootdown was the fact that the massive Soviet national air defense system had not performed well at all,” wrote Aid in his 2009 history of the NSA, *The Secret Sentry*.

How did a civilian aircraft flying straight and fairly level end up hundreds of miles off course in dangerous territory?

That’s a central question of the KAL 007 event. Conspiracy theorists have long pushed the idea that some sort of dark US government plot lay behind the airplane’s actions that night. But the simple fact of crew error, combined with continued inattentiveness, appears to have put the Boeing airliner on a collision course with disaster.

KAL 007 originated in New York. At 4:00 a.m. local time, the airliner took off from its intermediate stop in Anchorage, Alaska, headed for Seoul. As it flew west it began to slowly deviate from its planned route. KAL 007 should have passed over a navigational waypoint at Bethel, Alaska, on its way to the open ocean, but when it reached Bethel it had already strayed 12 miles north of its intended path. As it flew on, the distance between its actual and

intended flight paths only grew. By the time it neared an oceanic waypoint named “Nabie,” some 200 miles off the Alaskan coast, the airplane was already 100 miles away from where it should have been.

The airplane wasn’t on its way to Seoul. Instead, it was traveling at a heading of 245 degrees, flying like an arrow toward the eastern portions of the Soviet Union. According to an investigation conducted by the International Civil Aviation Organization in 1993, following release of the airplane’s original flight recorder tapes by the new Russian government, the KAL crew activated an autopilot shortly after taking off from Anchorage and then turned to 245 degrees to comply with an air traffic control clearance. The aircraft maintained a heading of 245 degrees until it was shot down some five hours later.

Why did it go off course? The autopilot—more specifically, the pilots’ interaction with the autopilot controls—appears to be a large part of the answer.

When the autopilot used in the KAL airliner was set to “heading,” it directed the aircraft straight along that heading path. The KAL 007’s pilots used this setting just after takeoff. But when the autopilot was turned to the mode “INS Navigation,” it was designed to guide the airplane along a series of pre-entered waypoints to its ultimate destination. KAL was supposed to use this mode, riding the autopilot along a transoceanic route with 10 waypoints just outside of Soviet territory, all the way to Seoul.

That didn’t happen. Possibly, the pilots just forgot to turn the switch. It is also possible that they set the switch, but the INS Navigation mode did not activate.

In the model autopilot used in that particular 747, the aircraft had to be within 7.5 miles of its preprogrammed route for INS Navigation to take over. If it was farther away, or flying in the wrong direction, the autopilot stayed in heading mode until the gap closed. If the gap didn’t close, the aircraft just kept on jettling along the previous heading until the pilots noticed or something else intervened.

In 1993, after examining all the evidence, that’s what ICAO concluded had occurred.

“The maintenance of the constant magnetic heading and the resulting track deviation was due to the crew’s failure to note that the autopilot had either been left in the heading mode or had been switched to the inertial naviga-



Soviet documentary screen shots



CIA photo



tion system (INS) when the aircraft was beyond range for the INS to capture the desired track,” stated the ICAO in 1993.

The pilots had almost certainly been trained how to use the autopilot in the correct way, but human interaction with complex automated systems is often fraught with problems, according to a 2004 book on the issue, *Taming HAL: Designing Interfaces Beyond 2001*, by Asaf Degani, a scientist from the NASA Ames Research Center.

What if a pilot forgot the sequence of events that would engage the INS Navigation mode? What if they got the wrong number for how close they needed to be to their preprogrammed track stuck in their head—20 miles, say, instead of 7.5?

That sort of mistake should have been unsurprising, because it had happened before.

“Such problems in operating this B-747 autopilot were not new, and the track deviation that resulted was not a fluke or a rare case. There were more than a dozen reported similar incidents in which flight crews selected INS-

Navigation mode but did not detect that the INS system was not steering the autopilot,” wrote Degani.

So KAL 007 lumbered on, heading for Siberia instead of Seoul. After several hours it neared a buffer zone of international airspace monitored by the Soviet military for possible threats. Here a complication developed: A US Air Force Boeing RC-135 was already flying in wide circles in this area. Loaded with eavesdropping electronics, its mission was to spy on the USSR’s defenses in the Kamchatka Peninsula. Typically such missions involved flying right up to, but not over, the line into Soviet-controlled space.

### No One Was Listening

At some point the tracks of these aircraft converged enough for Soviet air traffic controllers to misidentify the oncoming KAL 007. The presence of the US spyplane thus “resulted in confusion and the assumption by the USSR Air Defense that the aircraft proceeding

towards the USSR was an RC-135,” according to the ICAO.

Nearly four hours after its takeoff from Anchorage KAL 007 entered the restricted airspace of the Kamchatka Peninsula. Four MiG-23s scrambled to intercept the aircraft and first flew east, then west to try and run down their unidentified target from behind. But the Soviet fighters ran low on fuel before they could catch up and had to return to base. KAL 007 continued on unaware, warm and well-lit in the cold of high altitude.

Crossing Kamchatka, the Boeing passed into international waters over the Sea of Okhotsk. But as it proceeded along its straight heading it soon hit another Soviet piece of land, Sakhalin Island. More Soviet fighters took to the air to find a target that air defense officials now suspected was military. The USSR military command was already tense, due to a recently concluded major north Pacific US Navy exercise and a Soviet missile test in the region scheduled for

**Right: A Soviet Il-14 Crate aircraft interfered in the search and rescue operations over the Sea of Japan. Below: A Soviet salvage tug boat searches for pieces of the downed KAL-007.**



USAF photos by SSgt. Steve McGill

later that day. They were in a shoot-now, question-later mood.

