



Introduction

Inspection Chronology

Selected Images

National Advisory Committee for Aeronautics

NACA Inspections



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Introduction NACA Inspections



Congress created the National Advisory Committee for Aeronautics (NACA) in 1915 to coordinate the Nation's aeronautical research. The Committee established the Langley Memorial Aeronautical Laboratory in 1920 to conduct research of its own. In the 1920s the NACA began holding annual industry conferences to connect the Nation's military, government, university, and industry aeronautical community with the work being performed at Langley. NACA researchers gave presentations on their efforts as the visitors toured the test facilities. The conferences were suspended at the onset of World War II. At that time the NACA also added two new research sites: the Ames Aeronautical Laboratory and the Lewis Flight Propulsion Laboratory. The conferences, now referred to as "Inspections," resumed in 1946 as multiday events at all three laboratories. The Inspections were very important to the NACA, and great efforts were expended to ensure they were carried out flawlessly. Every detail of the visit was thoroughly planned—from the research presentations and the tour schedules to the cigarette breaks and lunch. The NACA Inspections always received rave reviews.

The Inspection planning materials—including invitation lists, schedules, correspondence, transcripts of the talks, and photographs of the exhibits and charts—were then collected and bound in a single volume. One volume was permanently stored in the Lewis library. This Web site is designed to share these materials from the majority of the Inspections. The Glenn Research Center created the site in 2015 to mark the NACA's Centennial. These inspection volumes are a wonderful snapshot in time on the state of the NACA and of aeronautical research, and the personalities that played the biggest role. We also hope that they serve to start discussion and additional research on the impact of the NACA on aeronautics.

Learn more about the inspections by clicking on the topic titles below:

➤ [Overview of the NACA](#)

Congress established the National Advisory Committee for Aeronautics (NACA) on March 3, 1915, to coordinate and promote U.S. aeronautical research during World War I. The Nation that produced the first human flight had fallen behind the Europeans in aviation less than a decade later. At the time U.S. research and development lacked direction and thus was uneven and slow. Initially the NACA consisted of 12 uncompensated representatives from the military, universities, and industry as well as Secretary John Victory. The group met periodically to identify future trends in aeronautics and steer the Nation's research in those directions.

In 1917, the committee established the Langley Memorial Aeronautical Laboratory in Hampton, Virginia, to conduct research of its own. The NACA named George Lewis as Director of Research in 1924 to supervise the research and resulting reports. The Langley staff and its collection of test facilities, particularly wind tunnels, steadily increased in the 1920s and 1930s. The NACA's contributions to aircraft design and operational problems during this period spearheaded the ascendancy of the U.S. airline industry.

In the late 1930s, NACA leaders discovered that the Europeans, the Germans in particular, were developing military aircraft that could fly higher and faster than the U.S. models. The NACA decided to create two new research laboratories to increase their efforts. Construction of the Ames Aeronautical Laboratory in Sunnyvale, California, and the Aircraft Engine Research Laboratory in Cleveland, Ohio, commenced in 1940 and 1941, respectively. Ames specialized in the aerodynamics of high-speed flight, and the Cleveland laboratory was devoted to improving aircraft engines.

With the onset of World War II, the NACA laboratories expended all of their efforts on improving existing military aircraft and their engines. After the war, the NACA returned to more of a research-based operation and focused on new technologies such as the jet engine, supersonics, and missiles. The research led to the breaking of the sound barrier, dramatic increases in jet aircraft, and the development of high-energy fuels. In 1958 President Eisenhower based his new space agency primarily on the existing NACA laboratories. On October 1, 1958, the NACA became part of the National Aeronautics and Space Administration (NASA).

➤ **NACA Conferences (1926-1939)**

➤ **NACA Inspections (1946-58)**

➤ **Preparations for the Inspections**

➤ **NASA Inspections (1959-1973)**

The NACA management began hosting annual meetings in the 1920s, referred to as "industry conferences," to serve as a conduit between their research laboratory at Langley Field and the Nation's aviation leaders. The conferences provided the NACA an opportunity to relate its research efforts and demonstrate its unique test facilities. It also afforded the guests the opportunity to provide valuable feedback regarding the issues that needed addressing and what facilities would be most effective to address them.

Several dozen guests attended the first conference in May 1926. By 1936 attendance had grown to over 600 and required the addition of a second day. The NACA Headquarters invited hundreds of people from the military, industry, universities, and government. The events attracted the Nation's aeronautical and political elites.

The conferences consisted of a series of four stops at the test facilities where researchers would give short briefings on their work. NACA Chairman Joseph Ames demanded the conferences be perfectly coordinated and the presentations be well-honed. George Lewis worked with the Langley staff on the content and staging of the talks and the facility tours. Ames personally reviewed the presentations during rehearsals and discussed the content, visuals, and oration directly with the speakers. John Victory would assume this role following Ames's resignation in 1936. Victory handled the logistics and socializing for the events.

It became customary for the NACA officials and attendees to meet in Washington, D.C., the day before and take an overnight cruise across Chesapeake Bay to Langley. After a lavish breakfast in Hampton, Virginia, the visitors caravanned to the laboratory for a morning tour of the facilities. This was followed by lunch and the requisite group photograph. In the afternoon, Langley representatives continued briefing the crowd on the NACA's research and solicited ideas for future research. The group reboarded the steamship at the end of the day for the return journey. In those final hours the leading lights of the Nation's aviation field held relaxed conversations over drinks and dinner regarding the NACA and current aeronautical concerns.

The NACA suspended this annual spring ritual during World War II as the organization turned its attention to improving military aircraft. The final conference in 1939 was referred to as an "Inspection"—a military term—for the first time. It was at this point that NACA created its Ames and Lewis research laboratories. In lieu of the overarching industry conferences, smaller groups of military and manufacturing representatives made frequent visits to the three NACA laboratories for classified technical conferences on specific topics.

➤ **NACA Inspections (1946-58)**

➤ **Preparations for the Inspections**

➤ **NASA Inspections (1959-1973)**

➤ NACA Inspections (1946-58)

After World War II, members of the aeronautical industry began voicing concerns that the NACA was not responsive enough to their needs. They urged the NACA to share its research findings in a more timely and broad fashion. The NACA responded with several new measures, perhaps the most palpable was the reinstatement of the NACA Inspection conferences. During the war years, the NACA tripled in size and took on a much broader spectrum of research. The aviation industry also expanded and was transitioning into new technologies such as jet aircraft and missiles.

The growth of both the NACA and the aeronautical field required new approaches to the Inspections. The NACA would hold the events at all three of its laboratories and expanded them to several days to accommodate the growing number of interested visitors. The traditional exchange of information with the guests would be supplanted by even more polished presentations that would demonstrate the NACA's capabilities, facilities, and effectiveness. Summaries of the talks with selected photographs were printed in 8- by 4-in. pamphlets and distributed to the guests.

On May 9, 1946, the NACA opened its first Inspection in 7 years at Langley. Two months later, on July 16, 1946, the Ames laboratory held its very first Inspection. From 1947 to 1953 Langley and Ames held Inspections biennially. The Cleveland lab, renamed the Lewis Flight Propulsion Laboratory, held its initial Inspection in October 1947 and would conduct them annually for several years.

By 1949 the NACA was concerned that the content of the Inspections was overly technical. The scope of postwar NACA research was much broader than in earlier times. The visitors could not be expected to be versed in all topics. The group issued new guidelines that stressed the streamlining of information and encouraged the use of simple charts, models, and equipment. In March 1953 the NACA announced that its three laboratories would rotate the duties of hosting the Inspections. These new Triennial Inspections would highlight the work of the host site, but include a stop from each of the other two laboratories. These were held through 1957.

➤ Preparations for the Inspections

➤ NASA Inspections (1959-1973)

➤ NACA Inspections (1946-58)

➤ Preparations for the Inspections

The presentations, physical logistics, and scheduling for the Inspections required a tremendous amount of planning and coordination. The technical talks were the most important component of the Inspections. Management decided which topics and facilities to highlight, and the division chiefs selected individuals (and alternates) to develop and deliver the presentations. Even though many of the visitors possessed technical backgrounds, great efforts were made to convey complex subject matter in simple, easy-to-understand language. Speakers often incorporated models, charts, photographs, and films into their presentations. There were several rounds of practice runs in the weeks beforehand, including a final full dress rehearsal that was critiqued by Headquarters management.

The physical preparations began weeks in advance. There was a general round of basic cleanup and repairs. The staff landscaped the grounds and painted the buildings. Carpenters constructed stages and platforms, audio engineers installed public address systems and projectors, and mechanics fabricated exhibits and models. The publication branch created signs, slides, and pamphlets. The laboratory borrowed hundreds of chairs and disseminated them among the stops. The cafeteria scrambled to cater to hundreds of guests, and the secretarial staff trained as hostesses and servers for the luncheon and parties.

The synchronization of the tours was perhaps the most difficult aspect of hosting the Inspections. Literally every minute of the day was scripted. At Lewis, the visitors arrived at the laboratory around 8:30 a.m. and registered in the lobby of the Administration Building. In the auditorium at 9:30 a.m., Jerome Hunsaker or John Victory greeted the guests and provided an overview of the NACA's history. NACA Director of Research Hugh Dryden then described the group's research methodology. The Lewis contingent, led by Director Ray Sharp and Associate Director Abe Silverstein, briefed the group on the tour stops and the laboratory's overall research efforts. Executive Engineer Carlton Kemper then highlighted the lab's primary test facilities. The opening session was concluded with a group photograph of the guests.

At 10 a.m. the hundreds of visitors were then broken up into color-coded groups of about 40 and shuttled to different facilities to begin the tour. At Lewis there were customarily eight tour stops—each with 30-minute sessions featuring several speakers. Management pressured the guides and support staff to maintain a tight schedule that included well-coordinated breaks for coffee, cigarettes, and lunch. The day concluded around 4 p.m. with a reception at the picnic grounds or hangar. The guests were then bused back downtown for dinner at the hotel.

Traditionally, Lewis held a private Inspection for the staff on the Friday afternoon following the event. Afterwards, a party was thrown at the picnic grounds to celebrate the event's success. Management also invited employees to bring their families in on that Sunday for an open house. These open houses regularly drew 3000 or 4000 people on a single afternoon. The enthusiastic letters of appreciation from the guests began rolling in almost immediately afterwards. Meanwhile the planners began assessing the event and listened to suggestions regarding displays, talks, and planning.

➤ NASA Inspections (1959-1973)

➤ [NACA Inspections \(1946-58\)](#)

➤ [Preparations for the Inspections](#)

➤ [NASA Inspections \(1959-1973\)](#)

President Eisenhower created NASA in 1958 with the NACA laboratories serving as its core. In January 1959 NASA announced that the new Agency would continue the Triennial Inspections at the three former NACA laboratories. The events were not extended to the newer NASA centers. The Inspections, however, slowly faded away as NASA evolved and pursued new space-related issues. Langley took the most advantage of the new enterprise, holding events in 1959, 1964, and 1968. Ames held no Inspections during the NASA era. Lewis conducted Inspections in 1966 and 1973. The 1973 event was different in nature than any of the previous Inspections. NASA made a concerted effort to revive the Inspections at its three field centers, starting with Lewis. The nation was captivated with the Apollo Program when the previous event was held five years before in 1968. The end of the Apollo program and NASA's declining budget threatened the former NACA centers. During the 1973 event, Lewis emphasized the ties between aerospace research and everyday life on Earth. The Inspection was successful and attracted record numbers of guests. It did not, however, produce the political support that NASA had hoped for. It was the final Inspection.

Inspection Chronology 1946 - 1973

NACA Biennial Inspections: 1946-1953



1946

Ames: July 16 ➤ [\(1946_Ames.html\)](#)



1947

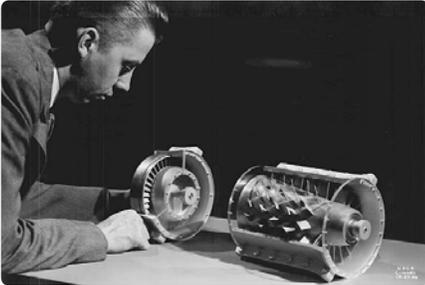
Lewis: October 8 - 10 ➤ [\(1947_Lewis.html\)](#)





1947

Lewis: October 8 - 10 > (1947_Lewis.html)



1948

Lewis: September 28 - 30 > (1948_Lewis.html)

Ames: July 12 - 13 > (1948_Ames.html)



1949

Lewis: September 20 - 22 > (1949_Lewis.html)

Langley: May 18 - 24 > (1949_Langley.html)



1950

Ames: July 10 - 12 > (1950_Ames.html)



1951

Lewis: October 9 - 11 > (1951_Lewis.html)

Langley: May 18 - 25 > (1951_Langley.html)



1952

Ames: July 14 - 15 ➤ (1952_Ames.html)



1953

Langley: May 5 - 13 ➤ (1953_Langley.html)

NACA Triennial Inspections: 1954-1958



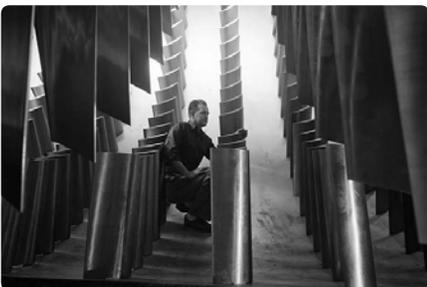
1954

Lewis: June 2 - 4 ➤
(1954_Lewis.html)



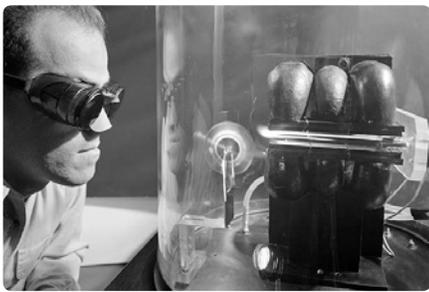
1955

Ames: June 27 - 28 ➤ (1955_Ames.html)



1956

Lewis 10x10: May 22 ➤ (1956_Lewis.html)



1957

Lewis: October 4 - 10 > (1957_Lewis.html)



1958

Ames: July 14 - 16 > (1958_Ames.html)

NASA Inspections: 1959-1973



1964

Langley: May 18-19 > (1964_Langley.html)



1966

Lewis: October 4 - 7 > (1966_Lewis.html)



1973

Lewis: September 26 - 30 > (1973_Lewis.html)

Selected Images (click to enlarge)



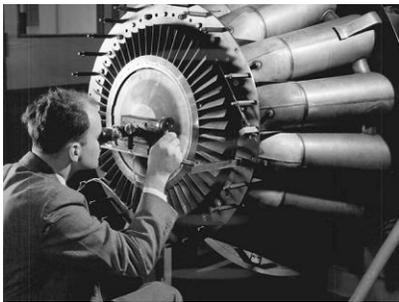
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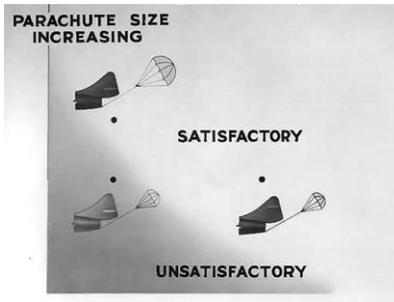
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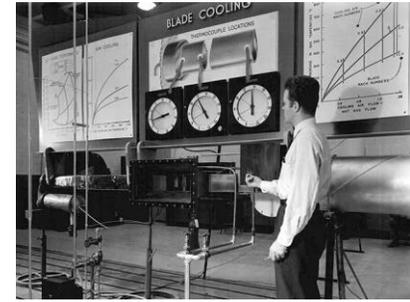
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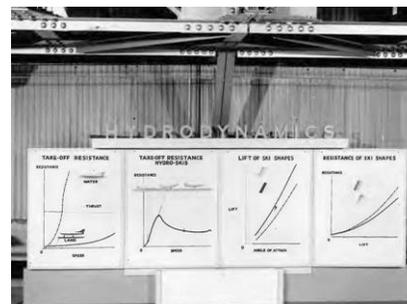
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LAL-70525



C1951-28546



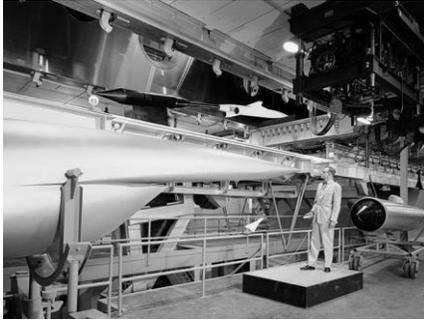
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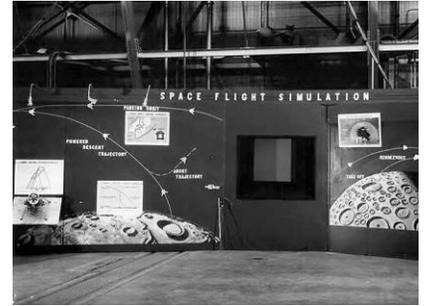
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C1957-46153



