PRESS RELEASES

COMMITTEE HEADQUARTERS
1724 F STREET, NORTHWEST
WASHINGTON 25, D. C.

LANGLEY MEMORIAL AERONAUTICAL LABORATORY
LANGLEY FIELD, HAMPTON, VA.

FLIGHT PROPULSION RESEARCH LABORATORY
CLEVELAND AIRPORT, CLEVELAND 11, OHIO

NATIONAL ADVISORY COMMITTEE
FOR AERONAUTICS
AMES AERONAUTICAL LABORATORY
MOFFETT FIELD, CALIF.

TELEPHONE: YORKSHIRE 7-5581

July 13, 1948.

SPECIAL NOTICE

FOR

REPRESENTATIVES OF THE PRESS

Press releases will be distributed by Mr. E. E. Miller in the small dining room, downstairs from the foyer of the Auditorium, at 10:23 a.m., on July 13, 1948 immediately following the opening session of the Inspection in the Auditorium. Your questions should be addressed to Mr. Miller at that time.

You are welcome to take photographs at will in the Administration Building and in the Auditorium. The first row of seats in the Auditorium will be reserved for you for the purpose.

Cameras are not permitted beyond the Auditorium. Please leave them in the check room in the foyer of the Auditorium before you join the tour of the Laboratory.

/s/
Smith J. DeFrance,
Director.

NATIONAL ADVISORY COMMITTEE FOR AERONAUTICS

1724 F Street, N.W. Washington 25, D.C.

PLEASE NOTE RELEASE DATE
FOR RELEASE
AM's, WEDNESDAY, JULY 14, 1948

"JIMMY" DOOLITTLE SWORN IN AS NEW NACA MEMBER

Ames Laboratory, Moffett Field, California, July 14, 1948:- Dr. James H. Doolittle was sworn in today as a new member of the National Advisory Committee for Aeronautics, the government's aeronautical research agency. The ceremony took place at the NACA's Ames Aeronautical Laboratory at Moffett Field, California.

Dr. Doolittle comes to the NACA under a new law increasing the membership of the Committee from 15 to 17. The second member to be added is Dr. Detlev W. Bronk, physicist and physiologist, who is to be sworn in soon. An additional change provided by the law is establishment of the Chairman of the Research and Development Board as a permanent member. As a result of this, Dr. Vannevar Bush, previous member from private life, was made an official member as Chairman of the RDB. The two new members are appointed from private life on the basis of their knowledge and qualifications in aeronautics.

Dr. Doolittle brings to the Committee a trained scientific mind, outstanding knowledge and experience of the practical problems of aeronautics and unusual qualities of leadership. He is a graduate engineer with a Doctor of Science degree in aeronautical engineering from M.I.T. In addition to his scientific qualifications, Dr. Doolittle is an outstanding pilot. He pioneered blind landings of aircraft, and won both the Schneider and Thompson trophy races. During World War II he distinguished himself throughout as an air general of unusual stature and ability. He is now vice president of the Shell Union Oil Corporation. He holds the Congressional Medal of Honor, is a Fellow of the Royal Aeronautical Society of London, and past President and Fellow of the Institute of the Aeronautical Sciences.

Dr. Bronk is an outstanding scientist in the field of human physiology and aeromedical research, and is director of the Johnson Foundation for Medical Physics at the University of Pennsylvania. He has a Ph.D. from the University of Michigan and an Sc.D. from Swarthmore. He was coordinator of research in the Air Surgeon's office, chairman of the Committee on Aviation Medicine of the National Research Council and chief of aviation medicine for the Office of Scientific Research and Development. He is a member of the National Academy of Sciences, the Aeromedical Association, the American Physical Society, the American Physiological Society and other scientific organizations.

July 9, 1948.

NATIONAL ADVISORY COMMITTEE FOR AERONAUTICS

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PLEASE - Note Release Date
For Release

IMMEDIATE RELEASE

TRANSONIC AIRFLOW VISUALIZED ON AIRPLANE WING BY NEW NACA TECHNIQUE

Ames Laboratory, Moffett Field, California:-- By a new adaptation of wind tunnel "schlieren" apparatus for visualization of shock waves, the NACA can now visually study transonic phenomena on a wing in actual flight. The new device uses the same principle as the wind tunnel apparatus, and projects a beam of parallel light rays through the flow field over a wing, where density variations refract the light and register images of the shock wave and other density changes on a camera film. This method differs from observation of shock waves in sunlight in that it gives a detailed view in a vertical plane through shock wave and boundary layer air, whereas ordinary observation merely shows the shock wave shadow horizontally along the wing.

Importance of the new step lies in the opportunity afforded for study of interaction between transonic shock waves and the boundary layer on an actual wing in flight. It is believed that this relationship is a clue to explanation of many transonic occurrences so far not understood. When correlated with pressure changes recorded on the wing surface and in the wing wake, visual shock wave study may help explain effects of shock wave oscillation on drag, buffeting and control flutter at high speeds.

