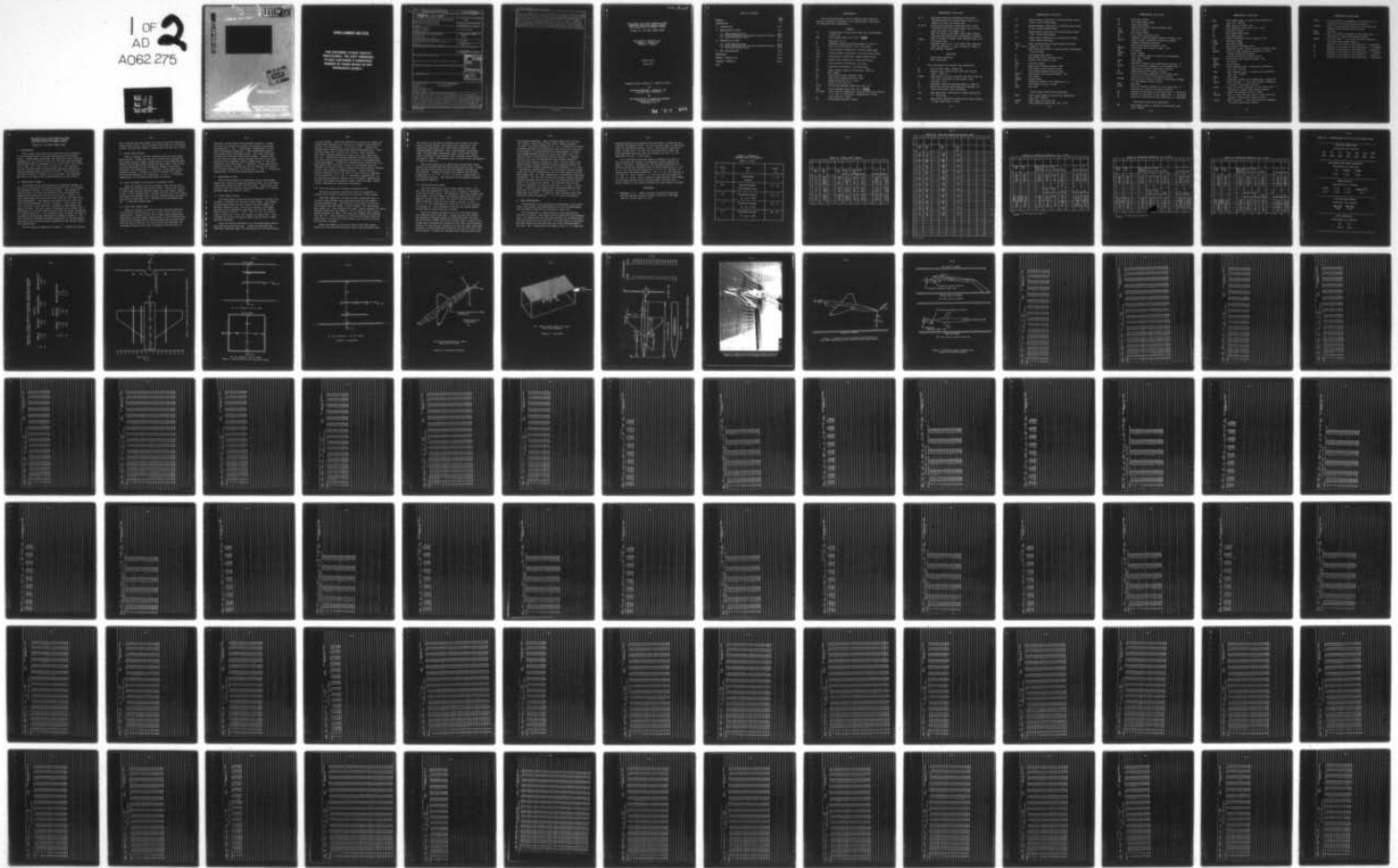


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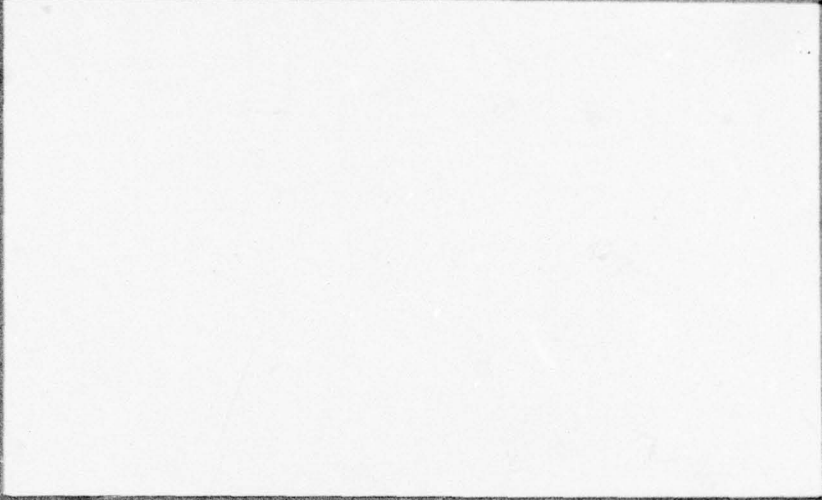
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DATA REPORT FOR A TEST PROGRAM TO STUDY TRANSONIC FLOW FIELDS A--ETC(U)
JUL 77 S C PERKINS, S S STAHARA, M J HEMSCH F44620-75-C-0047
NEAR-TR-138-VOL-6 AFOSR-TR-78-1490 NL

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) A test program was conducted to obtain measurements of flow velocities and static pressures in the vicinity of wing-body-store model (representative of a fighter-type aircraft) as well as surface pressures, forces, and moments on the model. Flow velocities and static pressures were also measured near the tunnel walls to provide outer flow field information. This report presents the data obtained during the test program conducted in the 4T and 16T Wind Tunnels at Arnold Engineering Development Center. The Flow-field data were obtained at Mach numbers 0.925, 0.975, and 1.025 and constitute the major part of the data. (cont)																				

Volume I is a summary report which gives detailed information on the test program and presents uncertainties associated with the various types of data taken in the 4T Wind Tunnel. The volume also presents tunnel-empty and Mach-number surveys, as well as tabulated force and moment and pressure data for the Mach number range 0.80 to 1.15 and angles of attack -2° , -5° , 0° , 2° , and 5° . Volumes II, III, and IV present the tabulated flowfield data for the 4-percent thick wing model at Mach numbers 0.925, 0.975 and 1.025, respectively. Volume V presents the tabulated flow-field data for the 6-percent thick wing model, and Volume VI presents data obtained for the 4-percent thick wing model in the 16T Wind Tunnel.

DATA REPORT FOR A TEST PROGRAM TO STUDY
TRANSONIC FLOW FIELDS ABOUT AIRCRAFT
WITH APPLICATION TO EXTERNAL STORES

VOLUME VI.- 16T WIND TUNNEL TESTS

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NOMENCLATURE

This section provides a list of symbols which identify various aerodynamic parameters, axis designations, subscripts, and tabulated data nomenclature.

SYMBOLS

A_w	planform area of both wings (does not include body), 0.4444 ft ²
AAL	local upwash angle, deg; $\tan^{-1} \left(\frac{WL/VM}{UL/VM} \right)$
b	wing span, 16 in.
\bar{c}	reference length for pitching moment, 5.3444 in.
C_A	axial force coefficient, axial force/ $q_\infty A_w$
C_{LL}	rolling-moment coefficient, rolling moment/ $q_\infty A_w b$
C_{LM}	pitching-moment coefficient, pitching moment/ $q_\infty A_w \bar{c}$
C_{LN}	yawing-moment coefficient, yawing moment/ $q_\infty A_w b$
C_N	normal-force coefficient, normal force/ $q_\infty A_w$
C_p	local pressure coefficient, $(p_\ell - p)/q_\infty$
C_y	side-force coefficient, side force/ $q_\infty A_w$
CPS	model surface pressure coefficient, $(PS - P)/Q$
M	Mach number
p, P	free-stream static pressure, psfa
PS	model local surface pressure, psfa
q	dynamic pressure, $\frac{1}{2} \rho V^2$; psfa
r	radius of the body, in.
Re/ft	free-stream Reynolds number per foot, ft ⁻¹
SWL	local sidewash angle, deg; $\tan^{-1} \left(\frac{VL/VM}{UL/VM} \right)$
UL, VL, WL	local velocity components, positive along the positive X, Y, and Z directions; respectively, ft/sec
v	total velocity, ft/sec
VM	free-stream velocity, ft/sec

NOMENCLATURE (Continued)

X, Y, Z	body-fixed Cartesian coordinates with origin coincident with the aircraft model nose at all angles of attack, see figure 5(a)
X_T, Y_T, Z_T	tunnel-fixed Cartesian coordinates with origin coincident with the aircraft model nose at zero angle of attack, see figure 5(b)
α	angle of attack of the model, deg; angle between body axis and tunnel axis, as defined in figure 5
α_{probe}	angle of attack of probe, angle between probe axis and tunnel axis
θ	azimuthal angle in the Y-Z plane, deg; measured from the positive Y axis as shown in figure 5
ρ	mass density, slugs/ft ³

Subscripts

∞	free-stream conditions
l	local conditions

Force and Moment and Pressure Data Tabulations

A_b	area of model base, .038785 ft ²
A_w	planform area of both wings (does not include body), .4444 ft ²
ALFWM	model angle of attack, positive nose up as seen by the pilot (nose down in the tunnel), deg.
b	wing span, 16 in.
\bar{c}	reference length for pitching moment, 5.3444 in.
CA	axial-force coefficient measured by balance, in body coordinates, axial force/ QA_w
CAB	base axial-force coefficient in body coordinates, $(P - \bar{P}_b)A_b/QA_w$
CAF	axial-force coefficient corrected for base effects, in body coordinates, CA-CAB

NOMENCLATURE (Continued)

CLL	rolling-moment coefficient in unrolled body coordinates, rolling moment/ $QA_W b$
CLM	pitching-moment coefficient in unrolled body coordinates, pitching moment/ $QA_W \bar{c}$
CLN	yawing-moment coefficient in unrolled body coordinates, yawing moment/ $QA_W b$
CN	normal-force coefficient in unrolled body coordinates, normal force/ QA_W
CPS N	model surface-pressure coefficients at orifice
(N = 1,25)	number N, $(P_S - P)/Q$
CY	side-force coefficient in unrolled body coordinates, side force/ QA_W
M	free-stream Mach number
P	free-stream static pressure, psfa
\bar{P}_b	average base pressure, psfa
PART	test part number
PS	model local surface pressure, psfa
PT	free-stream total pressure, psfa
Q	free-stream dynamic pressure, psfa
REX10 ⁻⁶	free-stream unit Reynolds number, 1/ft
RUN	run number
SURVEY	survey number
TT	stagnation chamber total temperature, °F
VM	free-stream velocity, ft/sec
WING	wing type

Tunnel Empty Survey Data Tabulations

AATL	local upwash angle in tunnel-axis coordinates, deg; $\tan^{-1} (WT/VT)$
ALFBM	model angle of attack, deg
CPL	local pressure coefficient, $(P_S - P)/Q$

NOMENCLATURE (Continued)

GP	grid point number
M	free-stream Mach number
ML	local Mach number
P	tunnel free-stream static pressure, psfa
PART	test part number
POINT	part point number
PS	local static pressure, psfa
PT	stagnation tunnel chamber pressure, primary, psfa
PTL/PT	ratio of probe stagnation pressure to tunnel chamber stagnation pressure
Q	free-stream dynamic pressure, psfa
REX10 ⁻⁶	free-stream unit Reynolds number, 1/ft
RUN	run number
SURVEY	survey number
SWTL	local sidewash angle in tunnel-axis coordinates, deg; $\tan^{-1} (VT/UT)$
TEST	test number
TT	stagnation chamber total temperature, primary, °F
UT/VM	ratio of velocity component in the tunnel-axis X direction to tunnel free-stream velocity
VM	tunnel free-stream velocity, ft/sec
VT/VM	ratio of velocity component in the tunnel-axis Y direction to tunnel free-stream velocity
VTL/VM	ratio of local velocity vector in tunnel-axis system to free-stream velocity vector
WING	wing type
WT/VM	ratio of velocity component in the tunnel-axis Z direction to tunnel free-stream velocity
XT	location of the probe in the tunnel-axis X direction
YT	location of the probe in the tunnel-axis Y direction
ZT	location of the probe in the tunnel-axis Z direction

Flow-Field Survey Data Tabulations

AAL	local upwash angle in body-axis coordinates, deg; $\tan^{-1} (WL/UL)$
-----	---

NOMENCLATURE (Continued)

AATL	local upwash angle in tunnel-axis coordinates, deg; \tan^{-1} (WT/UT)
ALFBM	model angle of attack, deg
CPL	local pressure coefficient, $(P_S - P)/Q$
GP	grid point number
M	free-stream Mach number
ML	local Mach number
P	tunnel free-stream static pressure, psfa
PART	test part number
POINT	part point number
PS	local static pressure, psfa
PT	stagnation tunnel chamber pressure, primary, psfa
PTL/PT	ratio of probe stagnation pressure to tunnel chamber stagnation pressure
Q	free-stream dynamic pressure, psfa
REX10 ⁻⁶	free-stream unit Reynolds number, 1/ft
RUN	run number
SURVEY	survey number
SWL	local sidewash angle in body-axis coordinates, deg; \tan^{-1} (VL/UL)
SWTL	local sidewash angle in tunnel-axis coordinates, deg; \tan^{-1} (VT/UT)
TEST	test number
TT	stagnation chamber total temperature, primary °F
UL/VM	ratio of probe X axis local velocity component to tunnel free-stream velocity
UT/VM	ratio of velocity component in the tunnel-axis X direction to tunnel free-stream velocity
VM	tunnel free-stream velocity, ft/sec
VML/VM	ratio of local velocity vector in the body-axis system to free-stream velocity vector
VL/VM	ratio of probe Y axis local velocity component to tunnel free-stream velocity

NOMENCLATURE (Concluded)

VT/VM	ratio of velocity component in the tunnel-axis Y direction to tunnel free-stream velocity
VTL/VM	ratio of local velocity vector in the tunnel-axis system to free-stream velocity vector
WING	wing type
WL/VM	ratio of velocity component in the tunnel-axis Z direction to tunnel free-stream velocity
WT/VM	ratio of probe Z axis local velocity component to tunnel free-stream velocity
X	location of the probe in the body-axis X direction
XT	location of the probe in the tunnel-axis X direction
Y	location of the probe in the body-axis Y direction
YT	location of the probe in the tunnel-axis Y direction
Z	location of the probe in the body-axis Z direction
ZT	location of the probe in the tunnel-axis Z direction

DATA REPORT FOR A TEST PROGRAM TO STUDY
TRANSONIC FLOW FIELDS ABOUT AIRCRAFT
WITH APPLICATION TO EXTERNAL STORES

VOLUME VI. - 16T WIND TUNNEL TESTS

1. INTRODUCTION

This volume of the data report presents the data obtained in the 16T Wind Tunnel at Arnold Engineering and Development Center. Tunnel-empty survey data and flow-field survey data are presented for $M_\infty = 0.925, 0.975, \text{ and } 1.025$ and force and moment and pressure data are presented at $M_\infty = 0.80, 0.85, 0.90, 0.925, 0.95, 0.975, 1.0, 1.025, 1.05, 1.10$ and 1.15 . All tests are for the 4-percent thick wing-body model and were performed at a nominal Reynolds number per foot of 3.0×10^6 . These tests are outlined in Tables I through VI of this volume. The tabulated data are at the end of this volume beginning on page number 1.

2. DESCRIPTION OF TESTS

The details of the test hardware and coordinate systems, as well as an overview of the purpose and scope of the test program, are provided in Volume I of this data report. The purpose of the 16T tests is to study the effects of wall interference by comparing data obtained in the 4T and 16T tests. Figure 1 of this volume shows the entire grid layout used for the inner flow-field measurements. The general grid layout used for the outer flow-field measurements is shown in figure 2. Some layouts use only a portion of these patterns, depending on Mach number and angle of attack. The grid layout is designed to give outer flow-field data at a constant radial distance from the tunnel centerline for various values of θ , the aximuthal angle, as shown in figure 3. A sketch of the wing-body combination is shown in figure 4. Figure 5 shows the 4-percent wing-body combination in the 16T Tunnel with the conical flow-field probe supported on the captive trajectory system (CTS).

The 16T tests are summarized in Table I. Columns one through

three indicate the table number, the type of test data presented (tunnel-empty survey, force and moment and pressure or flow-field survey), and the page numbers, respectively, for each set of data.

2.1 Tunnel-Empty Surveys

Table II contains the test condition grids for the tunnel-empty surveys. Columns one and two of these tests indicate the page number and part number, respectively, of the tabulated data. Columns four through seven indicate the Mach number, the initial and final positions and the incremental change in the axial coordinate, the tunnel-axis X direction, of the probe static-pressure orifices. Columns nine and ten indicate the lateral and vertical positions, the tunnel-axis Y and Z directions, respectively, of the probe longitudinal centerline.

2.2 Force and Moment and Pressure Distribution Tests

Table III contains the test condition grids for the force and moment and pressure distribution tests. Columns one and two of these tests indicate the page number and part number, respectively, of the tabulated data. Columns four and six of the force and moment and pressure tests indicate the Mach number and type of data given on each page; F & M indicates force and moment data and P indicates pressure data.

2.3 Flow-Field Survey Tests

Tables IV through VI contain the test condition grids for the flow-field survey tests at $M_{\infty} = 0.925, 0.975, \text{ and } 1.025$, respectively. Columns one and two of these tests indicate the page number and part number, respectively, of the tabulated data. Columns four through seven of the flow-field survey tests indicate the angle of attack, the initial and final positions and incremental change in the axial coordinate, the body-axis X

direction, of the probe static-pressure orifices. Columns nine and ten indicate the lateral and vertical coordinates, the body-axis Y and Z directions, respectively, of the probe longitudinal centerline. These coordinates indicate the various inner flow-field surveys. The outer flow-field surveys follow the inner flow-field surveys. Columns five, six and seven of these surveys indicate the initial and final positions and incremental change, respectively, of the axial coordinate, the tunnel-axis X direction, of the probe static-pressure orifices. Columns nine and ten indicate the lateral and vertical coordinates, the tunnel-axis Y and Z directions, respectively, of the probe longitudinal centerline.

3. DESCRIPTION OF DATA

This section presents a description of the tunnel-empty survey data, force and moment and pressure data, and flow-field survey data obtained in the 16T Wind Tunnel. These tests were conducted with the 4-percent thick wing-body model at a nominal Reynolds number per foot of 3.0×10^6 .

3.1 Tunnel-Empty Surveys

The tunnel-empty survey data are presented in tabular form on pages 1 through 10 at the end of this volume. The heading on each page contains the test number, the part number, the Reynolds number per foot, the angle of attack of the model, the type of wing attached to the model (no wing for tunnel-empty surveys), and the Y and Z (or YT and ZT) coordinates at which the X (or XT) traverse is carried out. Also included are the run and survey numbers and the date on which data were recorded.

Below the heading information are the tunnel-empty survey data obtained during each test. Column one indicates the sequential indexing number for referencing data obtained during

one part (POINT). Column two indicates the grid point number and column three indicates the location of the probe static-pressure orifices in the tunnel-axis X direction (XT). Columns four through eight indicate wind tunnel free-stream quantities. These are Mach number (M), velocity (VM, ft/sec), total pressure (PT, psfa), dynamic pressure (Q, psfa), and total temperature (TT, °F). Columns nine through seventeen indicate local quantities which were either measured by the probe or calculated from probe measurements. Columns nine through twelve contain the local Mach number (ML), the ratio of local to free-stream velocity (VTL/VM), the ratio of local to free-stream total pressure (PTL/PT), and the local pressure coefficient (CPL). Columns thirteen through seventeen contain the ratio of local velocity components in the tunnel-axis X, Y, and Z directions, respectively, to the free-stream velocity (UT/VM, VT/VM, and WT/VM, respectively) and the local upwash and sidewash angles (AATL and SWTL, respectively) referenced to tunnel-axis coordinates.

3.2 Force and Moment and Pressure Distribution Data

The force and moment and pressure data are presented in tabular form on pages 11 through 32 at the end of this volume.

Each Mach number has two pages of data associated with it. The first page contains force and moment data and the second contains pressure data. The heading on both pages is identical and contains the test number, the part number, the free-stream Mach number (M), total pressure (PT, psfa), static pressure (P, psfa), Reynolds number per foot ($REX10^{-6}$, ft^{-1}), velocity (VM, ft/sec), dynamic pressure (Q, psfa), and stagnation chamber total temperature (TT, °F). Also included are wing type (4-percent thick for these tests), the run and survey numbers, and the date on which the data were recorded.

Below the heading on the first page of each Mach number section are the data obtained during each force and moment test.

The results for the force and moment tests include the model angle of attack (ALFWM), the normal-force coefficient (CN), side-force coefficient (CY), axial-force coefficient (CA), pitching-moment coefficient (CLM), yawing-moment coefficient (CLN), rolling-moment coefficient (CLL), axial-force coefficient corrected for base effects (CAF), and base axial-force coefficient (CAB). The positive sense of these forces and moments is shown in figure 6.

Below the heading on the second page of each Mach number section are the data obtained during each pressure test. Column one indicates the orifice at which the pressure coefficient was measured. Columns two through six indicate the pressure coefficient at $\alpha = -5^\circ, -2^\circ, 0^\circ, 2^\circ, \text{ and } 5^\circ$, respectively, at each orifice location. The locations of the pressure orifices are shown in figure 4.

3.3 Flow-Field Survey Tests

The flow-field survey data at Mach numbers 0.925, 0.975 and 1.025 are presented in tabular form on pages 33 through 70 at the end of this volume. The heading on each page contains the test number, the part number, the Reynolds number per foot, the angle of attack of the model, the type of wing attached to the model (4-percent thick for this volume), and the Y and Z (or YT or ZT) coordinates at which the X (or XT) traverse is carried out. Also included are the run and survey numbers and the date on which data were recorded.

Below the heading information are the flow-field survey data obtained during each test. Columns one and two indicate the sequential indexing number for referencing data obtained during one part (POINT) and the grid point number, respectively. Column three indicates the location of the probe static-pressure orifices in the body-axis direction (X) for the inner flow-field surveys or in the tunnel-axis direction (XT) for the outer flow-field surveys. Columns four through eight indicate wind tunnel

free-stream quantities. These are Mach number (M), velocity (VM , ft/sec), total pressure (PT , psfa), dynamic pressure (Q , psfa), and total temperature (TT , °F). Columns nine through seventeen indicate local quantities which were either measured by the probe or calculated from probe measurements. Columns nine through twelve contain the local Mach number (ML), the ratio of local to free-stream velocity (VML/VM or VTL/VM), the ratio of local to free-stream total pressure (PTL/PT), and the local pressure coefficient (CPL). For the inner flow-field surveys, columns thirteen through seventeen contain the ratio of local velocity components in the body-axis X , Y , and Z directions, respectively, to the free-stream velocity (UL/VM , VL/VM , and WL/VM , respectively) and the local upwash and sidewash angles (AAL and SWL , respectively) referenced to body-axis coordinates. For the outer flow-field surveys, columns thirteen through seventeen contain these same local quantities as determined in the tunnel-axis system. The positive sense of the velocity components is along the positive X , Y , and Z directions. A positive local upwash angle indicates downward flow away from the wing-body combination, the positive Z or ZT direction, see figure 7. A positive local sidewash angle indicates flow along the positive Y or YT axis, see figure 7.

4. DATA UNCERTAINTIES

Uncertainties in the aerodynamic coefficients, local conditions, flow angles, and probe position for the 16T Wind Tunnel were provided by ARO and are presented in Table VII.

The uncertainties in probe positions were particularly difficult to obtain. The values given in Table VII are estimates only. An optical test for one probe position was conducted with the wind on and with the wind off. For these tests, a reflective band was painted on the model body aft of the trailing edge of the wing. The Z -position of the probe in the $Y = 0$ plane was

measured optically and compared with the nominal (requested) and computed (tabulated) values. For the wind-off cases, an additional check was made by hand using a ruler. Some typical results are given in Table VIII. For all the calibration tests made, the tabulated probe positions were more accurate for the $\alpha = -5^\circ$ cases than for the $\alpha = +5^\circ$ cases.

It is noted here that the center of rotation for pitch in the 16T tunnel was located a considerable distance behind the base of the model. Consequently, the wing-body combination at angle of attack was displaced from its tunnel position at $\alpha = 0^\circ$. At $\alpha = 0^\circ$, the nose was located at $X = 0$, $Z = 0$ and was 3.75 inches below the tunnel centerline. For $\alpha = -5^\circ$, the nose was at $X = .385$, $Z = -8.53$, while at $\alpha = +5^\circ$, the nose was located at $X = .513$, $Z = 11.52$. Such a change in model position with respect to the tunnel centerline for various angles of attack could have an effect on the results obtained for these angles of attack.

REFERENCES

1. Reichenau, D. E.: AFFDL Wing-Body Flow-Field Study Test. PWT 16T Facility Project Criteria, Project No. P41T-M4A, Test No. TF-445, Mar. 10, 1977.

TABLE I. - SUMMARY OF
TABULATED DATA IN VOLUME VI

$$Re/ft = 3.0 \times 10^6$$

Table (1)	Test (2)	Pages (3)
II	Tunnel-Empty Surveys	1 - 10
III	Force and Moment and Pressure Tests	11 - 32
IV	Flow-Field Surveys At $M_\infty = 0.925$	33 - 45
V	Flow-Field Surveys At $M_\infty = 0.975$	45 - 57
VI	Flow-Field Surveys At $M_\infty = 1.025$	58 - 70

TABLE II.- TUNNEL-EMPTY SURVEYS

1	2	3	4	5	6	7	8	9	10
Page No.	Part No.		Mach No.	Initial XT inches	Final XT inches	Δ XT inches		YT inches	ZT inches
1	102		.925	-6.0	24.0	2.0		0.0	-14.2
2	103		↓	-40.0	↓	↓		↓	0.0
3	104		↓	-6.0	↓	↓		14.1	↓
4	106		↓	↓	↓	↓		0.0	8.3
5	97		.975	-6.0	24.0	2.0		0.0	-14.2
6	96		↓	-42.0	↓	↓		0.0	0.0
7	98		↓	-6.0	↓	↓		14.1	0.0
8	101		1.025	-6.0	24.0	2.0		0.0	-14.2
9	100		↓	-40.0	↓	↓		0.0	0.0
10	99		↓	-6.0	↓	↓		14.1	0.0

TABLE IV. - FLOW-FIELD SURVEYS AT $M_\infty = 0.925$

1	2	3	4	5	6	7	8	9	10
Page No.	Part No.		Angle of Attack, degrees	Initial X inches	Final X inches	ΔX inches		Y inches	Z inches
33	59		0.0	10.0	19.0	.33		4.0	-1.0
34	77		5.0	11.0	↓	↓		↓	-.9
35	92		-5.1	↓	↓	↓		↓	-1.1
36	62		0.0	↓	↓	1.33		-4.0	-1.0
						↓			
				Initial XT inches	Final XT inches	ΔXT inches		YT inches	ZT inches
37, 38	44, 45		0.0	-5.8	24.0	.50		0.0	-14.2
39, 40	57, 58		↓	-5.4	↓	↓		14.2	0.0
* 41, 42	72, 73		5.0	-5.0	↓	↓		0.0	-14.0
43	78		↓	↓	↓	1.00		↓	-13.2
44	84		↓	↓	↓	↓		14.2	0.0
45	91		-5.0	-6.0	↓	↓		0.0	-14.1

* $\alpha_{\text{probe}} = 5^\circ$ for parts 72 and 73

TABLE V.- FLOW-FIELD SURVEYS AT $M_\infty = 0.975$

1	2	3	4	5	6	7	8	9	10
Page No.	Part No.		Angle of Attack, degrees	Initial X inches	Final X inches	ΔX inches		Y inches	Z inches
				Initial XT inches	Final XT inches	ΔXT inches		YT inches	ZT inches
46	60		0.0	11.0	19.0	.33		4.0	-1.0
47	76		5.0	↓	↓	↓		↓	-.9
48	87		-5.1	↓	↓				-1.1
49	61		0.0	↓	↓	1.33		-4.0	-1.0
50, 51	46, 47		0.0	-5.8	24.0	.50		0.0	-14.2
52	56		↓	-5.4	↓	↓		14.2	0.0
* 53, 54	74, 75		5.0	↓	↓	↓		0.0	-14.1
55	79		↓	-5.0	↓	1.00		↓	-13.2
56	83		↓	↓	↓	↓		14.2	0.0
57	85		-5.1	↓	↓	↓		0.0	-14.1

* $\alpha_{\text{probe}} = 5^\circ$ for parts 74 and 75

TABLE VII. - UNCERTAINTIES FOR THE 16T WIND TUNNEL TESTS.

