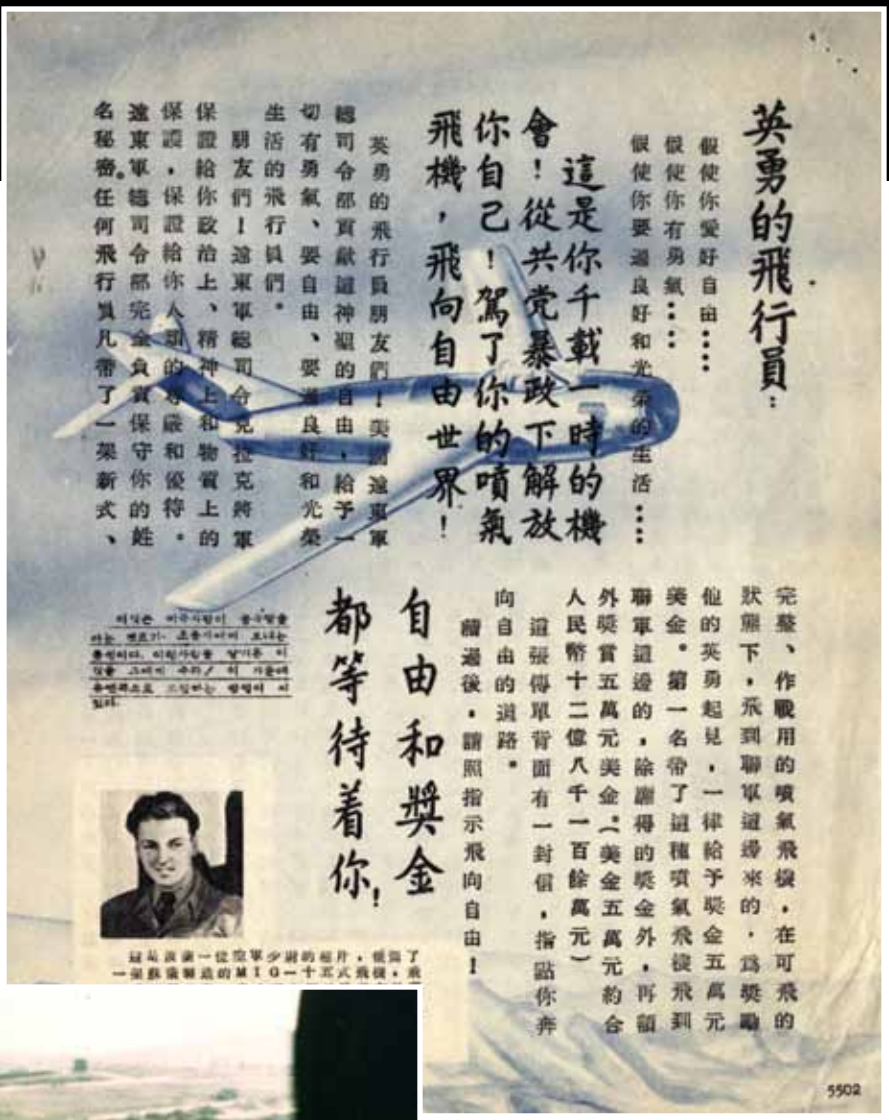
Everything from spy satellites to future four-stars crawling through mud gathered intel on the supersecret Soviet fighters.

SPYING ON THE MiGs

By Jeffrey T. Richelson



USAF photo

LOCKED in a vault somewhere may be a study of how the United States has gathered intelligence on multiple versions of the MiG fighter, the intelligence reports produced, and their accuracy.

If thorough, it would run to several thousand pages, for there was a great deal the US wanted to know about MiGs, and some of this knowledge could save lives and win battles. The Air Force, CIA, and other agencies gathered and analyzed intelligence on where they were produced, how many were produced, the production process, technical specifications, deployments, operations, and the sale or transfer to other nations.

The study would also be highly classified as the Intelligence Community employed human sources, communications intelligence, imagery, open sources, covert acquisition and exploitation of the airplanes, as well as a little help from friends.

In 1948, the Cold War heated up when the Soviet Union began its blockade of West Berlin. The Soviet supply of MiGs to its Eastern European satellite air forces only heightened the threat they posed to US and allied air forces.