A-24000-14-13



LAL-4882



A-15322



C1966-3909



C1973-3426



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NACA Inspections

Ames Aeronautical Laboratory

1946



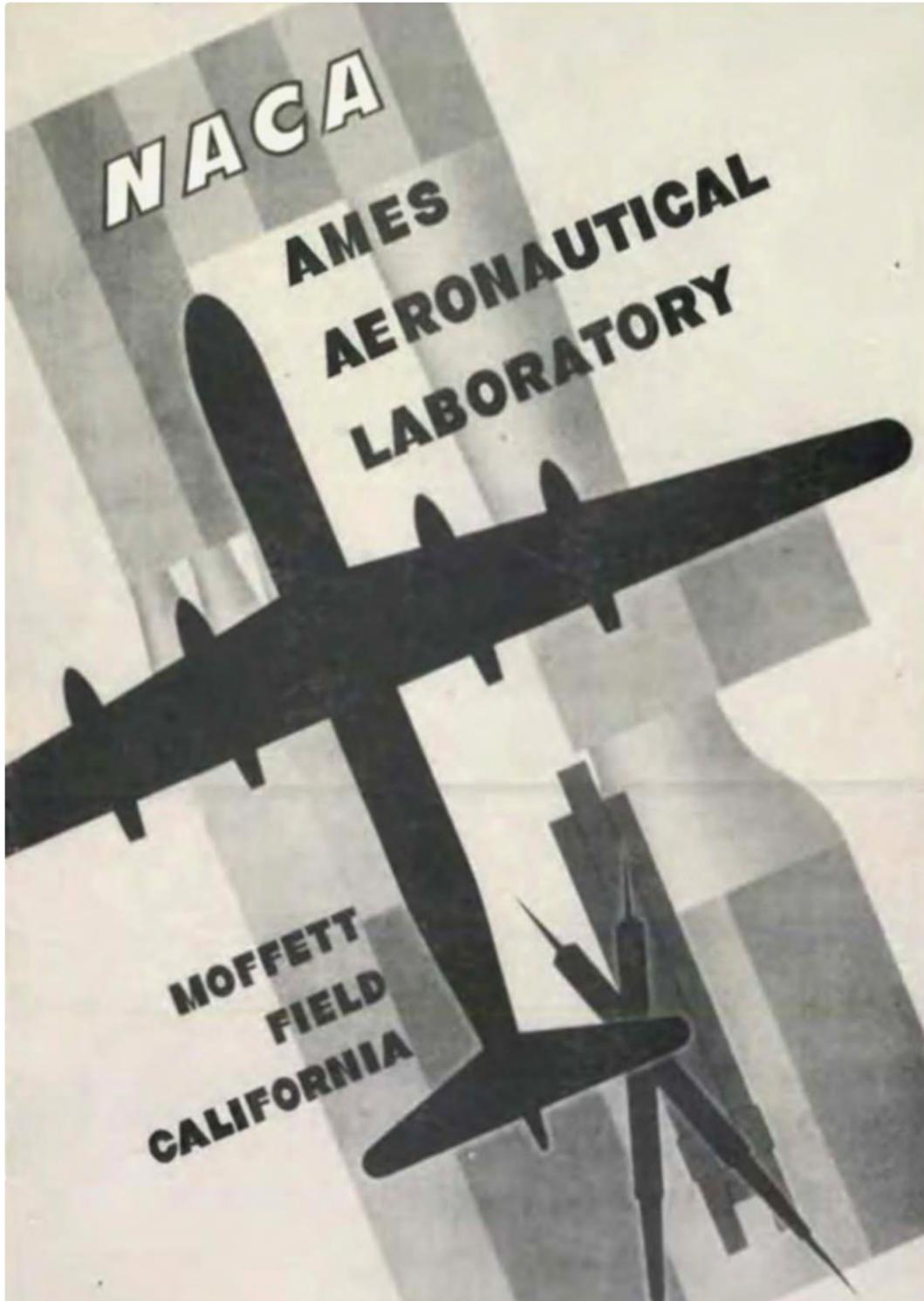
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1946

Ames Aeronautical Laboratory

Overview



Ames Aeronautical Laboratory hosted its first Inspection on July 16, 1946.

Two years earlier, on June 8, 1944, Ames had hosted a dedication ceremony that served as an Inspection, though on a much smaller scale. In the rush to start building wind tunnels while the Nation fought World War II, Ames leadership had eschewed any form of groundbreaking. There had been no ceremony to formally dedicate the Laboratory in the name of Joseph Sweetman Ames, long-standing chairman of the NACA, who had died on June 23, 1943. This 1944 dedication ceremony was to formally name the Laboratory for Ames and to give many aviation luminaries their first view of the new Laboratory. Visitors came from industry, military, universities and the NACA-92 people in total, including most of the NACA Main Committee.

The 1946 annual Inspection at Ames was a grander event, coming a few months after the first post-war Inspection at Langley. It was organized with the precision that became customary of NACA Inspections. As was case for all Ames Inspections over the coming decade, general preparations were led by Jack Parsons, Ames associate director, and responsibility for their execution fell to Marie St. John, secretary to Laboratory Director Smith J. DeFrance. More than 400 people attended. DeFrance had decided the presentations should focus, somewhat narrowly, on the performance and testing capabilities of the new wind tunnels and research facilities at Ames. This was the first time many attendees had seen them. Ames used the occasion to dedicate its new 12-foot low-turbulence pressurized wind tunnel, and distributed a special booklet on its specifications. William F. Durand, Stanford professor and former member of the NACA, led that dedication. A notable feature was the display of visiting aircraft, many of which had transported guests there, and all of which had been touched in some way by NACA research. After the Inspection at Ames, the NACA Main Committee travelled to Los Angeles to visit the factories of California-based aerospace firms.

1946

Ames Aeronautical Laboratory

Documents Linked files are in PDF format

Materials for Visitors

 **1946 Inspection Brochure** (documents/1946/00a_1946_Inspection_Brochure.pdf)

 **12-Foot Low Pressure Wind Tunnel Brochure** (documents/1946/12-Foot_Low_Pressure_Tunnel_Brochure.pdf)

 **Agenda and Schedule** (documents/1946/01_Agenda_and_Schedule.pdf)

 **Participant Photos** (documents/1946/01_Participant_Photos_1946.pdf)

Research Presentations

 **Introductory Talks** (documents/1946/02_Introduction_Talks.pdf)

 **16-Foot High Speed Wind Tunnel** (documents/1946/03a_16-Foot_Wind_Tunnel.pdf)

 **7- By 10-Foot Wind Tunnel** (documents/1946/03b_7_by_10_Wind_Tunnel.pdf)

 **12-Foot Pressure Wind Tunnel** (documents/1946/03c_12-Foot_Wind_Tunnel.pdf)

 **Supersonic Wind Tunnel** (documents/1946/03d_Supersonic_Wind_Tunnel.pdf)

 **Flight Research** (documents/1946/03e_Flight_Research.pdf)

 **Thermal Ice Prevention** (documents/1946/03f_Icing_Prevention.pdf)

 **Transonic Flutter** (documents/1946/03g_Transonic_Flutter.pdf)

 **40- By 80-Foot Wind Tunnel Tour** (documents/1946/03h_40_by_80_Wind_Tunnel.pdf)

Media Materials

 **Newspaper Articles** (documents/1946/04_Newspaper_Articles.pdf)

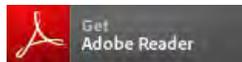
Guest Lists

 **List of Attendees** (documents/1946/05_List_of_Attendees.pdf)

Logistics

 **Post-Event Materials** (documents/1946/02_Post-Event_Materials_1946.pdf)

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1946 Ames Aeronautical Laboratory

Gallery Selected images (click to enlarge)



A-10147



A-10229



A-10161



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A-10153



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NACA Inspections
Lewis Flight Propulsion Laboratory
1947

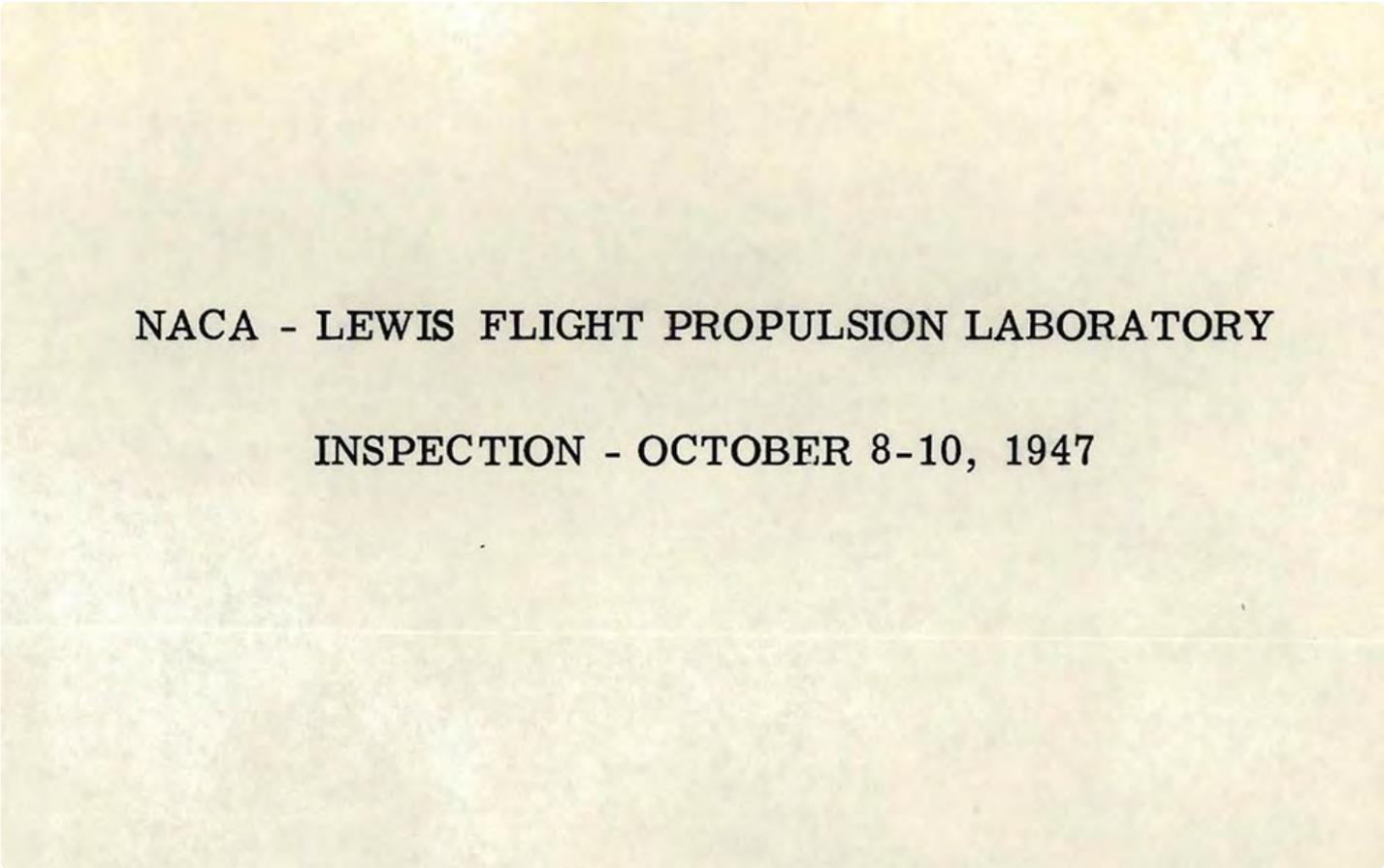


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1947

Lewis Flight Propulsion Laboratory

Overview



NACA - LEWIS FLIGHT PROPULSION LABORATORY

INSPECTION - OCTOBER 8-10, 1947

The Flight Propulsion Research Laboratory hosted its first Inspection on October 8 to 10, 1947. The NACA created the Cleveland laboratory during World War II to study and improve aircraft engines. Initially, the lab concentrated on the piston engines, which powered contemporary military aircraft, but as the war progressed it began investigating turbojet engines. The laboratory reorganized after the war to concentrate nearly all of its efforts on the jet engine and high-speed flight. Technology advanced rapidly after the war, and the U.S. Army conducted the first supersonic flight days after the 1947 Inspection.

The 1947 Inspection highlighted different aspects of the laboratory's engine work, including compressor, turbine, fuels, high-altitude combustion, and materials research. The Inspection also featured the laboratory's Altitude Wind Tunnel—the nation's only facility for operating full-scale jet engines in simulated altitude conditions. The lab demonstrated its flight research capabilities with an Administration Building flyby of a P-61 Black Widow aircraft with an operating ramjet engine underneath its wing. The Inspection also included an early view of the lab's rocket engine work, complete with firings of small rocket engines in the new Rocket Lab test cells.

Over 1000 aviation experts attended the event. The aircraft manufacturers attended the first day, the military the second day, and local industry and political leaders the third. Jesse Hall managed all preparations. The lab also began the tradition of holding an open house for employees and their families the Sunday following the event. The 1947 Inspection is also notable for the presence of the NACA's new Director of Aeronautical Research, Hugh Dryden. Dryden had recently replaced the ailing George Lewis.

1947

Lewis Flight Propulsion Laboratory

Documents Linked files are in PDF format

Materials for Visitors

 **1947 Invitation and Agenda** (documents/1947/01_Invitation_and_Agenda_1947.pdf)

Research Presentations

 **Introduction by Jerome Hunsaker** (documents/1947/02a_Introduction_by_Jerome_Hunsaker_1947.pdf)

 **Introduction by Hugh Dryden** (documents/1947/02b_Introduction_by_Hugh_Dryden_1947.pdf)

 **Introduction by Carlton Kemper** (documents/1947/02c_Introduction_by_Carlton_Kemper_1947.pdf)

 **Compressor Research** (documents/1947/03a_Compressor_Research_1947.pdf)

 **Turbine Research** (documents/1947/03b_Turbine_Research_1947.pdf)

 **Altitude Test Chambers** (documents/1947/03c_Altitude_Test_Chambers_1947.pdf)

 **Ramjet Flight Research** (documents/1947/03d_Ramjet_Flight_Research_1947.pdf)

 **Fuels and Combustion Research** (documents/1947/03e_Fuels_and_Combustion_Research_1947.pdf)

 **Tunnel Facilities and Propeller Research** (documents/1947/03f_Tunnel_Facilities_and_Propeller_Research_1947.pdf)

 **Materials and Stresses Research** (documents/1947/03g_Materials_and_Stresses_Research_1947.pdf)

 **Rocket Research** (documents/1947/03h_Rocket_Research_1947.pdf)

Media Materials

 **Newspaper Articles** (documents/1947/04_Newspaper_Articles_1947.pdf)

 **Press Releases** (documents/1947/04b_Press_Releases_1947.pdf)

Guest Lists

 **List of Attendees** (documents/1947/05a_List_of_Attendees_1947.pdf)

 **List of Invitations** (documents/1947/05b_List_of_Invitations_1947.pdf)

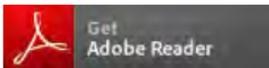
Logistics

 **Planning Materials** (documents/1947/06a_Planning_Materials_1947.pdf)

 **Preparation of Technical Talks** (documents/1947/06b_Preparation_of_Technical_Talks_1947.pdf)

 **Tour Planning** (documents/1947/06c_Tour_Planning_1947.pdf)

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1947

Lewis Flight Propulsion Laboratory

Gallery

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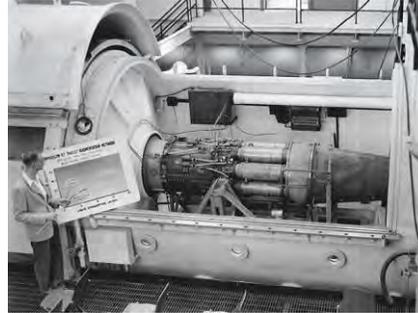
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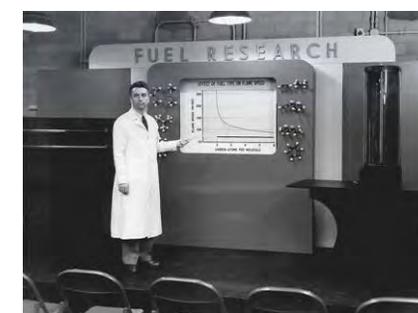
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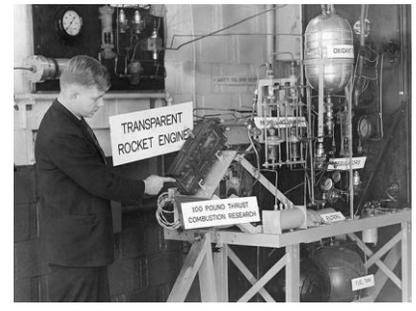
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C-1947-19772



C-1947-19769



C-1947-19767



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NACA Inspections
Lewis Flight Propulsion Laboratory
1948



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1948

Lewis Flight Propulsion Laboratory

Overview



The NACA renamed the Cleveland laboratory as the Lewis Flight Propulsion Laboratory during the September 28 to 30, 1948, Inspection to honor of the NACA's former Director of Aeronautical Research, George W. Lewis, who passed away in July. NACA research contributed to the repeated breaking of the sound barrier during the past year, and the advances in second- and third-generation jet engines.

The 1948 Inspection, Lewis's second, included eight 30-minute stops that showcased the laboratory's turbojet work, particularly the compressor and turbine research and the thrust augmentation devices such as the afterburner and variable-area nozzle. The tour stops also featured high-energy rocket fuels, jet engine icing research, and turboprop testing. The lab unveiled the new Four Burner Area, which included two altitude test cells for engines; the new Jet Propulsion Fuels Building with its tower descending into a valley; and the 8-by 6-Foot Supersonic Wind Tunnel, which was under construction.

Lewis presented the technical talks for the staff on Friday, October 1, and held open house—without the presentations—on Sunday, October 3, for families and friends. Heavy weather on the second day of the Inspection prevented many frustrated guests from landing at Hopkins Airport.

