AIR SCOOP

LANGLEY MEMORIAL AERONAUTICAL LABORATORY

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CLEVELAND ANNOUNCES SUPERSONIC TUNNEL

Cleveland, Ohio, August 2. Fundamental research on aircraft propulsion plants operating at equivalent sea level velocities up to and beyond 2,000 miles per hour is now being conducted in a new type of supersonic wind tunnel completed at the NACA aircraft propulsion research laboratory in Cleveland, it was announced here today.

The wind tunnel is a unique research facility for investigating at supersonic velocity the operating characteristics of models of turbo jet, ram jet, and similar engines expected to propel aircraft and guided missiles through space at speeds hitherto unrealized except by projectiles shot from guns.

Dr. Jerome C. Hunsaker, Chairman of the NACA, points out that aviation is entering an era of revolutionary change resulting from the development of new methods of propulsion. The new propulsion systems open up extraordinary high-speed possibilities. The Cleveland supersonic wind tunnel is an

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COW DANCE AUGUST 16

Marking the second anniversary of the first sale of a Green Cow ticket to a resident of Ann Wythe Hall, the Green Cow will hold a gala dance Thursday evening, August 16, at the Grand View Pavilion (now located at Grand View).

Cowmitteemen promise a treat in the way of music for the occasion. Said music will be provided by Kirby Johnson and his orchestra, an aggregation new to Peninsula dance circles but fast achieving real popularity. Johnson, formerly with Bunny Berigan's orchestra, is now employed at the Laboratory.

SO SORRY, PLEASE.

Quite by accident, when last week's story on the bond finals was being prepared, the Buildings and Grounds Section failed to receive proper credit for their record. We extend our apologies and our congratulations for they were among the leaders with 348 percent of quota subscribed.

LAB TESTED PLANES SHOWN AT LANGLEY

Employees of the Laboratory, who since war began have been in the dark as to much of the value of their work, got a close-up view of the results of their labor Wednesday when they took the afternoon off to view the air show staged at Langley Field in honor of the Army Air Forces' 38th Birthday.

All types of up to the minute Army airplanes, including the mammoth Superfortress, the dashing jet-propelled Airacomet, the queer looking helicopter, and scores of other fighters, bombers, and cargo craft were on display, many of them participating in mock air battles and other flying demonstrations.

One of the most popular ships in the lot was the B-29. Raiding the Jap homeland for the past year, it is one of the most talked about airplanes ever in service. The Laboratory's connection with this sky giant began with wind tunnel tests in the 8-Foot high speed tunnel early in 1942. Eight thousand hours of wind tunnel testing went into the Superfort before the first flight test. The NACA received the thanks of the Boeing Company for the early availability of preliminary data on the model tests, which allowed a material speed up of operations.

Vying with the Superfort for popularity was the Airacomet, Bell Aircraft's P-59. The first jet propelled airplane built in this country, it is serving as a flying laboratory for problems relating to this revolutionary design. The P-59 visited the Full Scale tunnel a long time ago, as does nearly every service airplane. The "big wind" at Full Scale specializes in a little job called clean up. This is the streamlining of the airplane as much as possible to eliminate unnecessary drag. Because of the work in this tunnel many airplanes have been able to add considerable to their top speeds.

One of the Army's newest fighters and one that is put in the 400 m.p.h. class is the King Cobra, big brother to the old Airacobra. Designated the P-63 it is in the speed class of the Thunder-

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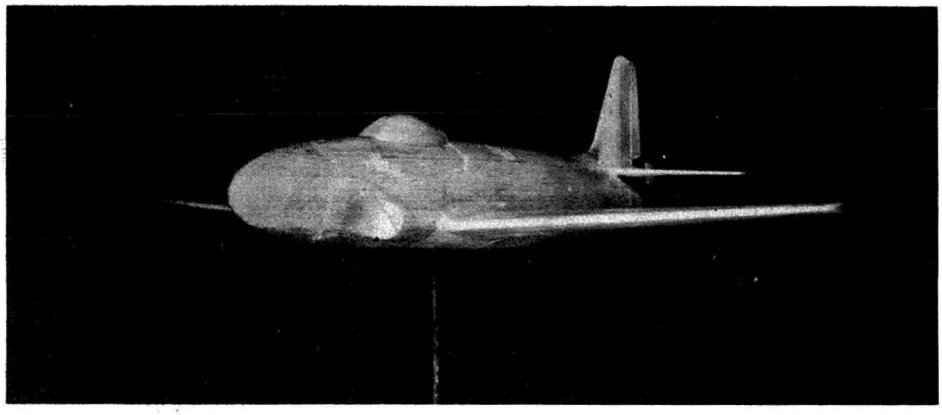