Photo via National Musuem of the US Air Force

Above: A leaflet offering a $100,000 reward to any pilot who delivered a MiG to US forces. The leaflets were dropped on North Korean bases in the last months of the Korean War. Left: On the ramp at Kimpo AB, South Korea, the MiG flown by a North Korean defector.

Then the Cold War turned hot in Korea with Soviet-piloted MiG-15s, based in China, battling it out with F-86 Sabre fighters. In August 1950, RB-29 reconnaissance aircraft spotted the arrival of 122 MiGs in northeastern China.

There was more than imagery to analyze. According to a former Central Intelligence Agency official, the US had "a lot of communications intelligence" about MiG activity in Korea—although the switch from HF to VHF communications in 1951-52 sent Air Force Security Service personnel scrambling to re-establish their intercept capability. This intelligence was gained by radio intercepts in combat, during which the Russians lapsed into their native language, making the nationality of the pilots clear.

But the US also wanted a MiG of its own. In early 1951, the allied Air Force commander in Korea was asked to obtain a complete MiG-15, and US forces succeeded in retrieving a shot down aircraft. Then in 1953, a North Korean pilot took off in his MiG-15 and didn't land until he reached the South. Aerodynamic examination of this airplane revealed design prowess, but the MiG's electronics and engine technology were far behind those of the United States.

America's spies also monitored MiGs in the Soviet Union and Eastern Europe. High-quality cameras on the roof of the US Embassy in Moscow photographed MiGs as they flew over the nearby Kremlin during air shows.

Starting in July 1956, the US had U-2 aircraft photograph airfields and factories, and MiGs futilely tried to intercept them. In October 1957, pilot Hervey S. Stockman brought back good photography of MiG bases on the Kola peninsula as well as a MiG-19 right below his aircraft. Those photographs gave a true picture of the MiG, in contrast to officially released, often doctored Soviet photos.

Spies also gathered human intelligence. In 1952, a CIA source reported on technical details observed on MiG-15s in East Germany. In April 1957, the CIA distributed a report, the product of a joint CIA-Air Force effort focused on technical details of the MiG-15 and MiG-17 aircraft in the Hungarian Air Force. Among the details was information on the MiG-17's net weight, fuselage, wing structure, propulsion, electronics, tail warning radar, and armament.

AP photo

A Soviet MiG-25 is covered with sheets after its pilot, Victor Belenko, landed at Hakodate Airport in Japan in a successful bid to defect to the US.

Obtaining Manuals

One product of such collection efforts was an April 1954 CIA report regarding production of the MiG-15 at factories in Kuybyshev and Novosibirsk between 1950 and 1952. Other products could be found, by the end of the decade, in monthly issues of *Air Intelligence Digest,* published by Air Force intelligence. The first four issues of 1959 each carried a MiG article. One reported on the revised version of the MiG-19 Farmer, changes first observed in May 1957—including improved engines and armaments.

U-2s continued to return images of MiGs across the world into the 1960s, from MiG-21s at the newly completed Santa Clara airfield in Cuba on Sept. 5, 1962, to a 1964 sortie revealing 34 MiG-15s and -17s at another recently built airfield at the time, Phuc Yen in North Vietnam.

The following two years produced more than photographs. By November 1965, the US had obtained (and the Air Force's Foreign Technology Division had translated) the Soviet *Manual on the Techniques of Piloting and Military Use of the MiG-21F-13.* Included in its 265 pages were chapters on target search and interception and aerial combat between MiG-21s and enemy fighters, which included the range (three to six miles) to achieve a maximum kill probability using the airplane's R-3S rockets.

The next year, the US had more than a manual in their hands, when an Iraqi Air Force captain flew a MiG-21 to Is-

Illustration © Zaur Eylanbekov/Air Force Magazine

This Have Drill program MiG-17 is one of two supplied to the US by Israel in the 1970s.

This MiG-21, pictured in a Navy fighter-adversary squadron hangar, was flown by a defecting Cuban Air Force major to NAS Key West, Fla., in 1993.

rael. After being examined in Israel, its next home was Groom Lake in Nevada, where experts flew it and identified a number of significant aerodynamic limitations.

During those years, the CIA's National Photographic Interpretation Center was busy exploiting MiG imagery provided by overhead sensors. Back then, with the war in Vietnam expanding, a major concern was the number, models, and distribution of MiGs in the North. In February 1966, NPIC again reported on Phuc Yen, revealing that on Dec. 23, 1965, seven MiG-21 aircraft and four canvas-covered aircraft were photographed at the airfield.