The apparatus consists of two fairings that form an air channel over the wing surface. A beam of light of uniform frequency (monochromatic) is projected across the channel to a camera, which records the refracted patterns corresponding to air density changes.

One great difficulty to successful application was interference of direct and reflected sunlight. This was overcome by use of a light beam of a single frequency, paired with a filter on the camera which admits light of only the frequency of the projected beam, preventing stray light of other frequencies from registering.

Another obstacle was airplane vibration, which disturbed the optical system. This was remedied by mounting the whole optical system on a single rigid frame and attaching it to the structure with shock mounts.

In addition to these difficulties, great skill is needed on the part of the pilot to keep an oscillating shock wave within the three-inch field of the apparatus. However, further experience will undoubtedly lead to improvements, and indicate the best location for the device and the shape of the fairings, so that airplane attitude will be less critical.

Information from the new device will contribute added knowledge of the mixed sub- and supersonic airflow conditions that exist together at flight speeds near the speed of sound.

July 7, 1948.

PRESS RELEASE

DISTINGUISHED GUESTS ATTENDING THE 1948 INSPECTION OF THE AMES AERONAUTICAL LABORATORY.

ARMY - AIR FORCES

Brig. Gen. C. Y. Banfill, USAF, Armed Forces Staff College	Norfolk, Va.
Maj. Gen. C. P. Cabell, USAF	Pentagon, Washington, D. C.
Lt. Gen. H. A. Craig, USAF, Deputy Chief of Staff, Materiel Headquarters	Washington, D. C.
Brig. Gen. R. W. Crichlow, Jr., Res. and Dev. Board, National Military Estab.	Washington, D. C.
Brig. Gen. D. L. Putt, USAF Headquarters	Washington, D. C.
Maj. Gen. J. F. Curry, (USA) (Ret)	Denver, Colo.
Maj. Gen. Robert M. Lee, USAF, Tactical Air Command, Langley Air Force Base	Hampton, Va.
Maj. Gen. W. H. Tunner, Deputy Commander, Operations Headquarters, MATS	Washington, D. C.
Maj. Gen. F. L. Anderson (USAF) (Ret.), Hodges Res. and Dev. Company	Redwood City, Calif.

MANUFACTURERS

D. W. Douglas, Jr., Director of Contract, Req. and Testing	Douglas Aircraft Santa Monica, Calif.
Elmer A. Sperry, Jr., The Engineers Club, New York, N. Y.	Sperry Gyroscope Co. (I.A.S.)

John K. Northrop, President	Northrop Airc. Co., Inc. Hawthorne, Calif.
W. B. Oswald	Douglas Airc. Co., Inc. Santa Monica, Calif.
Clarence L. Johnson	Lockheed Airc. Corp. Burbank, Calif.
S. Paul Johnston, Director	Institute Aero. Sciences New York, N. Y.
Dr. Clark B. Millikan, Acting Director	Calif. Inst. of Tech. Guggenheim Aero. Lab. Pasadena, Calif.
Maj. Gen. F. L. Anderson (USAF) (Ret.)	Hodges Res. and Dev. Co. Redwood City, Calif.

NAVY

Rear Adm. M. F. Schoeffel, USN, Bureau of Ordnance, Navy Dept.	Washington, D. C.
Captain A. C. Olney, USN, Commanding Officer, Naval Air Station	Moffett Field, Calif.
Captain R. S. Hatcher, USN, Commanding Officer, U.S. NAMTC	Point Mugu, Calif.
Vice Adm. J. D. Price, USN, Deputy Chief of Naval Operations (Air)	Washington, D. C.
Brig. Gen. L. H. M. Sanderson, United States Marine Corps, El Toro, Calif.	Santa Ana, Calif.
Rear Adm. Theodore C. Lonnquest, USN, Asst. Chief BuAer for Res. and Dev. and Engr., Navy Dept.	Washington, D. C.

NACA

A. E. Raymond, Vice President of Engineering Douglas Aircraft Co. Santa Monica, Calif.	NACA Member

Dr. T. P. Wright, Vice Pres. for Research Cornell Aero Lab Buffalo, N. Y.	NACA Member
Dr. Hugh L. Dryden, Director of Aeronautical Research NACA Headquarters Washington, D. C.	NACA Director
Smith J. DeFrance, Director Ames Aeronautical Laboratory Moffett Field, California	
Dr. J. H. Doolittle, Vice President, Shell Union Oil Corporation New York, N. Y.	NACA Member
Dr. J. C. Hunsaker, NACA Headquarters Washington, D. C.	NACA Chairman
J. F. Victory, Executive Secretary, NACA Headquarters Washington, D. C.	NACA Secretary
Vice Adm. J. D. Price, USN Deputy Chief of Naval Operations (AIR) Navy Department Washington, D. C.	NACA Member
Dr. H. J. E. Reid, Director, Langley Aeronautical Laboratory Langley Field, Va.	
Dr. Alexander Wetmore, Secretary Smithsonian Institute Washington, D. C.	NACA Vice Chairman
Dr. E. R. Sharp, Director Jet Propulsion Research Laboratory Cleveland, Ohio	
Hon. John R. Alison, Asst. Secretary of Commerce Washington, D. C.	NACA Member
Rear Adm. Theodore C. Lonnquest, USN Asst. Chief, BuAer for Res. and Dev. and Engr., Navy Dept., Washington, D. C.	NACA Member

NATIONAL ADVISORY COMMITTEE FOR AERONAUTICS
AMES AERONAUTICAL LABORATORY, MOFFETT FIELD, CALIF.

