#### Episode 4

Wednesday, February 17, 2021

Area 51 is the common name of a highly classified United States Air Force (USAF) facility located within the Nevada Test and Training Range. A remote detachment administered by Edwards Air Force Base, the facility is officially called Homey Airport (KXTA) or Groom Lake (after the salt flat situated next to its airfield). Details of the facility's operations are not made public, but the USAF says that it is an open training range, and it is commonly thought to support the development and testing of experimental aircraft and weapons systems. The USAF acquired the site in 1955, primarily for flight testing the  $\underline{\text{Lockheed U-2}}$  aircraft.  $^{\underline{\text{J31}}}$ 

 $The intense secrecy surrounding the base has made it the frequent subject of conspiracy theories and a central component of <math display="block">\underline{unidentified flying}$ object (UFO) folklore.[405] The base has never been declared a secret base, but all research and occurrences in Area 51 are Top Secret/Sensitive Compartmented Information (TS/SCI).= The CIA publicly acknowledged the existence of the base for the first time on June 25, 2013, following a Freedom of Information Act (FOIA) request filed in 2005, and, at the same time, they declassified documents detailing the history and purpose of Area

 $Area 51 is located in the southern portion of \underline{Nevada}, 83 miles (134 km) north-northwest of \underline{Las Vegas}. The surrounding area is a popular tourist the surrounding area of \underline{Nevada}, 83 miles (134 km) north-northwest of \underline{Nevada}, 84 miles (134 km) north-northwest of \underline{Nevada}, 85 miles (134 km) northwest o$ destination, including the small town of <u>Rachel</u> on the "<u>Extraterrestrial Highway</u>".

From <a href="https://en.wikipedia.org/wiki/Area">https://en.wikipedia.org/wiki/Area</a> 51>





# History

Nevada Test Range topographic chart centered on Groom Lake
The origin of the name "Area 51" is unclear. It is believed to be from an Atomic Energy Commission (AEC) numbering grid, although Area 51 is not part of this system; it is adjacent to Area 15. Another explanation is that 51 was used because it was unlikely that the AEC would use the number.[16]

According to the Central Intelligence Agency (CIA), the correct names for the facility are Homey Airport (KXTA) and Groom Lake,[17] [18] though the name Area 51 was used in a CIA document from the Vietnam War. [19] The facility has also been referred to as Dreamland and Paradise Ranch, [20] among other nicknames. The USAF public relations has referred to the facility as "an operating location near Groom Dry Lake". The special use airspace around the field is referred to as Restricted Area 4808 North (R-4808N).[21]

Lead and silver were discovered in the southern part of the Groom Range in 1864, [22] and the English company Groome Lead Mines Limited financed the Conception Mines in the 1870s, giving the district its name (nearby mines included Maria, Willow, and White Lake). [23] J. B. Osborne and partners acquired the controlling interest in Groom in 1876, and Osbourne's son acquired it in the 1890s. [23] Mining continued until 1918, then resumed after World War II until the early 1950s. [23]

The airfield on the Groom Lake site began service in 1942 as Indian Springs Air Force Auxiliary Field [24] and consisted of two unpaved 5,000-foot (1,524 m) runways.[25]

#### UFO and other conspiracy theories

Area 51 has become a focus of modern conspiracy theories due to its secretive nature and connection to classified aircraft research. 19 Theories include:

- The storage, examination, and reverse engineering of crashed alien spacecraft, including material supposedly recovered at Roswell, the study of their occupants, and the manufacture of aircraft based on alien technology
- Meetings or joint undertakings with extraterrestrials
- The development of exotic <u>energy weapons</u> for the <u>Strategic Defense Initiative</u> (SDI) or other weapons programs
- The development of weather control
- The development of time travel and teleportation technology
  The development of exotic propulsion systems related to the <u>Aurora Program</u>

Activities related to a shadowy one world government or the Majestic 12 organization

Many of the hypotheses concern underground facilities at Groom or at Papoose Lake (also known as "S-4 location"), 8.5 miles (13.7 km) south, and include claims of a transcontinental underground railroad system, a disappearing airstrip nicknamed the "Cheshire Airstrip", after Lewis Carroll's Cheshire cat, which briefly appears when water is sprayed onto its camouflaged asphalt, and engineering based on alien technology

In the mid-1950s, civilian aircraft flew under 20,000 feet while military aircraft flew under 40,000 feet. The U-2 began flying at above 60,000 feet and there was an increasing number of UFO sighting reports. Sightings occurred most oftenduring early evenings hours, when airline pilots flying west saw the U-2's silver wings reflect the setting sun, giving the aircraft a "fiery" appearance. Many sighting reports came to the Air Fooce's <u>Project Blue Book</u>, which investigated UFO sightings, through air-tra controllers and letters to the government. The project checked U-2 and later OXCART flight records to eliminate the majority of UFO reports that it received during the late 1950s and 1960s. Buthough it could not reveal to the letter writers the truth behind what they saw\_m²-similarly, veterans of experimental projects such as OXCART at Area 51 agree that their work inadvertently prompted many of the UFO sightings and other rumors. ok, which investigated UFO sightings, through air-traffic

The shape of OXCART was unprecedented, with its wide, disk-like fuselage designed to carry vast quantities of fuel. Commercial pilots cruising over Nevada at dusk would look up and seethe bottom of OXCART whiz by at 2,000-plus mph. The aircraft's titanium body, moving as fast as a bullet, would reflect the sun's rays in a way that could make anyone think, UFO.100

They believe that the rumors helped maintain secrecy over Area 51's operations and operations. The veterans deny the existence of a vast underground railroad system. although many of Area 51's operations did occur underground. Bob Lazar claimed in 1989 that he had worked at Area 51's "Sector Four (S-4)", said to be located underground inside the Papoose Range near Papoose Lake. He claimed that he was contracted to work with alien spacecraft that the government had in its possession. Similarly, the 1996 documentary Dreamland directed by Bruce Burgess included an interview with a 71-year-old mechanical engineer who claimed to be a former employee at Area 51 during the 1950s. His claims included that he had worked on a "flying disc simulator" which had been based on a disc originating from a crashed extraterrestrial craft and wasused to train pilots. He also claimed to have worked with an extraterrestrial being named "FROd" and described as a "telepathic translator". In 2004, Dan Burisch (pseudonym of Dan Crain) claimed to have worked on cloning alien viruses at Area 51, also alongside thealien named "J-Rod". Burisch's scholarly credentials are the subject of much debate, as he was apparently working as a Las Vegas parole officer in 1989 while also earning a PhD at State University of New York (SUNY).



A closed-circuit TV camera watches over the perimeter of Area 51.

