

TECHNICAL REPORT

AEROSCIENCES DIVISION 8-FOOT TRANSONIC WIND TUNNEL

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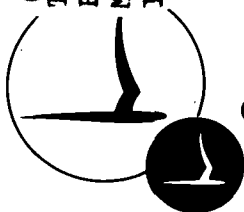
TRANSONIC WIND TUNNEL TESTS OF
SEVERAL NASA BODIES OF REVOLUTION

Prepared For:
Langley Research Center
National Aeronautical and Space Administration
Langley Air Force Base, Virginia

Contract No. NASA-1-10649

January and March 1971

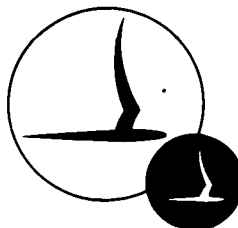
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TESTS OF SEVERAL NASA BODIES OF
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CORNELL AERONAUTICAL LABORATORY, INC.
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Date 27 July 1971

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TRANSONIC WIND-TUNNEL TESTS OF SEVERAL

BODIES OF REVOLUTION

(Report No. AA-4018-W-5)

Abstract

Tests were conducted on six bodies of revolution in the Cornell Aeronautical Laboratory 8-Foot Transonic Wind Tunnel. Five of the bodies were identical in regard to maximum body diameter and area distribution, but of different fineness ratios. An additional body was tested to obtain pressure distribution data.

The tests were conducted at Mach numbers from 0.60 to 1.02 at constant Reynolds numbers of 2.0, 3.0, and 4.0×10^6 per foot. The test angle of attack was 0° .

This report presents details of the test program, an outline of the test procedures, and test results in tabular and graphical form.

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SECTION I

SUMMARY

Aerodynamic tests were conducted on six NASA Langley bodies of revolution in the Cornell Aeronautical Laboratory (CAL) 8-Foot Transonic Wind Tunnel. Body-11, tested during January, 1971, was one specific design from a series of several bodies of revolution. The five fineness ratio (F.R.) models, tested during March, 1971, represented a new family of bodies, all identical in regard to maximum body diameter and area distribution, but of different fineness ratios. These tests were performed in order to define the transonic drag raise with variations in body fineness ratio, and to obtain pressure distribution data for Body-11.

These tests were conducted at Mach numbers from .60 to 1.02, at constant Reynolds numbers of 2.0, 3.0 and 4.0×10^6 per foot, at angles of attack from -1 to +1 degree for Body-11 model, and zero degrees angle of attack for all the fineness ratio models.

This report presents details of the test program, an outline of the test procedures, and results of these investigations in tabular and graphical form.

SECTION II

TEST EQUIPMENT

Installation

Six bodies of revolution models were designed and fabricated by the NASA Langley Research Center, Hampton, Virginia. These models were sting mounted in the test section as shown in Figure 2, model photographs, and Figure 4, installation drawings. A complete description of the CAL 8-Foot Transonic Wind Tunnel is presented in Reference 1.

Models and Instrumentation

Geometric ordinates for the various fineness ratio bodies are presented in Figures 5a and 5b. Forces and moments for these models were measured with a NASA-829 internal six-component strain gage balance. A single balance thermocouple was used to monitor the balance temperature; however, no corrections due to modulus of elasticity change was required for this balance. Two model cavity pressures were located on the sting (180 degrees opposed) and 0.5 inches aft of the balance aft end. The cavity pressure lines were routed externally along the sting to the CAL Automanometer located in the sphere plenum.

Body-11 geometric ordinates are listed in Figure 5c. Forces and moments for this model were measured with a NASA UT12-20 internal six-component strain gage balance. A single thermocouple installed inside this balance determined a temperature to correct the balance strain gage readings for modulus of elasticity due to balance temperature change. A total of 50 external static pressure orifices were installed on this model as detailed in Figure 5d. Pressure lines from these orifices were connected to two Scani-valves located in the model nose section. Three model cavity pressures were located on the sting periphery (120 degree increments) and 16.2 inches aft of the balance front end. These cavity pressure lines were routed externally along the sting to the CAL Automanometer located in the sphere plenum. A single electrolytic (bubble) potentiometer was mounted inside the model and was set to indicate zero degree balance angle of attack.

SECTION II

TEST EQUIPMENT (CONT.)

Models and Instrumentation - continued

All configurations were tested with fixed boundary layer transition trip strips installed as detailed further in Section III, configuration nomenclature.

All strain gages, pressure transducers, and thermocouple outputs were connected to CAL automatic digital readouts located in the control room. (See Reference 1.) Data from these channels along with the tunnel conditions were recorded on punched cards for subsequent electronic data reduction.

SECTION III NOMENCLATURE AND SYMBOLS

The following nomenclature is used throughout this report:

Tunnel Conditions

V	Free-stream velocity - feet per second
H	Free-stream total pressure - pounds per square foot
p	Free-stream static pressure - pounds per square foot
M_c	Computed free-stream Mach number = $5 \left[\left(\frac{H}{p} \right)^{2/7} - 5 \right]^{1/2}$
γ	Ratio of specific heats of air = 1.400
q	Free-stream dynamic pressure - pounds per square foot $= \frac{\gamma}{2} p M_c^2$
T_o	Free-stream total temperature - degrees Rankine
T	Computed free-stream static temperature - degrees Rankine $= T_o \left(1 + .2 M_c^2 \right)^{-1}$
$N_R \times 10^{-6}$	Free-stream Reynolds number - per foot $= 1.2322 p M \left[\frac{216 + T}{T^2} \right]$

Note: Data for the above nomenclature is presented in Tables IIA and IIB.

Reference Dimensions (FINENESS RATIO BODIES)

S	Cross sectional reference area based on body diameter $= 0.03409$ square feet
S_4	Wetted reference area for F. R. 4 body = 0.4452 square feet
S_6	Wetted reference area for F. R. 6 body = 0.6670 square feet
S_8	Wetted reference area for F. R. 8 body = 0.8902 square feet

SECTION III NOMENCLATURE AND SYMBOLS (CONT.)

Reference Dimensions (FINENESS RATIO BODIES) - continued

$S_{9.1}$	Wetted reference area for F.R. 9.1 body = 1.0094 square feet
S_{10}	Wetted reference area for F.R. 10 body = 1.1072 square feet
S_c	Balance cavity area = 0.0112 square feet
d	Maximum body diameter = 2.50 inches

Reference Dimensions (Body - 11)

S	Cross sectional reference area based on body diameter = 0.13889 square feet
S_c	Balance cavity area = 0.00866 square feet
d	Maximum body diameter = 5.00 inches
α	Model angle of attack with respect to body longitudinal centerline - degrees

Note: Body and balance centerlines were coincident for all models.

Cavity Pressure and Incremental Correction Coefficients

p_{c_x}	Model cavity pressure - pounds per square foot where subscript 'x' denotes related cavity pressures "x" = 1 and 2 for bodies F.R. 4, 6, 8, 9.1, 10 "x" = 1, 2 and 3 for Body - 11
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$C_{p_{c_x}}$	Model cavity pressure coefficient = $\frac{p_{c_x} - p}{q}$
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$C_{p_{c_{avg}}}$	Averaged model cavity pressure coefficient $= \frac{1}{n} \sum_{n=1}^{n=x} C_{p_{c_x}}$
-------------------	--

SECTION III NOMENCLATURE AND SYMBOLS (CONT.)

Cavity Pressure and Incremental Correction Coefficients - continued

ΔC_{A_c} Incremental axial force correction due to balance cavity pressure and based on body diameter reference area

$$= \frac{S_c}{S} C_{p_{c_{avg}}}$$

$\Delta C_{A_{cw}}$ Incremental axial force correction due to balance cavity pressure and based on the individual body wetted reference areas = $\frac{S_c}{S_w} C_{p_{c_{avg}}}$, for bodies F.R. 4, 6, 8, 9.1, 10 only.

Note: Data for the above quantities are presented in Tables V A and V B.

Model Forces and Moments - Body Axis System

N	Normal force - pounds
m	Pitching moment - inch - pounds
Y	Side force - pounds
n	Yawing moment - inch - pounds
l	Rolling moment - inch - pounds
A_u	Axial force, uncorrected for balance cavity pressure - pounds
C_N	Normal force coefficient = $\frac{N}{qS}$
C_m	Pitching moment coefficient = $\frac{m}{qSd}$
C_Y	Side force coefficient = $\frac{Y}{qS}$
C_n	Yawing moment coefficient = $\frac{n}{qSd}$

SECTION III NOMENCLATURE AND SYMBOLS (CONT.)

Model Forces and Moments - Body Axis System - continued

C_l	Rolling moment coefficient = $\frac{l}{qSd}$
C_{A_u}	Uncorrected axial force coefficient = $\frac{A_u}{qS}$
C_A	Axial force coefficient corrected for balance cavity pressure = $C_{A_u} + \Delta C_{A_c}$

Note: (1) Coefficients listed above were computed based on the respective model maximum body diameter area. These data are presented in Tables IIIA and IIIB.

(2) An additional set of body axis system coefficients were computed based on the respective wetted body areas for bodies F.R. 4, 6, 8, 9.1, 10 and are denoted by subscript "w." These data are presented in Table IV.

Pressure Coefficients, Body - 11

p_y	Static pressure - pounds per square foot where subscript "y" denotes the respective pressure orifice number and location as indicated in Figure 4d.
C_{p_y}	Pressure coefficient = $\frac{p_y - p}{q}$
x	Longitudinal distance aft of the model nose to the respective pressure orifice number "y."
l	Length of Body - 11 = 47.500 inches
x/l	Fractional distance aft of the model nose to the respective pressure orifice number "y", see Figure 5d.

SECTION III NOMENCLATURE AND SYMBOLS (CONT.)

Configuration Symbols

F. R. 'z' Fineness Ratio model, where 'z' denotes the respective F. R. body: 4, 6, 8, 9.1, 10. See Figures 5a and 5b for actual model ordinates.

Body - 11 See Figure 5c for actual model ordinates.

Boundary layer transition strips were installed on all models as follows:

- a). leading-edge of transition strip = $0.25 x/t$
- b). width of transition strip = 0.050 inches
- c). No. 120 sifted carborundum grit, sparse density

SECTION IV

TEST PROCEDURES

Calibrations

Both NASA balances were calibrated prior to testing in accordance with procedures described in Reference 2. These calibrations were performed at ambient and elevated temperatures in order to determine the primary sensitivity constants and modulus of elasticity effect due to balance temperature change. The NASA UT12-20 main balance did not require a modulus of elasticity correction; however, the NASA-829 main balance did. The method by which these corrections were applied is discussed further in Section VI. NASA Langley supplied all the interaction terms required to compute the measured balance forces and moments, as determined at the test sponsor's facility. In the tunnel calibration check loads were applied directly to the models prior to testing. Calculated results from the loadings agreed within 1/4 of 1 percent of full scale design balance loads. See Section VII for additional information concerning accuracies of the balance calibrations.

All pressure transducers were calibrated in accordance with procedures described in Reference 3. The calibrations were performed in order to determine the individual transducer calibration constant, linearity and repeatability. The actual transducer constants were calculated at each data point by applying known end-point pressures. Results of all the above-mentioned calibrations are on file at CAL.

Operations

The fineness ratio model test program consisted of 64 force data runs and 10 oil flow visualization runs as detailed in Table I. The pod potentiometer system was used to set zero degrees model angle of attack for all these test runs. Zero degrees angle of attack was defined as that angle setting which resulted in a balance normal force output of zero. Seven consecutive data points were recorded at each test condition, and averaged as detailed further in Section V. All models were tested at a

SECTION IV

TEST PROCEDURES (CONT.)

Operations - continued

constant Reynolds number of 3.0×10^6 per foot throughout the Mach number range. In addition, the F.R. 4 model was also tested at Reynolds numbers of 2.0 and 4.0×10^6 per foot. Body F.R. 10 was scheduled to be tested at Reynolds number of 4.0×10^6 ; however, due to excessive main balance dynamic load (in the side force direction), this model was not tested at this operating condition. The F.R. 10 model was tested at a Reynolds number of 2.0 and 3.0×10^6 per foot, where the main balance dynamic loads were observed to be within limits.

Body - 11 test program consisted of eleven force and pressure data runs as detailed in Table I. No oil flow visualization photographs were taken with this model. All runs were tested at a constant Reynolds number of 3.0×10^6 per foot over an angle of attack range of ± 1.0 degrees in 0.5 degree increments. A single electronic null indicator bubble, set at zero degrees balance angle of attack was used to set this model attitude. All other model angles of attack were set using the pod potentiometer system.

Oil flow visualization data runs were separate and independent from the force data runs. The fineness ratio models were painted with white lacquer and polished prior to testing. The model nose region and 0.20 inches aft of the trip strips remained unpainted. Oil flow visualization photographs were taken during F.R. 4 model tests, at Reynolds numbers 2.0 and 3.0×10^6 , and for F.R. 10 model, at Reynolds number 2.0×10^6 .

Wind-off zeros were recorded before and after each run or group of runs. All runs tested were within the acceptable drift limit of 0.2 percent of the full calibration applied loadings.

NASA Langley was represented by Mr. L. Wayne McKinney during these tests.

SECTION V

PRESENTATION OF DATA

A run schedule detailing the various model configurations and nominal test condition for both test periods is presented in Table I. Actual tunnel operating conditions for each run and point are presented in Table IIA for the fineness ratio models (F.R. 4, 6, 8, 9.1, 10) and Table IIB for Body-11 model.

Force and moment coefficient data were resolved to the body axis system shown in Figure 6, and corresponding to the balance centerlines. Body axis coefficient data for the fineness ratio models are presented in Table IIIA, and Table IIIB for the Body-11 model. Coefficients presented in Tables IIIA and IIIB were computed based on the respective maximum body diameter area. An additional set of body axis coefficient data, listed in Table IV, was computed for the fineness ratio models based on the respective model wetted area.

Cavity pressure coefficients and incremental axial force correction coefficients are presented in Table VA for the fineness ratio models, and in Table VB for Body - 11 model. Body - 11 external surface static pressure coefficients are listed in Table VI. All of these pressure orifices were operative throughout this entire test program except orifice number 6. Coefficient data for this pressure orifice has been omitted from Table VI data list. Refer to Figure 5d for pressure orifice number and model location.

Seven consecutive data points were recorded at each particular test condition during the fineness ratio model test program as per test sponsor's request. These coefficients were averaged arithmetically and comprise the data listed in Tables IIA, IIIA, IV and VA. Only one data point at each particular test condition was recorded during the Body - 11 test program. Section VII lists the standard deviations for all coefficients recorded during both test programs.

Oil flow visualization photographs were only taken during F.R. 4 and 10 model tests, at select Mach numbers and Reynolds numbers. Results of these investigations are presented in Figures 3a to 3f. No coefficient data for these runs have been included in this report.

SECTION V

PRESENTATION OF DATA (CONT.)

Axial force coefficient data at zero degrees angle of attack is plotted versus Mach number, as Figures 7 to 9 for the fineness ratio models, and Figure 19 for Body-11 model. Incremental cavity pressure correction coefficients for these same configurations are presented in Figures 10 to 12. All the coefficients presented in Figures 7 to 12 and 19 were computed based on the respective model body diameter area. Axial force and incremental cavity pressure correction coefficients computed based on the respective fineness ratio model wetted area, are presented in graphical form as Figures 13 to 18. Body-11 pressure distribution coefficients at zero degrees angle of attack are presented in graphical form as Figures 20a to 20k.

SECTION VI

CORRECTIONS TO DATA

No wind tunnel wall corrections have been applied to the data presented in this report to account for the blocking effect of the model or for wall constraining effects on transverse flow. Within the limitations of theoretical computations, these corrections are believed to be negligible in this perforated test section with the model installed. No buoyancy correction was made to axial force, as the clear tunnel pressure gradients in the vicinity of the models tested are negligible. Results of some recent studies of wall effects and blockage, and calibration data for the CAL 8-Foot Tunnel will be presented in Reference 4.

Balance Corrections

Both main balances used during these test programs were corrected for mechanical interactions inherent to the particular balance system, using interaction coefficients furnished by NASA-Langley. In addition the NASA-829 balance (used with F.R. 4, 6, 8, 9.1, 10 models) was also corrected for a modulus of elasticity effect. The temperature modulus of elasticity correction was applied to the balance axial force strain gage readings only, prior to the mechanical interaction correction. These correction factors were obtained during the balance static calibrations and are on file at CAL.

Static tare data was obtained for each model configuration and applied to the balance forces and moments prior to computation of these coefficients. The magnitude of these corrections however, was observed to be insignificant over the limited model angle of attack range tested.

Model angles of attack measured with the pod system were corrected for sting and balance deflections due to aerodynamic loads. Values of these corrections were obtained from the static loading calibration of the balance. Angles of attack set by the bubble system include the balance and sting deflection due to aerodynamic loads; therefore, no corrections were applied.

Balance cavity pressures were used to correct the measured axial force to a condition corresponding to free-stream static pressure acting over the balance cavity area.

SECTION VII

PRECISION OF DATA

It is estimated that the model geometric angles of attack are accurate to within ± 0.03 degrees.

Accuracy of the two strain gage balance systems used during these test programs were determined statistically by calculating the root mean square of the deviation between the applied and calculated loadings. The calculated loads were determined by using the final balance constants and balance readings produced by known static loads. These results are presented below:

<u>Component</u>	<u>Root Mean Square Deviations</u>	
	<u>NASA - 829</u>	<u>NASA UT12-20</u>
Normal Force - pounds	± 0.212	± 0.083
Pitching Moment - inch-pounds	± 0.042	± 0.258
Side Force- pounds	± 0.008	± 0.051
Yawing Moment - inch-pounds	± 0.045	± 0.303
Rolling Moment - inch-pounds	± 0.014	± 0.0511
Axial Force - pounds	± 0.006	± 0.023

All pressure transducers were calibrated to an accuracy of ± 0.5 pounds per square foot.

No satisfactory method is known for determining the absolute accuracy of the final coefficients. However, since the test procedure includes the repetition of at least one model attitude during each run for Body-11 model tests, an estimate can be made of the repeatability with which these data were measured. For the fineness ratio models, only zero degree angle of attack data was recorded. However, seven consecutive data points were recorded at each test condition, and the arithmetical averaged results are only presented in the tabulation of this data. The RMS deviations of these coefficients (data repeatability) were obtained based on the first recorded data point of each run with respect to the next six successive data points. All the data runs from this test period were used in the calculations of these values, as listed below.

SECTION VII

PRECISION OF DATA (CONT.)

<u>Coefficients</u>	<u>RMS DEVIATION</u>	
	<u>Body-11</u>	<u>Fineness Ratio Models</u>
C_N	$\pm .0009$	$\pm .00004$
C_m	$\pm .0082$	$\pm .0002$
C_Y	$\pm .0005$	$\pm .0000$
C_n	$\pm .0024$	$\pm .0000$
C_l	$\pm .0000$	$\pm .0000$
C_A	$\pm .00053$	$\pm .00030$
ΔC_{A_c}	$\pm .00031$	$\pm .00017$

Fineness ratio model deviations listed above were computed based on the wetted area coefficients.

SECTION VIII

REFERENCES

1. "8-Foot Transonic Wind Tunnel," Cornell Aeronautical Laboratory Wind Tunnel Report No. WTO-300, Revised March 1968.
2. Hutka, D. A.:
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3. Cochi, R. J.:
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"Results of Calibration and Model Tests in the CAL 8-Foot Transonic Wind Tunnel, With Varying Wall Porosity and Test Section Configurations." (to be published)

SECTION IX

TABLE INDEX

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V A	Cavity Pressure Coefficients and Incremental Axial Force Correction Coefficients (F.R. 4, 6, 8, 9.1, 10)
V B	Cavity Pressure Coefficients and Incremental Axial Force Correction Coefficients (Body - 11)
VI	Pressure Coefficients (Body - 11)

TABLE I
TEST SCHEDULE

Config	$N_R \times 10^6$	Figure No.	.60	.70	.80	.85	.90	.95	.98	.99	1.00	1.01	1.02
F.R.4	2.0	7	-	-	15	14	13	12	11	10	9	8	-
F.R.4	3.0	7,9	-	-	23	22	21	20	19	18	17	16	-
F.R.4	4.0	7,9	-	-	31	30	29	28	27	26	25	24	-
F.R.6	3.0	9	-	-	41	40	39	38	37	36	35	34	-
F.R.8	3.0	9	-	-	51	50	49	48	47	46	45	44	-
F.R.9.1	3.0	9	-	-	62	61	60	59	58	57	56	55	-
F.R.10	2.0	8	-	-	74	73	72	71	70	69	68	67	-
F.R.10	3.0	8,9	-	-	82	81	80	79	78	77	76	75	-
BODY-11	3.0	10,11	23	22	13	21	14	20	19	18	17	16	15

General Comments

- (a) Model checkloads were applied to each balance system prior to testing.
- (b) The fineness ratio models were tested at zero degrees angles of attack only.
- (c) Body-11 model was tested at variable angles of attack from -1.0 to +1.0, in 0.5 degree increments, at all Mach numbers.

TABLE II A
TEST CONDITIONS
(F.R. 4, 6, 8, 9.1, 10)

Run Pt	M_c	α	q	p	H	$N_R \times 10^{-6}$	T_o	T	V
8 3	1.009	0.00	354.1	496.7	950.4	1.981	552.	458.	1059.1
9 1	0.997	0.00	353.5	507.2	957.6	1.990	552.	460.	1049.2
10 1	0.989	0.00	351.3	512.6	958.5	1.987	552.	461.	1041.8
11 2	0.978	0.00	348.2	519.1	959.0	1.982	552.	463.	1032.6
12 1	0.948	0.00	342.1	543.4	969.6	1.984	552.	467.	1005.4
13 1	0.895	0.00	329.4	586.5	987.5	1.979	552.	475.	957.5
14 1	0.848	0.00	319.6	634.7	1016.0	1.999	550.	480.	911.5
15 1	0.798	0.00	307.3	688.3	1047.8	2.003	550.	487.	864.4
16 3	1.011	0.00	545.8	762.9	1462.9	2.993	560.	464.	1068.4
17 1	0.999	0.00	541.7	775.1	1465.8	2.990	560.	466.	1058.0
18 1	0.992	0.00	540.3	783.7	1470.5	2.994	560.	467.	1052.0
19 1	0.978	-0.00	536.9	801.3	1479.4	3.000	560.	470.	1039.5

TABLE II A
TEST CONDITIONS
(F.R. 4, 6, 8, 9.1, 10)

Run	Pt	M_c	α	q	p	H	$N_R \times 10^{-6}$	T_o	T	V
20	1	0.949	-0.04	528.6	837.5	1496.4	3.006	560.	474.	1013.7
21	1	0.898	-0.14	510.1	901.7	1523.4	3.000	560.	482.	967.3
22	1	0.848	-0.12	490.4	972.3	1557.6	2.994	560.	489.	920.3
23	1	0.800	-0.06	472.4	1054.2	1607.1	3.018	558.	494.	872.1
24	3	1.009	-0.11	729.2	1021.4	1956.0	3.983	562.	466.	1069.3
25	1	0.998	-0.12	724.3	1037.3	1960.8	3.981	562.	468.	1059.5
26	1	0.988	-0.12	726.4	1061.1	1983.0	3.996	564.	471.	1052.6
27	1	0.980	-0.14	728.2	1082.4	2002.9	4.007	566.	474.	1046.9
28	1	0.949	-0.13	711.7	1128.9	2015.6	3.973	568.	481.	1020.3
29	1	0.898	-0.09	689.0	1218.1	2057.8	3.978	568.	488.	974.1
30	1	0.848	-0.08	660.4	1309.6	2097.8	3.959	568.	496.	926.9
31	1	0.798	-0.09	637.3	1429.7	2175.1	4.005	566.	502.	876.3

TABLE II A

TEST CONDITIONS

(F.R. 4, 6, 8, 9.1, 10)

Run Pt	M_c	α	q	p	H	$N_R \times 10^{-6}$	T_o	T	V
34 3	1.010	0.00	535.4	748.7	1435.2	3.007	550.	456.	1058.5
35 1	1.000	-0.00	536.1	765.8	1449.8	2.986	556.	463.	1054.9
36 1	0.990	-0.00	532.2	775.6	1451.4	2.981	556.	464.	1046.2
37 1	0.978	0.00	531.9	793.4	1465.3	2.985	558.	468.	1037.9
38 1	0.950	-0.00	530.2	838.0	1499.1	3.012	560.	474.	1014.7
39 1	0.899	-0.00	509.1	899.5	1520.1	2.994	560.	482.	967.5
40 1	0.850	-0.00	492.0	972.0	1559.6	3.001	560.	489.	921.8
41 2	0.799	-0.00	470.5	1050.3	1600.9	3.006	558.	494.	872.0

TABLE II A

TEST CONDITIONS

(F.R. 4, 6, 8, 9.1, 10)

Run Pt	M_c	α	q	p	H	$N_R \times 10^{-6}$	T_o	T	V
44 3	1.011	0.00	540.9	755.7	1449.5	2.994	556.	461.	1064.8
45 1	1.000	0.00	536.7	765.9	1450.8	2.974	558.	464.	1057.3
46 1	0.988	0.00	539.1	787.5	1471.6	3.007	558.	466.	1047.0
47 2	0.979	0.00	539.4	802.8	1484.4	3.011	560.	469.	1040.8
48 1	0.950	0.00	528.1	835.7	1494.0	3.002	560.	474.	1014.2
49 1	0.899	0.00	511.0	902.1	1525.1	3.004	560.	481.	967.9
50 1	0.849	0.00	490.5	971.6	1557.1	2.939	568.	496.	927.3
51 1	0.799	-0.01	470.1	1051.9	1602.0	3.006	558.	494.	871.1

TABLE II A
TEST CONDITIONS
(F.R. 4, 6, 8, 9.1, 10)

Run Pt	M_c	α	q	p	H	$N_R \times 10^{-6}$	T_o	T	V
55 1	1.010	-0.00	546.6	764.4	1465.2	3.012	558.	463.	1066.2
56 1	1.000	-0.00	542.8	774.4	1467.0	2.994	560.	466.	1059.3
57 1	0.989	-0.00	541.6	790.9	1478.3	3.007	560.	468.	1049.0
58 1	0.979	0.00	537.8	800.9	1480.4	3.003	560.	469.	1040.4
59 1	0.951	0.00	528.6	834.7	1493.9	2.988	562.	475.	1016.9
60 1	0.899	-0.00	510.6	901.9	1524.3	2.988	562.	483.	969.4
61 1	0.849	-0.00	491.7	972.6	1559.7	3.000	560.	489.	921.3
62 1	0.800	-0.00	471.3	1050.1	1601.9	3.009	558.	494.	872.7

TABLE II A
TEST CONDITIONS
(F.R. 4, 6, 8, 9.1, 10)

Run	Pt	M _c	α	q	p	H	N _R × 10 ⁻⁶	T _o	T	V
67	4	1.010	-0.00	355.0	496.2	951.6	1.994	550.	456.	1058.8
68	2	0.994	-0.00	353.4	510.2	960.0	2.003	550.	459.	1044.6
69	1	0.990	-0.00	352.9	514.0	962.2	2.005	550.	459.	1040.8
70	1	0.977	-0.00	349.9	523.0	964.8	2.003	550.	461.	1029.5
71	2	0.949	-0.00	343.2	543.7	971.4	1.988	552.	467.	1006.5
72	1	0.898	-0.00	322.4	570.2	963.2	1.942	550.	473.	958.4
73	1	0.849	-0.00	319.7	633.4	1015.1	1.998	550.	480.	912.4
74	1	0.800	-0.00	305.8	682.0	1040.0	2.000	548.	485.	864.5
75	3	1.010	-0.00	539.8	755.9	1447.8	3.004	554.	460.	1061.8
76	1	1.000	-0.01	532.4	759.6	1438.9	2.992	552.	459.	1051.7
77	1	0.991	-0.00	528.6	768.8	1440.3	2.987	552.	461.	1043.3
78	1	0.980	-0.01	524.0	779.0	1441.4	2.966	554.	464.	1035.6

TABLE II A

TEST CONDITIONS

(F.R. 4, 6, 8, 9.1, 10)

Run Pt	M_c	α	q	p	H	$N_R \times 10^{-6}$	T_o	T	V
79 1	0.949	-0.00	522.7	827.9	1479.3	3.014	554.	469.	1008.3
80 1	0.900	-0.00	504.5	889.8	1504.9	3.007	554.	476.	963.1
81 1	0.850	0.00	486.0	960.4	1540.7	3.006	554.	484.	916.7
82 1	0.798	0.00	458.4	1026.0	1562.3	2.974	552.	489.	866.3

TABLE II B
TEST CONDITIONS
(BODY-11)

Run	Pt	M _c	α	q	p	H	T	T _o	N _R × 10 ⁻⁶	V
13	5	0.799	0.00	611.8	1366.1	2082.2	487	550	3.984	865.6
13	6	0.800	0.61	612.0	1365.9	2082.2	487	550	3.985	865.8
13	7	0.799	1.18	612.6	1367.8	2084.8	494	558	3.915	871.9
13	8	0.800	-1.11	613.2	1367.6	2085.4	487	550	3.992	866.1
13	9	0.800	-0.54	613.6	1369.6	2087.8	487	550	3.995	865.7
13	10	0.800	0.00	614.1	1369.7	2088.5	487	550	3.997	866.0
14	5	0.901	0.00	669.9	1178.8	1995.9	476	554	3.990	964.0
14	6	0.899	0.62	670.1	1182.4	1999.4	478	556	3.976	964.6
14	7	0.899	1.21	671.8	1187.5	2006.4	478	556	3.989	963.9
14	8	0.900	-1.12	672.3	1183.5	2003.5	478	556	3.986	965.6
14	9	0.901	-0.55	673.2	1184.6	2005.7	480	558	3.972	967.5
14	10	0.901	0.00	674.2	1185.2	2007.7	479	558	3.977	967.9
15	3	1.020	-1.16	730.6	1003.2	1944.1	463	560	3.987	1076.2
15	4	1.021	-0.56	729.3	998.2	1938.2	464	562	3.958	1079.6
15	5	1.018	0.00	733.1	1008.8	1952.6	465	562	3.985	1077.2
15	7	1.021	0.64	740.1	1014.0	1967.8	466	564	3.999	1081.0
15	8	1.018	1.24	739.1	1017.2	1968.5	468	566	3.980	1080.9
15	10	1.021	0.00	741.7	1015.9	1971.8	468	566	3.989	1083.1
16	11	1.008	-1.16	736.4	1033.5	1977.0	471	568	3.968	1074.1
16	12	1.012	-0.57	738.4	1029.8	1977.1	471	568	3.972	1076.9
16	13	1.011	0.00	737.7	1030.6	1976.7	471	568	3.970	1076.2
16	14	1.011	0.63	739.8	1034.0	1982.8	471	568	3.982	1076.0
16	15	1.008	1.23	739.4	1038.1	1985.3	473	570	3.967	1075.8
16	16	1.013	0.00	741.4	1031.1	1982.9	472	570	3.967	1080.1
17	3	1.000	-1.16	727.7	1038.1	1966.8	466	560	4.014	1059.3
17	4	1.003	-0.57	727.2	1031.7	1960.9	467	562	3.986	1063.6
17	6	0.999	0.00	729.9	1042.9	1974.0	470	564	3.990	1062.4