July 14, 1948, Moffett Field, California.

Dr. Doolittle and Mr. Hoover examining instrumentation in the nose of a jet-driven airplane at the Ames Aeronautical Laboratory.

NATIONAL ADVISORY COMMITTEE FOR AERONAUTICS
AMES AERONAUTICAL LABORATORY, MOFFETT FIELD, CALIF.

July 14, 1948, Moffett Field, California.

Dr. James H. Doolittle being sworn in as a member of the National Advisory Committee for Aeronautics by John F. Victory, (left), Executive Secretary of the NACA, as Dr. James C. Hunsaker, (right), NACA Chairman looks on. Well known as Lt. General "Jimmy" Doolittle, the famed flier was recently appointed to the Nation's top aeronautical research agency by the President.

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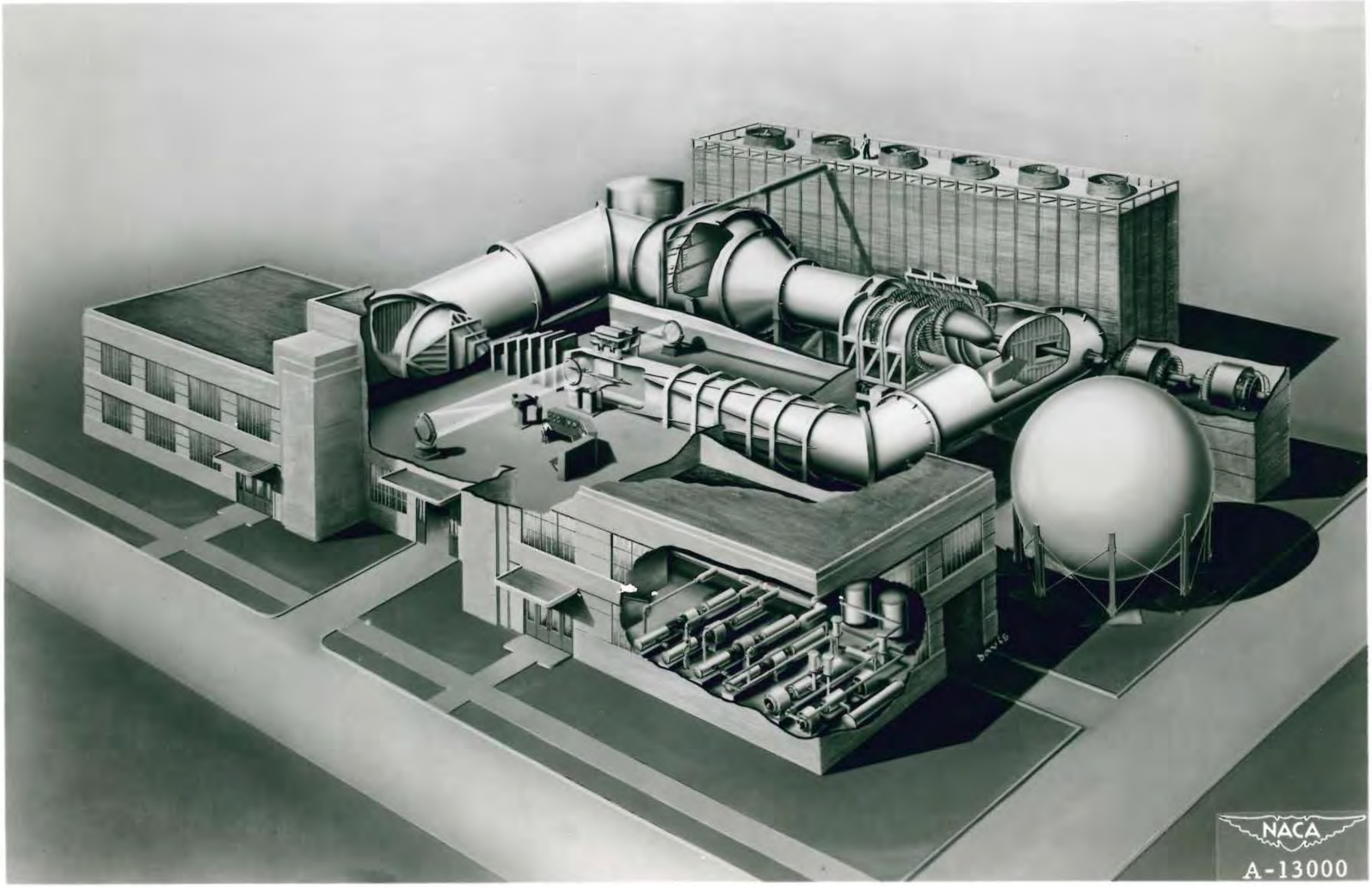
July 14, 1948, Moffett Field, California.