One Soviet commander said that their orders were to shoot down the airplane even if it made it out to neutral territory, according to transcripts of their conversations. Another said that if it had four contrails, it must be an RC-135.

Osipovich, the attacking pilot, said that he saw the aircraft's blinking light. He fired cannon shots to try and alert the pilots, but as he later admitted, his aircraft was loaded with armor-piercing, not incendiary, shells. The Soviets tried to hail the airplane on a radio frequency reserved for emergencies, but inside KAL 007's cockpit, no one was listening.

Then Tokyo air traffic control ordered the airliner to climb to 35,000 feet. Soviet authorities took this as an evasive maneuver, sealing the airplane's fate.

The USSR's destruction of KAL 007 took place in the context of heightened Cold War anxieties. The Soviet Union, for its part, felt vulnerable: Its economy had begun to break up, its leadership was aging and sclerotic, and the tide of world events seemed to be turning against its communist system. Meanwhile, the US had moved to aggressively confront its superpower adversary via the Reagan Administration's strategic defense initiative, a general increase in military spending, and ramped-up rhetoric about the failures of the Soviet empire.

The prospect of a US-launched nuclear war appears to have genuinely concerned Soviet officials. Soviet behavior made Washington so suspicious it believed the Kremlin might be capable of anything. Then came the KAL shootdown.

"The KAL 007 incident ... touched off a dangerous episode in US-Soviet relations," wrote intelligence analyst Benjamin B. Fischer in a 1997 monograph on the era for the CIA's Center for the Study of Intelligence.

The White House learned of the airplane's destruction hours after it had occurred. US and Japanese eavesdropping equipment had captured the air-to-ground conversations of Soviet fighters involved, which revealed part of the story of what had happened. The next day at 10:45 a.m.—it was still Sept. 1 Washington time—Secretary of State George P. Shultz held a press conference and denounced the Soviet action.

"We can see no excuse whatsoever for this appalling attack," said Shultz.

Confronted with this, the USSR dissembled. A Soviet diplomat visited the State Department and told Shultz that they had warned the airplane off and

that it must have crashed afterward. The Soviet news agency TASS issued a statement to similar effect at about the same time.

Faced with this attitude—and with the knowledge afforded by its eavesdropping capabilities—the US intensified its rhetoric. On Sept. 5, President Reagan addressed the nation to denounce what he called a "crime against humanity." He played an intercepted audio tape of Osipovich's discussions with ground control, including a portion where Osipovich mentioned the airplane's blinking light.

### Deepened Paranoia

A Boeing 747 airliner is a distinctive shape, noted Reagan. It looks nothing like a US military spyplane.

"There is no way a pilot could mistake this for anything other than a civilian airliner," said Reagan.

The problem was that Osipovich had indeed made just such a mistake and the US knew it. As early as the afternoon of Sept. 1, thorough NSA translations of more intercepts showed that the Soviet officials might have believed they were tracking an RC-135, according to Aid.

Yet Ambassador to the UN Jeane J. Kirkpatrick went before the Security Council the day after Reagan spoke and repeated his charge, using audio tapes and a map of the KAL 007 flight path to make her presentation more forceful.

"Air Force intelligence dissented from the rush to judgment at the time, and eventually US intelligence reached a consensus that the Soviets probably did not know they were attacking a civilian airliner," wrote Fischer. "The charge probably should have been something akin to criminally negligent manslaughter, not premeditated murder. But the official US position never deviated from the initial assessment."

On Sept. 9, Marshal Nikolai V. Ogarkov, the Soviet military's chief of staff, held a press conference in Moscow at which he admitted that the airplane had been shot down but said the action was justified. Whether an RC-135 or a Boeing 747, the airplane had surely been on a US intelligence mission, he said.

His statement might not have been pure propaganda. It appears to be what the Soviet leadership truly believed. A classified memo to the Politburo from the Soviet military and the KGB asserted

that KAL 007 was "a major, dual-purpose political provocation carefully organized by the US special services."

This memo, cited in Fischer's CIA study, went on to say that the first purpose of the KAL incursion had been to gather valuable intelligence. Second, if the USSR shot the airplane down, the US knew it could use the event to mount a global anti-Soviet campaign.

The fact that the US quickly moved to do just that only deepened the USSR's paranoia. The Reagan Administration used the incident as an argument for its plans for increased military spending, while pushing for denial of landing rights to the Soviet airline Aeroflot and other civilian sanctions.

"For Washington, the incident seemed to express all that was wrong with the Soviet system and to vindicate the Administration's critique of the Soviet system. For Moscow, the episode seemed to encapsulate and reinforce the Soviets' worst-case assumptions about US policy," concluded Fischer.

KAL 007 left behind little debris as evidence of its plunge into the cold ocean. A US Navy-led search for the wreckage, harassed by Soviet personnel, produced nothing.

Later that fall, Soviet leader Yuri V. Andropov entered the hospital and began a physical decline that culminated in his death the following February. Another aging caretaker, General Secretary Konstantin U. Chernenko, succeeded him. He died in turn after only 13 months in office. On March 11, 1985, Mikhail S. Gorbachev was named head of the USSR, and the rest is history. Gorbachev tried to revive the Soviet economy and relax superpower tensions, but he could not arrest the decline and the Soviet empire collapsed in December 1991.

Boris N. Yeltsin, Russia's new president, was eager to turn the page on the Soviet past. One way he did this was by releasing Kremlin secrets related to KAL 007. In 1992, he made public Soviet memos discussing the shootdown and subsequent sea search for wreckage. Later that year, he released the airplane's black boxes, which Soviet officials had recovered, and a transcript of the Soviet air defense communications surrounding the incident.

The airplane itself still lies at the bottom of the ocean, shattered into small pieces by the force of impact. ■

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