FORCE AND MOMENT DATA						
Uncertainty (+), Absolute						
$\underline{C_N}$	$\underline{C_Y}$	$\underline{C_A}$	$\underline{C_{LL}}$	$\underline{C_{LM}}$	$\underline{C_{LN}}$	\underline{CPS}
.0041	.0015	.0026	.0004	.0051	.0001	.0091

WIND TUNNEL FREE-STREAM PARAMETERS		
Uncertainty (+), Absolute		
\underline{M}	$\underline{Q, \text{ psf}}$	$\underline{P, \text{ psf}}$
.0033	2.243	2.566

PROBE POSITION			
Uncertainty (+), Absolute			
$\underline{X, \text{ in.}}$	$\underline{Y, \text{ in.}}$	$\underline{Z, \text{ in.}}$	$\underline{\alpha_{\text{probe}}, \text{ deg}}$
0.150	0.150	0.250	0.25

FLOW AND MODEL ANGLES	
Uncertainty (+), Absolute	
$\underline{AAL, \text{ deg}}$	$\underline{SWL, \text{ deg}}$
0.229	0.229

LOCAL CONDITIONS	
Uncertainty (+), Absolute	
$\underline{M_\ell}$	$\underline{C_P}$
0.018	0.030

TABLE VIII. - TYPICAL COMPARISON OF NOMINAL, TABULATED AND MEASURED Z-POSITIONS OF PROBE IN Y = 0 PLANE (ALL VALUES ARE IN INCHES).

WIND-OFF			
α	<u>Nominal</u>	<u>Tabulated</u>	<u>Measured by Hand</u>
+5°	1.000	0.829	0.870
-5°	1.000	1.178	1.08
			0.880
			1.07

WIND-ON			
α	<u>Nominal</u>	<u>Tabulated</u>	<u>Measured Optically</u>
+5°	1.000	0.874	0.62
0°	1.000	1.000	0.784
-5°	1.000	1.06	0.94

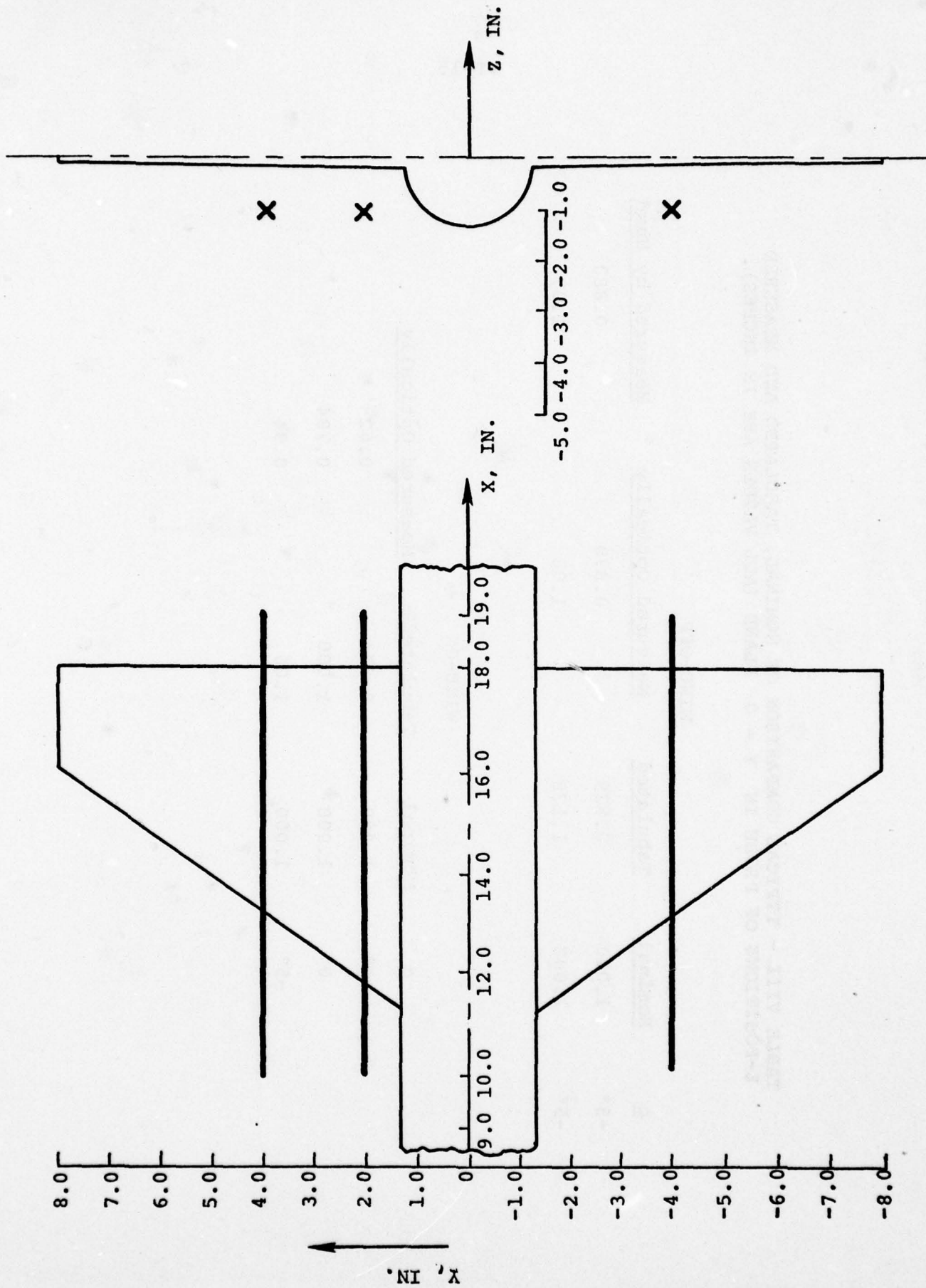
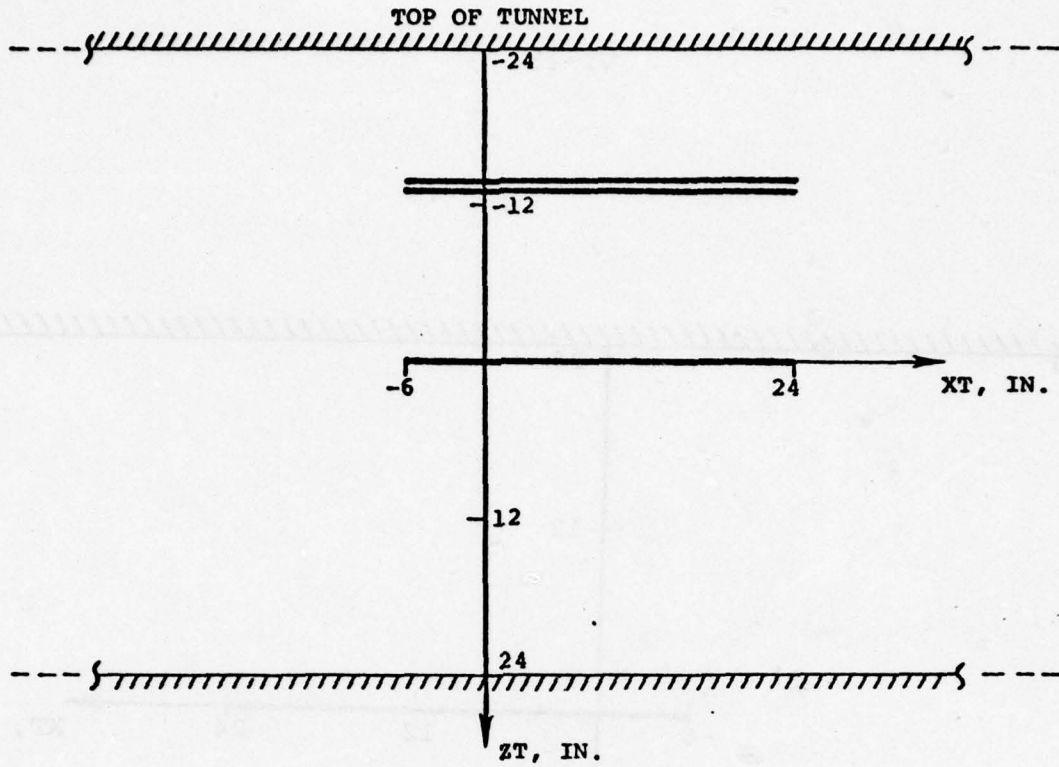
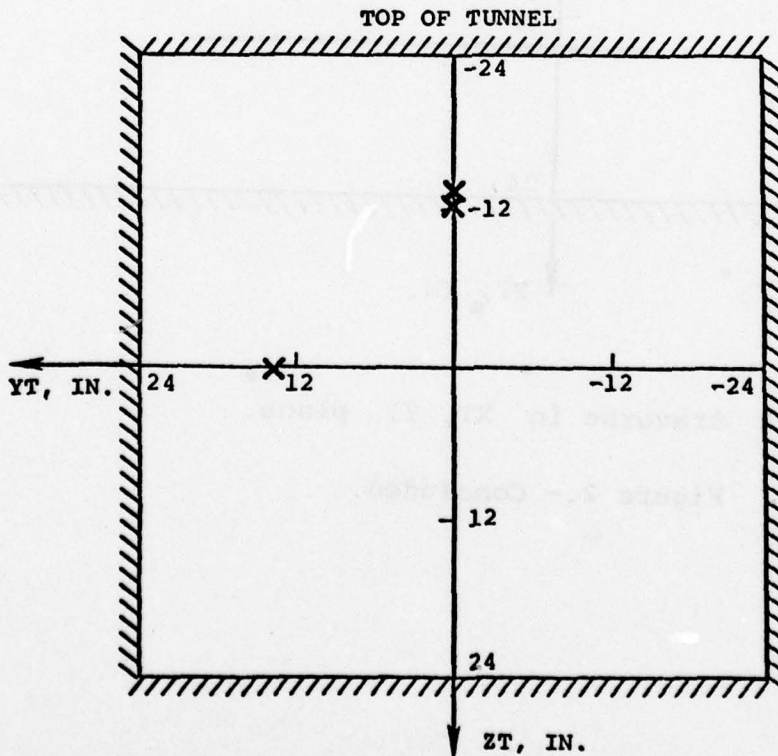


Figure 1.- General grid for inner flow-field measurements.



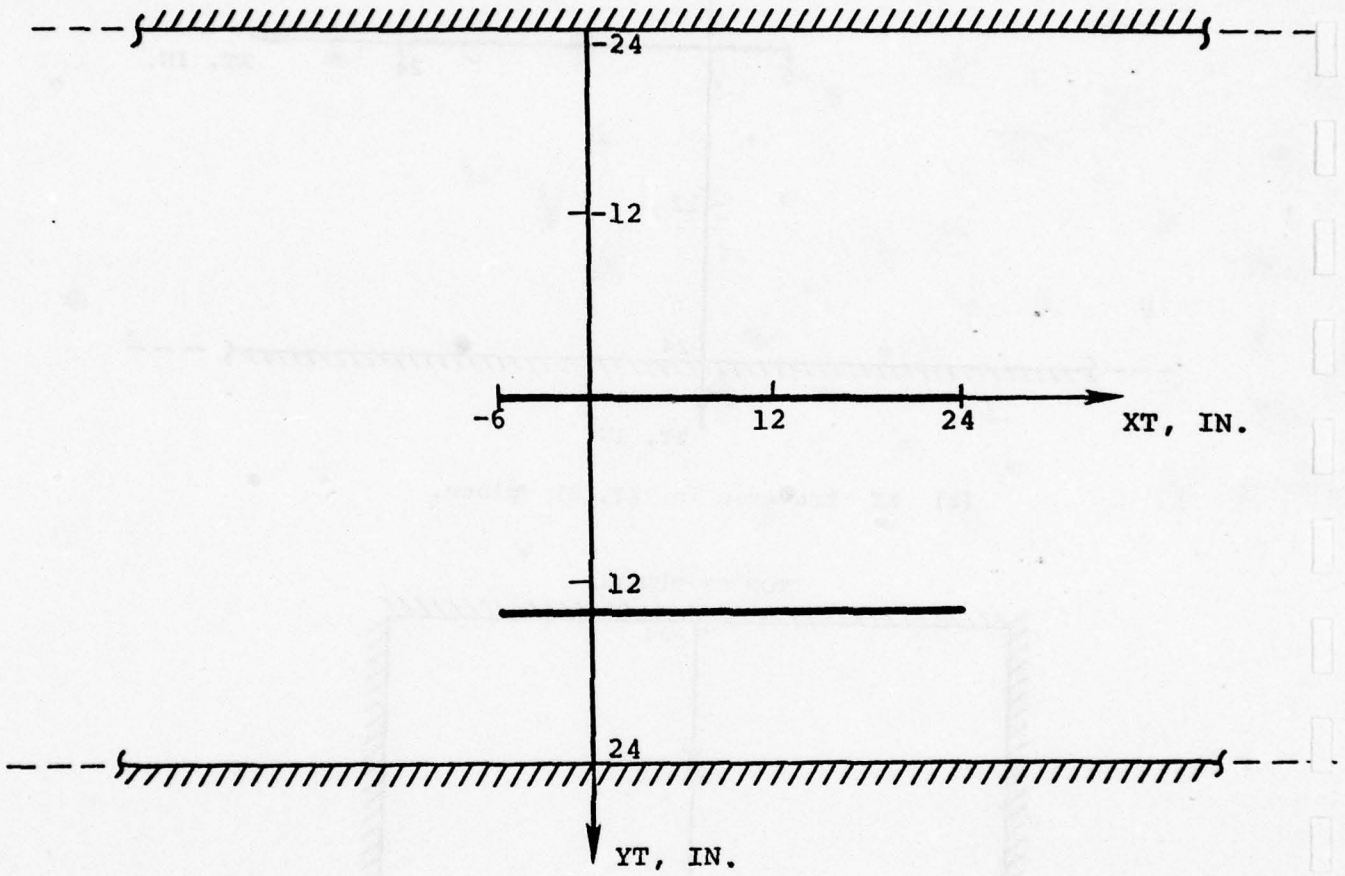
(a) XT traverse in XT, ZT plane.



(b) XT traverse in YT, ZT plane.

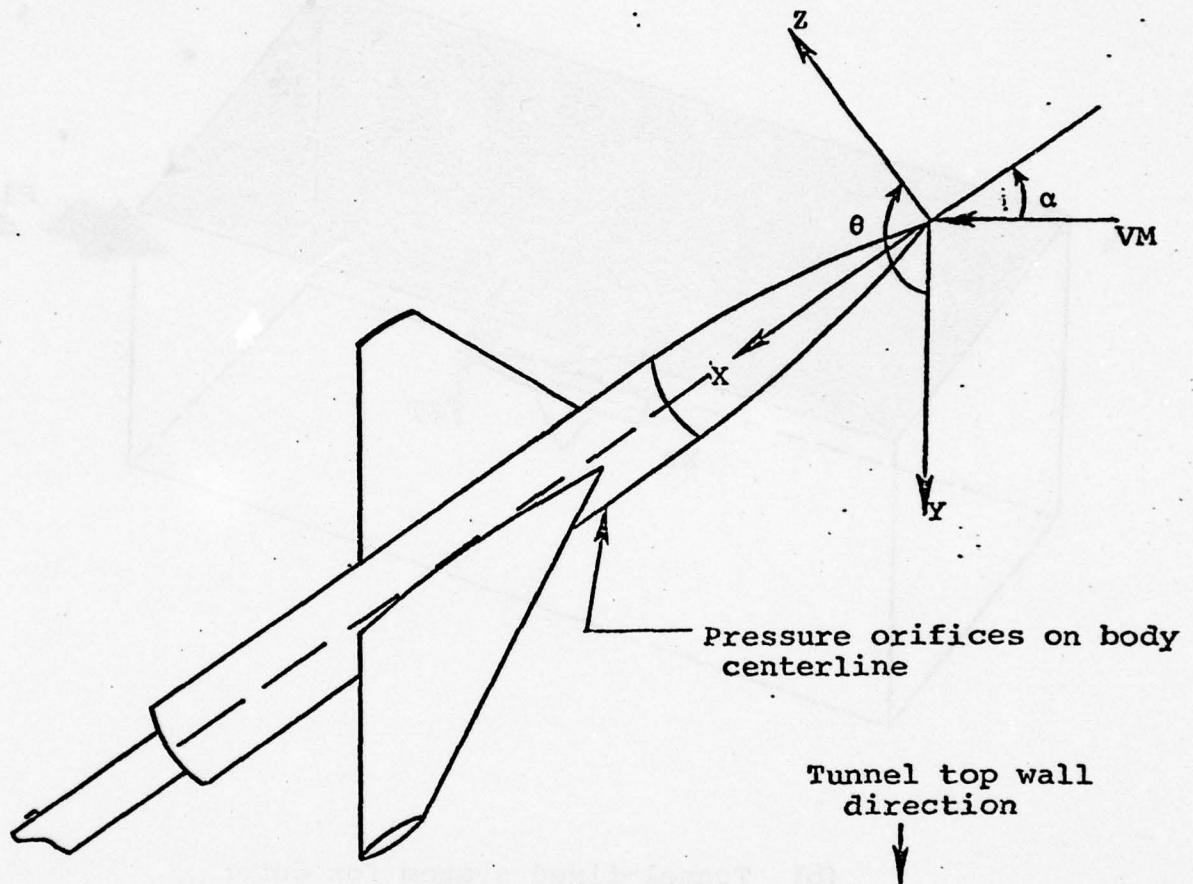
Figure 2.- General grids for outer flow-field surveys.

VI-18



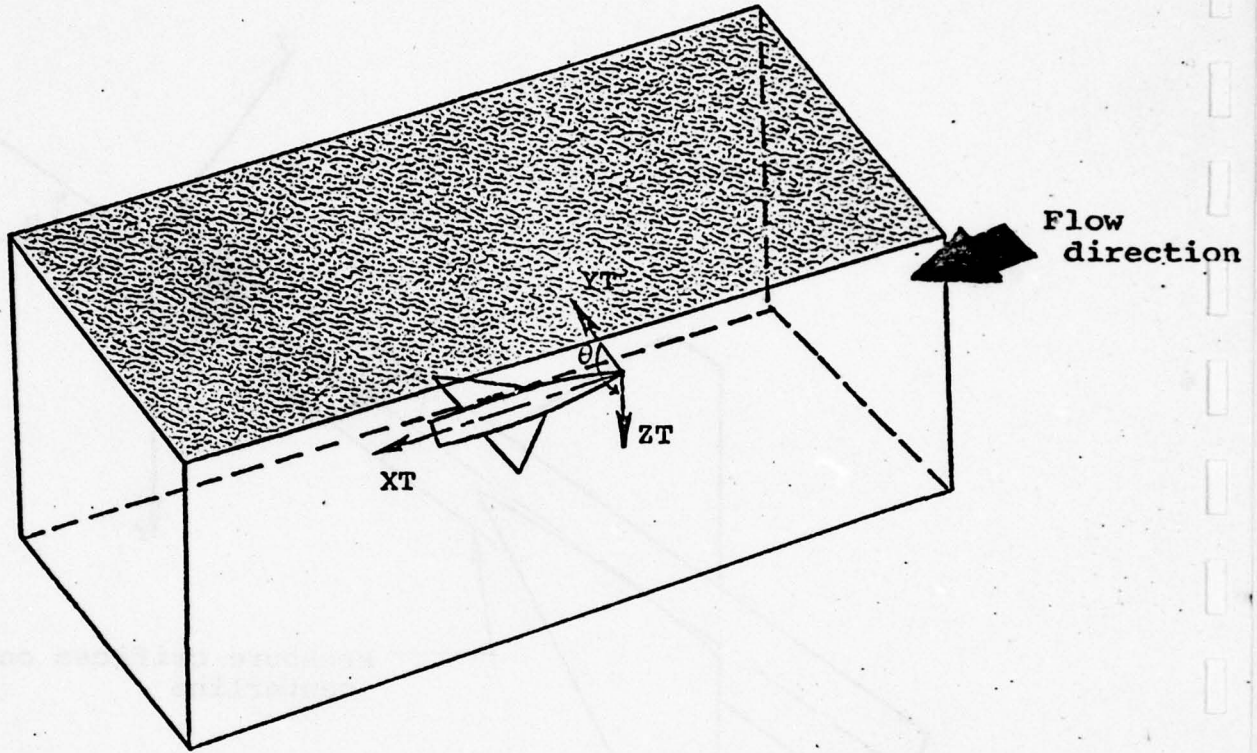
(c) XT traverse in XT, YT plane.

Figure 2.- Concluded.



(a) Body-fixed system for inner flow field surveys.

Figure 3.-Coordinate systems.



(b) Tunnel-fixed system for outer flow field surveys.

Figure 3.- Concluded.

BODY COORDINATES

<u>x, in.</u>	<u>r, in.</u>
0	0
0.5	0.162
1.0	0.313
1.5	0.453
2.0	0.583
2.5	0.703
3.0	0.813
3.5	0.912
4.0	1.000
4.5	1.078
5.0	1.146
5.5	1.203
6.0	1.250
6.5	1.287
7.0	1.313
7.5	1.328
8.0	1.333
24.0	1.333

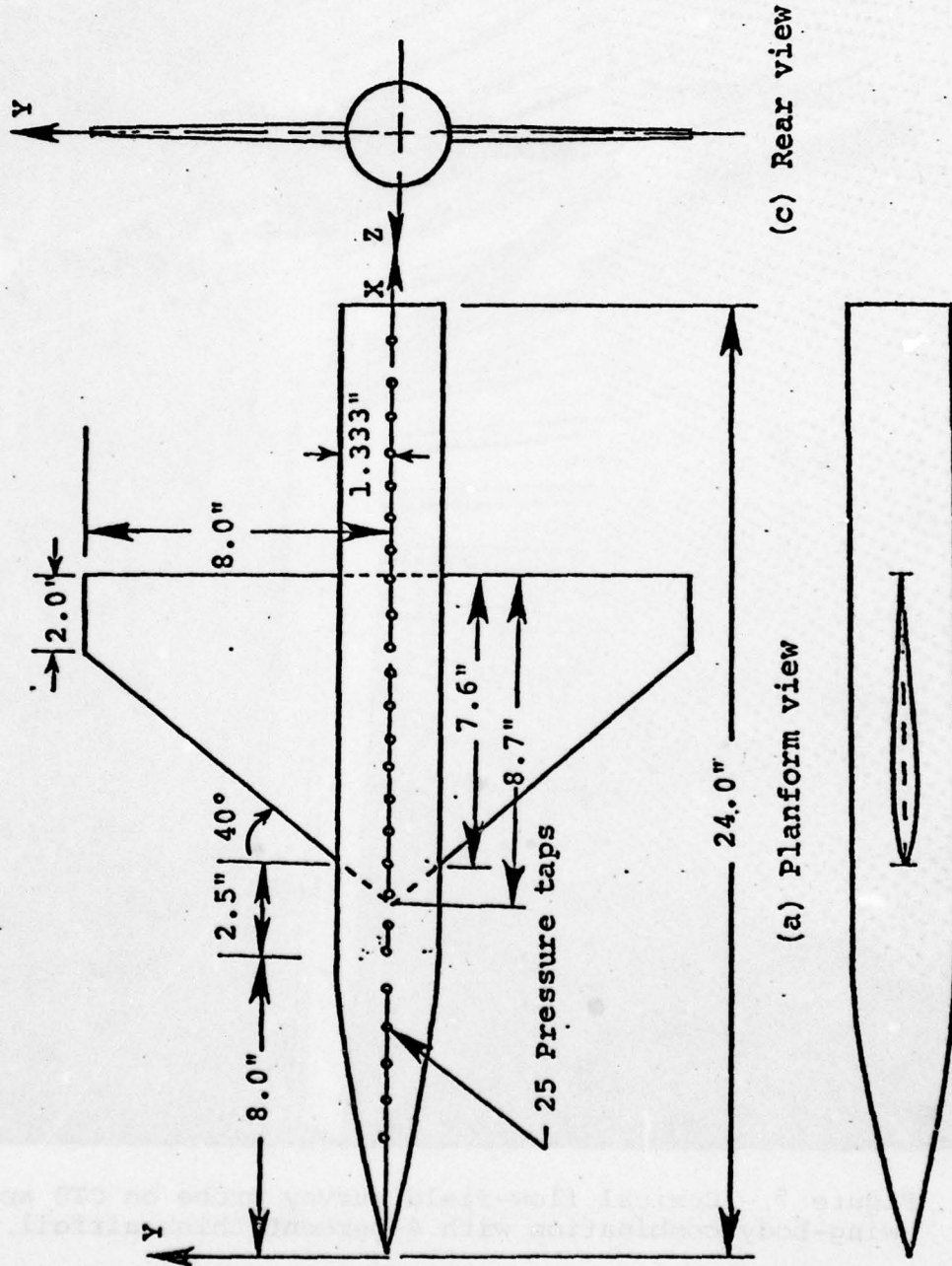
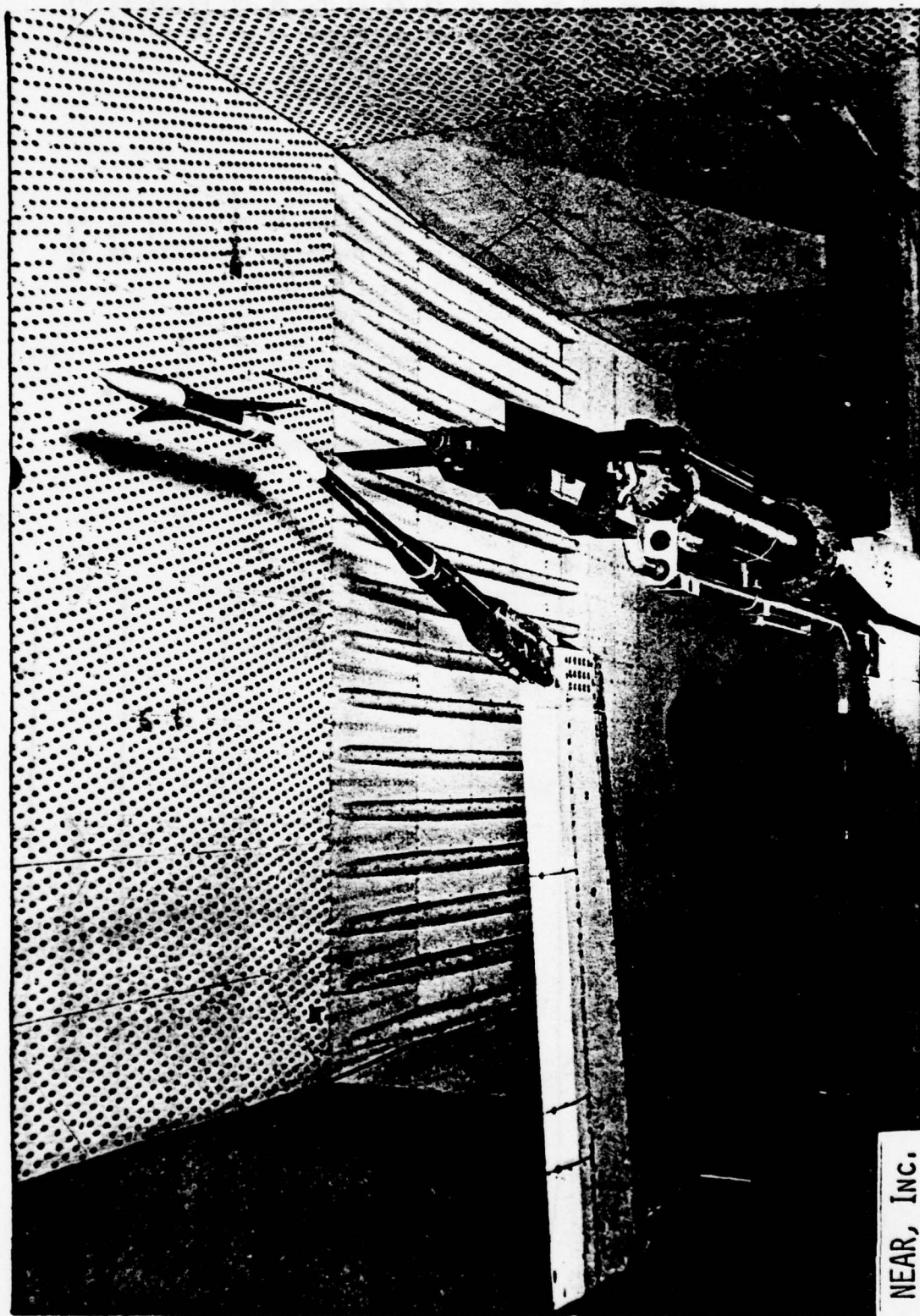


Figure 4.- Wing-body combination.



