

from off-shelf sales, \$128 million.

- **Procurement generally**—to reflect a reduction and force more economical procurement practices in the Defense Department, \$400.5 million.

- **Transfers of surplus stock fund cash**, \$15.5 million.

In reporting out changes in the Defense budget, Rep. George H. Mahon (D.-Tex.), subcommittee chairman, said:

"It is firmly believed that the overall effect of these actions will substantially strengthen our defense posture over the next few years as they become fully effective.

"The additions made will unquestionably add greatly to our defense. The reductions were made to effect economies wherever possible. In considering these reductions, a majority of the committee felt that they would have no endangering effect on our over-all defense capability."

The capability to maintain an airborne alert within the Strategic Air Command will be a "very important element" of the retaliatory force, the committee said. The additional \$115 million, together with the \$85 million recommended in the President's budget, will make \$200 million available in Fiscal 1961 "for application toward attaining a capability of initiating and sustaining an airborne alert, if and when necessary, at very near the proportion of our strategic bomber forces considered most reasonable by the Department of the Air Force."

In addition to these funds, \$100 million has been made available through reprogramming actions in Fiscal 1960 to begin preparations for an airborne alert. An additional diversion of about \$75 million of war reserve mobilization material also was proposed for the air alert program. The additional funds are recommended exclusively for the procurement, storage and distribution of extra engines, spare-part stocks and supplies necessary to sustain the accelerated rate of aircraft operation if it should become necessary, the committee said.

In an earlier re-evaluation of the air defense problem, the committee said the Air Force proposed to reduce previously planned requirements for the Bomarc B in Fiscal 1961 from \$421.5 million to \$40.4 million, a cut of \$381.1 million. After due consideration, the report said, a majority of the committee decided it was advisable to reduce the Bomarc program even further by eliminating all funds not firmly committed for the Bomarc B missile and leaving only sufficient funds to continue a limited development program. As a result, the committee cut another \$294 million, including previously appropriated funds, making a total reduction from the original 1961 budget requests and prior years of \$675.1 million.

Although the committee recom-

U-2 Missing; Soviets Say U. S. Plane Down

Washington—Soviet Union shot down a U. S. aircraft over Russian territory on May 1, Premier Nikita Khrushchev told a stormy Supreme Soviet session last week. The plane apparently was an unarmed National Aeronautics and Space Administration Lockheed U-2 weather research plane whose civilian pilot had experienced trouble with his oxygen equipment at 55,000 ft. in a flight near the eastern border of Turkey.

The U-2 was one of four operated from Incirlik Air Base at Adana, Turkey, by Lockheed under contract to NASA. It took off at 8 a.m. Adana time May 1. Flight plan called for the first check point to be at 37 deg. 25 min. North, 41 deg. 23 min. East, and for a left turn to be made to the Lake Van beacon; thence to the Trabazon beacon, thence to Antalya and return to Adana. Scheduled time was 3 hr. 45 min. and total distance was 1,400 naut. mi.

The pilot called on emergency radio frequency at about 9 a.m. Adana time saying he had oxygen trouble and would head for the Lake Van beacon to get his bearings and return to Adana. He was then between 50,000 and 55,000 ft. altitude.

His last report indicated he was attempting to receive the Lake Van beacon. He presumably was on a northeasterly course at the time. If the pilot had lost consciousness and the plane was on automatic pilot, it might have continued on a northeasterly course, NASA said.

Air search began soon after the last message was received and continued through last Thursday over the rugged mountains of eastern Turkey.

Khrushchev, in a belligerent, emotional speech, said his government had ordered its military men to shoot down a U. S. aircraft on May 1 because "the aggressor knows what he is doing when he invades somebody else's territory, and, if he remains unpunished, he will launch new provocations." He said he would ask the United Nations' Security Council to consider the matter.

A U. S. plane escaped after invading Soviet territory on Apr. 9, Khrushchev said, and "American military men evidently like the impunity they enjoyed . . . and decided to repeat their aggressive act." State Department said it had "absolutely no knowledge" on the alleged Apr. 9 flight. President Eisenhower ordered an inquiry and public report into the Soviet claim and the missing U-2.

Khrushchev said the aircraft that was shot down did not carry "the usual markings" and said "it appeared that the plane was American, although the identification marks were painted out."

The NASA U-2 painted with a dark blue anti-corrosion paint, carried a 20-in. circular NASA symbol on the tail and a horizontal yellow tail stripe 12 in. high, with the letters "NASA" across the stripe. It carried no wing or fuselage markings. NASA said there apparently was no attempt to lure the U-2 across the Soviet border by radio signals and no scramble of Soviet fighters was detected.

The aircraft's mission was a clear air turbulence study, NASA said. It carried an angular velocity recorder, modified VGH recorder to measure head-on gust components; continuous recorder for airspeed, pressure altitude and normal acceleration; airspeed and altitude transducer to measure pressure altitude and indicated airspeed; AN/AMQ-7 temperature and humidity measuring set; vortex thermometer and USAF Air Weather Service cloud cover cameras. NASA said these cameras were not for reconnaissance and the plane was not carrying radiological detection gear.