TABLE II B
TEST CONDITIONS
(BODY-11)

Run	Pt	M _c	α	q	p	H	T	T _o	N _R x 10 ⁻⁶	V
17	7	1.000	0.63	731.3	1043.5	1976.6	469	564	3.996	1063.0
17	8	1.000	1.23	732.2	1045.0	1979.2	469	564	4.001	1062.9
17	9	0.999	0.00	732.8	1047.2	1982.1	470	564	4.006	1062.3
18	1	0.991	-1.16	729.1	1060.0	1986.3	473	566	3.987	1056.6
18	2	0.990	-0.57	729.0	1062.6	1988.3	473	566	3.989	1055.5
18	3	0.991	0.00	729.8	1060.9	1988.0	473	566	3.990	1056.6
18	4	0.989	0.63	730.4	1066.1	1993.2	473	566	3.998	1054.8
18	5	0.989	1.23	730.8	1066.1	1993.9	474	568	3.981	1057.0
18	6	0.991	0.00	731.8	1063.1	1993.0	474	568	3.982	1058.8
19	1	0.979	-1.16	724.4	1079.4	1994.6	476	568	3.971	1047.6
19	2	0.981	-0.56	725.2	1075.2	1992.3	476	568	3.969	1049.8
19	3	0.981	0.00	725.1	1075.9	1992.7	476	568	3.969	1049.4
19	4	0.981	0.63	726.3	1078.1	1996.5	476	568	3.977	1049.3
19	5	0.980	1.23	726.5	1078.8	1997.3	476	568	3.978	1049.1
19	6	0.981	0.00	727.0	1078.2	1997.5	476	568	3.979	1049.6
20	4	0.949	-1.15	703.1	1113.1	1989.6	477	564	3.960	1017.6
20	5	0.951	-0.56	703.4	1111.0	1988.2	477	564	3.959	1018.6
20	6	0.950	0.00	704.1	1113.9	1991.6	477	564	3.964	1017.9
20	7	0.950	0.63	704.2	1112.8	1991.0	477	564	3.964	1018.4
20	8	0.951	1.22	704.8	1111.8	1991.0	477	564	3.965	1019.1
20	9	0.951	0.00	705.4	1113.5	1993.4	477	564	3.969	1018.8
21	1	0.850	-1.13	653.8	1290.6	2071.5	490	562	3.968	923.7
21	2	0.850	-0.55	654.5	1293.2	2074.8	490	562	3.973	923.4
21	3	0.851	0.00	657.2	1294.3	2079.6	490	562	3.986	924.7
21	5	0.851	0.61	657.2	1295.6	2080.7	485	556	4.043	919.3
21	6	0.851	1.19	659.2	1299.0	2086.5	489	560	4.017	922.8
21	7	0.853	0.00	659.1	1293.1	2081.2	488	560	4.011	924.6

TABLE II B
TEST CONDITIONS
(BODY-11)

Run	Pt	M _c	α	q	P	H	T	T _o	N _R x 10 ⁻⁶	V
22	1	0.700	-1.11	561.1	1633.7	2267.0	504	554	3.991	771.0
22	2	0.700	-0.54	565.1	1646.7	2284.5	504	554	4.021	770.8
22	3	0.699	0.00	564.6	1648.3	2285.5	504	554	4.021	770.1
22	4	0.700	0.59	565.2	1644.6	2282.7	504	554	4.020	771.3
22	5	0.700	1.15	564.7	1645.5	2282.9	504	554	4.018	770.8
22	6	0.700	0.00	564.4	1644.1	2281.1	504	554	4.016	770.9
23	1	0.599	-1.10	492.8	1958.0	2496.8	513	550	4.006	665.7
23	2	0.599	-0.53	493.6	1959.3	2498.9	513	550	4.011	665.9
23	3	0.601	0.00	493.2	1948.4	2487.8	512	550	4.000	667.4
23	4	0.599	0.57	490.9	1951.0	2487.6	511	548	4.010	664.4
23	5	0.599	1.13	491.1	1950.5	2487.3	511	548	4.010	664.5
23	6	0.600	0.00	491.2	1947.5	2484.5	511	548	4.008	665.1

TABLE III A
 BODY AXIS FORCE AND MOMENT COEFFICIENTS BASED ON BODY DIAMETER AREA
 (F.R. 4, 6, 8, 9.1, 10)

Run	Pt	M_c	α	C_N	C_A	C_m	C_Y	C_n	C_l	C_{A_u}
8	3	1.009	0.00	0.0000	0.30022	0.0095	-0.0000	0.0005	0.0000	0.30924
9	1	0.997	0.00	0.0004	0.28496	0.0129	0.0000	0.0005	0.0000	0.29538
10	1	0.989	0.00	0.0010	0.26255	0.0130	0.0000	0.0004	0.0000	0.26910
11	2	0.978	0.00	0.0000	0.23226	0.0124	0.0000	0.0004	0.0000	0.22191
12	1	0.948	0.00	0.0000	0.09958	0.0147	0.0000	0.0001	0.0000	0.04626
13	1	0.895	0.00	0.0000	0.08803	0.0139	0.0000	0.0001	0.0000	0.03654
14	1	0.848	0.00	0.0008	0.08597	0.0150	0.0000	0.0001	0.0000	0.03653
15	1	0.798	0.00	0.0000	0.08459	0.0109	0.0000	0.0001	0.0000	0.03672
16	3	1.011	0.00	0.0013	0.29260	0.0119	0.0000	0.0005	0.0000	0.30302
17	1	0.999	0.00	0.0013	0.28000	0.0115	0.0000	0.0005	0.0000	0.29201
18	1	0.992	0.00	0.0020	0.25768	0.0133	0.0000	0.0004	0.0000	0.26822
19	1	0.978	-0.00	0.0013	0.21773	0.0134	0.0000	0.0003	0.0000	0.21260

TABLE III A
 BODY AXIS FORCE AND MOMENT COEFFICIENTS BASED ON BODY DIAMETER AREA
 (F.R. 4, 6, 8, 9.1, 10)

Run Pt	M_c	α	C_N	C_A	C_m	C_Y	C_n	C_l	C_{A_u}
20 1	0.949	-0.04	0.0000	0.09788	0.0100	0.0000	0.0001	0.0000	0.04474
21 1	0.898	-0.14	0.0000	0.08139	0.0014	0.0000	0.0000	0.0000	0.03027
22 1	0.848	-0.12	0.0000	0.07941	0.0034	0.0000	0.0000	0.0000	0.03073
23 1	0.800	-0.06	-0.0009	0.07847	0.0061	-0.0000	0.0000	0.0000	0.03114
24 3	1.009	-0.11	0.0000	0.28852	0.0006	-0.0000	0.0004	0.0000	0.29992
25 1	0.998	-0.12	0.0000	0.27475	0.0003	-0.0000	0.0004	0.0000	0.28703
26 1	0.988	-0.12	0.0000	0.25596	-0.0000	-0.0000	0.0004	0.0000	0.26204
27 1	0.980	-0.14	-0.0000	0.22106	-0.0016	-0.0000	0.0003	0.0000	0.21971
28 1	0.949	-0.13	0.0008	0.09559	-0.0000	0.0000	0.0000	-0.0000	0.04219
29 1	0.898	-0.09	0.0000	0.07902	0.0048	0.0000	0.0000	0.0000	0.02718
30 1	0.848	-0.08	-0.0003	0.07817	0.0054	0.0000	0.0000	0.0000	0.02782
31 1	0.798	-0.09	0.0000	0.07675	0.0049	0.0000	0.0000	0.0000	0.02790

TABLE III A
 BODY AXIS FORCE AND MOMENT COEFFICIENTS BASED ON BODY DIAMETER AREA
 (F.R. 4, 6, 8, 9.1, 10)

Run Pt	M_c	α	C_N	C_A	C_m	C_Y	C_n	C_l	C_{A_u}
34 3	1.010	0.00	0.0000	0.22696	0.0076	-0.0000	0.0003	0.0000	0.22373
35 1	1.000	-0.00	0.0000	0.20547	0.0103	0.0000	0.0003	0.0000	0.18831
36 1	0.990	-0.00	0.0000	0.16896	0.0135	0.0000	0.0002	0.0000	0.13404
37 1	0.978	0.00	0.0002	0.11940	0.0126	0.0000	0.0001	0.0000	0.06962
38 1	0.950	-0.00	0.0005	0.09099	0.0136	0.0000	0.0001	0.0000	0.04909
39 1	0.899	-0.00	0.0000	0.08730	0.0142	0.0000	0.0001	0.0000	0.05055
40 1	0.850	-0.00	0.0000	0.08614	0.0146	0.0000	0.0001	0.0000	0.05243
41 2	0.799	-0.00	0.0000	0.08660	0.0122	0.0000	0.0001	0.0000	0.05379

TABLE III A
 BODY AXIS FORCE AND MOMENT COEFFICIENTS BASED ON BODY DIAMETER AREA
 (F.R. 4, 6, 8, 9.1, 10)

Run Pt	M_c	α	C_N	C_A	C_m	C_Y	C_n	C_l	C_{A_u}
44 3	1.011	0.00	-0.0004	0.19500	0.0031	-0.0000	0.0003	0.0000	0.18931
45 1	1.000	0.00	0.0000	0.15704	0.0062	0.0000	0.0002	0.0000	0.12406
46 1	0.988	0.00	0.0000	0.12034	0.0049	0.0000	0.0001	0.0000	0.08217
47 2	0.979	0.00	0.0000	0.10634	0.0031	-0.0000	0.0001	0.0000	0.07346
48 1	0.950	0.00	0.0000	0.10137	0.0100	0.0000	0.0001	0.0000	0.07337
49 1	0.899	0.00	0.0000	0.09675	0.0094	0.0000	0.0001	0.0000	0.07346
50 1	0.849	0.00	0.0000	0.09449	0.0098	0.0000	0.0001	0.0000	0.07357
51 1	0.799	-0.01	-0.0002	0.09522	0.0020	-0.0000	0.0001	0.0000	0.07516

TABLE III A
 BODY AXIS FORCE AND MOMENT COEFFICIENTS BASED ON BODY DIAMETER AREA
 (F.R. 4, 6, 8, 9.1, 10)

Run Pt	M_c	α	C_N	C_A	C_m	C_Y	C_n	C_l	C_{A_u}
55 1	1.010	-0.00	-0.0006	0.18091	-0.0052	-0.0000	0.0002	0.0000	0.16382
56 1	1.000	-0.00	-0.0006	0.14156	-0.0031	-0.0000	0.0001	0.0000	0.10669
57 1	0.989	-0.00	-0.0006	0.11542	-0.0031	-0.0000	0.0001	0.0000	0.08558
58 1	0.979	0.00	-0.0004	0.11157	0.0000	-0.0000	0.0001	0.0000	0.08508
59 1	0.951	0.00	-0.0006	0.10592	0.0018	-0.0000	0.0001	0.0000	0.08391
60 1	0.899	-0.00	-0.0013	0.10321	0.0000	-0.0000	0.0001	0.0000	0.08418
61 1	0.849	-0.00	-0.0014	0.10161	0.0000	-0.0000	0.0001	0.0000	0.08542
62 1	0.800	-0.00	-0.0022	0.10237	0.0005	-0.0000	0.0001	0.0000	0.08674

TABLE III A
BODY AXIS FORCE AND MOMENT COEFFICIENTS BASED ON BODY DIAMETER AREA
(F.R. 4, 6, 8, 9.1, 10)

Run Pt	M_c	α	C_N	C_A	C_m	C_Y	C_n	C_l	C_{A_u}
67 4	1.010	-0.00	-0.0020	0.18087	-0.0108	-0.0000	0.0001	0.0000	0.16145
68 2	0.994	-0.00	-0.0007	0.13795	-0.0074	-0.0000	0.0001	0.0000	0.11135
69 1	0.990	-0.00	-0.0003	0.12415	-0.0068	-0.0000	0.0001	0.0000	0.10025
70 1	0.977	-0.00	-0.0000	0.12196	-0.0020	-0.0000	0.0001	0.0000	0.10155
71 2	0.949	-0.00	0.0000	0.11730	0.0014	-0.0000	0.0001	0.0000	0.10089
72 1	0.898	-0.00	0.0000	0.11593	-0.0000	-0.0000	0.0001	0.0000	0.10172
73 1	0.849	-0.00	-0.0011	0.11442	0.0007	-0.0000	0.0001	0.0000	0.10175
74 1	0.800	-0.00	-0.0000	0.11379	-0.0007	-0.0000	0.0001	0.0000	0.10240
75 3	1.010	-0.00	-0.0007	0.16620	-0.0102	-0.0000	0.0001	0.0000	0.14423
76 1	1.000	-0.01	-0.0004	0.13397	-0.0099	-0.0000	0.0001	0.0000	0.10374
77 1	0.991	-0.00	-0.0000	0.12204	-0.0082	-0.0000	0.0001	0.0000	0.09710
78 1	0.980	-0.01	-0.0000	0.11575	-0.0059	-0.0000	0.0001	0.0000	0.09520

TABLE III A
 BODY AXIS FORCE AND MOMENT COEFFICIENTS BASED ON BODY DIAMETER AREA
 (F.R. 4, 6, 8, 9.1, 10)

Run Pt	M_c	α	C_N	C_A	C_m	C_y	C_n	C_l	C_{A_u}
79 1	0.949	-0.00	-0.00002	0.11033	-0.0041	-0.0000	0.0001	0.0000	0.09372
80 1	0.900	-0.00	-0.00000	0.10717	-0.0043	-0.0000	0.0001	0.0000	0.09398
81 1	0.850	0.00	0.00000	0.10668	-0.0000	-0.0000	0.0001	0.0000	0.09452
82 1	0.798	0.00	0.00000	0.10662	0.0010	-0.0000	0.0001	0.0000	0.09559

TABLE III B
BODY AXIS FORCE AND MOMENT COEFFICIENTS BASED ON BODY DIAMETER AREA
(BODY-11)

Run	Pt	M _c	α	C _N	C _A	C _m	C _y	C _n	C _l	C _{A_u}
13	5	0.799	0.00	0.0014	0.08545	0.0582	-0.0012	-0.0224	-0.0000	0.07385
13	6	0.800	0.61	0.0065	0.08516	0.1700	-0.0018	-0.0187	-0.0000	0.07341
13	7	0.799	1.18	0.0110	0.08519	0.2806	-0.0020	-0.0199	-0.0000	0.07338
13	8	0.800	-1.11	-0.0142	0.08508	-0.1588	-0.0039	-0.0141	-0.0000	0.07349
13	9	0.800	-0.54	-0.0033	0.08538	-0.0720	-0.0005	-0.0197	-0.0000	0.07364
13	10	0.800	0.00	-0.0005	0.08460	0.0366	-0.0006	-0.0209	-0.0000	0.07305
14	5	0.901	0.00	0.0003	0.08536	0.0463	-0.0007	-0.0236	-0.0000	0.07325
14	6	0.899	0.62	0.0052	0.08563	0.1740	-0.0017	-0.0212	-0.0000	0.07331
14	7	0.899	1.21	0.0112	0.08521	0.2953	-0.0014	-0.0248	-0.0000	0.07290
14	8	0.900	-1.12	-0.0179	0.08496	-0.1426	-0.0044	-0.0107	-0.0000	0.07269
14	9	0.901	-0.55	-0.0030	0.08548	-0.0690	-0.0012	-0.0227	-0.0000	0.07334
14	10	0.901	0.00	-0.0000	0.08583	0.0405	-0.0008	-0.0256	-0.0000	0.07320
15	3	1.020	-1.16	-0.0117	0.11743	-0.2009	-0.0030	-0.0316	-0.0000	0.10483
15	4	1.021	-0.56	-0.0060	0.11876	-0.0805	0.0003	-0.0203	-0.0000	0.10600
15	5	1.018	0.00	-0.0005	0.11661	0.0377	0.0003	-0.0210	-0.0000	0.10397
15	7	1.021	0.64	0.0050	0.11789	0.1795	-0.0000	-0.0216	-0.0000	0.10501
15	8	1.018	1.24	0.0107	0.11697	0.3087	-0.0006	-0.0229	-0.0000	0.10357
15	10	1.021	0.00	-0.0005	0.11695	0.0353	-0.0006	-0.0204	-0.0000	0.10412
16	11	1.008	-1.16	-0.0155	0.10996	-0.1903	-0.0024	-0.0091	-0.0000	0.09640
16	12	1.012	-0.57	-0.0058	0.11160	-0.0876	-0.0000	-0.0161	-0.0000	0.09862
16	13	1.011	0.00	-0.0004	0.11097	0.0254	-0.0001	-0.0177	-0.0000	0.09721
16	14	1.011	0.63	0.0051	0.11279	0.1730	0.0010	-0.0176	-0.0000	0.09938
16	15	1.008	1.23	0.0112	0.11054	0.2973	-0.0018	-0.0163	-0.0000	0.09708
16	16	1.013	0.00	-0.0004	0.11226	0.0303	-0.0000	-0.0176	-0.0000	0.09929
17	3	1.000	-1.16	-0.0141	0.10001	-0.1992	-0.0018	-0.0051	-0.0000	0.08621
17	4	1.003	-0.57	-0.0055	0.10105	-0.0831	-0.0008	-0.0143	-0.0000	0.08761
17	6	0.999	0.00	-0.0005	0.09979	0.0378	-0.0005	-0.0173	-0.0000	0.08582

TABLE III B
BODY AXIS FORCE AND MOMENT COEFFICIENTS BASED ON BODY DIAMETER AREA
(BODY-11)

Run	Pt	M_c	α	C_N	C_A	C_m	C_y	C_n	C_l	C_{A_u}
17	7	1.000	0.63	0.0056	0.09987	0.1723	-0.0004	-0.0175	-0.0000	0.08632
17	8	1.000	1.23	0.0109	0.09993	0.3007	-0.0014	-0.0185	-0.0000	0.08601
17	9	0.999	0.00	-0.0010	0.09984	0.0393	-0.0005	-0.0178	-0.0000	0.08559
18	1	0.991	-1.16	-0.0152	0.09321	-0.1910	-0.0021	-0.0132	-0.0000	0.07971
18	2	0.990	-0.57	-0.0066	0.09339	-0.0797	-0.0019	-0.0163	-0.0000	0.07987
18	3	0.991	0.00	-0.0005	0.09366	0.0363	-0.0009	-0.0159	-0.0000	0.08009
18	4	0.989	0.63	0.0047	0.09332	0.1694	-0.0001	-0.0218	-0.0000	0.07971
18	5	0.989	1.23	0.0109	0.09357	0.2985	-0.0011	-0.0214	-0.0000	0.07985
18	6	0.991	0.00	-0.0015	0.09382	0.0417	-0.0005	-0.0196	-0.0000	0.08009
19	1	0.979	-1.16	-0.0133	0.09149	-0.1919	-0.0018	-0.0156	-0.0000	0.07820
19	2	0.981	-0.56	-0.0050	0.09132	-0.0841	-0.0007	-0.0225	-0.0000	0.07808
19	3	0.981	0.00	-0.0001	0.09148	0.0397	-0.0009	-0.0270	-0.0000	0.07803
19	4	0.981	0.63	0.0051	0.09167	0.1782	-0.0011	-0.0222	-0.0000	0.07817
19	5	0.980	1.23	0.0105	0.09160	0.2971	-0.0012	-0.0253	-0.0000	0.07814
19	6	0.981	0.00	0.0003	0.09117	0.0411	-0.0008	-0.0249	-0.0000	0.07783
20	4	0.949	-1.15	-0.0143	0.08793	-0.1880	-0.0022	-0.0137	-0.0000	0.07523
20	5	0.951	-0.56	-0.0043	0.08820	-0.0790	-0.0011	-0.0208	-0.0000	0.07535
20	6	0.950	0.00	0.0005	0.08776	0.0303	0.0001	-0.0230	-0.0000	0.07478
20	7	0.950	0.63	0.0053	0.08792	0.1777	-0.0012	-0.0229	-0.0000	0.07508
20	8	0.951	1.22	0.0115	0.08801	0.2925	-0.0018	-0.0245	-0.0000	0.07522
20	9	0.951	0.00	-0.0005	0.08813	0.0408	-0.0003	-0.0263	-0.0000	0.07529
21	1	0.850	-1.13	-0.0083	0.08324	-0.1839	-0.0007	-0.0126	-0.0000	0.07107
21	2	0.850	-0.55	-0.0041	0.08297	-0.0727	0.0002	-0.0140	-0.0000	0.07081
21	3	0.851	0.00	0.0004	0.08298	0.0459	-0.0005	-0.0186	-0.0000	0.07070
21	5	0.851	0.61	0.0044	0.08307	0.1674	-0.0009	-0.0149	-0.0000	0.07080
21	6	0.851	1.19	0.0095	0.08304	0.2820	-0.0010	-0.0144	-0.0000	0.07083
21	7	0.853	0.00	-0.0000	0.08283	0.0441	-0.0004	-0.0150	-0.0000	0.07071

TABLE III B
BODY AXIS FORCE AND MOMENT COEFFICIENTS BASED ON BODY DIAMETER AREA
(BODY-11)

Run	Pt	M_c	α	C_N	C_A	C_m	C_Y	C_n	C_l	C_{A_u}
22	1	0.700	-1.11	-0.0114	0.08389	-0.1807	-0.0004	-0.0106	-0.0000	0.07227
22	2	0.700	-0.54	-0.0049	0.08402	-0.0761	-0.0016	-0.0166	-0.0000	0.07255
22	3	0.699	0.00	0.0007	0.08392	0.0383	-0.0005	-0.0168	-0.0000	0.07227
22	4	0.700	0.59	0.0044	0.08381	0.1517	-0.0006	-0.0173	-0.0000	0.07212
22	5	0.700	1.15	0.0093	0.08405	0.2614	-0.0015	-0.0167	-0.0000	0.07223
22	6	0.700	0.00	-0.0005	0.08419	0.0414	0.0002	-0.0153	-0.0000	0.07257
23	1	0.599	-1.10	-0.0179	0.08517	-0.1651	-0.0017	0.0010	-0.0000	0.07384
23	2	0.599	-0.53	-0.0028	0.08509	-0.0698	0.0004	-0.0003	-0.0000	0.07365
23	3	0.601	0.00	0.0001	0.08439	0.0329	-0.0014	-0.0029	-0.0000	0.07304
23	4	0.599	0.57	0.0039	0.08470	0.1509	-0.0001	-0.0027	-0.0000	0.07335
23	5	0.599	1.13	0.0084	0.08492	0.2553	-0.0005	-0.0054	-0.0000	0.07340
23	6	0.600	0.00	-0.0011	0.08465	0.0261	-0.0005	0.0004	-0.0000	0.07332

TABLE IV
BODY AXIS FORCE AND MOMENT COEFFICIENTS BASED ON BODY WETTED AREA
(F.R. 4, 6, 8, 9.1, 10)

Run	Pt	M_c	α	C_{N_w}	C_{A_w}	C_{m_w}	C_{Y_w}	C_{n_w}	C_{l_w}	C_{A_u}
8	3	1.009	0.00	0.0000	0.023986	0.0007	-0.0000	0.0000	0.0000	0.024706
9	1	0.997	0.00	0.0000	0.022766	0.0010	0.0000	0.0000	0.0000	0.023598
10	1	0.989	0.00	0.0000	0.020976	0.0010	0.0000	0.0000	0.0000	0.021499
11	2	0.978	0.00	0.0000	0.018555	0.0009	0.0000	0.0000	0.0000	0.017729
12	1	0.948	0.00	0.0000	0.007956	0.0011	0.0000	0.0000	0.0000	0.003696
13	1	0.895	0.00	0.0000	0.007033	0.0011	0.0000	0.0000	0.0000	0.002919
14	1	0.848	0.00	0.0000	0.006868	0.0012	0.0000	0.0000	0.0000	0.002919
15	1	0.798	0.00	0.0000	0.006758	0.0008	0.0000	0.0000	0.0000	0.002933
16	3	1.011	0.00	0.0001	0.023376	0.0009	0.0000	0.0000	0.0000	0.024209
17	1	0.999	0.00	0.0001	0.022369	0.0009	0.0000	0.0000	0.0000	0.023329
18	1	0.992	0.00	0.0001	0.020586	0.0010	0.0000	0.0000	0.0000	0.021429
19	1	0.978	-0.00	0.0001	0.017395	0.0010	0.0000	0.0000	0.0000	0.016985

TABLE IV
BODY AXIS FORCE AND MOMENT COEFFICIENTS BASED ON BODY WETTED AREA
(F.R. 4, 6, 8, 9.1, 10)

Run	Pt	M_c	α	C_{N_w}	C_{A_w}	C_{m_w}	C_{Y_w}	C_{n_w}	C_{l_w}	C_{A_u}
20	1	0.949	-0.04	0.0000	0.007819	0.0008	0.0000	0.0000	0.0000	0.003575
21	1	0.898	-0.14	0.0000	0.006502	0.0001	0.0000	0.0000	0.0000	0.002418
22	1	0.848	-0.12	0.0000	0.006344	0.0002	0.0000	0.0000	0.0000	0.002455
23	1	0.800	-0.6	-0.0000	0.006269	0.0004	-0.0000	0.0000	0.0000	0.002487
24	3	1.009	-0.11	0.0000	0.023050	0.0000	-0.0000	0.0000	0.0000	0.023961
25	1	0.998	-0.12	0.0000	0.021950	0.0000	-0.0000	0.0000	0.0000	0.022932
26	1	0.988	-0.12	0.0000	0.020449	-0.0000	-0.0000	0.0000	0.0000	0.020935
27	1	0.980	-0.14	-0.0000	0.017661	-0.0001	-0.0000	0.0000	0.0000	0.017553
28	1	0.949	-0.13	0.0000	0.007637	-0.0000	0.0000	0.0000	-0.0000	0.003371
29	1	0.898	-0.09	0.0000	0.006313	0.0003	0.0000	0.0000	0.0000	0.002171
30	1	0.848	-0.08	-0.0000	0.006245	0.0004	0.0000	0.0000	0.0000	0.002222
31	1	0.798	-0.09	0.0000	0.006131	0.0003	0.0000	0.0000	0.0000	0.002229

TABLE IV
BODY AXIS FORCE AND MOMENT COEFFICIENTS BASED ON BODY WETTED AREA
(F.R. 4, 6, 8, 9.1, 10)

Run Pt	M_c	α	C_{N_w}	C_{A_w}	C_{m_w}	C_{Y_w}	C_{n_w}	C_{l_w}	C_{A_u}
34 3	1.010	0.00	0.0000	0.012046	0.0004	-0.0000	0.0000	0.0000	0.011874
35 1	1.000	-0.00	0.0000	0.010905	0.0005	0.0000	0.0000	0.0000	0.009994
36 1	0.990	-0.00	0.0000	0.008967	0.0007	0.0000	0.0000	0.0000	0.007114
37 1	0.978	0.00	0.0000	0.006337	0.0006	0.0000	0.0000	0.0000	0.003695
38 1	0.950	-0.00	0.0000	0.004829	0.0007	0.0000	0.0000	0.0000	0.002605
39 1	0.899	-0.00	0.0000	0.004633	0.0007	0.0000	0.0000	0.0000	0.002683
40 1	0.850	-0.00	0.0000	0.004572	0.0007	0.0000	0.0000	0.0000	0.002782
41 2	0.799	-0.00	0.0000	0.004596	0.0006	0.0000	0.0000	0.0000	0.002855

TABLE IV
BODY AXIS FORCE AND MOMENT COEFFICIENTS BASED ON BODY WETTED AREA
(F.R. 4, 6, 8, 9.1, 10)

Run	Pt	M_c	α	C_{N_w}	C_{A_w}	C_{m_w}	C_{Y_w}	C_{n_w}	C_{l_w}	C_{A_u}
44	3	1.011	0.00	-0.0000	0.007799	0.0001	-0.0000	0.0000	0.0000	0.007572
45	1	1.000	0.00	0.0000	0.006281	0.0002	0.0000	0.0000	0.0000	0.004962
46	1	0.988	0.00	0.0000	0.004813	0.0001	0.0000	0.0000	0.0000	0.003286
47	2	0.979	0.00	0.0000	0.004253	0.0001	-0.0000	0.0000	0.0000	0.002938
48	1	0.950	0.00	0.0000	0.004054	0.0004	0.0000	0.0000	0.0000	0.002934
49	1	0.899	0.00	0.0000	0.003870	0.0003	0.0000	0.0000	0.0000	0.002938
50	1	0.849	0.00	0.0000	0.003779	0.0003	0.0000	0.0000	0.0000	0.002942
51	1	0.799	-0.01	-0.0000	0.003808	0.0000	-0.0000	0.0000	0.0000	0.003006

TABLE IV
 BODY AXIS FORCE AND MOMENT COEFFICIENTS BASED ON BODY WETTED AREA
 (F.R. 4, 6, 8, 9.1, 10)

Run	Pt	M_c	α	C_{N_w}	C_{A_w}	C_{m_w}	C_{Y_w}	C_{n_w}	C_{l_w}	C_{A_u}
55	1	1.010	-0.00	-0.0000	0.006360	-0.0001	-0.0000	0.0000	0.0000	0.005759
56	1	1.000	-0.00	-0.0000	0.004976	-0.0001	-0.0000	0.0000	0.0000	0.003751
57	1	0.989	-0.00	-0.0000	0.004057	-0.0001	-0.0000	0.0000	0.0000	0.003008
58	1	0.979	0.00	-0.0000	0.003922	0.0000	-0.0000	0.0000	0.0000	0.002991
59	1	0.951	0.00	-0.0000	0.003723	0.0000	-0.0000	0.0000	0.0000	0.002950
60	1	0.899	-0.00	-0.0000	0.003628	0.0000	-0.0000	0.0000	0.0000	0.002959
61	1	0.849	-0.00	-0.0000	0.003572	0.0000	-0.0000	0.0000	0.0000	0.003003
62	1	0.800	-0.00	-0.0000	0.003599	0.0000	-0.0000	0.0000	0.0000	0.003049

TABLE IV
BODY AXIS FORCE AND MOMENT COEFFICIENTS BASED ON BODY WETTED AREA
(F.R. 4, 6, 8, 9.1, 10)

Run	Pt	M_c	α	C_{N_w}	C_{A_w}	C_{m_w}	C_{Y_w}	C_{n_w}	C_{l_w}	C_{A_u}
67	4	1.010	-0.00	-0.0000	0.005782	-0.0003	-0.0000	0.0000	0.0000	0.005161
68	2	0.994	-0.00	-0.0000	0.004410	-0.0002	-0.0000	0.0000	0.0000	0.003559
69	1	0.990	-0.00	-0.0000	0.003969	-0.0002	-0.0000	0.0000	0.0000	0.003204
70	1	0.977	-0.00	-0.0000	0.003898	-0.0000	-0.0000	0.0000	0.0000	0.003246
71	2	0.949	-0.00	0.0000	0.003750	0.0000	-0.0000	0.0000	0.0000	0.003225
72	1	0.898	-0.00	0.0000	0.003706	-0.0000	-0.0000	0.0000	0.0000	0.003251
73	1	0.849	-0.00	-0.0000	0.003657	0.0000	-0.0000	0.0000	0.0000	0.003252
74	1	0.800	-0.00	-0.0000	0.003637	-0.0000	-0.0000	0.0000	0.0000	0.003273
75	3	1.010	-0.00	-0.0000	0.005313	-0.0003	-0.0000	0.0000	0.0000	0.004610
76	1	1.000	-0.01	-0.0000	0.004282	-0.0003	-0.0000	0.0000	0.0000	0.003316
77	1	0.991	-0.00	-0.0000	0.003901	-0.0002	-0.0000	0.0000	0.0000	0.003104
78	1	0.980	-0.01	-0.0000	0.003700	-0.0001	-0.0000	0.0000	0.0000	0.003043