NEAR, INC.

Figure 5.- Conical flow-field survey probe on CTS and wing-body combination with 4-percent thick airfoil.

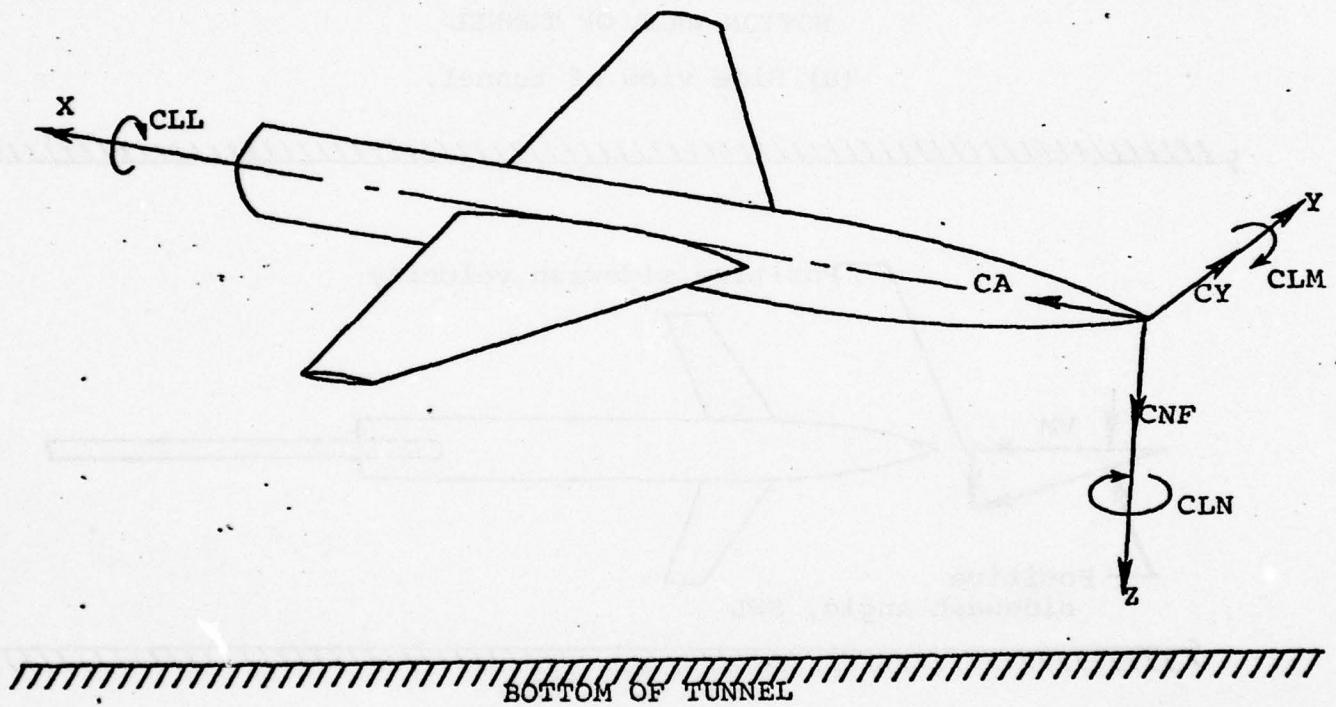
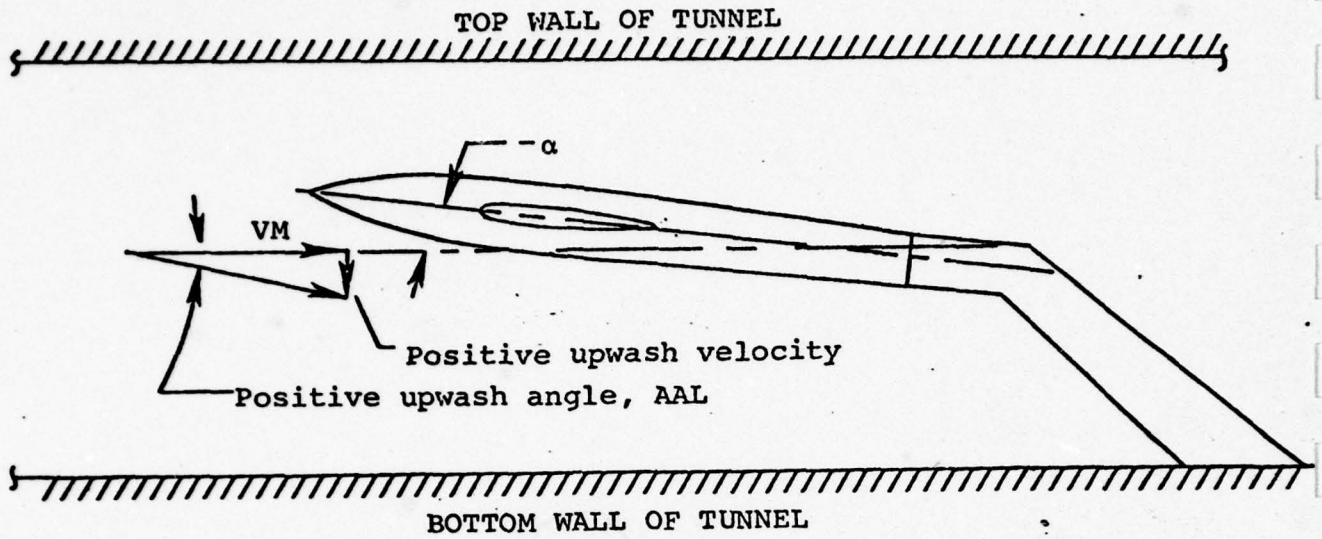
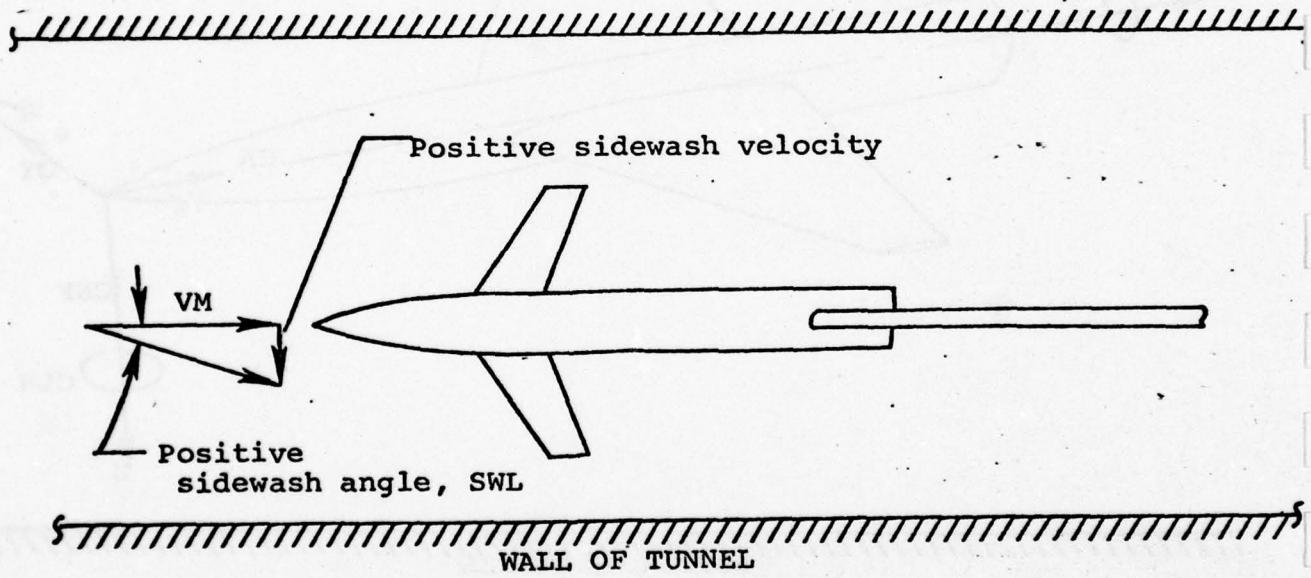


Figure 6.-Sketch of the wing-body configuration in the tunnel showing positive sense of forces and moments.



(a) Side view of tunnel.



(b) Plan view of tunnel from top.

Figure 7.-Pictorial sign convention for upwash and sidewash angles.

TEST PART REF10-C ALP10 WIND SURVEY
 YF-65 102 3.011 0.00 NONE 0.01 -14.17 1 101
 GULCH FLOWFIELD SURVEY SUMMARY

DATE
 4-14-77

AEDC PROPULSION WIND TUNNEL
 TRANSONIC 16T

POINT GP	AT	A	V ₁	V ₂	PT	U	TI	ML	VTL/VM	MIL/PT	CPL	UT/VM	VT/VM	WI/VM	AAIL	SWTL
1 25	26.014	0.526	982.07	1478.1	507.8	89.3	0.916	0.99	1.000	0.020	0.020	0.991	0.008	0.002	0.13	0.44
2 25	21.955	0.526	982.16	1480.0	510.5	89.4	0.914	0.99	1.000	0.014	0.014	0.993	0.007	0.003	0.17	0.42
3 25	20.037	0.525	981.50	1482.4	511.0	89.2	0.920	0.99	1.001	0.012	0.012	0.995	0.007	0.003	0.17	0.43
4 25	18.007	0.525	981.05	1483.4	511.5	89.4	0.921	1.00	1.001	0.009	0.009	0.996	0.007	0.003	0.18	0.42
5 25	16.022	0.525	981.68	1484.8	511.7	89.4	0.919	0.99	1.001	0.012	0.012	0.994	0.008	0.004	0.22	0.45
6 25	14.001	0.526	982.18	1484.5	512.0	89.4	0.919	0.99	1.000	0.013	0.013	0.993	0.008	0.004	0.25	0.45
7 25	11.983	0.526	982.07	1484.3	511.9	89.4	0.920	0.99	1.000	0.011	0.011	0.995	0.008	0.004	0.22	0.45
8 25	10.030	0.526	981.09	1483.8	511.6	89.4	0.920	0.99	0.997	0.008	0.008	0.995	0.008	-0.003	-0.19	0.46
9 25	7.994	0.526	982.06	1483.4	511.7	89.2	0.922	1.00	1.001	0.009	0.009	0.996	0.008	0.004	0.23	0.47
10 25	5.958	0.525	981.05	1482.0	510.7	89.1	0.919	0.99	1.000	0.013	0.013	0.994	0.008	0.004	0.23	0.47
11 25	3.963	0.526	981.59	1482.7	511.2	89.2	0.921	1.00	1.001	0.009	0.009	0.996	0.007	0.004	0.24	0.43
12 25	2.021	0.526	981.87	1482.7	511.4	89.1	0.924	1.00	1.001	0.005	0.005	0.998	0.005	0.004	0.24	0.30
13 25	0.032	0.526	981.95	1482.7	511.3	89.3	0.919	0.99	1.000	0.013	0.013	0.994	0.012	0.005	0.26	0.67
14 25	-1.998	0.526	982.28	1483.0	511.4	89.7	0.921	1.00	1.001	0.010	0.010	0.995	0.008	0.005	0.27	0.47
15 25	-3.971	0.526	982.53	1482.2	511.4	89.4	0.923	1.00	1.001	0.007	0.007	0.997	0.009	0.005	0.31	0.52
16 25	-5.956	0.526	981.85	1480.1	510.4	89.2	0.917	0.99	1.000	0.016	0.016	0.992	0.004	0.004	0.26	0.24

TEST PANT HEAD-D ALPHA 41MG YI ZT RUN SURVEY DATE AEDC PROPLUSION #IND TUNNEL
 TF-665 106 3.014 0.000 NONE 0.00 0.10 1 110 4-14-77 TRANSONIC 16T

WIND TUNNEL SURVEY SUMMARY

POINT	SP	AI	SI	V ₀	MT	W	IT	HL	VTL/VM	P/L/PT	CPL	UT/VM	VT/VM	WT/VM	AATL	SMTL
1	25	23.958	0.523	979.73	1478.8	508.5	89.5	0.915	0.99	1.000	0.014	0.993	0.016	0.002	0.11	0.93
2	25	22.060	0.523	979.46	1478.7	508.6	89.5	0.917	0.99	1.001	0.013	0.994	0.016	0.001	0.03	0.91
3	25	19.943	0.523	978.96	1477.4	507.4	89.1	0.916	0.99	1.000	0.013	0.994	0.016	-0.002	-0.14	0.90
4	25	17.937	0.523	980.07	1478.4	508.5	89.7	0.917	0.99	1.000	0.012	0.994	0.015	-0.006	-0.34	0.89
5	25	15.949	0.523	979.88	1478.2	508.5	89.4	0.918	1.00	1.001	0.011	0.995	0.015	-0.009	-0.51	0.89
6	25	13.949	0.524	980.21	1478.8	508.8	89.5	0.919	1.00	1.000	0.010	0.996	0.015	-0.008	-0.46	0.89
7	25	12.031	0.524	980.34	1479.4	509.0	89.7	0.916	0.99	1.000	0.014	0.993	0.015	-0.005	-0.26	0.88
8	25	10.010	0.524	980.77	1479.6	509.5	89.4	0.919	1.00	1.000	0.010	0.995	0.015	-0.007	-0.43	0.87
9	25	7.981	0.524	980.49	1479.6	509.4	89.3	0.920	1.00	1.000	0.009	0.996	0.016	-0.006	-0.35	0.92
10	25	5.948	0.525	981.27	1480.5	510.0	89.6	0.921	1.00	1.000	0.008	0.996	0.015	-0.005	-0.30	0.87
11	25	4.034	0.525	980.96	1480.6	510.0	89.3	0.921	1.00	1.000	0.008	0.996	0.015	-0.005	-0.30	0.84
12	25	2.000	0.524	980.65	1481.3	509.9	89.6	0.920	1.00	1.001	0.008	0.996	0.014	-0.005	-0.27	0.79
13	25	-2.174	0.524	980.78	1481.7	510.1	89.6	0.921	1.00	1.000	0.007	0.997	0.015	-0.005	-0.28	0.88
14	25	-4.002	0.524	980.08	1481.8	509.8	89.4	0.919	1.00	1.000	0.008	0.996	0.015	-0.005	-0.29	0.87
15	25	-6.003	0.524	980.10	1483.2	510.3	89.4	0.921	1.00	1.001	0.007	0.997	0.015	-0.005	-0.28	0.84

TEST PART MEX10-6 ALPHA WIND WIND SURVEY
 TF-445 97 2.597 0.00 NONE -0.03 -14.18 1 101

DATE 4-14-77

AEUC PROPULSION WIND TUNNEL
 TRANSONIC 16T

OUTER FLOWFIELD SURVEY SUMMARY

POINT	GP	XI	M	V	W	U	ZI	HL	VTL/VM	PTL/PT	CPL	UT/VM	VT/VM	WI/VM	AATL	SMTL
1	25	23.591	0.974	1025.15	1449.9	524.2	89.4	0.964	0.97	1.000	0.054	0.973	0.012	0.003	0.18	0.73
2	25	21.940	0.974	1025.08	1448.7	523.6	89.5	0.964	0.99	1.000	0.017	0.992	0.004	0.004	0.22	0.43
3	25	14.544	0.974	1025.03	1451.5	524.0	89.5	0.973	1.00	1.001	0.003	0.999	0.007	0.004	0.22	0.40
4	25	17.948	0.975	1025.00	1450.4	527.1	89.7	0.975	1.00	1.001	0.002	1.000	0.007	0.004	0.21	0.37
5	25	15.545	0.976	1027.38	1455.1	527.2	89.4	0.970	0.99	1.000	0.011	0.995	0.007	0.004	0.21	0.42
6	25	14.012	0.976	1026.51	1449.5	525.1	89.2	0.960	0.99	1.000	0.028	0.986	0.008	0.004	0.22	0.45
7	25	11.904	0.976	1025.85	1440.5	523.8	89.4	0.966	0.99	1.000	0.018	0.991	0.008	0.004	0.23	0.47
8	25	10.034	0.975	1025.94	1446.2	523.3	89.4	0.971	1.00	1.000	0.009	0.996	0.008	0.003	0.20	0.46
9	25	7.990	0.975	1025.64	1448.0	523.8	89.4	0.976	1.00	1.001	-0.000	1.000	0.007	0.004	0.25	0.40
10	25	6.024	0.974	1025.53	1452.6	525.3	89.5	0.978	1.00	1.001	-0.005	1.003	0.006	0.004	0.23	0.36
11	25	4.028	0.975	1026.33	1456.6	527.2	89.5	0.980	1.00	1.001	-0.006	1.004	0.006	0.004	0.23	0.35
12	25	2.025	0.976	1027.04	1457.4	527.4	89.5	0.977	1.00	1.001	-0.001	1.001	0.007	0.005	0.26	0.40
13	25	-0.010	0.975	1026.33	1453.7	526.2	89.4	0.970	1.00	1.000	0.010	0.995	0.008	0.004	0.25	0.45
14	25	-1.982	0.975	1026.49	1452.6	525.6	89.6	0.972	1.00	1.000	0.007	0.997	0.009	0.005	0.26	0.50
15	25	-4.007	0.975	1026.67	1450.9	525.2	89.6	0.973	1.00	1.000	0.004	0.998	0.008	0.004	0.24	0.46
16	25	-5.969	0.974	1025.29	1448.5	523.8	89.2	0.968	0.99	1.000	0.011	0.995	0.008	0.004	0.26	0.47

TEST POINT MEX10-6 ALPINE 7.696 0.000 TIME -0.02

DATE 4-14-77

AEUC PROPULSION WIND TUNNEL TRANSONIC 1A1

MIN SURVEY 102
OUTER FLOWFIELD SURVEY SUMMARY

POINT GP	AI	M	VM	PT	Q	T1	PL	VTL/VM	PIL/PT	CHI	UT/VM	VT/VM	WT/VM	AATL	SATL
1 25	23.572	0.976	1025.25	1450.6	526.5	89.1	0.964	0.99	1.000	0.017	0.991	0.011	0.004	0.23	0.61
5 25	23.576	0.975	1026.04	1453.0	526.0	89.4	0.967	0.99	1.001	0.015	0.993	0.011	0.003	0.20	0.62
6 25	21.556	0.975	1025.46	1426.3	525.5	89.4	0.962	0.99	1.001	0.023	0.989	0.011	0.003	0.20	0.51
7 25	19.574	0.976	1026.05	1431.6	525.5	89.4	0.970	1.00	1.001	0.010	0.995	0.011	0.005	0.31	0.51
8 25	17.590	0.975	1026.46	1451.6	525.4	89.6	0.975	1.00	1.001	0.002	1.000	0.011	0.004	0.21	0.64
9 25	16.025	0.976	1026.46	1426.0	525.9	89.4	0.972	1.00	1.001	0.008	0.997	0.011	0.006	0.34	0.64
10 25	13.996	0.976	1025.74	1453.2	526.3	89.4	0.972	1.00	1.001	0.008	0.996	0.011	0.006	0.22	0.65
11 25	12.022	0.976	1026.44	1454.1	526.6	89.4	0.977	1.00	1.001	-0.001	1.001	0.011	0.002	0.13	0.63
12 25	10.015	0.976	1026.73	1453.9	525.5	89.4	0.968	1.01	1.004	-0.016	1.010	0.011	0.004	0.22	0.60
13 25	7.593	0.975	1025.77	1453.9	525.9	89.2	0.970	1.00	1.001	0.009	0.996	0.011	0.004	0.22	0.65
14 25	6.024	0.975	1025.39	1452.9	525.6	89.5	0.971	1.00	1.000	0.007	0.996	0.012	0.004	0.25	0.66
15 25	4.017	0.974	1025.69	1452.0	525.1	89.6	0.966	0.99	1.000	0.015	0.992	0.011	0.004	0.24	0.63
16 25	1.993	0.974	1025.67	1451.4	524.9	89.5	0.969	1.00	1.000	0.010	0.995	0.011	0.004	0.23	0.64
17 25	-0.016	0.974	1025.29	1449.0	524.2	89.5	0.969	1.00	1.000	0.009	0.996	0.011	0.004	0.25	0.63
18 25	-2.024	0.974	1025.53	1450.0	524.6	89.4	0.975	1.00	1.001	0.001	1.000	0.011	0.005	0.26	0.64
19 25	-3.951	0.974	1024.65	1452.2	524.9	89.1	0.971	1.00	1.001	0.006	0.997	0.011	0.005	0.26	0.65
20 25	-5.964	0.975	1025.65	1454.8	526.2	89.4	0.973	1.00	1.001	0.003	0.999	0.010	0.004	0.24	0.60
21 25	-7.950	0.974	1026.40	1456.0	527.0	89.4	0.973	1.00	1.000	0.004	0.998	0.011	0.005	0.26	0.63
22 25	-10.007	0.975	1026.31	1456.2	527.0	89.5	0.971	1.00	1.001	0.008	0.997	0.012	0.005	0.27	0.67
23 25	-11.994	0.976	1026.76	1455.4	527.0	89.4	0.974	1.00	1.001	0.003	0.999	0.012	0.006	0.32	0.66
24 25	-13.995	0.976	1026.62	1454.4	526.6	89.3	0.972	1.00	1.000	0.007	0.997	0.011	0.005	0.27	0.63
25 25	-15.976	0.976	1026.49	1452.0	525.7	89.4	0.963	0.99	1.000	0.022	0.994	0.008	0.005	0.29	0.48
26 25	-18.003	0.976	1026.51	1450.4	525.1	89.4	0.964	0.97	1.002	0.058	0.972	0.011	0.019	1.13	0.67
27 25	-19.977	0.975	1025.66	1448.1	523.9	89.2	0.971	1.00	1.000	0.008	0.996	0.012	0.005	0.29	0.68
28 25	-21.973	0.974	1024.73	1445.4	523.6	89.3	0.974	1.00	1.000	0.000	1.000	0.009	0.005	0.30	0.53
29 25	-24.017	0.974	1025.21	1450.0	524.2	89.4	0.977	1.00	1.001	-0.004	1.003	0.011	0.005	0.26	0.63
30 25	-25.952	0.974	1025.12	1451.1	524.6	89.4	0.969	1.00	1.000	0.009	0.996	0.011	0.005	0.30	0.64
31 25	-27.950	0.974	1025.07	1452.3	524.9	89.5	0.974	1.00	1.001	0.000	1.000	0.010	0.005	0.31	0.55
32 25	-29.944	0.974	1025.62	1453.3	524.6	89.5	0.969	1.00	1.001	0.010	0.996	0.012	0.005	0.30	0.70
33 25	-32.042	0.974	1024.71	1453.6	525.4	89.3	0.976	1.00	1.000	-0.004	1.002	0.008	0.006	0.33	0.45
34 25	-33.960	0.974	1025.39	1453.6	525.0	89.4	0.973	1.00	1.000	0.002	0.999	0.011	0.006	0.34	0.63
35 25	-35.944	0.974	1025.37	1450.3	524.4	89.4	0.972	1.00	1.001	0.005	0.998	0.012	0.006	0.33	0.69
36 25	-38.011	0.974	1025.40	1451.1	524.6	89.6	0.963	0.97	0.997	0.049	0.973	0.011	0.003	0.18	0.65
37 25	-40.030	0.974	1024.92	1452.0	524.8	89.3	0.974	1.00	1.001	0.001	1.000	0.011	0.006	0.35	0.63
38 25	-42.021	0.974	1024.56	1453.5	525.2	89.2	0.974	1.00	1.001	0.000	1.000	0.010	0.006	0.33	0.59
39 25	-47.949	0.975	1025.93	1452.6	525.6	89.4	0.974	1.00	1.000	0.002	0.999	0.011	0.007	0.42	0.65
40 25	-47.986	0.975	1025.88	1448.7	524.1	89.4	0.966	0.99	1.000	0.015	0.992	0.011	0.005	0.30	0.65

TEST PANT MEXICO ALPHA 4.00 NONE 14.13 -0.05 ZT 0.00 MIN SHIRVEY 1 103

DATE 4-16-77

AEDC PROPULSION WIND TUNNEL

TRANSONIC 16T

OUTLET PLUMAGE FIELD SUMMARY

POINT	MP	AI	MI	VA	VT	WT	TT	ML	VTL/VM	MIL/PT	CPL	UI/VM	VI/VM	WI/VM	AAIL	SWIL
1	25	23.576	0.976	1025.25	1454.6	525.7	89.4	0.904	1.01	1.004	-0.012	1.004	0.014	0.003	0.19	0.82
2	25	22.009	0.976	1025.50	1454.2	525.5	89.4	0.965	0.99	1.000	0.019	0.970	0.016	0.004	0.21	0.90
3	25	20.036	0.977	1025.01	1452.8	525.8	89.2	0.964	0.99	1.000	0.024	0.988	0.015	0.002	0.13	0.87
4	25	18.004	0.977	1027.42	1447.5	525.4	89.3	0.944	0.97	1.000	0.058	0.971	0.021	0.004	0.22	1.22
5	25	15.988	0.976	1027.41	1447.9	524.6	89.5	0.976	0.99	1.001	0.012	0.984	0.015	0.004	0.21	0.85
6	25	14.601	0.977	1027.42	1447.0	524.3	89.4	0.972	1.00	1.001	0.010	0.996	0.015	0.004	0.22	0.87
7	25	12.020	0.976	1026.43	1446.8	523.9	89.3	0.970	0.99	1.001	0.011	0.995	0.015	0.004	0.24	0.87
8	25	10.029	0.975	1026.26	1443.6	524.6	89.5	0.972	1.00	1.001	0.007	0.997	0.014	0.004	0.21	0.83
9	25	7.984	0.976	1026.43	1452.1	525.4	89.5	0.975	1.00	0.994	0.001	0.999	0.014	0.000	0.02	0.82
10	25	6.029	0.976	1027.15	1452.5	526.1	89.5	0.972	1.00	1.001	0.008	0.997	0.015	0.005	0.26	0.86
11	25	3.970	0.977	1027.67	1453.1	526.0	89.5	0.974	1.00	1.000	0.006	0.997	0.015	0.004	0.22	0.84
12	25	2.027	0.976	1027.21	1451.7	525.9	89.5	0.974	1.00	1.001	0.005	0.998	0.015	0.004	0.23	0.88
13	25	0.001	0.976	1027.16	1450.4	525.5	89.7	0.972	1.00	1.001	0.008	0.996	0.015	0.003	0.18	0.89
14	25	-1.984	0.976	1026.56	1450.5	525.1	89.4	0.975	1.00	1.001	0.001	1.000	0.015	0.005	0.26	0.87
15	25	-4.006	0.975	1025.70	1451.0	525.2	89.3	0.979	1.00	1.001	-0.007	1.004	0.015	0.007	0.40	0.84
16	25	-5.984	0.974	1025.42	1453.3	525.5	89.5	0.974	1.00	1.001	0.001	1.000	0.014	0.005	0.30	0.82