Dr. Doolittle and Mr. Hoover examining instrumentation in the nose of a jet-driven airplane at the Ames Aeronautical Laboratory.



Cutaway drawing of the 6- by 6-foot supersonic wind tunnel, latest major addition to the facilities of the Ames Aeronautical Laboratory.

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Model mounted in the test section of the 6- by 6-foot supersonic wind tunnel.

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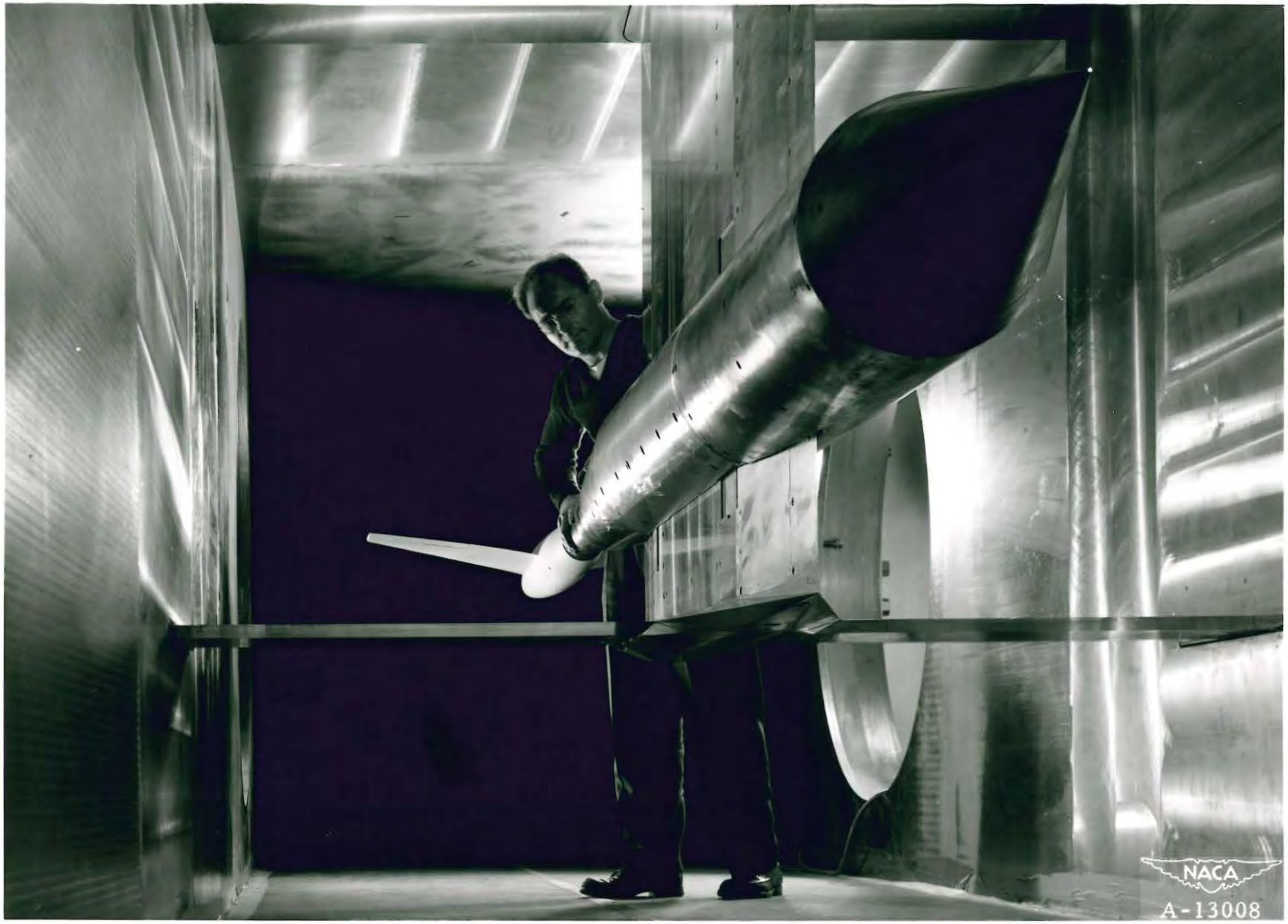

Rear-view of the model support in the 6- by 6-foot supersonic wind tunnel.

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Turning vanes in the 6- by 6-foot supersonic wind tunnel.