Documents

Linked files are in PDF format

Materials for Visitors

-  **1948 Inspection Brochure** (documents/1948/00_1948_Inspection_Brochure.pdf)
-  **George Lewis Commemoration Program** (documents/1948/00b_George_Lewis_Commemoration_Program_1948.pdf)
-  **Research and Facilities of the NACA** (documents/1948/00c_Research_and_Facilities_of_the_NACA_1948.pdf)
-  **Agenda and Schedule** (documents/1948/01_Agenda_and_Schedule_1948.pdf)

Research Presentations

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-  **Compressor and Turbine Research** (documents/1948/03a_Compressor_and_Turbine_Research_1948.pdf)
-  **Fuels and Combustion Research** (documents/1948/03b_Fuels_and_Combustion_Research_1948.pdf)
-  **Materials and Stresses Research** (documents/1948/03c_Materials_and_Stresses_Research_1948.pdf)
-  **Full-Scale Engine Research** (documents/1948/03d_Full-Scale_Engine_Research_1948.pdf)
-  **Supersonic Research** (documents/1948/03e_Supersonic_Research_1948.pdf)

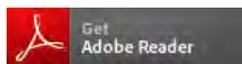
Media Materials

-  **Press Releases and Photographs** (documents/1948/04a_Press_Releases_and_Photos_1948.pdf)
-  **Newspaper Articles** (documents/1948/04b_Newspaper_Articles_1948.pdf)

Logistics

-  **Planning Materials** (documents/1948/06_Planning_Materials_1948.pdf)

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1948

Lewis Flight Propulsion Laboratory

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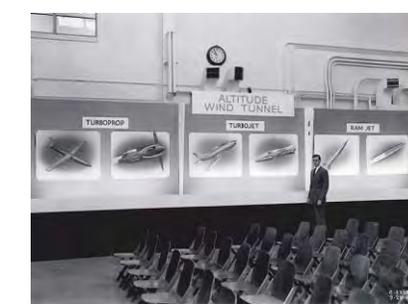
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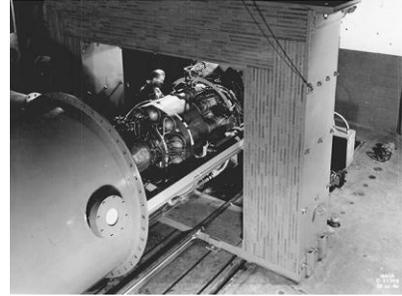
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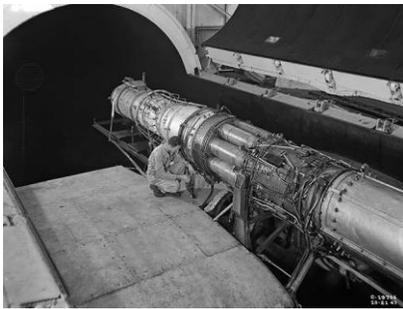
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C-1946-16047



C-1948-17359



C-1947-19794



C-1948-22336



C-1948-20985



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1948

Ames Aeronautical Laboratory

Overview



The second biennial Inspection at the Ames Aeronautical Laboratory was expanded to two days, on July 13 and 14, 1948. The program was identical both days, split to accommodate the 886 guests from aircraft manufacturers, airlines, universities, professional societies, Congress, local municipalities, the press, NACA headquarters and the other Laboratories, and the military services. As with all the Ames Inspections, since there were no hotels nearby, blocks of rooms were reserved for the Inspection guests at the St. Francis Hotel in San Francisco and at the St. Claire Hotel in San Jose. Busses transported attendees the twenty miles to the Laboratory. Before they boarded their busses back to their hotels, the guests were invited to a happy hour at the Moffett Field Officer's Club.

The event started with a moment of silence for George Lewis, Director of Aeronautical Research for the NACA for 30 years, who died the day before. The new NACA director of research, Hugh Dryden, reminded the attendees that the Inspection was meant to be a very general look at the aerodynamic work of the NACA, and that the NACA would accelerate the use of specialized conferences on focused topics. Special guest of honor, Jimmy Doolittle, was sworn in then as a new member of the NACA Main Committee. Chuck Yeager, who recently broke the sound barrier in the Bell X-1, attended to punctuate the role of the NACA in supersonic flight.

Jack Parson again organized the logistics of the events, and engineer Walter Vincenti honed the intellectual structure of the presentations. He presented a matrix of standard aircraft problems (performance, stability and control, and other problems related to engines and structures) mapped to speed regimes—subsonic, transonic and supersonic. Again, the emphasis was on the research facilities that Ames was still rapidly building, especially to tackle the problems of supersonic flight. Guests toured the new wind tunnels—the 16 foot, the 12 foot, the 40 by 80 foot, the 7 by 10 foot, the 6 by 6 supersonic, the 1 by 3 foot supersonic, the low-density wind tunnel, and the flight research hangar—and saw a special presentation on research on air induction. Ames highlighted its new work on heat transfer at high altitude, as well as its burgeoning agenda on the performance efficiencies of swept wings. Lunch cost \$1.75, was served in the new flight research hangar, and the hangar floor was ringed with displays of new instruments and research techniques.

1948

Ames Aeronautical Laboratory

Documents Linked files are in PDF format

Materials for Visitors

-  **1948 NACA Ames Inspection Brochure** (documents/1948/Ames/00_1948_NACA_Ames_Inspection_Brochure.pdf)
-  **Agenda and Schedule** (documents/1948/Ames/01a_Agenda_and_Schedule.pdf)
-  **Luncheon Menu** (documents/1948/Ames/01c_Luncheon_Menu.pdf)
-  **Photos of Participants** (documents/1948/Ames/01b_Attendees_Photos.pdf)

Research Presentations

-  **Introduction** (documents/1948/Ames/02a_Introduction.pdf)
-  **July 13, 1948 Opening Session** (documents/1948/Ames/02b_July_13_1948_Open_Session.pdf)
-  **July 14, 1948 Opening Session** (documents/1948/Ames/02b_July_14_1948_Open_Session.pdf)
-  **6-By 6-Foot Supersonic Wind Tunnel** (documents/1948/Ames/02d_6_by_6_Foot_Superonic_Tunnel.pdf)
-  **1-By 3-Foot Supersonic Wind Tunnel** (documents/1948/Ames/02e_1x3_Supersonic_Tunnel.pdf)
-  **12-Foot Pressure Wind Tunnel** (documents/1948/Ames/02f_12_Foot_Pressure_Tunnel.pdf)
-  **Flight Research** (documents/1948/Ames/02g_Flight_Research.pdf)
-  **7-By 10-Foot Wind Tunnel** (documents/1948/Ames/02h_7_By_10_Foot_Tunnel.pdf)
-  **Air Induction Exhibit** (documents/1948/Ames/02i_Air_Induction.pdf)

 **Low-Density Wind Tunnel** (documents/1948/Ames/02kLow-Density_Wind_Tunnel.pdf)

 **40-By 80-Foot Wind Tunnel** (documents/1948/Ames/02l_40x80_Wind_Tunnel.pdf)

 **Luncheon Exhibits** (documents/1948/Ames/02m_Luncheon_Exhibits.pdf)

Media Materials

 **Press Release and Photographs** (documents/1948/Ames/03a_Press_Releases_and_Photos.pdf)

Guest Lists

 **List of Attendees** (documents/1948/Ames/04a_List_of_Attendees.pdf)

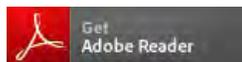
 **List of Visiting Aircraft** (documents/1948/Ames/04b_List_of_Visiting_Aircraft.pdf)

Logistics

 **Planning Materials** (documents/1948/Ames/05a_Planning_Materials.pdf)

 **Tour Planning** (documents/1948/Ames/05c_Tour_Planning.pdf)

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1948

Ames Aeronautical Laboratory

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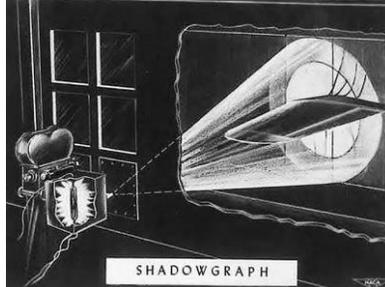
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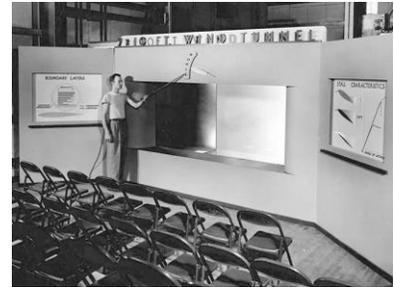
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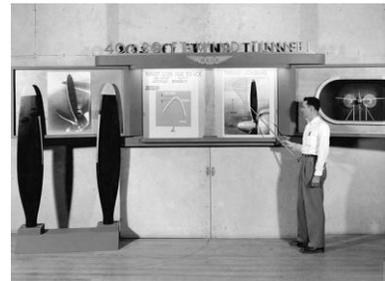
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4 x 4 FT SUPERSONIC TUNNEL

WING SECTION **NACA Inspections** SPAN LOAD DISTRIBUTION

Langley Aeronautical Laboratory

1949

The NACA logo is a stylized white outline of a wing with a scalloped trailing edge. The word "NACA" is written in a bold, white, sans-serif font across the center of the wing.

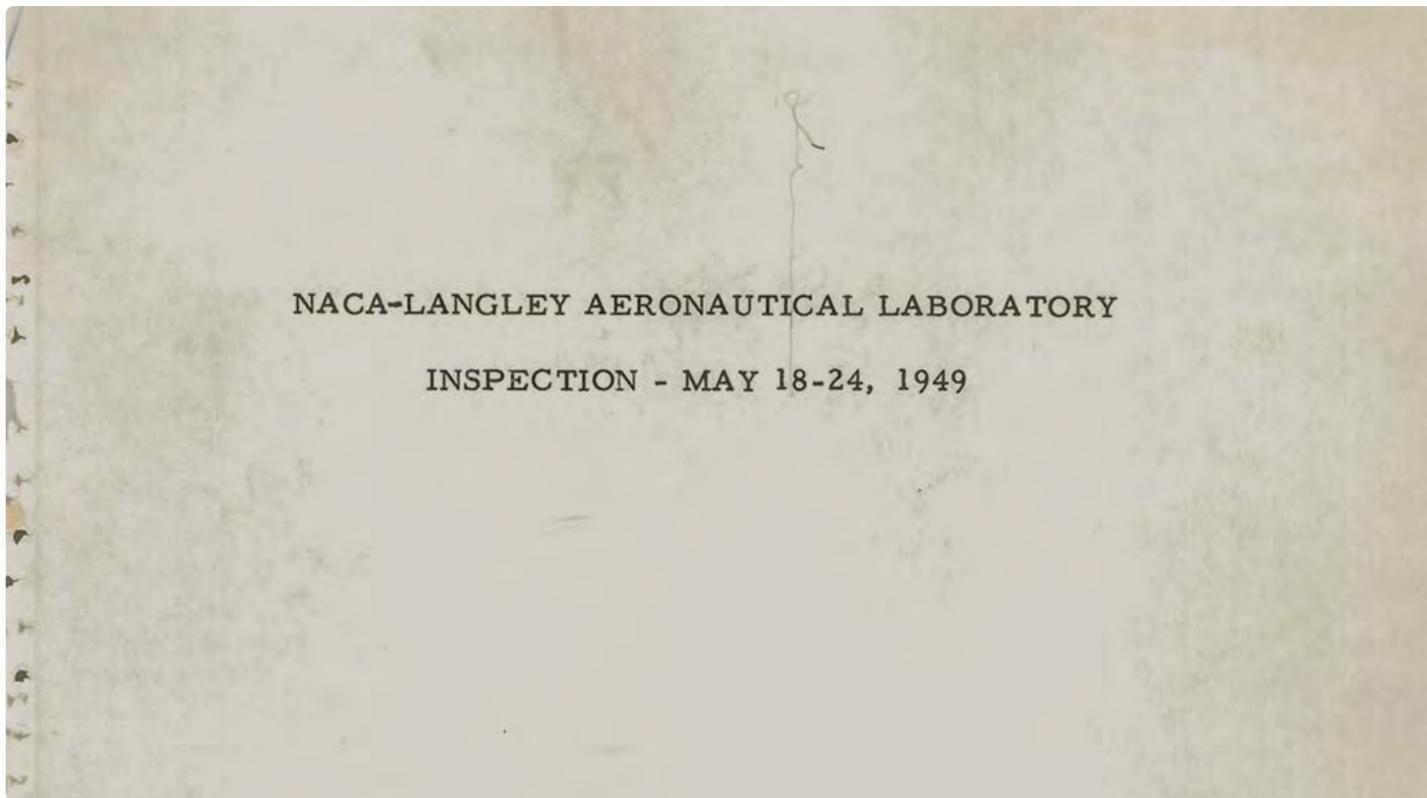
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1949

Langley Aeronautical Laboratory

Overview



An overview description for this NACA Inspection is not available.

1949

Langley Aeronautical Laboratory

Documents Linked files are in PDF format

Materials for Visitors

 **Agenda** (documents/1949/Langley/01a_Agenda_1949.pdf)

Research Presentations

 **Introduction by John Stack** (documents/1949/Langley/02a_Introduction_by_John_Stack_1949.pdf)

 **Introduction by H.A. Soul** (documents/1949/Langley/02b_Introduction_By_HA_Soul_1949.pdf)

 **Aircraft Loads Calibration** (documents/1949/Langley/02c_Aircraft_Loads_Calibration.pdf)

 **Flight Research Program** (documents/1949/Langley/02g_Flight_Research_Program.pdf)

 **Flutter Survey** (documents/1949/Langley/02h_Flutter_Survey.pdf)

 **Muffler Talk** (documents/1949/Langley/02i_Muffler_Talk.pdf)

 **Helicopter and Dynamics Research** (documents/1949/Langley/02j_Helicopter_and_Dynamics_Research.pdf)

 **Spin Tunnel** (documents/1949/Langley/02k_Spin_Tunnel.pdf)

 **Structures Research** (documents/1949/Langley/02l_Structures_Research.pdf)

 **Supersonic Research** (documents/1949/Langley/02m_Supersonic_Research.pdf)

 **Air Inlet Research** (documents/1949/Langley/02n_Air_Inlet_Research.pdf)

 **19-Foot Pressure Tunnel** (documents/1949/Langley/02o_19-Foot_Pressure_Tunnel.pdf)

 **4-By 4-Foot Supersonic Tunnel** (documents/1949/Langley/02p_4-By_4-Foot_Supersonic_Tunnel.pdf)

 **Free-Flight Tunnel** (documents/1949/Langley/02q_Free-Flight_Tunnel.pdf)

 **7-by 10-Foot Tunnel** (documents/1949/Langley/02r_7-By_10-Foot_Tunnel.pdf)

Media Materials

 **Newspaper Articles** (documents/1949/Langley/03_Newspaper_Articles.pdf)

Logistics

 **New NACA Inspection Guidelines** (documents/1949/Langley/05a_New_Inspection_Guidelines_1949.pdf)

 **Planning Materials** (documents/1949/Langley/05b_Planning_Materials.pdf)

 **Langley Comments re Lewis Inspection**
(documents/1949/Langley/05c_Langley_Comments_on_Lewis_Inspection_1949.pdf)

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1949

Langley Aeronautical Laboratory

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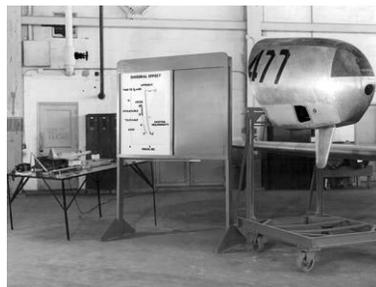
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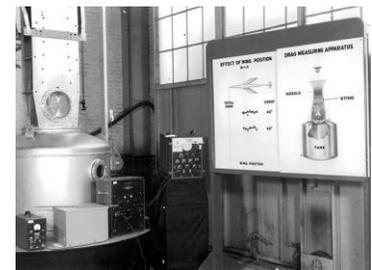
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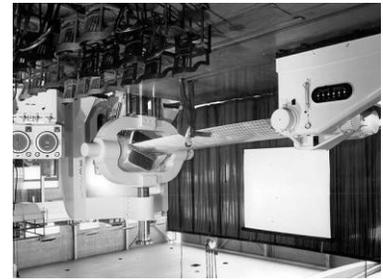
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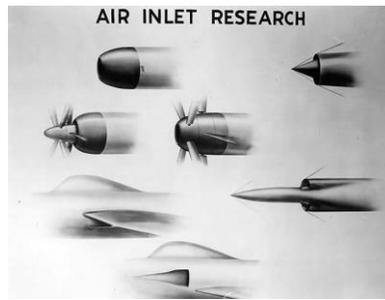
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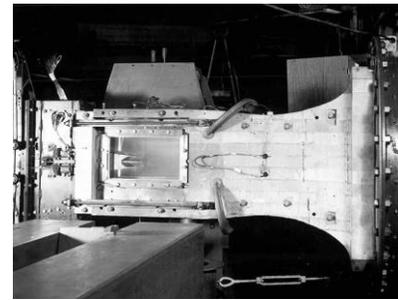
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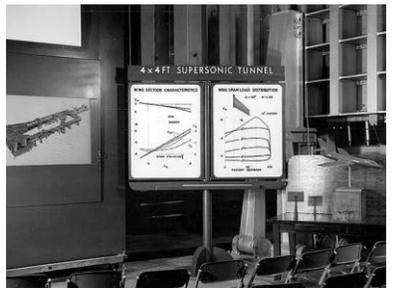
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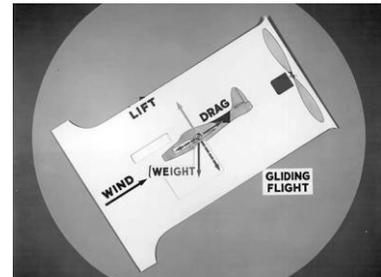
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LAL-61143



LAL-61145



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NACA Inspections
Lewis Flight Propulsion Laboratory
1949

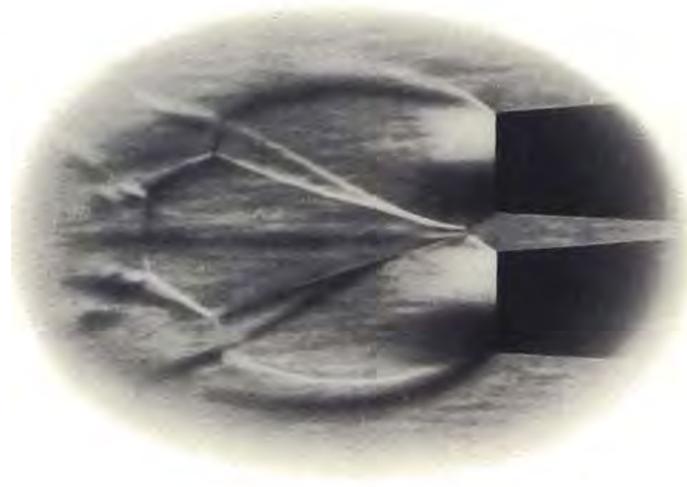


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1949

Lewis Flight Propulsion Laboratory

Overview



Lewis Flight Propulsion Laboratory

NATIONAL ADVISORY COMMITTEE FOR AERONAUTICS

1949 INSPECTION

Lewis Flight Propulsion Laboratory's third Inspection, on September 20 to 22, 1949, featured the nation's largest supersonic wind tunnel, the brand new 8-by 6-Foot Supersonic Wind Tunnel. Guides described the tunnel's operation and instrumentation to the guests in detail. The 1949 Inspection was the NACA's first attempt to present the material in a streamlined manner that reduced the amount of technical language and increased the use of visual aids.