TEST PAMT MEX10-6 ALPHA WIND TUNNEL
 1F-45 101 3.002 0.00 NONE

DATE 4-14-77

AEUC PROPULSION WIND TUNNEL
 TRANSONIC 141

DATE 4-14-77

AEUC PROPULSION WIND TUNNEL
 TRANSONIC 141

TEST PAMT MEX10-6 ALPHA WIND TUNNEL
 1F-45 101 3.002 0.00 NONE

DATE 4-14-77

AEUC PROPULSION WIND TUNNEL
 TRANSONIC 141

DATE 4-14-77

AEUC PROPULSION WIND TUNNEL
 TRANSONIC 141

UNITED FLIGHTFIELD SURVEY SUMMARY

POINT	GP	AI	MI	VA	PI	W	TT	ML	VTL/VM	PIL/PT	CPL	UI/VM	VT/VM	WT/VM	AATL	SMIL
1	25	23.970	1.025	1070.71	1433.4	541.1	89.0	1.006	0.93	1.001	0.032	0.984	0.006	0.004	0.21	0.33
2	25	21.946	1.025	1069.91	1433.4	540.7	89.7	1.002	0.98	1.000	0.038	0.981	0.004	0.004	0.25	0.34
3	25	19.942	1.024	1064.77	1432.7	540.0	89.4	0.987	0.97	1.000	0.061	0.970	0.017	0.004	0.24	0.69
4	25	18.020	1.025	1070.12	1434.2	541.1	89.7	0.992	0.97	0.999	0.052	0.973	0.005	0.004	0.22	0.28
5	25	16.004	1.025	1069.98	1434.3	541.0	89.8	1.005	0.98	1.000	0.033	0.984	0.006	0.004	0.22	0.35
6	25	14.004	1.026	1070.72	1434.4	541.4	89.8	1.005	0.98	1.000	0.034	0.983	0.006	0.004	0.22	0.36
7	25	11.989	1.027	1071.37	1435.1	542.1	89.7	1.000	0.98	1.000	0.043	0.979	0.004	0.004	0.26	0.24
8	25	9.976	1.027	1072.08	1435.7	542.5	89.9	1.002	0.98	1.001	0.042	0.980	0.005	0.005	0.28	0.31
9	25	7.946	1.028	1072.02	1435.4	542.6	89.5	1.006	0.98	1.001	0.036	0.983	0.006	0.004	0.24	0.35
10	25	5.944	1.026	1070.79	1435.3	541.8	89.7	1.003	0.98	1.001	0.039	0.981	0.005	0.004	0.26	0.31
11	25	3.997	1.026	1071.14	1435.0	542.2	89.6	1.003	0.98	1.001	0.039	0.981	0.005	0.004	0.22	0.50
12	25	1.944	1.026	1070.40	1435.9	542.1	89.6	1.004	0.98	1.001	0.036	0.982	0.005	0.004	0.22	0.31
13	25	0.005	1.026	1071.21	1436.7	542.5	89.6	1.011	0.99	1.001	0.026	0.988	-0.000	0.004	0.25	-0.00
14	25	-1.977	1.026	1070.99	1435.5	542.1	89.5	1.000	0.98	1.001	0.043	0.979	0.005	0.005	0.28	0.30
15	25	-4.015	1.027	1071.66	1434.5	542.0	89.7	1.002	0.98	1.000	0.040	0.980	0.006	0.005	0.29	0.36
16	25	-5.989	1.027	1071.93	1433.3	541.5	89.9	1.007	0.98	1.000	0.033	0.984	0.007	0.004	0.25	0.42

TEST POINT HEAD-D ALPHA WINDS YI ZI RUN SURVEY DATE AEDC PROPUSSION WIND TUNNEL
 1F-445 100 3.0002 0.000 NONE 0.00 -0.10 1 102 4-14-77 TRANSONIC INT

QUITEM FLOWFIELD SURVEY SUMMARY

POINT GP	AI	M	VP	PI	U	TI	HL	VTL/VM	PTL/PT	CPL	UT/VM	VI/VM	WI/VM	AATL	SWTL
1	25	23.980	1.026	1070.05	1433.5	541.2	89.8	1.007	0.99	1.000	0.930	0.013	0.003	0.20	0.79
2	25	22.041	1.026	1071.37	1432.2	540.9	89.8	1.006	0.98	1.001	0.935	0.009	0.003	0.20	0.52
3	25	19.983	1.026	1071.39	1430.9	540.4	89.4	1.003	0.98	1.001	0.934	0.009	0.003	0.16	0.50
4	25	18.009	1.027	1071.48	1430.9	540.3	89.4	1.005	0.98	1.001	0.936	0.008	0.003	0.20	0.49
5	25	15.983	1.026	1072.28	1431.1	541.0	89.6	1.002	0.98	1.001	0.942	0.011	0.004	0.21	0.62
6	25	14.029	1.027	1072.17	1432.8	541.8	89.7	1.005	0.98	1.000	0.941	0.010	0.004	0.21	0.57
7	25	11.992	1.026	1071.20	1433.8	541.4	89.8	1.007	0.98	1.001	0.932	0.010	0.004	0.23	0.58
8	25	10.046	1.025	1069.00	1435.3	541.3	90.0	1.003	0.98	1.001	0.936	0.009	0.004	0.25	0.54
9	25	7.980	1.026	1069.18	1436.2	541.4	89.4	1.005	0.98	1.001	0.932	0.010	0.004	0.23	0.56
10	25	6.031	1.024	1064.74	1436.0	541.3	89.4	1.001	0.98	1.000	0.937	0.010	0.004	0.22	0.59
11	25	4.053	1.024	1069.05	1435.0	541.0	89.6	1.000	0.98	1.000	0.940	0.010	0.004	0.26	0.61
12	25	2.014	1.024	1069.42	1434.6	540.5	89.9	1.002	0.98	1.000	0.936	0.010	0.004	0.22	0.59
13	25	0.017	1.025	1070.04	1432.7	540.3	90.1	0.999	0.98	1.000	0.942	0.009	0.005	0.27	0.53
14	25	-1.988	1.024	1069.72	1431.7	539.9	89.9	0.998	0.98	1.000	0.944	0.009	0.005	0.27	0.55
15	25	-3.972	1.025	1064.70	1430.3	539.5	89.5	0.999	0.98	1.001	0.942	0.010	0.004	0.23	0.57
16	25	-6.014	1.025	1069.61	1430.7	539.7	89.4	1.000	0.98	1.000	0.940	0.010	0.005	0.28	0.56
17	25	-7.956	1.025	1069.64	1431.4	539.4	89.5	1.002	0.98	1.001	0.938	0.009	0.005	0.30	0.55
18	25	-9.975	1.025	1070.27	1432.2	540.3	89.9	1.004	0.98	1.000	0.934	0.010	0.005	0.32	0.59
19	25	-11.972	1.025	1069.54	1432.3	540.3	89.7	1.005	0.98	1.001	0.934	0.010	0.004	0.23	0.58
20	25	-13.996	1.025	1069.55	1432.3	540.3	89.4	1.010	0.99	1.000	0.924	0.014	0.005	0.30	0.41
21	25	-15.992	1.025	1069.41	1433.0	540.4	89.5	1.006	0.98	1.000	0.931	0.011	0.005	0.30	0.63
22	25	-17.983	1.025	1069.96	1433.1	540.4	89.7	1.011	0.99	1.001	0.923	0.010	0.005	0.27	0.60
23	25	-20.022	1.025	1069.46	1433.3	540.7	89.7	1.012	0.99	1.001	0.922	0.010	0.005	0.31	0.57
24	25	-22.024	1.025	1069.41	1433.4	540.8	89.5	1.017	0.99	1.000	0.913	0.016	0.005	0.32	0.90
25	25	-24.981	1.025	1069.45	1432.9	540.4	89.8	1.002	0.98	1.000	0.937	0.006	0.006	0.34	0.36
26	25	-26.025	1.025	1070.25	1433.1	540.7	89.9	1.012	0.99	1.001	0.923	0.009	0.004	0.23	0.53
27	25	-27.987	1.025	1070.04	1432.3	540.4	89.7	1.008	0.99	1.000	0.928	0.009	0.004	0.45	0.53
28	25	-30.007	1.025	1069.94	1432.0	540.2	89.7	0.998	0.98	1.000	0.944	0.006	0.006	0.35	0.34
29	25	-31.990	1.025	1069.63	1431.9	540.2	89.5	0.996	0.98	1.000	0.948	0.005	0.006	0.34	0.27
30	25	-34.026	1.025	1069.74	1432.3	540.2	89.8	1.003	0.98	1.001	0.937	0.009	0.006	0.32	0.54
32	25	-35.987	1.024	1069.11	1432.6	540.1	89.5	0.998	0.98	1.000	0.943	0.008	0.006	0.32	0.49
33	25	-37.937	1.024	1069.66	1433.1	540.4	89.8	1.002	0.98	1.001	0.938	0.010	0.006	0.33	0.56
34	25	-39.981	1.024	1069.57	1433.5	540.6	89.7	1.001	0.98	1.001	0.938	0.010	0.006	0.33	0.56

10

TEST PART HEX10-6 ALFMD WIND TUNNEL
 1F-445 99 3.002 0.000 NUDE 14.13

ZT -0.05
 4-14-77

DATE 4-14-77
 AEDC PROPULSION WIND TUNNEL
 TRANSONIC 141

ZI 0.05
 10.3

OUTER FLD FIELD SURVEY SUMMARY

POINT GP	AI	W	VI	W	II	IL	VTL/VM	PIL/PT	CPL	UI/VM	VI/VM	WI/VM	AATL	SWTL
1 25	24.022	1.024	1069.13	436.1	44.5	0.996	0.98	1.000	0.046	0.977	0.014	0.003	0.17	0.81
2 25	21.944	1.024	1069.24	443.2	49.4	1.014	0.99	1.001	0.018	0.992	0.013	0.003	0.18	0.72
3 25	20.044	1.024	1072.59	444.8	49.3	1.017	0.99	1.001	0.019	0.991	0.013	0.003	0.17	0.73
4 25	14.014	1.024	1068.59	426.8	49.4	0.986	0.97	1.000	0.061	0.969	0.016	0.003	0.20	0.94
5 25	16.002	1.026	1070.71	431.5	49.6	1.005	0.98	1.001	0.035	0.983	0.010	0.003	0.20	0.56
6 25	14.001	1.026	1070.94	435.6	49.8	1.001	0.98	1.001	0.041	0.980	0.011	0.003	0.20	0.67
7 25	12.027	1.026	1070.93	435.2	49.6	1.003	0.98	1.000	0.039	0.961	0.014	0.004	0.25	0.82
8 25	10.000	1.026	1070.43	435.0	49.5	1.007	0.98	1.000	0.031	0.985	0.014	0.004	0.25	0.80
9 25	8.001	1.026	1070.77	434.3	49.3	1.006	0.98	1.001	0.034	0.983	0.013	0.004	0.23	0.77
10 25	5.941	1.023	1068.42	432.6	49.4	1.004	0.98	1.001	0.033	0.984	0.014	0.003	0.20	0.81
11 25	3.944	1.026	1070.13	432.3	49.5	1.002	0.98	1.001	0.034	0.981	0.013	0.004	0.23	0.78
12 25	1.974	1.025	1070.18	432.0	49.8	1.002	0.98	1.001	0.038	0.981	0.013	0.004	0.24	0.77
13 25	-0.000	1.025	1069.93	431.9	49.6	1.002	0.98	1.001	0.039	0.981	0.013	0.004	0.24	0.78
14 25	-1.965	1.025	1069.54	431.8	49.5	1.001	0.98	1.001	0.039	0.981	0.013	0.005	0.27	0.76
15 25	-3.985	1.024	1069.00	432.0	49.4	0.997	0.98	1.001	0.046	0.978	0.012	0.004	0.25	0.69
16 25	-5.974	1.025	1069.66	433.3	49.7	0.998	0.98	1.000	0.043	0.978	0.012	0.005	0.28	0.71

TEST PART M PT P REX10-6 VM U TT WING RUN SURVEY DATE AEDC PROPULSION WIND TUNNEL
 1F-445 9 0.800 1573.0 1032.4 3.005 564.2 461.97 89.20 4 PCT 7 701 4-12-77 TRANSONIC 161

ALF=M	CN	CY	CA	CLM	CLN	CLL	CAF	CAB
5.42	0.5150	0.0018	0.0175	0.0428	0.0005	0.0014	0.0072	0.0103
2.13	0.2024	0.0006	0.0238	0.0193	0.0003	0.0025	0.0143	0.0095
-0.06	0.0106	-0.0000	0.0275	0.0020	0.0000	0.0027	0.0184	0.0091
-2.25	-0.1772	-0.0006	0.0259	-0.0156	-0.0001	0.0033	0.0170	0.0090
-5.57	-0.4942	-0.0020	0.0209	-0.0388	-0.0006	0.0037	0.0120	0.0089

TEST PART M PT P HEAD-5 V1 M HEAD-2 4A1.97 M SURVEY DATE AEDC PROPULSION WIND TUNNEL
 14-45 9 0.800 1573.0 1032.4 3.085 464.2 4A1.97 7.701 4-12-77 TRANSONIC 16T

ORIFICE ALF=5.42 ALF=2.13 ALF=0.06 ALF=2.25 ALF=5.57

CPS	ALF	CPS	ALF	CPS	ALF	CPS	ALF
1	0.0916	0.0272	0.0359	0.0576	0.1132	0.0398	0.0398
2	0.1257	-0.1101	-0.0497	-0.0644	-0.0743	-0.0710	-0.0710
3	0.1460	-0.1362	-0.1219	-0.1122	-0.0432	-0.0427	-0.0427
4	0.1321	-0.1311	-0.1214	-0.0500	-0.0257	-0.0257	-0.0257
5	0.0627	-0.0634	-0.0565	-0.0519	0.0323	0.0323	0.0323
6	0.0476	-0.0476	-0.0476	-0.0476	0.0650	0.0650	0.0650
7	0.0742	-0.0742	-0.0742	-0.0742	0.1015	0.1015	0.1015
8	0.1232	-0.1232	-0.1232	-0.1232	0.1109	0.1109	0.1109
9	0.1614	-0.1614	-0.1614	-0.1614	0.1024	0.1024	0.1024
10	0.1824	-0.1824	-0.1824	-0.1824	0.0823	0.0823	0.0823
11	0.1656	-0.1656	-0.1656	-0.1656	0.0735	0.0735	0.0735
12	0.1544	-0.1544	-0.1544	-0.1544	0.0482	0.0482	0.0482
13	0.1293	-0.1293	-0.1293	-0.1293	0.0337	0.0337	0.0337
14	0.0945	-0.0945	-0.0945	-0.0945	0.0225	0.0225	0.0225
15	0.0616	-0.0616	-0.0616	-0.0616	0.0225	0.0225	0.0225
16	0.0231	-0.0231	-0.0231	-0.0231	0.0323	0.0323	0.0323
17	0.0036	-0.0036	-0.0036	-0.0036	0.0304	0.0304	0.0304
18	0.0039	-0.0039	-0.0039	-0.0039	0.0262	0.0262	0.0262
19	0.0024	-0.0024	-0.0024	-0.0024	0.0183	0.0183	0.0183
20	0.0043	-0.0043	-0.0043	-0.0043	0.0164	0.0164	0.0164
21	0.0003	-0.0003	-0.0003	-0.0003	0.0108	0.0108	0.0108
22	0.0329	-0.0329	-0.0329	-0.0329	-0.0257	-0.0257	-0.0257
23							
24							
25							

TEST PART M P REX10-6 VM Q TT WING RUN SURVEY DATE AEDC PROPULSION WIND TUNNEL
 JF-445 10 0.820 1530.1 954.2 3.002 912.5 482.37 0 90.00 4 PCT 0 0 5-24-77 IRANSONIC-16T

ALFMH	CN	CY	CA	CLM	CLN	CLL	CAF	CAB
-5.61	-0.5153	-0.0017	0.0211	-0.0376	-0.0005	0.0036	0.0124	0.0087
-2.29	-0.1862	-0.0005	0.0251	-0.0154	-0.0001	0.0035	0.0162	0.0088
-0.08	0.0084	0.0002	0.0272	0.0012	0.0001	0.0030	0.0183	0.0089
2.15	0.2103	0.0008	0.0236	0.0384	0.0004	0.0025	0.0144	0.0092
5.49	0.5342	0.0020	0.0180	0.0402	0.0005	0.0018	0.0080	0.0100

TEST PART M PT P REX10-6 VM Q TT WING RUN SURVEY DATE AEDC PROPULSION WIND TUNNEL
 YE-445 10 0.850 1530.1 954.2 3.002 912.5 482.37 90.00 4 PCT 0 0 5-24-77 TRANSONIC 16T

PRESSURE COEFFICIENTS CPS(PS-P)/Q

ORIFICE	ALFHM=5.61	ALFHM=2.29	ALFHM=0.08	ALFHM=2.15	ALFHM=5.49
1 CPS 1=	0.1275	0.0699	0.0368	0.0660	-0.0348
2 CPS 2=	0.0445	-0.0061	-0.0355	-0.0604	-0.0921
3 CPS 3=	-0.0237	-0.0682	-0.0936	-0.1124	-0.1284
4 CPS 4=	-0.0713	-0.1094	-0.1294	-0.1407	-0.1521
5 CPS 5=	-0.0861	-0.1174	-0.1307	-0.1349	-0.1355
6 CPS 6=	-0.0219	-0.0486	-0.0583	-0.0604	-0.0581
7 CPS 7=	-0.0241	-0.0401	-0.0619	-0.0613	-0.0563
8 CPS 8=	0.0392	0.0020	-0.0141	-0.0236	-0.0334
9 CPS 9=	0.0741	0.0239	-0.0025	-0.0250	-0.0607
10 CPS 10=	0.1071	0.0435	0.0024	-0.0375	-0.1167
11 CPS 11=	0.1249	0.0525	-0.0007	-0.0564	-0.1669
12 CPS 12=	0.1123	0.0355	-0.0146	-0.0788	-0.1996
13 CPS 13=	0.0939	0.0167	-0.0364	-0.0945	-0.2067
14 CPS 14=	0.0822	0.0100	-0.0405	-0.0936	-0.1866
15 CPS 15=	0.0526	-0.0119	-0.0583	-0.1026	-0.1736
16 CPS 16=	0.0355	-0.0195	-0.0570	-0.0914	-0.1431
17 CPS 17=	0.0212	-0.0226	-0.0503	-0.0730	-0.1087
18 CPS 18=	0.0203	-0.0092	-0.0280	-0.0416	-0.0634
19 CPS 19=	0.0337	0.0149	0.0029	-0.0053	-0.0173
20 CPS 20=	0.0342	0.0221	0.0149	0.0113	0.0046
21 CPS 21=	0.0311	0.0230	0.0181	0.0163	0.0127
22 CPS 22=	0.0221	0.0158	0.0127	0.0122	0.0104
23 CPS 23=	0.0203	0.0127	0.0114	0.0104	0.0104
24 CPS 24=	0.0158	0.0069	0.0047	0.0046	0.0055
25 CPS 25=	-0.0219	-0.0267	-0.0271	-0.0268	-0.0276

TEST PART M PT P REX10-6 VM Q TT WING RUN SURVEY DATE AEDC PROPULSION WIND TUNNEL
 IE-445 11 0.930 1494.6 883.7 3.001 959.3 501.03 90.30 4 PCT 0 0 5-24-77 TRANSONIC 161

ALPH	CN	CY	CA	CLM	CLN	CLL	CAF	CAB
5.53	0.5627	0.0023	0.0185	0.0353	0.0005	0.0023	0.0087	0.0090
2.17	0.2216	0.0010	0.0240	0.0174	0.0003	0.0029	0.0151	0.0090
-0.08	0.0359	0.0006	0.0279	0.0011	0.0001	0.0029	0.0191	0.0088
-2.29	-0.1991	-0.0003	0.0260	-0.0145	-0.0001	0.0035	0.0174	0.0086
-5.32	-0.4944	-0.0012	0.0215	-0.0291	-0.0003	0.0038	0.0128	0.0087

TEST PART M PT P REX10-6 V4 Q TT WING RUN SURVEY DATE AEDC PROPULSION WIND TUNNEL
 TF-445 11 0.930 1494.6 883.7 3.001 959.3 501.03 90.30 4 PCT 0 0 5-24-77 TRANSONIC 16T

PRESSURE COEFFICIENTS CPS=(PS-P)/Q

ORIFICE	ALFMs=5.93	ALFMs=2.17	ALFMs=0.08	ALFMs=2.29	ALFMs=5.12
1 CPS 1*	-0.0337	0.0057	0.0359	0.0704	0.1221
2 CPS 2*	-0.0942	-0.0496	-0.0433	-0.0063	0.0376
3 CPS 3*	-0.1435	-0.1230	-0.1023	-0.0779	-0.0378
4 CPS 4*	-0.1643	-0.1580	-0.1458	-0.1279	-0.0947
5 CPS 5*	-0.1427	-0.1494	-0.1470	-0.1370	-0.1128
6 CPS 6*	-0.0501	-0.0604	-0.0592	-0.0542	-0.0357
7 CPS 7*	-0.0397	-0.0539	-0.0571	-0.0512	-0.0309
8 CPS 8*	-0.0133	-0.0150	-0.0089	0.0049	0.0350
9 CPS 9*	-0.0367	-0.0142	0.0058	0.0307	0.0734
10 CPS 10*	-0.1003	-0.0319	0.0161	0.0544	0.1174
11 CPS 11*	-0.1638	-0.0569	0.0023	0.0553	0.1247
12 CPS 12*	-0.2136	-0.0837	-0.0166	0.0406	0.1126
13 CPS 13*	-0.2469	-0.1105	-0.0403	0.0178	0.0894
14 CPS 14*	-0.2564	-0.1183	-0.0498	0.0062	0.0760
15 CPS 15*	-0.2612	-0.1299	-0.0700	-0.0188	0.0437
16 CPS 16*	-0.1764	-0.1222	-0.0756	-0.0326	0.0230
17 CPS 17*	-0.1292	-0.0949	-0.0683	-0.0382	0.0044
18 CPS 18*	-0.0631	-0.0466	-0.0356	-0.0184	0.0079
19 CPS 19*	-0.0195	0.0001	0.0053	0.0143	0.0290
20 CPS 20*	0.0247	0.0225	0.0247	0.0286	0.0355
21 CPS 21*	0.0247	0.0269	0.0201	0.0316	0.0355
22 CPS 22*	0.0208	0.0212	0.0213	0.0238	0.0264
23 CPS 23*	0.0197	0.0174	0.0174	0.0200	0.0234
24 CPS 24*	0.0126	0.0109	0.0105	0.0122	0.0178
25 CPS 25*	-0.0220	-0.0215	-0.0218	-0.0210	-0.0184

TEST PART M PT P REX10-6 VM Q TT WING RUN SURVEY DATE AEDC PROPULSION WIND TUNNEL
 TF-445 12 0.923 1477.3 851.5 2.995 980.6 504.11 0 90.30 4 PCT 0 0 5-24-77 TRANSONIC 167

ALF/M	CN	CY	CA	CLM	CLN	CLL	CAF	CAB
-5.16	-0.5302	-0.0011	0.0206	-0.0152	-0.0004	0.0042	0.0118	0.0088
-2.30	-0.2081	-0.0000	0.0255	-0.0119	-0.0000	0.0033	0.0168	0.0088
-0.08	0.0078	0.0006	0.0275	0.0021	0.0001	0.0029	0.0187	0.0088
2.18	0.2320	0.0011	0.0236	0.0162	0.0004	0.0026	0.0146	0.0090
4.89	0.5556	0.0013	0.0174	0.0211	0.0030	0.0047	0.0079	0.0095

TEST PART M PT P REX10-6 VM Q TT WING RUN SURVEY DATE AEDC PROPULSION WIND TUNNEL
 YF-442 12 0.923 1477.3 851.5 2.995 980.6 508.11 90.30 4 PCT 0 0 5-24-77 TRANSONIC-16T

PRESSURE COEFFICIENTS CPS=(PS-P)/Q

ORIFICE	ALFHM=-5.16	ALFHM=-2.39	ALFHM=-0.08	ALFHM= 2.18	ALFHM= 4.89
1 CPS 1=	0.1277	0.0824	0.0465	0.0143	-0.0227
2 CPS 2=	0.0405	-0.0035	-0.0336	-0.0607	-0.0878
3 CPS 3=	-0.0411	-0.0797	-0.1052	-0.1276	-0.1464
4 CPS 4=	-0.1004	-0.1338	-0.1514	-0.1674	-0.1758
5 CPS 5=	-0.1228	-0.1487	-0.1590	-0.1628	-0.1524
6 CPS 6=	-0.0361	-0.0560	-0.0607	-0.0598	-0.0499
7 CPS 7=	-0.0301	-0.0517	-0.0548	-0.0514	-0.0355
8 CPS 8=	0.0401	0.0075	-0.0039	-0.0086	-0.0027
9 CPS 9=	0.0820	0.0308	0.0130	-0.0014	-0.0214
10 CPS 10=	0.1171	0.0685	0.0262	-0.0171	-0.0699
11 CPS 11=	0.1344	0.0651	0.0130	-0.0463	-0.1277
12 CPS 12=	0.1222	0.0477	-0.0094	-0.0789	-0.1766
13 CPS 13=	0.0972	0.0240	-0.0353	-0.1064	-0.2106
14 CPS 14=	0.0799	0.0113	-0.0484	-0.1213	-0.2255
15 CPS 15=	0.0460	-0.0208	-0.0772	-0.1488	-0.2553
16 CPS 16=	0.0215	-0.0395	-0.0904	-0.1560	-0.2752
17 CPS 17=	-0.0014	-0.0505	-0.0874	-0.1251	-0.2544
18 CPS 18=	0.0029	-0.0268	-0.0433	-0.0501	-0.0593
19 CPS 19=	0.0308	0.0143	0.0079	0.0075	0.0147
20 CPS 20=	0.0431	0.0329	0.0304	0.0316	0.0406
21 CPS 21=	0.0443	0.0350	0.0346	0.0346	0.0453
22 CPS 22=	0.0350	0.0266	0.0262	0.0291	0.0355
23 CPS 23=	0.0291	0.0219	0.0206	0.0223	0.0279
24 CPS 24=	0.0211	0.0147	0.0139	0.0139	0.0185
25 CPS 25=	-0.0162	-0.0196	-0.0192	-0.0192	-0.0163

TEST PART M P MAXIMUM VM Q TT WING RUN SURVEY DATE AEDC PROPULSION WIND TUNNEL
 TF-445 13 0.950 1470.5 822.2 3.010 1005.2 519.98 90.40 4 PCT 7 701 4-12-77 TRANSONIC INT

ALFRM	CM	CY	CA	CLM	CLN	CLL	CAF	CAH
5.02	0.5710	0.0027	0.0222	0.0028	0.0004	0.0024	0.0127	0.0095
2.16	0.2430	0.0013	0.0270	0.0072	0.0004	0.0023	0.0180	0.0090
-0.07	0.0003	0.0008	0.0300	0.0019	0.0002	0.0025	0.0211	0.0089
-2.31	-0.2160	0.0000	0.0290	-0.0041	-0.0001	0.0037	0.0202	0.0089
-5.15	-0.5424	-0.0010	0.0262	0.0017	-0.0002	0.0031	0.0175	0.0087

TEST PART M PT P MCAL0-6 VM H H22.2 3.010 1005.2 519.9M TT WINDS HUN SURVEY DATE AEDC PHUPULSION WIND TUNNEL
 7F-445 13 0.950 1470.5 H22.2 3.010 1005.2 519.9M 90.40 4 PCT 7 701 4-12-77 TRANSONIC 16T

ORIFICE ALF₁=5.07 ALF₂=2.18 ALF₃=0.07 ALF₄=-2.31 ALF₅=-5.15

TEST	PART	M	PT	P	MCAL0-6	VM	H	H22.2	3.010	1005.2	519.9M	TT	WINDS	HUN	SURVEY	DATE	AEDC	PHUPULSION	WIND	TUNNEL	
1	CPS 1	=	-0.0152		0.0154		0.0471		0.0811		0.1314		0.0811		0.1314						
2	CPS 2	=	-0.0547		-0.0579		-0.0329		-0.0016		-0.0445		-0.0016		-0.0445						
3	CPS 3	=	-0.1334		-0.1345		-0.1134		-0.0858		-0.0456		-0.0858		-0.0456						
4	CPS 4	=	-0.1082		-0.1011		-0.1677		-0.1677		-0.1129		-0.1677		-0.1129						
5	CPS 5	=	-0.1440		-0.2244		-0.2244		-0.2070		-0.1698		-0.2070		-0.1698						
6	CPS 6	=	-0.20336		-0.0412		-0.0463		-0.0414		-0.0323		-0.0414		-0.0323						
7	CPS 7	=	-0.0149		-0.0366		-0.0450		-0.0335		-0.0240		-0.0335		-0.0240						
8	CPS 8	=	0.0150		0.0738		0.0033		0.0163		0.0466		0.0163		0.0466						
9	CPS 9	=	0.0033		0.0080		0.0176		0.0458		0.0894		0.0458		0.0894						
10	CPS10	=	-0.0420		-0.0104		0.0325		0.0742		0.1297		0.0742		0.1297						
11	CPS11	=	-0.1094		-0.0366		0.0175		0.0748		0.1422		0.0748		0.1422						
12	CPS12	=	-0.1622		-0.0687		-0.0086		0.0557		0.1297		0.0557		0.1297						
13	CPS13	=	-0.1491		-0.1024		-0.0350		0.0279		0.1015		0.0279		0.1015						
14	CPS14	=	-0.2167		-0.1199		-0.0513		0.0113		0.0432		0.0113		0.0432						
15	CPS15	=	-0.2707		-0.1507		-0.0809		-0.0223		0.0458		-0.0223		0.0458						
16	CPS16	=	-0.2454		-0.1765		-0.1040		-0.0509		0.0105		-0.0509		0.0105						
17	CPS17	=	-0.3164		-0.2053		-0.1418		-0.0896		-0.0319		-0.0896		-0.0319						
18	CPS18	=	-0.0671		-0.1494		-0.1064		-0.0783		-0.0473		-0.0783		-0.0473						
19	CPS19	=	0.0506		0.0012		0.0058		0.0034		-0.0011		0.0034		-0.0011						
20	CPS20	=	0.0506		0.0471		0.0396		0.0383		0.0308		0.0383		0.0308						
21	CPS21	=	0.0640		0.0529		0.0451		0.0458		0.0437		0.0458		0.0437						
22	CPS22	=	0.0607		0.0421		0.0359		0.0366		0.0408		0.0366		0.0408						
23	CPS23	=	0.0464		0.0313		0.0244		0.0292		0.0371		0.0292		0.0371						
24	CPS24	=	0.0309		0.0200		0.0188		0.0209		0.0288		0.0209		0.0288						
25	CPS25	=	-0.0076		-0.0150		-0.0163		-0.0148		-0.0099		-0.0148		-0.0099						