U-2 was designed in 1954 with a sailplane-type wing and specially designed Pratt & Whitney J57 engine for sustained high altitude flight. It has a ceiling over 60,000 ft. Lockheed began operating 10 U-2s for NASA under contract in 1956. One exploded over Germany that year and another crashed in the U. S. in 1958. NASA now has one at Edwards AFB, Calif., three at Atsugi, Japan, and three left at Adana. At other times, they have operated from Alaska, New York, England, Germany, Pakistan, Okinawa and the Philippines.

Lockheed also has operated some in its research work and USAF's Strategic Air Command and Air Research and Development Command have used them in the U. S. ARDC has used one in Hawaii in the Discoverer satellite program. USAF trains its U-2 pilots in Texas. NASA late last week had not stopped its U-2 flights.

mended that the \$75 million requested for continued development of a nuclear powered aircraft, it urged the Joint Committee on Atomic Energy to re-examine the program fully.

Since the U. S. has been a leader in the development and use of nuclear propulsion for ships, the report said it would be "most unfortunate" if another nation gained supremacy in nuclear pro-

pulsion for aircraft, particularly "in view of our efforts to date."

The report also said that many of the problems in defense program management, which have taken on major significance in the past year or two, stem from the policy of controlling military programs by a fixed expenditure ceiling applied inflexibly, regardless of other considerations.

U. S. to Continue U-2 Flights Over Soviet

'Rocket' boast of Russians largely discounted; loss of plane attributed to flameout of engine.

Washington—United States will continue manned reconnaissance flights over the heart of the Soviet Union despite Russian retaliation threats until an effective surveillance satellite system becomes operational and/or an arms inspection agreement is reached.

The decision to continue such flights, which have been under way since 1956 at least, followed in the wake of the May 1 crash of a Lockheed U-2 high-altitude reconnaissance aircraft 1,400 mi. inside Russia near Sverdlovsk in the Ural Mountain region.

It also was a public indication of U.S. official disbelief in Soviet Nikita Khrushchev's boast that the U-2 had been downed by a single anti-aircraft "rocket" while flying at an altitude of 65,000 ft. and his boasts that similar "rockets" could destroy Strategic Air Command's bomber force.

The U-2, piloted by Francis Gary Powers, a civilian under contract to Lockheed Aircraft Corp., actually experienced a flameout of its Pratt & Whitney J75-P-13 turbojet engine near its maximum altitude of about 90,000 ft.

The aircraft had descended to about 37,000 ft. attempting an engine restart when last contact with the pilot was made. Efforts by Powers to restart the U-2 engine had not been successful down to this altitude.

At this relatively-low altitude, or lower, the plane may have been intercepted by either Soviet interceptors or ground-to-air missiles.

Several Versions

The U-2, whose design was begun in 1954, is not the only U.S. high-altitude aircraft available for reconnaissance missions over the Soviet Union.

Other, more advanced manned reconnaissance systems will go above 100,000 ft. using exotic fuels developed during the past five years and a lightweight supersonic airframe. These light metal, boron and hydrogen-based fuels have proved practical for specialized missions, particularly those where the turbojet engines can be overhauled after a few hours of running time.

Cost and handling problems have generally prevented the adoption of these fuels for wide operational use within the Air Force.

There also are several versions of the U-2, whose subsonic airframe is limited by Mach number effects to an altitude of approximately 100,000 ft.

While the U-2 downed over the Soviet Union was powered by a J75 engine, earlier versions were powered by a version of the lower-powered Pratt & Whitney J57. Range and altitude performance also probably have been substantially boosted since the initial

design through structural changes and internal improvements.

Gross weight of early versions of the U-2 with slipper tanks on the wings is 17,270 lb., including 995 gal. of fuel. Without the tanks, weight is 15,850 lb., with 785 gal. carried internally.

Lockheed also lists the cruising speed of this version as 460 mph. true airspeed at altitude, top speed as 500 mph. true airspeed. Wing span, as given by the company, is 80 ft.; length, 49 ft., 7 in. Lockheed reports the range at approximately 2,200 stat. mi. without slipper tanks and about 2,600 mi. with them. Range figures are based on having a 100 gal. reserve on letdown.

The Soviets apparently were alerted to the proposed U-2 flight and tracked it by radar from its initial penetration of the Afghan border on a course that took it over Stalinabad west of Tashkent, over Tyura Tam, past Aralsk and on to the Chelyabinsk area where engine trouble apparently developed.

The U-2 downed near Sverdlovsk, which according to Soviet sources, was equipped with extra fuel tanks, was flying a route from Peshwar, Pakistan, to Bodo, Norway, that would have covered more than 3,000 mi.

Main Checkpoints

Main checkpoints on the flight were to have been:

- **Large rocket launching complex** at Tyura Tam just east of the Aral Sea to monitor any space launchings which might be made to coincide with the Soviet May Day celebration.

- **Industrial complex at Sverdlovsk** to report on the status of the new missile defense installation there which has hemispherical, domed launch points rather than the herringbone pattern of the older Russian ground-to-air missile sites that resemble U.S. Nike installa-

tions. Vice President Richard M. Nixon reported seeing these domed sites, dubbed "House of David" by the U.S., at Sverdlovsk during his 1959 visit.