In July 2019, more than 2,000,000 people responded to a joke proposal to storm Area 51, They Can't Stop All of Us", an attempt to "see them aliens" Proce spokeswoman Laura McAndrews said the government "would discourage anyone from trying to come into the area where wetrain American armed forces" Two music festivals in rural Nevada, "AlienStock" and "Storm Area 51 Basecamp", were subsequently organized to capitalize on the popularity of the original Facebook event. Between 1,500 and 3,000 people showed up at the festivals, while over 150 people made the journey over several miles of rough roads to get near the gates to Area 51.[80(81)] Five people were reportedly arrested at the event.

- Known as the Homey Airport & Groom Lake Began service in 1942 as Indian Springs Air
- Force Auxiliary Field
- In 1955, it gained a larger run way
- Acquired via the AEC
- The Soviet Union's own version of Area 51 (catchy name: NII-88/TsNIIMash) In a small industrial town 40 miles from Moscow

### Housekeeping

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The 256th couplet of Tirukkural, which was composed at least 2000 years ago, says that "if people do not consume a product orservice, then there will not be anybody to supply that product or service for the sake of price".[11]

According to Hamid S. Hosseini, the power of supply and demand was understood to some extent by several early Muslim scholars such as fourteenth-century Syrian scholar Ibn Taymiyyah, who wrote: "If desire for goods increases while its availability decreases, its price rises. On the other hand, if availability of the good increases and the desire for it decreases, the price comes down."[12]

If desire for goods increases while its availability decreases, its price rises. On the other hand, if availability of the god increases and the desire for it decreases, the price comes down.

— Ibn Taymiyyah, [12]

#### Adam Smith

Shifting focus to the English etymology of the expression, it has been confirmed that the phrase 'supply and demand' was notused by English economics writers until after the end of the 17th century.[13] In John Locke's 1691 work Some Considerations on the Consequences of the Lowering of Interest and the Raising of the Value of Money,[14] Locke alluded to the idea of supply and demand, however, he failed to accurately label it as such and thus, he fell short in coining the phrase and conveying its true significance.[15] Locke wrote: "The price of any commodity rises or falls by the proportion of the number of buyer and sellers" and "that which regulates the price... [of goods] is nothing else but their quantity in proportion to [the] Vent."[15] Locke's terminology drew criticism from John Locke's Prices of Goods are not according to the quantity in proportion to the Vent, but in proportion to the Demand."[16] From Law the demand part of the phrase was given its proper title and it began to circulate among "prominent authorities" in the \$\pi\$30s.[15] In \$\pi\$755, Francis Hutcheson, in his A System of Moral Philosophy, furthered development toward the phrase by stipulating that, "the prices of goods depend on these two jointly, the Demand... and the Difficulty of acquiring."[15]

It was not until 1767 that the phrase "supply and demand" was first used by Scottish writer James Denham-Steuart in his Inquiry into the Principles of Political Economy. He originated the use of this phrase by effectively combining "supply' and "demand" together in a number of different occasions such as price determination and competitive analysis. In Steuart's chapter entitled "Of Demand", he argues that "The nature of Demand is to encourage industry; and when it is regularly made, the effect of it is, that the supply for the most part is found to be in proportion to it, and then the demand is simple". It is presumably from this chapter that the idea spread to other authors and economic thinkers.

Adam Smith used the phrase after Steuart in his 1776 book The Wealth of Nations. In The Wealth of Nations, Smith asserted that the supply price was fixed but that its "merit" (value) would decrease as its "scarcity" increased, this idea by Smith was later named the law of demand. In 1803, Thomas Robert Malthus used the phrase "supply and demand" twenty times in the second edition of the Essay on Population.[15] And David Ricardo in his 1817 work, Principles of Political Economy and Taxation, titled one chapter, "On the Influence of Demand and Supply on Price".[17] In Principles of Pditical Economy and Taxation, Ricardo more rigorously laid down the idea of the assumptions that were used to build his ideas of supply and demand. In 1838, Antoine Augustin Cournot developed a mathematical model of supply and demand in his Researches into the Mathematical Principles of Wealth, it included diagrams. It is important to note that the use of the phrase was still rare and only a few examples of more than 20 uses in a single work have been identified by the end of the second decade of the 19th century.[15]

During the late 19th century the marginalist school of thought emerged. The main innovators of this approach were Stanley Jevons, Carl Menger, and Léon Walras. The key idea was that the price was set by the subjective value of a good at the margin. This was a substantial change from Adam Smith's thoughts on determining the supply price.

In his 1870 essay "On the Graphical Representation of Supply and Demand", Fleeming Jenkin in the course of "introduc[ing] thediagrammatic method into the English economic literature" published the first drawing of supply and demand curves in English, [18] including comparative statics from a shift of supply or demand and application to the labor market. [19] The model was further developed and popularized by Alfred Marshall in the 1890 textbook Principles of Economics. [17]

### The Business Plot

Imagine the United States of America ruled by a fascist dictatorship. Not the kind your uncle is always complaining about, mind you, but a real one with an actual goose-stepping il Duce type giving orders to the president on all matters of policy.

That almost happened in 1933, when a group of American businessmen tried to install a retired Marine Corps general as a shadow dictator to offset the perceived threat of Franklin Delano Roosevelt.

Of course, by "almost happened," it's more accurate to say that the conspirators were caught before they even got close to throwing the switch on their plans.

All the same, the Business Plotters, as they came to be known, did manage to give the hilariously named McCormack-Dickstein Committee a light workout as it exposed a group of conspirators that included the heads of General Motors and Chase Manhattan Bank, a French fascist organization called the "Arrow Cross," and at least one future US Senator, Prescott Bush (yes, that Bush).

The plot developed into a semi-big deal, with financing channels and a new economic initiative all ready to go, but was undone by the plotters' choice for the American Benito Mussolini: the even-more hilariously named Smedley Butler. The idea was to assemble a force of disgruntled veterans (brown shirts optional, one imagines), march them to Washington, and force President Roosevelt to appoint Butler to some kind of cabinet position, from which he could pass the cabal's orders to the basically powerless president.

All that the plot's architects seemed to know about Butler when they picked him was that he was a solid-gold, heavily decorated war veteran. Unfortunately for them, Butler had a change of heart (and politics) during the Hoover Administration and actively campaigned for Roosevelt in 1932.

All's well that ends well. Butler went straight to the offices of the FBI with the Plotters' plans, where he filed a full report and agreed to act as their informant. J. Edgar Hoover might have had his disagreements with Roosevelt, but fascist coups have never been the kind of thing the Justice Department just lets slide on by.