TEST PART M WT P HEAD-6 VII U TT WING MIN SURVEY DATE AEDC PROPULSION WIND TUNNEL
 TF-445 14 0.974 1451.1 740.0 2.994 1026.0 524.54 50.30 4 PCT 7 701 4-12-77 TRANSONIC 16T

ALFNM	CM	CY	CA	CL-4	CLN	CLL	CAF	CAB
-5.15	-0.5554	-0.0004	0.0330	0.0235	-0.0004	0.0037	0.0252	0.0078
-2.32	-0.2225	0.0002	0.0367	0.0031	-0.0000	0.0032	0.0279	0.0089
-0.07	0.0101	0.0007	0.0379	0.0018	0.0001	0.0024	0.0289	0.0089
2.19	0.2486	0.0015	0.0350	0.0002	0.0004	0.0020	0.0260	0.0090
5.03	0.5889	0.0026	0.0292	-0.0214	0.0004	0.0022	0.0201	0.0091

TEST NAME: 16 0.974 1451.1 730.0 2.334 1025.0 524.5M 90.30 4 PCT 7 701 4-12-77 AEDC PROPELLSION WIND TUNNEL
TRANSONIC 16T

ORIFICE

PT PRESSURE COEFFICIENTS ALF=0.15 ALF=2.32 ALF=0.07 ALF=2.19 ALF=5.03

ORIFICE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
CPS 1=	0.1674	0.1907	0.0678	0.0678	0.0678	0.0678	0.0678	0.0678	0.0678	0.0678	0.0678	0.0678	0.0678	0.0678	0.0678	0.0678	0.0678	0.0678	0.0678	0.0678	0.0678	0.0678	0.0678	0.0678	0.0678
CPS 2=	0.0544	0.0716	-0.0170	-0.0170	-0.0170	-0.0170	-0.0170	-0.0170	-0.0170	-0.0170	-0.0170	-0.0170	-0.0170	-0.0170	-0.0170	-0.0170	-0.0170	-0.0170	-0.0170	-0.0170	-0.0170	-0.0170	-0.0170	-0.0170	-0.0170
CPS 3=	-0.0341	-0.0742	-0.0760	-0.0760	-0.0760	-0.0760	-0.0760	-0.0760	-0.0760	-0.0760	-0.0760	-0.0760	-0.0760	-0.0760	-0.0760	-0.0760	-0.0760	-0.0760	-0.0760	-0.0760	-0.0760	-0.0760	-0.0760	-0.0760	-0.0760
CPS 4=	-0.1045	-0.1452	-0.1452	-0.1452	-0.1452	-0.1452	-0.1452	-0.1452	-0.1452	-0.1452	-0.1452	-0.1452	-0.1452	-0.1452	-0.1452	-0.1452	-0.1452	-0.1452	-0.1452	-0.1452	-0.1452	-0.1452	-0.1452	-0.1452	-0.1452
CPS 5=	-0.1731	-0.2015	-0.2100	-0.2100	-0.2100	-0.2100	-0.2100	-0.2100	-0.2100	-0.2100	-0.2100	-0.2100	-0.2100	-0.2100	-0.2100	-0.2100	-0.2100	-0.2100	-0.2100	-0.2100	-0.2100	-0.2100	-0.2100	-0.2100	-0.2100
CPS 6=	-0.2244	-0.2470	-0.2503	-0.2503	-0.2503	-0.2503	-0.2503	-0.2503	-0.2503	-0.2503	-0.2503	-0.2503	-0.2503	-0.2503	-0.2503	-0.2503	-0.2503	-0.2503	-0.2503	-0.2503	-0.2503	-0.2503	-0.2503	-0.2503	-0.2503
CPS 7=	0.0005	-0.1013	-0.1242	-0.1242	-0.1242	-0.1242	-0.1242	-0.1242	-0.1242	-0.1242	-0.1242	-0.1242	-0.1242	-0.1242	-0.1242	-0.1242	-0.1242	-0.1242	-0.1242	-0.1242	-0.1242	-0.1242	-0.1242	-0.1242	-0.1242
CPS 8=	0.0207	0.0547	0.0516	0.0516	0.0516	0.0516	0.0516	0.0516	0.0516	0.0516	0.0516	0.0516	0.0516	0.0516	0.0516	0.0516	0.0516	0.0516	0.0516	0.0516	0.0516	0.0516	0.0516	0.0516	0.0516
CPS 9=	0.1165	0.0773	0.0547	0.0547	0.0547	0.0547	0.0547	0.0547	0.0547	0.0547	0.0547	0.0547	0.0547	0.0547	0.0547	0.0547	0.0547	0.0547	0.0547	0.0547	0.0547	0.0547	0.0547	0.0547	0.0547
CPS 10=	0.1535	0.1628	0.0694	0.0694	0.0694	0.0694	0.0694	0.0694	0.0694	0.0694	0.0694	0.0694	0.0694	0.0694	0.0694	0.0694	0.0694	0.0694	0.0694	0.0694	0.0694	0.0694	0.0694	0.0694	0.0694
CPS 11=	0.1650	0.0962	0.0542	0.0542	0.0542	0.0542	0.0542	0.0542	0.0542	0.0542	0.0542	0.0542	0.0542	0.0542	0.0542	0.0542	0.0542	0.0542	0.0542	0.0542	0.0542	0.0542	0.0542	0.0542	0.0542
CPS 12=	0.1444	0.0749	0.0199	0.0199	0.0199	0.0199	0.0199	0.0199	0.0199	0.0199	0.0199	0.0199	0.0199	0.0199	0.0199	0.0199	0.0199	0.0199	0.0199	0.0199	0.0199	0.0199	0.0199	0.0199	0.0199
CPS 13=	0.1210	0.0478	-0.0109	-0.0109	-0.0109	-0.0109	-0.0109	-0.0109	-0.0109	-0.0109	-0.0109	-0.0109	-0.0109	-0.0109	-0.0109	-0.0109	-0.0109	-0.0109	-0.0109	-0.0109	-0.0109	-0.0109	-0.0109	-0.0109	-0.0109
CPS 14=	0.1017	0.0297	-0.0285	-0.0285	-0.0285	-0.0285	-0.0285	-0.0285	-0.0285	-0.0285	-0.0285	-0.0285	-0.0285	-0.0285	-0.0285	-0.0285	-0.0285	-0.0285	-0.0285	-0.0285	-0.0285	-0.0285	-0.0285	-0.0285	-0.0285
CPS 15=	0.0614	-0.0064	-0.0645	-0.0645	-0.0645	-0.0645	-0.0645	-0.0645	-0.0645	-0.0645	-0.0645	-0.0645	-0.0645	-0.0645	-0.0645	-0.0645	-0.0645	-0.0645	-0.0645	-0.0645	-0.0645	-0.0645	-0.0645	-0.0645	-0.0645
CPS 16=	0.0245	-0.0364	-0.0442	-0.0442	-0.0442	-0.0442	-0.0442	-0.0442	-0.0442	-0.0442	-0.0442	-0.0442	-0.0442	-0.0442	-0.0442	-0.0442	-0.0442	-0.0442	-0.0442	-0.0442	-0.0442	-0.0442	-0.0442	-0.0442	-0.0442
CPS 17=	-0.0201	-0.0756	-0.1247	-0.1247	-0.1247	-0.1247	-0.1247	-0.1247	-0.1247	-0.1247	-0.1247	-0.1247	-0.1247	-0.1247	-0.1247	-0.1247	-0.1247	-0.1247	-0.1247	-0.1247	-0.1247	-0.1247	-0.1247	-0.1247	-0.1247
CPS 18=	-0.0743	-0.1226	-0.1689	-0.1689	-0.1689	-0.1689	-0.1689	-0.1689	-0.1689	-0.1689	-0.1689	-0.1689	-0.1689	-0.1689	-0.1689	-0.1689	-0.1689	-0.1689	-0.1689	-0.1689	-0.1689	-0.1689	-0.1689	-0.1689	-0.1689
CPS 19=	-0.1134	-0.1571	-0.1926	-0.1926	-0.1926	-0.1926	-0.1926	-0.1926	-0.1926	-0.1926	-0.1926	-0.1926	-0.1926	-0.1926	-0.1926	-0.1926	-0.1926	-0.1926	-0.1926	-0.1926	-0.1926	-0.1926	-0.1926	-0.1926	-0.1926
CPS 20=	-0.1146	-0.0228	-0.0137	-0.0137	-0.0137	-0.0137	-0.0137	-0.0137	-0.0137	-0.0137	-0.0137	-0.0137	-0.0137	-0.0137	-0.0137	-0.0137	-0.0137	-0.0137	-0.0137	-0.0137	-0.0137	-0.0137	-0.0137	-0.0137	-0.0137
CPS 21=	-0.0122	0.0429	0.0526	0.0526	0.0526	0.0526	0.0526	0.0526	0.0526	0.0526	0.0526	0.0526	0.0526	0.0526	0.0526	0.0526	0.0526	0.0526	0.0526	0.0526	0.0526	0.0526	0.0526	0.0526	0.0526
CPS 22=	0.0174	0.0478	0.0555	0.0555	0.0555	0.0555	0.0555	0.0555	0.0555	0.0555	0.0555	0.0555	0.0555	0.0555	0.0555	0.0555	0.0555	0.0555	0.0555	0.0555	0.0555	0.0555	0.0555	0.0555	0.0555
CPS 23=	0.0355	0.0445	0.0469	0.0469	0.0469	0.0469	0.0469	0.0469	0.0469	0.0469	0.0469	0.0469	0.0469	0.0469	0.0469	0.0469	0.0469	0.0469	0.0469	0.0469	0.0469	0.0469	0.0469	0.0469	0.0469
CPS 24=	0.0371	0.0334	0.0334	0.0334	0.0334	0.0334	0.0334	0.0334	0.0334	0.0334	0.0334	0.0334	0.0334	0.0334	0.0334	0.0334	0.0334	0.0334	0.0334	0.0334	0.0334	0.0334	0.0334	0.0334	0.0334
CPS 25=	0.0042	-0.0044	-0.0051	-0.0051	-0.0051	-0.0051	-0.0051	-0.0051	-0.0051	-0.0051	-0.0051	-0.0051	-0.0051	-0.0051	-0.0051	-0.0051	-0.0051	-0.0051	-0.0051	-0.0051	-0.0051	-0.0051	-0.0051	-0.0051	-0.0051

TEST PART M PI P HE410-6 VM U TT #ING NUM SURVEY DATE AEDC PROPULSION WIND TUNNEL
 TF-445 15 1.001 1444.1 762.3 3.001 1049.6 534.31 90.50 4 PCT 7 701 4-12-77 TRANSONIC 15T

ALPH	CM	CY	CA	CLM	CLN	CLL	CAF	CAH
5.04	0.590A	0.0026	0.0382	-0.0252	0.0004	0.0022	0.0235	0.0147
2.19	0.252R	0.0015	0.0416	-0.0059	0.0003	0.0022	0.0298	0.011A
-0.06	0.0110	0.000A	0.0451	0.0013	0.0001	0.0024	0.0331	0.0119
-2.32	-0.2286	0.0001	0.0462	0.0090	-0.0000	0.0031	0.0332	0.0130
-5.15	-0.5532	-0.0007	0.0429	0.0270	-0.0003	0.0038	0.0282	0.0147

TEST PART M PT P MEALU-0 VM U TT WING HUM SURVEY DATE AEDC PROPULSION WIND TUNNEL
 TF-445 16 1.024 1433.9 736.2 2.594 1070.6 540.65 90.90 4 PCT 7 701 4-12-77 TRANSONIC 16T

ALPWR	CM	CY	CA	CLM	CLN	CLL	CAF	CAR
-5.15	-0.5500	-0.0004	0.0456	0.0294	-0.0003	0.0034	0.0296	0.0160
-2.33	-0.2288	0.0001	0.0688	0.0104	0.0001	0.0027	0.0333	0.0155
-0.07	0.0108	0.0008	0.0500	0.0017	0.0001	0.0027	0.0344	0.0156
2.19	0.2510	0.0016	0.0477	-0.0068	0.0004	0.0017	0.0316	0.0160
5.06	0.5867	0.0024	0.0427	-0.0273	0.0005	0.0018	0.0251	0.0176

TEST PART # M MT M KEA10-6 VM U TT WING RUN SURVEY DATE AEDC PROPULSION WIND TUNNEL
 TF-445 16 1.024 1433.9 736.2 2.994 1070.6 540.05 90.90 4 PCI 7 701 4-12-77 TRANSONIC 16T

ORIFICE ALF=5.15 ALF=2.33 ALF=0.07 ALF=2.19 ALF=5.06

CPS #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Pressure	0.1484	0.1054	0.0184	-0.0565	-0.1215	-0.1804	-0.1792	-0.1203	0.0677	0.1763	0.2096	0.1588	0.1763	0.1587	0.1214	0.0448	0.0461	-0.0044	-0.0457	-0.0410	-0.0565	-0.0425	-0.0213	-0.0096	-0.0209
U	0.1229	0.0341	-0.0347	-0.1045	-0.1592	-0.1999	-0.1835	-0.1189	-0.0710	0.0431	0.0666	0.0499	0.0407	0.0164	-0.0164	-0.0399	-0.0674	-0.1073	-0.1448	-0.1632	-0.0650	-0.0112	0.0148	0.0152	-0.0064
U	0.0916	0.0143	-0.0570	-0.1149	-0.1753	-0.1996	-0.1741	-0.1080	-0.0510	0.0231	0.0211	-0.0060	-0.0299	-0.0442	-0.0757	-0.0984	-0.1251	-0.1586	-0.1944	-0.2144	-0.0928	-0.0108	0.0143	0.0135	-0.0104
Wing Run	0.0535	-0.0152	-0.0443	-0.1406	-0.1438	-0.1498	-0.1662	-0.0411	0.0176	0.0276	-0.0244	-0.0735	-0.1059	-0.1235	-0.1542	-0.1750	-0.1998	-0.2293	-0.2589	-0.2881	-0.1410	-0.0196	0.0156	0.0136	-0.0128

TEST PART M PT P HEAD-6 VM U IT KING RUN SURVEY DATE AEDC PROPULSION WIND TUNNEL
 YF-645 17 1.051 1424.1 710.3 3.000 1093.3 549.06 90.80 4 PCT 7 701 4-12-77 TRANSONIC 16T

ALFRM	CW	CT	CA	CLM	CLN	CLL	CAF	CAH
5.06	0.5775	0.0024	0.0445	-0.0244	0.0005	0.0019	0.0261	0.0184
2.21	0.2564	0.0013	0.0497	-0.0097	0.0004	0.0021	0.0318	0.0174
-0.07	0.0115	0.0006	0.0520	0.0005	0.0002	0.0023	0.0350	0.0170
-2.31	-0.2214	-0.0002	0.0502	0.0128	0.0001	0.0031	0.0339	0.0163
-5.16	-0.5454	-0.0010	0.0474	0.0360	-0.0002	0.0039	0.0310	0.0164

TEST PART M PT P MK10-6 VM W IT WING RUN SURVEY DATE AEDC PROPULSION WIND TUNNEL
 TF-445 17 1.051 1424.1 710.3 3.000 1047.3 549.06 90.80 4 PCT 7 701 4-12-77 TRANSONIC 161

ORIFICE ALFWM=5.06 ALFWM=2.21 ALFWM=0.07 ALFWM=2.31 ALFWM=5.16

ORIFICE	ALFWM=5.06	ALFWM=2.21	ALFWM=0.07	ALFWM=2.31	ALFWM=5.16
1	0.0525	0.0861	0.1142	0.1524	0.1999
2	-0.0045	0.0702	0.0402	0.0743	0.1169
3	0.0670	-0.0497	-0.0279	-0.0627	0.0312
4	-0.1231	-0.1144	-0.0975	-0.0789	-0.0495
5	-0.1645	-0.1609	-0.1497	-0.1353	-0.1120
6	-0.1745	-0.1497	-0.1445	-0.1819	-0.1671
7	-0.1534	-0.1645	-0.1644	-0.1705	-0.1687
8	-0.0903	-0.1053	-0.1049	-0.1128	-0.1105
9	-0.0363	-0.0702	-0.0746	-0.0876	-0.0865
10	0.0046	-0.0134	-0.0046	0.0356	0.1511
11	-0.0296	0.0004	0.0461	0.0995	0.1456
12	-0.0741	-0.0373	0.0426	0.1047	0.1991
13	-0.1043	-0.0422	0.0201	0.0865	0.1771
14	-0.1151	-0.0560	0.0064	0.0747	0.1622
15	-0.1412	-0.0777	-0.0168	0.0502	0.1327
16	-0.1574	-0.1009	-0.0416	0.0301	0.1035
17	-0.1741	-0.1230	-0.0680	-0.0007	0.0642
18	-0.2043	-0.1447	-0.0967	-0.0374	0.0209
19	-0.2327	-0.1751	-0.1266	-0.0730	-0.0197
20	-0.2655	-0.1984	-0.1511	-0.1073	-0.0597
21	-0.1615	-0.0970	-0.0700	-0.0619	-0.0491
22	-0.0410	-0.0159	-0.0157	-0.0355	-0.0385
23	0.0142	0.0150	0.0131	-0.0074	-0.0184
24	0.0167	0.0131	0.0139	-0.0031	-0.0129
25	-0.0106	-0.0082	-0.0074	-0.0193	-0.0223

AEDC PROPULSION WIND TUNNEL
TRANSONIC 16T

TEST PART M PT P KEA10-6 VM H TT WING HUM SURVEY DATE
TF-465 1A 1.100 1413.5 661.7 3.005 1133.2 560.84 89.20 4 PCT 7 701 4-12-77

ALFHM	CW	CY	CA	CLM	CLN	CLL	CAF	CAH
-5.16	-0.5367	-0.0010	0.0475	0.0429	-0.0004	0.0039	0.0315	0.0160
-2.33	-0.2296	0.0002	0.0500	0.0177	-0.0007	0.0033	0.0341	0.0159
-0.06	0.0046	0.0009	0.0510	0.0014	-0.0006	0.0027	0.0347	0.0163
2.19	0.2477	0.0013	0.0459	-0.0146	-0.0003	0.0022	0.0327	0.0172
5.02	0.5569	0.0025	0.0462	-0.0373	-0.0003	0.0012	0.0281	0.0182

AEDC PROPULSION WIND TUNNEL
TRANSONIC 16T

TEST DATE 4-12-77

WING NUM SURVEY DATE 7 701 4-12-77

IT WING NUM SURVEY DATE 7 701 4-12-77

IT WING NUM SURVEY DATE 7 701 4-12-77

IT WING NUM SURVEY DATE 7 701 4-12-77

IT WING NUM SURVEY DATE 7 701 4-12-77

TEST	PART	M	PT	P	MCALIB	VM	U	IT	WING	NUM	SURVEY	DATE	
TF-45	1M	1.100	1413.5	651.7	3.005	1133.2	560.84	89.20	4	WCT	7	701	4-12-77
		ALPHA=5.16	Coefficients	ALPHA=2.33	CPS=(PSP)/U	ALPHA=0.08	ALPHA=2.19	ALPHA=5.02					
ORIFICE													
1	CPS 1=	0.2141	0.1710	0.1174	0.0699	0.0797	0.0529						
2	CPS 2=	0.1397	0.1011	0.0669	0.0407	0.0407	0.0117						
3	CPS 3=	0.0594	0.0321	0.0017	-0.0191	-0.0191	-0.0426						
4	CPS 4=	-0.0140	-0.0449	-0.0039	-0.0740	-0.0740	-0.0957						
5	CPS 5=	-0.0424	-0.0970	-0.1160	-0.1276	-0.1276	-0.1362						
6	CPS 6=	-0.1014	-0.1512	-0.1573	-0.1624	-0.1624	-0.1601						
7	CPS 7=	-0.1444	-0.1523	-0.1472	-0.1481	-0.1481	-0.1369						
8	CPS 8=	-0.1035	-0.1042	-0.0975	-0.0971	-0.0971	-0.0842						
9	CPS 9=	-0.0947	-0.0457	-0.0401	-0.0728	-0.0728	-0.0561						
10	CPS 10=	-0.0340	-0.0414	-0.0431	-0.0369	-0.0369	-0.0241						
11	CPS 11=	0.1010	0.0426	0.0225	-0.0076	-0.0076	-0.0372						
12	CPS 12=	0.2016	0.1057	0.0349	-0.0130	-0.0130	-0.0715						
13	CPS 13=	0.1915	0.1076	0.0330	-0.0257	-0.0257	-0.0934						
14	CPS 14=	0.1475	0.1069	0.0341	-0.0323	-0.0323	-0.1042						
15	CPS 15=	0.1246	0.0791	0.0110	-0.0570	-0.0570	-0.1285						
16	CPS 16=	0.1317	0.0572	-0.0110	-0.0755	-0.0755	-0.1416						
17	CPS 17=	0.0975	0.0314	-0.0373	-0.0987	-0.0987	-0.1608						
18	CPS 18=	0.0571	-0.0079	-0.0701	-0.1269	-0.1269	-0.1866						
19	CPS 19=	0.0143	-0.0449	-0.1032	-0.1547	-0.1547	-0.2097						
20	CPS 20=	-0.0244	-0.0442	-0.1387	-0.1871	-0.1871	-0.2425						
21	CPS 21=	-0.0374	-0.0722	-0.1052	-0.1381	-0.1381	-0.1916						
22	CPS 22=	-0.0344	-0.0368	-0.0415	-0.0458	-0.0458	-0.0676						
23	CPS 23=	-0.0374	-0.0268	-0.0091	0.0144	0.0144	0.0133						
24	CPS 24=	-0.0194	-0.0006	0.0129	0.0260	0.0260	0.0287						
25	CPS 25=	-0.0294	-0.0102	0.0032	0.0060	0.0060	0.0067						

TEST PART M PI P Mx10-6 V4 U IT WING RUN SURVEY DATE AEDC PROPULSION WIND TUNNEL
 TF-645 19 1.151 1408.9 618.6 3.007 1175.5 574.03 89.70 4 PCT 7 701 4-12-77 TRANSONIC 16T

ALFNM	CN	CY	CA	CLM	CLN	CLL	CAP	CAB
5.01	0.5395	0.0032	0.0466	-0.0425	0.0003	0.0021	0.0249	0.0179
2.20	0.2396	0.0025	0.0492	-0.0153	0.0003	0.0025	0.0325	0.0166
-0.08	0.0077	0.0016	0.0514	0.0029	0.0003	0.0029	0.0345	0.0169
-2.31	-0.2142	0.0011	0.0499	0.0222	0.0001	0.0032	0.0335	0.0163
-5.12	-0.5064	0.0004	0.0474	0.0461	-0.0002	0.0033	0.0314	0.0160

TEST	PART	U	PT	M	MEXI0-6	VM	U	IT	WIND	HUN	SURVEY	DATE	AEDC
TF-45	13	1.151	1000.9	614.6	3.007	1175.5	574.03	89.70	4	PCT	7	701	4-12-77
			Pressure	Coefficient	CPN=(P5-P)/U								
OMIFIC		ALFMA=2.01	ALFMA=2.20	ALFMA=0.08	ALFMA=5.12								
1	CPS 1=	0.0011	0.0901	0.1135	0.1378	0.1794							
2	CPS 2=	0.0191	0.0400	0.0693	0.1009	0.1456							
3	CPS 3=	-0.0393	-0.0190	0.0044	0.0323	0.0707							
4	CPS 4=	-0.0913	-0.0813	-0.0078	-0.0446	-0.0114							
5	CPS 5=	-0.1533	-0.1228	-0.1136	-0.1000	-0.0637							
6	CPS 6=	-0.1486	-0.1547	-0.1529	-0.1452	-0.1284							
7	CPS 7=	-0.1240	-0.1417	-0.1408	-0.1344	-0.1340							
8	CPS 8=	-0.0740	-0.0960	-0.0951	-0.0947	-0.0934							
9	CPS 9=	-0.0571	-0.0741	-0.0787	-0.0804	-0.0825							
10	CPS10=	-0.0373	-0.0382	-0.0494	-0.0664	-0.0629							
11	CPS11=	-0.0304	-0.0137	0.0104	0.0334	0.0706							
12	CPS12=	-0.0677	-0.0156	0.0346	0.0843	0.1783							
13	CPS13=	-0.0924	-0.0371	0.0274	0.0794	0.1783							
14	CPS14=	-0.1000	-0.0466	0.0225	0.0805	0.1734							
15	CPS15=	-0.1145	-0.0690	0.0053	0.0689	0.1520							
16	CPS16=	-0.1234	-0.0737	-0.0103	0.0512	0.1328							
17	CPS17=	-0.1374	-0.0903	-0.0288	0.0293	0.1109							
18	CPS18=	-0.1537	-0.1047	-0.0461	0.0112	0.0842							
19	CPS19=	-0.1730	-0.1251	-0.0695	-0.0171	0.0515							
20	CPS20=	-0.2044	-0.1553	-0.1031	-0.0547	0.0127							
21	CPS21=	-0.1722	-0.1288	-0.0914	-0.0562	-0.0027							
22	CPS22=	-0.0512	-0.0413	-0.0239	-0.0118	0.0026							
23	CPS23=	0.0222	0.0101	0.0078	0.0018	-0.0087							
24	CPS24=	0.0433	0.0448	0.0339	0.0169	-0.0016							
25	CPS25=	0.0191	0.0331	0.0271	0.0142	-0.0095							

TEST PART HEX10-A ALPHA 4.00 7 MIN SURVEY DATE AEIC PROPULSION WIND TUNNEL
 TF-445 50 3.000 -0.01 PCT 4.00 -1.02 4 20A 4-13-77 TRANSONIC 1A1