- **Archangel and Murmansk**, both of which house large bases for the Soviet navy and air force. Soviet submarine, air defense and long-range bombing forces all have numerous installations in the vicinity of these two cities.

First pictures released by the Soviets in their propaganda barrage over the incident and purporting to show the U-2 wreckage (see p. 30) were quickly discredited by Clarence L. "Kelly" Johnson, Lockheed vice president who had been charged with the aircraft's design. After a thorough study of available photographs, which showed a heavily damaged aircraft, Johnson said not one part could be identified as belonging to the lightweight U-2 and that the small pieces of heavy structure that could be studied closely were definitely not from a U-2. He said the wreckage most probably was that of an obsolescing Soviet Il-28 Beagle light bomber.

Johnson's skepticism, which was voiced in other quarters, including the White House, prompted the Soviets to display the remains of a relatively lightly damaged aircraft at a public exhibition in Moscow's Gorki park and to release new pictures. Lockheed officials, after a study of these photographs, said there was no doubt that the aircraft on display was the U-2.

Mission Responsibility

Aircraft and pilots employed on strategic reconnaissance missions around the periphery of the Communist territory also serve NASA by gathering gust and meteorological data at altitudes of up to 55,000 ft. as part of a four-year-old high-altitude weather research program.

Three reports by NASA and its predecessor agency, the National Advisory Committee for Aeronautics, presenting data gathered by U-2 aircraft have been issued during this time. This data has shown primarily that turbulence at 55,000 ft. is, on the average, half as frequent and half as severe as that at 20,000 ft.

Under procedures established in 1956, the aircraft used in this program are paid for by the Air Force and put out on bailment to NASA for specific periods of time. This practice has been used for many years by both Air Force and Navy to support NACA programs.

The Air Force originally purchased the U-2 for a joint USAF-Atomic Energy Commission high altitude radiation detection research program. The

project, however, was conducted on a sporadic basis, and some of the aircraft were baled to NASA for its weather research program during slack periods.

The Air Force Weather Service acts as administrator for the portion of the NASA program investigating high-altitude weather conditions outside the continental U.S. There are no personnel directly employed by NASA in these overseas activities.

These units apparently take their orders primarily from the Central Intelligence Agency, with NASA receiving only raw weather data from these units.

Cover Plane

On May 1, as Powers' plane flew into the Soviet Union from Pakistan, another U-2 was flying as a cover in the Lake Van region near the eastern border of Turkey. The aircraft over Turkey was following the pattern of a normal weather reconnaissance flight such as those made for NASA.

First reports that a U-2 was missing came on May 3 from the Incirlik Air Base in Adana, Turkey, the aircraft's home base. These reports placed the aircraft in the Lake Van region and said the pilot had reported difficulty with his oxygen system.

Two days later, when Soviet Premier Nikita Khrushchev told a session of the Supreme Soviet that a U.S. reconnaissance aircraft had been downed over the Soviet Union, the U.S. still clung to the Lake Van U-2.

An NASA release, made at State Department insistence, and apparently based upon reports received from Turkey, reiterated the statement that the Lake Van U-2 was missing and that the pilot had experienced trouble with his oxygen equipment.

It added that the aircraft was on a northeasterly course when last heard from and that, if the pilot had lost consciousness it could have strayed across the Soviet border.

The State Department release stated that "there was no deliberate attempt to violate Soviet airspace and there never has been."

These statements stood for two days—until Khrushchev announced to the Supreme Soviet that the aircraft had been downed near Sverdlovsk deep in Russian territory, that Powers had safely parachuted from his crippled

SAC U-2 Fleet

Strategic Air Command has a fleet of 15 U-2 aircraft which are used for training purposes, high altitude weather research and nuclear radiation detection missions. Other USAF U-2 aircraft have been assigned to Air Research and Development Command.

Wreckage Displayed

Moscow—Underside damage predominated in the sections of wreckage of a blue-black unmarked Lockheed U-2 the Russians put on display here last week. Greatest degree of damage appeared to be in the center section and to the Pratt & Whitney J75-P-13 turbojet engine.

Vertical tail surfaces were less damaged than the underside of the tail section. Trailing edges of both wings were torn and there were holes from one to ten inches in diameter in the right wing. Underside of the left wing showed very little damage. Slipper tanks on the wings were bent upward and the left one was flattened on the bottom.

Unofficial Soviet sources maintained the airplane was hit by a rocket in the engine section. Equipment described by the Soviets as radio and ground radar reconnaissance systems was displayed along with dome antennas carrying designations of MP 11719 and MP 12570. Seven glass ports for cameras were noted by observers and a 9x18 in. film size camera designated 73B and an astro-tracker for calibrating pictures taken in flight by reference to the sun also were included.

Airspeed indicator needle was stuck on 340 kt. Altitude needle was gone. None of the pilot's survival equipment displayed appeared soiled or damaged.

Lettering on the wing "Fuel only with MIL-F-25524A" correspond with markings on U-2s photographed in the U.S. (see p. 29, lower left photo).

plane and that he had admitted flying a reconnaissance mission on orders from his "chiefs."