The furor eventually led to hearings in the House of Representatives, zero arrests, and a nicely profitable set of professional connections for most of the plotters to carry on doing business with Italy and Germany until a few months after Pearl Harbor.

From < https://allthatsinteresting.com/true-conspiracies>

## **Operation Northwoods**

Trason against the United States, shall consist only in levying War against them, or in adhering to their Enemies, giving them Aid and Comfort.

Between 1959 and 1962, the Joint Chiefs of Staff developed a plan for provoking war between the United States and Cuba. The plan, Operation Northwoods, originated with the Eisenhower Administration's desire to short circuit Fidel Castro's successful revolution and rapidly developed into a wild scheme to blackmail or bribe Cuban officials into attacking ships of the US Navy or engaging in terrorist attacks against civilians in Florida.

Conceived by Chairman of the JCoS Lyman Lemnitzer, the plan called for the Navy to "sink a boatload of Cubans en route to Florida (real or simulated)." Also floating around was the proposal to reenact the 1898 sinking of the USS Maine, blame the Cuban rescue efforts for the attack, and launch military operations against Cuba.

In its final form, which it achieved in 1963, the plan was to stage a simulated night attack against an American ship by communist gunboats as a way of justifying a war. Fortunately, President Kennedy killed the proposal in the last year of his term. Less than a year later, communist gunboats staged a night attack against the USS Maddox in the Gulf of Tonkin, precipitating war in Vietnam, which was a pretty wild coincidence, amirite?

From < https://allthatsinteresting.com/true-conspiracies/4>

# U-2 program

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We flew over it and within thirty seconds, you knew that was the place ... it was right by a dry lake. Man alive, we looked at that lake, and we all looked at each other. It was another Edwards, so we wheeled around, landed on that lake, taxied up to one end of it. It was a perfect natural landing field ... as smooth as a billiard table without anything being done to it. The lake bed made an ideal strip for testing aircraft, and the Emigrant Valley's mountain ranges and the NTS perimeter protected the site from visitors; it was about 100 mi (160 km) north of Las Vegas. The CIA asked the AEC to acquire the land, designated "Area 51" on the map, and to add it to the Nevada Test Site.

Johnson named the area "Paradise Ranch" to encourage workers to move to "the new facility in the middle of nowhere", as the CIA later described it, and the name became shortened to "the Ranch". [2]:57 On 4 May 1955, a survey team arrived at Groom Lake and laid out a 5,000-foot (1,500 m) north—south runway on the southwest corner of the lakebed and designated a site for a base support facility. The Ranch initially consisted of little more than a few shelters, workshops, and trailer homes in which to house its small team. [22] A little over three months later, the base consisted of a single paved runway, three hangars, a control tower, and rudimentary accommodations for test personnel. The base's few amenities included a movie theater and volleyball court. There was also a mess hall, several wells, and fuel storage tanks. CIA, Air Force, and Lockheed personnel began arriving by July 1955. The Ranch received its first U-2 delivery on 24 July 1955 from Burbank on a C-124 Globemaster II cargo plane, accompanied by Lockheed technicians on a Douglas DC-3. [22] Regular Military Air Transport Service flights were set up between Area 51 and Lockheed's offices in Burbank, California. To preserve secrecy, personnel flew to Nevada on Monday mornings and returned to California on Friday evenings. [2]:72

From < https://en.wikipedia.org/wiki/Area 51>

# **OXCART** program

Wednesday, February 17, 2021 6:05 PM



Project OXCART was established in August 1959 for "antiradar studies, aerodynamic structural tests, and engineering designs" and all later work on the Lockheed A-12. [28] This included testing at Groom Lake, which had inadequate facilities consisting of buildings for only 150 people, a 5,000 ft (1,500 m) asphalt runway, and limited fuel, hangar, and shop space. [28] S Groom Lake had received the name "Area 51" [28] When A-12 test facility construction began in September 1960, including a new 8,500 ft (2,600 m) runway to replace the existing runway. [28]

Reynolds Electrical and Engineering Company (REECo) began construction of "Project 51" on 1 October 1960 with double-shift construction schedules. The contractor upgraded base facilities and built a new 10,000 ft (3,000 m) runway (14/32) diagonally across the southwest corner of the lakebed. They marked an <u>Archimedean spiral</u> on the dry lake approximately two miles across so that an A-12 pilot approaching the end of the overrun could abort instead of plunging into the sagebrush. Area 51 pilots called it "The Hook". For crosswind landings, they marked two unpaved airstrips (runways 9/27 and 03/21) on the dry lakebed.

By August 1961, construction of the essential facilities was complete; three surplus Navy hangars were erected on the base's north side while hangar 7 was new construction. The original U-2 hangars were converted to maintenance and machine shops. Facilities in the main cantonment area included workshops and buildings for storage and admini stration, a commissary, control tower, fire station, and housing. The Navy also contributed more than 130 surplus Babbitt duplex housing units for long-term occupancy facilities. Older buildings were repaired, and additional facilities were constructed as necessary. A reservoir pond surrounded by trees served as a recreational area one mile north of the base. Other recreational facilities included a gymnasium, a movie t heater, and a baseball diamond. A permanent aircraft fuel tank farm was constructed by early 1962 for the special 19-7 fuel required by the A-12. Seven tanks were constructed, with a total capacity of 1,320,000 gallons. A permanent aircraft fuel tank farm was constructed by the A-12 fuel from Groom Lake during one of the first test flights, piloted by Louis Schalk, 26 April 1962.

Security was enhanced for the arrival of OXCART and the small mine was closed in the Groom basin. In January 1962, the Federal Aviation Administration (FAA) expanded the restricted airspace in the vicinity of Groom Lake, and the lakebed became the center of a 600-square mile addition to restricted area R-4808N. The CIA facility received eight USAF F-101 Voodoos for training, two T-33 Shooting Star trainers for proficiency flying, a C-130 Hercules for cargo transport, a U-3A for administrative purposes, a helicopter for search and rescue, and a Cessna 180 for liaison use, and Lockheed provided an F-104 Starfighter for use as a chase plane.