NPIC also reported on images of MiGs in flight over North Vietnam and China. One image was the first of the airplane flying over North Vietnam. A December 1966 report noted images of two aircraft in flight—one armed with two Atoll air-to-air missiles, while the other carried at least one UB-16-57 rocket pod—the first time any MiG-21 in North Vietnam was identified with rocket pods.

Open and human sources contributed to the effort to monitor the acquisition and production of MiGs to nations outside the Soviet Bloc. A May 1965 CIA report, "Soviet MiG-21 Factories in India: Progress and Prospects," cited six sources, including two *Times of India* articles plus State Department and air attache reports. The report included information on the Soviet-Indian agreement, the location and functions of planned factories, as well as the construction schedule, projected costs, and India's plans to produce basic components from raw materials and its dissatisfaction with previously purchased MiGs.

US intelligence agencies continued to monitor MiG-21s in Eastern Europe and the Soviet Union, as indicated by the 1969 National Intelligence Estimate on Warsaw Pact general-purpose forces. The estimate noted that the latest, all-weather model of the MiG-21 constituted more than 95 percent of the aircraft in Soviet air defense regiments, and the airplane was produced in eight or nine versions—with the latest variant, identified in East Germany, as having "improved payload capabilities and improved air intercept radar."

Better Than Photographs

On June 15, 1971, a Titan-3D rocket propelled into orbit on its first mission what is generally agreed to be the most complicated piece of reconnaissance hardware ever developed. The KH-9 or Hexagon photographic reconnaissance system (with a resolution of one to two feet) would eventually replace the Corona satellite system as America's means for searching large areas of foreign territory, particularly the Soviet Union.

As Corona evolved since its debut in 1960, the US had been able to get an ever more accurate MiG order of battle, with intelligence on airfields, training fields, and deployments. But the KH-9 was a significant improvement, and its ability to photograph huge chunks of territory with high resolution meant, according to former senior NPIC official Dino A. Brugioni, the CIA's MiG order-of-battle report "wasn't an estimate anymore."

Then, in 1974, US intelligence provided the first suggestion that MiG-23s had been acquired by the Syrian Air Force.

A declassified and sanitized April 4, 1974, message from the CIA to the White House states, "[deleted] the Soviet Union has supplied Syria with MiG-23 fighters and trained Syrian pilots in their operations." Since the document is stamped "Comint Channels," the deleted words are almost certainly, "According to communications intelligence" or some equivalent. The report also noted, "There is no evidence available to confirm the presence of MiG-23 aircraft in Syria, but such reports have come in recently with increasing frequency."

In 1978, a Cuban refugee reported that a new contingent of MiGs had arrived in Cuba, a claim confirmed by satellite reconnaissance. To provide further details, President Jimmy Carter ordered the resumption of SR-71 missions over the island, which he had halted in 1977. The concern was whether the MiGs included not only MiG-23s, but MiG-27s, the ground-attack version of the MiG-23, which could be armed with nuclear weapons and reach deep into the United States.

However, several differences between the airplanes could not be detected from overhead photography, even SR-71 imagery. What proved to be decisive to imagery interpreters were photographs of the aircraft appearing in a Cuban magazine—photographs apparently not altered. Close examination of those images convinced the relevant NPIC interpreters that the MiGs were indeed MiG-23s.

By the late 1970s, the US was gaining a better appreciation of the MiG—an appreciation that could not be obtained from photographs.

On Sept. 6, 1976, Soviet pilot Victor Belenko flew his MiG-25 Foxbat to Japan where, before the airplane was returned to the Soviets, it was disassembled and analyzed in minute detail by US experts, revealing, according to former CIA officer Robert Clark, it "was substantially less spectacular than ... described in intelligence estimates."

In 1977, the Constant Peg program, a continuation of the aggressor squadron effort begun earlier in the decade in Nevada, kicked off.

Under both efforts, American pilots flew against MiG-17s, MiG-21s, and

MiG-23s obtained through still-classified means. US pilots were aided by their understanding of MiG training operations, an understanding based in part on the communications monitoring and tracking of operations, conducted from Tempelhof air station in West Berlin. One added piece of intelligence obtained from those flights, former Air Force Chief of Staff Gen. Merrill A. McPeak said, was that "the first turn they made was eye-watering. But if you could survive the first turn and take the fight vertical, the MiG [pilot] was quickly out of energy and out of ideas."