INNER FLOWFIELD SURVEY SUMMARY

POINT GP	A	M	V	PT	Q	TT	HL	VML/VH	PTL/PT	CPL	UL/VH	VL/VH	WL/VH	AAL	SWL
1	60	14.953	0.926	991.61	1515.4	522.5	106.4	0.894	0.97	1.000	0.971	0.008	0.012	0.72	0.49
2	60	14.664	0.925	991.34	1515.5	522.4	100.3	0.449	0.97	1.001	0.966	0.004	0.015	0.91	0.48
3	60	14.341	0.925	991.41	1515.9	522.5	100.4	0.448	0.97	1.001	0.965	0.004	0.020	1.17	0.46
4	60	14.000	0.926	991.84	1515.5	522.5	100.6	0.894	0.97	1.000	0.970	0.005	0.028	1.62	0.31
5	60	17.654	0.926	991.72	1513.9	522.0	100.5	0.916	0.99	1.001	0.991	0.011	0.037	2.16	0.64
6	60	17.331	0.925	991.16	1513.1	521.4	100.5	0.939	1.01	1.000	1.012	0.009	0.042	2.37	0.49
7	60	16.990	0.925	991.31	1512.6	521.4	100.4	1.004	1.07	1.000	1.071	0.004	0.038	2.03	0.23
8	60	16.644	0.926	991.61	1513.0	521.6	100.4	1.008	1.07	0.999	1.074	0.001	0.025	1.31	0.04
9	60	16.344	0.925	991.40	1512.9	521.1	100.1	1.006	1.07	1.002	1.074	0.000	0.014	0.76	0.01
10	60	16.002	0.925	991.41	1513.7	521.7	100.6	0.948	1.06	1.000	1.057	0.001	0.006	0.30	0.05
11	60	15.665	0.925	991.52	1514.0	521.9	100.1	0.969	1.04	1.001	1.053	0.004	0.003	0.15	0.23
12	60	15.337	0.925	990.83	1513.5	521.6	100.1	0.969	1.04	1.001	1.040	0.002	0.008	0.45	0.09
13	60	14.995	0.925	991.37	1514.4	521.9	100.5	0.965	1.04	1.001	1.034	0.001	0.014	0.79	0.05
14	60	14.671	0.925	991.15	1514.6	521.9	100.5	0.940	1.01	1.000	1.014	0.001	0.020	1.15	0.06
15	60	14.315	0.925	990.89	1514.8	521.8	100.4	0.935	1.01	0.994	1.009	0.004	0.031	1.74	0.20
16	60	14.001	0.924	990.70	1514.2	521.4	100.0	0.933	1.01	1.000	1.007	0.005	0.030	1.70	0.31
17	60	13.659	0.925	991.31	1515.9	522.5	100.4	0.927	1.00	1.001	1.002	0.011	0.035	2.03	0.62
18	60	13.340	0.925	991.00	1515.2	521.9	100.4	0.917	0.99	1.000	0.992	0.016	0.037	2.16	0.95
19	60	13.002	0.925	991.16	1514.6	521.9	100.4	0.912	0.99	1.001	0.987	0.022	0.036	2.09	1.30
20	60	12.663	0.926	991.72	1513.9	522.0	100.5	0.906	0.98	1.000	0.981	0.030	0.030	1.74	1.72
21	60	12.337	0.925	991.27	1512.9	521.4	100.4	0.903	0.98	1.001	0.979	0.032	0.023	1.37	1.85
22	60	12.006	0.925	991.51	1513.0	521.6	100.4	0.902	0.98	0.999	0.974	0.031	0.018	1.03	1.82
23	60	11.664	0.925	991.15	1512.0	521.0	100.4	0.903	0.98	1.000	0.979	0.028	0.010	0.58	1.64
24	60	11.341	0.925	990.74	1513.3	521.4	100.1	0.905	0.98	1.001	0.974	0.025	0.008	0.48	1.46
25	60	11.006	0.925	990.89	1517.7	522.9	100.3	0.907	0.98	1.001	0.983	0.022	0.005	0.32	1.25
26	60	10.668	0.925	991.06	1518.7	523.4	100.1	0.909	0.98	1.000	0.984	0.019	0.004	0.20	1.09
27	60	10.337	0.926	991.75	1514.2	523.6	100.2	0.910	0.99	1.000	0.985	0.018	0.002	0.09	1.02
28	60	9.972	0.926	991.91	1516.6	523.1	100.4	0.914	0.99	1.000	0.989	0.016	0.000	0.00	0.94
29	60	9.644	0.926	991.91	1516.6	523.1	100.4	0.914	0.99	1.000	0.989	0.016	0.000	0.00	0.94

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TEST PART HEX10-6 ALPHA 4140 Y 4.00 Z -0.86 6 20A DATE 4-14-77 AEDC PROPULSION WIND TUNNEL TRANSONIC 1A7

INNER FLOWFIELD SURVEY SUMMARY

POINT GP	A	H	VH	PT	G	TT	ML	VML/VM	PTL/PT	CPL	UL/VM	VL/VM	WL/VM	AAL	SWL
5	19.019	0.927	943.58	1447.1	513.2	90.4	0.901	0.98	1.001	0.049	0.974	0.060	0.035	2.03	3.50
7	18.649	0.926	942.69	1449.1	513.5	90.2	0.891	0.97	1.001	0.065	0.965	0.060	0.038	2.25	3.56
9	18.347	0.925	942.28	1441.4	513.4	90.4	0.890	0.97	1.001	0.067	0.964	0.066	0.042	2.52	3.93
11	19.014	0.926	947.85	1443.1	511.4	90.0	0.888	0.96	0.999	0.071	0.961	0.060	0.049	2.92	3.58
13	17.688	0.925	942.30	1470.9	507.0	90.1	0.905	0.98	0.999	0.035	0.978	0.060	0.058	3.37	3.54
15	17.356	0.924	941.08	1460.7	502.9	90.0	0.934	1.01	0.999	-0.019	1.005	0.057	0.062	3.52	3.27
17	17.022	0.924	940.74	1454.3	500.5	90.0	0.973	1.04	1.000	-0.040	1.042	0.051	0.055	3.02	2.80
19	16.687	0.924	1118.07	1452.6	500.1	254.1	0.970	1.04	1.000	-0.043	1.040	0.045	0.041	2.27	2.47
21	16.353	0.925	942.20	1455.5	501.5	90.3	0.930	1.01	1.001	-0.022	1.010	0.044	0.027	1.52	2.51
23	16.028	0.925	942.24	1457.8	502.4	90.3	0.927	1.00	1.001	-0.003	1.001	0.045	0.020	1.12	2.59
25	15.674	0.924	940.88	1466.2	504.5	90.2	0.922	1.00	1.001	0.006	0.997	0.047	0.013	0.77	2.71
27	15.345	0.926	942.57	1474.5	508.3	90.3	0.912	0.99	1.001	0.027	0.986	0.051	0.009	0.53	2.94
29	15.018	0.925	942.37	1474.6	509.6	90.3	0.901	0.98	1.001	0.046	0.976	0.054	0.007	0.38	3.16
31	14.689	0.926	943.17	1484.3	512.1	90.3	0.889	0.97	1.001	0.070	0.964	0.060	0.000	0.02	3.55
33	14.358	0.925	942.43	1484.9	511.7	90.5	0.877	0.95	1.000	0.091	0.952	0.065	0.002	0.14	3.92
35	14.027	0.925	942.30	1483.1	511.1	90.3	0.860	0.94	1.000	0.122	0.936	0.071	0.002	0.11	4.33
37	13.674	0.925	941.80	1481.7	510.4	90.4	0.838	0.92	1.000	0.162	0.915	0.081	0.001	0.08	5.07
39	13.350	0.925	942.00	1480.7	510.1	90.4	0.823	0.90	1.001	0.191	0.899	0.094	0.013	0.83	5.97
41	13.020	0.925	942.24	1474.0	509.8	90.5	0.811	0.89	1.000	0.213	0.885	0.107	0.032	2.04	6.92
43	12.686	0.925	941.98	1474.1	509.2	90.4	0.809	0.89	1.000	0.218	0.879	0.122	0.062	4.04	7.87
45	12.352	0.925	941.98	1477.4	509.0	90.3	0.828	0.91	1.000	0.140	0.898	0.109	0.091	5.77	6.94
47	12.024	0.925	941.88	1476.9	508.7	90.4	0.848	0.93	0.999	0.142	0.917	0.091	0.108	6.75	5.47
49	11.693	0.925	942.15	1476.0	508.5	90.4	0.868	0.95	1.000	0.105	0.937	0.077	0.113	6.88	4.73
51	11.365	0.925	942.28	1475.0	508.4	90.2	0.871	0.95	0.996	0.095	0.941	0.060	0.112	6.81	3.68
53	11.013	0.925	942.30	1474.2	508.0	90.4	0.887	0.96	1.000	0.070	0.957	0.049	0.113	6.73	2.96

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TEST PART MEX10-6 ALPHA WING AEDC PROPUSSION WIND TUNNEL
 1F-605 92 3.075 5.07 & PCT 4.00 -1.11 4 20R DATE 4-14-77
 TRANSONIC 1AT

INNER FLOWFIELD SURVEY SUMMARY

POINT GP	X	Y	Z	ML	VML/VM	PTL/PT	CPL	UL/VA	VL/VM	WL/VM	AAL	SML				
5	1	14.011	0.924	981.46	1474.8	509.3	90.7	0.449	0.97	0.996	0.059	0.956	-0.036	0.005	0.30	-2.16
7	2	14.045	0.924	981.52	1480.1	509.4	90.4	0.442	0.96	0.996	0.071	0.960	-0.037	0.009	0.54	-2.23
9	3	14.044	0.924	982.26	1480.4	509.4	91.1	0.442	0.96	0.996	0.072	0.959	-0.037	0.014	0.84	-2.22
11	4	14.002	0.925	982.32	1486.7	510.3	91.1	0.443	0.97	0.996	0.052	0.969	-0.038	0.021	1.26	-2.22
13	5	17.074	0.924	981.66	1480.2	509.5	91.0	0.407	0.98	0.996	0.026	0.953	-0.037	0.029	1.68	-2.17
15	6	17.350	0.924	981.94	1480.0	509.5	91.0	0.925	1.00	0.997	-0.006	0.999	-0.040	0.031	1.80	-2.31
17	7	17.012	0.924	981.98	1480.4	509.6	91.0	0.936	1.01	0.996	-0.028	1.010	-0.035	0.025	1.43	-2.00
19	8	16.065	0.924	982.19	1483.1	509.7	91.0	1.074	1.13	0.997	-0.271	1.133	-0.033	0.007	0.35	-1.65
21	9	16.348	0.924	982.06	1479.5	509.4	90.9	1.125	1.18	0.997	-0.358	1.176	-0.037	0.001	0.04	-1.82
23	10	16.021	0.924	982.08	1479.9	509.5	91.0	1.114	1.17	0.998	-0.339	1.167	-0.044	-0.006	-0.32	-2.16
25	11	15.687	0.924	982.31	1480.0	509.6	91.2	1.110	1.16	0.998	-0.331	1.162	-0.048	-0.013	-0.63	-2.37
27	12	15.335	0.925	982.64	1480.4	509.9	91.2	1.103	1.16	0.999	-0.314	1.156	-0.052	-0.021	-1.05	-2.59
29	13	15.020	0.925	982.49	1479.9	509.9	90.8	1.095	1.15	0.999	-0.303	1.149	-0.055	-0.028	-1.40	-2.74
31	14	14.687	0.924	981.03	1474.4	509.2	90.7	1.089	1.15	0.998	-0.297	1.145	-0.061	-0.034	-1.70	-3.03
33	15	14.350	0.924	981.76	1480.0	509.6	90.9	1.088	1.15	0.998	-0.295	1.143	-0.066	-0.041	-2.05	-3.32
35	16	14.002	0.924	982.36	1479.9	509.6	91.2	1.078	1.14	0.998	-0.277	1.133	-0.073	-0.052	-2.60	-3.47
37	17	13.645	0.925	982.55	1479.7	509.7	91.0	1.070	1.13	0.996	-0.265	1.125	-0.083	-0.063	-3.21	-4.22
39	18	13.344	0.924	982.01	1479.6	509.4	91.0	1.063	1.14	0.995	-0.291	1.134	-0.094	-0.094	-4.45	-5.00
41	19	13.022	0.924	981.66	1478.8	508.8	91.0	1.118	1.17	0.994	-0.346	1.159	-0.099	-0.136	-6.69	-4.88
43	20	12.676	0.924	981.27	1478.1	508.5	90.8	1.067	1.13	0.999	-0.259	1.114	-0.072	-0.166	-8.50	-3.68
45	21	12.359	0.924	981.67	1478.5	508.4	91.0	0.949	1.06	0.999	-0.120	1.045	-0.036	-0.170	-9.26	-1.94
47	22	12.026	0.924	982.00	1479.6	509.3	91.1	0.932	1.01	1.000	-0.015	0.995	-0.095	-0.158	-9.01	-0.26
49	23	11.685	0.924	981.98	1481.6	510.1	91.0	0.918	0.99	1.000	0.011	0.984	0.012	-0.142	-8.23	0.67
51	24	11.352	0.924	982.07	1483.0	510.5	91.2	0.913	0.99	1.000	0.021	0.981	0.014	-0.130	-7.54	0.83
53	25	10.998	0.925	982.41	1484.6	511.3	91.1	0.914	0.99	1.000	0.021	0.982	0.016	-0.121	-7.03	0.96

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TEST PART MEX10-C ALFMM WING Y Z MON SURVEY DATE AEDC PROPULSION WIND TUNNEL
 YF-65 62 3.007 -0.01 * PCT -0.00 -0.99 * 212 4-13-77 TRANSONIC 16T

INNER FLOWFIELD SURVEY SUMMARY

POINT GP	X	Y	Z	TT	ML	VML/VM	PTL/PT	CPL	UL/VM	VL/VM	ML/VM	AAL	SWL
1	0	10.995	0.926	992.10	1517.5	523.4	100.6	0.908	0.943	-0.003	-0.003	-0.19	-0.15
2	0	12.351	0.925	991.22	1514.5	522.0	100.2	0.899	0.975	-0.012	-0.017	-0.98	-0.68
3	0	13.655	0.925	990.64	1514.0	521.5	100.3	0.914	0.990	0.007	-0.021	-1.20	0.41
4	0	14.982	0.925	990.70	1517.3	522.8	99.9	0.938	1.012	0.022	-0.012	-0.64	1.26
5	0	16.312	0.925	990.68	1512.2	520.8	100.4	0.993	1.052	0.025	0.012	0.64	1.35
6	0	17.323	0.924	990.10	1514.7	521.6	99.9	0.977	1.047	0.020	0.022	1.18	1.09
7	0	19.005	0.926	992.04	1516.5	523.2	100.2	0.900	0.976	0.014	0.001	0.03	0.84

TEST PART HEADLINE ALPHA WIND TUNNEL
 TF-885 46 2.993 -0.000 4 PCT -0.02

DATE
 4-13-77

WIND TUNNEL
 TRANSONIC 1A1

DATE
 4-13-77

WIND TUNNEL
 TRANSONIC 1A1

OUTER FLOWFIELD SURVEY SUMMARY

POINT	RP	AL	M	V _∞	WT	U	ZT	WIND SURVEY	U	W	U/V	W/V	U/V _∞	W/V _∞	U/V _∞	W/V _∞	U/V _∞	W/V _∞	U/V _∞	W/V _∞
1	26.074	0.924	978.60	1471.5	508.7	87.0	0.915	0.991	0.017	1.000	0.017	0.006	0.991	0.006	0.005	0.28	0.33			
2	23.533	0.926	974.97	1474.1	508.2	86.2	0.916	0.993	0.014	1.000	0.014	0.007	0.993	0.007	0.005	0.27	0.38			
3	23.074	0.924	979.79	1482.6	510.2	84.6	0.921	0.998	0.007	1.002	0.007	0.007	0.998	0.007	0.005	0.29	0.41			
4	22.541	0.924	981.49	1470.7	508.4	90.2	0.910	0.987	0.025	0.999	0.025	0.006	0.987	0.006	0.005	0.30	0.36			
5	22.041	0.924	981.34	1471.2	508.3	90.7	0.919	0.987	0.010	1.001	0.010	0.006	0.987	0.006	0.005	0.31	0.37			
6	21.535	0.926	983.15	1474.7	509.8	90.9	0.922	0.996	0.009	1.001	0.009	0.007	0.996	0.007	0.005	0.29	0.38			
7	21.046	0.925	982.50	1477.9	509.1	91.0	0.917	0.993	0.014	1.000	0.014	0.007	0.993	0.007	0.005	0.28	0.38			
8	20.542	0.924	981.93	1472.3	508.7	91.2	0.915	0.992	0.015	1.000	0.015	0.006	0.992	0.006	0.005	0.28	0.36			
9	20.047	0.925	981.72	1470.1	508.3	90.3	0.916	0.994	0.014	1.001	0.014	0.006	0.994	0.006	0.003	0.20	0.35			
10	19.544	0.925	981.74	1470.7	508.6	90.3	0.920	0.996	0.010	1.000	0.010	0.006	0.996	0.006	0.005	0.29	0.37			
11	19.045	0.924	981.59	1472.1	508.9	90.4	0.920	0.996	0.009	1.001	0.009	0.007	0.996	0.007	0.005	0.28	0.40			
12	18.535	0.925	982.39	1475.4	508.5	90.4	0.914	0.994	0.011	1.000	0.011	0.006	0.994	0.006	0.004	0.26	0.36			
13	18.039	0.925	982.44	1477.2	509.1	90.4	0.921	0.996	0.009	1.001	0.009	0.006	0.996	0.006	0.005	0.28	0.36			
14	17.545	0.926	982.72	1478.0	509.7	90.1	0.922	0.996	0.008	1.000	0.008	0.006	0.996	0.006	0.005	0.28	0.36			
15	17.034	0.926	982.48	1476.9	509.2	90.2	0.923	0.998	0.006	1.001	0.006	0.006	0.998	0.006	0.004	0.22	0.35			
16	16.532	0.925	982.25	1476.0	508.7	90.3	0.923	0.997	0.007	1.000	0.007	0.006	0.997	0.006	0.005	0.29	0.35			
17	16.043	0.925	981.89	1475.0	508.2	90.2	0.922	0.997	0.006	1.000	0.006	0.007	0.997	0.007	0.004	0.21	0.38			
18	15.540	0.925	982.21	1473.5	507.4	90.2	0.923	0.994	0.006	1.001	0.006	0.006	0.994	0.006	0.003	0.18	0.35			
19	15.037	0.925	981.46	1473.0	507.4	89.9	0.921	0.997	0.007	1.000	0.007	0.006	0.997	0.006	0.003	0.16	0.35			
20	14.534	0.925	981.89	1473.3	507.5	90.3	0.923	0.998	0.005	1.000	0.005	0.006	0.998	0.006	0.003	0.16	0.34			
21	14.045	0.925	981.60	1473.1	507.4	90.0	0.923	0.999	0.003	1.000	0.003	0.006	0.999	0.006	-0.000	-0.01	0.35			
22	13.536	0.925	981.80	1473.3	507.5	90.2	0.921	0.997	0.006	1.000	0.006	0.006	0.997	0.006	0.002	0.12	0.34			
23	13.041	0.924	981.53	1473.0	507.3	90.2	0.921	0.997	0.007	1.001	0.007	0.006	0.997	0.006	0.002	0.10	0.37			
24	12.536	0.925	981.78	1473.1	507.4	90.2	0.920	0.994	0.008	1.000	0.008	0.006	0.994	0.006	0.002	0.10	0.36			
25	12.041	0.925	981.95	1473.2	507.6	90.1	0.921	0.996	0.008	1.000	0.008	0.006	0.996	0.006	0.001	0.06	0.34			
26	11.534	0.925	981.66	1473.4	507.5	90.2	0.920	0.996	0.009	1.001	0.009	0.007	0.996	0.007	0.003	0.19	0.38			
27	11.047	0.925	981.85	1473.4	507.5	90.3	0.921	0.996	0.008	1.000	0.008	0.006	0.996	0.006	0.001	0.09	0.33			
28	10.534	0.925	981.82	1474.2	507.8	90.2	0.924	0.999	0.004	1.001	0.004	0.006	0.999	0.006	0.001	0.05	0.35			
29	10.047	0.925	982.21	1474.9	508.3	90.3	0.921	0.997	0.007	1.000	0.007	0.006	0.997	0.006	0.001	0.04	0.35			
30	9.541	0.925	982.07	1475.0	508.2	90.3	0.920	0.996	0.009	1.000	0.009	0.006	0.996	0.006	0.001	0.09	0.36			
31	9.046	0.925	981.96	1475.8	508.5	90.1	0.916	0.999	0.014	0.999	0.014	0.007	0.991	0.007	0.001	0.04	0.38			
32	8.540	0.926	982.71	1476.4	509.0	90.4	0.922	0.997	0.007	1.001	0.007	0.007	0.997	0.007	0.000	0.03	0.39			
33	8.036	0.925	982.35	1475.5	508.5	90.4	0.921	0.996	0.008	1.000	0.008	0.006	0.996	0.006	0.000	0.03	0.35			
34	7.534	0.925	982.08	1474.8	508.3	90.0	0.920	0.995	0.010	1.000	0.010	0.006	0.995	0.006	0.001	0.04	0.36			
35	7.041	0.925	982.10	1474.7	508.1	90.3	0.920	0.995	0.010	1.000	0.010	0.006	0.995	0.006	-0.000	-0.01	0.37			
36	6.540	0.925	981.89	1474.9	508.1	90.1	0.921	0.996	0.008	1.000	0.008	0.006	0.996	0.006	0.001	0.07	0.36			
37	6.034	0.926	982.52	1475.0	508.7	90.2	0.922	0.996	0.008	1.000	0.008	0.006	0.996	0.006	-0.000	-0.03	0.35			
38	5.543	0.925	982.04	1476.0	508.4	90.5	0.919	0.995	0.011	1.001	0.011	0.007	0.995	0.007	0.001	0.04	0.43			
39	5.036	0.925	982.46	1475.9	508.5	90.7	0.920	0.995	0.011	1.000	0.011	0.006	0.995	0.006	-0.001	-0.06	0.35			
40	4.543	0.925	982.60	1475.6	508.7	90.4	0.921	0.996	0.010	1.001	0.010	0.006	0.996	0.006	-0.001	-0.07	0.35			
41	4.044	0.925	981.89	1475.0	508.2	90.2	0.917	0.999	0.015	1.001	0.015	0.005	0.999	0.005	-0.001	-0.07	0.29			
42	3.545	0.925	982.19	1475.0	508.2	90.4	0.917	0.993	0.015	1.000	0.015	0.007	0.993	0.007	0.001	0.05	0.38			
43	3.043	0.925	982.09	1474.9	508.0	90.6	0.917	0.993	0.016	1.001	0.016	0.006	0.993	0.006	-0.001	-0.06	0.37			
44	2.542	0.925	982.59	1475.4	508.6	90.4	0.917	0.992	0.016	1.000	0.016	0.007	0.992	0.007	-0.001	-0.06	0.39			
45	2.052	0.925	982.07	1475.0	508.6	90.4	0.916	0.992	0.017	1.000	0.017	0.006	0.992	0.006	-0.000	-0.03	0.32			
46	1.544	0.925	981.82	1474.9	508.0	90.4	0.914	0.990	0.020	1.000	0.020	0.006	0.990	0.006	-0.000	-0.03	0.36			
47	1.046	0.925	982.65	1475.7	508.7	90.5	0.919	0.994	0.012	1.001	0.012	0.001	0.994	0.001	0.000	0.01	0.07			

TEST PART 45 3.000 ALPHA 0.01 % PCT -0.02

DATE 4-13-77

AEUC PROPULSION WIND TUNNEL
TRANSONIC 16T

401

OUTER FLOW FIELD SURVEY SUMMARY

POINT GP	AT	M	V ₁	M ₁	W	TI	TL	VTL/V ₁	PTL/PT	CPL	UT/V ₁	VT/V ₁	WI/V ₁	AATL	SMTL
7	0.541	0.924	981.79	1476.7	507.6	90.5	0.915	0.99	1.001	0.019	0.991	0.006	0.000	0.01	0.36
9	0.944	0.925	982.46	1475.1	506.5	90.7	0.915	0.99	1.000	0.021	0.990	0.006	0.001	0.04	0.34
11	0.652	0.924	981.93	1476.9	507.5	91.4	0.913	0.99	1.000	0.021	0.990	0.006	0.001	0.05	0.37
13	0.950	0.925	981.48	1471.0	506.6	90.0	0.912	0.99	1.000	0.023	0.989	0.006	0.001	0.06	0.36
15	1.450	0.925	981.81	1473.0	507.3	90.4	0.915	0.99	1.000	0.019	0.991	0.006	0.002	0.10	0.33
17	1.954	0.925	982.34	1476.5	508.9	90.3	0.917	0.99	1.001	0.016	0.993	0.007	0.002	0.13	0.39
19	2.445	0.926	982.76	1478.4	509.9	90.1	0.921	1.00	1.001	0.010	0.995	0.007	0.009	0.51	0.37
21	2.949	0.926	983.16	1479.3	510.5	90.0	0.917	0.99	1.001	0.020	0.991	0.007	0.003	0.16	0.41
23	3.454	0.927	984.14	1480.7	511.4	90.3	0.918	0.99	1.001	0.019	0.991	0.006	0.003	0.19	0.37
25	3.954	0.928	984.26	1480.2	511.4	90.1	0.918	0.99	1.001	0.018	0.992	0.007	0.003	0.19	0.43
27	4.456	0.927	984.01	1480.1	511.2	90.1	0.918	0.99	1.001	0.016	0.992	0.006	0.003	0.20	0.37
29	4.957	0.927	983.76	1480.0	511.0	90.1	0.919	0.99	1.001	0.016	0.993	0.007	0.006	0.36	0.38
31	5.465	0.926	983.03	1480.1	510.6	90.2	0.917	0.99	1.001	0.018	0.992	0.007	0.003	0.20	0.38
33	5.960	0.925	981.56	1476.0	509.1	90.0	0.915	0.99	1.000	0.019	0.991	0.007	0.004	0.21	0.40

TEST POINT MFL10-0 ALPHA -0.01 VLOS 10.16 YI 10.16 ZI -0.01 MUM SURVEY 5 403 DATE 4-13-77 AUC PROPLUSION WIND TUNNEL TRANSONIC 1AT

OTHER FLOWFIELD SURVEY SUMMARY

POINT GP	AT	M	VM	VT	V	TI	ML	VTL/VM	M/L/PT	CPL	UI/VM	VT/VM	WT/VM	AATL	SAITL
1 60	23.456	0.526	982.62	1474.6	510.2	89.7	0.523	1.00	1.000	0.007	0.997	0.012	-0.007	-0.43	0.69
2 60	23.475	0.525	981.64	1477.7	509.4	89.3	0.521	1.00	1.000	0.010	0.995	0.012	-0.005	-0.29	0.71
3 60	23.002	0.526	981.03	1476.0	509.1	89.2	0.519	1.00	1.000	0.012	0.994	0.012	-0.004	-0.21	0.68
4 60	22.525	0.525	981.60	1474.3	509.6	89.3	0.521	1.00	1.000	0.009	0.996	0.013	-0.003	-0.19	0.74
5 60	21.974	0.525	981.39	1470.0	510.0	89.4	0.521	1.00	1.001	0.009	0.996	0.012	-0.003	-0.19	0.72
6 60	21.443	0.525	981.09	1461.3	510.6	89.4	0.521	1.00	1.001	0.008	0.997	0.012	-0.004	-0.22	0.71
7 60	21.047	0.526	982.51	1482.7	511.5	89.6	0.523	1.00	1.000	0.008	0.997	0.012	-0.003	-0.19	0.70
8 60	20.537	0.526	982.43	1482.7	511.6	89.4	0.523	1.00	1.000	0.009	0.996	0.013	-0.003	-0.19	0.77
9 60	20.047	0.526	982.23	1483.2	511.6	89.4	0.522	1.00	1.001	0.008	0.996	0.012	-0.003	-0.18	0.70
10 60	19.553	0.526	982.14	1483.1	511.7	89.2	0.522	1.00	1.001	0.005	0.997	0.012	-0.003	-0.16	0.67
11 60	19.001	0.526	982.00	1483.1	511.6	89.1	0.523	1.00	1.000	0.004	0.998	0.012	-0.001	-0.08	0.67
12 60	18.472	0.526	982.64	1482.9	511.7	89.4	0.524	1.00	1.000	0.004	0.998	0.012	-0.001	-0.08	0.71
13 60	18.011	0.526	982.34	1482.9	511.5	89.5	0.527	1.00	1.001	-0.001	1.000	0.014	-0.001	-0.07	0.78
14 60	17.454	0.526	981.99	1513.0	521.9	100.4	0.526	1.00	1.001	0.001	1.000	0.013	-0.000	-0.02	0.76
15 60	16.904	0.526	981.97	1513.3	522.0	100.4	0.526	1.00	1.000	0.001	1.000	0.016	-0.000	-0.01	0.90
16 60	16.452	0.526	982.05	1513.1	521.9	100.4	0.525	1.00	1.000	0.001	0.999	0.020	0.000	0.02	1.13
17 60	16.022	0.526	982.44	1513.2	522.2	100.5	0.530	1.00	1.001	-0.002	1.003	0.016	0.000	0.07	0.89
18 60	15.542	0.527	982.53	1513.6	522.5	100.3	0.528	1.00	1.001	-0.001	1.001	0.015	0.000	0.01	0.88
19 60	15.084	0.525	981.30	1513.3	521.6	100.3	0.526	1.00	1.000	-0.000	1.000	0.016	-0.002	-0.11	0.94
20 60	14.544	0.525	981.11	1512.8	521.3	100.4	0.523	1.00	0.999	0.003	0.998	0.017	0.000	0.01	0.96
21 60	14.017	0.526	981.44	1513.7	521.9	100.2	0.524	1.00	1.000	0.003	0.999	0.017	0.000	0.02	0.96
22 60	13.572	0.525	981.64	1513.4	521.4	100.4	0.524	1.00	1.001	0.003	0.999	0.016	0.000	0.03	0.92
23 60	13.004	0.525	981.29	1513.1	521.5	100.3	0.523	1.00	1.001	0.006	0.997	0.017	0.001	-0.00	0.97
24 60	12.466	0.525	981.34	1513.3	521.6	100.4	0.524	1.00	1.001	0.004	0.999	0.017	-0.000	-0.00	1.00
25 60	11.999	0.526	981.56	1513.0	521.8	100.4	0.525	1.00	1.002	0.004	0.999	0.017	0.003	0.15	0.99
26 60	11.514	0.525	981.56	1513.1	521.6	100.5	0.524	1.00	1.001	0.004	0.999	0.017	0.001	0.03	0.99
27 60	10.925	0.526	981.57	1512.3	521.9	99.5	0.524	1.00	1.000	0.005	0.998	0.018	0.001	0.07	1.05
28 60	10.532	0.527	981.95	1512.5	522.0	99.8	0.524	1.00	1.001	0.005	0.998	0.017	0.001	0.06	0.99
29 60	10.011	0.526	981.20	1512.7	521.6	99.8	0.524	1.00	1.001	0.006	0.998	0.017	0.002	0.10	0.97
30 60	9.462	0.525	980.73	1512.9	521.3	99.9	0.523	1.00	1.001	0.006	0.998	0.017	0.001	0.05	0.98