The first A-12 test aircraft was covertly trucked from Burbank on 26 February 1962 and arrived at Groom Lake on 28 February. (20) so It made its first flight 26 April 1962 when the base had over 1,000 personnel. (20) so The closed airspace above Groom Lake was within the Nellis Air Force Range airspace, and pilots saw the A-12 20 to 30 times. (20) so 30 times. (20) so 30 times (20) so 40 the first Lockheed D-21 drone test flight on 22 December 1964. (20) had 1963, nine A-12s were at Area 51, assigned to the CIA-operated "1129th Special Activities Squadron". (20)

From < https://en.wikipedia.org/wiki/Area 51>

# D-21 Tagboard

Wednesday, February 17, 2021 6:06 I

Following the loss of <u>Gary Powers' U-2</u> over the Soviet Union, there were several discussions about using the A-12 OXCART as an unpiloted drone aircraft. Although Kelly Johnson had come to support the idea of drone reconnaissance, he opposed the development of an A-12 drone, contending that the aircraft was too large and complex for such a conversion. However, the Air Force agreed to fund the study of a high-speed, high-altitude drone aircraft in October 1962. The Air Force interest seems to have moved the CIA to take action, the project designated "Q-12". By October 1963, the drone's design had been finalized. At the same time, the Q-12 underwent a name change. To separate it from the other A-12-based projects, it was renamed the "D-21". (The "12" was reversed to "21"). "Tagboard" was the project's code name.

The first D-21 was completed in the spring of 1964 by Lockheed. After four more months of checkouts and static tests, the aircraft was shipped to Groom Lake and reassembled. It was to be carried by a two-seat derivative of the A-12, designated the "M-21". When the D-21/M-21 reached the launch point, the first step would be to blow off the D-21's inlet and exhaust covers. With the D-21/M-21 at the correct speed and altitude, the LCO would start the ramjet and the other systems of the D-21. "With the D-21's systems activated and running, and the launch aircraft at the correct point, the M-21 would begin a slight pushover, the LCO would push a final button, and the D-21 would come off the pulpar "LEB122".

Difficulties were addressed throughout 1964 and 1965 at Groom Lake with various technical issues. Captive flights showed unforeseen aerodynamic difficulties. By late January 1966, more than a year after the first captive flight, everything seemed ready. The first D-21 launch was made on 5 March 1966 with a successful flight, with the D-21 flying 120 miles with limited fuel. A second D-21 flight was successful in April 1966 with the forone flying 1,200 miles, reaching Mach 3.3 and 90,000 feet. An accident on 30 July 1966 with a fully fueled D-21, on a planned checkout flight suffered from an <u>unstart</u> of the drone after its separation, causing it to collide with the M-21 launch aircraft. The two crewmen ejected and landed in the ocean 150 miles offshore. One crew member was picked up by a helicopter, but the other, having survived the aircraft breakup and ejection, drowned when sea water entered his pressure suit. Kelly Johnson personally cancelled the entire program, having had serious doubts from the start of the feasibility. A number of D-21s had already been produced, and rather than scrapping the whole effort, Johnson again proposed to the Air Force that they be launched from a <u>B-52H</u> bomber.

By late summer of 1967, the modification work to both the D-21 (now designated D-21B) and the B-52Hs were complete. The test program could now resume. The test missions were flown out of Groom Lake, with the actual launch es over the Pacific. The first D-21B to be flown was Article 501, the prototype. The first attempt was made on 28 September 1967, and ended in complete failure. As the B-52 was flying toward the launch point, the D-21B fell off the pylon. The B-52H gave a sharp lurch as the drone fell free. The booster fired and was "quite a sight from the ground". The failure was traced to a stripped nut on the forward right attachment point on the pylon. Several more tests were made, none of which met with success. However, the fact is that the resumptions of D-21 tests took place against a changing reconnaissance background. The A-12 had finally been allowed to deploy, and the <u>SR-71</u> was soon to replace it. At the same time, new developments in reconnaissance satellite technology were nearing operation. Up to this point, the limited number of satellites outled soon cover targets anywhere in the world. The satellites' resolution would be comparable to that of aircraft, but without the slightest political risk. Time was running out for the Tagboard. Description of reconnaissance satellites and the satellites' resolution would be comparable to that of aircraft, but without the slightest political risk. Time was running out for the Tagboard. Description of reconnaissance satellites and 1970, to varying degrees of success. On 15 July 1971, Kelly Johnson received a wire canceling the D-21B regram. The remaining drones were transferred by a C-5A and placed in dead storage. The tooling used to build the D-21Bs was ordered destroyed. Like the A-12 Oxcart, the D-21B Tagboard drones remained a Black airplane, even in retirement. Their existence was not suspected until August 1976, when the first group was placed in storage at the Davis-Monthan AFB Military Storage and Disposition Center. A second group arrived in 197

Davis-Monthan is an open base, with public tours of the storage area at the time, so the odd-looking drones were soon spotted and photos began appearing in magazines. Speculation about the D-21Bs circulated within aviation circles for years, and it was not until 1982 that details of the Tagboard program were released. However, it was not until 1993 that the B-52/D-21B program was made public. That same year, the surviving D-21Bs were released to museums. [186:132-133]

From <a href="https://en.wikipedia.org/wiki/Area\_51">https://en.wikipedia.org/wiki/Area\_51</a>

# Foreign technology evaluation

Wednesday, February 17, 2021 6:07 I

During the Cold War, one of the missions carried out by the United States was the test and evaluation of captured Soviet fighter aircraft. Beginning in the late 1960s, and for several decades, Area 51 played host to an assortment of Soviet-built aircraft. Under the HAVE DOUGHNUT, HAVE DRILL and HAVE FERRY programs, the first MiGs flown in the United States were used to evaluate the aircraft in performance, technical, and operational capabilities, pitting the types against U.S. fighters:

This was not a new mission, as testing of foreign technology by the USAF began during World War II. After the war, testing of acquired foreign technology was performed by the Air Technical Intelligence Center (ATIC, which became very influential during the Korean War), under the direct command of the Air Materiel Control Department. In 1961 ATIC became the Foreign Technology Division (FTD), and was reassigned to Air Force Systems Command. ATIC personnel were sent anywhere where foreign aircraft could be found.

The focus of <u>Air Force Systems Command</u> limited the use of the fighter as a tool with which to train the <u>front line</u> tactical fighter pilots. Which is a catical fighter pilots. Which is a catical fighter pilots. Which is a catical fighter pilot schools. Tactical Air Command selected its pilots primarily from the ranks of the <u>Weapons School</u> graduates. Which is a catical Air Command selected its pilots primarily from the ranks of the <u>Weapons School</u> graduates. Which is a catical Air Command selected its pilots primarily from the ranks of the <u>Weapons School</u> graduates. Which is a catical Air Command selected its pilots primarily from the ranks of the <u>Weapons School</u> graduates. Which is a catical Air Command is a catical Air Command. His aircraft was transferred to Groom Lake in late 1967 for study. In 1968 the US Air Force and Navy jointly formed a project known as <u>HAVE DOUGHNUT</u> in which Air Force Systems Command, and the U.S. Navy's Air Test and Evaluation Squadron Four (VX-4) flew this acquired Soviet made aircraft in simulated air combat training. Because U.S. possession of the Soviet MiG-21 was, itself, secret, it was tested at Groom Lake. A joint Air Force-Navy team was assembled for a series of dogfight tests.