boratory officials revealed this week that the Shooting Star, new jet propelled .-80, was tested in the Spin Tunnel here early in 1944. The Spin Model is shown above. Its performance is officially listed at better than 500 m.p.h. with a ceiling of more than 45,000 feet. In actual flight it has demonstrated that it will do better than 580 m.p.h. Additional investigations were also made by AAL, and the airplane boasts as one of its speed making features, an NACA high speed wing.

LIFE at the LABORATORY

A letter from Cleveland . . . . .

came in last week expressing through the words of Wing Tips Editor, Maurice Munger, the opinion of several AERL employees that Wing Tips was not a suitable name for their newspaper nor was Air Scoop ideal for ours and would we like to change. Having 25 percent of the Langley employees calling us Air Scoop, 25 calling us Bulletin and 50 varying from "Hey, You" to "Look, Stupid" and on down the line, we see no reason for adding another name on our own hook. After sampling Laboratory opinion (two girls in the next office) we thanked him for his interest but asked that we be allowed to remain Air Scoop. Cleveland can have all the big conferences, generals, and publicity but they cannot have our good name.

Two youthful West Area characters . . . . .

Jo Farthing, Stability Tunnel, and Eddie "The Kid" Polhamus, 7 x 10, came back from a visit to Eddie's home in Washington with a pair of stupid looking grins and a diamond. "When are you gonna get married?" we asked. "Sometime in 1952," answered Jo as the Kid's face fell. "We thought it was to be in the fall," we explained. Says Jo, "Oh, it will be----maybe." All of which leaves us marvelling at increasing number of joint income tax declarations that are filed from here.

The irony of fate . . . . .

is what you might call it, but Lt. Col. J. H. Belknap, Administrator of the Army-Navy-NACA Militarization Plan, has been replaced. A veteran of the last war, the Colonel is bound to be pleased at a chance to get overseas this time, if reports that we hear about his going to Germany are true. At present, Lieut. Lee Mercer of the Navy has taken over the Colonel's duties with the plan.

Leave us watch the way . . . . .

we apply for leave. A section head referred the following application which he received. "I hereby apply for two weeks' leave. I am not sick. I'm able to sit up and take nourishment, but I do have an acute case of 'Hampton fatigue' complicated by the 'NACA Blues'. There is a good medicine for the above; it is labeled "LEAVE". I would like to take this medicine daily from August 10th to August 25th inclusive. Please fill the prescription and oblige. Yours . . . . . ." We are advised by the section that he called the man in for a further explanation before he would okay any such request as that. We thought that it was kinda cute.

With all necessary apologies to "The Aeroplane" . . . . .

we print the latest drivel that has come this way about high speed flight. Several years ago, explorers in South America reported that they had discovered a new insect, the Deer Bott Fly, which was capable of flying 1500 m.p.h. The eminent U. S. scientist, L. P. Tosti, stated that he had obtained conclusive evidence that the Bott Fly could not possibly attain a speed above 500 m.p.h.

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R. A. F. Flt. Lt. Y. R. Z. Cholmondeley, C.B.E., A.F.C., M.C., D.S.O., C.B., having read Dr. Tosti's report repudiates it with the statement that although it is impossible for an ordinary Bott Fly to ever reach 500 m.p.h., that the British Bott Fly will do well over 550 m.p.h. Lt. Cholmondeley also states that RAF pilots flying Mosquito bombers report having seen Bott Flies of the British variety at 80,000 feet altitude. (Ed. note: The highest a Western Hemisphere Bott Fly has been sighted is 50,000 feet by a U. S. Navy pilot flying over Brazil in a new high altitude, jet fighter plane (designation Confidential - British Secret). The British Deer Bott fly also has a bigger bite, longer range, and climbs straight up.)

An adventuresome three-year-old . . . . .