TABLE IV
BODY AXIS FORCE AND MOMENT COEFFICIENTS BASED ON BODY WETTED AREA
(F.R. 4, 6, 8, 9.1, 10)

Run Pt	M_c	α	C_{N_w}	C_{A_w}	C_{m_w}	C_{Y_w}	C_{n_w}	C_{L_w}	C_{A_u}
79 1	0.949	-0.00	-0.0000	0.003527	-0.0001	-0.0000	0.0000	0.0000	0.002996
80 1	0.900	-0.00	-0.0000	0.003426	-0.0001	-0.0000	0.0000	0.0000	0.003004
81 1	0.850	0.00	0.0000	0.003410	-0.0000	-0.0000	0.0000	0.0000	0.003021
82 1	0.798	0.00	0.0000	0.003408	0.0000	-0.0000	0.0000	0.0000	0.003056

TABLE V A
 CAVITY PRESSURE COEFFICIENTS AND
 INCREMENTAL AXIAL FORCE CORRECTION COEFFICIENTS
 (F.R. 4, 6, 8, 9.1, 10)

Run	Pt	Mc	α	$C_{p_{c1}}$	$C_{p_{c2}}$	$\Delta C_{A_{c_w}}$	ΔC_{A_c}
8	3	1.009	0.00	-0.025	-0.029-0.000720	-0.00901	
9	1	0.997	0.00	-0.030	-0.032-0.000832	-0.01041	
10	1	0.989	0.00	-0.019	-0.019-0.000522	-0.00654	
11	2	0.978	0.00	0.032	0.029 0.000826	0.01034	
12	1	0.948	0.00	0.162	0.159 0.004259	0.05332	
13	1	0.895	0.00	0.155	0.155 0.004113	0.05149	
14	1	0.848	0.00	0.148	0.149 0.003949	0.04943	
15	1	0.798	0.00	0.145	0.143 0.003824	0.04787	
16	3	1.011	0.00	-0.030	-0.032-0.000832	-0.01041	
17	1	0.999	0.00	-0.035	-0.037-0.000959	-0.01201	
18	1	0.992	0.00	-0.032	-0.031-0.000842	-0.01054	
19	1	0.978	-0.00	0.015	0.015 0.000410	0.00513	

TABLE V A
 CAVITY PRESSURE COEFFICIENTS AND
 INCREMENTAL AXIAL FORCE CORRECTION COEFFICIENTS
 (F.R. 4, 6, 8, 9.1, 10)

Run	Pt	Mc	α	$C_{p_{c1}}$	$C_{p_{c2}}$	$\Delta C_{A_{cw}}$	ΔC_{A_c}
20	1	0.949	-0.04	0.159	0.161	0.004244	0.05313
21	1	0.898	-0.14	0.154	0.153	0.004084	0.05112
22	1	0.848	-0.12	0.145	0.147	0.003889	0.04867
23	1	0.800	-0.06	0.142	0.143	0.003781	0.04733
24	3	1.009	-0.11	-0.033	-0.035	-0.000910	-0.01140
25	1	0.998	-0.12	-0.036	-0.037	-0.000981	-0.01228
26	1	0.988	-0.12	-0.017	-0.019	-0.000485	-0.00607
27	1	0.980	-0.14	0.004	0.003	0.000108	0.00135
28	1	0.949	-0.13	0.162	0.160	0.004266	0.05339
29	1	0.898	-0.09	0.155	0.157	0.004141	0.05183
30	1	0.848	-0.08	0.152	0.151	0.004022	0.05035
31	1	0.798	-0.09	0.146	0.148	0.003902	0.04884

TABLE V A
 CAVITY PRESSURE COEFFICIENTS AND
 INCREMENTAL AXIAL FORCE CORRECTION COEFFICIENTS
 (F.R. 4, 6, 8, 9.1, 10)

Run	Pt	Mc	α	C_{Pc1}	C_{Pc2}	ΔC_{Acw}	ΔC_{Ac}
34	3	1.010	0.00	0.012	0.006	0.000171	0.00323
35	1	1.000	-0.00	0.054	0.049	0.000910	0.01715
36	1	0.990	-0.00	0.106	0.104	0.001853	0.03491
37	1	0.978	0.00	0.151	0.149	0.002641	0.04977
38	1	0.950	-0.00	0.126	0.126	0.002224	0.04190
39	1	0.899	-0.00	0.112	0.109	0.001950	0.03675
40	1	0.850	-0.00	0.101	0.101	0.001789	0.03371
41	2	0.799	-0.00	0.098	0.099	0.001741	0.03280

TABLE V A
 CAVITY PRESSURE COEFFICIENTS AND
 INCREMENTAL AXIAL FORCE CORRECTION COEFFICIENTS
 (F.R. 4, 6, 8, 9.1, 10)

Run	Pt	Mc	α	C_{Pc1}	C_{Pc2}	ΔC_{Acw}	ΔC_{Ac}
44	3	1.011	0.00	0.019	0.014	0.000227	0.00568
45	1	1.000	0.00	0.100	0.098	0.001319	0.03297
46	1	0.988	0.00	0.116	0.114	0.001526	0.03816
47	2	0.979	0.00	0.100	0.098	0.001315	0.03288
48	1	0.950	0.00	0.085	0.083	0.001119	0.02799
49	1	0.899	0.00	0.071	0.069	0.000931	0.02329
50	1	0.849	0.00	0.063	0.062	0.000836	0.02092
51	1	0.799	-0.01	0.060	0.060	0.000802	0.02005

TABLE V A
 CAVITY PRESSURE COEFFICIENTS AND
 INCREMENTAL AXIAL FORCE CORRECTION COEFFICIENTS
 (F.R. 4, 6, 8, 9.1, 10)

Run	Pt	Mc	α	C_{Pc1}	C_{Pc2}	ΔC_{Acw}	ΔC_{Ac}
55	1	1.010	-0.00	0.053	0.049	0.000600	0.01708
56	1	1.000	-0.00	0.106	0.103	0.001225	0.03486
57	1	0.989	-0.00	0.091	0.088	0.001049	0.02984
58	1	0.979	0.00	0.081	0.078	0.000931	0.02649
59	1	0.951	0.00	0.065	0.067	0.000773	0.02200
60	1	0.899	-0.00	0.058	0.056	0.000669	0.01903
61	1	0.849	-0.00	0.050	0.047	0.000569	0.01618
62	1	0.800	-0.00	0.047	0.047	0.000549	0.01563

TABLE V A
 CAVITY PRESSURE COEFFICIENTS AND
 INCREMENTAL AXIAL FORCE CORRECTION COEFFICIENTS
 (F.R. 4, 6, 8, 9.1, 10)

Run	Pt	Mc	α	$C_{p_{c1}}$	$C_{p_{c2}}$	$\Delta C_{A_{c_w}}$	ΔC_{A_c}
67	4	1.010	-0.00	0.060	0.056	0.000620	0.01941
68	2	0.994	-0.00	0.081	0.078	0.000850	0.02659
69	1	0.990	-0.00	0.074	0.070	0.000764	0.02390
70	1	0.977	-0.00	0.063	0.059	0.000652	0.02041
71	2	0.949	-0.00	0.050	0.048	0.000524	0.01641
72	1	0.898	-0.00	0.044	0.041	0.000454	0.01421
73	1	0.849	-0.00	0.037	0.038	0.000405	0.01267
74	1	0.800	-0.00	0.035	0.033	0.000363	0.01138
75	3	1.010	-0.00	0.067	0.065	0.000702	0.02196
76	1	1.000	-0.01	0.092	0.090	0.000966	0.03022
77	1	0.991	-0.00	0.075	0.074	0.000797	0.02494
78	1	0.980	-0.01	0.062	0.061	0.000657	0.02055

TABLE V A
 CAVITY PRESSURE COEFFICIENTS AND
 INCREMENTAL AXIAL FORCE CORRECTION COEFFICIENTS
 (F.R. 4, 6, 8, 9.1, 10)

Run	Pt	Mc	α	$C_{p_{c1}}$	$C_{p_{c2}}$	$\Delta C_{A_{cw}}$	ΔC_{A_c}
79	1	0.949	-0.00	0.050	0.050	0.000530	0.01660
80	1	0.900	-0.00	0.039	0.039	0.000421	0.01318
81	1	0.850	0.00	0.038	0.035	0.000388	0.01215
82	1	0.798	0.00	0.032	0.033	0.000352	0.01102

TABLE V B
INDIVIDUAL AND AVERAGED CAVITY PRESSURE COEFFICIENTS
(BODY-11)

Run	Pt	M_c	α	C_{Pc1}	C_{Pc2}	C_{Pc3}	$C_{Pc_{avg}}$	ΔC_{Ac}
13	5	0.799	0.00	0.184	0.188	0.185	0.186	0.01160
13	7	0.799	1.18	0.188	0.190	0.189	0.189	0.01180
13	8	0.800	-1.11	0.186	0.188	0.183	0.185	0.01159
13	9	0.800	-0.54	0.189	0.186	0.189	0.188	0.01174
13	10	0.800	0.00	0.185	0.184	0.186	0.185	0.01155
14	5	0.901	0.00	0.193	0.194	0.195	0.194	0.01210
14	6	0.899	0.62	0.198	0.197	0.197	0.197	0.01232
14	7	0.899	1.21	0.200	0.195	0.196	0.197	0.01231
14	8	0.900	-1.12	0.196	0.197	0.196	0.196	0.01226
14	9	0.901	-0.55	0.192	0.195	0.195	0.194	0.01213
14	10	0.901	0.00	0.203	0.202	0.202	0.202	0.01263
15	3	1.020	-1.16	0.201	0.201	0.202	0.202	0.01260
15	4	1.021	-0.56	0.202	0.202	0.209	0.204	0.01276
15	5	1.018	0.00	0.203	0.201	0.203	0.202	0.01264
15	7	1.021	0.64	0.205	0.210	0.203	0.206	0.01288
15	8	1.018	1.24	0.217	0.214	0.212	0.214	0.01339
15	10	1.021	0.00	0.202	0.204	0.210	0.205	0.01283
16	11	1.008	-1.16	0.220	0.218	0.213	0.217	0.01356
16	12	1.012	-0.57	0.213	0.207	0.203	0.208	0.01297
16	13	1.011	0.00	0.218	0.221	0.222	0.220	0.01375
16	14	1.011	0.63	0.213	0.220	0.210	0.215	0.01340
16	15	1.008	1.23	0.212	0.216	0.218	0.215	0.01346
16	16	1.013	0.00	0.209	0.211	0.203	0.208	0.01296
17	3	1.000	-1.16	0.219	0.219	0.225	0.221	0.01380
17	4	1.003	-0.57	0.210	0.212	0.223	0.215	0.01343
17	6	0.999	0.00	0.224	0.225	0.221	0.223	0.01396
17	7	1.000	0.63	0.218	0.216	0.216	0.217	0.01355

TABLE V B
INDIVIDUAL AND AVERAGED CAVITY PRESSURE COEFFICIENTS
(BODY-11)

Run	Pt	M_c	α	$C_{p_{c1}}$	$C_{p_{c2}}$	$C_{p_{c3}}$	$C_{p_{c_{avg}}}$	ΔC_{A_c}
17	8	1.000	1.23	0.224	0.223	0.220	0.223	0.01391
17	9	0.999	0.00	0.223	0.229	0.227	0.227	0.01415
18	1	0.991	-1.16	0.220	0.214	0.214	0.216	0.01349
18	2	0.990	-0.57	0.215	0.218	0.216	0.216	0.01351
18	3	0.991	0.00	0.217	0.216	0.218	0.217	0.01356
18	4	0.989	0.63	0.219	0.216	0.218	0.218	0.01360
18	5	0.989	1.23	0.218	0.219	0.222	0.220	0.01372
18	6	0.991	0.00	0.217	0.219	0.223	0.220	0.01372
19	1	0.979	-1.16	0.210	0.214	0.214	0.213	0.01329
19	2	0.981	-0.56	0.214	0.211	0.211	0.212	0.01324
19	3	0.981	0.00	0.215	0.215	0.216	0.215	0.01345
19	4	0.981	0.63	0.216	0.218	0.214	0.216	0.01350
19	5	0.980	1.23	0.214	0.217	0.215	0.215	0.01345
19	6	0.981	0.00	0.215	0.212	0.214	0.214	0.01334
20	4	0.949	-1.15	0.203	0.202	0.205	0.203	0.01269
20	5	0.951	-0.56	0.206	0.206	0.205	0.206	0.01284
20	6	0.950	0.00	0.206	0.210	0.208	0.208	0.01298
20	7	0.950	0.63	0.204	0.206	0.206	0.205	0.01284
20	8	0.951	1.22	0.206	0.205	0.203	0.205	0.01279
20	9	0.951	0.00	0.205	0.206	0.205	0.205	0.01284
21	1	0.850	-1.13	0.192	0.197	0.195	0.195	0.01217
21	2	0.850	-0.55	0.195	0.196	0.193	0.195	0.01216
21	3	0.851	0.00	0.191	0.198	0.201	0.196	0.01227
21	5	0.851	0.61	0.200	0.197	0.191	0.196	0.01226
21	6	0.851	1.19	0.194	0.195	0.197	0.195	0.01220
21	7	0.853	0.00	0.197	0.192	0.193	0.194	0.01211

TABLE V B
INDIVIDUAL AND AVERAGED CAVITY PRESSURE COEFFICIENTS
(BODY-11)

Run	Pt	M_c	α	C_{Pc1}	C_{Pc2}	C_{Pc3}	$C_{Pc\text{ avg}}$	ΔC_{Ac}
22	1	0.700	-1.11	0.181	0.188	0.188	0.186	0.01161
22	2	0.700	-0.54	0.181	0.185	0.184	0.183	0.01146
22	3	0.699	0.00	0.189	0.186	0.185	0.186	0.01165
22	4	0.700	0.59	0.183	0.187	0.191	0.187	0.01169
22	5	0.700	1.15	0.195	0.190	0.182	0.189	0.01182
22	6	0.700	0.00	0.187	0.182	0.188	0.186	0.01161
23	1	0.599	-1.10	0.181	0.181	0.182	0.181	0.01133
23	2	0.599	-0.53	0.183	0.188	0.178	0.183	0.01143
23	3	0.601	0.00	0.177	0.184	0.183	0.182	0.01135
23	4	0.599	0.57	0.177	0.182	0.185	0.181	0.01134
23	5	0.599	1.13	0.187	0.184	0.182	0.184	0.01152
23	6	0.600	0.00	0.184	0.179	0.181	0.181	0.01132

KEY TO TABLE VI
PRESSURE COEFFICIENTS - BODY 11

Run	Pt	α	M_c	C_{P1}	C_{P2}	C_{P3}	C_{P4}	C_{P5}	C_{P7}	C_{P8}	C_{P9}	C_{P10}	
cd	5												
6				C_{P11}	C_{P12}	C_{P13}	C_{P14}	C_{P15}	C_{P16}	C_{P17}	C_{P18}	C_{P19}	C_{P20}
7				C_{P21}	C_{P22}	C_{P23}	C_{P24}	C_{P25}	C_{P26}	C_{P27}	C_{P28}	C_{P29}	C_{P30}
8				C_{P31}	C_{P32}	C_{P33}	C_{P34}	C_{P35}	C_{P36}	C_{P37}	C_{P38}	C_{P39}	C_{P40}
9				C_{P41}	C_{P42}	C_{P43}	C_{P44}	C_{P45}	C_{P46}	C_{P47}	C_{P48}	C_{P49}	C_{P50}
10													

TABLE VI
PRESSURE COEFFICIENTS - BODY 11

Run	Pt	cd	M_c	α	C_{p_y} (SEE TABLE KEY)									
13	5	5	0.799	0.00	-0.023	-0.038	-0.055	-0.071	-0.074	-0.065	-0.071	-0.065	-0.071	-0.071
		6	0.183	0.040	-0.064	-0.061	-0.064	-0.056	-0.056	-0.044	-0.056	-0.044	-0.056	-0.050
		7	-0.066	-0.067	-0.048	-0.053	-0.044	-0.046	-0.039	-0.039	-0.046	-0.039	-0.041	-0.041
		8	-0.046	-0.053	-0.017	-0.013	-0.005	0.032	0.168	0.216	0.073	0.216	-0.030	-0.030
		10	-0.039	-0.023	0.221	-0.027	-0.062	-0.054	-0.046	-0.069	0.192	-0.069	-0.061	-0.061
13	6	5	0.800	0.61	-0.035	-0.041	-0.067	-0.077	-0.077	-0.064	-0.077	-0.064	-0.074	-0.074
		6	0.166	0.017	-0.069	-0.063	-0.062	-0.052	-0.056	-0.048	-0.056	-0.048	-0.052	-0.052
		7	-0.060	-0.070	-0.043	-0.052	-0.044	-0.045	-0.030	-0.033	-0.039	-0.033	-0.029	-0.029
		8	-0.050	-0.050	-0.015	-0.007	0.004	0.034	0.163	0.200	0.075	0.200	-0.037	-0.037
		10	-0.035	-0.023	0.242	-0.020	-0.059	-0.056	-0.048	-0.064	0.201	-0.064	-0.060	-0.060
13	7	5	0.799	1.18	-0.049	-0.055	-0.073	-0.081	-0.082	-0.072	-0.081	-0.072	-0.078	-0.078
		6	0.139	-0.002	-0.074	-0.061	-0.062	-0.058	-0.059	-0.048	-0.058	-0.048	-0.052	-0.052
		7	-0.070	-0.074	-0.048	-0.047	-0.039	-0.038	-0.032	-0.035	-0.038	-0.035	-0.033	-0.033
		8	-0.047	-0.051	-0.008	-0.002	0.005	0.036	0.164	0.211	0.074	0.211	-0.036	-0.036
		10	-0.033	-0.024	0.251	-0.012	-0.055	-0.049	-0.054	-0.066	0.194	-0.066	-0.066	-0.066
13	8	5	0.800	-1.11	0.004	-0.016	-0.032	-0.051	-0.064	-0.058	-0.051	-0.058	-0.059	-0.059
		6	0.231	0.070	-0.058	-0.055	-0.059	-0.050	-0.052	-0.047	-0.050	-0.047	-0.048	-0.048
		7	-0.052	-0.059	-0.053	-0.056	-0.045	-0.046	-0.046	-0.038	-0.046	-0.038	-0.042	-0.042
		8	-0.048	-0.057	-0.028	-0.024	-0.013	0.026	0.158	0.205	0.067	0.205	-0.041	-0.041
		10	-0.048	-0.032	0.171	-0.054	-0.077	-0.059	-0.041	-0.060	0.209	-0.060	-0.058	-0.058
13	9	5	0.800	-0.54	-0.007	-0.018	-0.048	-0.066	-0.071	-0.061	-0.066	-0.061	-0.061	-0.061
		6	0.202	0.050	-0.064	-0.058	-0.058	-0.057	-0.054	-0.048	-0.057	-0.048	-0.054	-0.054
		7	-0.057	-0.065				-0.051						

TABLE VI
PRESSURE COEFFICIENTS - BODY 11

[illegible]

TABLE VI
PRESSURE COEFFICIENTS - BODY 11

Run	Pt	cd	M_c	α	C_{p_y} (SEE TABLE KEY)									
14	8	5	0.900	-1.12	0.024	0.002	-0.032	-0.058	-0.065	-0.061	-0.062			
		6	0.261	0.089	-0.063	-0.055	-0.061	-0.057	-0.056	-0.050	-0.060			
		7	-0.054	-0.059	-0.052	-0.063	-0.054	-0.052	-0.046	-0.042	-0.044			
		8	-0.058	-0.062	-0.024	-0.021	-0.008	0.081	0.172	0.247	-0.034			
		9	-0.044	-0.031	0.217	-0.046	-0.079	0.241	-0.042	-0.077	-0.071			
		10	-0.063	-0.067										
14	9	5	0.901	-0.55	0.004	-0.010	-0.045	-0.066	-0.073	-0.065	-0.068			
		6	0.250	0.073	-0.062	-0.062	-0.065	-0.059	-0.059	-0.051	-0.059			
		7	-0.058	-0.066	-0.050	-0.065	-0.058	-0.050	-0.041	-0.041	-0.040			
		8	-0.055	-0.061	-0.020	-0.017	-0.003	0.085	0.176	0.250	-0.034			
		9	-0.043	-0.025	0.244	-0.036	-0.079	0.248	-0.040	-0.068	-0.067			
		10	-0.068	-0.060										
14	10	5	0.901	0.00	-0.006	-0.024	-0.048	-0.078	-0.082	-0.075	-0.069			
		6	0.234	0.063	-0.069	-0.065	-0.065	-0.056	-0.063	-0.048	-0.054			
		7	-0.064	-0.070	-0.054	-0.060	-0.050	-0.051	-0.048	-0.035	-0.040			
		8	-0.054	-0.059	-0.020	-0.008	0.003	0.086	0.180	0.250	-0.030			
		9	-0.041	-0.029	0.261	-0.029	-0.076	0.234	-0.044	-0.077	-0.071			
		10	-0.067	-0.068										
15	3	5	1.020	-1.16	0.116	0.087	0.053	-0.028	-0.040	-0.045	-0.063			
		6	0.375	0.192	-0.076	-0.086	-0.092	-0.102	-0.092	-0.088	-0.081			
		7	-0.053	-0.069	-0.064	-0.062	-0.044	-0.036	-0.036	-0.029	-0.042			
		8	-0.090	-0.095	-0.078	-0.087	-0.071	0.095	0.184	0.358	0.049			
		9	-0.070	-0.076	-0.078	-0.087	-0.068	0.350	0.041	-0.062	-0.101			
		10	-0.053	-0.099	0.330	0.040	-0.068	0.350	0.041	-0.062	-0.101			
15	4	5	1.021	-0.56	0.098	0.072	0.043	-0.041	-0.047	-0.052	-0.069			
		6	0.352	0.176	-0.082	-0.092	-0.091	-0.101	-0.106	-0.080	-0.074			
		7	-0.065	-0.076	-0.047	-0.056	-0.034	-0.037	-0.034	-0.041	-0.057			
		8	-0.083	-0.080										

TABLE VI
PRESSURE COEFFICIENTS - BODY 11

Run	Pt	cd	M _c	α	C _{Py} (SEE TABLE KEY)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														

TABLE VI
PRESSURE COEFFICIENTS - BODY 11

Run	Pt	cd	M_c	α	C_{p_y} (SEE TABLE KEY)									
16	11	5	1.008	-1.16	0.099	0.064	0.031	-0.075	-0.044	-0.050	-0.057	-0.077		
		6	0.367	0.177	-0.085	-0.090	-0.082	-0.075	-0.071	-0.070	-0.059	-0.042		
		7	-0.064	-0.078	-0.025	-0.042	-0.043	-0.058	-0.065	-0.073	-0.070	-0.083		
		8	-0.038	-0.034	-0.093	-0.099	-0.065	0.074	0.137	0.203	0.335	0.029		
		9	-0.101	-0.098	-0.309	0.024	-0.079	-0.097	0.345	0.036	-0.067	-0.089		
16	12	10	-0.064	-0.095										
		5	1.012	-0.57	0.096	0.063	0.036	-0.079	-0.053	-0.056	-0.058	-0.072		
		6	0.354	0.169	-0.083	-0.097	-0.096	-0.079	-0.084	-0.089	-0.069	-0.073		
		7	-0.060	-0.078	-0.032	-0.033	-0.028	-0.044	-0.042	-0.051	-0.064	-0.080		
		8	-0.058	-0.062	-0.094	-0.093	-0.053	0.032	0.117	0.196	0.347	0.036		
16	13	9	-0.104	-0.101	0.337	0.034	-0.074	-0.090	0.330	0.033	-0.073	-0.094		
		10	-0.062	-0.090										
		5	1.011	0.00	0.072	0.044	0.018	-0.087	-0.068	-0.066	-0.062	-0.070		
		6	0.326	0.150	-0.087	-0.092	-0.093	-0.087	-0.089	-0.098	-0.079	-0.047		
		7	-0.063	-0.077	-0.020	-0.036	-0.040	-0.046	-0.039	-0.043	-0.059	-0.078		
16	14	8	-0.029	-0.036	-0.093	-0.087	-0.045	0.043	0.107	0.192	0.345	0.037		
		9	-0.102	-0.098	0.352	0.042	-0.067	-0.082	0.342	0.032	-0.064	-0.091		
		10	-0.058	-0.083										
		5	1.011	0.63	0.055	0.029	0.011	-0.082	-0.076	-0.070	-0.068	-0.078		
		6	0.299	0.121	-0.086	-0.088	-0.088	-0.082	-0.094	-0.098	-0.079	-0.021		
16	15	7	-0.068	-0.078	-0.034	-0.043	-0.033	-0.039	-0.038	-0.037	-0.046	-0.065		
		8	-0.020	-0.041	-0.072	-0.043	-0.017	0.050	0.116	0.189	0.349	0.038		
		9	-0.091	-0.089	0.377	0.050	-0.059	-0.086	0.336	0.030	-0.068	-0.100		
		10	-0.056	-0.093										
		5	1.008	1.23	0.045	0.021	0.005	-0.083	-0.096	-0.083	-0.076	-0.088		
16	15	6	0.286	0.109	-0.097	-0.098	-0.090	-0.053	-0.084	-0.087	-0.058	-0.042		
		7	-0.081	-0.091	-0.018	-0.039	-0.046	-0.053	-0.055	-0.060	-0.059	-0.068		
		8	-0.025	-0.041										

TABLE VI

Run	Pt	cd	M_c	α	C_{Py} (SEE TABLE KEY)											
		9	-0.082	-0.078	-0.074	-0.066	-0.023	0.061	0.125	0.208	0.341	0.031				
		10	-0.061	-0.096	0.396	0.055	-0.058	-0.086	0.333	0.031	-0.074	-0.102				
16	16	5	1.013	0.00												
		6	0.322	0.147	0.077	0.049	0.023	-0.091	-0.070	-0.069	-0.068	-0.077				
		7	-0.065	-0.078	-0.090	-0.095	-0.102	-0.054	-0.087	-0.090	-0.063	-0.073				
		8	-0.058	-0.054	-0.021	0.030	0.045	-0.054	-0.058	-0.051	-0.059	-0.080				
		9	-0.103	-0.095	-0.088	-0.092	-0.053	0.026	0.112	0.204	0.348	0.035				
		10	-0.059	-0.096	0.360	0.043	-0.068	-0.094	0.334	0.033	-0.074	-0.095				
17	3	5	1.000	-1.16												
		6	0.351	0.168	0.083	0.057	0.019	-0.067	-0.059	-0.063	-0.065	-0.077				
		7	-0.065	-0.078	-0.082	-0.087	-0.087	-0.093	-0.060	-0.068	-0.043	-0.030				
		8	-0.034	-0.063	-0.056	-0.077	-0.080	-0.069	-0.087	-0.085	-0.089	-0.091				
		9	-0.107	-0.079	-0.026	-0.002	0.025	0.069	0.121	0.201	0.325	0.014				
		10	-0.069	-0.091	0.298	0.010	-0.086	-0.092	0.322	0.019	-0.081	-0.090				
17	4	5	1.003	-0.57												
		6	0.328	0.155	0.078	0.049	0.015	-0.069	-0.059	-0.067	-0.069	-0.086				
		7	-0.075	-0.089	-0.082	-0.085	-0.080	-0.064	-0.065	-0.069	-0.061	-0.038				
		8	-0.021	-0.053	-0.042	-0.063	-0.072	-0.064	-0.068	-0.076	-0.090	-0.097				
		9	-0.121	-0.076	-0.014	0.013	0.033	0.074	0.126	0.206	0.327	0.016				
		10	-0.067	-0.082	0.319	0.020	-0.081	-0.081	0.321	0.017	-0.076	-0.094				
17	6	5	0.999	0.00												
		6	0.316	0.143	0.066	0.040	0.014	-0.074	-0.078	-0.077	-0.078	-0.086				
		7	-0.074	-0.084	-0.088	-0.089	-0.090	-0.065	-0.065	-0.064	-0.065	-0.045				
		8	-0.027	-0.040	-0.037	-0.066	-0.063	-0.066	-0.075	-0.084	-0.085	-0.086				
		9	-0.092	-0.053	-0.005	0.006	0.040	0.079	0.129	0.204	0.332	0.021				
		10	-0.059	-0.083	0.337	0.028	-0.072	-0.082	0.316	0.017	-0.080	-0.096				

TABLE VI
PRESSURE COEFFICIENTS - BODY II

Run	Pt	cd	M _c	α	C _{p_y} (SEE TABLE KEY)									
17	7	5	1.000	0.63	0.054	0.021	0.001	-0.096	-0.082	-0.081	-0.090			
		6	0.300	0.124	-0.090	-0.088	-0.083	-0.074	-0.074	-0.049	-0.037			
		7	-0.079	-0.086	-0.048	-0.069	-0.072	-0.073	-0.081	-0.084	-0.086			
		8	-0.026	-0.053	-0.003	0.020	0.034	0.131	0.205	0.333	0.019			
		9	-0.084	-0.029	0.003	0.031	-0.074	0.311	0.016	-0.080	-0.098			
17	8	5	1.000	1.23	0.028	0.009	-0.006	-0.102	-0.082	-0.083	-0.095			
		6	0.262	0.091	-0.096	-0.093	-0.085	-0.073	-0.075	-0.062	-0.040			
		7	-0.084	-0.089	-0.052	-0.072	-0.070	-0.070	-0.080	-0.082	-0.088			
		8	-0.045	-0.064	-0.006	0.026	0.046	0.135	0.203	0.341	0.021			
		9	-0.085	-0.072	0.006	0.044	-0.067	0.325	0.021	-0.079	-0.094			
17	9	5	0.999	0.00	0.062	0.035	0.009	-0.075	-0.079	-0.080	-0.090			
		6	0.311	0.136	-0.090	-0.091	-0.092	-0.079	-0.070	-0.062	-0.041			
		7	-0.079	-0.085	-0.045	-0.070	-0.070	-0.079	-0.086	-0.090	-0.096			
		8	-0.024	-0.055	-0.038	-0.018	0.031	0.136	0.209	0.340	0.023			
		9	-0.100	-0.081	-0.038	0.030	-0.071	0.320	0.016	-0.081	-0.104			
18	1	5	0.991	-1.16	0.079	0.039	0.006	-0.060	-0.063	-0.076	-0.087			
		6	0.341	0.159	-0.079	-0.078	-0.071	-0.060	-0.043	-0.039	-0.035			
		7	-0.071	-0.075	-0.051	-0.074	-0.070	-0.071	-0.084	-0.085	-0.076			
		8	-0.049	-0.075	-0.017	-0.006	0.007	0.108	0.194	0.322	0.009			
		9	-0.060	-0.029	0.017	0.001	-0.085	0.313	0.007	-0.082	-0.093			
18	2	5	0.990	-0.57	0.066	0.037	0.005	-0.068	-0.065	-0.072	-0.086			
		6	0.323	0.146	-0.092	-0.095	-0.095	-0.043	-0.041	-0.029	-0.053			
		7	-0.080	-0.086	-0.053	-0.064	-0.058	-0.075	-0.061	-0.073	-0.075			
		8	-0.059	-0.077	-0.053	-0.064	-0.058	-0.075	-0.061	-0.073	-0.075			