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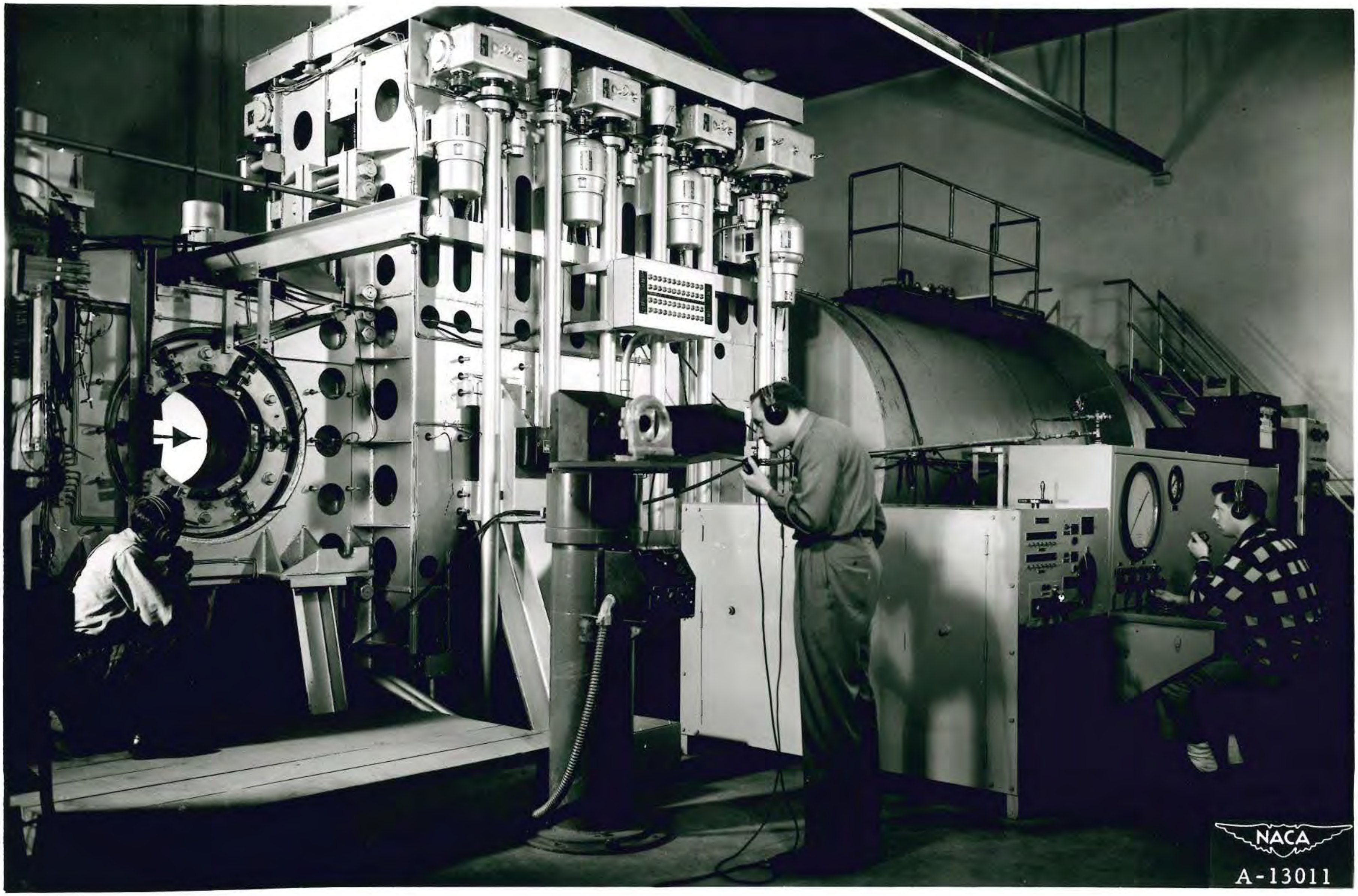

Mach number variation is provided by this flexible throat in the Ames 1- by 3-foot supersonic wind tunnel No. 2.