State Department then issued a statement acknowledging that the aircraft had been sent on a reconnaissance mission over the Soviet Union and officially expressing surprise at the belligerence of the Russian leaders' attack on the U.S. since, it said, they had known of these flights for several years.

In a later statement, Secretary of State Christian Herter said the U.S. intends to continue such flights, terming them necessary to assure the West that it will not be taken by surprise attack. A day later, President Eisenhower gave his tacit approval to the flights and outlined the reasons the U.S. believes they are necessary (see p. 32).

Initial Design

In the initial design of the aircraft in 1954, existing state-of-the-art information was used in the development of the airframe, and no elaborate research program was conducted before work on actual hardware was begun.

Construction of the aircraft is ex-

tremely light, a necessity for high-altitude planes. The wings flap noticeably during flight near the ground, and the main landing gear has been reduced to one strut with dual wheels to conserve weight. This strut is located just forward of the center of gravity so that the pilot can balance on it during his landing ground roll.

Wing-tip skids are provided to prevent damage to the wing when the aircraft slows down and the pilot loses lateral control with his ailerons. During takeoff, two small wheels under each wing keep them level. These wheels are held firmly on the ground by a flexible strut inserted in a wing socket so that, on takeoffs, the struts come out of the sockets and the whole assembly remains on the runway.

Small wheel supports the tail section when the pilot lowers it near the end of his landing roll and during takeoff.

U-2 Surface

Surface of the U-2 is exceptionally clean, with flush riveting over much of the aircraft. Careful attention is paid to joints and junctures during manufacture, since a very smooth surface is required to keep friction drag low at high altitudes.

High aspect ratio, sailplane-type wing was used on the aircraft to permit it to operate at high lift coefficients during cruise with a small penalty in drag due to lift. The turned-down wing tips that form the skids for landing increase the effective aspect ratio of the wing and make it more efficient for the U-2 mission.

Primary mechanical modification to the J57 powerplant in initial installations was the use of larger, wide chord compressor blades to pump thin, low-density air more efficiently than those on normal turbojet installations which must function effectively through a wide altitude range.

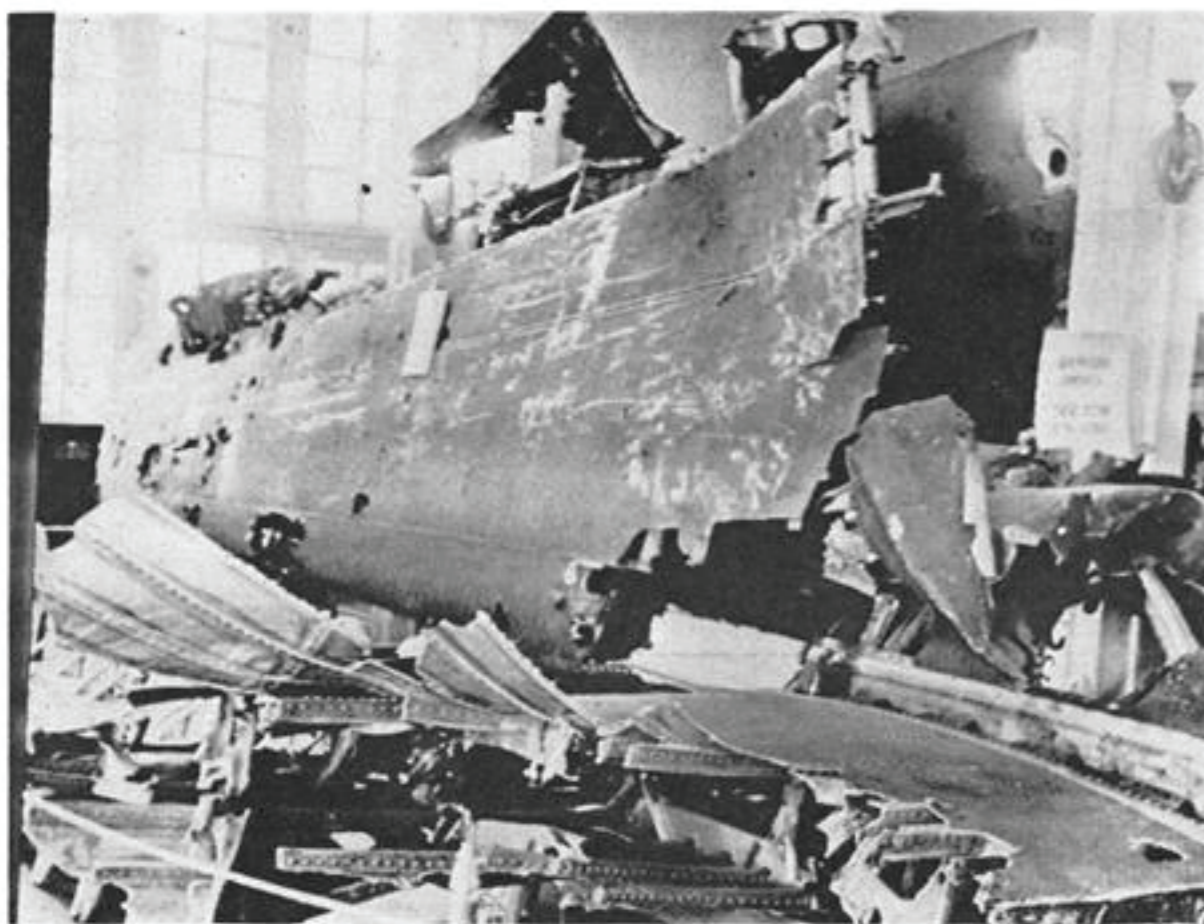
Soviet Missile Command

Moscow—Soviet Union has established a separate missile command, apparently on a level equal to that of its air force, army and navy.

