

A History of NASIC

NATIONAL AIR AND SPACE INTELLIGENCE CENTER

WRIGHT-PATTERSON AIR FORCE BASE, OHIO

A Life-Long Career in Science and Technical Intelligence

Contributed by Dan J. Gareri, Col USAF, Retired

My first contact with T-2 (now NASIC) in 1948 led to a life-long career in Air Force science and technical information (S&TI). A postwar foreign materiel exploitation (FME) program at Air Materiel Command, Wright-Patterson Air Force Base (WPAFB) included transfer of German jet propulsion hardware, technical manuals, and other items to selected university engineering departments for research, evaluation, and advanced instructional programs.

In 1948, I was an Army Air Corp captain assigned by the Air Force Institute of Technology (AFIT) to the University of Minnesota to pursue a postgraduate degree in jet propulsion. As part of a thesis study program, I selected the JUMO-004, which included extensive testing of the associated Reidel small combustion engine starter. I successfully modified an existing internal combustion test cell and instrumentation, and collected test data which confirmed the Reidel handbook performance and characteristics (P&C). The final report was accepted by my advisor and a copy sent to WPAFB.

In 1950, Colonel Harold E. Watson used my 1948 FME exploitation and completion of M.S. Aero Engineering (RamJet) in a name request for my assignment to the T-2 Propulsion Branch. During my first work week, I discovered my 1948 FME reports in our files. That first brush with FME was a precursor for the many exploitations I later took part in, including the MiG-15, MiG-17, MiG-21, Yak-23, and other foreign weapon systems in a variety of host countries, as well as the United States. Today, more than 50 years later, I am still actively engaged in S&TI.



Colonel Harold Watson shows a JUMO-004 engine to General Carl Spaatz in July 1945.

ATLO Exploitation of Large Turboprop Engine

In the 1950's, selected German engineers and scientists who had been interned in the Soviet Union since post-WWII were slowly returning home. The Air Technical Intelligence Center (ATIC) Detachment 3 (Det 3) Air Technical Liaison Office (ATLO) was actively engaged in S&TI exploitations that yielded a number of significant developments. One that I participated in was the design, test, and development of a large turboprop engine for heavy aircraft. Over a 2-year period, a voluminous series of reports was produced on this particular subject alone.

There were eight separate design teams involved, and their engineering skills and recall were amazing. They were able to reconstruct complete engine and component design, test data, P&C curves, dimensional features, etc. The ATIC evaluation sparked interest in conducting an onsite government/industry team visit. The team—which consisted of representatives from ATLO (myself), ATIC Propulsion (division chief Lou DeRose), the WPAFB Prop Lab, NACA (now NASA [National Aeronautics and Space Administration]), and United Aircraft—met with the principals in Germany and verified and expanded on a number of unique design features. I was the interrogator on this project, wrote the reports, and set up the US team that came over to Germany.

In 1955, the BEAR aircraft appeared, powered by four large turboprop engines. The BEAR was the Soviet's best bomber and truly a threat to the United States.

Aircrew Hand-Held Camera Air-to-Air Project

Photos of Soviet aircraft in flight were hard to come by during the early days of the Cold War. Interest was high for information to supplement the analysis conducted on the usual Moscow Air Show photos. In time, a scenario had been evolving where both sides were intercepting each others' surveillance aircraft flying in international waters. So a project was initiated to outfit pilots and aircrews (ground- and carrier-based) with hand-held 35-mm cameras. I took part in this in Det 4, Tokyo.

The project was a success. Such aerial photography contributed to the continuing analysis and evaluation of foreign aircraft.



A Soviet MiG-23 pilot is captured by a hand-held camera during an air-to-air Cold War intercept.

Hand-Held Camera Air-to-Ground Photo

Strange as it may seem, in 1953, I took some air-to-ground photos of a complex near Moscow. It did not seem important at the time, but I was able to recoup and report on them later.

An Air Force C-54 occasionally flew Embassy supplies and people on the Berlin-Moscow route. A Russian navigator joined the airplane in Berlin to establish and monitor the route. While assigned to the Wiesbaden ATLO, I was the crew navigator on one flight. The Russian navigator did not stay on course, nor did he manage estimated times of arrival very well. On the letdown to Moscow, the airplane strayed off over a complex that appeared to be ground storage sites. I went back to the lavatory area and took some 35-mm telephoto shots out the window.