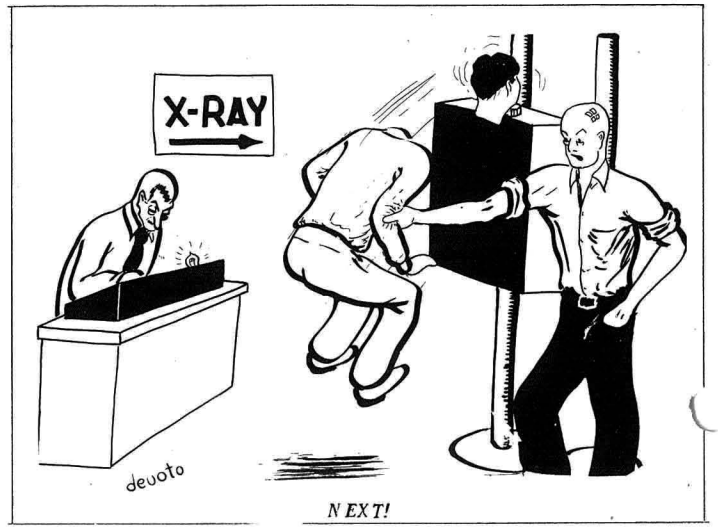
Young Sean Quinn, son of John Ditto of Low Turbulence, "got losted" in the crowd at the air show and turned up at the announcers stand where his plight was announced to the mob. When claimed by papa, Sean volunteered information that he was a bad boy, said he was glad the soldiers didn't shoot him, appreciated the ride he got in a jeep, stayed miraculously quiet and close for the rest of the day, much to the amazement of mama and papa who wouldn't mind if it was an everyday occurrence, if it's that easy.

The boys in Open Water Research . . . . .

very nearly inherited a new test model in the form of a bright fire-engine-red fire engine which came screeching to a quivering stop at the brink of Back River Saturday afternoon. Summoned to the aid of two canoers clinging to their overturned craft, the firemen decided against investigating the amphibious characteristics of their gallant but conventional vehicle, and were at a loss as to a means of reaching their quarry until the Air Sea rescue command of Tank No. 1 took a hand. As the firemen stood by offering advice and encouragement, Jack Smith and John Jacobs bailed out the rowboat used for servicing outdoor hydrodynamic models and cast off in the direction of the two drifting heads. After a desperate stretch drive in which they barely nosed out the Army crash boat, the boys reached the stricken craft and hauled the survivors back to the garbage dump. Congratulated by the spectators lining the shore to watch the thrilling rescue, Jack Smith blushed and said, "Shucks, it wasn't anything much. One of 'em was so small I thought we'd have to throw him back."

Two well known dashing Laboratory yachtsmen . . . . .

Axel Mattson and Sid "Notsofatso" Batterson (who says, "please don't confuse me with my roommate Fatso Fedziuk) were temporarily marooned in Hampton Roads one evening last week when their deluxe cabin cruiser, Chug Chug, ran around on a sewer pipe. On them it looked good.



19-FOOT, AWT TAKE TWO CLOSE GAMES

With most of the league cursing the deluge that played havoc with three weeks' schedule, 19-Foot took advantage of a fifth inning downpour last Friday to chalk up a 3-2 win over the Structures Reds. Al Martina was the winning pitcher, but loser Andy Anderson was the star of the game. Providing the only pitching opposition to compare favorably with Martina this year, the lanky Andy also clouted a powerful triple into right field that drove in both the losers' runs. Both pitchers gave up three hits, Martina walking five and striking out eight, and Andersib walking four and striking out six.

Martina started badly, walking the first three batters, but settled quickly, striking out two of the next three men. The winners scored in their half of the first, Conner taking first on a fielder's choice, second on a wild pitch, and home on George Zender's muff of Pete Deters' fly to left. The Reds came back in the third when Woods beat out a bunt; Bartone walked; and Anderson tripled. Nineteen-Foot's winning majority came in the fourth when Conner walked; Deters singled, Woods' wild throw scoring Conner; and Cancro doubled Deters home. Rain came in the last half of the fifth while 19-Foot had two on and two out.