New service is under the command of Marshal Mitrofan Ivanovich Nedelin, who has headed the Soviet army artillery and served as chief of the principal artillery administration in the Ministry of Defense for the past 10 years.

First indication of the separate command came shortly after Soviet Premier Nikita Khrushchev's initial announcement that a Lockheed U-2 aircraft had been downed over Russian territory. At a formal reception, Khrushchev introduced Nedelin as "Marshal of Rocketry Nedelin."

Soviets Exploit U-2, Boast of Strength



REAL U-2 WRECKAGE was finally displayed later by Soviets in Moscow Gorki Park exhibit after earlier faked wreckage picture had been exposed by Lockheed's Johnson and President Eisenhower. Wreckage shows major portion of U-2 wing panel. Soviets claim to have recovered most of the U-2 reconnaissance equipment intact and description of cockpit equipment indicates they may have recovered this plane relatively undamaged, again casting suspicion on their earlier claim of rocket hits at 65,000 ft. Pratt & Whitney J75 engine from U-2 exhibited in Moscow showed evidence of impact damage. Tail section was intact except for missing rudder tab. U-2 wreckage was painted blue-black and no insignia was visible on wings, fuselage or tail.



FAKED U-2 WRECKAGE is shown in this photo originally released by the Soviets labeled as the wreckage of the U-2 as it was shot down near Sverdlovsk. Wreckage is actually the remains of an Aeroflot Tu-104 jet transport that crashed near Sverdlovsk last February killing an official Chinese delegation to Moscow. C. L. "Kelly" Johnson, Lockheed designer of the U-2, analyzed the structural members showing in this photo and said they bore no resemblance to the lightweight U-2 structure and were probably of a bomber type aircraft. Aeroflot Tu-104 crash near Sverdlovsk was one of few publicly announced in USSR because of large foreign delegation aboard. Faked U-2 wreckage was apparently released to create impression of heavy damage from Soviet anti-aircraft missile whereas genuine U-2 wreckage displayed later in Moscow showed major damage sustained along aircraft belly similar to that from a forced landing. Khrushchev awarded medals to Red Army missile crew who allegedly fired the rocket that supposedly hit the U-2. New type anti-aircraft missiles have been observed in the Sverdlovsk area since last summer.

Moscow—Soviet Union last week exploited the May 1 downing of a Lockheed U-2 reconnaissance plane well inside Russia with boasts of its own defensive strength and warnings to U. S. and its allies that further flights might be met by "more drastic action."

At a press conference called shortly after U. S. Secretary of State Christian Herter said the U. S. plans to continue such flights, Soviet Foreign Minister Andrei Gromyko warned:

"Once again, the violation of the sovereignty and integrity of foreign frontiers, spying and subversion, are pronounced as the U. S. official policy."

"We shall meet, as the Soviet people have always met aggressors, and aircraft which dare to make a sortie into our borders will be smashed to smithereens."

Gromyko warned that those "who lend bases on their territory for aircraft violating our frontier . . . should know that in the event of a repetition of such provocations, the Soviet Union will be able to render these bases harmless."

Earlier, a Radio Moscow broadcast beamed to the U. S. threatened that, "if these American flights over our territory do not cease, the Soviet Union will be compelled to take more drastic action and the security of the United States will hardly benefit."

The furor over the U-2 crash—and the debate over the actual facts behind it—near Sverdlovsk 1,400 mi. inside the Soviet border was dramatically touched off by Premier Nikita Khrushchev four days after the incident.

In a speech before the Supreme Soviet, in which he failed to mention that U-2 pilot Francis Powers had been captured alive, Khrushchev said:

"That day (May 1) . . . an American plane flew over our frontier and continued its flight into the interior of the Soviet land. A report on this aggressive act was immediately given to the government by the Minister of Defense."

"The government has stated this: Since he realizes what he comes up against when intruding into a foreign territory, if he gets away with it, he will attempt fresh provocations. Therefore, the plane must be shot down."

"This task was fulfilled, and the plane was shot down."

Khrushchev said that, upon being told of the invasion, he personally ordered that the U-2 be shot down.

He saved his greatest propaganda coup until May 7 after U. S. spokesmen had issued a statement that a U-2 flying a high-altitude weather mission in the vicinity of Lake Van near the eastern border of Turkey had been missing since May 1.