TABLE VI
PRESSURE COEFFICIENTS - BODY 11

Run	Pt	cd	M_c	α	C_{p_y} (SEE TABLE KEY)									
18	3	5	9	10	-0.049 -0.061	-0.037 -0.082	-0.017 0.307	-0.001 0.008	0.020 -0.080	0.067 -0.082	0.116 0.317	0.199 0.008	0.314 -0.079	0.011 -0.085
18	4	5	6	7	0.991 0.292 -0.079 -0.066 -0.071 -0.068	0.00 0.118 -0.090 -0.080 -0.025 -0.087	0.046 -0.087 -0.045 -0.010 0.332	0.024 -0.091 -0.057 0.002 0.018	-0.006 -0.085 -0.060 0.025 -0.080	-0.062 -0.071 0.068 -0.084	-0.091 -0.063 -0.069 0.120 0.322	-0.078 -0.042 -0.070 0.201 0.013	-0.070 -0.033 -0.065 0.324 -0.073	-0.087 -0.062 -0.071 0.014 -0.077
18	5	6	7	8	0.989 0.276 -0.076 -0.064 -0.031 -0.067	0.63 0.103 -0.077 -0.078 -0.016 -0.067	0.036 -0.085 -0.065 -0.007 0.345	0.009 -0.091 -0.069 0.004 0.023	-0.011 -0.074 -0.055 0.025 -0.078	-0.066 -0.067 0.068 -0.065	-0.101 -0.043 -0.072 0.119 0.312	-0.082 -0.051 -0.077 0.200 0.007	-0.084 -0.055 -0.068 0.323 -0.082	-0.090 -0.059 -0.058 0.010 -0.086
18	6	7	8	9	0.989 0.259 -0.085 -0.061 -0.052 -0.076	1.23 0.092 -0.097 -0.077 -0.023 -0.090	0.025 -0.099 -0.056 -0.000 0.364	0.002 -0.090 -0.059 0.013 0.028	-0.013 -0.086 -0.064 0.030 -0.078	-0.073 -0.067 0.076 -0.082	-0.109 -0.037 -0.061 0.126 0.316	-0.077 -0.059 -0.063 0.198 0.010	-0.078 -0.057 -0.060 0.315 -0.082	-0.097 -0.055 -0.052 0.005 -0.089
18	7	8	9	10	0.991 0.304 -0.079 -0.052 -0.042 -0.075	0.00 0.125 -0.087 -0.067 -0.027 -0.089	0.052 -0.093 -0.049 -0.008 0.330	0.021 -0.093 -0.061 0.002 0.014	-0.008 -0.085 -0.059 0.023 -0.085	-0.070 -0.071 0.068 -0.089	-0.090 -0.064 -0.070 0.122 0.319	-0.079 -0.057 -0.068 0.201 0.014	-0.072 -0.056 -0.066 0.319 -0.080	-0.087 -0.058 -0.058 0.006 -0.079

TABLE VI
PRESSURE COEFFICIENTS - BODY 11

Run	Pt	cd	M _c	α	C _{Py} (SEE TABLE KEY)									
19	1	5	0.979	-1.16	0.067	0.038	-0.002	-0.047	-0.058	-0.071	-0.071	-0.071	-0.084	
		6	0.329	0.149	-0.072	-0.074	-0.058	-0.054	-0.054	-0.066	-0.043	-0.048		
		7	-0.068	-0.068	-0.043	-0.069	-0.071	-0.065	-0.058	-0.058	-0.054	-0.056		
		8	-0.054	-0.074	-0.043	-0.012	0.004	0.047	0.104	0.190	0.311	-0.001		
		9	-0.057	-0.037	-0.024	-0.011	-0.101	-0.072	0.300	-0.004	-0.094	-0.069		
19	2	5	0.981	-0.56	0.055	0.025	-0.007	-0.045	-0.051	-0.078	-0.077	-0.086		
		6	0.310	0.130	-0.088	-0.074	-0.061	-0.049	-0.071	-0.054	-0.054	-0.051		
		7	-0.080	-0.084	-0.056	-0.064	-0.061	-0.055	-0.054	-0.052	-0.052	-0.060		
		8	-0.058	-0.069	-0.018	-0.006	0.014	0.104	0.193	0.309	0.309	-0.002		
		9	-0.057	-0.037	-0.0294	-0.003	-0.095	-0.065	0.301	-0.003	-0.089	-0.071		
19	3	5	0.981	0.00	0.042	0.013	-0.011	-0.062	-0.070	-0.081	-0.082	-0.094		
		6	0.292	0.115	-0.090	-0.075	-0.062	-0.047	-0.067	-0.050	-0.050	-0.056		
		7	-0.083	-0.093	-0.056	-0.063	-0.053	-0.056	-0.052	-0.052	-0.052	-0.055		
		8	-0.064	-0.069	-0.012	-0.001	0.016	0.113	0.198	0.313	0.313	-0.001		
		9	-0.054	-0.030	-0.012	0.003	-0.089	0.302	-0.003	-0.094	-0.094	-0.071		
19	4	5	0.981	0.63	0.022	-0.002	-0.026	-0.062	-0.105	-0.085	-0.092	-0.098		
		6	0.266	0.084	-0.082	-0.081	-0.065	-0.049	-0.069	-0.044	-0.044	-0.060		
		7	-0.084	-0.092	-0.050	-0.067	-0.070	-0.053	-0.051	-0.046	-0.046	-0.048		
		8	-0.060	-0.073	-0.008	0.001	0.023	0.115	0.196	0.309	0.309	-0.002		
		9	-0.046	-0.024	-0.008	0.011	-0.079	0.302	-0.002	-0.091	-0.091	-0.071		
19	5	5	0.980	1.23	0.010	-0.013	-0.032	-0.066	-0.081	-0.095	-0.100	-0.109		
		6	0.243	0.079	-0.090	-0.080	-0.068	-0.056	-0.069	-0.049	-0.049	-0.058		
		7	-0.085	-0.086	-0.053	-0.063	-0.058	-0.052	-0.050	-0.049	-0.049	-0.043		
		8	-0.048	-0.069	-0.053	-0.063	-0.058	-0.052	-0.050	-0.049	-0.049	-0.043		

C_{p_y} (SEE TABLE KEY)

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TABLE VI
PRESSURE COEFFICIENTS - BODY 11

Run	Pt	cd	M_c	α	C_{p_y} (SEE TABLE KEY)									
20	7	5	0.950	0.63	0.003	-0.022	-0.050	-0.084	-0.091	-0.080	-0.085			
		6	0.244	0.066	-0.073	-0.072	-0.072	-0.062	-0.063	-0.055	-0.051			
		7	-0.076	-0.078	-0.053	-0.063	-0.051	-0.050	-0.045	-0.046	-0.043			
		8	-0.053	-0.055	-0.013	-0.005	0.011	0.103	0.183	0.290	-0.019			
		9	-0.038	-0.021	-0.013	-0.008	-0.076	0.275	-0.029	-0.081	-0.076			
		10	-0.072	-0.070	0.315			-0.070						
20	8	5	0.951	1.22	-0.014	-0.039	-0.056	-0.085	-0.090	-0.083	-0.084			
		6	0.219	0.045	-0.081	-0.074	-0.077	-0.063	-0.060	-0.049	-0.054			
		7	-0.074	-0.082	-0.061	-0.064	-0.054	-0.044	-0.042	-0.038	-0.036			
		8	-0.055	-0.066	-0.007	-0.001	0.017	0.108	0.187	0.291	-0.020			
		9	-0.036	-0.021	0.337	0.003	-0.067	0.271	-0.028	-0.087	-0.075			
		10	-0.067	-0.069				-0.067						
20	9	5	0.951	0.00	0.010	-0.012	-0.040	-0.077	-0.083	-0.070	-0.075			
		6	0.266	0.083	-0.077	-0.071	-0.073	-0.063	-0.064	-0.046	-0.060			
		7	-0.065	-0.076	-0.058	-0.060	-0.053	-0.051	-0.042	-0.044	-0.043			
		8	-0.059	-0.068	-0.019	-0.010	0.001	0.101	0.193	0.289	-0.020			
		9	-0.045	-0.032	-0.019	-0.010	-0.077	0.270	-0.027	-0.084	-0.071			
		10	-0.069	-0.069	0.294	-0.016		-0.072						
21	1	5	0.850	-1.13	0.007	-0.001	-0.028	-0.047	-0.056	-0.049	-0.049			
		6	0.242	0.076	-0.058	-0.061	-0.053	-0.053	-0.050	-0.039	-0.055			
		7	-0.046	-0.054	-0.044	-0.048	-0.039	-0.041	-0.039	-0.030	-0.036			
		8	-0.056	-0.060	-0.023	-0.010	-0.010	0.078	0.172	0.225	-0.030			
		9	-0.040	-0.029	-0.023	-0.042	-0.072	0.221	-0.031	-0.060	-0.058			
		10	-0.057	-0.053	0.193									
21	2	5	0.850	-0.55	0.001	-0.010	-0.045	-0.061	-0.060	-0.049	-0.056			
		6	0.226	0.068	-0.058	-0.063	-0.061	-0.051	-0.046	-0.038	-0.039			
		7	-0.050	-0.057	-0.046	-0.056	-0.047	-0.040	-0.030	-0.034	-0.028			
		8	-0.046	-0.053	-0.046	-0.056	-0.047	-0.046	-0.030	-0.034	-0.028			

TABLE VI
PRESSURE COEFFICIENTS - BODY 11

Run	Pt	cd	M _c	α	C _{p_y} (SEE TABLE KEY)									
22	1	5	0.700	-1.11	0.013	-0.001	-0.037	-0.043	-0.051	-0.037	-0.044			
		6	0.203	0.074	-0.048	-0.052	-0.051	-0.041	-0.043	-0.035	-0.050			
		7	-0.047	-0.051	-0.035	-0.051	-0.041	-0.033	-0.034	-0.031	-0.036			
		8	-0.038	-0.043	-0.020	-0.016	-0.015	0.022	0.162	0.177	-0.035			
		9	-0.037	-0.019	-0.0152	-0.045	-0.068	-0.056	-0.034	-0.056	-0.057			
22	2	10	-0.048	-0.049										
		5	0.700	-0.54	-0.010	-0.012	-0.036	-0.053	-0.059	-0.050	-0.054			
		6	0.193	0.054	-0.056	-0.055	-0.052	-0.046	-0.047	-0.037	-0.039			
		7	-0.044	-0.055	-0.040	-0.035	-0.034	-0.038	-0.034	-0.033	-0.030			
		8	-0.048	-0.051	-0.012	-0.011	-0.003	0.029	0.163	0.189	-0.030			
22	3	9	-0.037	-0.023	-0.0174	-0.035	-0.055	-0.053	-0.034	-0.053	-0.056			
		10	-0.044	-0.047										
		5	0.699	0.00	-0.025	-0.011	-0.046	-0.063	-0.055	-0.050	-0.052			
		6	0.178	0.040	-0.051	-0.055	-0.057	-0.046	-0.046	-0.041	-0.038			
		7	-0.052	-0.058	-0.025	-0.041	-0.041	-0.043	-0.030	-0.026	-0.029			
22	4	8	-0.038	-0.049	-0.007	-0.010	-0.001	0.031	0.159	0.200	-0.024			
		9	-0.030	-0.011	-0.007	-0.010	-0.001	0.031	0.159	0.200	-0.024			
		10	-0.042	-0.048	0.197	-0.024	-0.051	-0.053	-0.036	-0.057	-0.057			
		5	0.700	0.59	-0.028	-0.031	-0.057	-0.067	-0.066	-0.053	-0.062			
		6	0.152	0.025	-0.058	-0.062	-0.049	-0.054	-0.047	-0.034	-0.034			
22	5	7	-0.050	-0.057	-0.042	-0.040	-0.032	-0.037	-0.028	-0.026	-0.023			
		8	-0.038	-0.047	-0.007	0.004	0.004	0.031	0.165	0.181	-0.031			
		9	-0.029	-0.010	-0.007	0.004	0.004	0.031	0.165	0.181	-0.031			
		10	-0.049	-0.053	0.212	-0.017	-0.052	-0.052	-0.034	-0.056	-0.053			
		5	0.700	1.15	-0.045	-0.042	-0.068	-0.070	-0.069	-0.059	-0.061			
22	6	6	0.133	0.005	-0.058	-0.067	-0.059	-0.049	-0.039	-0.039	-0.043			
		7	-0.053	-0.061	-0.033	-0.046	-0.035	-0.031	-0.025	-0.021	-0.019			
		8	-0.037	-0.040										

TABLE VI
PRESSURE COEFFICIENTS - BODY 11

Run	Pt	cd	M_c	α	C_{p_y} (SEE TABLE KEY)									
22	6	9	-0.021	-0.009	-0.007	0.001	0.007	0.039	0.084	0.161	0.189	-0.031		
		10	-0.038	-0.050	0.234	-0.008	-0.041	-0.048	0.174	-0.047	-0.061	-0.065		
22	6	5	0.700	0.00	-0.011	-0.021	-0.051	-0.061	-0.061	-0.066	-0.046	-0.049		
		6	0.167	0.037	-0.061	-0.060	-0.053	-0.044	-0.044	-0.046	-0.043	-0.043		
		7	-0.043	-0.059	-0.032	-0.044	-0.040	-0.042	-0.038	-0.023	-0.027	-0.021		
		8	-0.041	-0.040	-0.010	-0.006	0.004	0.036	0.069	0.158	0.194	-0.030		
		9	-0.036	-0.022	-0.010	-0.027	-0.058	-0.051	0.184	-0.033	-0.053	-0.054		
		10	-0.047	-0.048	0.195	-0.027	-0.058	-0.051	0.184	-0.033	-0.053	-0.054		
23	1	5	0.599	-1.10	0.005	0.003	-0.022	-0.046	-0.052	-0.043	-0.039			
		6	0.183	0.054	-0.047	-0.050	-0.047	-0.042	-0.042	-0.037	-0.031	-0.041		
		7	-0.032	-0.039	-0.037	-0.036	-0.028	-0.042	-0.039	-0.037	-0.025	-0.027		
		8	-0.043	-0.045	-0.018	-0.011	-0.008	0.022	0.063	0.157	0.166	-0.026		
		9	-0.025	-0.021	-0.147	-0.039	-0.059	-0.050	0.178	-0.031	-0.044	-0.050		
		10	-0.046	-0.044	0.147	-0.039	-0.059	-0.050	0.178	-0.031	-0.044	-0.050		
23	2	5	0.599	-0.53	-0.006	-0.011	-0.034	-0.048	-0.045	-0.042	-0.045			
		6	0.169	0.049	-0.052	-0.053	-0.050	-0.045	-0.045	-0.044	-0.030	-0.036		
		7	-0.035	-0.054	-0.038	-0.042	-0.028	-0.036	-0.028	-0.030	-0.025	-0.020		
		8	-0.038	-0.039	-0.018	-0.006	-0.001	0.025	0.062	0.158	0.174	-0.019		
		9	-0.035	-0.017	0.168	-0.025	-0.046	-0.048	0.171	-0.024	-0.049	-0.041		
		10	-0.036	-0.044	0.168	-0.025	-0.046	-0.048	0.171	-0.024	-0.049	-0.041		
23	3	5	0.601	0.00	-0.019	-0.021	-0.044	-0.058	-0.051	-0.043	-0.049			
		6	0.154	0.032	-0.053	-0.049	-0.048	-0.044	-0.044	-0.041	-0.035	-0.036		
		7	-0.043	-0.050	-0.033	-0.034	-0.031	-0.035	-0.029	-0.026	-0.023	-0.024		
		8	-0.040	-0.038	-0.009	-0.001	-0.002	0.028	0.067	0.156	0.183	-0.021		
		9	-0.022	-0.014	0.180	-0.021	-0.053	-0.051	0.174	-0.028	-0.051	-0.046		
		10	-0.042	-0.047	0.180	-0.021	-0.053	-0.051	0.174	-0.028	-0.051	-0.046		

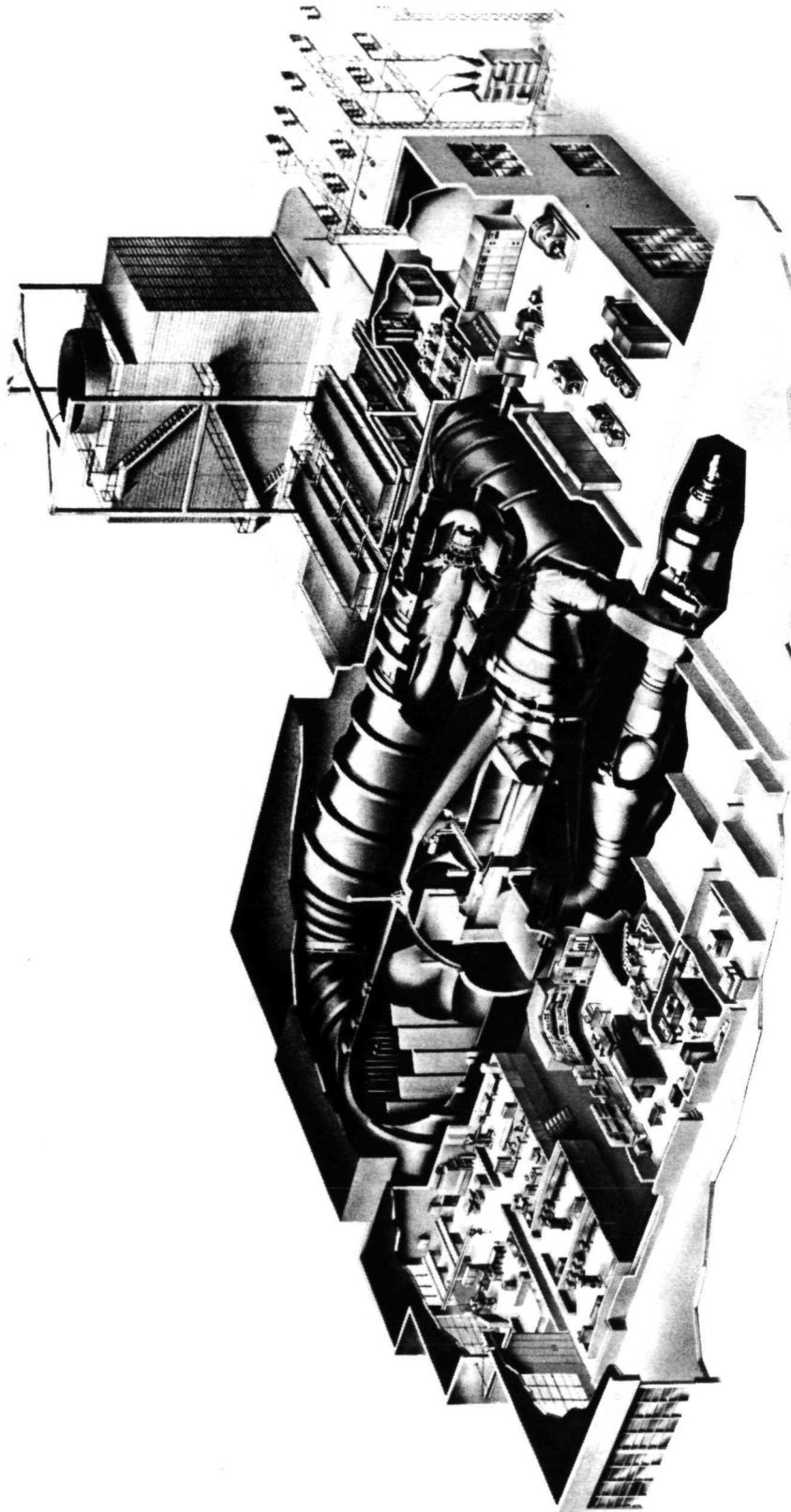
TABLE VI
PRESSURE COEFFICIENTS - BODY 11

Run	Pt	cd	M_c	α	C_{p_y} (SEE TABLE KEY)									
23	4	5	0.599	0.57	-0.029	-0.030	-0.047	-0.041	-0.050	-0.057	-0.049	-0.052		
		6	0.132	0.015	-0.053	-0.047	-0.050	-0.041	-0.038	-0.047	-0.039	-0.040		
		7	-0.049	-0.052	-0.041	-0.035	-0.023	-0.027	-0.022	-0.027	-0.021	-0.022		
		8	-0.037	-0.038	-0.041	-0.035	-0.023	-0.027	-0.022	-0.027	-0.021	-0.022		
		9	-0.024	-0.011	-0.000	0.001	0.004	0.045	0.065	0.154	0.170	-0.021		
23	5	5	-0.035	-0.049	0.198	-0.014	-0.034	-0.050	0.167	-0.029	-0.049	-0.044		
		6	0.599	1.13	-0.036	-0.036	-0.059	-0.041	-0.071	-0.067	-0.045	-0.055		
		7	0.115	0.014	-0.059	-0.052	-0.054	-0.031	-0.044	-0.045	-0.035	-0.037		
		8	-0.046	-0.052	-0.030	-0.037	-0.034	-0.031	-0.023	-0.012	-0.018	-0.017		
		9	-0.030	-0.034	-0.002	0.005	0.010	0.037	0.069	0.157	0.178	-0.032		
23	6	5	-0.021	-0.014	0.210	-0.010	-0.039	-0.039	0.171	-0.037	-0.045	-0.052		
		6	-0.044	-0.043	-0.036	-0.036	-0.059	-0.041	-0.071	-0.067	-0.045	-0.055		
		7	0.600	0.00	-0.017	-0.021	-0.042	-0.038	-0.042	-0.056	-0.051	-0.053		
		8	0.161	0.030	-0.049	-0.051	-0.053	-0.022	-0.040	-0.044	-0.034	-0.043		
		9	-0.044	-0.045	-0.037	-0.040	-0.022	-0.022	-0.031	-0.034	-0.026	-0.025		
23	7	5	-0.043	-0.045	-0.012	-0.006	0.002	0.033	0.064	0.156	0.164	-0.030		
		6	-0.021	-0.013	-0.012	-0.006	-0.002	-0.048	0.172	-0.030	-0.047	-0.048		
		7	-0.040	-0.044	0.169	-0.024	-0.049	-0.048	0.172	-0.030	-0.047	-0.048		
		8	-0.043	-0.045	-0.037	-0.040	-0.022	-0.022	-0.031	-0.034	-0.026	-0.025		
		9	-0.021	-0.013	-0.012	-0.006	0.002	0.033	0.064	0.156	0.164	-0.030		
23	8	5	-0.040	-0.044	-0.012	-0.006	-0.002	-0.048	0.172	-0.030	-0.047	-0.048		
		6	-0.021	-0.013	-0.012	-0.006	-0.002	-0.048	0.172	-0.030	-0.047	-0.048		
		7	-0.043	-0.045	-0.037	-0.040	-0.022	-0.022	-0.031	-0.034	-0.026	-0.025		
		8	-0.043	-0.045	-0.037	-0.040	-0.022	-0.022	-0.031	-0.034	-0.026	-0.025		
		9	-0.021	-0.013	-0.012	-0.006	0.002	0.033	0.064	0.156	0.164	-0.030		
23	9	5	-0.040	-0.044	-0.012	-0.006	-0.002	-0.048	0.172	-0.030	-0.047	-0.048		
		6	-0.021	-0.013	-0.012	-0.006	-0.002	-0.048	0.172	-0.030	-0.047	-0.048		
		7	-0.043	-0.045	-0.037	-0.040	-0.022	-0.022	-0.031	-0.034	-0.026	-0.025		
		8	-0.043	-0.045	-0.037	-0.040	-0.022	-0.022	-0.031	-0.034	-0.026	-0.025		
		9	-0.021	-0.013	-0.012	-0.006	0.002	0.033	0.064	0.156	0.164	-0.030		
23	10	5	-0.040	-0.044	-0.012	-0.006	-0.002	-0.048	0.172	-0.030	-0.047	-0.048		
		6	-0.021	-0.013	-0.012	-0.006	-0.002	-0.048	0.172	-0.030	-0.047	-0.048		
		7	-0.043	-0.045	-0.037	-0.040	-0.022	-0.022	-0.031	-0.034	-0.026	-0.025		
		8	-0.043	-0.045	-0.037	-0.040	-0.022	-0.022	-0.031	-0.034	-0.026	-0.025		
		9	-0.021	-0.013	-0.012	-0.006	0.002	0.033	0.064	0.156	0.164	-0.030		

SECTION X

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CORNELL AERONAUTICAL LABORATORY