TEST PART HEADLINE ALPHM 14.16 YR 14.16 ZT -0.13 MON SURVEY
 TF-665 SM 3.003 -0.000 * PCI 5 903 QUIER FLOP FLD SURVEY SUMMARY

DATE 4-13-77
 AEDC PROPULSION WIND TUNNEL
 TRANSONIC 1A1

POINT GP	AI	A	VH	PI	U	TI	ML	VTL/VM	PIL/PT	CPI	UT/VM	VT/VM	WT/VM	AATL	SMTL
1 60	8.968	0.924	990.39	1516.0	521.3	100.0	0.922	1.00	1.000	0.005	0.998	0.018	0.002	0.10	1.01
2 60	8.963	0.925	990.47	1516.7	521.4	100.1	0.921	1.00	1.000	0.006	0.997	0.018	0.002	0.12	1.01
3 60	7.963	0.924	989.77	1516.1	521.2	99.9	0.922	1.00	1.001	0.004	0.998	0.018	0.001	0.05	1.02
4 60	7.969	0.924	989.96	1516.3	521.3	100.1	0.922	1.00	1.000	0.004	0.998	0.018	0.001	0.08	1.01
5 60	6.966	0.924	990.14	1516.7	521.5	100.1	0.923	1.00	1.000	0.002	0.999	0.018	0.001	0.08	1.06
6 60	6.968	0.924	989.87	1516.3	521.3	100.0	0.923	1.00	1.001	0.004	0.998	0.018	0.002	0.09	1.06
7 60	5.978	0.924	989.98	1516.7	521.3	100.3	0.919	1.00	0.999	0.008	0.995	0.014	0.002	0.13	1.06
8 60	5.978	0.926	991.23	1511.3	521.1	100.3	0.921	1.00	1.000	0.008	0.996	0.019	0.003	0.17	1.07
9 60	5.961	0.925	990.99	1511.4	520.7	100.5	0.920	1.00	1.001	0.009	0.996	0.019	0.003	0.15	1.10
10 60	5.961	0.925	991.06	1512.0	521.0	100.3	0.921	1.00	1.001	0.009	0.996	0.019	0.004	0.21	1.09
11 60	4.973	0.925	991.06	1512.7	521.2	100.4	0.921	1.00	1.000	0.008	0.996	0.019	0.002	0.09	1.12
12 60	4.973	0.925	991.07	1513.4	521.5	100.4	0.921	1.00	1.001	0.009	0.996	0.019	0.001	0.07	1.08
13 60	3.970	0.925	991.07	1513.4	521.5	100.4	0.921	1.00	1.001	0.009	0.996	0.019	0.001	0.07	1.08
14 60	3.970	0.925	990.86	1513.7	521.4	100.5	0.921	1.00	1.001	0.009	0.996	0.020	-0.000	-0.03	1.13
15 60	3.971	0.925	990.84	1516.0	521.8	100.4	0.921	1.00	1.001	0.008	0.997	0.019	-0.000	-0.01	1.10
16 60	2.962	0.926	991.93	1511.0	521.1	100.4	0.918	0.99	1.000	0.015	0.992	0.019	0.001	0.08	1.12
17 60	2.967	0.925	991.23	1512.5	521.2	100.5	0.920	1.00	1.001	0.011	0.995	0.019	0.001	0.05	1.10
18 60	2.960	0.925	990.69	1515.1	522.7	100.2	0.924	1.00	1.002	0.009	0.999	0.019	-0.000	-0.03	1.10
19 60	1.964	0.925	991.19	1510.7	522.7	100.4	0.921	1.00	1.001	0.009	0.996	0.018	-0.002	-0.14	1.02
20 60	1.975	0.925	991.39	1516.9	522.9	100.4	0.920	1.00	1.000	0.010	0.995	0.019	-0.002	-0.14	1.07
21 60	0.975	0.926	991.84	1516.4	522.4	100.1	0.920	0.99	1.001	0.012	0.994	0.019	-0.002	-0.14	1.07
22 60	-0.019	0.926	991.93	1512.7	521.8	100.3	0.918	0.99	1.000	0.016	0.992	0.017	-0.000	-0.01	1.01
23 60	-0.979	0.926	991.39	1511.0	521.1	100.4	0.918	0.99	1.000	0.015	0.993	0.018	0.000	0.01	1.03
24 60	-1.974	0.925	990.39	1512.3	520.9	99.9	0.914	0.99	0.999	0.018	0.990	0.017	-0.000	-0.02	0.99
25 60	-1.962	0.925	991.43	1513.7	521.8	100.4	0.921	1.00	1.001	0.010	0.996	0.017	-0.002	-0.10	0.98
26 60	-2.963	0.925	991.43	1513.9	521.8	100.5	0.914	0.99	1.001	0.012	0.994	0.016	-0.001	-0.05	0.94
27 60	-2.952	0.925	991.08	1513.9	521.8	100.1	0.914	0.99	1.000	0.012	0.994	0.017	-0.001	-0.08	0.96
28 60	-3.960	0.925	991.31	1514.7	522.0	100.4	0.920	1.00	1.001	0.010	0.995	0.016	-0.001	-0.06	0.95
29 60	-3.961	0.926	991.85	1515.5	522.6	100.5	0.923	1.00	1.002	0.007	0.998	0.016	-0.001	-0.06	0.92
30 60	-4.967	0.925	990.87	1514.6	521.7	100.4	0.918	0.99	1.001	0.014	0.993	0.019	-0.001	-0.05	1.08
31 60	-4.960	0.926	991.85	1515.5	522.6	100.5	0.921	1.00	1.001	0.010	0.995	0.016	-0.001	-0.07	0.92
32 60	-4.984	0.925	991.23	1513.0	521.5	100.3	0.923	1.00	1.004	0.011	0.998	0.016	0.004	0.24	0.90
34 60	-4.985	0.925	991.42	1516.4	522.1	100.5	0.919	0.99	1.001	0.013	0.994	0.014	-0.002	-0.13	0.83
35 60	-5.988	0.925	991.50	1515.2	522.3	100.4	0.920	1.00	1.001	0.011	0.995	0.015	-0.003	-0.17	0.88

TEST POINT 72 3.000 ALPHA 5.05 & PLI 0.03 -14.00 5 401
 RWY SURVEY
 OUTER FLOWFIELD SUPPLY SUMMARY

DATE
 4-14-77

AEDC PROPUSSION WIND TUNNEL
 TRANSONIC 1st

POINT GP	ST	A	W	PL	W	TI	ML	VTL/VW	PTL/PT	CPL	UT/VW	VI/VW	WI/VW	AATL	SATL
5	1	26.014	0.925	941.00	1403.5	511.3	89.3	0.919	1.000	0.012	0.991	0.008	0.083	4.79	0.47
7	2	23.554	0.925	941.14	1402.7	510.9	89.3	0.916	1.000	0.013	0.990	0.006	0.083	4.78	0.34
9	3	23.040	0.926	942.29	1402.5	511.2	89.7	0.921	1.000	0.009	0.992	0.006	0.083	4.80	0.35
11	4	22.537	0.926	941.56	1431.3	510.7	89.1	0.914	1.000	0.014	0.991	0.011	0.083	4.78	0.62
13	5	22.042	0.925	941.73	1440.0	510.4	89.4	0.920	1.000	0.011	0.991	0.008	0.083	4.76	0.46
15	6	21.540	0.925	941.57	1450.5	510.3	89.4	0.919	1.000	0.012	0.991	0.008	0.083	4.77	0.47
17	7	21.035	0.925	941.73	1460.1	510.2	89.4	0.920	1.001	0.011	0.991	0.008	0.083	4.76	0.49
19	8	20.524	0.925	941.14	1474.1	509.7	89.3	0.917	1.000	0.015	0.989	0.008	0.083	4.77	0.46
21	9	20.016	0.926	941.54	1474.9	510.0	89.3	0.919	1.000	0.014	0.990	0.008	0.083	4.78	0.46
23	10	19.514	0.925	941.75	1473.1	509.9	89.4	0.919	1.001	0.014	0.990	0.008	0.084	4.83	0.48
25	11	19.011	0.925	942.06	1460.8	510.5	90.2	0.919	1.001	0.012	0.991	0.009	0.083	4.79	0.50
27	12	18.531	0.925	942.02	1460.9	510.4	90.4	0.916	1.001	0.014	0.990	0.008	0.083	4.80	0.48
29	13	18.034	0.925	942.32	1461.1	510.4	90.4	0.916	1.001	0.014	0.990	0.007	0.083	4.79	0.39
31	14	17.515	0.925	942.11	1461.4	510.4	90.3	0.917	1.000	0.016	0.989	0.007	0.083	4.80	0.49
33	15	17.035	0.925	942.46	1461.7	510.5	90.7	0.917	1.000	0.015	0.989	0.008	0.083	4.80	0.49
35	16	16.531	0.925	942.49	1461.0	510.6	90.6	0.914	1.000	0.014	0.990	0.009	0.083	4.77	0.51
37	17	16.030	0.924	941.46	1461.7	510.2	90.7	0.915	1.000	0.019	0.987	0.008	0.082	4.77	0.48
39	18	15.537	0.925	942.09	1461.6	510.3	90.7	0.916	1.000	0.016	0.989	0.009	0.083	4.81	0.54
41	19	15.030	0.925	941.77	1461.5	510.2	90.4	0.914	1.000	0.020	0.987	0.008	0.084	4.86	0.47
43	20	14.530	0.925	942.54	1461.7	510.6	90.7	0.915	1.000	0.019	0.987	0.009	0.083	4.82	0.51
45	21	14.032	0.925	942.16	1461.7	510.4	90.6	0.914	1.000	0.020	0.987	0.008	0.085	4.91	0.48
47	22	13.545	0.925	942.14	1461.5	510.3	90.6	0.914	1.000	0.019	0.997	0.008	0.085	4.93	0.49
49	23	13.035	0.925	942.60	1462.0	510.7	90.8	0.920	1.000	0.018	0.992	0.009	0.076	4.93	0.54
51	24	12.534	0.924	941.46	1461.7	510.2	90.7	0.915	1.000	0.018	0.987	0.009	0.086	5.00	0.52
53	25	12.033	0.925	942.37	1461.4	510.4	90.7	0.915	1.000	0.018	0.987	0.009	0.086	5.00	0.52
55	26	11.534	0.925	942.29	1461.8	510.4	90.9	0.915	1.000	0.019	0.987	0.009	0.087	5.04	0.49
57	27	11.033	0.925	942.64	1461.9	510.5	90.9	0.914	1.000	0.020	0.987	0.009	0.087	5.05	0.29
59	28	10.533	0.925	942.25	1461.7	510.4	90.7	0.917	1.000	0.013	0.989	0.009	0.084	4.85	0.53
61	29	10.031	0.925	942.34	1461.7	510.5	90.7	0.917	1.000	0.015	0.989	0.009	0.084	5.05	0.49
63	30	9.536	0.925	942.23	1461.5	510.3	90.7	0.916	1.000	0.015	0.989	0.009	0.088	5.07	0.49
67	31	9.015	0.925	942.34	1461.7	510.5	90.7	0.916	1.000	0.012	0.990	0.009	0.089	5.14	0.52
69	32	8.535	0.925	942.01	1461.6	510.3	90.5	0.917	1.000	0.015	0.989	0.009	0.088	5.09	0.52
71	33	8.030	0.924	941.63	1461.5	509.9	90.9	0.917	1.000	0.013	0.990	0.009	0.088	5.10	0.52
73	34	7.530	0.924	941.58	1461.4	509.9	90.8	0.914	1.000	0.013	0.991	0.009	0.088	5.07	0.54
75	35	7.031	0.924	941.23	1461.1	509.6	90.7	0.914	1.000	0.012	0.990	0.009	0.088	5.08	0.52
77	36	6.534	0.927	944.06	1461.3	511.3	90.7	0.920	1.000	0.014	0.989	0.009	0.088	5.08	0.51
79	37	6.034	0.925	942.42	1461.7	510.7	90.6	0.914	1.000	0.013	0.990	0.009	0.089	5.13	0.52
81	38	5.533	0.925	942.29	1461.6	510.4	90.7	0.918	1.000	0.014	0.989	0.009	0.088	5.11	0.53
83	39	5.035	0.926	942.93	1461.7	510.8	90.7	0.919	1.000	0.012	0.990	0.009	0.089	5.11	0.52
85	40	4.537	0.924	941.77	1461.2	510.0	90.7	0.912	1.001	0.023	0.984	0.010	0.095	5.49	0.57
87	41	4.066	0.925	942.64	1462.1	510.6	91.1	0.919	1.001	0.011	0.990	0.009	0.093	5.37	0.54
89	42	3.533	0.925	942.34	1461.7	510.4	90.8	0.917	1.001	0.016	0.988	0.008	0.089	5.15	0.48
91	43	3.036	0.925	942.57	1461.6	510.5	90.8	0.915	1.000	0.019	0.986	0.008	0.090	5.19	0.44
93	44	2.535	0.925	942.76	1461.6	510.6	90.9	0.915	1.000	0.019	0.986	0.008	0.090	5.19	0.47
95	45	2.038	0.925	942.72	1461.9	510.5	91.1	0.915	1.000	0.019	0.987	0.009	0.090	5.20	0.51

TEST PART REF ID-6 ALPHABETICALLY
 73 3.002 5.05 4.607 0.04 -10.04 5 401
 WJLFW PLUMFIELD SURVEY SUMMARY

DATE
 4-14-77

AEDC PROPELLSION WIND TUNNEL
 TRANSONIC 161

POINT	GM	AT	N	VM	PT	W	IT	ML	VTL/VM	PIL/PT	CPL	UT/VM	VI/VM	WI/VM	AATL	SWTL
1	46	1.579	0.524	981.83	1481.3	510.0	90.7	0.913	0.99	1.000	0.020	0.986	0.008	0.091	5.27	0.49
3	47	1.044	0.525	982.07	1481.8	510.5	91.0	0.913	0.99	1.000	0.023	0.984	0.004	0.091	5.27	0.25
5	48	0.537	0.525	981.68	1482.1	510.2	90.9	0.915	0.99	1.001	0.017	0.988	0.009	0.091	5.27	0.51
7	49	0.021	0.523	980.48	1481.0	509.0	90.9	0.913	0.99	1.000	0.018	0.987	0.010	0.092	5.31	0.55
9	50	-0.459	0.525	982.47	1481.6	510.4	90.9	0.915	0.99	1.000	0.018	0.986	0.009	0.092	5.34	0.53
11	51	-0.963	0.525	982.40	1481.5	510.3	91.0	0.915	0.99	1.000	0.018	0.987	0.008	0.093	5.38	0.49
13	52	-1.474	0.525	982.54	1481.2	510.4	90.6	0.914	0.99	1.000	0.020	0.986	0.009	0.093	5.38	0.50
15	53	-1.965	0.524	981.92	1481.3	510.1	90.7	0.914	0.99	1.000	0.019	0.986	0.009	0.093	5.41	0.51
17	54	-2.469	0.525	982.17	1481.2	510.2	90.6	0.915	0.99	1.000	0.017	0.987	0.009	0.094	5.43	0.51
19	55	-2.973	0.525	981.48	1481.2	510.2	90.5	0.916	0.99	1.000	0.015	0.988	0.009	0.093	5.39	0.51
21	56	-3.470	0.525	982.77	1481.8	510.7	90.9	0.915	0.99	1.000	0.014	0.986	0.012	0.095	5.49	0.67
23	57	-3.972	0.525	982.15	1481.7	510.4	90.7	0.914	0.99	1.000	0.014	0.990	0.009	0.096	5.53	0.54
25	58	-4.472	0.525	982.74	1481.7	510.8	90.6	0.917	0.99	1.000	0.015	0.988	0.010	0.094	5.46	0.58
26	58	-4.922	0.525	982.64	1481.9	510.6	90.9	0.918	0.99	1.000	0.013	0.989	0.009	0.094	5.44	0.52
28	59	-4.926	0.525	982.77	1481.8	510.7	90.9	0.922	1.00	1.004	0.012	0.992	0.009	0.096	5.62	0.50

TEST NAME MEX10-6 ALPHEA 2140 5.05 & PCT 5.05 & PCT
 DATE 9-14-77 AEDC PROPUSSION WIND TUNNEL
 TRANSONIC 16T

UNITED FLOWFIELD SURVEY SUMMARY
 RUN SURVEY 401
 ZT -13.14 5
 YI 0.01

POINT GP	XI	MI	V4	PT	U	FT	ML	VTL/VM	PIL/PT	CPL	UI/VM	VT/VM	WI/VM	AATL	SWTL
1 25	-4.947	0.425	942.51	1402.1	510.9	90.3	0.918	0.99	1.001	0.014	0.993	0.008	0.004	0.23	0.48
2 25	-4.004	0.420	942.73	1400.9	510.9	90.2	0.917	0.99	1.001	0.017	0.992	0.008	0.004	0.24	0.47
3 25	-3.018	0.420	943.06	1479.0	510.9	90.4	0.917	0.99	1.001	0.019	0.991	0.008	0.003	0.19	0.46
4 25	-1.946	0.420	943.24	1477.7	509.9	90.1	0.917	0.99	1.001	0.014	0.991	0.008	0.003	0.15	0.47
5 25	-0.929	0.420	943.02	1470.3	509.3	90.2	0.916	0.99	1.000	0.020	0.991	0.008	0.001	0.08	0.48
6 25	-0.060	0.420	943.22	1474.3	509.0	90.3	0.914	0.99	1.000	0.023	0.989	0.008	0.001	0.06	0.44
7 25	0.957	0.427	943.72	1473.5	508.8	90.4	0.917	0.99	1.000	0.019	0.991	0.008	0.000	0.03	0.45
8 25	2.019	0.420	943.03	1471.5	507.7	90.1	0.915	0.99	1.000	0.021	0.990	0.008	-0.000	-0.02	0.45
9 25	3.068	0.427	943.75	1470.4	507.0	90.4	0.917	0.99	1.001	0.019	0.991	0.008	-0.000	-0.03	0.44
10 25	4.007	0.427	943.75	1468.5	507.1	90.2	0.918	0.99	1.000	0.017	0.991	0.007	-0.001	-0.05	0.39
11 25	4.954	0.424	943.96	1466.5	506.7	90.1	0.915	0.99	1.000	0.018	0.992	0.008	-0.001	-0.04	0.45
12 25	6.104	0.425	943.89	1466.9	506.5	90.3	0.917	0.99	1.000	0.015	0.993	0.008	-0.001	-0.04	0.45
13 25	7.040	0.425	943.68	1469.2	506.3	90.3	0.916	0.99	1.000	0.016	0.992	0.008	-0.000	-0.02	0.44
14 25	8.032	0.425	943.47	1461.9	503.5	90.0	0.915	0.99	1.000	0.017	0.991	0.008	-0.001	-0.04	0.45
15 25	8.981	0.424	943.62	1462.4	503.6	90.4	0.916	0.99	1.001	0.016	0.993	0.008	-0.001	-0.09	0.45
16 25	10.062	0.424	943.36	1462.1	503.3	90.3	0.915	0.99	1.000	0.017	0.992	0.008	-0.001	-0.09	0.47
17 25	10.946	0.424	943.22	1462.0	503.3	90.1	0.914	0.99	1.000	0.019	0.990	0.007	-0.002	-0.12	0.42
18 25	12.070	0.424	943.17	1468.0	503.8	90.4	0.917	0.99	1.001	0.014	0.996	0.008	-0.005	-0.31	0.47
19 25	12.949	0.423	943.07	1468.3	503.9	90.1	0.915	0.99	1.001	0.018	0.992	0.009	-0.004	-0.21	0.50
20 25	13.941	0.423	943.62	1468.8	506.5	90.3	0.916	0.99	1.001	0.016	0.993	0.011	-0.005	-0.28	0.61
21 25	14.946	0.424	943.43	1469.3	505.1	90.4	0.921	1.00	1.003	0.011	0.997	0.008	-0.005	-0.31	0.48
22 25	15.959	0.425	943.80	1470.4	506.5	90.3	0.917	0.99	1.001	0.015	0.993	0.008	-0.005	-0.31	0.44
23 25	16.961	0.425	943.65	1471.3	506.8	90.0	0.919	0.99	1.001	0.013	0.994	0.009	-0.007	-0.39	0.50
24 25	17.944	0.425	942.08	1473.3	507.6	90.4	0.919	0.99	1.001	0.012	0.995	0.008	-0.006	-0.36	0.47
25 25	19.052	0.425	941.98	1473.1	507.6	90.2	0.918	0.99	1.001	0.014	0.993	0.008	-0.007	-0.39	0.43
26 25	19.962	0.425	942.51	1473.2	507.7	90.4	0.918	0.99	1.000	0.014	0.993	0.008	-0.007	-0.39	0.47
27 25	21.023	0.425	942.14	1472.2	507.3	90.3	0.915	0.99	1.000	0.020	0.990	0.002	-0.007	-0.40	0.12
28 25	22.001	0.425	942.12	1472.0	507.2	90.4	0.917	0.99	1.000	0.014	0.993	0.008	-0.007	-0.42	0.48
29 25	22.977	0.425	942.23	1471.3	507.1	90.1	0.921	1.00	1.001	0.008	0.996	0.012	-0.007	-0.39	0.68
30 25	24.047	0.425	942.42	1471.5	507.2	90.4	0.920	1.00	1.001	0.011	0.995	0.008	-0.006	-0.36	0.47

TEST PANT HX10-0 ALPHA 4-16-77
 1F-645 46 2.973 5.01 4 PCL 14.16

DATE
 4-16-77

WT 0.0
 ML 5
 RUN SURVEY 403
 WATER FLOWFIELD SURVEY SUMMARY

AEDC PULSION WIND TUNNEL
 TRANSONIC 161

POINT GP	X1	U	V1	M1	M	TT	ML	VTL/VM	VIL/PT	CPL	UT/VM	VT/VM	W1/VM	AATL	SWTL
1	25	23.909	0.929	985.74	1477.0	511.2	90.7	0.935	1.001	1.003	-0.006	0.017	0.020	1.17	0.98
2	25	22.882	0.928	985.07	1469.0	511.5	90.7	0.928	1.001	1.002	0.002	0.013	0.021	1.18	0.76
3	25	21.771	0.926	985.34	1477.5	510.9	90.4	0.920	1.000	1.000	0.016	0.018	0.020	1.18	1.04
4	25	20.941	0.926	983.40	1473.9	509.6	90.3	0.920	1.000	1.000	0.012	0.020	0.020	1.18	1.13
5	25	19.856	0.926	983.21	1470.5	507.2	90.5	0.922	1.000	1.000	0.008	0.018	0.023	1.32	1.01
6	25	18.945	0.926	982.44	1467.0	505.8	90.4	0.924	1.000	1.000	-0.005	0.014	0.020	1.15	0.79
7	25	18.068	0.926	983.13	1466.4	505.8	90.4	0.924	1.001	1.001	-0.022	0.019	0.019	1.10	1.08
8	25	16.950	0.926	983.14	1468.2	506.5	90.4	0.939	1.001	1.000	-0.009	0.021	0.007	0.41	1.11
9	25	16.045	0.926	983.45	1470.1	507.1	90.7	0.932	1.001	1.001	-0.006	0.026	0.013	0.91	1.22
10	25	14.890	0.925	982.42	1471.5	507.2	90.4	0.929	1.001	1.001	-0.006	0.026	0.013	0.74	1.47
11	25	13.641	0.925	982.04	1473.1	507.3	90.7	0.929	1.001	1.001	-0.006	0.020	0.012	0.68	1.12
12	25	13.002	0.924	981.33	1474.9	507.7	90.4	0.923	1.001	1.001	0.004	0.023	0.010	0.56	1.34
13	25	11.918	0.924	981.82	1479.4	509.4	90.7	0.925	1.001	1.001	0.001	0.023	0.010	0.55	1.32
14	25	10.878	0.923	980.69	1482.2	509.8	90.6	0.922	1.001	1.001	0.005	0.022	0.008	0.47	1.27
15	25	9.893	0.922	979.96	1482.6	509.5	90.5	0.919	1.001	1.001	0.008	0.022	0.006	0.35	1.26
17	25	8.978	0.924	981.71	1483.8	510.9	90.5	0.924	1.001	1.001	0.003	0.018	0.007	0.41	1.05
18	25	8.062	0.924	981.81	1483.0	510.8	90.7	0.921	1.001	1.001	0.007	0.022	0.007	0.40	1.29
19	25	6.886	0.924	981.92	1481.1	510.1	90.6	0.917	1.000	1.000	0.014	0.025	0.007	0.38	1.44
20	25	6.211	0.925	982.49	1479.7	510.0	90.5	0.921	1.000	1.000	0.009	0.022	0.006	0.36	1.28
21	25	4.886	0.925	982.45	1478.8	509.5	90.7	0.921	1.001	1.001	0.009	0.022	0.006	0.37	1.29
22	25	3.945	0.925	982.86	1477.3	509.3	90.7	0.920	1.001	1.001	0.010	0.023	0.006	0.32	1.31
23	25	2.865	0.925	982.51	1475.0	508.6	90.6	0.918	1.001	1.001	0.015	0.022	0.006	0.35	1.27
24	25	1.934	0.924	981.46	1473.8	507.5	90.6	0.914	1.000	1.000	0.019	0.022	0.004	0.21	1.25
25	25	1.025	0.925	982.19	1472.5	507.3	90.6	0.916	1.000	1.000	0.018	0.021	0.005	0.32	1.20
26	25	-0.003	0.925	982.13	1471.7	506.9	90.6	0.917	1.000	1.000	0.015	0.018	0.006	0.33	1.02
27	25	-1.129	0.924	981.88	1469.2	505.8	90.6	0.916	1.000	1.000	0.016	0.022	0.005	0.31	1.26
28	25	-2.077	0.925	982.46	1468.5	506.1	90.5	0.910	1.000	1.000	0.019	0.020	-0.003	-0.15	1.13
29	25	-2.872	0.924	981.96	1468.8	505.1	90.7	0.916	1.000	1.000	0.017	0.019	0.006	0.34	1.11
30	25	-4.092	0.925	982.23	1467.1	505.4	90.7	0.918	1.001	1.001	0.014	0.018	0.006	0.32	1.06
31	25	-4.940	0.924	981.66	1466.4	505.0	90.4	0.918	1.001	1.001	0.013	0.018	0.006	0.37	1.06

TEST PART M2110-6 ALPHM WING Y1 Z1 MUM SURVEY
 1F-465 91 2.692 -5.02 & PC1 -0.00 -14.14 5 503
 QUIK PLUNFIELD SURVEY SUMMARY