The Soviet Premier, after a wait of two days, then retorted in a speech highlighted by a statement that U-2 pilot Powers was in Soviet hands. Khrushchev told the Supreme Soviet:

"The flier testified he had no dizziness nor had his oxygen apparatus failed (as U. S. officials had speculated). He was flying along an assigned course, accurately executing his chiefs' order, switching on and off equipment over preselected targets for gleaning intelligence data on the Soviet Union's military and industrial establishments, and flew on until the very moment his piratical flight into this country's interior was cut short."

He told the Supreme Soviet that the U-2 was hit at an altitude of approximately 65,000 ft. by a "rocket" and boasted that, "if they fly higher, we will also hit them."

A "competent commission of experts" which examined the wreckage of the U-2, Khrushchev said, had established "that this American plane was a specially prepared reconnaissance aircraft" with the mission of crossing "the entire territory of the Soviet Union" from Pakistan to Norway. He added:

"Besides aerial cameras, the plane carried other reconnaissance equipment for spotting radar networks, identifying the location and frequencies of operations stations and other special radio engineering equipment."

Khrushchev also brandished pictures 2 x 2 ft. in size and tapes which he said came from the U-2 and showed, among other things:

- "Airfields and planes on it."
- "Petrol stores."
- "Industrial enterprises."
- "Signals of a number of our ground radar stations," Khrushchev said, were recorded on one of the tapes.

Terming Washington's version of the flight "baloney," Khrushchev gave what he termed the "truth" of U-2 mission.

The plane's base was, as Washington said, in Adana, Turkey, Khrushchev said. It was attached to a military intelligence unit headed by Col. William Shelton, numbered 10-10. The 10-10 unit, Khrushchev charged, was using the National Aeronautics and Space Administration, to which the aircraft was attached, as a "cover" while probing Soviet radar installations.

Khrushchev quoted Powers as saying that on May 1 he left Peshwar, Pakistan, flew over the Aral Sea and then headed toward Sverdlovsk where his plane was downed.

He also quoted Powers as saying that he flew into Soviet territory "with instructions to fly along a course indicated on his map over the Aral Sea, Sverdlovsk and other points and reach Archangel and Murmansk before landing at Bodo Airfield in Norway." He said Powers had told Soviet authorities:

Khrushchev Scores Twining

Moscow—Soviet Premier Nikita Khrushchev, in rising anger over the U-2 incident, last week described Gen. Nathan F. Twining, chairman of the Joint Chiefs of Staff, as a man to be compared with "an animal that may do its dirty doings where it eats."

Recalling the 1956 visit of Gen. Twining, then USAF chief of staff, to Russia, Khrushchev said the American general was "welcomed as a guest" and added:

"He left our country by air and next day sent a plane flying at great altitude to our country. This plane flew as far as Kiev (approximately 200 mi. inside the Soviet Union)."

"The question arose—should we protest? I proposed no protest should be lodged. All Twining might be compared to is to an animal that may do its dirty doings where it eats. From such behavior, we drew a conclusion: To improve rockets, to improve fighters."

"Our fighters can fly as high as 28,000 meters (92,000 ft.), but the difficulties of a fighter are, though it can rise high, it is not so easy and simple to find a target in the air; a plane in the air is like a needle in the ocean."

"But a rocket finds its target itself. This is the advantage of a rocket, and we make use of it. We have both fighters and rockets. That is why I say: If there are still politicians who would like to rely on bombers, they are doomed to failure."

"With up-to-date military techniques, bombers will be shot down even before they approach a target."

Earlier, Khrushchev repeated his charge that a U. S. reconnaissance plane flew over the Soviet Union on Apr. 9, adding:

"We should have shot down the reconnaissance plane. . . . However, our military men slipped up, to put it mildly, and we put them on the carpet."

"I believe my flight over Soviet territory was meant for collecting information on Soviet guided missiles and radar stations."

Khrushchev said that, after the U-2 was struck by a "rocket," Powers "bailed out by parachute; note he was not ejected by catapult but left through the upper canopy . . . He did this possibly because there was an explosive charge in the aircraft which was to blow the plane as soon as the pilot catapulted. The pilot knew this and possibly was afraid he would be killed in the explosion."

Later, Red Star, the Soviet army magazine, reported that the U-2 "catapult" appeared faulty "and probably would not have worked" had Powers used it.

The Red Star article written by Col. F. Luchnikov and Maj. V. Zhukov said Powers would have destroyed himself if he had attempted to use the ejection system. The article said investigation of the wreckage showed that it contained a cache of TNT designed to go off after the pilot had ejected but that the escape system bore a stamp saying it had last been checked in 1956 and would have failed if used. The explosive mechanism, it added, was in perfect order "and would have spared neither the plane nor the flyer." It added:

"Powers apparently knew his bosses' habits very well. Probably this is why he did not make use of the catapult, realizing what the end would be."

Red Star reported that the U-2 was equipped with extra tanks providing sufficient fuel to carry him the approximately 3,000 mi. needed to cross the Soviet Union.

The article said that, in an interview, Powers had never heard of U. S. aviation magazines mentioned to him and concluded:

"So we are dealing with a stupid, corrupt, greedy adventurer in military form. He has no pricks of conscience that he is a spy."

Other Soviet publications, however, attributed the crash of his aircraft to an "explosion" in the U-2 engine rather than to a Soviet missile.