8-FOOT TRANSONIC WIND TUNNEL

Figure 1



MODEL PHOTOGRAPH

NASA BODIES OF REVOLUTION

CONFIGURATION F.R. 4

Figure 2a

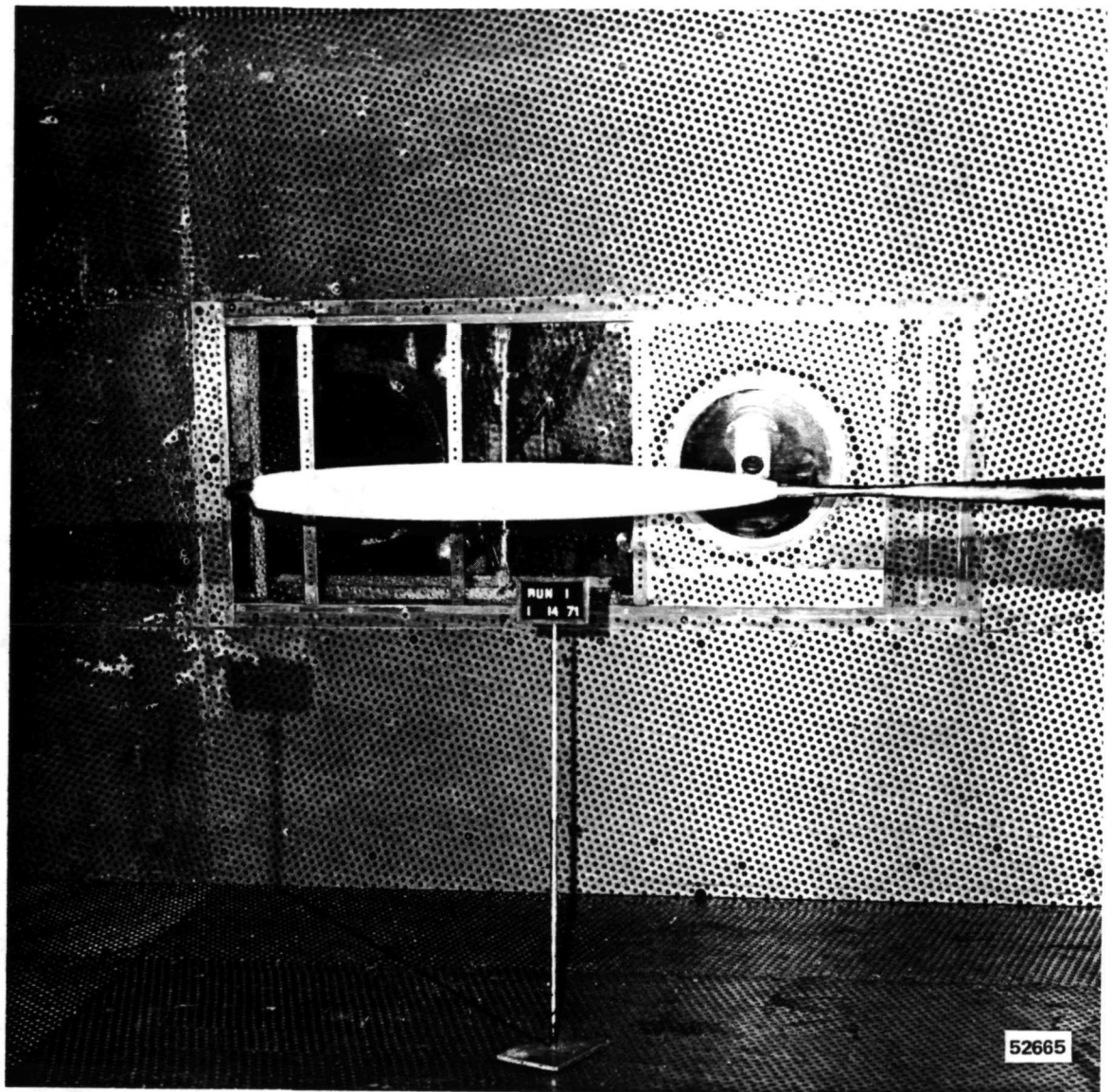


MODEL PHOTOGRAPH

NASA BODIES OF REVOLUTION

CONFIGURATION F.R. 9.1

Figure 2b

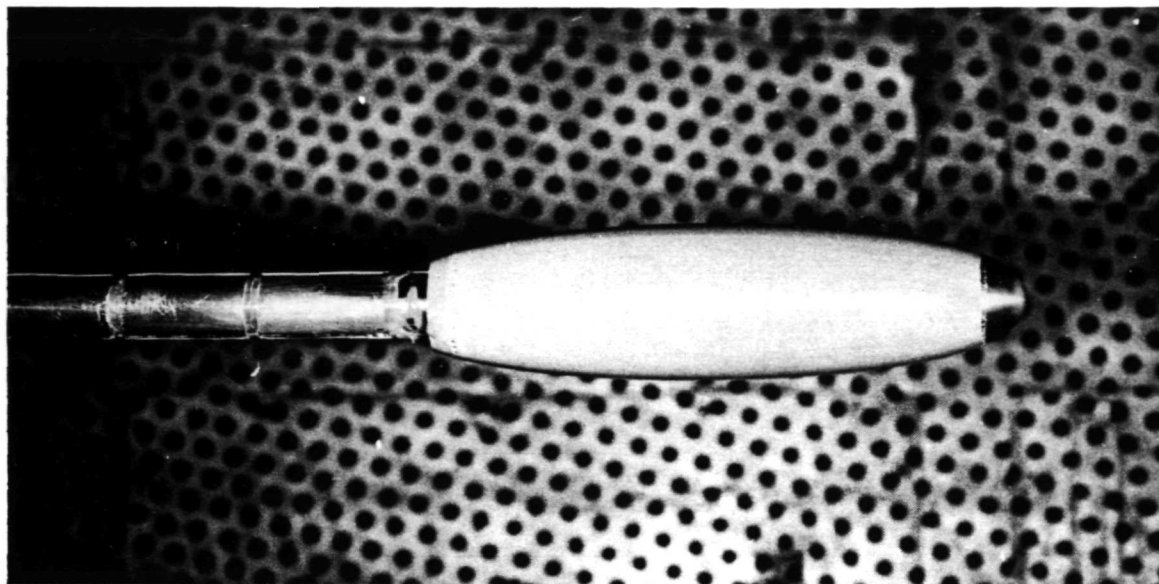


MODEL PHOTOGRAPH

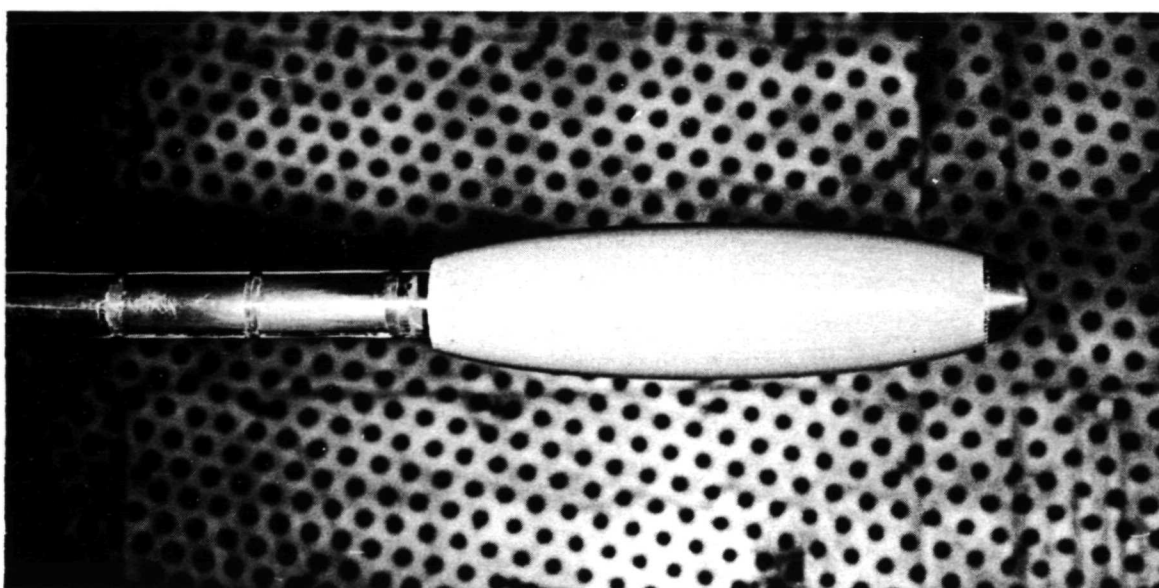
NASA BODIES OF REVOLUTION

CONFIGURATION BODY-11

Figure 2c



CONFIGURATION F.R. 4, $M_C = 1.008$, $N_R = 2.002 \times 10^6$

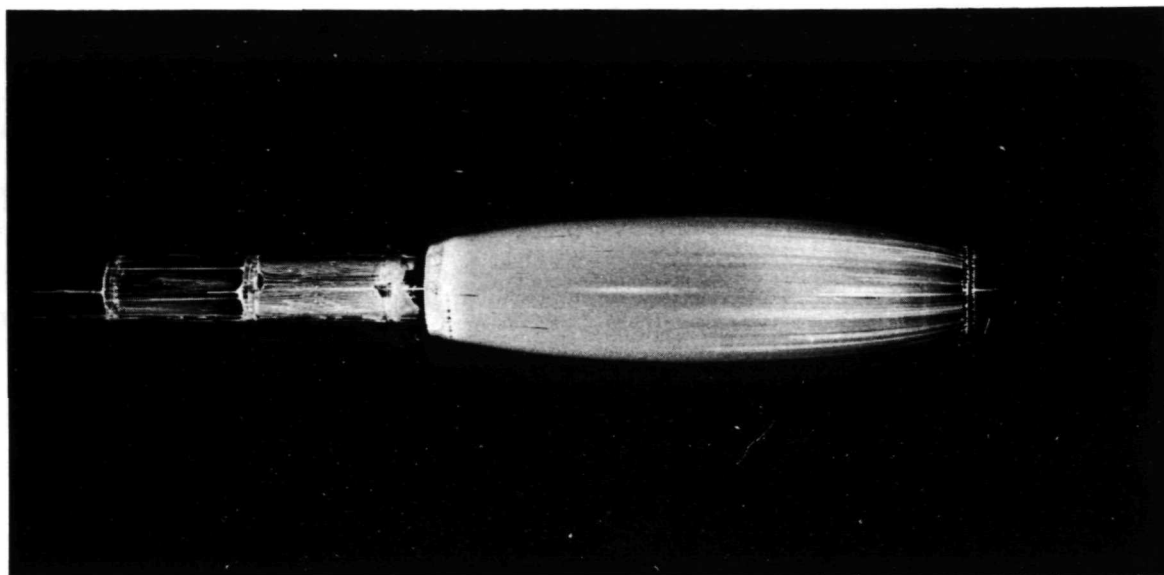


CONFIGURATION F.R. 4, $M_C = .798$, $N_R = 1.987 \times 10^6$

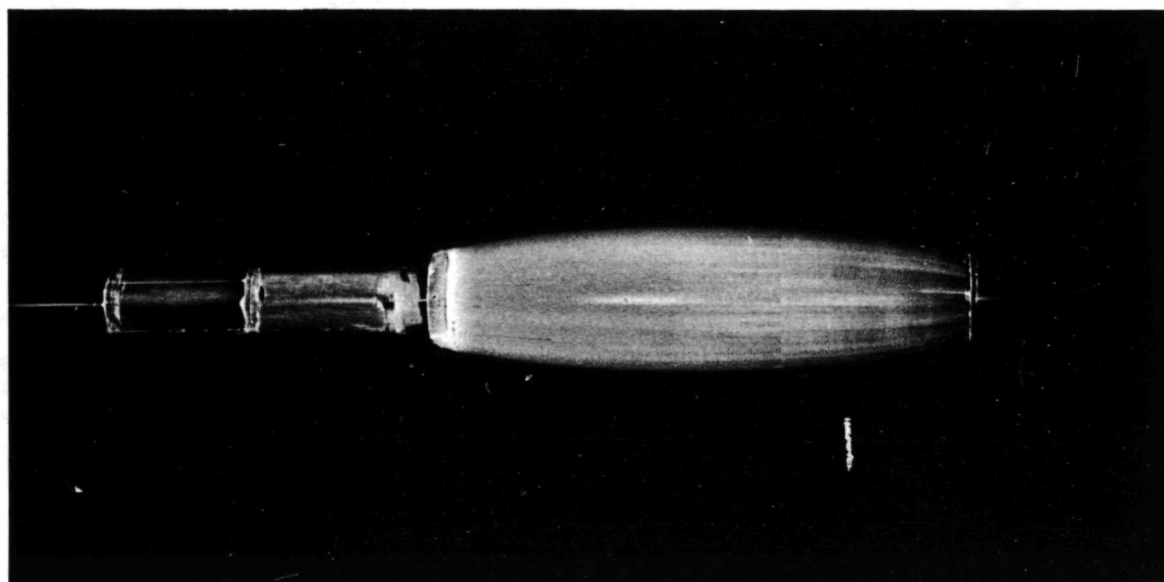
OIL FLOW PHOTOGRAPHS

NASA BODIES OF REVOLUTION

Figure 3a



CONFIGURATION F.R. 4, $M_C = 1.011$, $N_R = 2.965 \times 10^6$

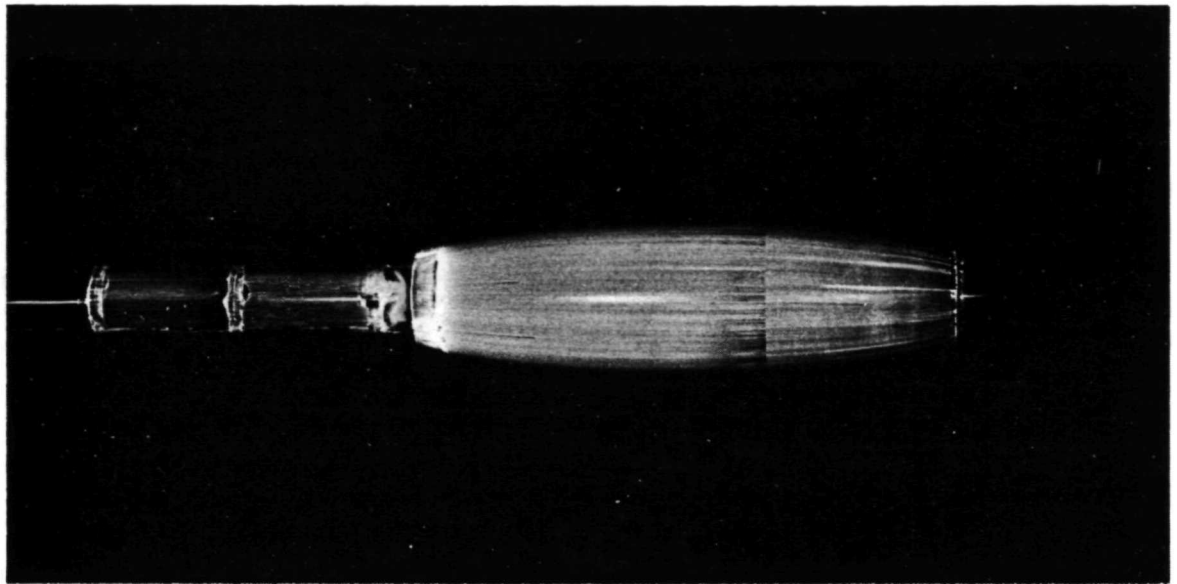


CONFIGURATION F.R. 4, $M_C = 1.000$, $N_R = 2.980 \times 10^6$

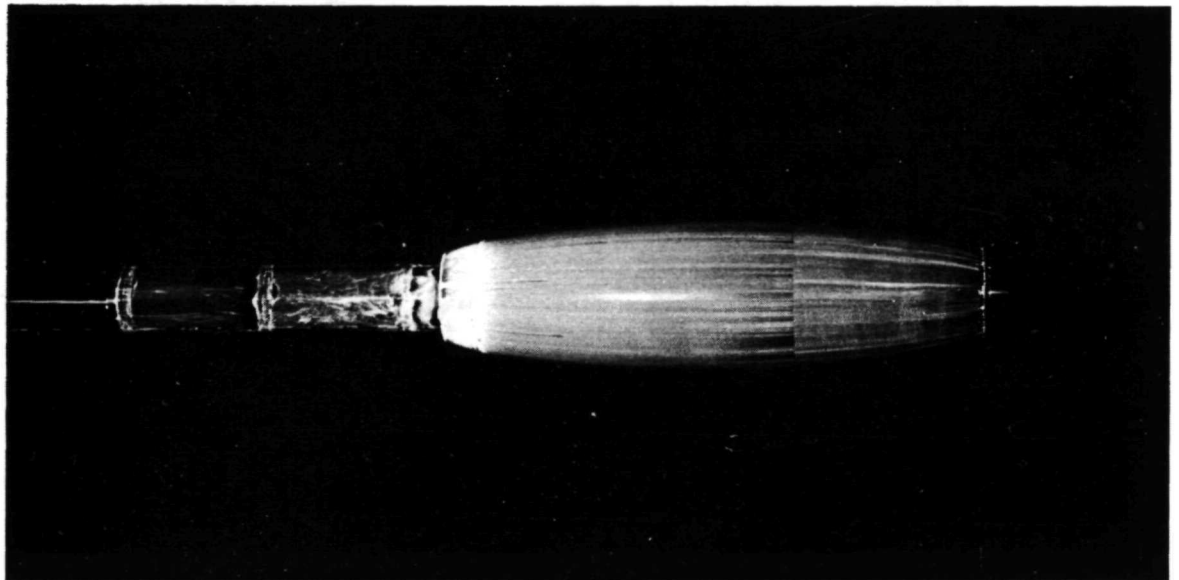
OIL FLOW PHOTOGRAPHS

NASA BODIES OF REVOLUTION

Figure 3b



CONFIGURATION F.R. 4, $M_C = .990$, $N_R = 2.984 \times 10^6$

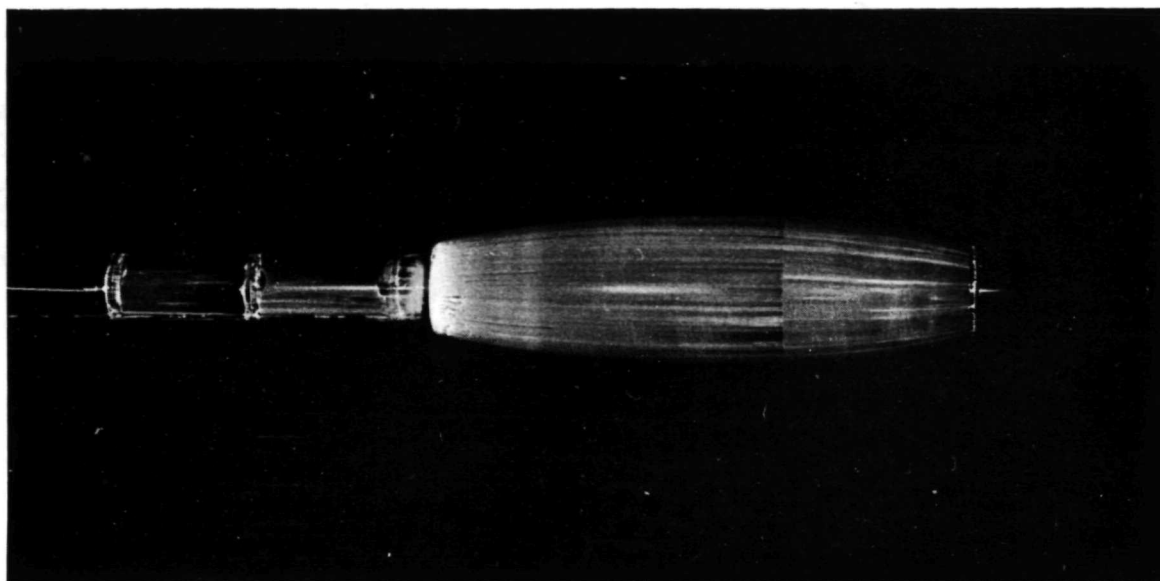


CONFIGURATION F.R. 4, $M_C = .981$, $N_R = 2.984 \times 10^6$

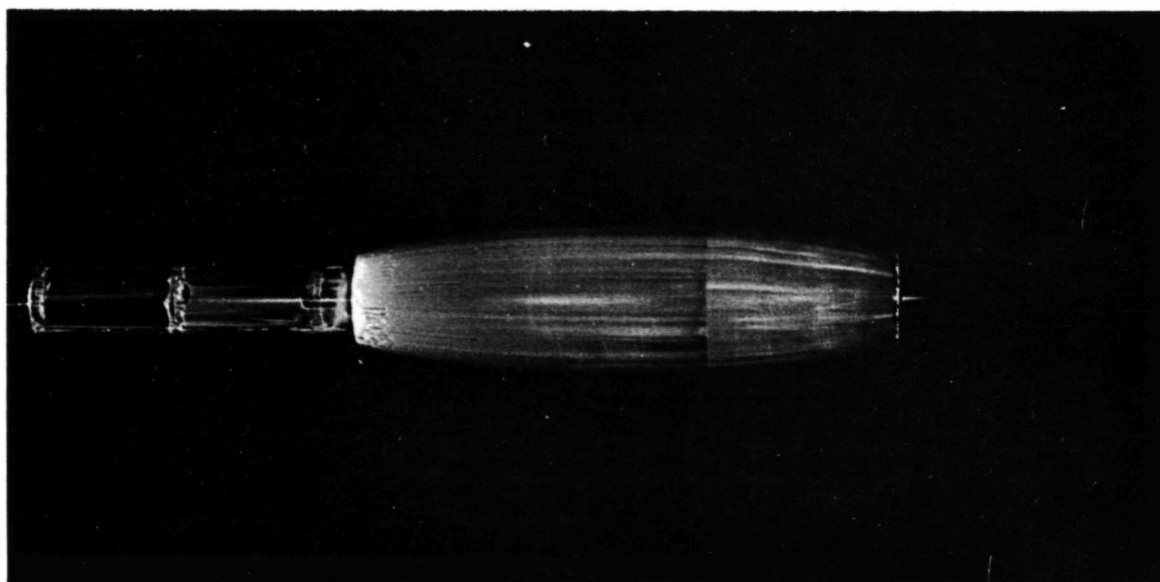
OIL FLOW PHOTOGRAPHS

NASA BODIES OF REVOLUTION

Figure 3c



CONFIGURATION F.R. 4, $M_C = .950$, $N_R = 2.990 \times 10^6$

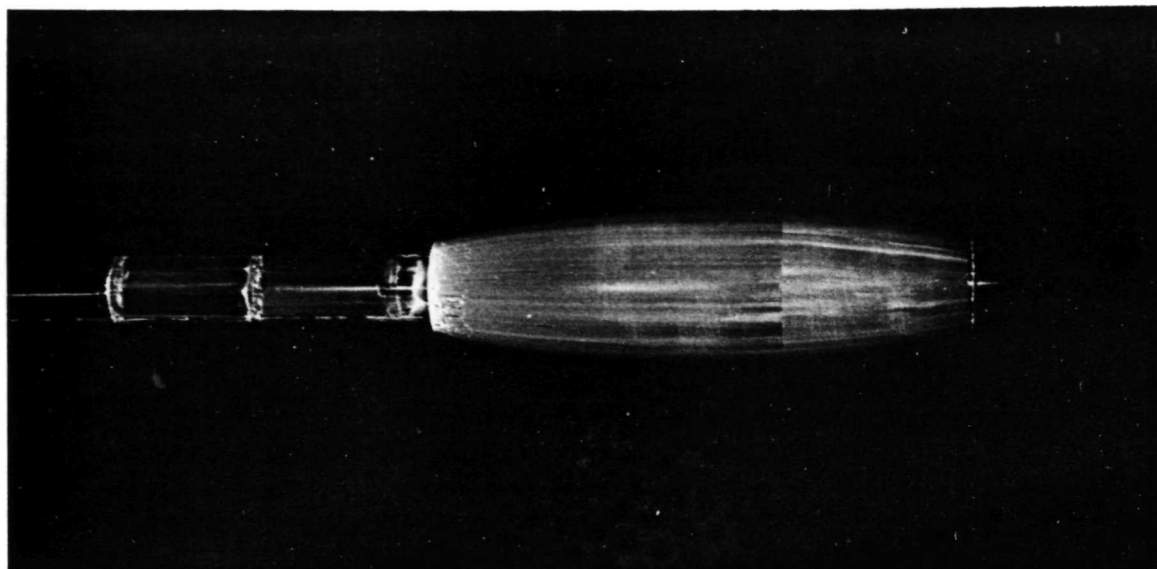


CONFIGURATION F.R. 4, $M_C = .900$, $N_R = 2.993 \times 10^6$

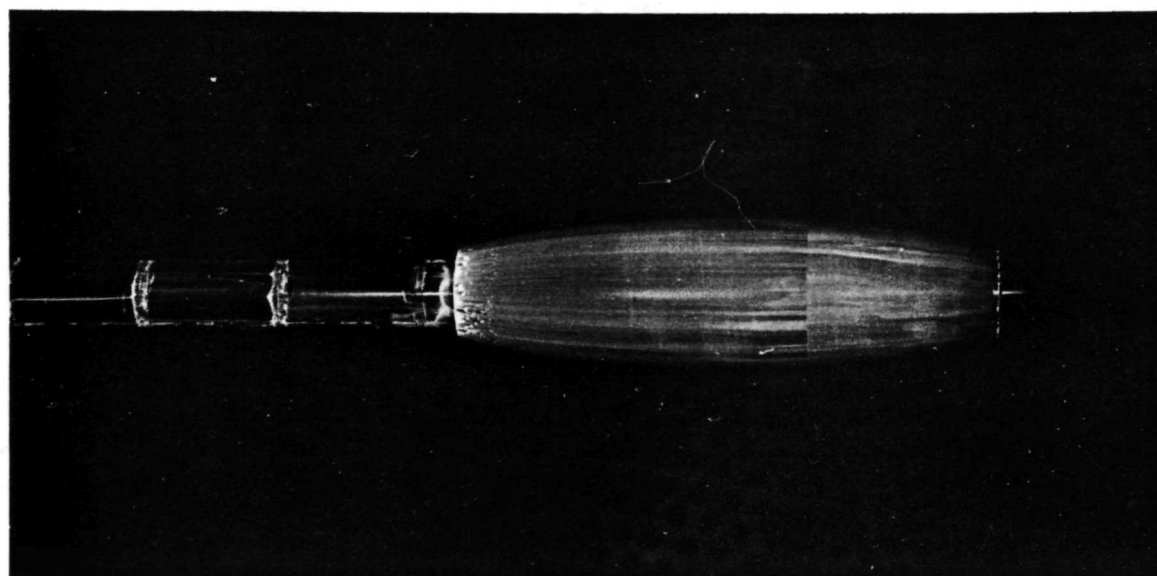
OIL FLOW PHOTOGRAPHS

NASA BODIES OF REVOLUTION

Figure 3d



CONFIGURATION F.R. 4, $M_C = .850$, $N_R = 3.005 \times 10^6$

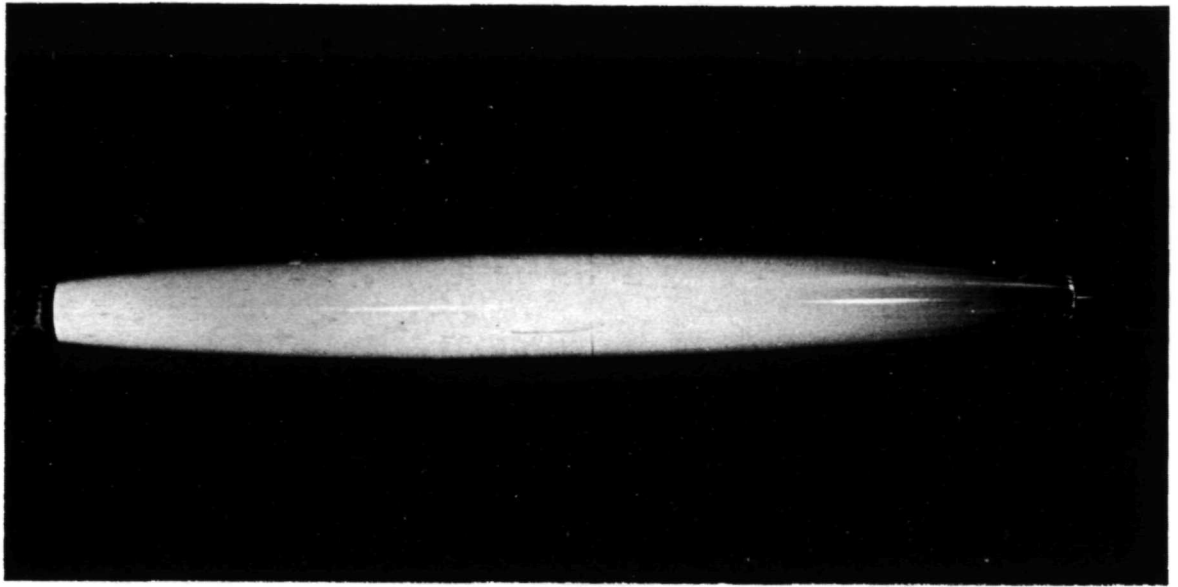


CONFIGURATION F.R. 4, $M_C = .800$, $N_R = 2.998 \times 10^6$

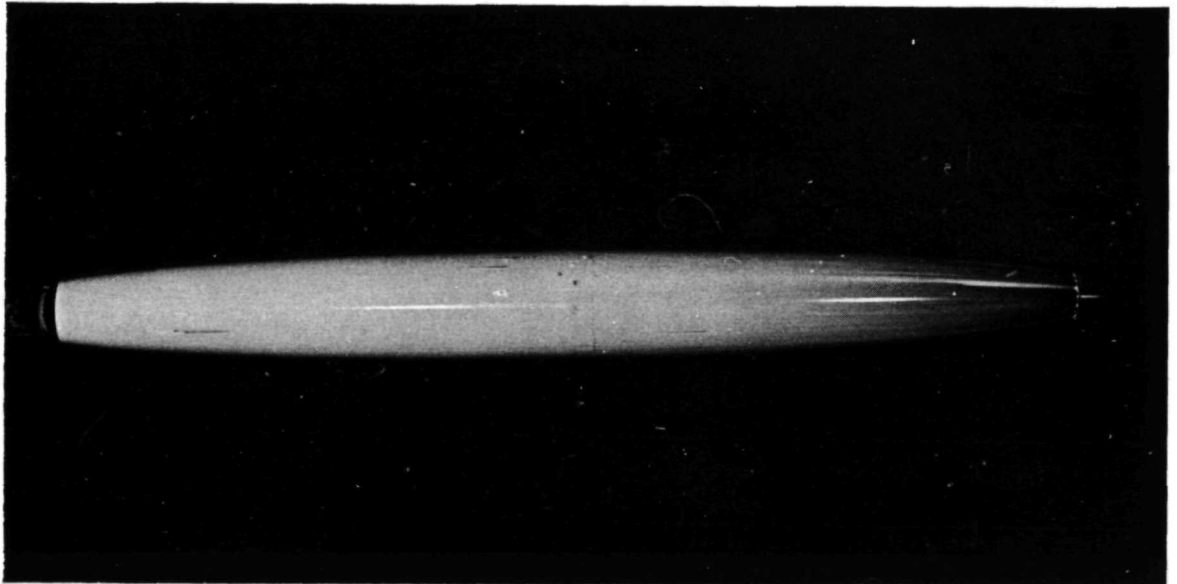
OIL FLOW PHOTOGRAPHS

NASA BODIES OF REVOLUTION

Figure 3e



CONFIGURATION F.R. 10, $M_C = 1.010$, $N_R = 2.000 \times 10^6$

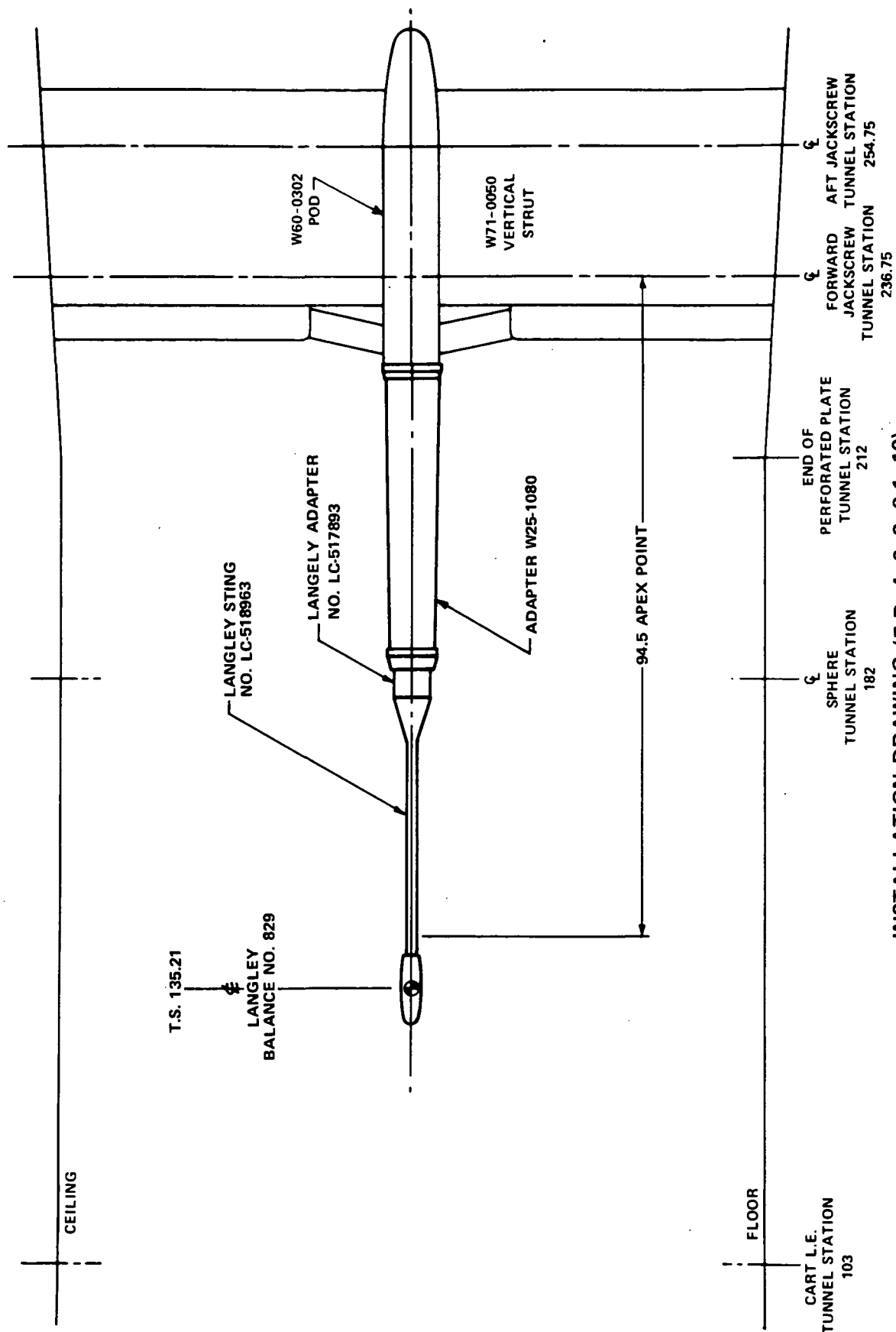


CONFIGURATION F.R. 10, $M_C = .798$, $N_R = 1.990 \times 10^6$

OIL FLOW PHOTOGRAPHS

NASA BODIES OF REVOLUTION

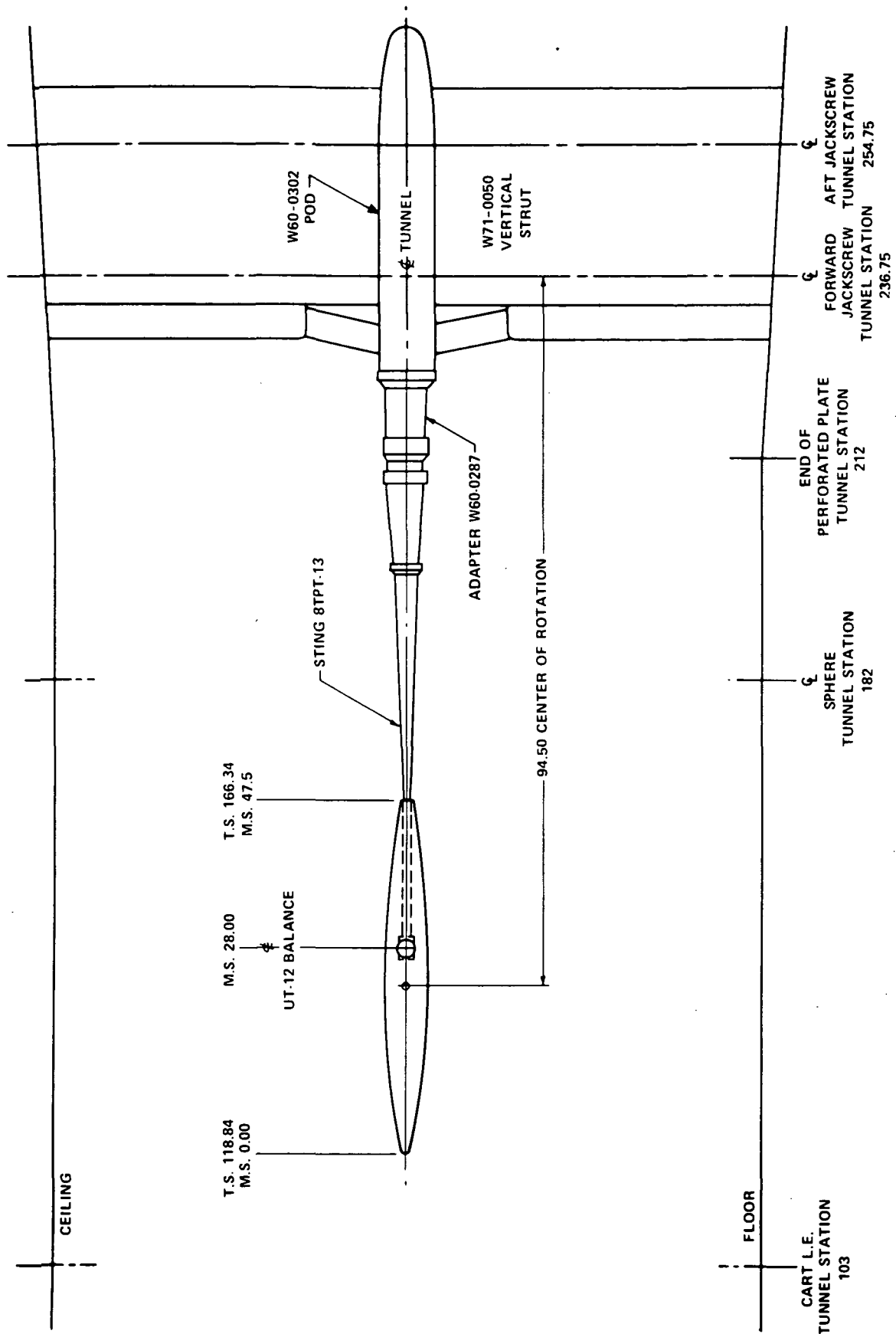
Figure 3f



INSTALLATION DRAWING (F.R. 4, 6, 8, 9.1, 10)