HAVE FERRY, the second of two MiG-17F "Fresco"s loaned to the United States by Israel in 1969

Comparisons between the F-4 and the MiG-21 indicated that, on the surface, they were evenly matched. The HAVE DOUGHNUT tests showed the skill of the man in the cockpit was what made the difference. When the Navy or Air Force pilots flew the MiG-21, the results were a draw; the F-4 would win some fights, the MiG-21 would win others. There were no clear advantages. The problem was not with the pilots by the the pilots though them. The pilots would not flye ither plane to its limits. One of the Navy pilots was Marland W. "Doc" Townsend, then commander of VF-121, the F-4 training squadron at NAS Miramar. He was an engineer and a Korean War veteran and had flown almost every navy aircraft. When he flew against the MiG-21, he would outmaneuver it every time. The Air Force pilots would not go vertical in the MiG-21. The HAVE DOUGHNUT project officer was Tom Cassidy, a pilot with VX-4, the Navy's Air Development Squadron at Point Mugu. He had been watching as Townsend "waxed" the Air Force MiG-21 pilots. Cassidy climbed into the MiG-21 and went up against Townsend's F-4. This time the result was far different. Cassidy was willing to fight in the vertical, flying the plane to the point where it was buffeting, just above the stall. Cassidy was able to get on the F-4's tail. After the flight, they realized the MiG-21 turned better than the F-4 at lower speeds. The key was for the F-4 to keep its speed up. An F-4 had defeated the MiG-21; the weakness of the Soviet plane had been found. Further test flights confirmed what was learned. It was also clear that the MiG-21 was a formidable enemy. United States pilots would have to fly much better than they had been to beat it. This would require a special school to teach advanced air combat techniques. (Lance Mig-21) was a formidable enemy. United States pilots would have to fly much better than they had been to beat it. This would require a special school to teach advanced air combat techniques. (Lance Mig-21) was a formidable enemy. United States pilots would have to fly much

On 12 August 1968, two Syrian air force lieutenants, Walid Adham and Radfan Rifai, took off in a pair of MiG-17Fs on a training mission. They lost their way and, believing they were over Lebanon, landed at the Betzet Landing Field in northern Israel. (One version has it that they were led astray by an Arabic-speaking Israeli). Prior to the end of 1968 these MiG-17s were transferred from Israeli stocks and added to the Area 51 test fleet. The aircraft were given USAF designations and fake serial numbers so that they could be identified in DOD standard flight logs. As in the earlier program, a small group of Air Force and Navy pilots conducted mock dogfights with the MiG-17s. Selected instructors from the Navy's Top Gun school at NAS Miramar. California, were chosen to fly against the MiGs for familiarization purposes. Very soon, the MiG-17's shortcomings became clear. It had an extremely simple, even crude, control system which lacked the power-boosted controls of American aircraft. The F-4's twin engines were so powerful it could accelerate out of range of the MiG-17's guns in thirty seconds. It was important for the F-4 to keep its distance from the MiG-17. As long as the F-4 was one and a half miles from the MiG-17, it was outside the reach of the Soviet fighter's guns, but the MiG was within reach of the F-4's missiles.

The data from the HAVE DOUGHNUT and HAVE DRILL tests were provided to the newly formed <u>Top Gun</u> school at <u>NAS Miramar</u>. By 1970, the HAVE DRILL program was expanded; a few selected fleet F-4 crews were given the chance to fight the MiGs. The most important result of Project HAVE DRILL is that no Navy pilot who flew in the project defeated the MiG-17 Fresco in the first engagement. The HAVE DRILL dogfights were by invitation only. The other pilots based at Nellis Air Force Base were not to know about the U.S.-operated MiGs. To prevent any sightings, the airspace above the Groom Lake range was closed. On aeronautical maps, the exercise area was marked in red ink. The forbidden zone became known as "Red Square".

During the remainder of the Vietnam War, the Navy kill ratio climbed to 8.33 to 1. In contrast, the Air Force rate improved only slightly to 2.83 to 1. The reason for this difference was Top Gun. The Navy had revitalized its air combat training, while the Air Force had stayed stagnant. Most of the Navy Mild kills were by Top Gun graduates<sup>123231</sup>
In May 1973, Project HAVE IDEA was formed which took over from the older HAVE DOUGHNUT, HAVE FERRY and HAVE DRILL projects and the project was transferred to the Tonopah Test Range Airport. At Tonopah testing of foreign technology aircraft continued and expanded throughout the 1970s and 1980s.

Area 51 also hosted another foreign materiel evaluation program called HAVE GLIB. This involved testing Soviet tracking and missile control radar systems. A complex of actual and replica Soviet-type threat systems began to grow around "Slater Lake", a mile northwest of the main base, along with an acquired Soviet "Barlock" search radar placed at Tonopah Air Force Station. They were arranged to simulate a Soviet-style air defense complex. The Air Force began funding improvements to Area 51 in 1979 under project SCORE EVENT. In 1979, the CIA transferred jurisdiction of the Area 51 site to the Air Force Flight Test Center at Edwards AFB, California. Mr. Sam Mitchell, the last CIA commander of Area 51, relinquished command to USAF Lt. Col. Larry D. McClain.

From < https://en.wikipedia.org/wiki/Area\_51>

### HAVE BLUE

Wednesday, February 17, 2021

The Lockheed Have Blue prototype stealth fighter (a smaller proof-of-concept model of the F-117 Nighthawk) first flew at Groom in December 1977. [24]

In 1978, the Air Force awarded a full-scale development contract for the F-117 to Lockheed Corporation's Advanced Development Projects. On 17 January 1981 the Lockheed test team at Area 51 accepted de livery of the first full-scale development (FSD) prototype 79–780, designated YF-117A. At 6:05 am on 18 June 1981 Lockheed Skunk Works test pilot Hal Farley lifted the nose of YF-117A 79–780 off the runway of Area 51.