Other Soviet publications, however, carried lengthy reports on the actions of the missile crew which supposedly downed the aircraft. Pravda carried this account of the action:

"Interference made search difficult and operators strained their eyes and ears to the utmost. The target was maneuvering and, with each minute, their job was becoming ever more difficult." Noting that U-2's radar blips on the screen were "barely visible," Pravda continued:

"The pirate plane was flying with almost sonic speed at very great altitude. A private," it said, "manipulated the instruments until the target mark was fixed on the plane's course."

"Corp. Kharbargin faultlessly plotted the target flight on a map. Maj. Mikhail Voronov at the command post was given precise parameters of the target, then gave the order to fire."

"The rocket shot through the air, shaking all things around and leaving a fiery trace. Then there was an explosion in the sky meaning destruction of the American plane."

"Our Army has many units like the one which has downed the pirate plane."

Lockheed U-2 Over Sverdlovsk:

The whole truth of Francis Gary Powers' 1,400-mi. penetration of the Soviet Union in a Lockheed U-2 on a Central Intelligence Agency mission of photo and electronic reconnaissance has not yet been told. It may never emerge from the welter of official lies pouring from Moscow and Washington.

Nevertheless, there are some points that have already emerged from this adventure that are worth examining. Let us start with the fabrications that have been bull-roared from the rostrum of the Supreme Soviet by Nikita Khrushchev because they reveal much about his fears and problems over the current state of the world.

Mr. Khrushchev's most blatant lie is his statement that the U-2 was hit by a Red Army anti-aircraft missile at an altitude of 65,000 ft. near Sverdlovsk after it had penetrated the air defenses of the Soviet Union for some 1,400 mi. This lie was necessary because the citizens of the USSR could understandably grow uneasy over the admitted ability of the U-2 and other specialized aircraft to penetrate Soviet airspace consistently with impunity. The spectacle of Soviet air defense system futility for the last four years in trying to stop these penetrations must provide a chilling counterpoint for Soviet citizens to the bellicose blustering of their leader over the aggressive strength of his military power.

The fact is, and Mr. Khrushchev undoubtedly knows it, that Powers' U-2 had an engine flameout at the altitude that it and other U-2 aircraft cruised safely beyond the reach of the Soviet air defense system. The flameout forced Powers to descend below 40,000 ft. where the denser atmosphere made an attempt to restart his jet engine feasible. Either Power failed to restart his engine or his plane was damaged at this relatively low altitude by the Red Army missile men to whom Mr. Khrushchev awarded medals.

Another obvious lie was used to bolster this originally false claim for the Soviet air defense system. A picture of some badly battered scrap from an Aeroflot Tu-104 crash near Sverdlovsk last February was officially released by the Soviets labeled as the U-2 wreckage to convey an impression of terrible damage wrought by the anti-aircraft missile. When this fake was exposed by Lockheed's U-2 designer, C. L. "Kelly" Johnson, the remains of the genuine U-2 were finally produced for an exhibition in Moscow's Gorki Park.

Further contradiction of the missile hit scored at 65,000 ft. was the Soviets' own claim that they recovered most of the U-2 photo and electronic reconnaissance equipment in good condition, were able to examine the cockpit ejection system in detail and to retrieve miscellaneous gear from the cockpit intact.

Mr. Khrushchev has good reason to worry about the ability of the U-2 and other aircraft to skim over his huge air defense system. For it must come as a real shocker to Soviet citizens, fed a steady diet of propaganda on the superiority of Soviet military might, to hear the admissions from Mr. Khrushchev and Andrei Gromyko that these U-2 flights have been going on successfully for at least four years. The Soviet citizens must wonder, if

this is true, how much credence they can place in the assurances they receive from Mr. Khrushchev that manned bombers are obsolete and cannot penetrate the Soviet air defense system. Even if his claim of a missile hit at Sverdlovsk was true, how does Mr. Khrushchev explain a 1,400-mi. penetration from the Pakistan border to the Urals?

It is obvious that Mr. Khrushchev does not really believe his own claims about the difficulty of manned bomber penetration into the USSR because he has been pushing a gigantic expansion of his air defense system for the past several years. This includes new improved surveillance, and ground control intercept radar, passive detection systems, new interceptors and a tremendous program of new anti-aircraft missile installations around key military and industrial areas. If Mr. Khrushchev really believed the Strategic Air Command B-47, B-52 and B-58 fleet of manned bombers were as ineffective as he publicly blusters, he would hardly waste the vast resources that he has and is still putting into his air defense system.

Nor is Mr. Khrushchev telling the truth when he announces that the Soviets have switched completely from bombers to ballistic missiles and that they no longer are producing or developing or exercising bombers because they are obsolete for modern warfare. The USSR is still producing long range jet bombers, although at far from maximum possible rates. It is developing new supersonic bombers and a nuclear-powered bomber and it is exercising its current operational jet bomber fleet at an accelerated rate in long distance Arctic missions. Mr. Khrushchev would like us to believe his lies on the future of the bomber in the Soviet arsenal. This belief would encourage the trend, already started, toward cutting back our own air defense system.