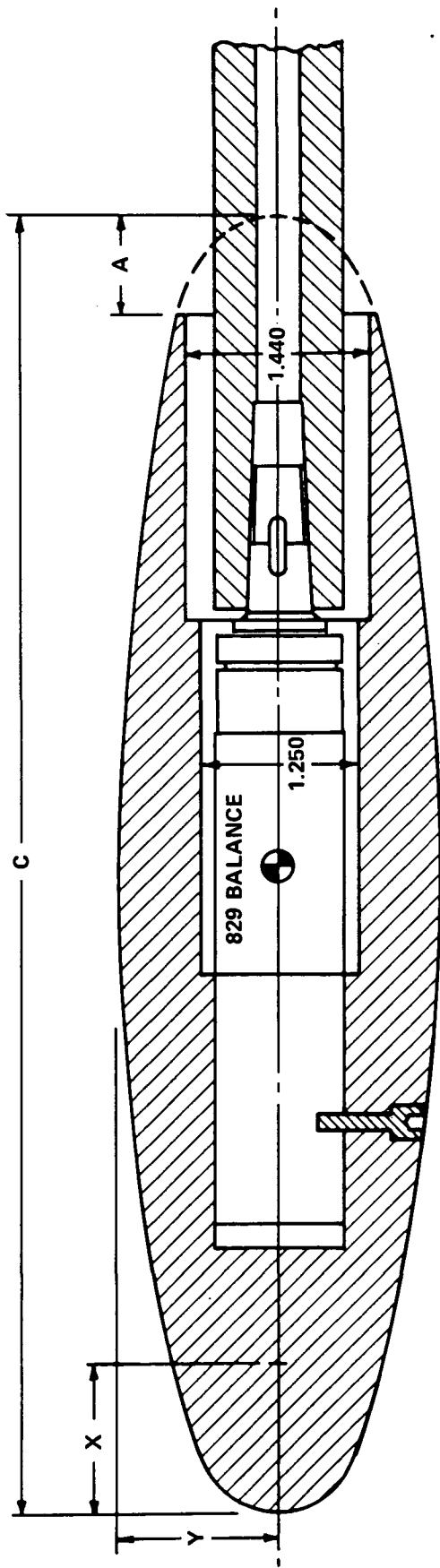
NASA BODIES OF REVOLUTION

Figure 4a



INSTALLATION DRAWING (BODY 11)
NASA BODIES OF REVOLUTION

Figure 4b



MODEL DRAWING (F.R. 4, 6, 8, 9.1, 10)
NASA BODIES OF REVOLUTION
Figure 5a

FINENESS RATIO = 4	FINENESS RATIO = 6	FINENESS RATIO = 8	FINENESS RATIO = 9.1	FINENESS RATIO = 10	
X - Sta.	X - Sta.	X - Sta.	X - Sta.	X - Sta.	Y - Ord.
.0000	.0000	.0000	.0000	.0000	.0000
.0932	.1395	.1860	.2116	.2325	.3132
.2387	.3585	.4780	.5437	.5975	.4692
.4049	.6075	.8100	.9214	1.0125	.5838
.5884	.8825	1.1760	1.3377	1.4700	.6778
.7873	1.1805	1.5740	1.7904	1.9675	.7584
1.0003	1.5000	2.0000	2.2750	2.5000	.8291
1.2262	1.8390	2.4520	2.7891	3.0650	.8918
1.4642	2.1960	2.9280	3.3306	3.6600	.9478
1.7133	2.5695	3.4260	3.8971	4.2825	.9979
1.9727	2.9595	3.9460	4.4885	4.2825	1.0425
2.2416	3.3630	4.4840	5.1066	5.6050	1.0825
2.5190	3.7785	5.0380	5.7307	6.2975	1.1173
2.8041	4.2060	5.6080	6.3791	7.0100	1.1485
3.0960	4.6440	6.1290	7.0434	7.7400	1.1750
3.3938	5.0910	6.7880	7.7213	8.4850	1.1974
3.6965	5.5455	7.3940	8.4107	9.2425	1.2158
4.0032	6.0045	8.0060	9.1068	10.0075	1.2301
4.3131	6.4695	8.6260	9.8121	10.7825	1.2406
4.6250	6.9375	9.2500	10.5219	11.5625	1.2471
4.8128	7.2195	9.6260	10.9495	12.0325	1.2492
5.0000	7.5000	10.0000	11.3750	12.5000	1.2500

NOTE: X-STA. AND Y-ORD. VALUES ARE IN INCHES.

FINENESS RATIO	"A" INCHES	"C" INCHES
F.R. = 4	.7873	10.000
F.R. = 6	1.1805	15.000
F.R. = 8	1.5740	20.000
F.R. = 9.1	1.7904	22.750
F.R. = 10	1.9675	25.000

GEOMETRIC MODEL ORDINATES (F.R. 4, 6, 8, 9.1, 10)

NASA BODIES OF REVOLUTION

Figure 5b

x/l	y/l	x/l	y/l	x/l	y/l
0.000	0.00000	0.120	0.03784	0.760	0.04490
0.002	0.00678	0.140	0.03989	0.800	0.04228
0.004	0.00922	0.160	0.04168	0.820	0.04076
0.006	0.01106	0.180	0.04328	0.840	0.03909
0.008	0.01258	0.200	0.04466	0.860	0.03724
0.010	0.01386	0.240	0.04700	0.880	0.03518
0.012	0.01500	0.280	0.04884	0.900	0.03289
0.014	0.01604	0.320	0.05026	0.920	0.03030
0.016	0.01698	0.400	0.05206	0.940	0.02737
0.018	0.01786	0.480	0.05263	0.960	0.02381
0.020	0.01864	0.500	0.05259	0.970	0.02179
0.040	0.02488	0.520	0.05248	0.980	0.01951
0.060	0.02924	0.600	0.05128	0.990	0.01688
0.080	0.03265	0.680	0.04883	1.000	0.01361
0.100	0.03546	0.720	0.04707		

- NOTE: (1) BODY-11 LENGTH (l) = 47.50 INCHES, HAS BEEN SHORTENED FROM ACTUAL THEORETICAL LENGTH IN ORDER TO PROVIDE FOR STING CLEARANCE
- (2) MAXIMUM BODY DIAMETER (d) = 5.00 INCHES

GEOMETRICAL MODEL ORDINATES, BODY-11

NASA BODIES OF REVOLUTION

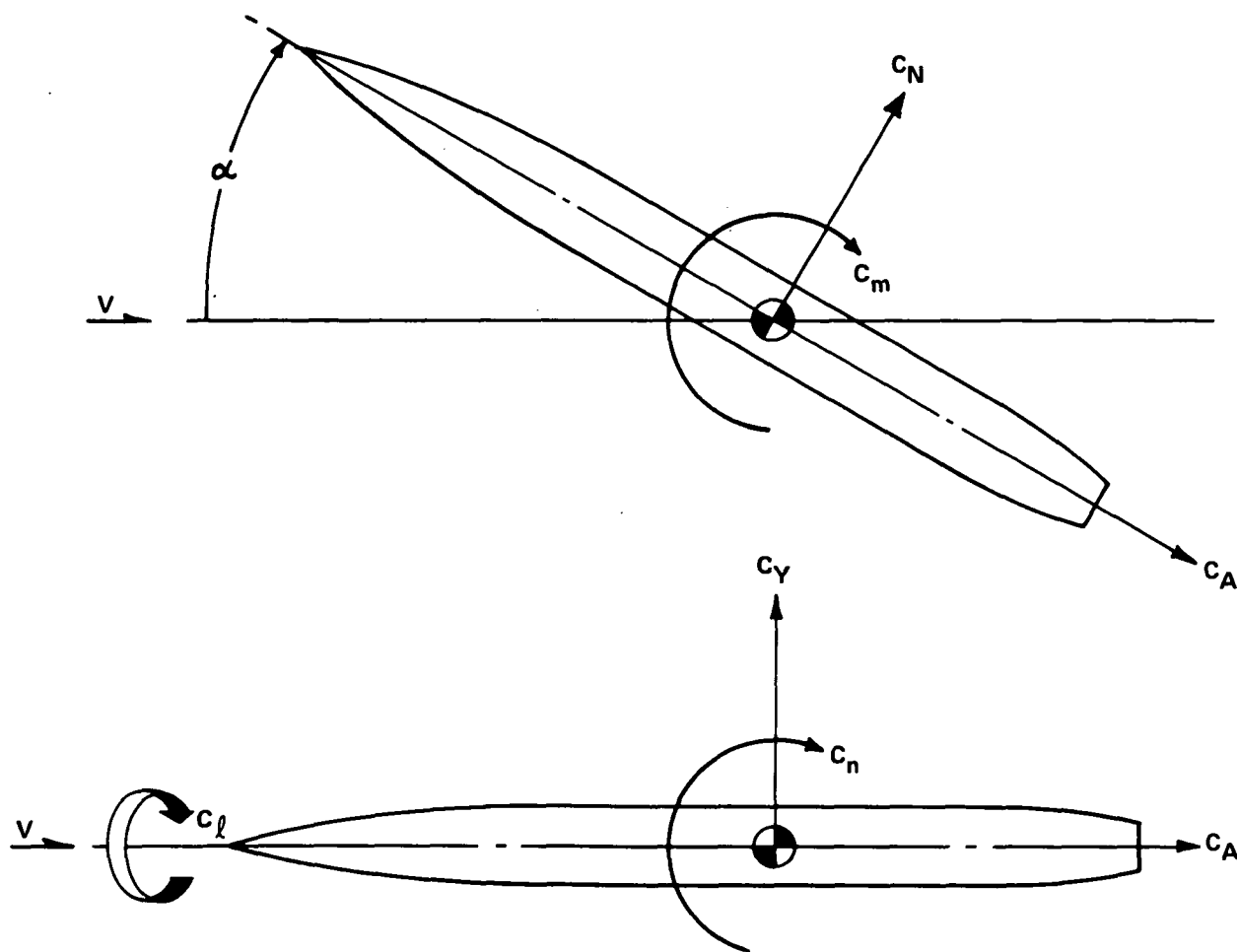
Figure 5c

PRESS. ORIFICE DIST.	x/l DIST.	PRESS. ORIFICE NO.	x/l DIST.	PRESS. ORIFICE NO.	x/l DIST.
1	0.0095	18	0.426	35	0.938
2	0.01895	19	0.473	36	0.956
3	0.0284	20	0.521	37	0.975
4	0.0379	21	0.569	38	0.995
5	0.0568	22	0.616	39	0.00305
6	0.0686	23	0.654	40	0.0568
7	0.0853	24	0.691	41	0.1231
8	0.1041	25	0.729	42	0.2841
9	0.1231	26	0.768	43	0.00305
10	0.1420	27	0.786	44	0.0568
11	0.1610	28	0.805	45	0.1231
12	0.1800	29	0.824	46	0.2841
13	0.1990	30	0.844	47	0.00305
14	0.2366	31	0.862	48	0.0568
15	0.2841	32	0.881	49	0.1231
16	0.3315	33	0.900	50	0.2841
17	0.379	34	0.920		

NOTE:

- (1) PRESSURE ORIFICES 1 TO 38 WERE LOCATED ALONG TOP MODEL CENTERLINE.
- (2) PRESSURE ORIFICES 39 TO 42 WERE LOCATED 90° FROM TOP OF MODEL, RIGHT SIDE.
- (3) PRESSURE ORIFICES 43 TO 46 WERE LOCATED 180° FROM TOP OF MODEL, BOTTOM CENTERLINE.
- (4) PRESSURE ORIFICES 47 TO 50 WERE LOCATED 90° FROM TOP OF MODEL, LEFT SIDE.

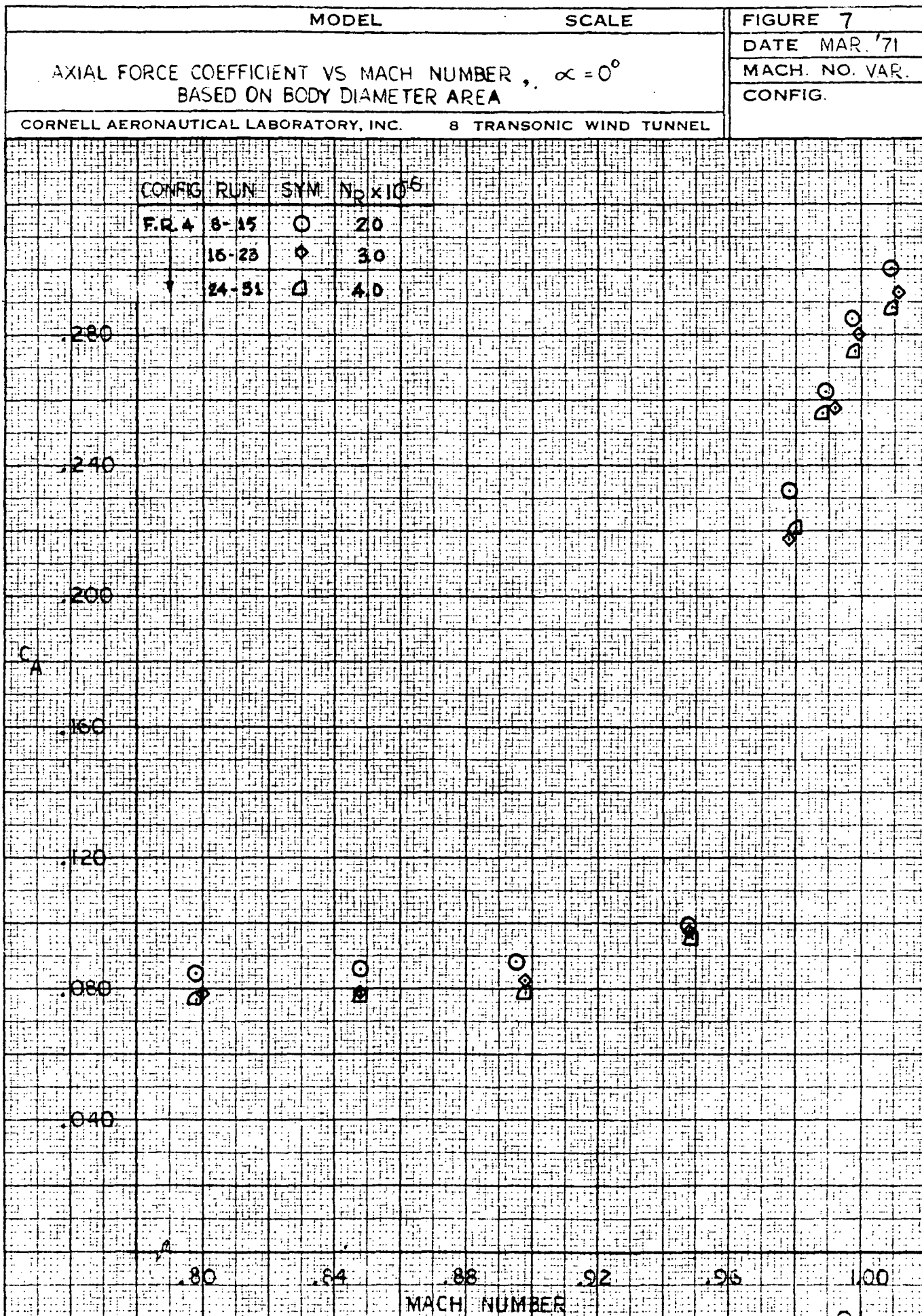
PRESSURE ORIFICE LOCATION, BODY-11**NASA BODIES OF REVOLUTION****Figure 5d**

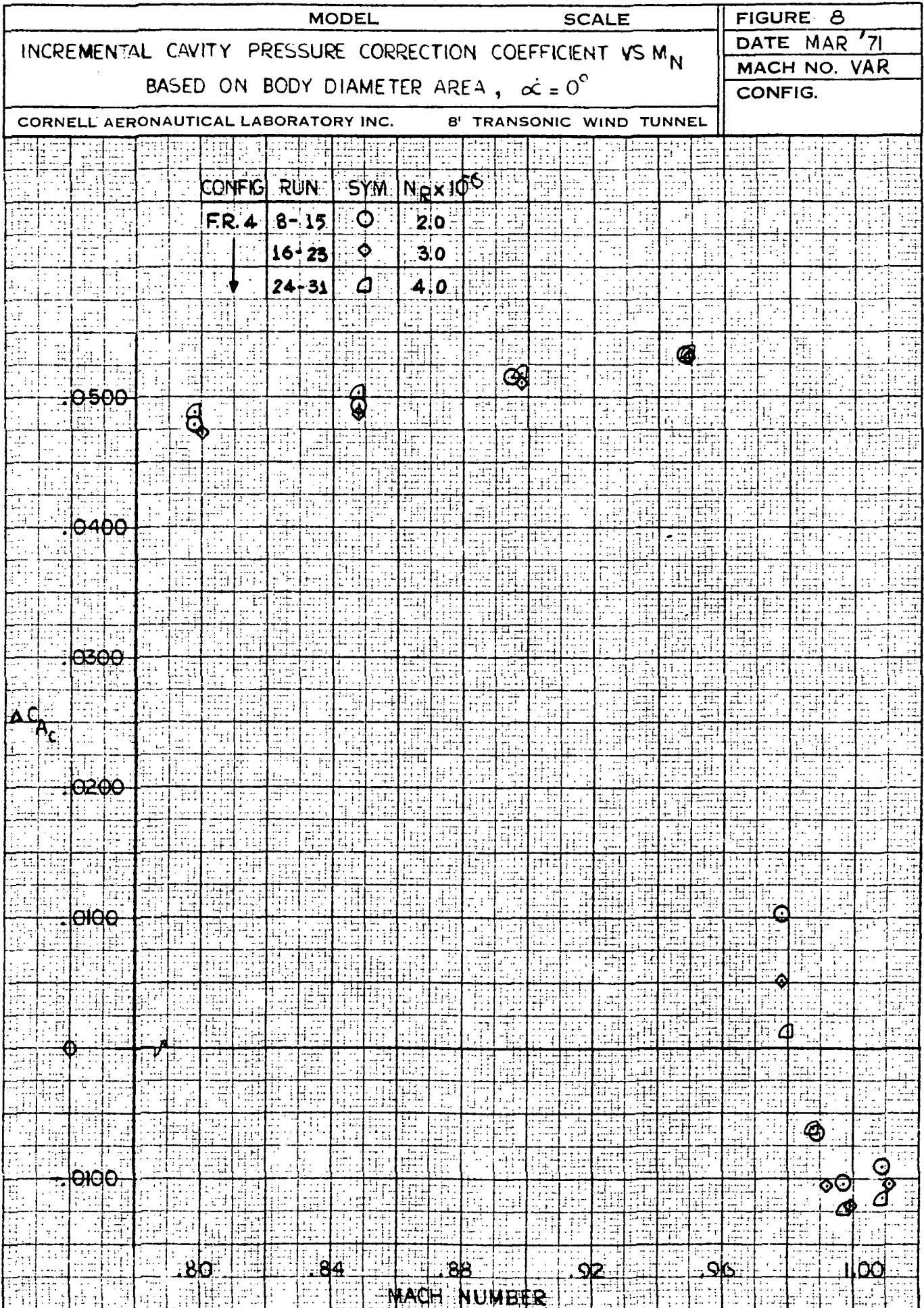


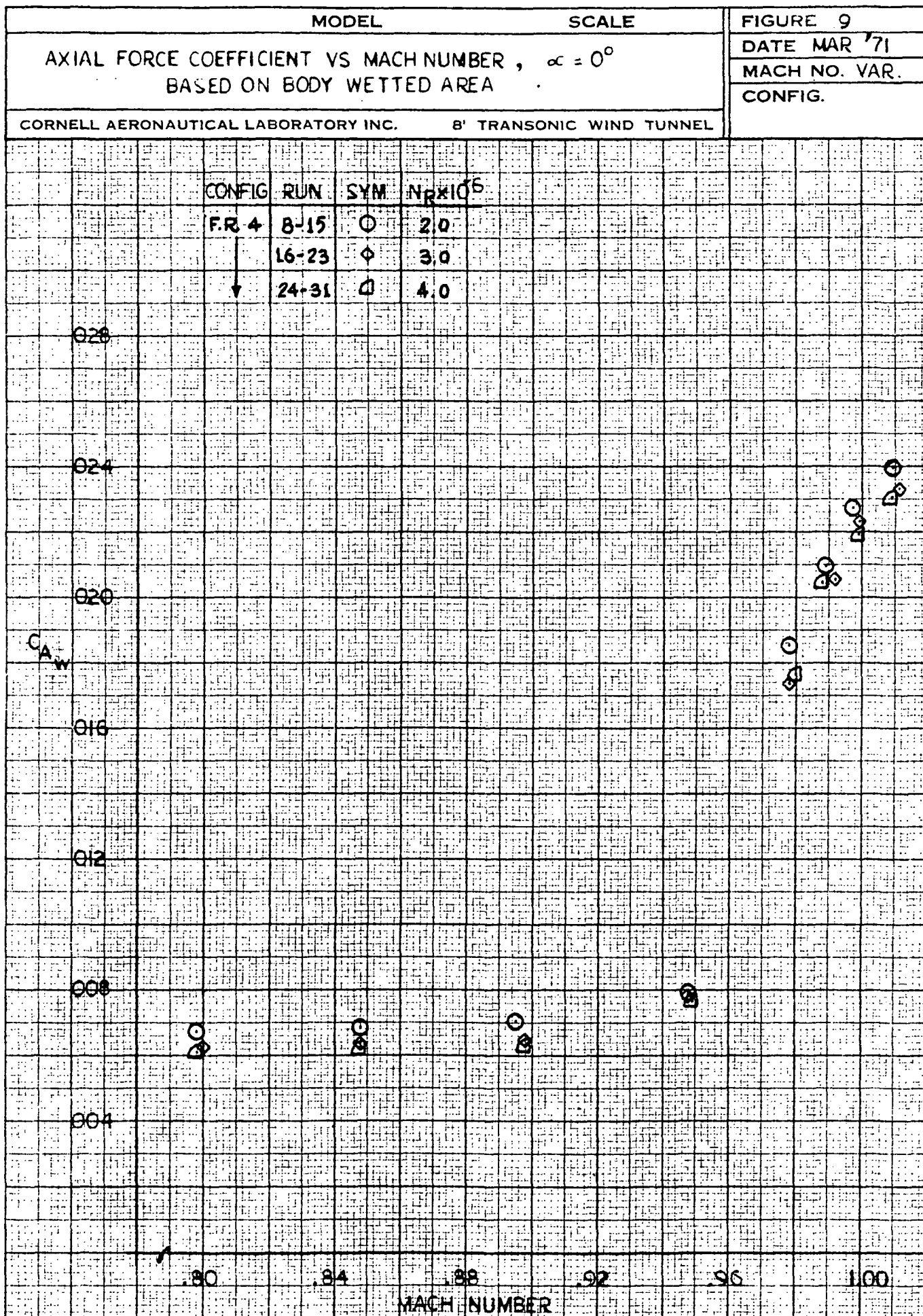
BODY AXIS SYSTEM AND POSITIVE SIGN CONVENTION