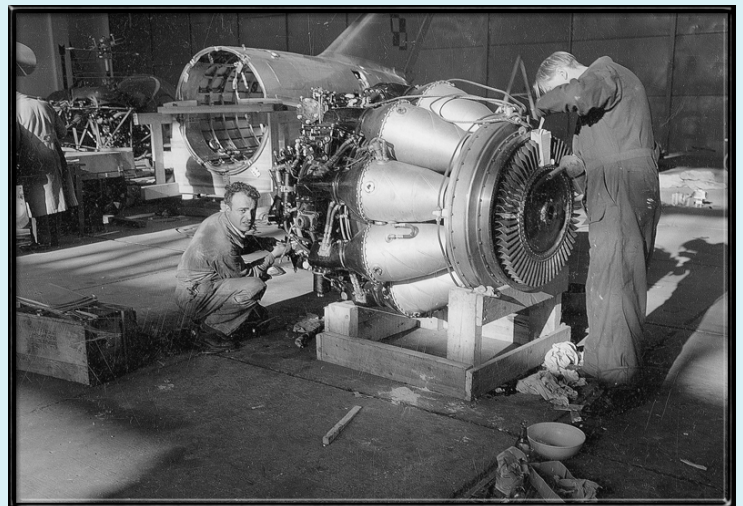
ATIC's C-54, also known as "Sarah Jane"

I developed the black and white roll in my home lab and put the prints and negatives in my office desk because I couldn't see that they would be of much interest. One day, a British colleague visited and I showed him the prints. He recognized something I didn't and suggested that I send them to ATIC. Later, when I talked to Bill Laxon, the surface-to-air missile (SAM) analyst, he told me they were the SA-1 sites under construction, the predecessors to the Moscow SA-2 complex. These were the first "unclassified" photographs taken of this site.

First Soviet MiG-15 Exploitation

In 1952, the Polish pilot Lt Sarecki flew his Soviet-built MiG-15 to the West. Shortly thereafter, a foreign materiel exploitation team of ATIC Det 3 personnel were on the scene. I was Chief of Aerodynamic Systems in Wiesbaden Det 3, and handled the propulsion exploitation on this project. An intensive 24 hours a day/7 days a week exploitation period produced the first detailed comprehensive engineering and technical report on the MiG-15. Subsystem and armament package tests were conducted, but no engine or flight tests. The only downside was being limited round the clock to meals of only open-faced sandwiches!

The documentation proved useful when a second defection occurred, North Korean Lt No Kum Sok in July 1953. That aircraft is now in the National Museum of the United States Air Force in Dayton, OH.



Major Dan Gareri works on a VK-1 engine from a Polish MiG-15 in 1953.

Prelude to the Purloined Yak

In June 1953, a team of four S&TI analysts from ATIC Det 3 in Wiesbaden, Germany boarded the Orient Express, with a footlocker full of tools, and headed east. On arrival, examinations of a site



revealed a fully assembled Soviet-built Yak-23/FLORA. With cooperation of the host country, a week of intense team activity produced substantial documentation of the aircraft and the physical and engineering characteristics of its systems. Exploitation stopped short of physical testing because facilities were not available.