Meanwhile, Tactical Air Command (TAC) decided to set up a group-level organization to guide the F-117A to an initial operating capability. That organization became the 4450th Tactical Group (Initially designated "A Unit"), which officially activated on 15 October 1979 at Nellis AFB, Nevada, although the group was physically located at Area 51. The 4450th TG also operated the A-7D Corsair II as a surrogate trainer for the F-117A, and these operations continued until 15 October 1982 under the guise of an avionics test mission.[35]

Flying squadrons of the 4450th TG were the 4450th Tactical Squadron (Initially designated "I Unit") activated on 11 June 1981, and 4451st Tactical Squadron (Initially designated "P Unit") on 15 January 1983. The 4450th TS, stationed at Area 51, was the first F-117A squadron, while the 4451st TS was stationed at Nellis AFB and was equipped with A-7D Corsair IIs painted in a dark motif, tail coded "LV". Lockheed test pilots put the YF-117 through its early paces. A-7Ds was used for pilot training before any F-117A's had been delivered by Lockheed to Area 51, later the A-7D's were used for F-117A chase testing and other weapon tests at the Nellis Range. On 15 October 1982, Major Alton C. Whitley Jr. became the first USAF 4450th TG pilot to fly the F-117A.

Although ideal for testing, Area 51 was not a suitable location for an operational group, so a new covert base had to be established for F-117 operations. 1811 Tonopah Test Range Airport was selected for operations of the first USAF F-117 unit, the 4450th Tactical Group (TG). Trom October 1979, the Tonopah Airport base was reconstructed and expanded. The 6,000-foot runway was lengthened to 10,000 feet. Taxiways, a concrete apron, a large maintenance hangar, and a propane storage tank were added.[38]

By early 1982, four more YF-117As were operating at the base. 25 After finding a large scorpion in their offices, the testing team (Designated "R Unit") adopted it as their mascot and dubbed themselves the "Baja Scorpions". 25 Testing of a series of ultra-secret prototypes continued at Area 51 until mid-1981, when testing transitioned to the initial production of F-117 stealth fighters. The F-117s were moved to and from Area 51 by C-5 during darkness to maintain security. The aircraft were defueled, disassembled, cradled, and then loaded aboard the C-5 at night, flown to Lockheed, and unloaded at night before reassembly and flight testing. Groom performed radar profiling, F-117 weapons testing, and training of the first group of frontline USAF F-117 pilots.[26]:161

While the "Baja Scorpions" were working on the F-117, there was also another group at work in secrecy, known as "the Whalers" working on Tacit Blue. A fly-by-wire technology demonstration aircraft with curved surfaces and composite material, to evade radar, it was a prototype, and never went into production. Nevertheless, this strange-looking aircraft was responsible for many of the stealth technology advances that were used on several other aircraft designs, and had a direct influence on the B-2; with first flight of Tacit Blue being performed on 5 February 1982, by Northrop Grumman test pilot, Richard G. Thomas.

Production FSD airframes from Lockheed were shipped to Area 51 for acceptance testing. As the Baja Scorpions tested the aircraft with functional check flights and L.O. verification, the operational airplanes were then transferred to the 4450th TG.B



On 17 May 1982, the move of the 4450th TG from Groom Lake to Tonopah was initiated, with the final components of the move completed in early 1983, Production FSD airframes from Lockheed were shipped to Area 51 for acceptance testing. As the Baja Scorpions tested the aircraft with functional check flights and L.O. verification, the operational airplanes were then transferred to the 4450th TG at Tonopah.

The R-Unit was inactivated on 30 May 1989. Upon inactivation, the unit was reformed as Detachment 1, 57th Fighter Weapons Wing (FWW). In 1990 the last F-117A (843) was delivered from Lockheed. After completion of acceptance flights at Area 51 of this last new F-117A aircraft, the flight test squadron continued flight test duties of refurbished aircraft after modifications by Lockheed. In February/March 1992 the test unit moved from Area 51 to the USAF Palmdale Plant 42 and was integrated with the Air Force Systems Command 6510th Test Squadron. Some testing, especially RCS verification and other classified activity was still conducted at Area 51 throughout the operational lifetime of the F-117. The recently inactivated (2008) 410th Flight Test Squadron traces its roots, if not its formal lineage to the 4450th TG R-unit.



F-22 during a Red Flag exercise with Groom Lake in the background (March 2013)
Since the F-117 became operational in 1983, operations at Groom Lake have continued. The base and its associated runway system were expanded, including expansion of housing and support facilities. government expanded the exclusionary area around the base to include nearby mountains that had hitherto afforded the only decent overlook of the base, prohibiting access to 3,972 acres (16.07 km²) of land formerly administered by the Bureau of Land Management. 40 0 22 October 2015 a federal judge signed an order giving land that belonged to a Nevada family since the 1870s to the United States Air Force for expanding Area 51. According to the judge, the land that overlooked the base was taken to address security and safety concerns connected with their training and testing.

From <https://en.wikipedia.org/wiki/Area\_51>

#### Aurora

Saturday, February 20, 2021 1:43 PM

Aurora was a rumored mid-1980s American reconnaissance aircraft. There is no substantial evidence that it was ever built or flown and it has been termed a myth. [1112]

The <u>U.S. government</u> has consistently denied such an aircraft was ever built. Aviation and space reference site *Aerospaceweb.org* concluded, "The evidence supporting the Aurora is circumstantial or pure conjecture, there is little reason to contradict the government's position."

Former Skunk Works director Ben Rich confirmed that "Aurora" was simply a myth in Skunk Works (1994), a book detailing his days as the director. Rich wrote that a colonel working in the Pentagon arbitrarily assigned the name "Aurora" to the funding for the B-2 bomber design competition and somehow the name was leaked to the media.

Others come to different conclusions. [4] In 2006, veteran black project watcher and aviation writer Bill Sweetman said, "Does Aurora exist? Years of pursuit have led me to believe that, yes, Aurora is most likely in active development, spurred on by recent advances that have allowed technology to catch up with the ambition that launched the program a generation ago."[5]

From <a href="https://en.wikipedia.org/wiki/Aurora">https://en.wikipedia.org/wiki/Aurora</a> (aircraft)>

By 1996, reports associated with the Aurora name dropped off in frequency, suggesting to people who believed that the aircraft existed that it had only ever been a prototype or that it had had a short service life. I1

In 2000, Aberdeen Press and Journal writer Nic Outterside wrote a piece on US stealth technology in Scotland. Citing confidential "sources", he alleged RAF/USAF Machrihanish in Kintyre, Argyll to be a base for Aurora aircraft. Machrihanish's almost 2-mile-long (3.2 km) long runway makes it suitable for high-altitude and experimental aircraft with the fenced-off coastal approach making it ideal for takeoffs and landings to be made well away from eyes or cameras of press and public. "Oceanic Air Traffic Control at Prestwick," Outterside says, "also tracked fast-moving radar blips. It was claimed by staff that a 'hypersonic jet was the only rational conclusion' for the readings."[18]

In 2006, aviation writer Bill Sweetman put together 20 years of examining budget "holes", unexplained sonic booms, as well as the Gibson sighting and concluded:

This evidence helps establish the program's initial existence. My investigations continue to turn up evidence that suggests current activity. For example, having spent years sifting through military budgets, tracking untraceable dollars and code names, I learned how to sort out where money was going. This year, when I looked at the Air Force operations budget in detail, I found a \$9-billion black hole that seems a perfect fit for a project like Aurora.[5]

In June 2017, Aviation Week reported that Rob Weiss, the General Manager of the Skunk Works, provided some confirmation of a research project and stated that hypersonic flight technology was now mature, and efforts were underway to fly an aircraft with it.[19]



A black project is a term used for a highly classified military or defense project publicly unacknowledged by government, military personnel, and contractors. Examples of <u>United States</u> military aircraft developed as black projects include the <u>F-117 Nighthawk</u> stealth thattack <u>aircraft</u> and the <u>B-2 Spirit</u> stealth bomber, both of which were highly classified and denied as existing until ready to be announced to the public. In the United States, the formal term for a black project is <u>Special access program (SAP)</u>. The money that funds these projects is referred to as the <u>black budget</u>.

From <https://en.wikipedia.org/wiki/Black\_proje

#### **Bob Lazar**

Wednesday, February 17, 2021 6:10 PM

Robert Scott Lazar ([la<sup>1</sup>zo:r/; born January 26, 1959) is an American conspiracy theorist who claims to have been hired in the late 1980s to reverse-engineer extraterrestrial technology at what he described as a secret site called "S-4". Lazar alleges that this subsidiary installation is located several kilometres south of the United States Air Force facility popularly known as Area 51.

Lazar claims he examined an alien craft that ran on an antimatter reactor powered by element 115, which at the time had not yet been synthesized. He also claims to have read US government briefing documents that described alien involvement in human affairs over the past 10,000 years. Lazar's claims resulted in bringing added public attention to Area 51 and fueling conspiracy theories surrounding its classified activities.

Lazar's story has since been analyzed and rejected by skeptics and some ufologists. Universities from which he claims to hold degrees show no record of him, and supposed former workplaces have disavowed him. In 1990, he was convicted for his involvement in a prostitution ring and again in 2006 for selling illegal chemicals.

From <a href="https://en.wikipedia.org/wiki/Bob\_Laza">https://en.wikipedia.org/wiki/Bob\_Laza</a>



#### Claims

Lazar has achieved notoriety as an Area 51 conspiracy theorist. [Support of the present of the p

Lazar has claimed that the propulsion of the studied vehicle ran on an <u>antimatter</u> reactor and was fueled by the chemical element with atomic number 115 (E115), which at the time was provisionally named <u>unumpentium</u> and had not yet been artificially created. It was first synthesized in 2003 and later named <u>moscovium</u>. Jul He further said that the propulsion system relied on a <u>stable isotope</u> of E115, which allegedly generates a gravity wave that allowed the vehicle to fly and to evade visual detection by <u>bending light</u> around it; <u>unit</u> to stable isotopes of moscovium have yet been synthesized; all have proven extremely radioactive, decaying in a few hundred milliseconds. <u>unit</u> Lazar also said the craft twas dismantled, and the reactor he studied was topped by a sphere or semi-sphere which emitted a <u>force field</u> capable of repulsing human flesh. <u>unit</u> He explained that the craft was split into two main levels. <u>unit</u> The reactor was positioned at the center of the upper level, with an antenna extending to the top, <u>unit</u> surrounded by three "gravity amplifiers". These connected to "gravity emitters" on the lower level, which can rotate 180 degrees to output a "gravity beam or <u>anti-gravity</u> wave" and that the craft would then travel "belly first" into this distortion field. <u>unit</u> Lazar additionally claimed that during his joining the program, he read briefing documents describing the historical involvement of Earth for the past 10,000 years with extraerrestrial beings described as grey aliens from a planet orbiting the historical involvement of Earth for the past 10,000 years with extraerrestrial beings described as grey aliens from a planet orbiting the historical involvement of Earth for the past 10,000 years with extraerrestrial beings described as grey aliens from a planet orbiting the historical involvement of Earth for the past 10,000 years with extraerrestrial beings described as grey aliens from a planet orbiting the historical involvement of Earth for the past 10,000 years with extraerrestrial

Lazar claims to have earned a master's degree in physics from the Massachusetts Institute of Technology (MIT), and a master's degree in electronic technology from the California Institute of Technology (Caltech); however, there are no records of Lazar attending either MIT or Caltech. His supposed employment at a Nellis Air Force Base subsidiary has also been discredited by skeptics, as well as by the United States Air Force.

His alleged employment as a physicist at Los Alamos Meson Physics Facility, within the Los Alamos National Laboratory, is mentioned in multiple New Mexico newspaper articles from the summer of 1982, which focus on his interest in jet-powered cars. Laboratory phone directory, but the laboratory penaled having any records on him. Laboratory and Importance of 1982 Los Alamos National Laboratory phone directory, but the laboratory repeatedly denied having any records on him. Laboratory phone directory, but the laboratory phone directory, but the laboratory repeatedly denied having any records on him. Laboratory phone directory, but the laboratory phone directory, Stanton T. Friedman, and Timothy D. Callahan have found this to be implausible. According to Prothero, "He was employed not by the government but rather as a technician working for a private company that contracted work at Los Alamos."

Lazar's story has drawn significant media attention, controversy, supporters, and detractors. Lazar admits that he has no evidence to support his core claim of alien technology. ETHERSHET IN 12 Lazar's workplace was raided by the FBI and local police which Lazar theorizes was to recover "element 115", a substance he says he took from a government lab. Records obtained through a freedom of information request show the raid was part of a murder investigation. 48

From <https://en.wikipedia.org/wiki/Bob\_Lazar:

### Majestic 12

Wednesday, February 17, 2021 6:14 PM

Majestic 12, also known as MJ-12 for short, is a purported organization that appears in UFO conspiracy theories. The organization is claimed to be the code name of an alleged secret committee of scientists, military leaders, and government officials, formed in 1947 by an executive order by U.S. President Harry S. Truman to facilitate recovery and investigation of alien spacecraft. The concept originated in a series of supposedly leaked secret government documents first circulated by ufologists in 1984. Upon examination, the Federal Bureau of investigation (FBI) declared the documents to be "completely bogus", and many ufologists consider them to be an elaborate hoax, was Majestic 12 remains popular among some UFO conspiracy theorists and the concept has appeared in popular culture including television, film and literature.