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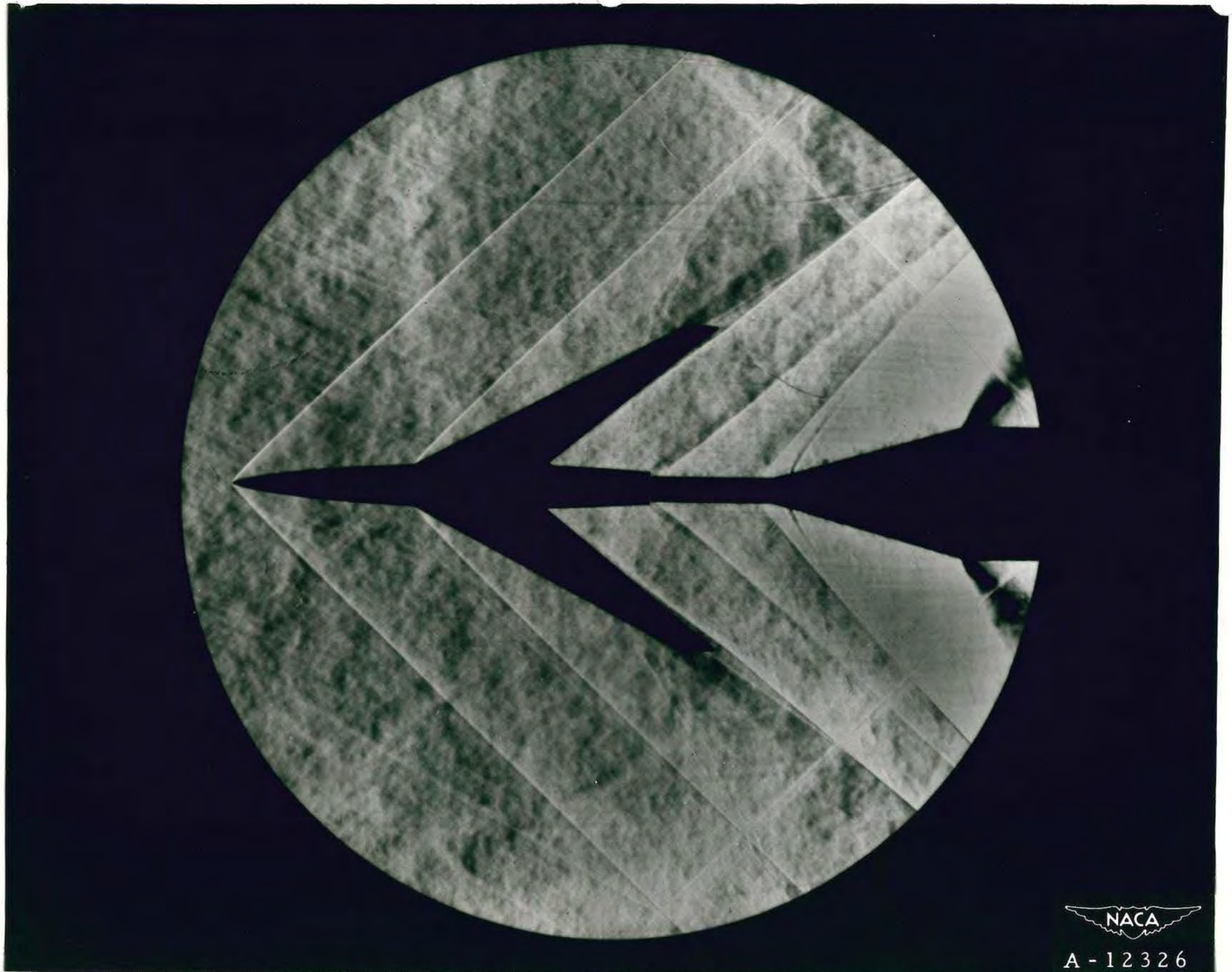

Schlieren photograph of a swept-wing model at a Mach number of 1.5 in the Ames 1- by 3-foot supersonic wind tunnel No. 1.

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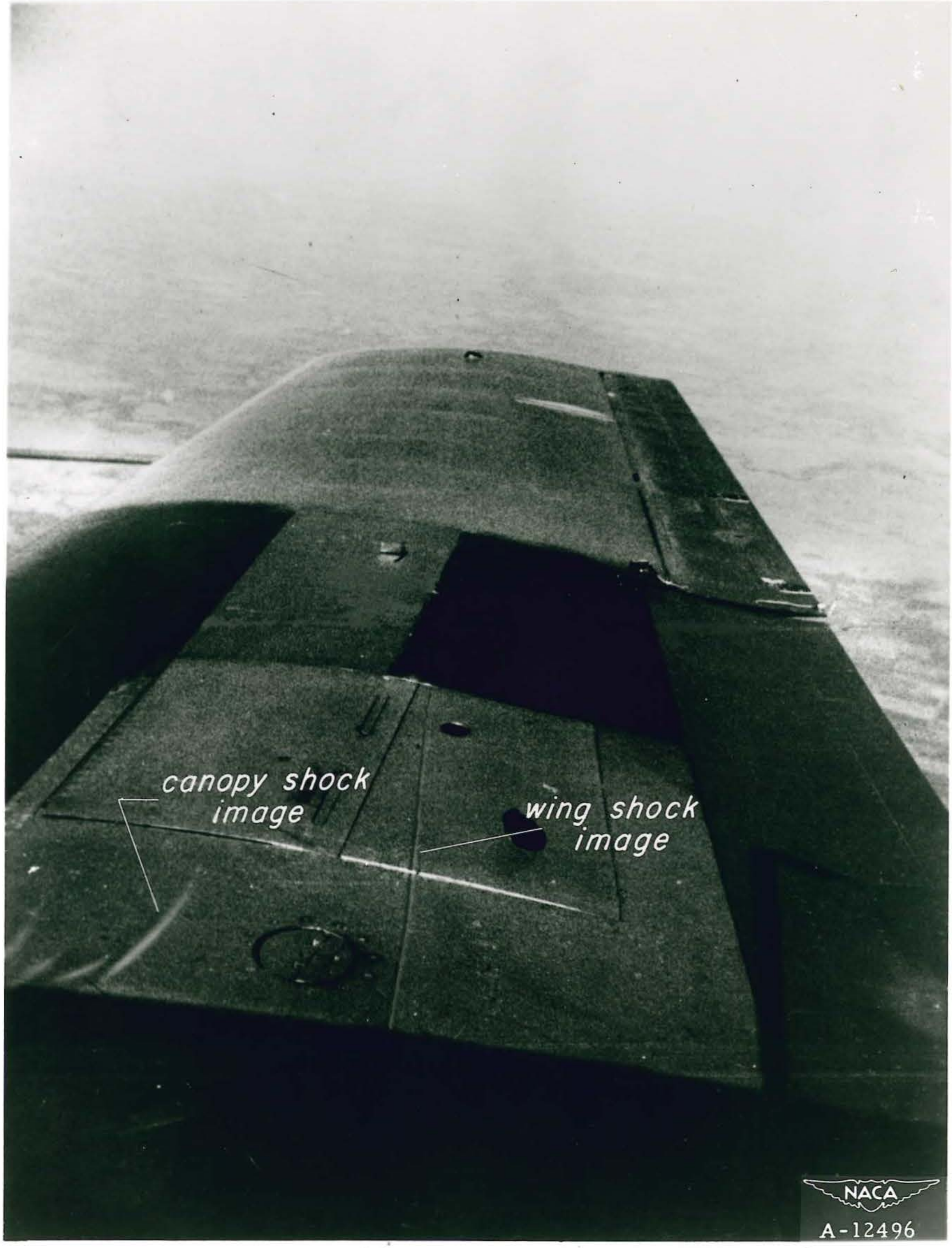
The wing-schlieren apparatus installed on the wing of a P-51 airplane.