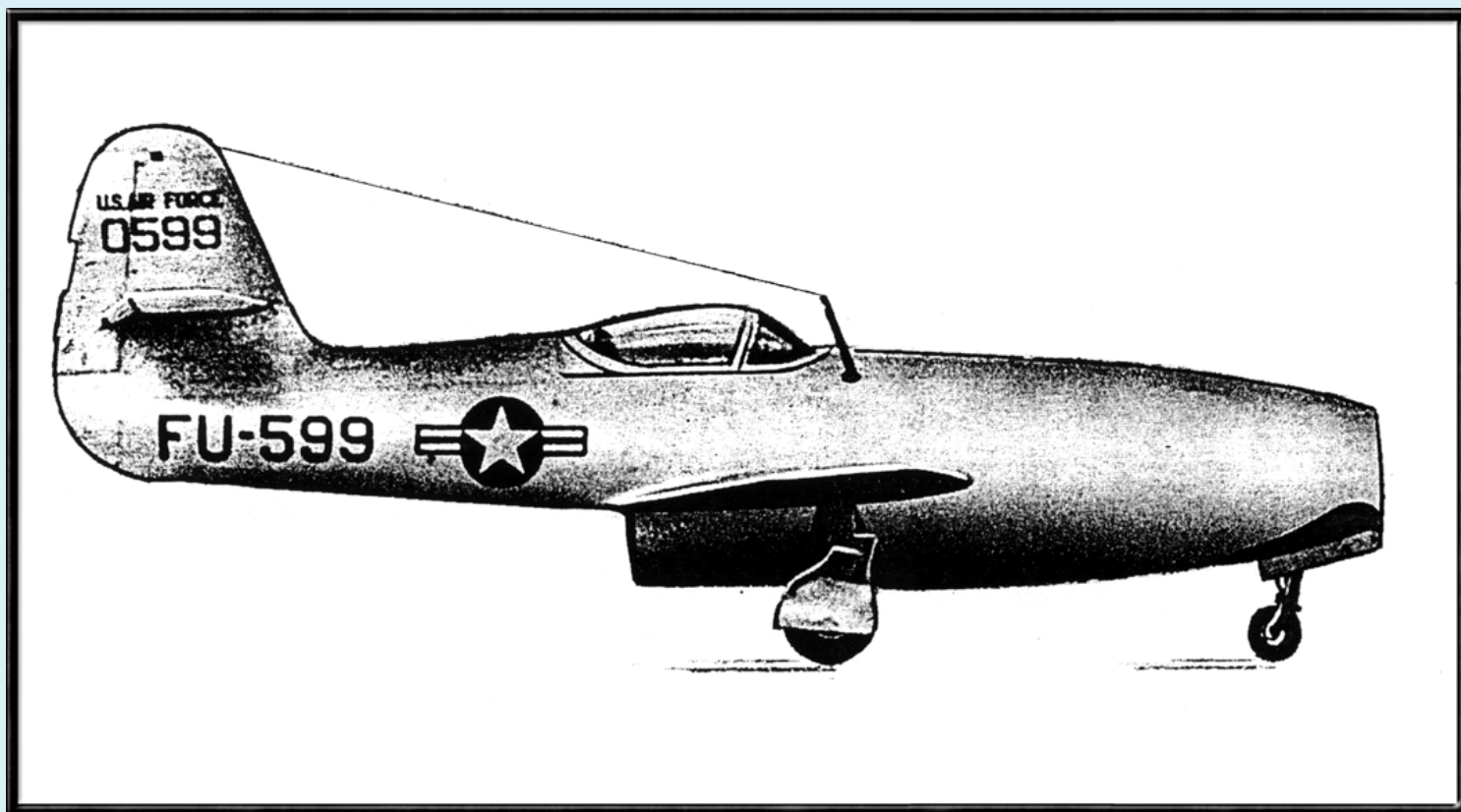
But that's another story. Eventually, negotiations made the Yak-23 available to the United States on a short-term basis. In October 1953, the Yak-23 was flight-tested at WPAFB as ATIC's Project ALPHA.

Science and Technical Intelligence from 1950 to 2006: Hard to Believe

It's hard to believe how far NASIC has developed from the day that Colonel Harold E. Watson, Commander T-2, issued orders for my assignment to WPAFB as a propulsion analyst. The work space back then was in open-bay Quonset buildings without air-conditioning, with secure space area for five or six people. Primary data input was

low-level intelligence reports; open-source literature; and rare, hand-held photography. I created my own abstracts on 4x5-inch cards and maintained the files. Human translation and a library were available, but viewing microfilm was a chore. I calculated aircraft and engine air inlet losses with a slide rule and desk calculator. For measurements, I had a pair of dividers and an engineer scale in my tool kit. Communication to users was by unsecured telephone, mail, or travel.

It's hard to believe, as I view NASIC in this new century: a vibrant, large, multidisciplinary skilled work force; a computer on every desk; processing/analysis/production tool kits for every application; leading-edge information technology resources and capabilities; multisource data inputs and accessible digital data bases; 24/7 secure connectivity and communications to users and collectors worldwide. Everyone ever associated with Air Force S&TI should be proud of the accomplishments and capabilities as embodied in the current National Air and Space Intelligence Center. The late Major General Harold E. Watson would be proud. Believe it!



Drawing of Yak-23 (right side view)