PLF

From < https://en.wikipedia.org/wiki/Majestic\_12>

#### History[edit]

The concept of "Majestic 12" emerged during a period in the 1980s when ufologists believed there had been a cover-up of the Roswell UFO incident and speculated some secretive upper tier of the United States government was responsible. Their suppositions appeared to be confirmed in 1984 when ufologist Jaime Shandera received an envelope containing film which, when developed, showed images of eight pages of documents that appeared to be briefing papers describing "Operation Majestic 12". He documents purported to reveal a secret committee of 12, supposedly authorized by United States President Harry S. Truman in 1952, and explain how the crash of an alien spacecraft at Roswell in July of 1947 had been concealed, how the recovered alien technology could be exploited, and how the United States should engage with extraterrestrial life in the future.

Shandera and his ufologist colleagues Stanton T. Friedman and Bill Moore say they later received a series of anonymous messages that led them to find what has been called the "Cutler/Twining memo" in 1985 while searching declassified files in the National Archives. Purporting to be written by President Eisenhower's assistant Robert Cutler to General Nathan F. Twining and containing a reference to Majestic 12, the memo is widely held to be a forgery, likely planted as part of a hoax. Historian Robert Goldberg wrote that the ufologists came to believe the story despite the documents being "obviously planted to bolster the legitimacy of the briefing papers". Historian Robert Goldberg wrote that the ufologists came to believe the story despite the documents being "obviously planted to bolster the legitimacy of the briefing papers".

Claiming to be connected to the United States Air Force Office of Special Investigations, a man named Richard Doty told filmmaker Linda Moulton Howe that the MJ-12 story was true, and showed Howe unspecified documents purporting to prove the existence of small, grey humanoid aliens originating from the Zeta Reticuli star system. Doty reportedly promised to supply Howe with film footage of UFOs and an interview with an alien being, although no footage ever materialized. Soon, distrust and suspicion led to disagreements within the ufology community over the authenticity of the MJ-12 documents, and Moore was accused of taking part in an elaborate hoax, while other ufologists and debunkers such as Philip J. Klass were accused of being "disinformation agents".

From < https://en.wikipedia.org/wiki/Majestic 12>

# Storm Area 51

Wednesday, February 17, 2021 6:19 PM

In June 2019, 21-year-old college student Matty Roberts <u>decided to create a Facebook event</u>. He called it "Storm Area 51, They Can't Stop All of Us" and said it would take place September 20. Roberts didn't think anyone would give the event, which he created as a joke, more than a passing chuckle.

But within a few days, more than 2 million Facebook users chimed in to "confirm" their attendance. The Air Force issued a stern warning discouraging people from trying to gain access to a military base.

Despite the warnings, <u>around 1,500 people</u> packed their campers and headed into the Nevada desert with your standard, alien-centric festival kit: Roswell-inspired onesies, inflatable aliens and the like. Forty bold individuals did make it as far as the outskirts of the base, but they mostly just chanted for a while and then dispersed when confronted by law enforcement. One arrest was made for public urination.

From <https://www.cbsnews.com/news/what-is-area-51-and-why-is-it-so-secretive/>

# Eyes on the sky

Wednesday, February 17, 2021 6:20 PM

That's about all we know about Area 51. As for UFOs, there's a bit more: The <u>government's investigation</u> of unidentified phenomena did not end with Operation Blue Book.

In August 2020, the <u>Pentagon announced</u> the formation of a new task force to better understand the nature and origin of such reports. (In 2017, the <u>Pentagon admitted that it had been running a secret multi-million dollar program</u> to investigate UFOs for years. It is unclear if the new task force is an expansion of or replacement for the old program.) Government officials said that the new task force would protect national security interests.

Earlier in 2020, the Pentagon officially released three previously leaked videos taken by Navy pilots that show interactions between military planes and large, fast-flying objects. Officials provided no explanation for the objects seen in the videos.

Most Americans don't expect the government to declassify the details of supposed alien sightings any time soon. In fact, a poll from June 2020 showed that more than half of Americans think if the U.S. government had evidence of UFOs, they would hide it from the public. Only 22% said they think the information would be made public.

The <u>Senate Intelligence Committee</u> is holding out hope for more military transparency. Members want the information from the Pentagon's task force to be available to the public. But when it comes to intel on hostile invaders, most officials would rat her focus on the threats here on Earth than on tales from outer space.

From <a href="https://www.cbsnews.com/news/what-is-area-51-and-why-is-it-so-secretive/">https://www.cbsnews.com/news/what-is-area-51-and-why-is-it-so-secretive/</a>

#### NII-88/TsNIIMash

Saturday, February 20, 2021

TSNIIMash (Russian: ЦНИИмаш) is a Russian rocket and spacecraft scientific center, dealing with all phases of development from conceptual design to flight test. It specializes in the development of long range ballistic missiles, air defense missiles, and propulsion units for the defense industry. It was established in 1946. The name TsNIIMash is an initialism for Central Research Institute of Machine Building (Russian: Центральный научно-исследовательский институт машиностроения).

Originally called NII-88 (Scientific-Research Institute No.88), the entity was established on May 13, 1946, located at what was then called Kaliningrad, Moscow Oblast (now Korolyou), northeast of Moscow. Based on his Plant No. 88, Dmitriy Ustinou had successfully lobbied to control post-war research and development of rockets in late 1945

Impressed by his work in Germany on the analysis of the V-2, Ustinov appointed Sergey Korolev chief designer of section 3 on long-range missiles, later called OKB-1. In 1956, OKB-1 was removed from NII-88 to become an independent bureau.

Helmut Gröttrup headed a group of German scientists working for the Soviets at Branch 1 of NII-88 located on Gorodomlya Island. Their job was to help reconstruct a Russian Version of the V-2, called the R-1, after which they were returned to Germany. The facility was also spied on by American U-2 spy planes in the late 1950s. It was renamed Central Research Institute of Machine Building in 1967.

TsNIIMash performs the following activities:

- Fundamental scientific and system research to prepare the basic strategy for spacecraft and rocket technology development. 

  Theoretical calculations and experimental research on aeronautical and gas dynamic loads in the atmosphere of the Earth and o ther planets, and in outer space.
- Analysis of the thermal resistance of thermal shields in high-temperature gas flows. 

  Theoretical calculations and experimental qualification of designs under the influence of static, dynamic, shock, and thermal loads.
- Ground control of spacecraft, as well as research and development of new methods and algorithms for guidance, ballistics and navigation.

  Development of methods and instruments for mission control during orbital insertion, attitude re-orientation, stabilization, orbital maneuvering, re-entry and landing.
- Reliability aspects of spacecraft and rocket engineering.
- Standardization and harmonization of spacecraft and rocket engineering products, as well as certification and quality control. Introduction of space technology in the national economy.

From < https://en.wikipedia.org/wiki/TsNIIMash>