Shadowgraph of shock-wave formation on a P-51 airplane in flight.

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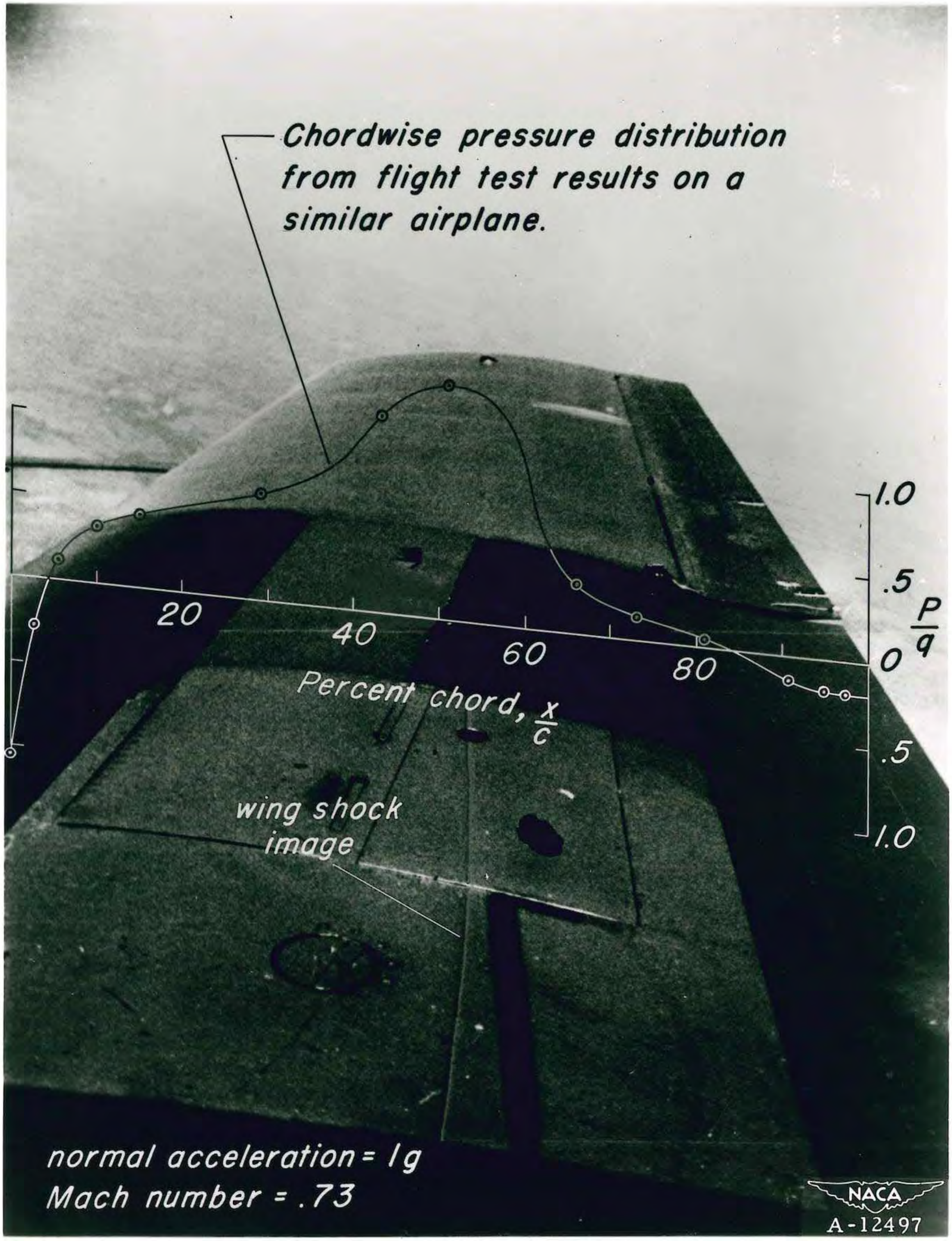

Shadowgraph of shock wave and corresponding pressure distribution on the wing of a P-51 airplane in flight.