AWT and Tank played to a thrilling 2-1 climax on Monday with AWT on top. Only argument in the game was "who is going to give it to whom". In the sixth inning, with no score before, Hoffman, Tank catcher, drew a walk, stole second, went to third on an infield out, and scored when first baseman Schuldenfrei's throw to third was wild. AWT came back in their half as Spearman got his third hit of the afternoon; McKee beat out an infield hit, the throw to first being wild; the attempt to catch Spearman at the plate was late; and Hoffman threw wild to third, letting in McKee.

Andrews allowed three hits for the winners and Mitchel seven for Tank.

Team	W	L	Pctg.
19' P. T.	15	0	1.000
East Shops	12	1	.923
Structures Reds	14	3	.824
Low Turb	10	3	.762
IRD	11	4	.733
AWT	10	5	.667
16-Foot	9	6	.600
Flight Blues	10	7	.588
Tank	9	7	.563
Full Scale	8	8	.500
PRT	6	6	.500
8-Foot	6	7	.462
PRD	6	8	.429
West Shops	6	10	.375
Stability	4	11	.267
Electrical	3	9	.250
Reproduction	3	10	.231
Structures Whites	4	14	.222
Flight Whites	2	14	.125
Loads	0	15	.000

COUNCIL HEAD TELLS OF RECREATION PLANS

by Peter F. Korycinski
President - Temporary Recreation Council
(Ed. Note) This is the first of a series of articles pertaining to events leading to the development, past and present, of the plans for your recreation center.)

While the Laboratory staff has displayed keen interest in recreational activities, these activities have never been organized into one effective association. The need for such an organization is apparent. When the plans for our recreation center are realized, many new problems will arise. At present, each organization, athletic or otherwise, has sought to solve its particular problems by its own enterprise and ingenuity. Still, many problems could not be solved mainly because of lack of proper resources and support.

One of the main functions of the LMAL Temporary Recreation Council has been to provide for just such an organization. Before undertaking a discussion on the proposed association of recreational organizations, it is in order and some may rightfully say "it's about time" - that the history and the activities of the LMAL Temporary Recreation Council be disclosed. It is doubtful that the council is publicity shy, but heretofore much of its activities and planning have been of a restricted nature. Developments have been slow and often very uncertain. Until funds were actually promised from the Federal Works Authority, the entire plans for a recreation center were shrouded in uncertainty.

To begin with, Laboratory Officials had been aware for some time of the need for coordinated recreational activities and facilities. To secure funds, the Laboratory needed a justification for a budget appropriation, and thereupon called a meeting of representatives of existing laboratory recreational groups to provide such a justification. This group, after suitable discussion, called itself the Temporary LMAL Recreation Association.

The Temporary Association is composed of representatives from each of the following existing organizations: Green Cow, John Houbolt and Charlie Kelley; Brainbusters, Charlie Folk; Men's Softball, Art Vogeley; Women's Softball, Annie Young; Touch Football, Irwin Schumacher; Women's Basketball, Shirley Huxter; Tennis Club, Hewitt Phillips; Bowling, Si Diskin; Men's Basketball (NACA), Frank Read; Men's Basketball (League), Pete Korycinski; Hampton Little Theater, Dave Goldenbaum; and Editor of Air Scoop, Tiny Hutton.

Justifications for each activity were duly written up by each representative and were submitted to Lab officials for further actions.

After the consolidated justification was presented to the Washington Office it was channeled to the Federal Works Agency, whose responsibility is to provide such facilities in war areas where such needs exist. After long consideration the final green light came through with the $110,000 appropriation for a recreation center for this Laboratory. The work had just begun. From that point until now, the temporary council has worked constantly toward securing the best possible facility from the funds available.

REID, CORSON WIN MATCHES

Two Laboratory employees, H. J. E. Reid and Blake Corson, captured first place in the two rifle events sponsored by the Hampton Rifle club at the range on Woodland Road last Sunday. This was the fourth in a series of eight biweekly summer matches.

Firing in a prone match which consisted of 10 shots at 50 yards and 10 shots at 100 yards, Reid posted 197 out of a possible 200 to chalk up his fourth consecutive win of the season. John Stack followed close behind with 195 - 8x.

In the second match which consisted of 10 shots at 50 yards kneeling and 10 shots at 50 yards sitting. Blake Corson came through with the winning score - 182 out of a possible 200.