During congressional testimony in 1984, Gen. Lawrence A. Skantze, the Air Force's vice chief of staff, showed a briefing slide describing some of the capabilities of the Soviet MiG-29 Fulcrum fighter: an attack capability "optimized for counter air," an "increased thrust to weight ratio," a look-down shoot-down capability, and an "improved combat radius." A photograph of the aircraft taken by a spy satellite was also displayed.

That July, USAF Maj. Michael V. Hayden (a future four-star general and National Security Agency and CIA director) began a two-year tour as the air attache at the US Embassy in Sofia, Bulgaria. More than two decades later, Hayden recalled his experience gathering intelligence on MiGs, telling the Senate Select Intelligence Committee, "I've crawled in the mud to take pictures of MiG-23s taking off from Bulgarian airfields so I could understand what type of model it was."

Later in 1984, the quest for intelligence about MiGs once again involved SR-71s and the possible Soviet provision of MiGs to a troublesome nation in Central America.

Early in 1982, a memo from the CIA's deputy director for intelligence, Robert M. Gates, noted the "construction of several airfields in Nicaragua that are potential MiG fighter bases continues." Then in October 1984, intelligence analysts reached the conclusion MiG-21s were probably being crated and loaded on *Bakuriani,* a Soviet ship, apparently headed for somewhere in Central or South America.

The ship was tracked across the Atlantic by satellites until weather conditions caused the analysts to lose the vessel. An SR-71 mission over the Gulf of Mexico reacquired the ship, and its imagery indicated Cuba was not its destination. On Nov. 7, it arrived in the port of Corinto, Nicaragua.

USAF photo by SSgt. Joshua Strang

A MiG-29 purchased from Moldova in 1997 is transported for display at the National Air and Space Intelligence Center at Wright-Patterson AFB, Ohio.

The ship's arrival was soon followed by SR-71 missions over the port. They not only photographed the port area, but created window-rattling sonic-booms—emphasizing US annoyance at the prospect of MiGs in the hands of the Sandinistas. No MiGs ever made it into the inventory of Nicaragua's air force—either because pressure led to their being returned or because there never were MiGs on *Bakuriani.*

More Mysterious Stealth Fighters

In 1990, an election defeat cost the Sandinistas their grip on power. But Cuba was still firmly in the hands of Fidel Castro, and the US continued to report on MiGs in Cuba. A Feb. 26, 1990, brief from the National Intelligence Council, "MiG-29s in Cuba," reported Cuba had received at least seven of the aircraft and would probably fill out a 12-squadron fighter force. It also noted a squadron of MiG-29s—which would probably be combat ready in mid-1991—"would modestly improve Cuba's ... capacity to threaten US reconnaissance flights." Specifics of the airplane's characteristics and capability were included in a figure depicting the combat radius of the MiG-29 for different missions and profiles.

The 1990s also presented opportunity for new acquisitions. In March 1991, in the aftermath of the Persian Gulf War, a team from the Joint Captured Materiel Exploitation Center arrived at Jalibah Air Base in Iraq. They returned with a MiG-29 nose, providing Air Force intelligence personnel with a Slot Back I radar and the Fulcrum's infrared search and tracking system.

Later in the decade, Air Force intelligence personnel were able to acquire more complete versions of the MiG-29, the result of spending money rather than fighting a war. In October 1997, the US purchased 21 fighter aircraft from the Republic of Moldova—including the MiG-29UB. According to the National Air and Space Intelligence Center, after "undergoing years of study" and employing "all the [center's foreign materiel exploitation] resources," the MiG-29 was displayed in front of NASIC headquarters at Wright-Patterson AFB, Ohio.

While nearly two decades have passed since the collapse of the Soviet Union, the need to collect intelligence on MiGs has not ceased. Russia continues to produce and sell assorted versions of them.

In 2007, it unveiled the MiG-35. In March 2010, India agreed to purchase 29 MiG-29s for almost $2 billion. Of more concern was a September 2009 report that Russia would probably be delivering MiG-29s and, possibly, MiG-31s to Syria. The MiG doesn't hold a monopoly on the fighters at which US intelligence analysts want a good look: Since 2010, both Russia and China have flown, for the first time, indigenously made stealth fighters. ■

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