A model of the P-80 airplane being mounted on the wing of a P-51 airplane for wing-flow tests.

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A close-up of the P-80 model mounted for testing at transonic speeds by the wing-flow method.

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A triangular wing model mounted in the test section of the Ames 12-foot high-pressure wind tunnel.

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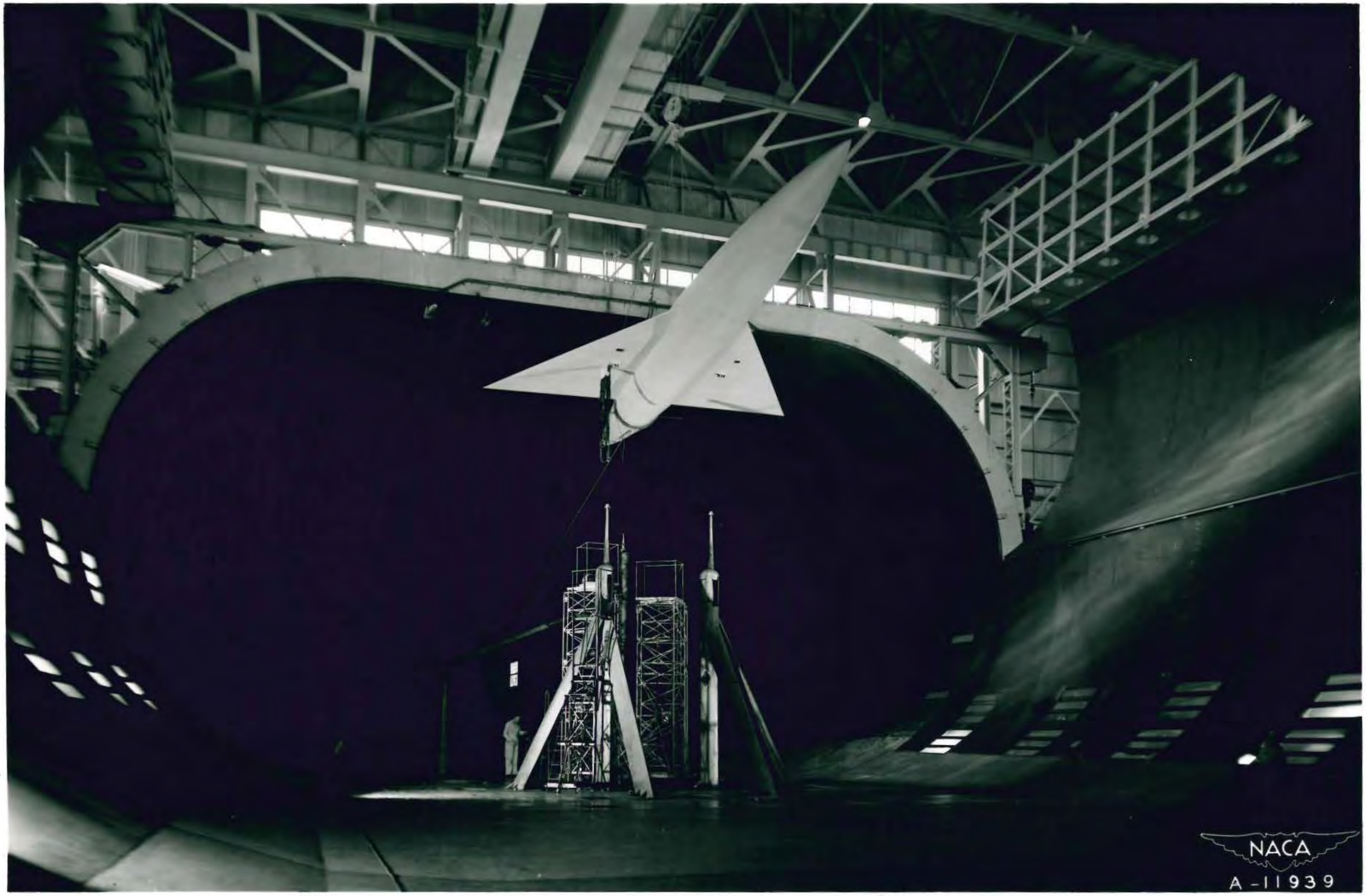

A triangular wing model being mounted in the Ames 40- by 80-foot wind tunnel.

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The 16-foot high-speed wind tunnel at the Ames Aeronautical Laboratory.

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A view of the wind tunnels at the Ames Aeronautical Laboratory, Moffett Field, Calif.

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Aerial view of the NACA Ames Aeronautical Laboratory, Moffett Field, Calif.

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