During this period, Lewis was concentrating its efforts on the ever-increasing demand for additional engine power, particularly for the military. Just weeks before the Inspection, Lewis appointed Abe Silverstein as Director of Research. Silverstein's opening remarks stressed the interconnectedness of the laboratory's various research groups in pursuing the laboratory's mission of "understanding the basic nature of the propulsion process." The tour stops covered issues such as supersonic missile research, afterburners, altitude ignition, high-temperature materials, compressor and turbine work, and rocket fuels.

More than 1200 guests attended the 1949 Inspection—industry one day, military the next, and local businesses the third. Robert Sessions supervised the planning of the event, which included the enlistment of 125 apprentices to construct six protective mounds around the Rocket Lab. Again, the staff could view talks on Friday, and families could tour buildings on Sunday.

Documents

Linked files are in PDF format

Materials for Visitors

 **1949 Inspection Brochure** (documents/1949/00_1949_Inspection_Brochure.pdf)

 **Agenda and Schedule** (documents/1949/01_Agenda_and_Schedule_1949.pdf)

Research Presentations

 **Introduction by Hugh Dryden** (documents/1949/02a_Introduction_by_Hugh_Dryden_1949.pdf)

 **Introduction by Abe Silverstein** (documents/1949/02b_Introduction_by_Abe_Silverstein_1949.pdf)

 **Fuels Research** (documents/1949/03a_Fuels_Research_1949.pdf)

 **Rocket Research** (documents/1949/03b_Rocket_Research_1949.pdf)

 **Supersonic Research** (documents/1949/03c_Supersonic_Research_1949.pdf)

 **Compressor Research** (documents/1949/03d_Compressor_Research_1949.pdf)

 **Turbine Research** (documents/1949/03e_Turbine_Research_1949.pdf)

 **Heat Transfer and Fuels Research** (documents/1949/03f_Heat_Transfer_and_Fuels_Research_1949.pdf)

 **Materials and Stresses Research** (documents/1949/03g_Materials_and_Stresses_Research_1949.pdf)

 **Full-Scale Engine Research** (documents/1949/03h_Full-Scale_Engine_Research_1949.pdf)

Media Materials

 **Press Releases and Photographs** (documents/1949/04a_Press_Releases_and_Photos_1949.pdf)

 **Newspaper Articles** (documents/1949/04b_Newspaper_Articles_1949.pdf)

 **Pegasus Magazine Article** (documents/1949/04c_Pegasus_Magazine_Article_1949.pdf)

Guest Lists

 **List of Attendees** (documents/1949/05a_List_of_Attendees_1949.pdf)

 **List of Invitations** (documents/1949/05b_List_of_Invitations_1949.pdf)

 **Thank You Letters** (documents/1949/05c_Thank_You_Letters_1949.pdf)

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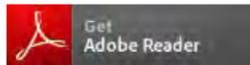
 **Planning Materials** (documents/1949/06a_Planning_Materials_1949.pdf)

 **Preparation of Technical Talks** (documents/1949/06b_Preparations_for_Technical_Talks_1949.pdf)

 **Tour Planning** (documents/1949/06c_Tour_Planning_1949.pdf)

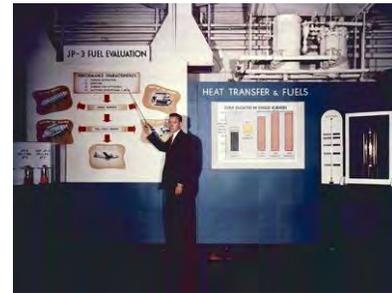
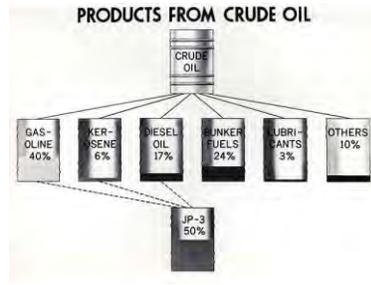
 **Post-Event Materials** (documents/1949/06d_Post_Event_Materials_1949.pdf)

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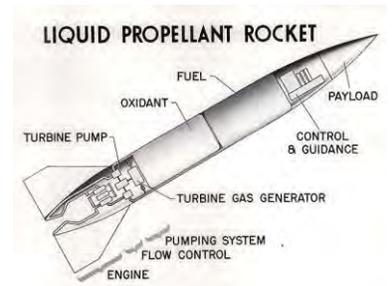
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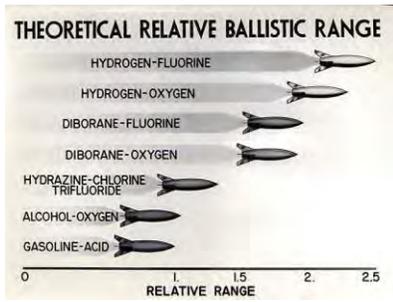


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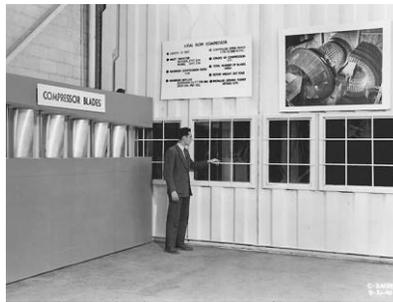
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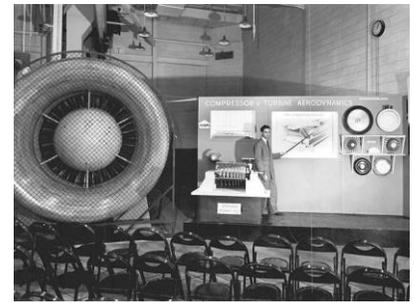
C-1949-23522



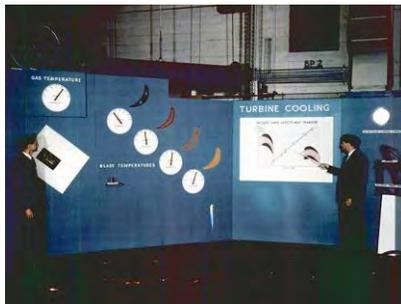
C-1949-24159



C-1949-24158



C-1949-24155



C-1949-24154



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NACA Inspections
Ames Aeronautical Laboratory
1950



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1950

Ames Aeronautical Laboratory

Overview



The 1950 biennial Inspection of the Ames Aeronautical Laboratory was held on July 10 to 12. Identical programs were planned for each of the 3 days. On the 12th, most of the guests were students in the military academies and, on July 13, Ames employees were invited tour the facilities and see the presentations. A public open house planned for July 16th was cancelled because of the "international situation." Two weeks before, on June 27, the United Nations launched a police action in response to the invasion of South Korea by troops from the North. Last-minute cancellations reduced total registrations at the Inspection to 666 guests. NACA chairman Jerome Hunsaker opened the Inspection by noting: "even though we are a civilian agency of the Government, we are much concerned with national security."

Russell Robinson organized the flow of the presentations: "Our product is not aircraft, engines, or missiles, not even experimental or research aircraft, engines or missiles. NACA uses these but only as a means to an end...the research job is not finished until the results are analyzed, a satisfactory explanation obtained regarding the controlling factors, conclusions drawn that will assist designers in general, and the whole accurately reported." Technical papers useful to any and all aircraft designers, as summarized in the Inspection presentations, were the product of the NACA.

Although the speeches were still presented in 10 of Ames' most prominent facilities, some of which operated during the talks, the speeches focused on research topics rather than the facilities themselves. Topics focussed on the problems of supersonic flight: high-speed research on high-speed wings, low-speed research on high-speed wings, airfoil and body interactions, propellers, air inlets, dynamic stability, aeroelasticity and loads, buffeting, and research at high supersonic speeds and at higher supersonic speeds (meaning missiles at hypersonic speeds). The star at this Inspection was Ames' new supersonic free-flight tunnel, designed by Harvey Allen's branch to reach low hypersonic speeds, and Ames researchers formally addressed how they expected to someday open up flight in the hypersonic regime.

1950

Ames Aeronautical Laboratory

Documents Linked files are in PDF format

Materials for Visitors



1950 Ames Inspection Brochure

(documents/1950/00_1950_Ames_Inspection_Brochure.pdf)



Agenda and Schedule (documents/1950/01a_Agenda_and_Schedule.pdf)



Participant Photographs (documents/1950/01c_Participants_Photos.pdf)



Luncheon Materials (documents/1950/01e_Luncheon_Materials.pdf)

Research Presentations

 **Introduction** (documents/1950/02a_Introduction.pdf)

 **July 10 Introductions** (documents/1950/02b_Introduction_Talks.pdf)

 **July 11 Introductions** (documents/1950/02c_July 11_Introductions.pdf)

 **Low-Speed Research on High-Speed Wings** (documents/1950/02d_Low-Speed_Research_on_High-Speed_Wings.pdf)

 **Airfoil-Body Combinations** (documents/1950/02e_Airfoil-Body_Combinations.pdf)

 **Propellers** (documents/1950/02f_Propellers.pdf)

 **Air Inlets** (documents/1950/02g_Air_Inlets.pdf)

 **Dynamic Stability** (documents/1950/02h_Dynamic_Stability.pdf)

 **Aeroelasticity and Loads** (documents/1950/02i_Aeroelasticity_and_Loads.pdf)

 **Buffeting** (documents/1950/02j_Buffeting.pdf)

 **Research at High Supersonic Speeds**
(documents/1950/02k_Research_at_High_Supersonic_Speeds.pdf)

 **Research at Higher Supersonic Speeds**
(documents/1950/02l_Research_at_Higher_Supersonic_Speeds.pdf)

Media Materials

 **Press Release and Photographs**
(documents/1950/03a_Press_Releases_and_Photos.pdf)

Guest Lists

 **Guest Lists** (documents/1950/04a_Guests_Lists.pdf)

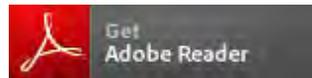
 **List of Visiting Aircraft** (documents/1950/04b_Visiting_Aircraft.pdf)

 **Guests Correspondence** (documents/1950/04c_Guests_Correspondence.pdf)

Logistics

 **Planning Materials** (documents/1950/05a_Planning_Materials.pdf)

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1950

Ames Aeronautical Laboratory

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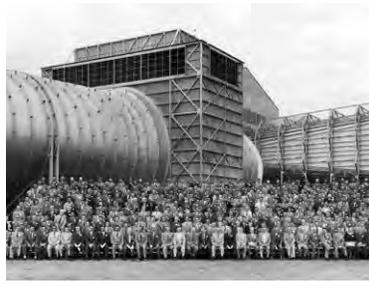
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Ames Aeronautical Laboratory

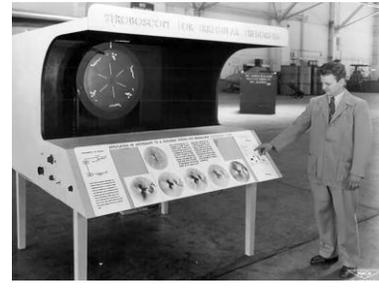
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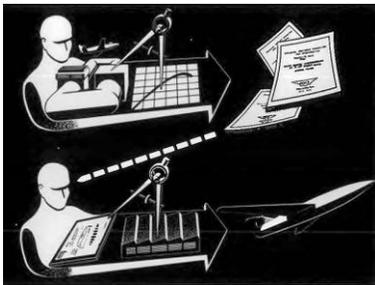
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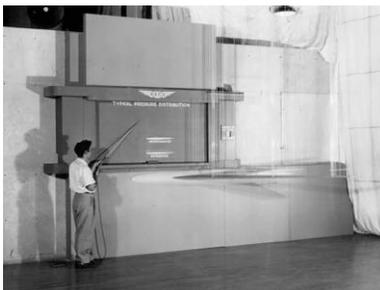
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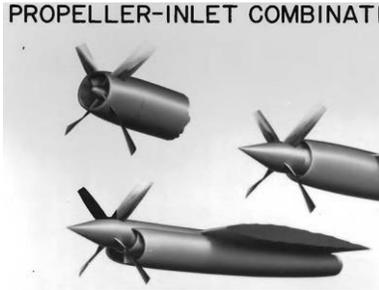
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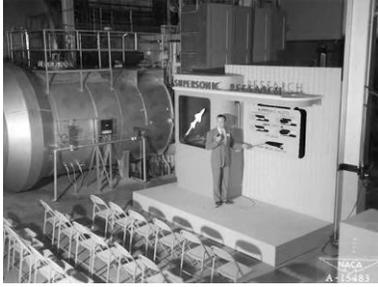
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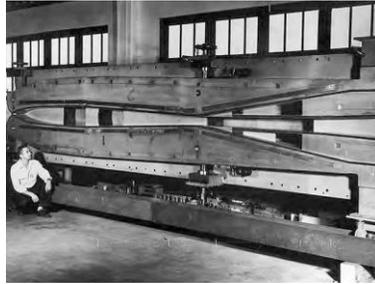
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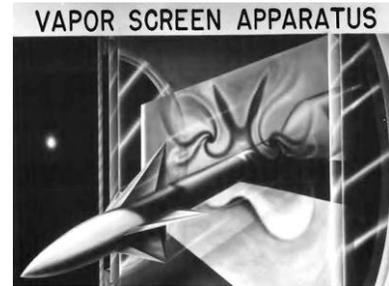
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NACA Inspections
Langley Aeronautical Laboratory
1951

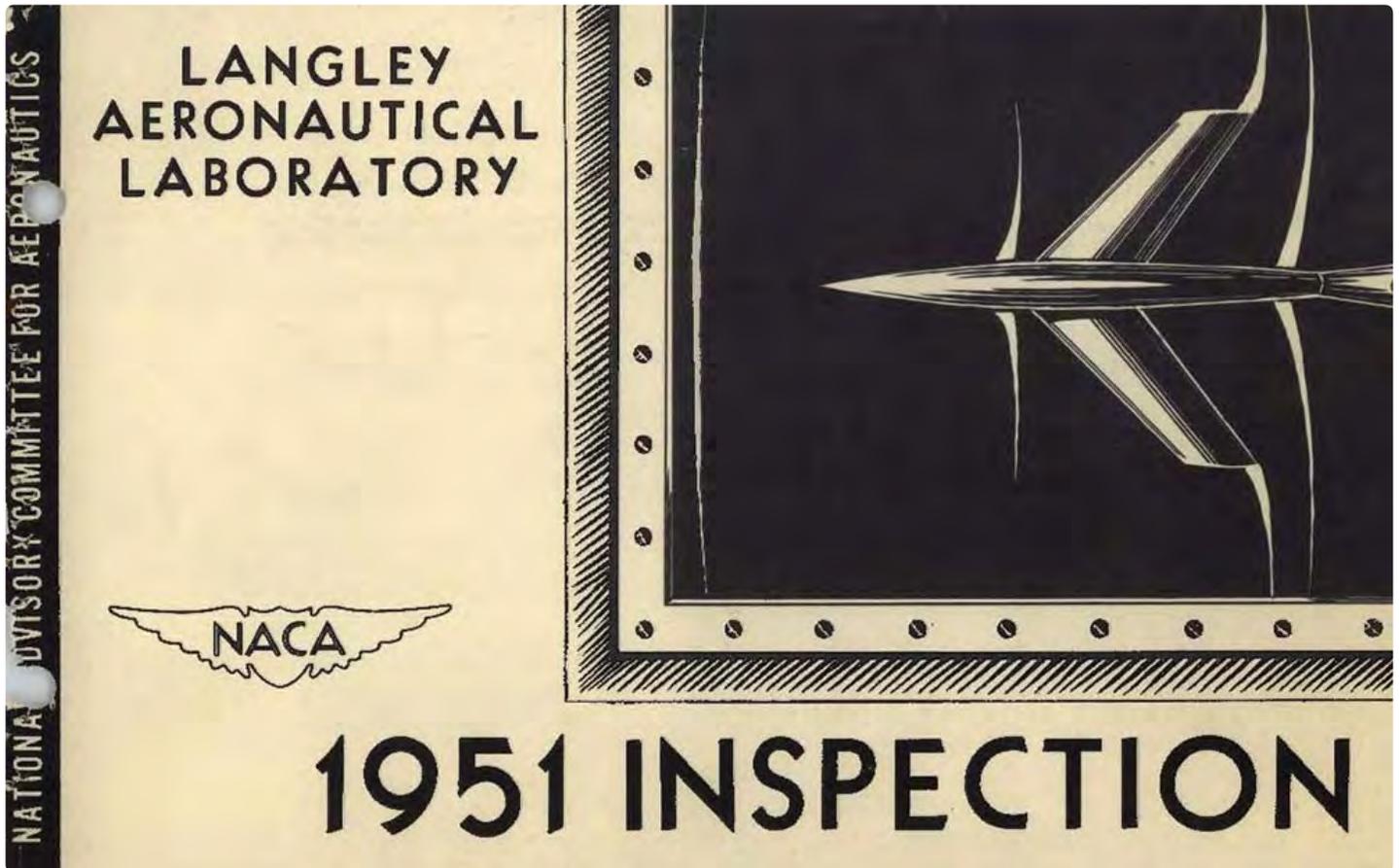


View Content

1951

Langley Aeronautical Laboratory

Overview



An overview description for this NACA Inspection is not available.