NASA BODIES OF REVOLUTION

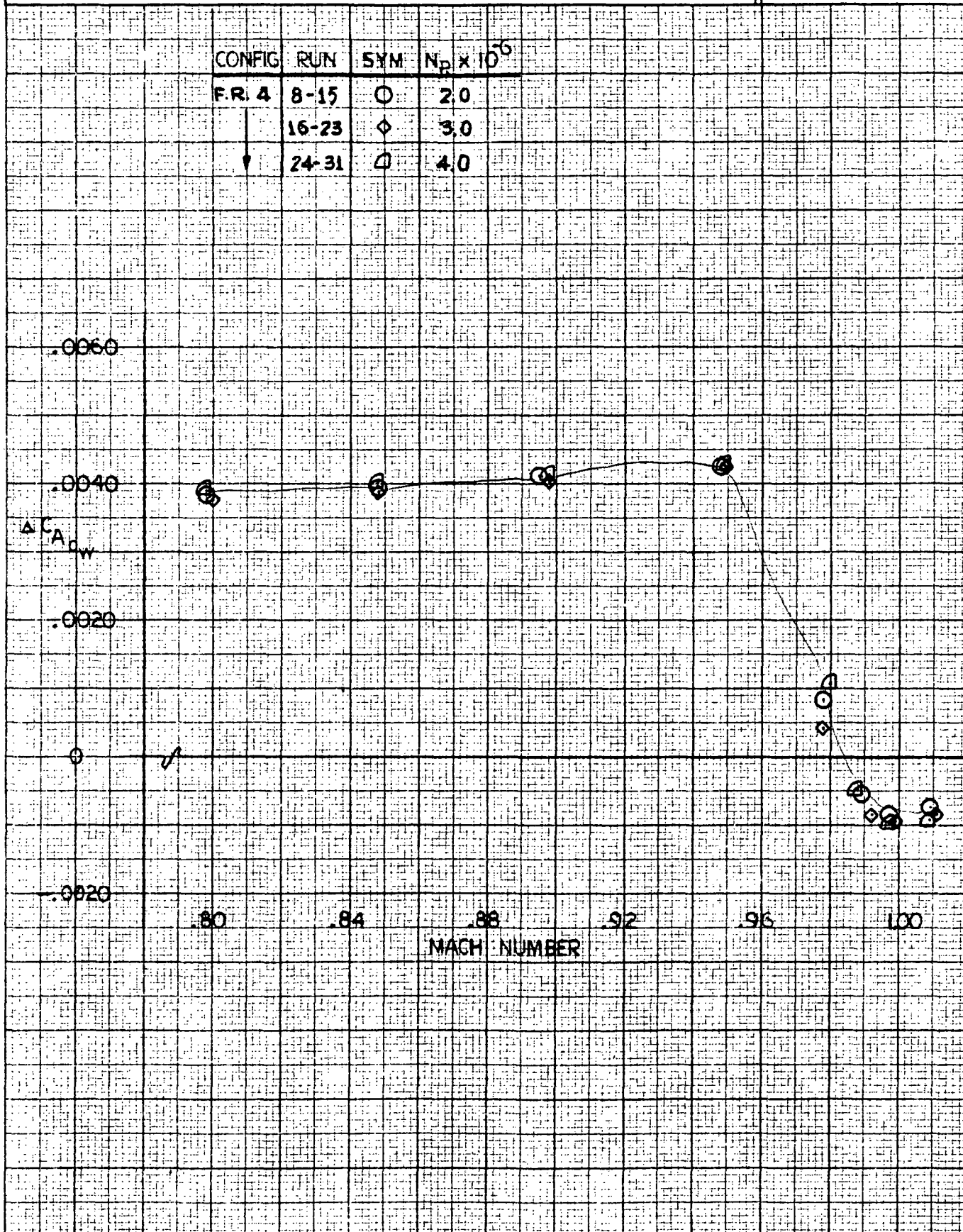
Figure 6

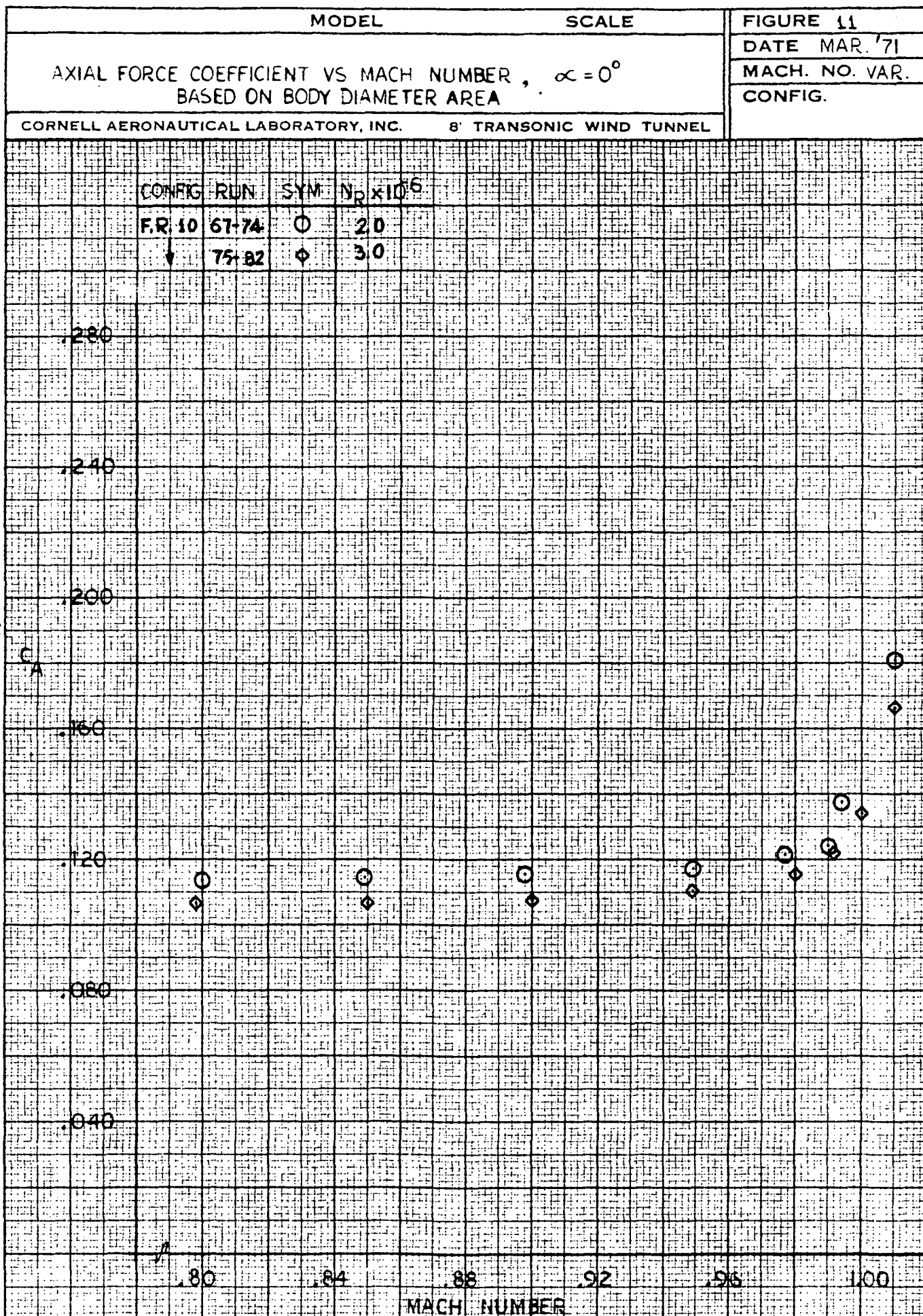


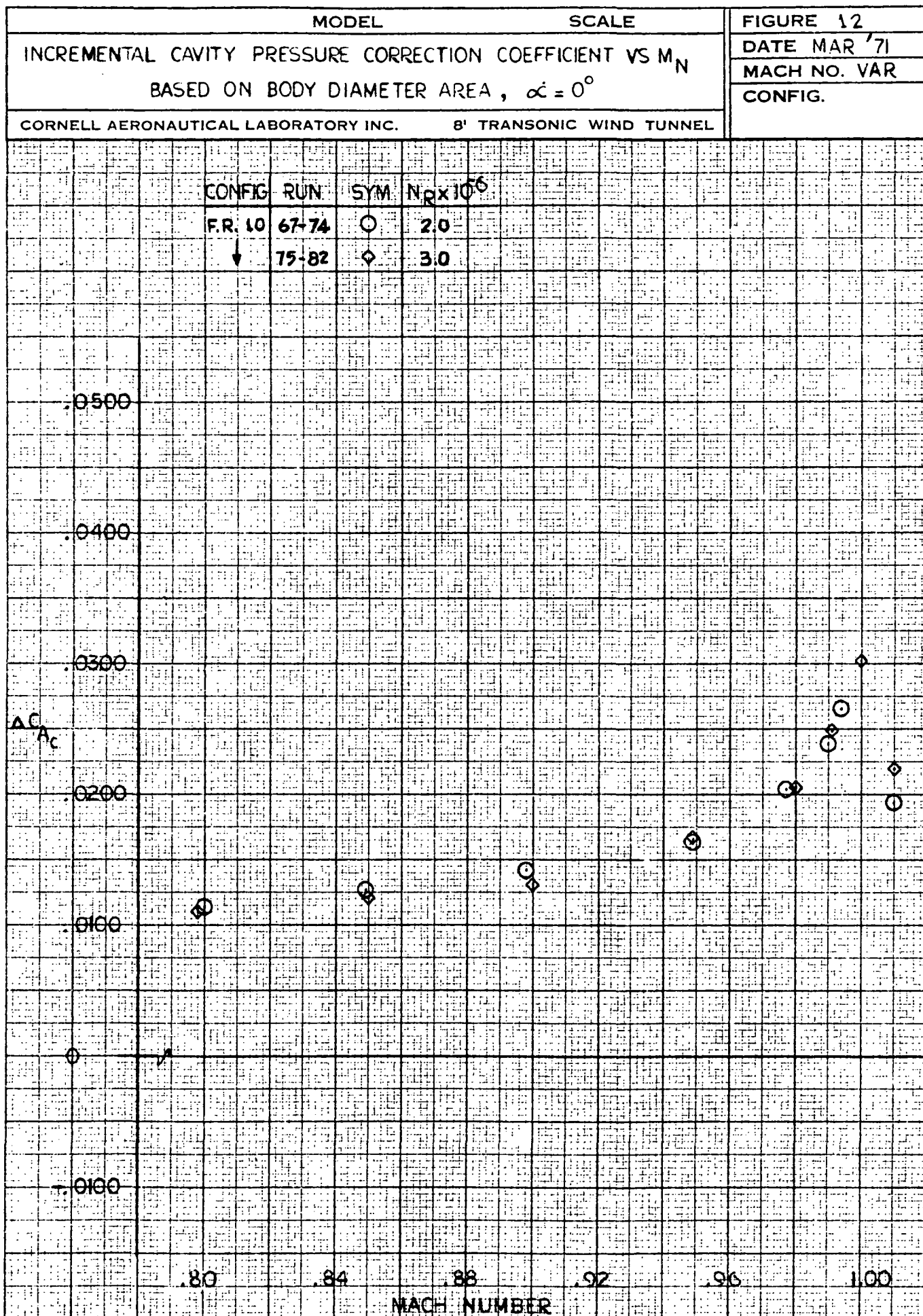


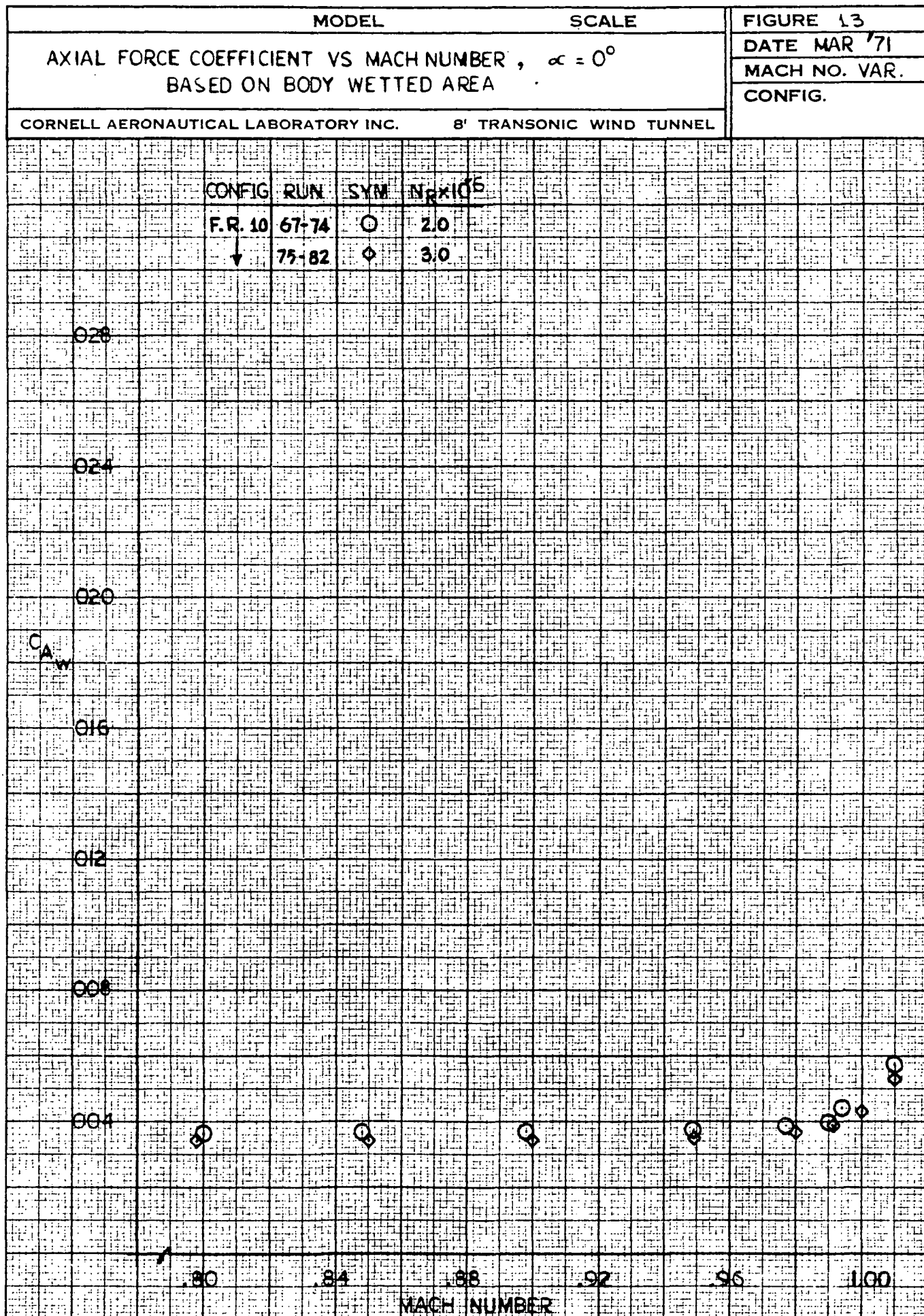


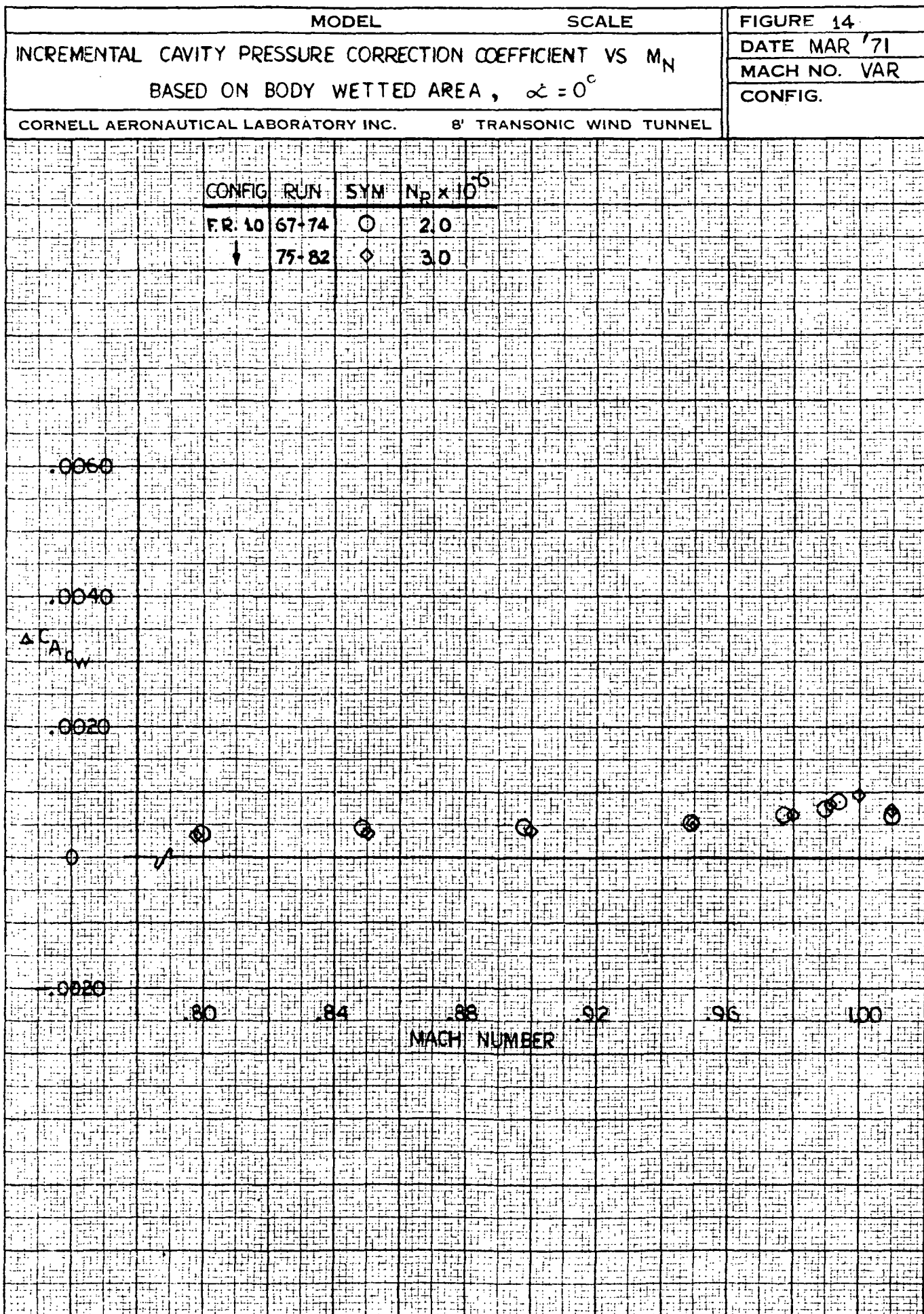
MODEL	SCALE	FIGURE 10
INCREMENTAL CAVITY PRESSURE CORRECTION COEFFICIENT VS M_N		DATE MAR '71
BASED ON BODY WETTED AREA, $\alpha = 0^\circ$		MACH NO. VAR
CORNELL AERONAUTICAL LABORATORY INC.		CONFIG.
8' TRANSONIC WIND TUNNEL		