Mr. Khrushchev is also ignoring some pertinent facts when he stresses the "provocative" nature of the U-2 flights. The Soviet espionage system in this country has been exposed in many aspects of its hydra-headed operation. The record from the atomic secret snitching of Klaus Fuchs to the cozy Brooklyn espionage nest operated by the Soviet Col. Abel has offered ample provocation for anything this country cares to make of it.

The Soviets are fighting the reconnaissance war with every method at their disposal all around the periphery of the Iron Curtain, cutting transatlantic cables off Newfoundland, grappling for Caesar anti-submarine warfare stations, fishing for nose cones off Ascension Island, monitoring the Atlantic Missile Range communications, shadowing Polaris submarines and conducting electronic reconnaissance on our frontiers by trawler, submarine and aircraft. The Soviets do not require deep penetration of the United States for photo reconnaissance because of the availability of this information from public sources and their espionage system. Their prime need is for electronic intelligence and this they are gathering with every means at their disposal.

A Study in Fabrication

When we turn to the record of our own government agencies involved in the U-2 adventure the record of deliberate falsification is equally bad. The series of inter-agency bungles gives us a queasy feeling over what might happen in a real emergency with survival or defeat hinging on the speed and acumen of the official reaction.

First, there are the ivory tower researchers of the old NACA now with NASA who had their hard-won reputation for scientific integrity shredded overnight by the exposure of their role as unwitting dupes of the Central Intelligence Agency. They saw no reason to sniff suspiciously at an offer of a free research program for high altitude weather and gust loading research from the military. This bailment of military aircraft to NACA was traditional, since NACA had no budget of its own for this purpose. NACA wrote the test program requirements, sporadically got back data from missions executed according to its specifications and apparently never did much analytical research into the geographic locations of the U-2s or the isolation of the agency from any contact with their personnel. NACA, and later NASA, dutifully published three technical reports in four years on this work and worked happily in the traditional role of the piano player in a bagnio who was never told what was going on upstairs.

This coupling of CIA (which Washington wags are now saying stands for Caught in the Act) with NASA in an international espionage venture will badly damage, if not altogether destroy, the fine foundation NASA was organizing for international cooperation in the scientific exploration of space. NASA can hardly blame foreign nations already solicited in this program for inquiring as to how much of a tracking station, launching site or payload instrumentation is earmarked for CIA missions. Nor can they be blamed for politely declining to take a chance with an agency that apparently doesn't know all it should about its own activities.

This damage to NASA's scientific integrity may count for little in the calloused calculations of CIA super-sleuths, but it will do irreparable harm in the international scientific community where this country has many of its staunchest friends.

Second is the spectacle of the State Department turning a complete slow motion somersault from the flat lie that "there was no deliberate attempt to violate the Soviet airspace and there never has been," to a mousy admission that there might have been such flights but that they "were not authorized by Washington," to a final complete admission that the U-2 penetrations were in fact an integral part of U.S. national policy. What the State Department can command as a credibility factor in future roles as a U.S. spokesman will be interesting to see.

The official U.S. policy as finally stated by President

Eisenhower some 10 days after Powers' U-2 hit the Siberian earth also carries some future forebodings.

It officially commits the United States to a continuous and deliberate policy of violating the Soviet airspace and formally makes espionage an integral part of U.S. policy. Although virtually every American citizen can see the need for continuous surveillance of the Soviet Union by whatever effective methods are available and will tacitly support these efforts, it is quite another matter to publicly announce that espionage and violation of another country's territory have become an official policy.

This policy, which is unprecedented in the history of nations, leaves our allies in an untenable position and forces the Soviets to carry this matter much further than they may have originally intended. It appears to be another one of those hasty, poorly thought out, improvised policies aimed at a quick fix with not much thought for future consequences or other implications.

Third, of course, comes the Central Intelligence Agency, in this incident stripped of all its protective secrecy, and standing nakedly exposed in an incredibly amateurish performance compounded from inadequate training, faulty execution and rather transparent cover operations. Apparently, all that was adequately provided in this operation was the \$30,000-a-year salaries for the pilots. Whatever reasons impelled Francis Powers to decline to carry out the traditional self-destruction orders of the espionage agent apprehended red-handed by the enemy may never be known. Suffice to say his embarrassing survival was not in the best tradition of either USAF, the agency that originally trained him, or CIA, the agency that hired him without training him properly in its specialized requirements.

The need for a congressional or some other "watch-dog" operation over CIA was never more apparent.

Finally the most important aspect of the U-2 episode is the illumination it must shed for most Americans on the simple salient fact that we are in fact fighting a war against the forces of communism. It is a far different war than we have ever fought before and it is being fought with weapons that we are not accustomed to using. The bungling, naivete and innocence our various government agencies have displayed in the U-2 episode show clearly that we are not yet organized for this type of conflict nor do we yet really understand its scope and strategy.

Although too few Americans realize it, we are already deep into this struggle to determine whether the Soviet system or our own will prevail. If we hope to preserve the basic elements of this civilization we cherish, we must dedicate ourselves more thoroughly to this task and organize our national resources and policies more effectively to achieve this goal.

—Robert Hotz