1951

Langley Aeronautical Laboratory

Documents Linked files are in PDF format

Materials for Visitors

 **1951 NACA Langley Brochure** (documents/1951/Langley/00_1951_NACA_Langley_Brochure.pdf)

 **Agenda** (documents/1951/Langley/01a_Agenda.pdf)

 **Invitation Letter** (documents/1951/Langley/01b_Invitation_Letter.pdf)

Research Presentations

 **Introduction by Floyd Thompson** (documents/1951/Langley/02a_Introduction_by_Floyd_Thompson.pdf)

 **Data Reduction** (documents/1951/Langley/02b_Data_Reduction.pdf)

 **Vibration and Flutter** (documents/1951/Langley/02c_Vibration_and_Flutter.pdf)

 **11-Inch Hypersonic Tunnel** (documents/1951/Langley/02d_11-Inch_Hypersonic_Tunnel.pdf)

 **Pilotless Aircraft Research** (documents/1951/Langley/02e_Pilotless_Aircraft_Research.pdf)

 **Compressor Cascade Research** (documents/1951/Langley/02g_Compressor_Cascade_Research.pdf)

 **Aerodynamic Loads Calibration** (documents/1951/Langley/02h_Aerodynamic_Loads_Calibration.pdf)

 **Gust Tunnel** (documents/1951/Langley/02i_Gust_Tunnel.pdf)

 **Aircraft Noise** (documents/1951/Langley/02j_Aircraft_Noise.pdf)

 **7-By 10-Foot Supersonic Pressure Tunnel** (documents/1951/Langley/02k_7-By_10-Foot_Tunnel_Program.pdf)

 **4-Foot Transonic Tunnel** (documents/1951/Langley/02l_4-Foot_Supersonic_Pressure_Tunnel.pdf)

 **Skin Friction and Aerodynamic Heating** (documents/1951/Langley/02m_Skin_Friction_and_Aerodynamic_Heating.pdf)

 **16-Foot Transonic Tunnel** (documents/1951/Langley/02n_16-Foot_Transonic_Tunnel.pdf)

 **Materials and Structures Research** (documents/1951/Langley/02o_Materials_and_Structures_Research.pdf)

 **Flight Research Laboratory** (documents/1951/Langley/02p_Flight_Research_Laboratory.pdf)

 **Helicopter Research** (documents/1951/Langley/02q_Helicopter_Research.pdf)

 **Ames Research Newsreel** (documents/1951/Langley/02u_Ames_Research_Newsreel.pdf)

Media Materials

 **Newspaper Articles** (documents/1951/Langley/03_Newspaper_Articles.pdf)

Guest Lists

 **Invitation Lists** (documents/1951/Langley/04_Invitation_Lists.pdf)

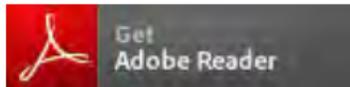
 **Invitation Correspondence** (documents/1951/Langley/04b_Invitation_Correspondence.pdf)

 **Press Invitation List** (documents/1951/Langle/04c_Press_Invitation_List.pdf)

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 **Post-Event Materials** (documents/1951/Langle/05_Post-Event_Materials.pdf)

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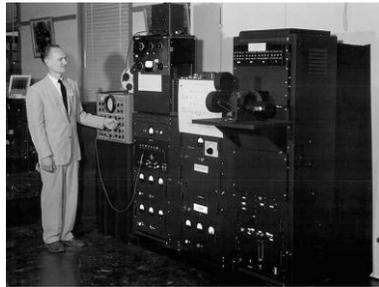
1951

Langley Aeronautical Laboratory

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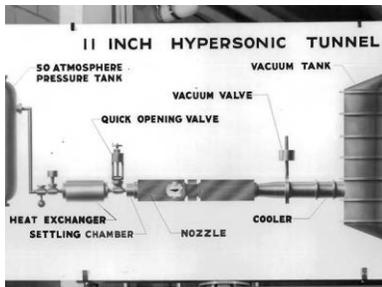
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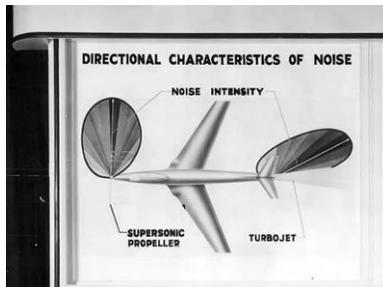
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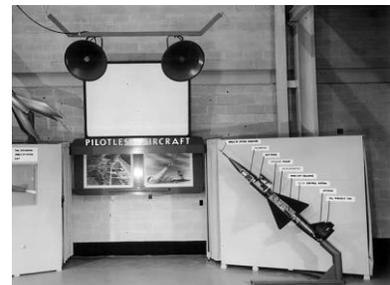
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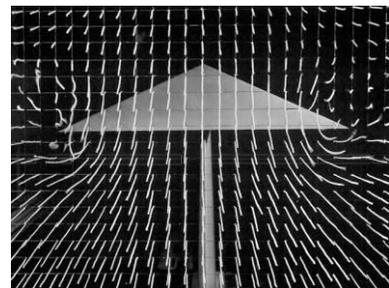
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NACA Inspections
Lewis Flight Propulsion Laboratory
1951



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1951

Lewis Flight Propulsion Laboratory

Overview



The Inspection of the Lewis Flight Propulsion Laboratory on October 9 to 11, 1951, marked the lab's 10th anniversary. Some of the laboratory's early jet engine work was now being utilized by U.S. fighter aircraft in the Korean War.

The eight tour stops focused on engine cooling, supersonic missiles, materials research, altitude performance, icing research, high-energy fuels, and the new Crash Fire Test Program. The Inspection also highlighted the lab's altitude testing facilities, instrumentation research, computational capabilities, and the fabrication of compressor blades. Abe Silverstein, who had recently been named Associate Director, provided the opening remarks.

Lewis invited 1200 guests to attend the three-day event. The NACA instituted a new policy of having its laboratories hold Inspections every other year, so this was Lewis's first Inspection since 1949. Wilson Hunter managed the preparations.

1951

Lewis Flight Propulsion Laboratory

Documents Linked files are in PDF format

Materials for Visitors

 **1951 Inspection Brochure** (documents/1951/00_1951_Inspection_Brochure.pdf)

 **Agenda** (documents/1951/01_Agenda_1951.pdf)

 **Participant Photographs** (documents/1951/01c_Participant_Photo_1951.pdf)

Research Presentations

 **Introduction by Abe Silverstein** (documents/1951/02a_Introduction_by_Abe_Silverstein_1951.pdf)

 **Turbine Cooling Research** (documents/1951/03a_Turbine_Cooling_Research_1951.pdf)

 **Supersonic Research** (documents/1951/03b_Supersonic_Missiles_1951.pdf)

 **Altitude Facilities** (documents/1951/03c_Altitude_Facilities_1951.pdf)

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 **Fuels and Combustion Research** (documents/1951/03g_Fuels_and_Combustion_Research_1951.pdf)

 **Instrument Research** (documents/1951/03h_Instrument_Research_1951.pdf)

Media Materials

 **Press Releases and Photographs** (documents/1951/04a_Press_Releases_and_Photos_1951.pdf)

 **Wing Tips Articles** (documents/1951/04b_Wing_Tips_Articles_1951.pdf)

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 **Thank You Letters** (documents/1951/05c_Thank_You_Letters_1951.pdf)

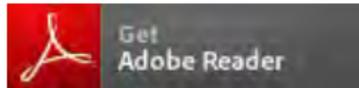
Logistics

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 **Tour Planning** (documents/1951/06c_Tour_Planning_1951.pdf)

 **Post-Event Materials** (documents/1951/06d_Post_Event_Materials_1951.pdf)

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1951

Lewis Flight Propulsion Laboratory

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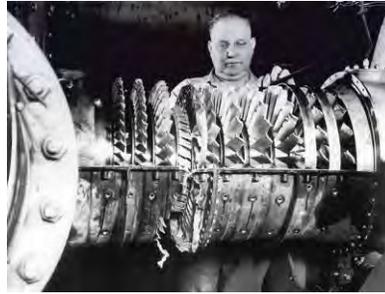
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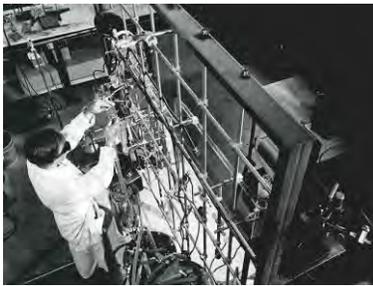
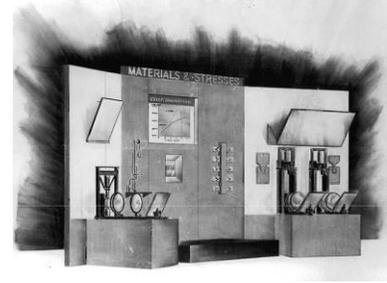
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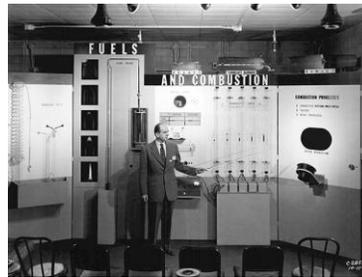
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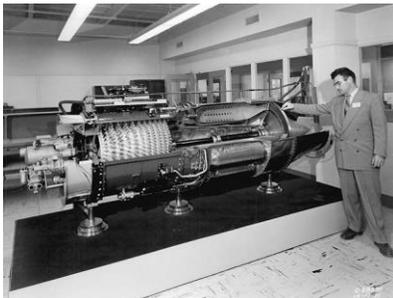
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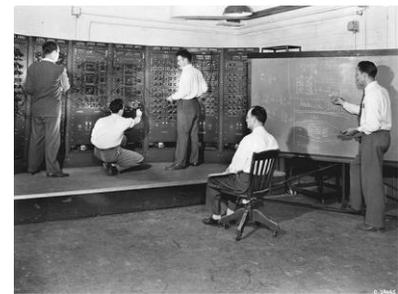
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C-1948-21366



C-1949-24645



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NACA Inspections
Ames Aeronautical Laboratory
1952



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1952

Ames Aeronautical Laboratory

Overview



The 4th biennial Inspection of the Ames laboratory was held on July 14 and 15, 1952. As before, the program was identical both days so that the 785 guests could be divided into manageable halves. The Langley and Lewis Laboratories, as well as NACA headquarters, each sent one DC-3 with about a dozen researchers to the Ames Inspection. The Sunday afternoon before, there was a private party to mark the 30th anniversary of Smith DeFrance's service to the NACA. After the Inspection, the Main Committee members travelled to southern California to visit the High-Speed Flight Research Station and the Naval Air Missile Test Center at Point Mugu. Others went to Los Angeles for meetings of the Institute of Aeronautical Sciences.

This was one of the first Inspections where the NACA talked openly about security restrictions on its presentations, leading them to be less technical. They tracked who was an American citizen; the 1955 Inspection would be restricted to American citizens. Ames researchers began to see as more important, in both size and seriousness, their technical conferences. Examples of these included the conferences on Supersonic Aerodynamics in February 1950, on Aerodynamic Design Problems of Supersonic Guided Missiles in October 1951, and on the Aerodynamics of High Speed Aircraft in July 1953. These conferences had all the practice and polish of the Inspections, but with a more expert audience. Jack Boyd joined the NACA in 1947, but by the 1950 conference on Supersonic Aerodynamics had already been tasked to present work done in the 6- by 6-foot supersonic tunnel. Sitting in the front row were luminaries such as Hans Liepman, Tsien Hsue-Shen, Theodore von Karman. When Boyd expressed nervousness at addressing such an esteemed audience, von Karman, in his thick accent, assured him: "Young man, I assure you that you know more about your subject than we do."

This 1952 Inspection, and those following, took on a more public-relations tone. Still, the Inspection was a great way to display how all the research work at Ames was interconnected, and thus supported the totality of American aerospace. Victor Stevens shaped the intellectual structure of the presentations. In addition to a booklet summarizing the presentations, he also prepared a booklet of the slides that were shown, with space for taking notes. Presentation topics included aeronautical loads, landing, static stability, automatic stability, missile dynamics, model construction, propellers and helicopters, higher speeds and longer range, research airplanes, and aerodynamic friction and heating. Wherever possible, Ames highlighted its capabilities in hypersonic research. The NACA issued three press releases to highlight its most timely research. One focused on aerodynamic heating and the 1600° F rise along the skin of missiles flying at Mach 5. Another release summarized a technical presentation on the prospects of boundary layer control to improve landing performance on supersonic wings. It was also at this Inspection that the NACA issued a press release on plans for the Unitary Plan Wind Tunnels.

1952

Ames Aeronautical Laboratory

Documents Linked files are in PDF format

Materials for Visitors

-  **1952 NACA Ames Inspection Brochure vI** (documents/1952/00a_1952_Ames_Inspection_Brochure_vI.pdf)
-  **1952 NACA Ames Inspection Brochure vII** (documents/1952/00b_1952_Ames_Inspection_Brochure_vII.pdf)
-  **Agenda and Schedule** (documents/1952/01a_Agenda_and_Schedule.pdf)
-  **Invitation Packet** (documents/1952/01b_Invitation_Packet.pdf)
-  **Participant Photographs** (documents/1952/01c_Participant_Photos.pdf)
-  **Luncheon Materials** (documents/1952/01d_Luncheon_Materials.pdf)

Research Presentations

-  **Introduction** (documents/1952/02a_Introduction.pdf)
-  **Loads - 16-Foot High-Speed Wind-Tunnel** (documents/1952/02c_Loads.pdf)
-  **Landing - 40-by 80-Foot Wind-Tunnel** (documents/1952/02d_Landing.pdf)
-  **Static Stability and Control - 1-by 3-Foot Wind Tunnel** (documents/1952/02e_Static_Stability_and_Control.pdf)
-  **Missile Dynamics - 6-by 6-Foot Wind Tunnel** (documents/1952/02f_Missile_Dynamics.pdf)
-  **Model Construction** (documents/1952/02h_Model_Construction.pdf)
-  **Propellers and Helicopters - 12-Foot Pressure Wind Tunnel** (documents/1952/02i_Propellers_and_Helicopters.pdf)

 **Aerodynamic Friction and Heating** (documents/1952/02j_Aerodynamic_Friction_and_Heating.pdf)

 **High-Speed and Range** (documents/1952/02k_High_Speed_and_Range.pdf)

 **Research Airplanes (Muroc)** (documents/1952/02l_Research_Airplanes.pdf)

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 **Thank You Letters** (documents/1952/04b_Thank_You_Letters.pdf)

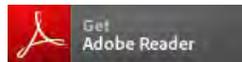
 **Plans for Lewis Guests** (documents/1952/04c_Plans_for_Lewis_Guests.pdf)

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 **Post-Event Materials** (documents/1952/05c_Post-Event_Materials.pdf)

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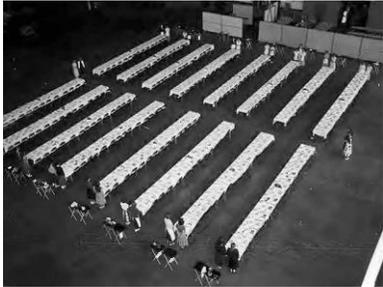


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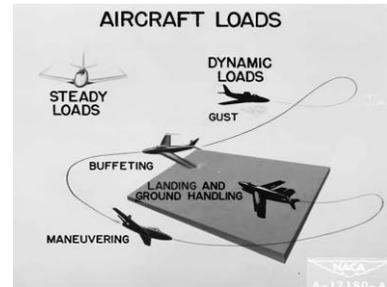
1952

Ames Aeronautical Laboratory

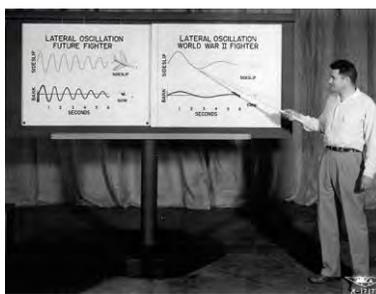
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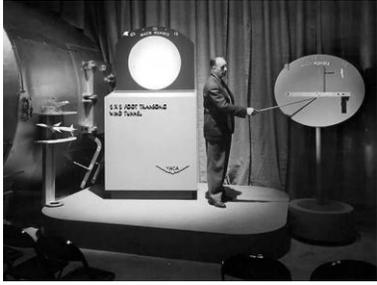
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8-FT. TRANSONIC TUNNELS

PUMPING AND DRYING SYSTEMS

NACA Inspections

Langley Aeronautical Laboratory 1953



NACA

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1953

Langley Aeronautical Laboratory

Overview



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1953

Langley Aeronautical Laboratory

Documents Linked files are in PDF format

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 **1953 Langley Inspection Brochure VII** (documents/1953/00b_1953_Langley_Inspection_Brochure_vII.pdf)

 **Agenda and Schedule** (documents/1953/01a_Agenda_and_Schedule.pdf)

Research Presentations

 **Introduction by Floyd Thompson** (documents/1953/01a_Introduction_by_Floyd_Thompson.pdf)

 **Helicopter Research** (documents/1953/01b_Helicopter_Research.pdf)

 **Transonic Research** (documents/1953/01c_Transonic_Research.pdf)

 **Hydrodynamics** (documents/1953/01d_Hydrodynamics.pdf)

 **Stability and Control** (documents/1953/01e_Stability_and_Control.pdf)

 **Structural Research Laboratory** (documents/1953/01f_Structural_Research_Laboratory.pdf)

 **Dynamics Load Research** (documents/1953/01g_Dynamic_Loads_Research.pdf)

 **Gas Dynamics** (documents/1953/01i_Gas_Dynamics.pdf)

 **Flight Research Program** (documents/1953/01h_Flight_Research.pdf)

 **Model Construction** (documents/1953/01j_Model_Construction.pdf)

 **Instrumentation** (documents/1953/01k_Instrumentation.pdf)

 **Pilotless Aircraft Research** (documents/1953/01l_Pilotless_Aircraft_Research.pdf)

 **Airplane Crash Fire Research (Lewis)** (documents/1953/01m_Airplane_Crash_Fire_Research.pdf)

 **Activities Building Exhibits** (documents/1953/01n_Activities_Building_Exhibits.pdf)

Media Materials

 **Newspaper Articles** (documents/1953/03a_Newspaper_Articles.pdf)

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 **Military Guest List** (documents/1953/04a_Military_Guest_List.pdf)

 **Lewis Attendees** (documents/1953/04b_Lewis_Attendees.pdf)

 **Thank You Letters** (documents/1953/04c_Thank_You_Letters.pdf)

Logistics

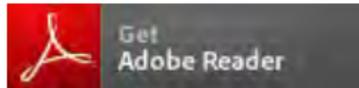
 **Planning Materials** (documents/1953/06a_Planning_Materials.pdf)

 **Preparation of Technical Talks** (documents/1953/06b_Preparation_of_Technical_Talks.pdf)

 **Tour Planning** (documents/1953/06c_Tour_Planning.pdf)

 **Post-Event Materials** (documents/1953/06d_Post-Event_Materials.pdf)

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NACA Inspections
Lewis Flight Propulsion Laboratory
1954



View Content

1954

Lewis Flight Propulsion Laboratory

Overview



The Cold War was a theme central to the June 2 to 4, 1954, Inspection of the Lewis Flight Propulsion Laboratory, Lewis's first since 1951. The recent death of Joseph Stalin and the end of the Korean War did little to ease the relations with the Soviet Union. In his opening remarks, NACA Secretary John Victory noted, "The race for air supremacy is on. The scientific war is on. These are the days in which we will lay our plans for survival or build our own tombs." The NACA's contributions were critical to the continued increases in U.S. aircraft's speeds and altitudes as well as to the issues concerning the first missile systems.