Laboratory employees have played an active part in these biweekly matches and all interested persons are invited to take part in the next event on Sunday, August 12.

★ ★ ★

TENNIS TOURNEY NOW UNDERWAY

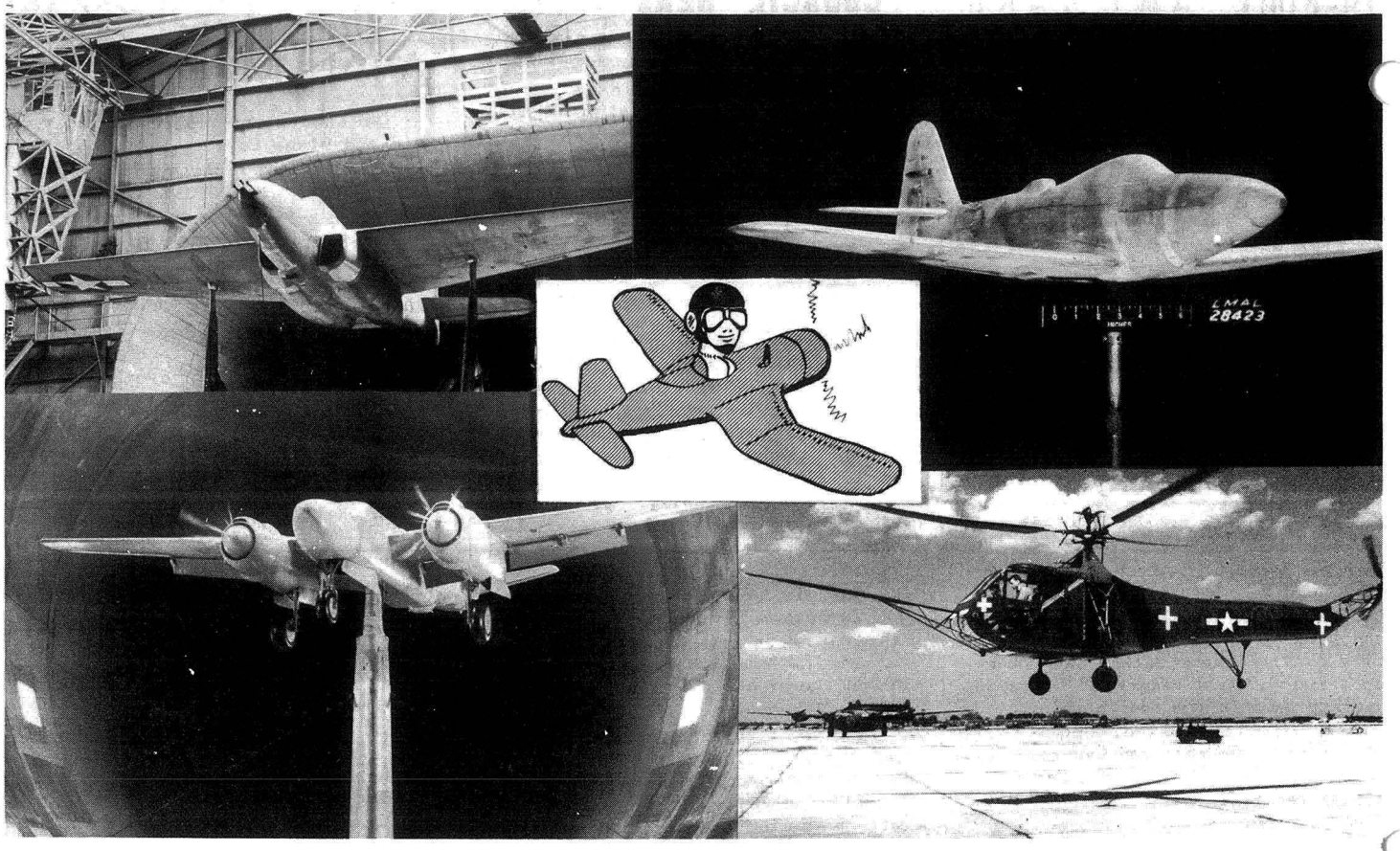
The Elizabeth City County Tennis tournament opened with its first matches on Monday, July 30. Sgt. William Scott of Fort Monroe defeated Dave Haynes. East Engineering, 6-0, 6-0, and Howard Edwards, Instrument Applications, won out over Ed Kruskewski, Structures, 6-2, 6-1. Schedules will be posted in the Daily Press for each day's matches.