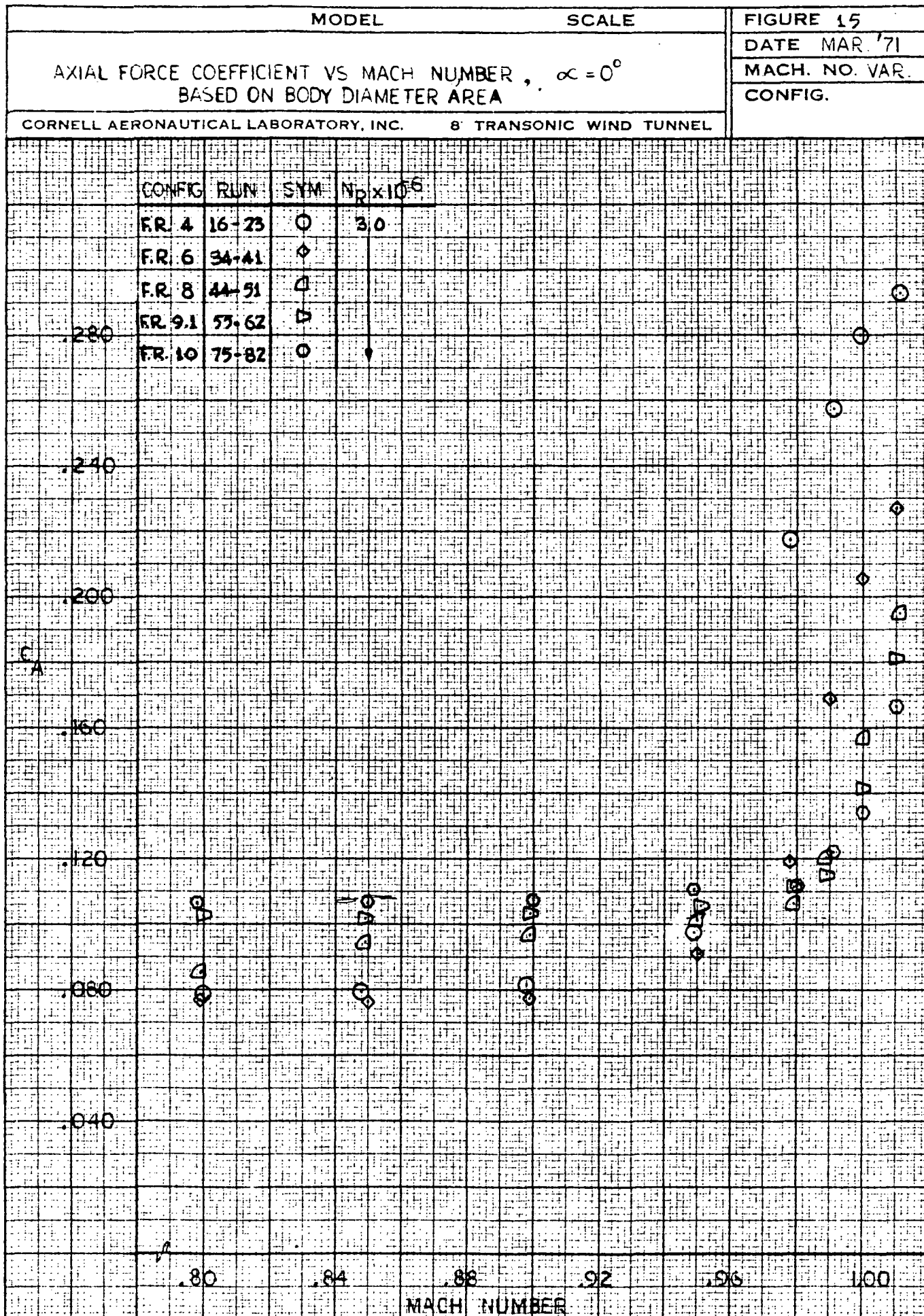


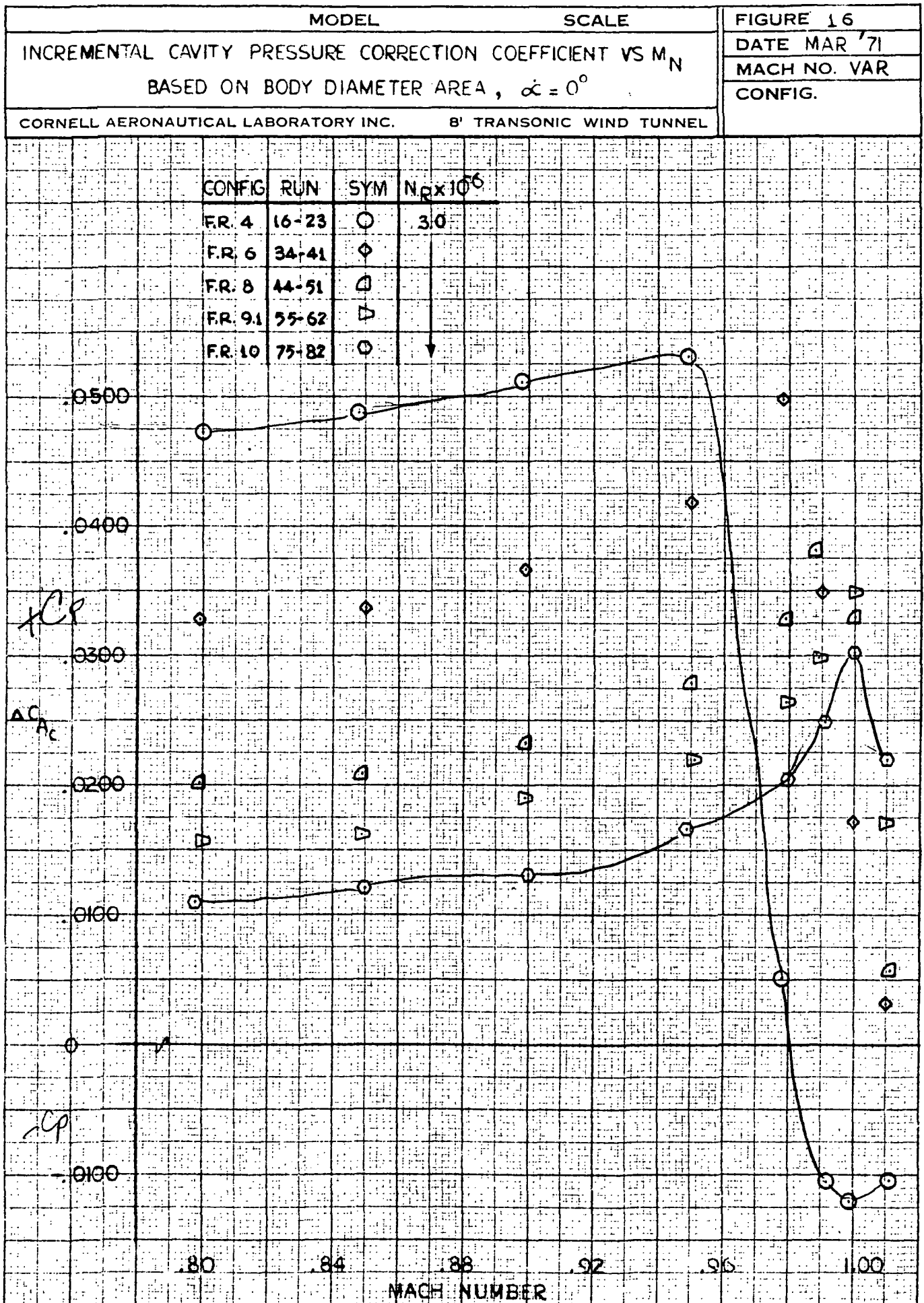


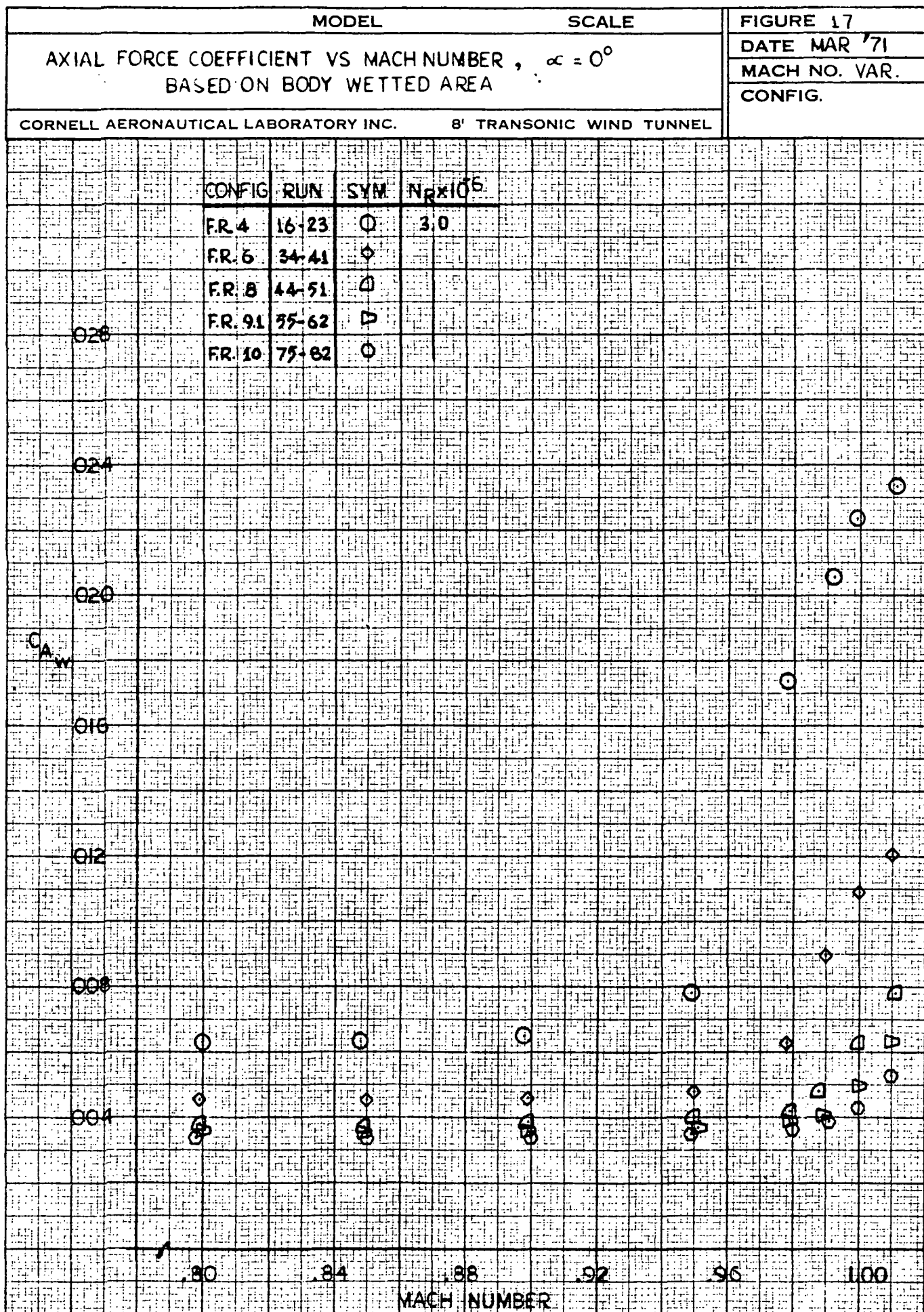


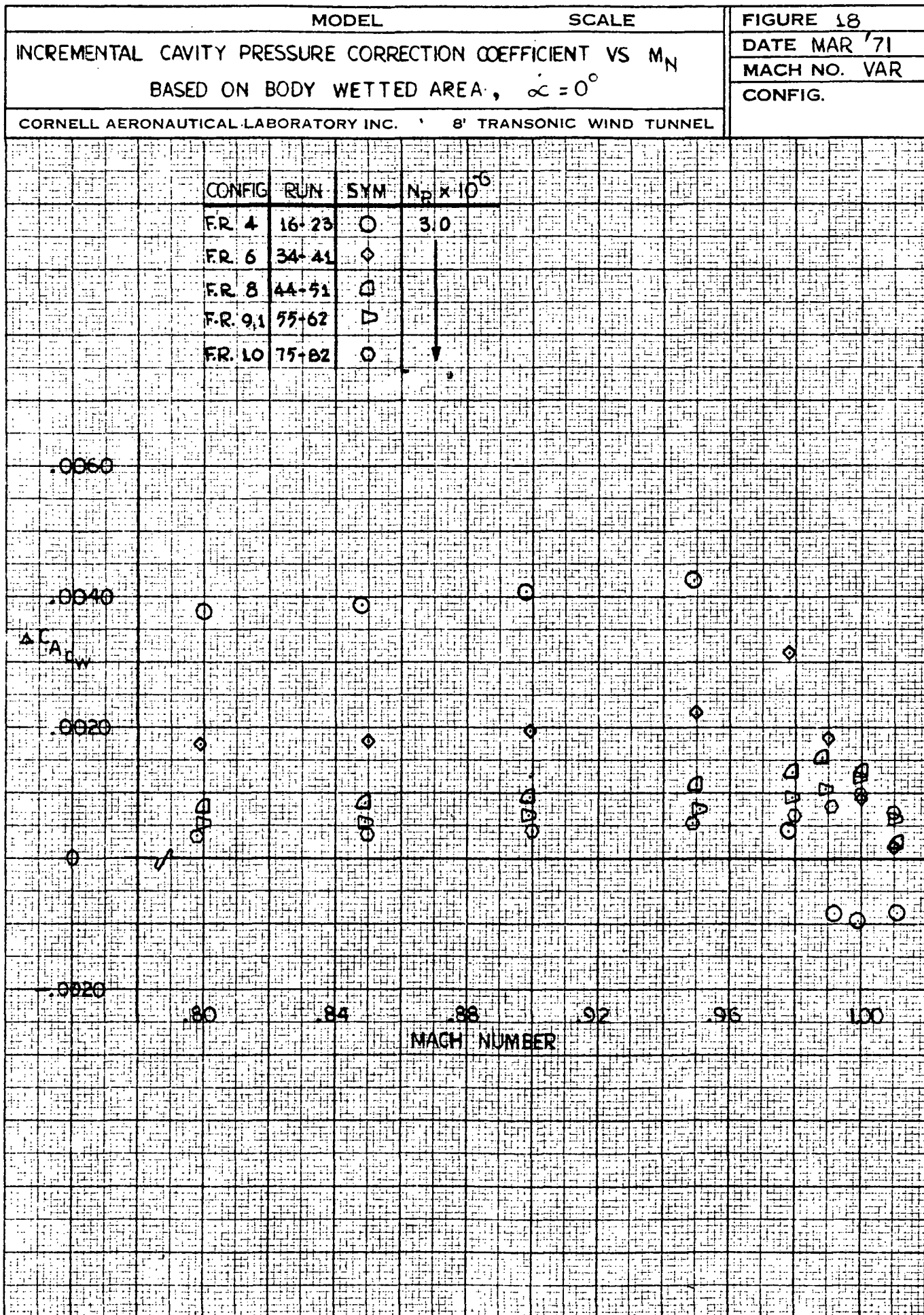






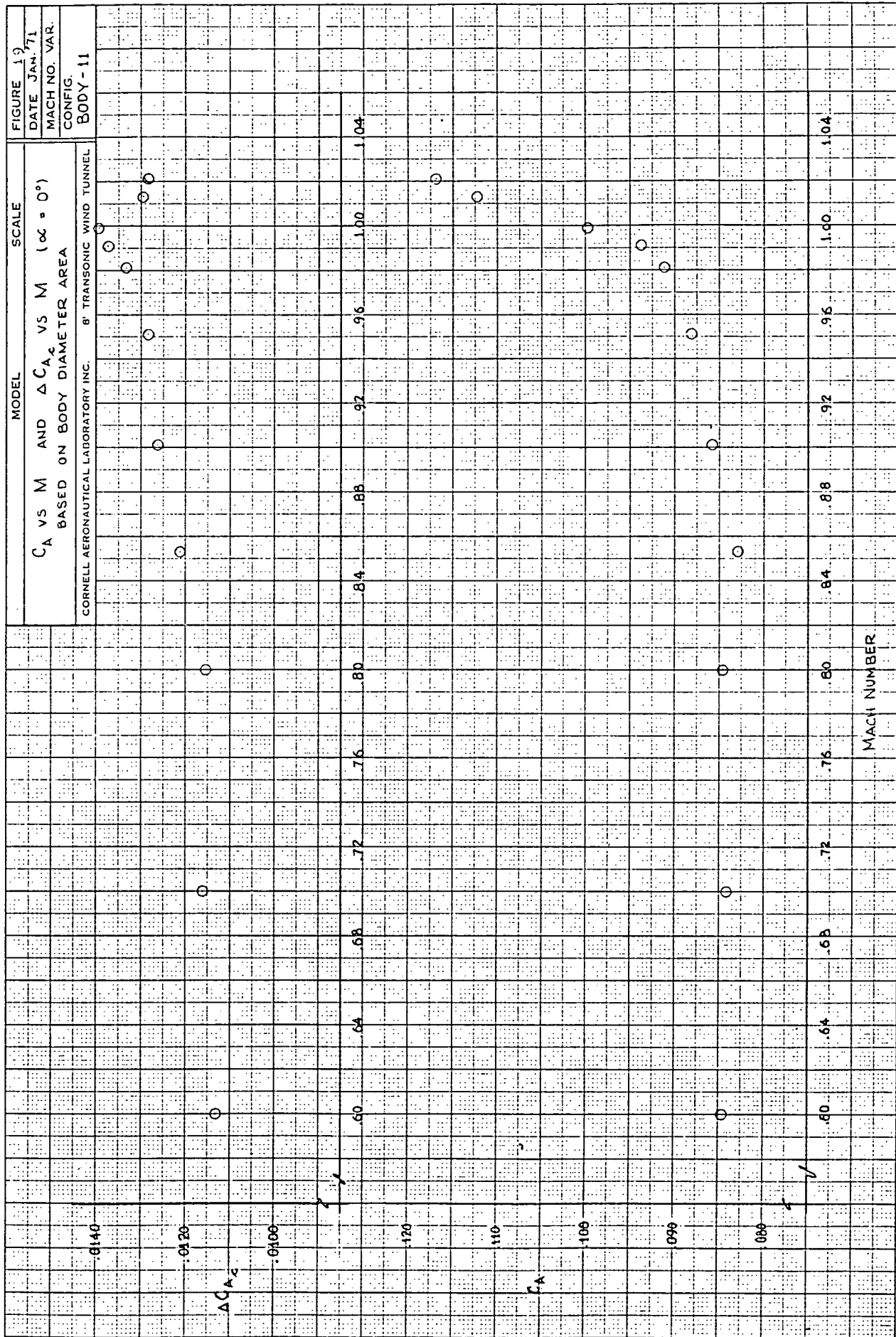






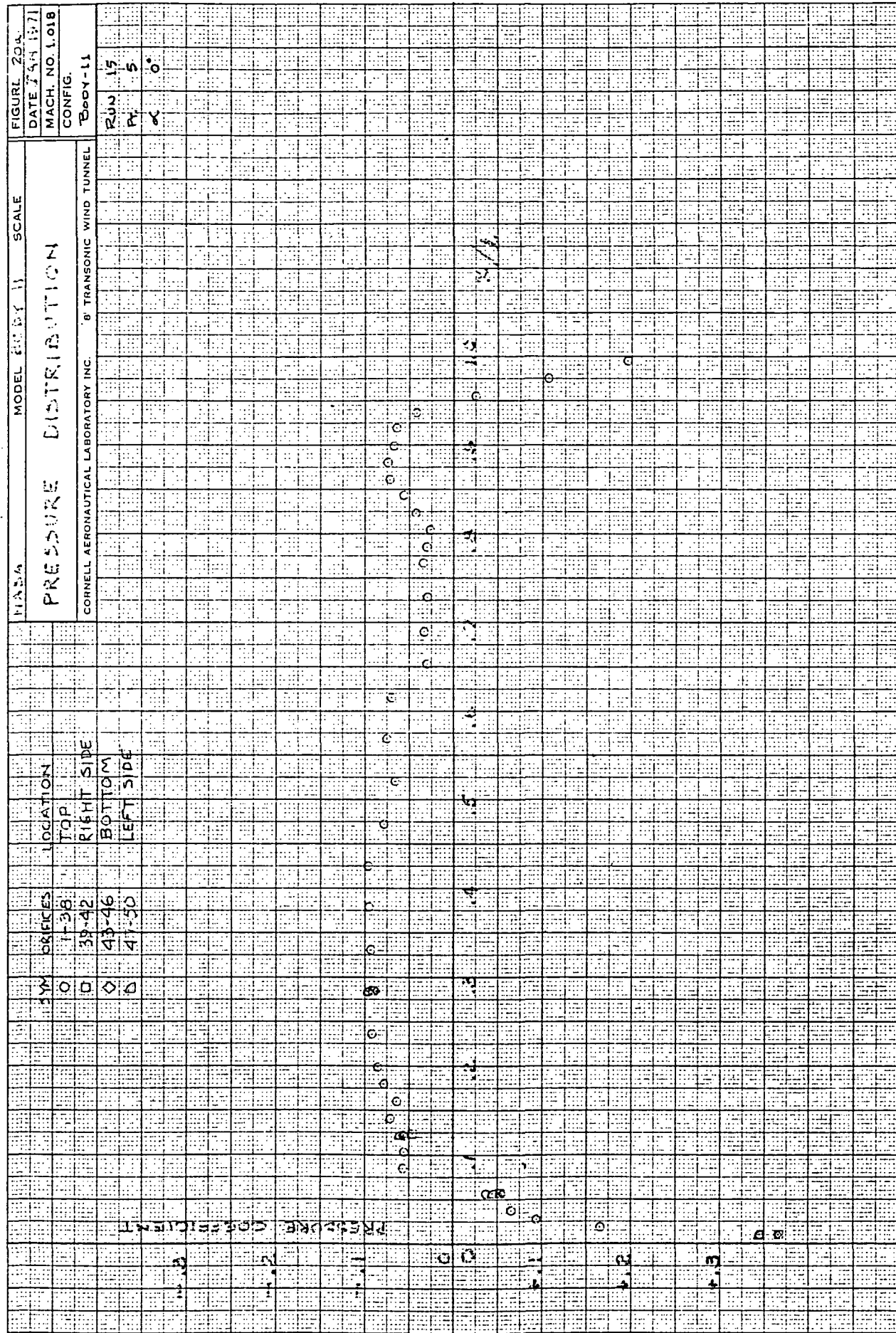
FOLDOUT FRAME 1

FOLDOUT FRAME 2



FOLDOUT FRAME 1

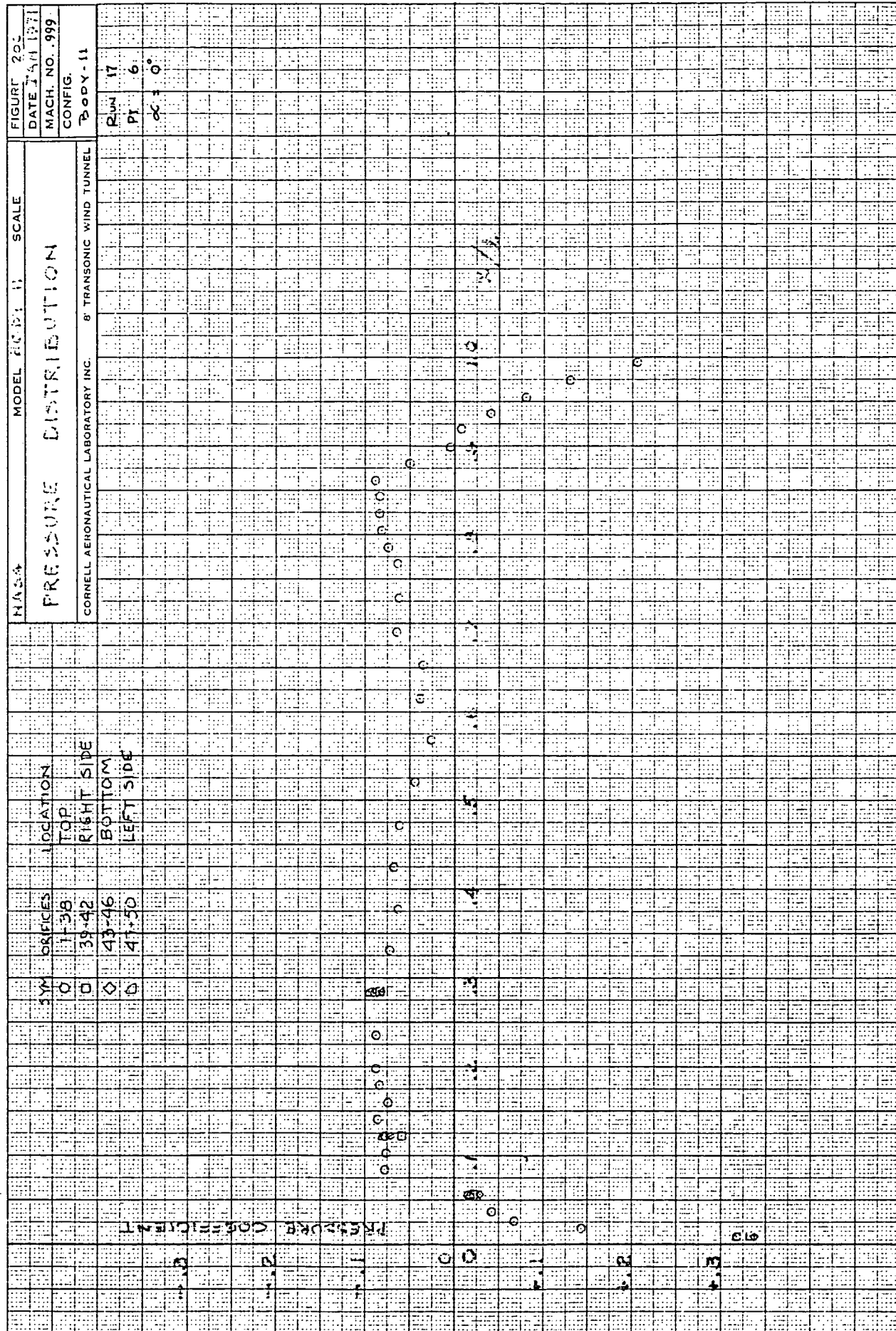
FOLDOUT FRAME 2





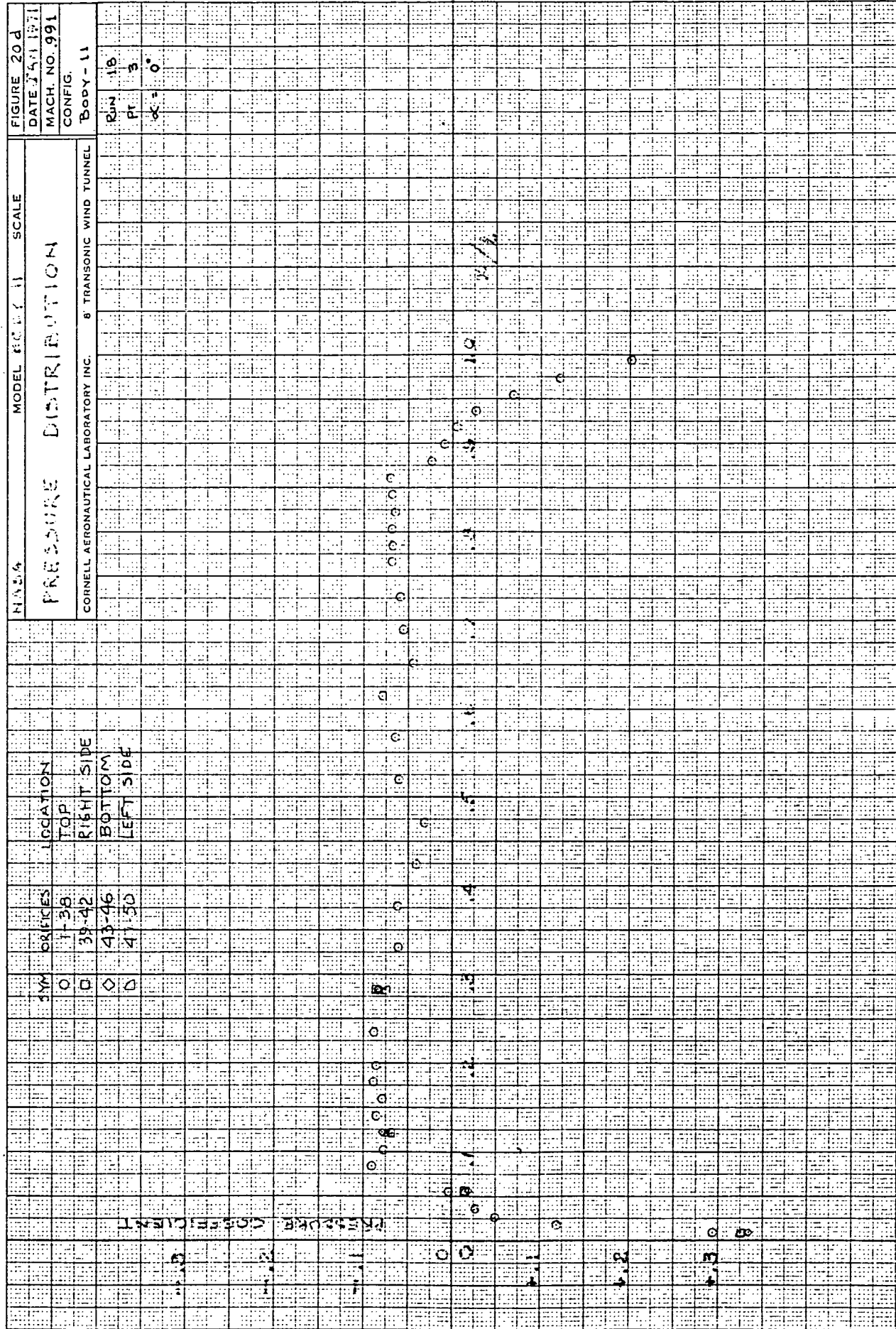
FOLDOUT FRAME 2

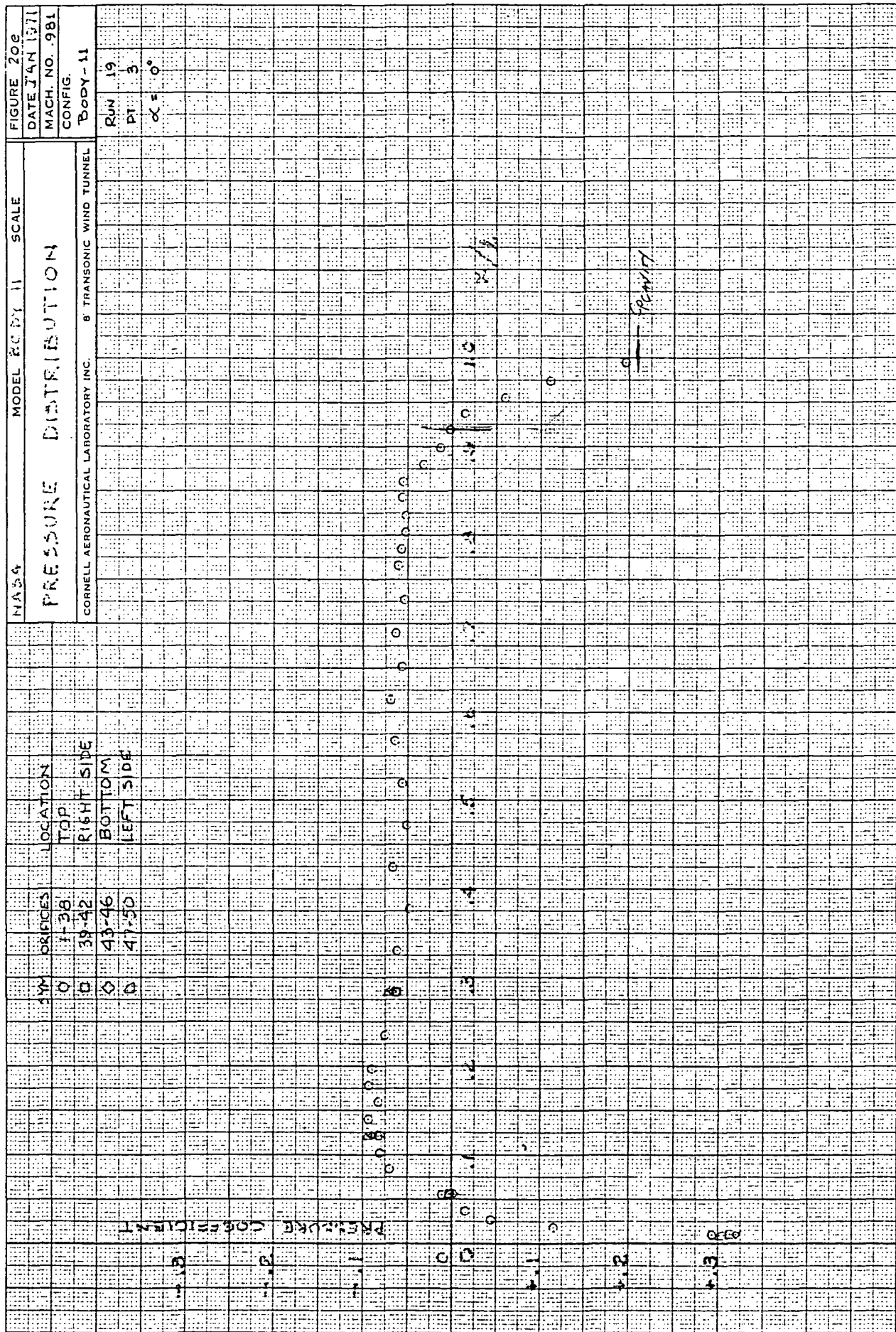
FOLDOUT FRAME 1

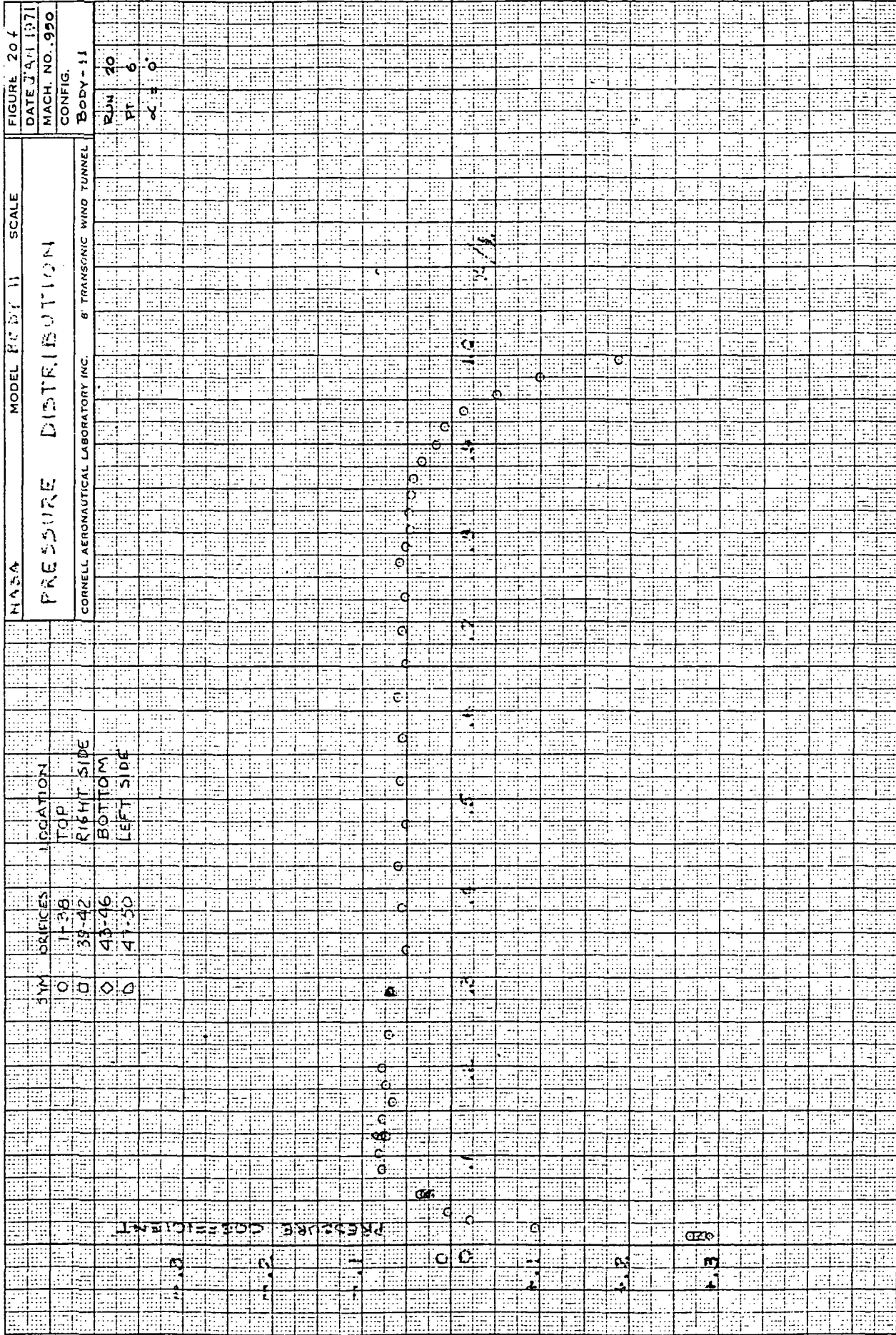


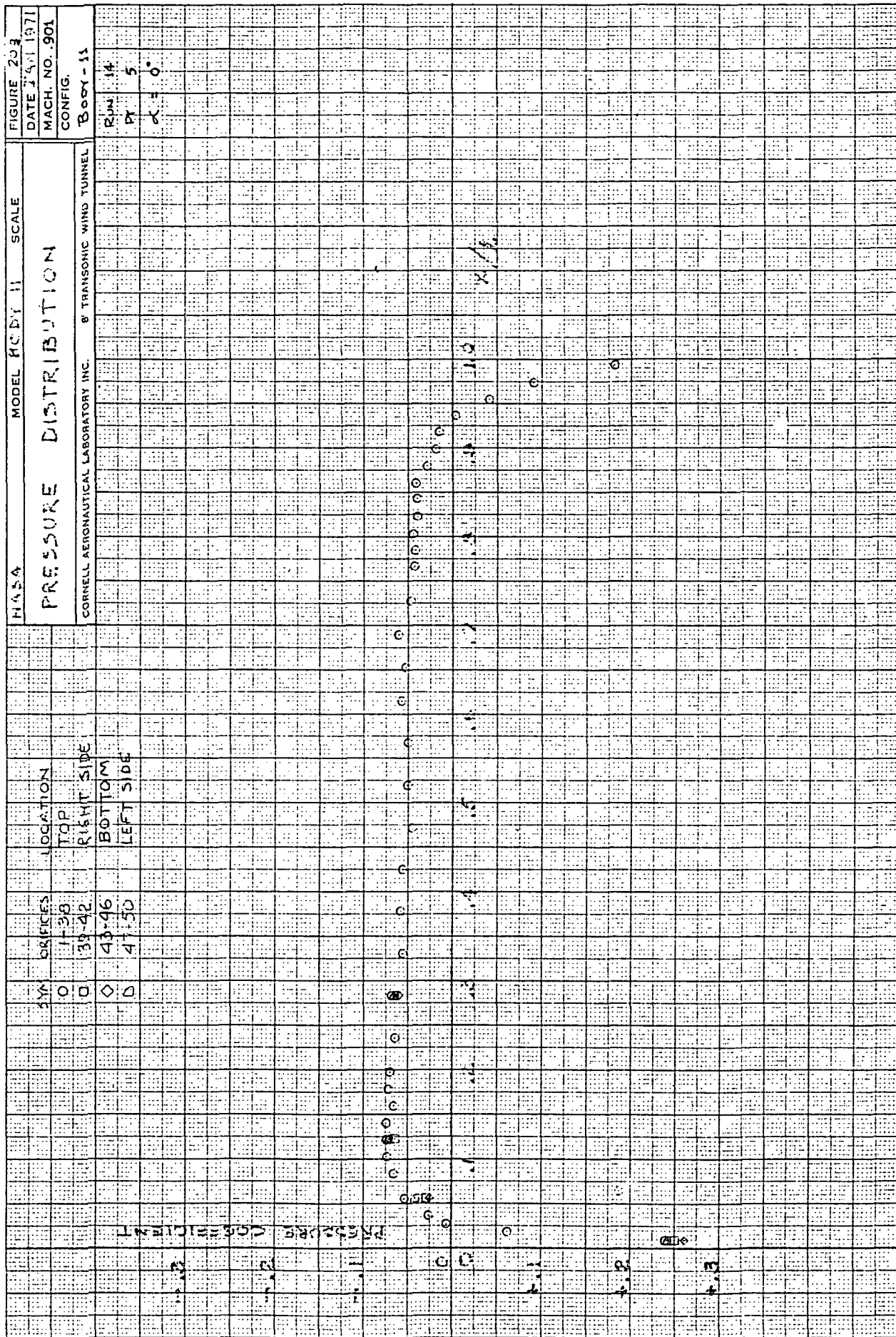
FOLDOUT FRAME 2

FOLDOUT FRAME 1





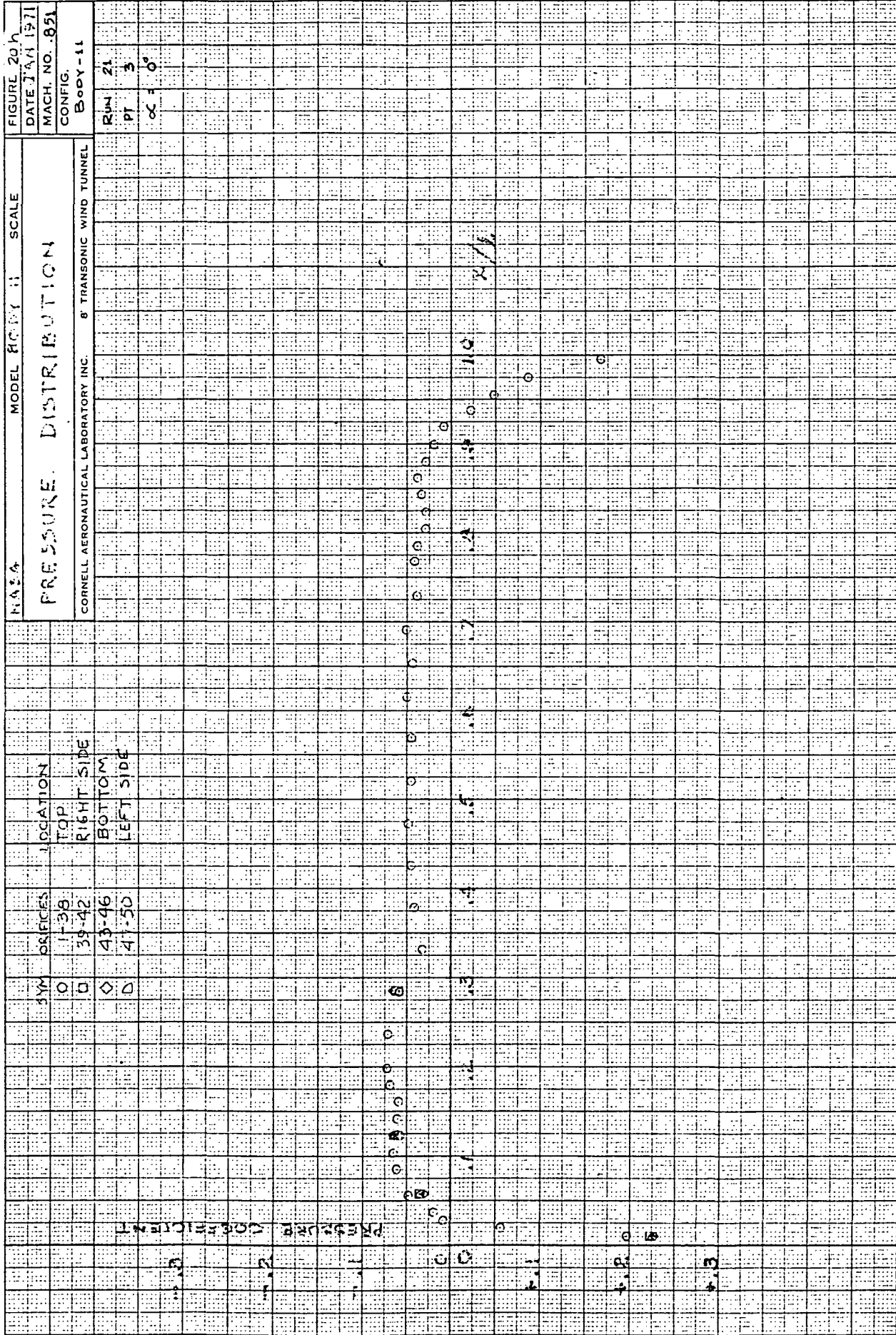


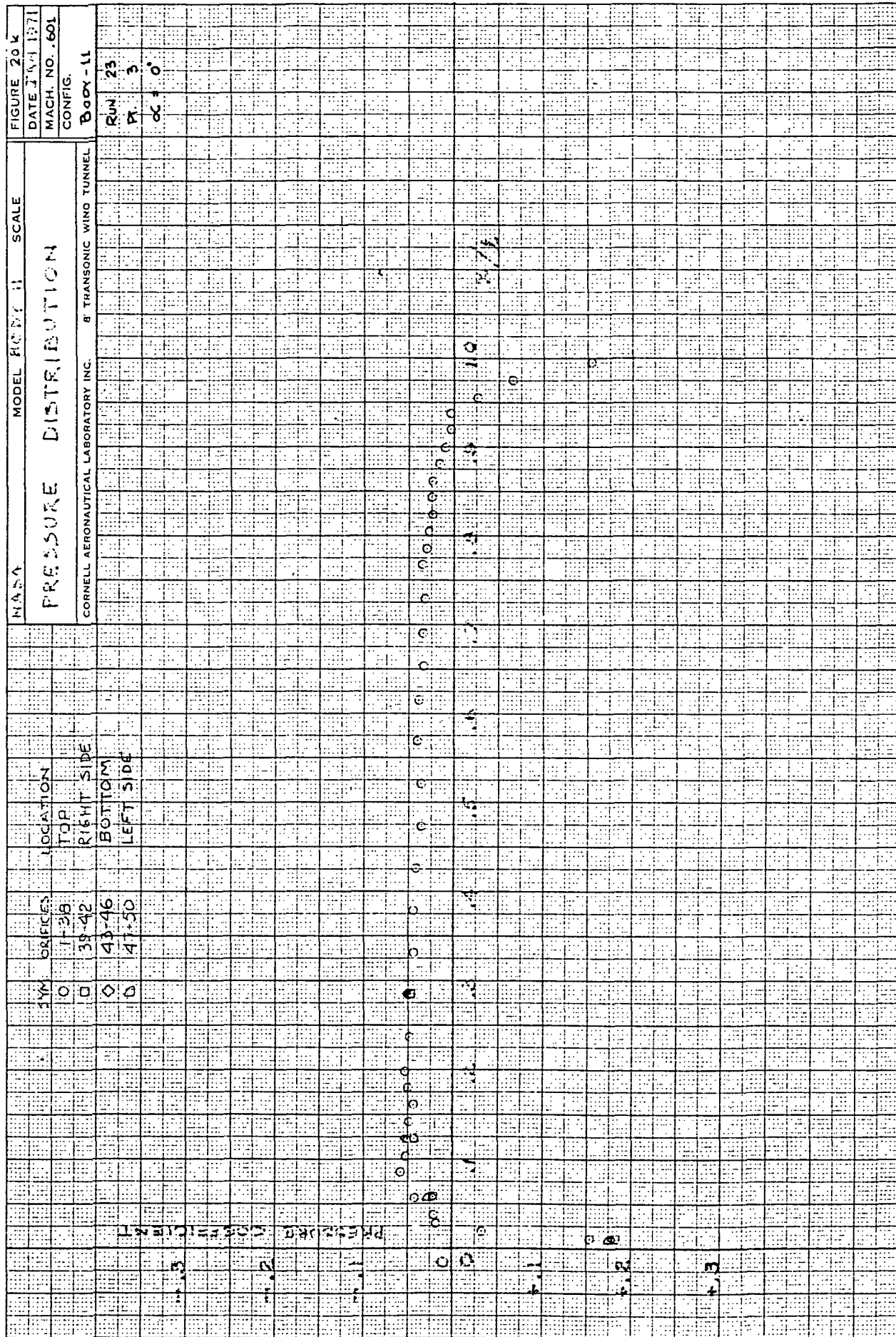


110-B

110-A

110-A





114-B

114-A

REF. NO. 114-B