During the 1954 Inspection Lewis highlighted its new Propulsion Systems Laboratory, which was the Nation's most powerful altitude testing facility for engines. Lewis was also pursuing issues related to high-speed flight. This included transonic compressors, aerodynamic heating on missiles, ramjet engines, and turbine cooling. Although Lewis remained focused on aircraft propulsion, the lab expanded its high-energy propellants and nuclear propulsion research. Lewis's first liquid hydrogen-liquid oxygen rocket firing took place just months after the Inspection. Researchers also highlighted their efforts on the extensive Crash Fire Test Program and reverse thrusters. Langley and Ames showcased their aerodynamics and flow visualization work.

The 1954 Inspection was the first of the NACA's Triennial Inspections. The NACA instructed Lewis, Langley, and Ames to rotate their Inspections so that each laboratory would hold one every 3 years. The 1954 Lewis Inspection attracted 995 guests. The laboratory held its open house for employees and their families the following Sunday. The 4374 visitors toured nearly all of the laboratory's facilities and heard a reprise of the Inspection presentations. Wilson Hunter again supervised all preparations.

1954

Lewis Flight Propulsion Laboratory

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Materials for Visitors

 **1954 Inspection Brochure vI** (documents/1954/00a_1954_Inspection_Brochure_vI.pdf)

 **1954 Inspection Brochure vII** (documents/1954/00b_1954_Inspection_Brochure_vII.pdf)

 **Invitation and Agenda** (documents/1954/01a_Invitation_and_Agenda_1954.pdf)

 **Participant Photographs** (documents/1954/01b_Participant_Photos_1954.pdf)

Research Presentations

 **Introductions by John Victory and Gene Manganiello**
(documents/1954/03_Introductions_by_Victory_and_Manganiello.pdf)

 **Aircraft Operating Problems** (documents/1954/03a_Aircraft_Operating_Problems_1954.pdf)

 **Nuclear Propulsion** (documents/1954/03b_Nuclear_Propulsion_1954.pdf)

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 **Compressor and Fuels Research** (documents/1954/03d_Fuels_and_Combustion_Research_1954.pdf)

 **Full-Scale Engine Research** (documents/1954/03e_Full_Scale_Engine_Research_1954.pdf)

 **Aerodynamic Heating [Langley]** (documents/1954/03f_Aerodynamic_Heating_[Langley]_1954.pdf)

 **Flow Visualization [Ames]** (documents/1954/03g_Flow_Visualization_[Ames]_1954.pdf)

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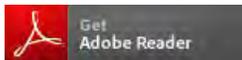
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 **Preparation of Technical Talks** (documents/1954/06b_Preparation_of_Technical_Talks_1954.pdf)

 **Tours Planning** (documents/1954/06c_Tour_Planning_1954.pdf)

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1954

Lewis Flight Propulsion Laboratory

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C-1954-36133a



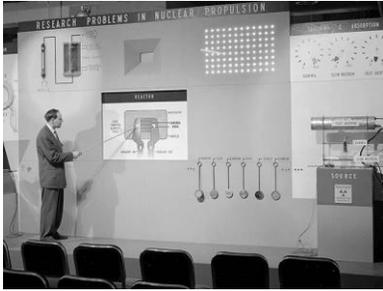
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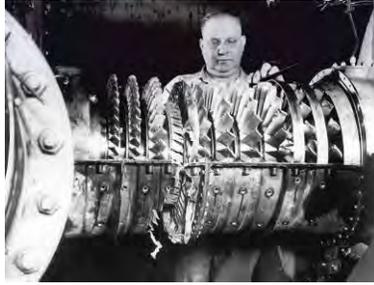
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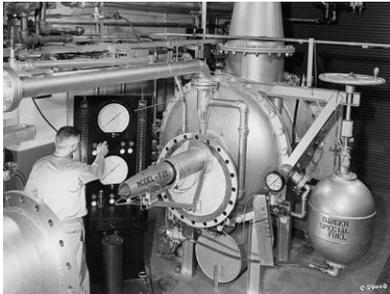
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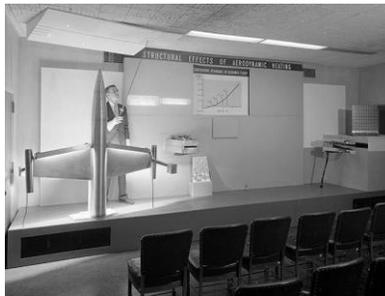
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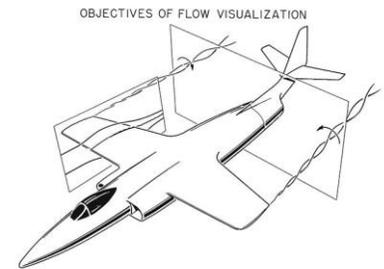
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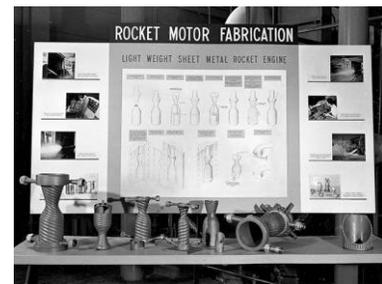
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NACA Inspections

Ames Aeronautical Laboratory 1955



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1955

Ames Aeronautical Laboratory

Overview



Ames hosted a triennial inspection on June 27 and 28, 1955. The dates were selected to follow the joint meetings in Los Angeles of the Institute of the Aeronautical Sciences and the Royal Aeronautical Society. It was the 40th anniversary of the NACA, and guests were given a history booklet written by Jerome Hunsaker (and included in this PDF). He prepared it for the NACA anniversary dinner held on April 14, 1955 at the Smithsonian Institution, at which U.S. Supreme Court Chief Justice Earl Warren presented Hunsaker with the Langley Medal.

By 1955, supersonic aircraft were entering military service, and NACA work to solve problems associated with them dominated the meeting. Carlton Bioletti defined the intellectual structure of the Inspection, and quoted Hugh Dryden: "Many of the major problems of the aircraft of the future are old problems in new dress." Designing sleek new aircraft able to fly at supersonic speed re-introduced old problems like buffeting, damping, and stability (and how the pilot can control those) as well as weight distribution and landing performance.

Furthermore, the number of test facilities at Ames was expanding rapidly, leaving Bioletti choices on where to host the topical presentations. Some presentations addressed new topics in old facilities: a session on static stability was presented in the 6- by 6-foot supersonic wind tunnel, on dynamic stability in the 7- by 10-foot wind tunnel, on airplane flexibility (meaning wing loads and bending) in the airplane hangar, and on take-off and landing in the 40- by 80-foot wind tunnel. Some were presented in new

facilities. A talk on the role of flight simulators aided by analog computers was done in the flight research hangar, where a YF-86D aircraft was hooked up to a separate cockpit model. As a result, lunch was moved from the hangar to the sheet metal shop. A presentation on hypersonic research, accompanied by a press release, on work at Ames on the reentry heating problem, was done in the new heat transfer tunnel (a precursor to the arc jet). A presentation on transonic research was done in the 14-foot transonic wind tunnel, which had recently been converted from the 16-foot tunnel, accompanied by a press release on the performance of the tunnel. The Unitary Plan wind tunnels, at Ames as well as Cleveland and Langley, had just begun operating. There was one session in the Ames Unitary Plan to inform the potential users on the capabilities of those tunnels, and also a session on jet aircraft crash and fire survival.

1955

Ames Aeronautical Laboratory

Documents Linked files are in PDF format

Materials for Visitors

-  **1955 NACA Ames Inspection Brochure vI** (documents/1955/00_1955_NACA_Ames_Inspection_Brochure.pdf)
-  **1955 NACA Ames Inspection Brochure vII** (documents/1955/00a_1955_NACA_Ames_Inspection_Brochure_vII.pdf)
-  **NACA Fourtieth Anniverary Booklet** (documents/1955/00b_NACA_Fourtieth_Anniversary.pdf)
-  **NACA Fourtieth Anniverary Publication** (documents/1955/00c_NACA_Fourtieth_Anniversary_Publication.pdf)
-  **Agenda** (documents/1955/01_Agenda.pdf)
-  **Invitation Packet** (documents/1955/01b_Invitation_Packet.pdf)
-  **Luncheon Materials** (documents/1955/01c_Luncheon_Materials.pdf)
-  **Participant Photographs** (documents/1955/01d_Participant_Photos.pdf)

Research Presentations

-  **Inspection Overview** (documents/1955/02a_Inspection_Overview.pdf)
-  **Introduction** (documents/1955/02b_Introduction.pdf)
-  **Static Stability** (documents/1955/02c_Static_Stability.pdf)
-  **Dynamic Stability** (documents/1955/02d_Dynamic_Stability.pdf)
-  **Flight Research Simulators** (documents/1955/02e_Flight_Research_Simulators.pdf)
-  **Airplane Flexibility** (documents/1955/02f_Airplane_Flexibility.pdf)

 **Transonic Research** (documents/1955/02g_Transonic_Research.pdf)

 **Hypersonic Research** (documents/1955/02h_Hypersonic_Research.pdf)

 **Research on Takeoff and Landing** (documents/1955/02i_Research_on_Takeoff_and_Landing.pdf)

 **Unitary Plan Tunnels** (documents/1955/02j_Unitary_Plan_Tunnels.pdf)

 **Jet Crash Fire and Impact Research (Lewis)** (documents/1955/02k_Jet_Crash_Fire_and_Impact_Research.pdf)

Media Materials

 **Press Releases** (documents/1955/03a_Press_Releases.pdf)

Guest Lists

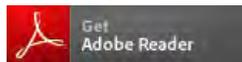
 **List of Attendees** (documents/1955/04a_List_of_Attendees.pdf)

Logistics

 **Planning Materials** (documents/1955/05a_Planning_Materials.pdf)

 **Post-Event Materials** (documents/1955/05b_Post-Inspection_Materials.pdf)

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1955

Ames Aeronautical Laboratory

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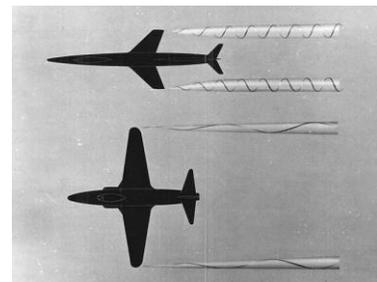
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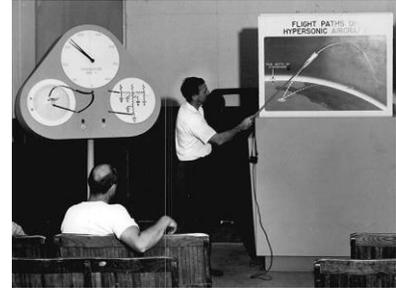
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NACA Inspections
Lewis Flight Propulsion Laboratory
1956

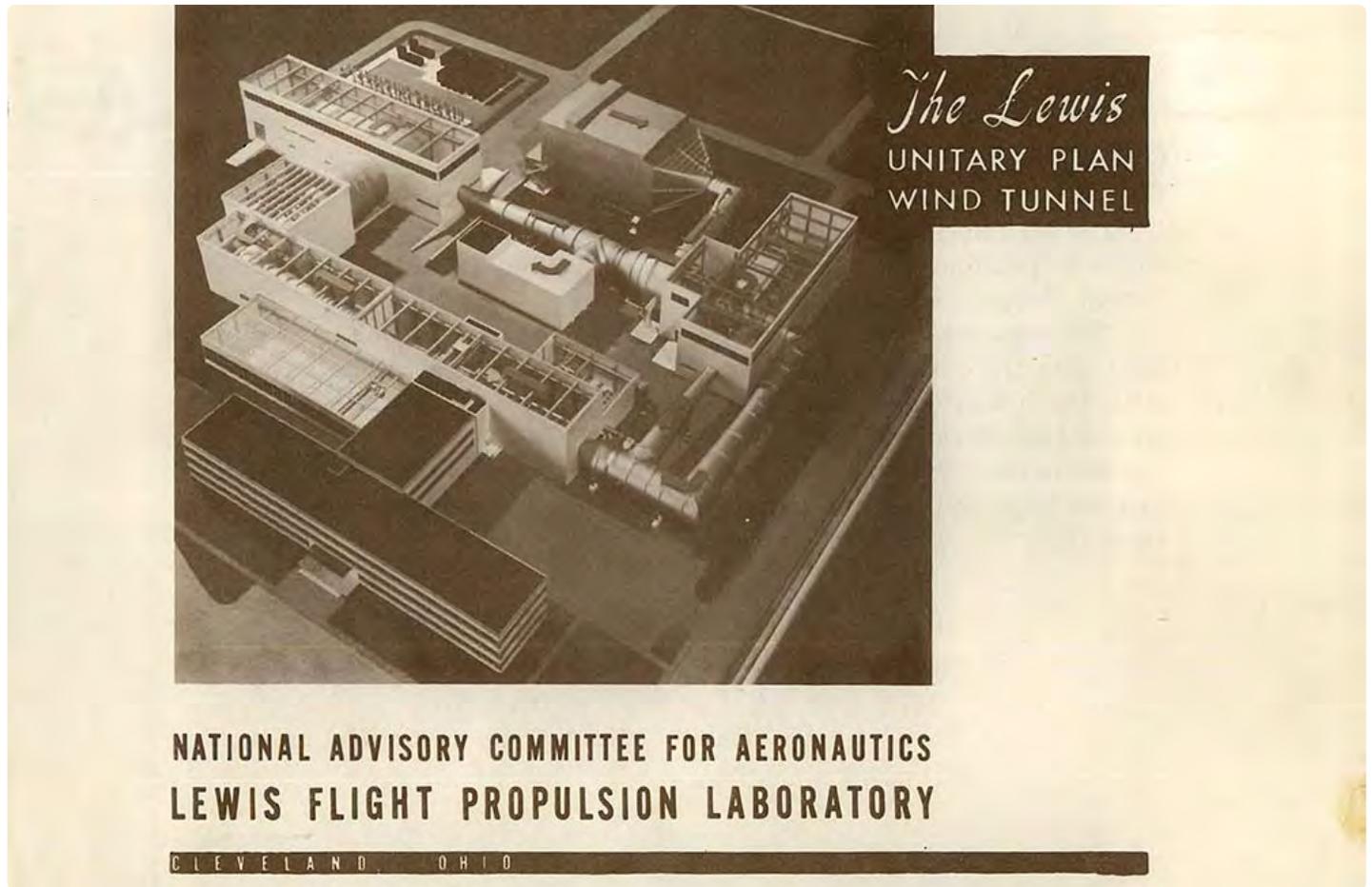


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1956

Lewis Flight Propulsion Laboratory

Overview



The Lewis Flight Propulsion Laboratory held a unique Inspection on May 22, 1956. The one-day event was dedicated entirely to the new Lewis Unitary Plan Tunnel—since renamed the 10- by 10-Foot Supersonic Wind Tunnel. The \$33-million facility was the most powerful wind tunnel in the nation. Over 150 guests from industry, other NACA laboratories, and the media attended the event.

The crowd assembled in the shop area before the tour. Lewis Director Raymond Sharp began the event by welcoming the visitors to the laboratory. NACA Director Hugh Dryden discussed Congress's Unitary Plan Act and its effect on the creation of the facility. Lewis Associate Director Abe Silverstein discussed the need for research tools and the 10 by 10's place among the NACA's other research facilities. Lewis Assistant Director Eugene Wasielewski described the detailed design work that went into the facility. Carl Schueller, Chief of the 10 by 10, described the tunnel's components and how the facility operated. Robert Godman led the tour of the facility afterwards.