BRAINBUSTERS CLUB TO MEET SUNDAY

A meeting of the Brainbusters will be held at the Industrial USO on Sunday, August 12. The purpose of the meeting will be to plan the annual Brainbusters contest which will be held on September 23, at the field on the corner of La Salle Avenue and Shell Road. All persons interested in the event are urged to be present.

WANTED: Ride to Raleigh, N. C. on week-end of August 4. Louise Thomas, Flight Research.

FOR SALE: 300 power Bausch and Lomb microscope. Frank Aspen, E.Engineering.



Among the warplanes on display at the AAF's birthday party on Wednesday was the first U. S. jet propelled ship, the P-59 Airacomet, shown at the left above mounted in the Full Scale Tunnel at the Laboratory to undergo a clean-up investigation. At the right above is the Spin Tunnel model of the P-63 Kingcobra, better than 400 m.p.h. fighter piloted by NACA pilot Bill Gray in the air show. Standing by for inspection Wednesday was the A-26 Invader. The picture on the lower left shows a model of this latest attack bomber mounted in the 19-Foot Pressure Tunnel. Jack Reeder settled down for a landing in the YR4B Helicopter, right below, just as he did in the show. No, the harpoon on the nose is not for jabbing unsuspecting ground crewmen, it's an air speed boom used at the Laboratory. Other Lab pilots who took part in the exhibition Wednesday were Mel Gough, flying the P-51, and Herb Hoover, in the B-29.

PLANES SHOWN

Continued from Page 1

bolt, Lightening, and Mustang, other top Army fighters. Important to all airplanes but especially so to fighters are good spinning characteristics. A trip to Langley's Spin Tunnel is in order for every Army fighter. Here, an inexpensive model of the P-63 was tested, eliminating the possibility of loss of life, precious equipment or time to one of the most deadly enemies of all airplanes, the uncontrollable spin.

NEW TUNNEL

(Continued from page 1)

indispensable tool for the use of the NACA in discharging its responsibility for attacking a fundamental problem of flight in this new range of speed.

Dr. George W. Lewis, Director of Aeronautical Research of the NACA, in discussing the application of the new Cleveland tunnel, revealed that many of the projected propulsion systems should have sufficient thrust to take aircraft well into the supersonic speed range. Those which depend on outside air for combustion, such as turbo jets and ram jets, must handle vast amounts of air at such high speeds as to change entirely the nature of air flow as we now know it. The new supersonic propulsion research wind tunnel provides the only means we have of determining what the requirements are for the design and operation of these new propulsion plants at the high speeds for which they seem most promising.

This supersonic wind tunnel, along with the famed Altitude Wind Tunnel, extends the propulsion research capabilities of NACA's Cleveland Laboratory to extremes of both altitude and speed. The Altitude Wind Tunnel is unique in that it permits investigation of the operating characteristics of full size jet engines and gas turbines as well as conventional engines at altitudes up to 50,000 feet. The humidity, temperature, pressure, and density conditions of extreme altitudes are simulated at air speeds up to 500 miles per hour. The extension of propulsion research into the supersonic speed ranges was accomplished by constructing the new supersonic propulsion research tunnel as an integral part of the Altitude Wind Tunnel. The latter's extensive air-drying and low-temperature apparatus are utilized to provide the required dry air for the supersonic tunnel; and its powerful exhauster installation is utilized to suck air through the supersonic wind tunnel at very high velocity.

The tunnel has a cross section of two and a quarter square feet, through which air moves at extremely high speed. In the tunnel the model propulsion device is mounted in such a way as to measure the aerodynamic forces on it, as well as the thrust developed. Complete instrumentation is provided to determine performance characteristics with various fuels at different speeds and other operating conditions.

Abe Silverstein, formerly Head of the Full Scale Tunnel here at Langley and now Chief of the Engine Installation Division at Cleveland, designed the supersonic tunnel installation. E. R. Sharp, Manager of the Cleveland Laboratory, supervised the entire project, which was carried through from ception to completion in the record-b ing time of ninety days.