Documents Linked files are in PDF format

Materials for Visitors

 **1956 Inspection Brochure** (documents/1956/00_1956_Inspection_Brochure.pdf)

 **Lewis Unitary Plan Tunnel Report** (documents/1956/00b_Lewis_Unitary_Plan_Tunnel_Report_1956.pdf)

 **Agenda and Invitation** (documents/1956/01_Agenda_and_Invitation_1956.pdf)

 **Participant Photographs** (documents/1956/01b_Attendees_Photos.pdf)

 **Exhibit Photographs** (documents/1956/01c_Exhibits_Photos.pdf)

Research Presentations

 **Tunnel Description by Carl Schueller** (documents/1956/03a_Tunnel_Description_by_Carl_Schueller_1956.pdf)

Media Materials

 **Press Releases and Photographs** (documents/1956/04a_Press_Releases_and_Photos_1956.pdf)

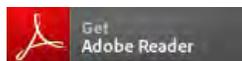
 **Newspaper Articles** (documents/1956/04b_Newspaper_Articles_1956.pdf)

Guest Lists

 **List of Attendees** (documents/1956/05a_List_of_Attendees_1956.pdf)

 **Thank You Letters** (documents/1956/05c_Thank_You_Letters_1956.pdf)

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1956

Lewis Flight Propulsion Laboratory

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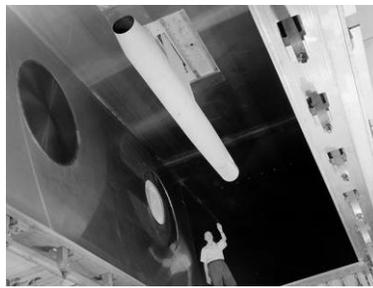
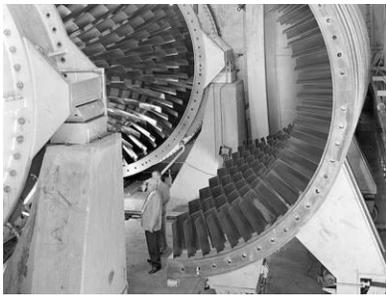


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NACA Inspections
Lewis Flight Propulsion Laboratory
1957



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1957

Lewis Flight Propulsion Laboratory

Overview



The Lewis Flight Propulsion Laboratory's October 7 to 10, 1957, Inspection event took place at the literal onset of the space age. Lewis had been working on rocket propulsion and missile aerodynamic issues since the mid-1940s and was already pursuing electric propulsion for space. By the mid-1950s the efforts to develop high-energy propellants, particularly liquid hydrogen, were producing real results. Although Lewis was also unveiling its new Rocket Engine Test Facility, the NACA was wary of overstepping its aeronautical mandate by discussing space work at the Inspection.

On Thursday October 3, NACA Secretary John Victory led a group from Headquarters through the final dress rehearsals. Victory interjected when references to space flight were mentioned. Victory ordered the frustrated researchers to strike those lines from their talks so as not to offend the visiting Congressional representatives. The next evening the Soviet Union launched Sputnik. When the Inspection began on Monday morning, the original talks were in place, and the guests praised Lewis for its readiness for the space race.

The tour stops included an extensive description of its high-energy rocket propellants work. There were also new aeronautics efforts dealing with nuclear propulsion, hypersonic flight, noise abatement, and high-energy fuels. Over 1700 guests attended the Inspection. Wilson Hunter supervised the preparations. The event was followed by an Employees Day Friday afternoon and a Family Day on Sunday. The 1957 event was Lewis's last Inspection for nearly a decade.

1957

Lewis Flight Propulsion Laboratory

Documents Linked files are in PDF format

Materials for Visitors

 **1957 Inspection Brochure vI** (documents/1957/00_1957_Inspection_Brochure_vI.pdf)

 **1957 Inspection Brochure vII** (documents/1957/00b_1957_Inspection_Brochure_vII.pdf)

 **Invitation and Agenda** (documents/1957/01_Agenda_and_Invitation_1957.pdf)

 **Participant Photographs** (documents/1957/01C_Participant_Photos_1957.pdf)

 **Exhibit Photographs** (documents/1957/01c_Exhibits_photos.pdf)

Research Presentations

 **Introduction by Eugene Manganiello** (documents/1957/02a_Introduction_by_Eugene_Manganiello_1957.pdf)

 **Jet Noise Reduction** (documents/1957/03a_Jet_Noise_Reduction_1957.pdf)

 **Hypersonic Propulsion** (documents/1957/03b_Hypersonic_Propulsion_1957.pdf)

Guest Lists

 **List of Attendees** (documents/1957/05a_List_of_Attendees_1957.pdf)

 **Thank You Letters** (documents/1957/05c_Thank_You_Letters_1957.pdf)

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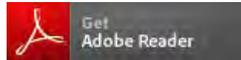
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 **Preparation of Technical Talks** (documents/1957/06b_Preparations_for_Technical_Talks_1957.pdf)

 **Tour Planning** (documents/1957/06c_Tour_Planning_1957.pdf)

 **Post-Event Materials** (documents/1957/06d_Post_Event_Materials_1957.pdf)

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1956

Lewis Flight Propulsion Laboratory

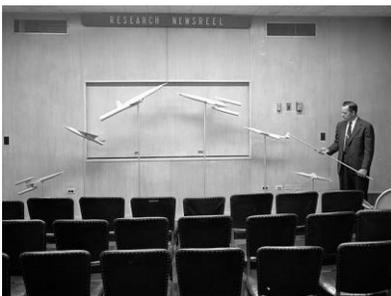
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EVOLUTION
OF
MANNED CRAFT

NACA Inspections
Ames Aeronautical Laboratory
1958

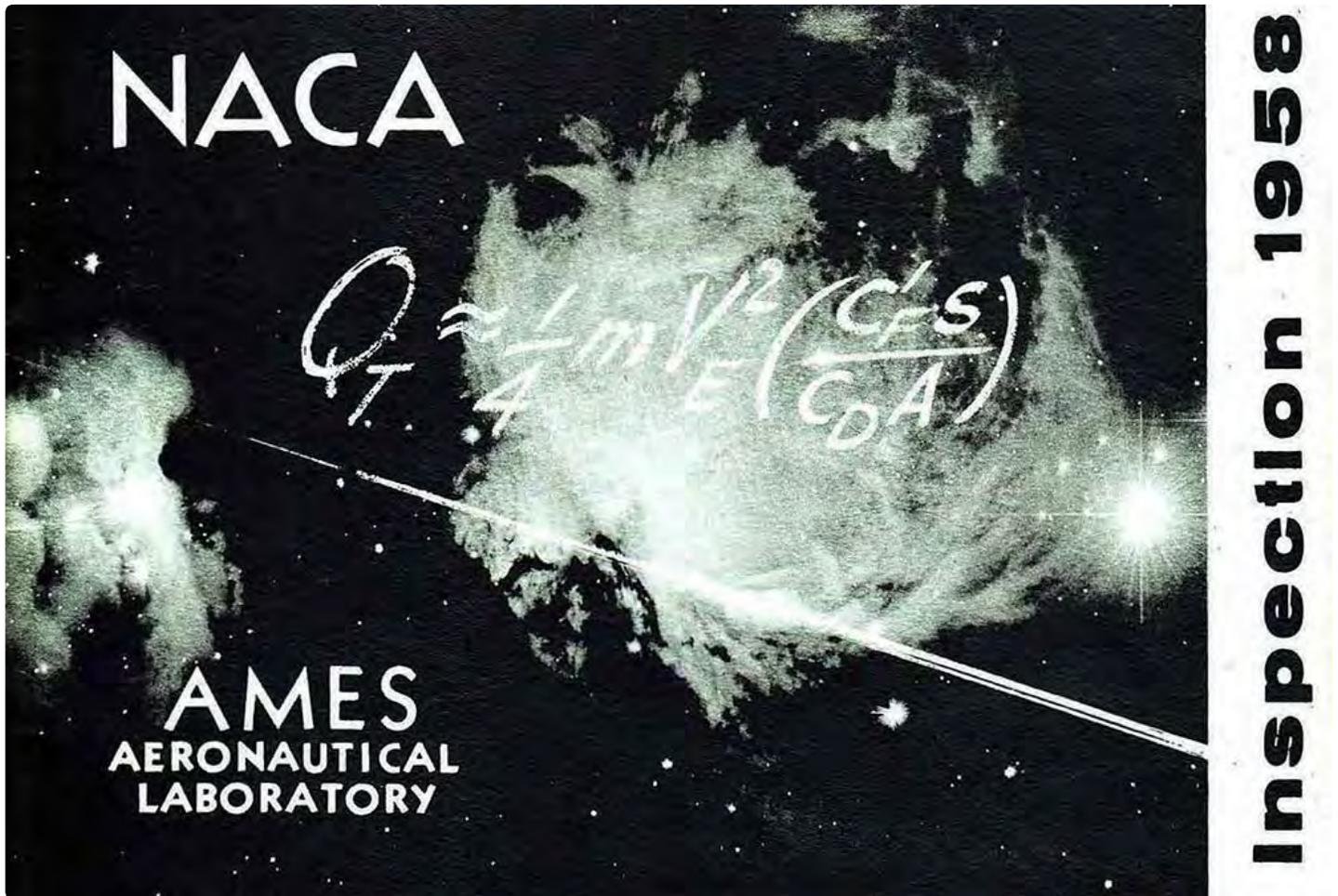


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1958

Ames Aeronautical Laboratory

Overview



Ames hosted its last Inspection on July 14 and 15, 1958. Again, the dates were selected to follow the meetings of the Institute of Aeronautical Sciences in Los Angeles. Even at the time, Ames people suspected it would be their last. The NACA was being absorbed into a new agency, the National Aeronautics and Space Administration (NASA), which portended a different relationship between Ames and the aerospace industry. The NACA Executive Committee held a regular meeting at Ames during the Inspection, during which they discussed plans to be absorbed into NASA. Furthermore, specialized NACA technical conferences, like one in March 1958 on High Speed Aerodynamics, showed that no general one-day Inspection could satisfy the increasingly focused interests of American aerospace leaders. NACA Director Hugh Dryden, in his introduction, noted guests would hear nothing about the X-15 airplane or aircraft operating problems because those were the subjects of future NACA technical conferences.

Of the nine presentation topics, eight addressed issues in spaceflight. The sole presentation on atmospheric flight dealt with a military topic: how to extend the range of supersonic turbojet bombers (noting it could someday carry civilian passengers). In a photograph from that presentation you can see a tunnel model of the sleek aircraft wing—following the theoretical work of Robert T. Jones and designed by Elliott Katzen—that inspired the red wing of the forthcoming NASA meatball logo.

Harvey Allen's work on the blunt body had been declassified the previous fall. His theory, and the test facilities Ames built to validate it, took a starring role at the Inspection. In his introduction to the Inspection pamphlet, NACA Chair Jimmy Doolittle noted: "More than six years ago in this Laboratory an NACA scientist worked out the principle of the high-drag blunt nose cone to reduce to a minimum the aerodynamic heating experienced by a body entering the Earth's atmosphere at high speed. All current ICBM and IRBM warheads employ this concept. From this and even earlier beginnings NACA's work in space technology has grown in orderly fashion until it now receives half of our research attention."

Manley J. Hood structured the presentations. A presentation on the uses and orbits of Earth satellites (information useful in the International Geophysical Year satellites) was done in the 40- by 80-foot wind tunnel. A presentation on aerophysics (the chemical composition of air in the upper atmosphere) was done in the hypervelocity air flow apparatus, and a presentation on aerodynamic heating was done near the low-density and heat transfer tunnels. A presentation on entry research techniques was done at the new Ames atmosphere entry simulator, one on piloting problems during entry was done in the flight research laboratory, and one on stability during atmosphere entry was done in the supersonic free-flight tunnel. Engineers from Langley discussed the X-7 rocket booster program for flight research on spacecraft in the Ames 11- by 11-foot transonic tunnel, and engineers from Lewis presented on electrical and nuclear space propulsion systems in the 6- by 6-foot supersonic wind tunnel.

1958

Ames Aeronautical Laboratory

Documents Linked files are in PDF format

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 **1958 NACA Ames Inspection Brochure** (documents/1958/00_1958_NACA_Ames_Inspection_Brochure.pdf)

 **Agenda and Schedule** (documents/1958/01a_Agenda_and_Schedule.pdf)

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 **Luncheon Materials** (documents/1958/01d_Luncheon_Materials.pdf)

 **Participant Photographs** (documents/1958/01b_Participants_Photos.pdf)

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 **Inspection Overview** (documents/1958/02a_Inspection_Overview.pdf)

 **Introuction by Hugh Dryden** (documents/1958/02b_Introduction_by_Hugh_Dryden.pdf)

 **Earth Satellites** (documents/1958/02c_Earth_Satellites.pdf)

 **Aerophysics** (documents/1958/02d_Aerophysics.pdf)

 **Aerodynamic Heating** (documents/1958/02e_Aerodynamic_Heating.pdf)

 **Hypervelocity and Entry Research** (documents/1958/02f_Hypervelocity_and_Entry_Research.pdf)

 **Missile Descent Through the Atmosphere** (documents/1958/02g_Missile_Descent_Through_Atmosphere.pdf)

 **Flight Research for Spacecraft** (documents/1958/02h_Flight_Research_for_Spacecraft.pdf)

 **Space Propulsion Systems (Lewis)** (documents/1958/02i_Space_Propulsion_Systems.pdf)

 **Piloting Problems During Entry** (documents/1958/02j_Piloting_Problems_During_Entry.pdf)

 **Supersonic Airplanes** (documents/1958/02k_Supersonic_Airplanes.pdf)

Media Materials

 **Press Releases** (documents/1958/03a_Press_Releases.pdf)

Guest Lists

 **Attendees Tour Groups** (documents/1958/04a_Attendees_Tour_Groups.pdf)

 **Invitation List** (documents/1958/04b_Invitation_List.pdf)

 **Thank You Letters** (documents/1958/04c_Thank_You_Letters.pdf)

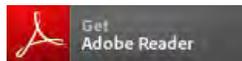
Logistics

 **Planning Materials** (documents/1958/05a_Planning_Materials.pdf)

 **Preparations for Presentations** (documents/1958/05b_Preparations_for_Presentations.pdf)

 **Post-Event Materials** (documents/1958/05c_Post-Event_Materials.pdf)

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1958

Ames Aeronautical Laboratory

Gallery Selected images (click to enlarge)



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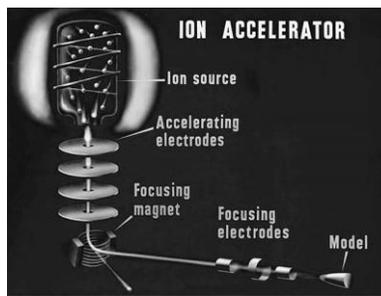
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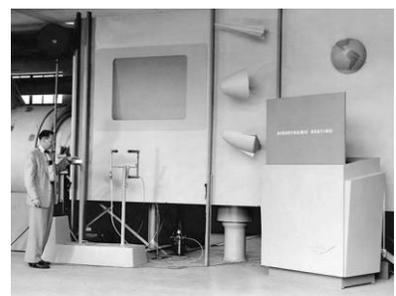
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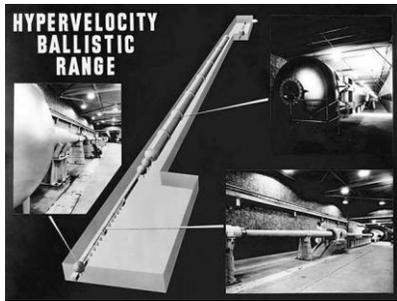
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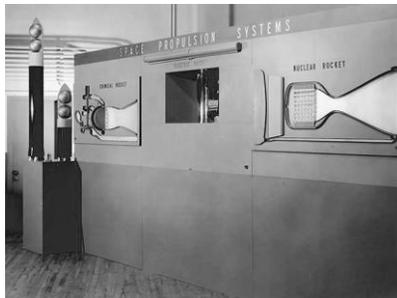
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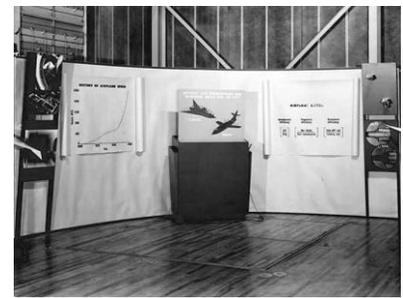
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NACA Inspections
Langley Aeronautical Laboratory
1964

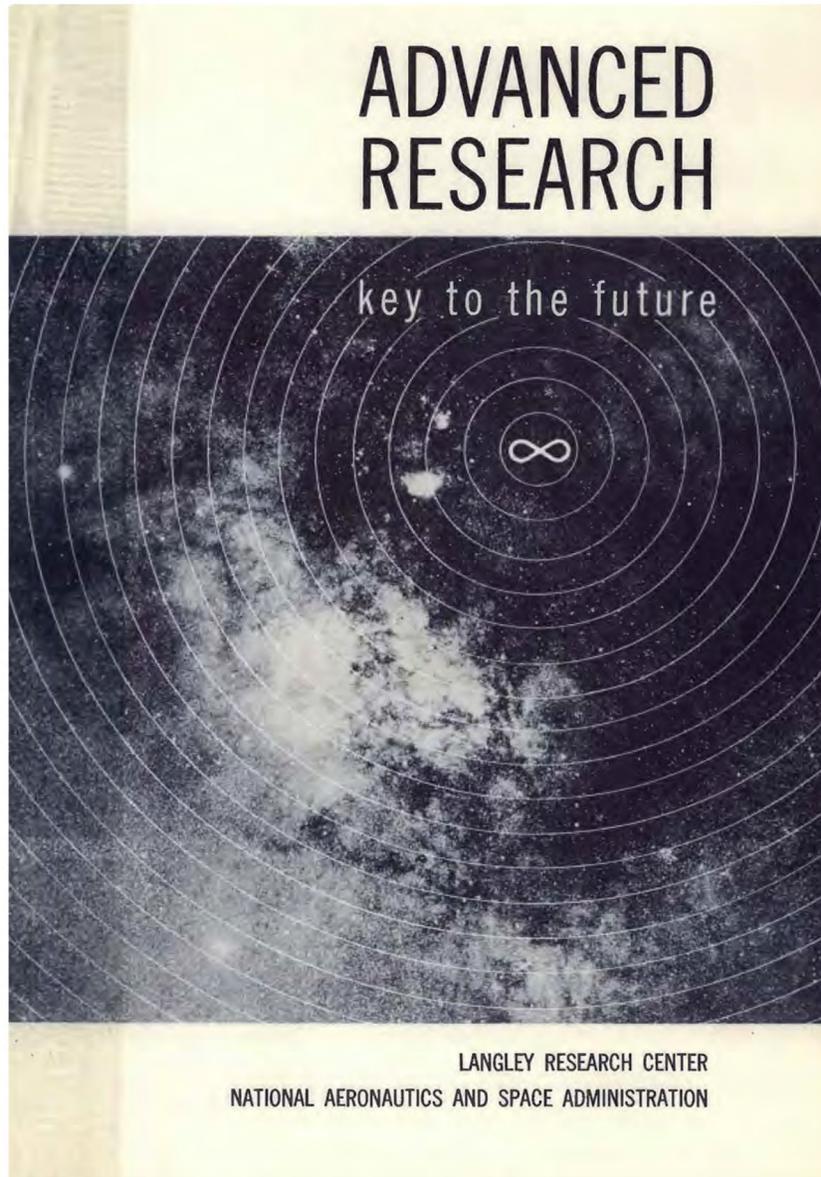


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1964

Langley Aeronautical Laboratory

Overview



An overview description for this NACA Inspection is not available.

1964

Langley Aeronautical Laboratory

Documents Linked files are in PDF format

Materials for Visitors

-  **1964 Langley Inspection Brochure** (documents/1964/00a_1964_NASA_Langley_Inspection_Brochure.pdf)
-  **Hazards of Hydroplaning Pamphlet** (documents/1964/00b_Hazards_of_Hydroplaning_Pamphlet.pdf)
-  **Agenda** (documents/1964/01a_Agenda.pdf)
-  **Invitation Packet** (documents/1964/01b_Invitation_Packet.pdf)
-  **Tour Pamphlet** (documents/1964/01b_Tour_Pamphlet.pdf)

Research Presentations

-  **Introduction by James Webb** (documents/1964/02a_Introduction_by_James_Webb.pdf)
-  **Introduction by Hugh Dryden** (documents/1964/02c_Introduction_by_Hugh_Dryden.pdf)
-  **Introduction by C.J. Donlan** (documents/1964/02d_Introduction_by_CJ_Donlan.pdf)
-  **Tour Introduction by Mattson and Korycinski** (documents/1964/02e_Tour_Introduction_by_Mattson_and_Korycinski.pdf)
-  **Low-Speed Aeronautics** (documents/1964/02f_Low_Speed_Aeronautics.pdf)
-  **Space Flight Simulation** (documents/1964/02g_Space_Flight_Simulation.pdf)
-  **Space Vehicle Technology** (documents/1964/02h_Space_Vehicle_Technology.pdf)
-  **Hypersonic Structures and Facilities** (documents/1964/02i_Hypersonic_Structures_and_Facilities.pdf)
-  **Magnetoplasmdynamics** (documents/1964/02j_Magnetoplasmdynamics.pdf)
-  **Electronic Computers in Space** (documents/1964/02k_Electronic_Computers_in_Space.pdf)
-  **Aircraft Operating Problems** (documents/1964/02l_Aircraft_Operating_Problems.pdf)
-  **High-Speed Aeronautics** (documents/1964/02m_High_Speed_Aeronautics.pdf)
-  **Hypersonics and Reentry** (documents/1964/02n_Hypersonics_and_Reentry.pdf)
-  **Structures and Materials** (documents/1964/02o_Structures_and_Materials.pdf)

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 **Preparation of Technical Talks** (documents/1964/05c_Preparations_for_Technical_Talks.pdf)

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1964

Langley Aeronautical Laboratory

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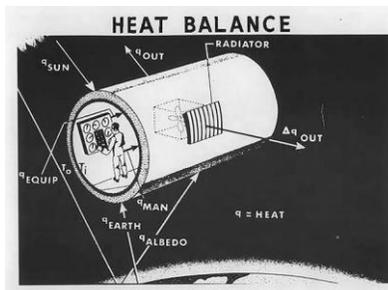
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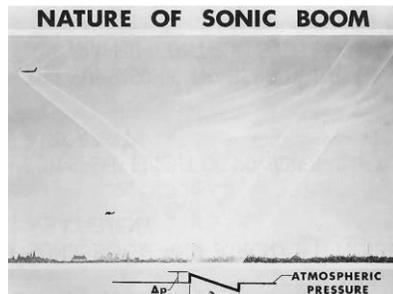
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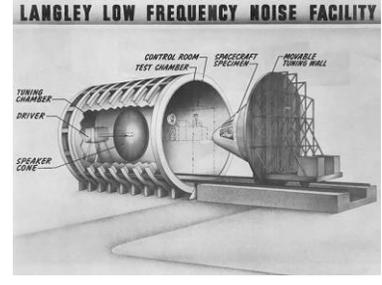
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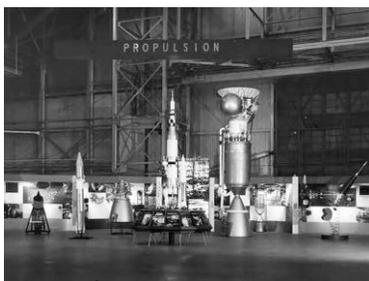
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L1964-4889



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Lewis Flight Propulsion Laboratory 1966



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1966

Lewis Flight Propulsion Laboratory

Overview



The Lewis Research Center's October 4 to 7, 1966, Inspection was its first since 1957. In the interim, the NACA disbanded and Lewis was incorporated into the new NASA space Agency. The Center reorganized to focus exclusively on space-related research and took on the management of the Centaur, Agena, and M-1 engine developmental programs. Now, Lewis was just starting to refocus its efforts to tackle issues related to civilian aviation. Associate Director Eugene Manganiello remarked at the dramatic accomplishments made since the last Inspection 9 years beforehand and noted the controversy over the references to space leading up to the 1957 Inspection.

The 1966 Inspection featured 10 stops—half of which dealt with the Center's space efforts. These addressed fluid behavior in microgravity, advanced chemical rocket engines, the Centaur rocket, ion engines, and an in-depth description of the space power systems. There were also stops that discussed materials and basic research on solar cells, lasers, and other subjects. The aeronautics talks described the Center's engine noise reduction work and air-breathing engine research. The Inspection included a film on Lewis's remote test facility at Plum Brook Station and demonstrations at the new Zero Gravity Facility.

The 1966 Inspection was also part of a year-long celebration of the Center's 25th anniversary. Nearly 2000 invited guests attended the three-day Inspection. Wilson Hunter managed the Inspection activities. For the first time Lewis hosted the guests in the Development Engineering Building auditorium instead of the Administration Building. In addition to the presentations at the major facilities, the guests viewed the Gemini VII spacecraft, a Centaur rocket, and other displays in the hangar. After the Inspection, the Center hosted an open house for employees and their families.

1966

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Documents Linked files are in PDF format

Materials for Visitors

 **1966 Inspection Brochure** (documents/1966/00_1966_Inspection_Brochure.pdf)

 **Agenda and Invitation** (documents/1966/01_Agenda_and_Invitation_1966.pdf)

 **Participant Photographs** (documents/1966/01d_Participant_Photos_1966.pdf)

Research Presentations

 **Introductions by Silverstein, Webb, and Seamans**
(documents/1966/02a_Introductions_by_Silverstein_Webb_and_Seamans_1966.pdf)

 **Introduction by Eugene Manganiello** (documents/1966/02b_Introduction_by_Eugene_Manganiello_1966.pdf)

 **Plum Brook Movie Script** (documents/1966/03a_Plum_Brook_Movie_Script_1966.pdf)

 **Materials Research** (documents/1966/03b_Materials_Research_1966.pdf)

 **Airbreathing Engines** (documents/1966/03c_Airbreathing_Engines_1966.pdf)

 **Space Vehicles** (documents/1966/03d_Space_Vehicles_1966.pdf)

 **Advanced Chemical Rockets** (documents/1966/03e_Advanced_Chemical_Rockets_1966.pdf)

 **Jet Engine Noise** (documents/1966/03f_Jet_Engine_Noise_1966.pdf)

 **Space Power - Stationary Systems** (documents/1966/03g_Space_Power_Stationary_Systems_1966.pdf)

 **Space Power - Rotating Systems** (documents/1966/03h_Space_Power_Rotating_Systems_1966.pdf)

 **Basic Research** (documents/1966/03i_Basic_Research_1966.pdf)

 **Electric Propulsion** (documents/1966/03j_Electric_Propulsion_1966.pdf)

 **Hangar Exhibits** (documents/1966/03k_Hangar_Exhibits_1966.pdf)

Media Materials

 **Press Releases and Photographs** (documents/1966/04a_Press_Releases_and_Photos_1966.pdf)

 **Newspaper Articles** (documents/1966/04c_Newspaper_Articles_1966.pdf)

Guest Lists

 **List of Invitations** (documents/1966/05b_List_of_Invitations_1966.pdf)

 **Thank You Letters** (documents/1966/05c_Thank_You_Letters_1966.pdf)

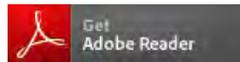
Logistics

 **Planning Materials** (documents/1966/06a_Planning_Materials_1966.pdf)

 **Tour Planning** (documents/1966/06c_Tour_Planning_1966.pdf)

 **Open House Planning** (documents/1966/06d_Open_House_Planning_1966.pdf)

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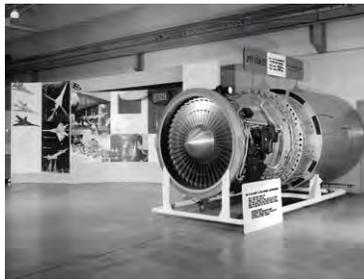
1966

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Gallery Selected images (click to enlarge)



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C-1966-3884

C-1966-3897



C-1966-3898

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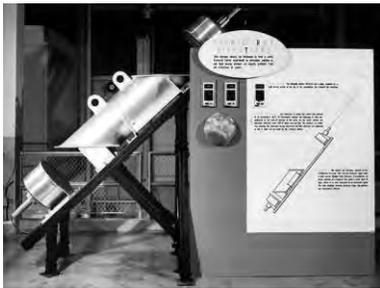
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1973

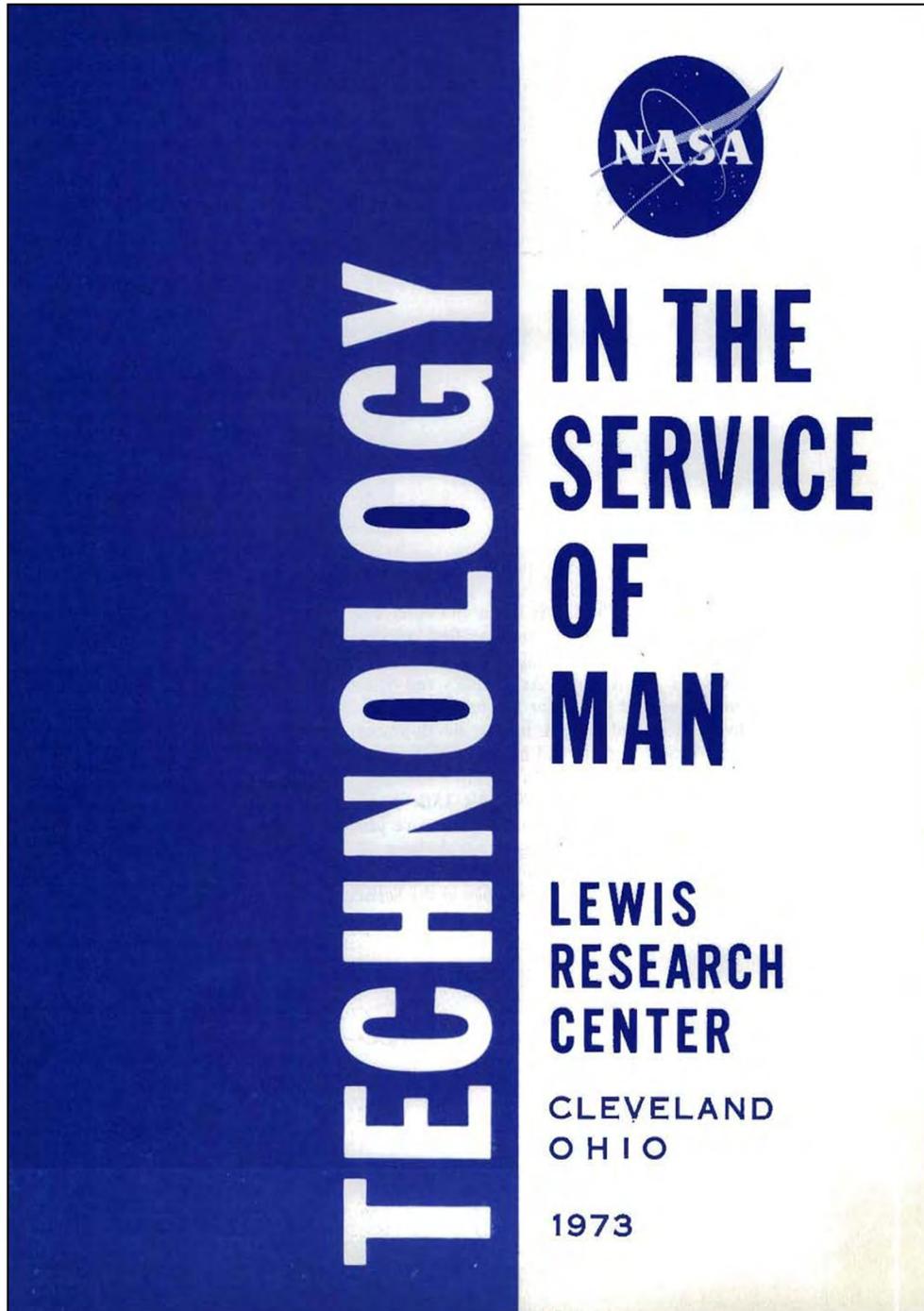


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1973

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Overview



NASA intended the September 19-21, 1973 Inspection at Lewis Research Center to be the first of a new round of Inspections at its three former NACA centers. The Apollo Program had recently ended, and the Agency's budget was plummeting. The reductions impacted Lewis, Ames, and Langley research centers more than the space flight centers. In addition, public enthusiasm for NASA had waned significantly since the Apollo 11 mission in 1969. To address this latter concern, the theme of the 1973 Inspection was "Technology in the Service of Man." It sought to demonstrate how NASA's aeronautics and space research benefited life on Earth.

In a dramatic shift, only three of the nine stops covered space topics, and these stressed their terrestrial applications. Speakers tied the Centaur rocket program to insulation and cryogenics breakthroughs that improved medical facilities, space communications systems to television signal transmission, and satellite-to-Earth observation tools. The aeronautics talks discussed quiet engines, vertical and short take-off and landing aircraft, and pollution reduction. There was a new stop dedicated to renewable energy research, as well as stops detailing the Center's work on composite materials and lubrication systems.

Nearly 900 guests attended the 1973 Inspection, which included exhibits from all of the other NASA centers in the hangar. Walter Olson managed the planning of the event. Lewis also held an open house for employees on the Sunday after the Inspection. This was followed by a multiday public open house during which 22,000 visitors listened to the talks and viewed the exhibits. Although the 1973 Inspection was a success with both the guests and visitors, it did not produce the political support that NASA had hoped for. It was the final Inspection.

1973

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Documents Linked files are in PDF format

Materials for Visitors

 **1973 Inspection Brochure** (documents/1973/00_1973_Inspection_Brochure.pdf)

 **Agenda** (documents/1973/01a_Agenda_1973.pdf)

 **Invitation** (documents/1973/01b_Invitation_1973.pdf)

 **Registration Materials** (documents/1973/01c_Registration_Materials_1973.pdf)

 **Participant Photos** (documents/1973/01d_Participants_Photos_1973.pdf)

Research Presentations

 **Introduction by Bruce Lundin** (documents/1973/02a_Introduction_by_Bruce_Lundin_1973.pdf)

 **Introduction by Fletch, Lundin, Low, and Olson** (documents/1973/02b_Introduction_Fletcher_Lundin_Low_1973.pdf)

 **Quieting the Fleet** (documents/1973/03a_Quieting_the_Fleet_1973.pdf)

 **Cleaner Skies** (documents/1973/03b_Cleaner_Skies_1973.pdf)

 **Powered Lift** (documents/1973/03c_Powered_Lift_1973.pdf)

 **Big Boost from Rockets** (documents/1973/03d_Big_Boost_from_Rockets_1973.pdf)

 **Space Electronics** (documents/1973/03e_Space_Electronics_1973.pdf)

 **Clean Energy** (documents/1973/03f_Clean_Energy_1973.pdf)

 **Materials for Man** (documents/1973/03g_Materials_for_Man_1973.pdf)

 **Impact of Wear** (documents/1973/03h_Impact_of_Wear_1973.pdf)

 **Servants in Space** (documents/1973/03i_Servants_Space_1973.pdf)

 **Hangar Exhibits** (documents/1973/03j_Hangar_Exhibits_1973.pdf)

Media Materials

 **Press Releases and Photographs** (documents/1973/04a_Press_Releases_and_Photos_1973.pdf)

 **Lewis News Articles** (documents/1973/04b_Lewis_News_Articles_1973.pdf)

 **Newspaper Articles** (documents/1973/04c_Newspaper_Articles_1973.pdf)

Guest Lists

 **List of Attendees** (documents/1973/05a_List_of_Attendees_1973.pdf)

 **Center Director Invitations** (documents/1973/05b_Center_Director_Invitations_1973.pdf)

 **List of Invitations** (documents/1973/05c_List_of_Invitations_1973.pdf)

 **Thank You Letters** (documents/1973/05d_Thank_You_Letters_1973.pdf)

Logistics

 **Planning Materials** (documents/1973/06a_Planning_Materials_1973.pdf)

 **Preparation of Technical Talks** (documents/1973/06b_Preparations_for_Technical_Talks_1973.pdf)

 **Tour Planning** (documents/1973/06c_Tour_Planning_1973.pdf)

 **Post-Event Materials** (documents/1973/06d_Post-Event_Materials_1973.pdf)

 **Expenses and Budget** (documents/1973/06f_Expenses_and_Budget_1973.pdf)

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