DATE
 4-14-77

AEDC PROPUSSION WIND TUNNEL
 TRANSONIC 161

POINT GP	AI	M	V	PI	Y1	Z1	ML	VTL/VM	PIL/PT	CPL	UT/VM	VT/VM	WT/VM	AATL	SWTL
1	24.004	0.926	982.04	1482.0	511.1	49.3	0.920	0.99	1.000	0.011	0.995	0.010	0.021	1.22	0.57
2	23.022	0.926	982.17	1482.4	511.3	49.7	0.923	1.00	1.001	0.006	0.997	0.010	0.021	1.20	0.55
3	21.943	0.925	981.42	1482.7	511.1	49.7	0.924	1.00	1.001	0.005	0.994	0.009	0.021	1.22	0.53
4	21.024	0.926	982.22	1482.9	511.3	49.8	0.926	1.00	1.001	0.001	1.000	0.010	0.022	1.25	0.55
5	20.057	0.925	981.64	1482.5	511.0	49.4	0.929	1.00	1.003	-0.006	1.003	0.014	0.022	1.24	0.81
6	19.029	0.926	982.42	1482.9	511.4	49.8	0.932	1.01	1.001	-0.011	1.004	0.009	0.022	1.24	0.49
7	18.024	0.926	981.95	1482.9	511.2	49.6	0.935	1.01	1.000	-0.016	1.004	0.011	0.021	1.22	0.61
8	17.031	0.926	982.66	1483.5	511.4	49.4	0.940	1.01	1.000	-0.026	1.004	0.011	0.019	1.09	0.62
9	16.005	0.925	981.55	1483.2	511.2	49.4	0.942	1.03	1.003	-0.061	1.033	0.010	0.018	0.99	0.54
10	14.969	0.926	981.99	1484.0	511.7	49.5	0.938	1.01	0.999	-0.025	1.012	0.010	0.010	0.59	0.56
11	13.941	0.925	981.98	1483.5	511.3	49.4	0.930	1.00	0.996	-0.014	1.004	0.009	0.008	0.43	0.54
12	12.970	0.926	982.67	1483.6	511.6	49.6	0.936	1.01	1.001	-0.017	1.009	0.010	0.005	0.29	0.55
13	12.023	0.926	982.51	1483.4	511.7	49.7	0.936	1.01	1.000	-0.017	1.009	0.007	0.004	0.23	0.39
14	11.011	0.926	982.25	1482.6	511.3	49.7	0.931	1.01	1.001	-0.010	1.005	0.010	0.002	0.12	0.55
15	10.033	0.926	981.97	1481.2	510.4	49.4	0.929	1.00	1.000	-0.006	1.003	0.010	0.002	0.09	0.56
16	9.030	0.926	982.39	1481.5	510.9	49.9	0.929	1.00	1.001	-0.006	1.003	0.007	0.001	0.08	0.38
17	7.947	0.927	983.44	1481.2	511.3	90.0	0.927	1.00	1.001	-0.003	1.002	0.010	0.001	0.05	0.56
18	7.031	0.924	981.31	1481.2	509.4	90.4	0.927	1.00	1.000	-0.004	1.002	0.009	-0.000	-0.01	0.54
19	6.053	0.923	981.04	1480.6	509.3	90.8	0.914	1.00	1.001	0.009	0.996	0.009	0.008	0.47	0.53
20	5.027	0.923	980.46	1479.6	508.9	90.7	0.922	1.00	1.000	0.003	0.999	0.009	-0.001	-0.06	0.51
21	4.008	0.923	981.15	1479.8	508.9	91.0	0.921	1.00	1.001	0.005	0.998	0.009	-0.001	-0.06	0.53
22	3.013	0.924	981.70	1479.2	509.2	90.8	0.920	1.00	1.001	0.009	0.996	0.009	-0.002	-0.11	0.54
23	2.036	0.924	981.44	1479.1	509.3	90.7	0.918	0.99	1.000	0.013	0.994	0.010	-0.010	-0.02	0.55
24	1.004	0.925	982.40	1478.9	509.4	90.9	0.916	0.99	1.000	0.016	0.992	0.009	-0.000	-0.01	0.53
25	0.042	0.924	982.62	1479.1	509.3	90.9	0.915	0.99	1.001	0.018	0.992	0.009	0.001	0.07	0.54
26	-0.976	0.925	982.19	1479.2	509.5	90.8	0.915	0.99	1.000	0.019	0.991	0.009	0.002	0.13	0.51
27	-1.976	0.924	981.61	1479.4	509.1	90.9	0.914	0.99	1.001	0.020	0.991	0.009	0.008	0.44	0.53
28	-2.960	0.925	982.38	1479.9	509.4	90.9	0.914	0.99	1.001	0.015	0.993	0.009	0.004	0.22	0.54
29	-3.997	0.924	981.77	1478.8	509.1	90.7	0.914	0.99	1.001	0.020	0.990	0.015	0.005	0.27	0.89
30	-4.944	0.924	982.04	1478.0	508.9	90.9	0.917	0.99	1.000	0.015	0.993	0.009	0.005	0.27	0.54
31	-5.941	0.924	981.99	1477.5	508.7	90.9	0.921	1.00	1.001	0.007	0.997	0.004	0.006	0.32	0.24

TEST PART REF10-6 ALFUM WIND Y Z RUN SURVEY DATE AEDC PROPULSION WIND TUNNEL
 1F-445 60 2.997 -0.000 + PCI 4.00 -1.02 4 20A 4-13-77 TRANSONIC 1st

INNER FLOWFIELD SURVEY SUMMARY

POINT CP	X	Y	Z	PT	U	TT	ML	VML/VM	PTL/PT	CPL	UL/VM	VL/VM	WL/VM	AAL	SWL
1	0	19.013	0.976	1037.05	1485.6	537.9	100.6	0.914	0.997	0.102	0.946	0.010	0.016	0.97	0.58
4	0	19.013	0.975	1036.65	1486.1	537.9	100.4	0.911	0.995	0.103	0.944	0.009	0.013	0.81	0.50
5	0	18.663	0.976	1037.91	1487.4	536.9	100.8	0.915	0.995	0.100	0.946	0.011	0.014	0.85	0.64
6	0	18.313	0.977	1038.05	1490.0	540.0	100.6	0.915	0.994	0.098	0.946	0.012	0.017	1.03	0.75
7	0	18.018	0.976	1037.83	1488.7	538.5	100.8	0.935	0.993	0.061	0.966	0.017	0.027	1.59	0.89
8	0	17.635	0.975	1036.89	1485.7	537.8	100.5	1.126	0.995	-0.256	1.124	0.017	0.057	2.88	0.66
9	0	17.316	0.973	1035.37	1488.1	537.7	100.9	1.175	0.997	-0.332	1.164	-0.002	0.065	3.21	0.11
10	0	17.004	0.975	1036.10	1488.7	538.5	100.5	1.144	0.995	-0.281	1.139	-0.008	0.039	1.97	0.38
11	0	16.644	0.974	1035.88	1488.5	538.2	100.8	1.093	0.999	-0.199	1.099	-0.009	0.018	0.92	0.49
12	0	16.316	0.974	1035.26	1488.4	538.0	100.5	1.057	1.000	-0.141	1.070	-0.003	0.008	0.43	0.18
13	0	15.997	0.973	1034.56	1489.1	537.7	100.8	1.034	1.001	-0.102	1.052	-0.005	0.001	0.08	0.25
14	0	15.651	0.974	1035.76	1490.8	539.0	100.8	1.012	1.000	-0.064	1.032	-0.003	-0.006	-0.36	0.17
15	0	15.317	0.974	1035.59	1489.4	538.4	100.7	1.002	1.000	-0.048	1.024	-0.001	-0.008	-0.44	0.06
16	0	15.018	0.974	1035.21	1489.3	538.6	100.9	0.998	1.000	-0.040	1.020	-0.001	-0.015	-0.82	0.04
17	0	14.653	0.974	1035.51	1487.8	537.8	100.7	0.983	1.000	-0.015	1.007	0.002	-0.022	-1.22	0.10
18	0	14.329	0.974	1035.32	1488.0	537.7	100.8	0.979	1.000	-0.009	1.004	0.004	-0.025	-1.44	0.23
19	0	14.024	0.973	1035.16	1487.7	537.5	100.8	0.973	1.000	0.000	0.999	0.004	-0.026	-1.48	0.23
20	0	13.610	0.974	1035.32	1488.4	538.1	100.9	0.968	1.000	0.011	0.994	0.007	-0.031	-1.78	0.39
21	0	13.254	0.974	1035.76	1488.5	538.1	100.8	0.982	1.000	0.056	0.971	0.011	-0.036	-2.10	0.65
22	0	13.021	0.974	1035.49	1488.7	538.3	100.8	0.936	1.000	0.066	0.966	0.018	-0.039	-2.29	1.06
23	0	13.021	0.974	1035.75	1488.9	538.3	100.6	0.932	1.000	0.074	0.962	0.024	-0.038	-2.27	1.43
24	0	12.648	0.974	1035.48	1488.1	537.9	100.7	0.929	1.001	0.080	0.960	0.032	-0.031	-1.85	1.88
25	0	12.348	0.974	1035.73	1488.2	538.1	100.6	0.925	1.000	0.086	0.956	0.036	-0.023	-1.37	2.16
26	0	11.978	0.974	1035.36	1488.4	535.1	100.4	0.928	1.001	0.082	0.959	0.031	-0.015	-0.91	1.87
27	0	11.682	0.974	1035.59	1487.8	537.9	100.9	0.928	1.000	0.081	0.959	0.028	-0.010	-0.62	1.65
28	0	11.338	0.974	1035.86	1487.7	537.9	100.6	0.929	1.000	0.080	0.960	0.024	-0.007	-0.40	1.42
29	0	10.947	0.974	1035.20	1488.1	537.8	100.5	0.930	1.000	0.077	0.961	0.020	-0.005	-0.27	1.19

AEUC PROPULSION WIND TUNNEL
TRANSONIC 16T

DATE
4-14-77

RUN SURVEY
4 204

Z -0.91
Y 4.00

INNER FLOWFIELD SURVEY SUMMARY

STATION	W	H	ALPHA	PT	Q	TI	ML	VM/VM	PT/PT	CPL	UL/VM	VL/VM	WL/VM	AAL	SWL
1	14.621	0.976	1027.91	1457.2	525.8	90.8	0.945	0.97	0.994	0.052	0.970	0.055	0.051	2.99	3.23
2	14.644	0.976	1027.79	1453.4	526.3	90.5	0.993	1.01	1.000	-0.030	1.011	0.057	0.054	3.07	3.21
3	14.662	0.976	1024.05	1454.8	526.8	90.7	1.010	1.03	0.998	-0.061	1.025	0.057	0.064	3.56	3.19
11	14.676	0.976	1024.24	1455.9	527.2	90.9	1.067	1.08	0.998	-0.156	1.072	0.058	0.074	3.97	3.08
13	17.644	0.977	1024.82	1455.7	527.5	90.8	1.079	1.09	0.998	-0.173	1.082	0.049	0.070	3.71	2.58
15	17.366	0.974	1026.09	1454.0	525.8	90.6	1.066	1.08	0.999	-0.158	1.075	0.042	0.064	3.41	2.24
17	17.024	0.975	1027.12	1455.1	526.4	90.9	1.055	1.07	1.000	-0.136	1.066	0.037	0.052	2.80	2.01
18	16.604	0.975	1027.11	1454.7	526.3	90.7	1.026	1.04	1.000	-0.046	1.042	0.035	0.035	1.94	1.44
21	16.345	0.975	1026.50	1454.3	526.1	90.5	0.992	1.01	1.000	-0.030	1.014	0.037	0.025	1.39	2.10
23	16.022	0.975	1026.54	1454.4	526.1	90.8	0.939	0.97	1.001	0.062	0.968	0.040	0.021	1.25	2.35
25	15.683	0.975	1027.12	1454.0	526.0	90.8	0.936	0.97	1.000	0.068	0.965	0.042	0.010	0.60	2.52
27	15.346	0.975	1026.90	1453.0	525.6	90.7	0.927	0.96	1.000	0.043	0.958	0.046	0.005	0.28	2.76
29	15.019	0.974	1026.53	1452.7	525.4	90.4	0.919	0.95	1.000	0.046	0.950	0.049	0.002	0.14	2.97
31	14.694	0.975	1027.36	1453.2	525.8	90.9	0.912	0.94	1.000	0.111	0.943	0.054	-0.001	-0.06	3.31
33	14.344	0.975	1027.61	1453.1	525.4	90.8	0.899	0.93	1.000	0.134	0.931	0.062	-0.005	-0.29	3.82
35	14.025	0.975	1027.09	1452.3	525.5	90.5	0.889	0.92	1.000	0.151	0.922	0.067	-0.002	-0.13	4.16
37	13.684	0.975	1027.35	1452.6	525.7	90.6	0.871	0.91	1.000	0.183	0.904	0.081	0.001	0.07	5.12
39	13.354	0.975	1027.37	1452.1	525.5	90.7	0.853	0.89	1.000	0.216	0.886	0.092	0.009	0.59	5.95
41	13.016	0.974	1026.71	1451.6	525.0	90.6	0.841	0.88	1.000	0.236	0.875	0.106	0.029	1.88	6.88
43	12.649	0.974	1026.53	1451.1	524.7	90.6	0.840	0.88	1.000	0.236	0.871	0.117	0.059	3.88	7.67
45	12.360	0.975	1026.92	1450.9	524.9	90.5	0.858	0.90	0.999	0.204	0.886	0.106	0.089	5.75	6.85
47	12.026	0.975	1027.17	1451.2	525.0	90.8	0.880	0.92	1.000	0.167	0.906	0.086	0.102	6.41	5.45
49	11.691	0.975	1027.33	1450.4	524.9	90.7	0.894	0.93	1.000	0.141	0.920	0.066	0.107	6.66	4.09
51	11.353	0.974	1026.52	1449.3	524.3	90.5	0.903	0.94	0.999	0.124	0.929	0.056	0.107	6.57	3.47
53	11.024	0.974	1026.95	1449.9	524.4	90.9	0.909	0.94	1.000	0.113	0.936	0.043	0.106	6.47	2.65

TEST PART MEX10-0 ALFMM WINDS Y Z DATE AEDC PROPULSION WIND TUNNEL
 1F-445 87 2-992 -5.11 & PCF 4.00 -1.09 -1.09 4 20A 4-14-77

INNER FLOWFIELD SURVEY SUMMARY

POINT GP	X	Y	Z	TT	ML	VPL/VH	PTL/PT	CPL	UL/VH	VL/VH	WL/VH	AAL	SWL
5	14.014	0.975	1026.49	1452.4	0.920	0.96	0.991	0.067	0.958	-0.030	-0.024	-1.43	-1.42
7	14.674	0.975	1026.65	1453.4	0.929	0.96	0.990	0.063	0.959	-0.028	-0.027	-1.64	-1.64
9	14.354	0.975	1026.34	1454.4	0.936	0.97	0.993	0.060	0.964	-0.023	-0.026	-1.56	-1.37
11	14.014	0.975	1026.92	1455.5	0.944	1.154	0.991	-0.323	1.151	-0.010	-0.016	-0.79	-0.49
13	17.004	0.975	1026.37	1455.4	1.250	1.23	0.996	-0.461	1.224	-0.014	0.064	3.19	-0.44
15	17.361	0.975	1026.61	1455.5	1.248	1.22	0.994	-0.445	1.217	-0.040	0.056	2.61	-1.89
17	17.004	0.976	1027.74	1455.3	1.214	1.21	0.991	-0.397	1.207	-0.044	0.031	1.49	-2.04
19	16.669	0.976	1027.50	1451.9	1.201	1.18	0.993	-0.370	1.182	-0.043	0.004	0.17	-2.09
21	15.990	0.976	1027.04	1450.5	1.193	1.18	0.994	-0.358	1.176	-0.043	-0.004	-0.21	-2.10
23	15.685	0.976	1026.98	1449.3	1.183	1.17	0.995	-0.343	1.169	-0.046	-0.012	-0.57	-2.25
25	15.351	0.975	1026.46	1448.7	1.169	1.16	0.996	-0.322	1.158	-0.047	-0.023	-1.15	-2.31
27	15.014	0.975	1026.45	1450.1	1.155	1.15	0.996	-0.300	1.147	-0.051	-0.033	-1.64	-2.54
29	14.669	0.974	1026.46	1452.9	1.156	1.15	0.996	-0.302	1.148	-0.053	-0.038	-1.47	-2.63
31	14.347	0.974	1026.20	1454.6	1.153	1.15	0.997	-0.297	1.145	-0.057	-0.044	-2.21	-2.47
33	14.006	0.974	1026.76	1454.9	1.143	1.14	0.996	-0.290	1.135	-0.062	-0.053	-2.47	-3.10
35	13.681	0.975	1026.37	1453.6	1.131	1.13	0.986	-0.276	1.126	-0.065	-0.057	-2.91	-3.29
37	13.330	0.975	1026.83	1453.2	1.125	1.14	0.993	-0.374	1.182	-0.049	-0.054	-2.63	-4.28
39	13.015	0.976	1027.14	1452.6	1.114	1.14	0.998	-0.356	1.166	-0.116	-0.121	-5.95	-5.67
41	12.692	0.976	1027.78	1451.9	1.110	1.13	0.999	-0.256	1.113	-0.000	-0.165	-4.46	-4.13
43	12.345	0.975	1026.45	1450.9	1.032	1.05	0.999	-0.098	1.035	-0.030	-0.164	-4.98	-1.67
45	12.015	0.975	1026.28	1449.8	0.965	0.99	1.000	0.016	0.981	0.003	-0.146	-4.45	0.15
47	11.669	0.975	1026.77	1450.0	0.939	0.97	1.000	0.064	0.959	0.013	-0.130	-7.70	0.81
49	11.348	0.976	1026.98	1449.5	0.934	0.96	1.000	0.071	0.957	0.019	-0.119	-7.11	1.11
51	11.016	0.975	1026.75	1448.9	0.932	0.96	1.000	0.075	0.956	0.019	-0.113	-6.72	1.13

TEST PART WEX10-0 ALFMM WINDS Y 7 MINS SURVEY DATE AEUC PROPLUSTION WIND TUNNEL
 TF-445 61 2.993 -0.01 4 PCT -4.00 -1.00 -4 212 4-13-77 TRANSONIC 161

INNER FLOWFIELD SURVEY SUMMARY

POINT GP	X	N	V1	PT	Q	TT	ML	VML/VM	PTL/PT	CPL	UL/VM	VL/VM	WL/VM	AAL	SWL
4	0	11.025	0.974	1035.43	1487.7	537.6	101.0	0.928	1.000	0.079	0.960	-0.003	-0.000	-0.01	-0.17
5	0	12.351	0.974	1035.39	1487.4	537.6	100.7	0.923	1.000	0.099	0.956	-0.015	-0.012	-0.69	-0.88
6	0	13.650	0.974	1035.56	1491.0	539.0	100.7	0.931	0.998	0.073	0.962	0.002	-0.028	-1.69	0.12
7	0	15.027	0.973	1035.28	1492.8	539.4	100.9	0.978	1.000	-0.009	1.004	0.018	-0.016	-0.93	1.03
8	0	16.321	0.974	1036.11	1492.0	539.6	100.7	1.046	0.999	-0.121	1.060	0.027	0.009	0.49	1.48
9	0	17.645	0.974	1035.54	1488.6	538.0	100.9	1.118	0.995	-0.246	1.119	0.019	0.041	2.12	0.98
10	0	19.018	0.974	1035.98	1486.5	537.6	100.7	0.925	0.995	0.077	0.957	0.011	-0.005	-0.29	0.63

TEST PAPT HEADUO ALPNO M LMO YI ZT MUN SUMVEY DATE AEDC PROPULSION WIND TUNNEL
 1F-005 47 2.097 0.014 PCI -0.02 -14.17 5 401 4-13-77 TRANSONIC 16T

INTER FLOWFIELD SURVEY SUMMARY

POINT GP	A1	M	Vx	PT	W	TT	ML	VTL/VM	PIL/PT	CPL	UT/VM	VT/VM	WI/VM	AATL	SWTL
5	0.047	0.976	1027.67	1453.6	526.4	90.4	0.943	0.97	1.001	0.057	0.972	0.005	0.000	0.03	0.32
7	-0.462	0.976	1027.62	1453.6	526.4	90.1	0.943	0.97	1.000	0.057	0.972	0.005	0.002	0.11	0.32
9	-0.957	0.976	1027.36	1453.4	526.2	90.1	0.944	0.97	1.000	0.056	0.972	0.005	0.002	0.09	0.32
11	-1.454	0.976	1027.24	1453.0	526.0	90.2	0.942	0.97	1.000	0.058	0.971	0.005	0.002	0.12	0.31
13	-1.950	0.976	1027.44	1453.3	526.1	90.4	0.943	0.97	1.001	0.057	0.972	0.006	0.005	0.31	0.32
15	-2.443	0.976	1027.30	1453.2	526.1	90.2	0.954	0.99	1.001	0.031	0.985	0.006	0.003	0.15	0.34
17	-2.936	0.975	1027.08	1452.8	525.8	90.2	0.944	0.97	1.000	0.055	0.972	0.004	0.003	0.20	0.26
19	-3.471	0.975	1026.97	1452.6	525.7	90.2	0.944	0.97	1.000	0.055	0.973	0.006	0.004	0.23	0.35
21	-3.962	0.975	1026.91	1452.4	525.8	90.3	0.962	0.99	1.001	0.023	0.984	0.004	0.004	0.20	0.21
23	-4.469	0.975	1026.97	1452.4	525.7	90.1	0.959	0.99	1.001	0.028	0.986	0.006	0.004	0.23	0.32
25	-4.966	0.975	1026.85	1452.2	525.5	90.2	0.961	0.99	1.000	0.026	0.987	0.006	0.004	0.25	0.33
27	-5.469	0.975	1026.81	1452.4	525.5	90.3	0.961	0.99	1.000	0.025	0.988	0.006	0.004	0.25	0.33
29	-5.966	0.975	1026.86	1452.6	525.6	90.4	0.961	0.99	1.000	0.025	0.988	0.006	0.004	0.25	0.37

TEST PART 56 HX10-6 ALFDM 3.000 -0.01 4 PCT 16.16 -0.04 5 403

DATE 4-13-77 AEDC PROPULSION WIND TUNNEL TRANSONIC 1A1

DATE 4-13-77 AEDC PROPULSION WIND TUNNEL TRANSONIC 1A1

DATE 4-13-77 AEDC PROPULSION WIND TUNNEL TRANSONIC 1A1

POINT GP	AT	M	VM	MT	U	TT	ML	VTL/VM	PTL/PT	CPL	UT/VM	VT/VM	WT/VM	AATL	SWTL
1	60	24.087	0.975	1026.10	1454.9	89.4	0.963	0.99	1.001	0.022	0.989	0.011	0.003	0.18	0.63
2	60	23.506	0.975	1026.31	1453.5	89.6	0.959	0.99	1.000	0.029	0.986	0.009	0.004	0.25	0.51
3	60	23.006	0.975	1026.11	1453.3	89.4	0.961	0.99	1.001	0.026	0.987	0.011	0.005	0.27	0.62
4	60	22.506	0.976	1026.72	1453.7	89.4	0.960	0.99	1.001	0.024	0.986	0.011	0.004	0.24	0.61
5	60	22.033	0.976	1026.77	1453.8	89.6	0.958	0.99	1.001	0.031	0.985	0.011	0.004	0.26	0.61
6	60	21.442	0.976	1026.84	1453.2	89.4	0.968	0.99	1.000	0.013	0.993	0.010	0.012	0.70	0.59
7	60	20.978	0.976	1027.21	1453.7	89.5	0.959	0.99	1.001	0.031	0.985	0.010	0.005	0.27	0.58
8	60	20.477	0.976	1027.44	1453.4	89.5	0.944	0.97	1.001	0.051	0.972	0.009	0.005	0.27	0.54
9	60	20.016	0.976	1026.53	1453.0	89.5	0.944	0.97	1.000	0.056	0.972	0.009	0.005	0.27	0.51
10	60	19.438	0.976	1026.88	1452.9	89.4	0.961	0.99	1.000	0.026	0.987	0.008	0.005	0.26	0.45
11	60	19.038	0.976	1027.10	1453.3	89.4	0.972	1.00	1.001	0.009	0.996	0.006	0.007	0.40	0.36
12	60	18.504	0.976	1026.76	1452.4	89.1	0.945	1.01	1.000	-0.015	1.008	0.006	0.010	0.54	0.36
13	60	18.038	0.976	1027.28	1453.4	89.6	0.995	1.02	1.001	-0.032	1.016	0.010	0.010	0.54	0.55
14	60	17.400	0.976	1026.74	1453.0	89.4	0.988	1.01	1.000	-0.020	1.010	0.012	0.009	0.50	0.67
15	60	16.832	0.975	1025.99	1452.3	89.4	0.972	1.00	1.000	0.006	0.997	0.018	0.008	0.44	0.04
16	60	16.442	0.976	1026.73	1452.8	89.4	0.974	1.00	1.001	-0.005	1.003	0.017	0.007	0.34	0.95
17	60	16.073	0.975	1026.55	1452.5	89.7	0.970	1.00	1.001	0.010	0.995	0.019	0.007	0.38	1.11
18	60	15.551	0.975	1026.37	1452.7	89.5	0.973	1.00	1.001	0.005	0.998	0.018	0.005	0.30	1.04
19	60	15.052	0.976	1026.56	1452.3	89.3	0.976	1.00	1.001	0.005	0.998	0.018	0.005	0.30	1.04
20	60	14.557	0.976	1027.00	1452.4	89.4	0.970	0.99	1.000	0.010	0.995	0.019	0.005	0.29	1.08
21	60	14.031	0.975	1026.54	1452.3	89.6	0.944	0.97	0.999	0.054	0.972	0.017	0.005	0.29	1.00
22	60	13.590	0.976	1027.14	1452.5	89.4	0.969	0.99	1.002	0.015	0.993	0.017	0.006	0.34	1.00
23	60	12.961	0.977	1027.66	1452.9	89.5	0.967	0.99	1.001	0.018	0.992	0.017	0.005	0.27	0.97
24	60	12.442	0.975	1026.68	1452.3	89.6	0.965	0.99	1.001	0.019	0.991	0.017	0.005	0.24	0.97
25	60	11.958	0.976	1027.08	1452.7	89.4	0.941	0.97	0.999	0.057	0.970	0.016	0.007	0.43	0.93
26	60	11.442	0.976	1026.96	1452.9	89.3	0.967	0.99	1.001	0.018	0.992	0.016	0.005	0.27	0.91
27	60	10.997	0.976	1026.26	1451.7	89.1	0.961	0.99	1.000	0.025	0.988	0.015	0.006	0.35	0.88
28	60	10.441	0.976	1026.70	1452.0	89.1	0.949	0.99	1.000	0.012	0.944	0.015	0.006	0.34	0.89
29	60	9.959	0.976	1026.99	1452.0	89.3	0.971	1.00	1.000	0.010	0.995	0.015	0.006	0.34	0.87
30	60	9.473	0.976	1026.52	1451.5	89.2	0.973	1.00	1.001	0.005	0.998	0.016	0.006	0.37	0.91
31	60	8.959	0.976	1026.53	1451.9	89.4	0.973	1.00	1.001	0.005	0.998	0.015	0.007	0.42	0.86
32	60	8.440	0.976	1027.31	1452.6	89.4	0.978	1.00	1.000	-0.003	1.001	0.017	0.007	0.42	0.95
33	60	7.940	0.975	1027.31	1451.0	89.1	0.972	1.00	1.000	0.007	0.997	0.017	0.007	0.40	0.97
34	60	7.449	0.976	1026.96	1452.5	89.4	0.976	1.00	1.001	-0.002	1.001	0.017	0.006	0.36	0.97
35	60	6.925	0.976	1027.10	1452.4	89.4	0.975	1.00	1.001	0.003	0.999	0.019	0.006	0.37	1.09
36	60	6.434	0.976	1027.04	1452.3	89.4	0.971	1.00	1.000	0.009	0.994	0.019	0.006	0.33	1.11
37	60	5.927	0.976	1027.25	1452.5	89.4	0.971	1.00	1.000	0.010	0.995	0.020	0.006	0.35	1.16
38	60	5.435	0.976	1026.70	1452.2	89.3	0.970	0.99	1.001	0.012	0.994	0.020	0.005	0.30	1.16
39	60	4.949	0.976	1027.01	1452.6	89.6	0.971	1.00	1.001	0.005	0.996	0.020	0.007	0.41	1.15
40	60	4.442	0.976	1027.16	1452.5	89.3	0.966	0.99	1.001	0.020	0.990	0.020	0.005	0.30	1.13
41	60	3.949	0.976	1027.30	1452.6	89.5	0.966	0.99	1.001	0.019	0.991	0.020	0.005	0.30	1.13
42	60	3.449	0.976	1026.90	1452.6	89.6	0.965	0.99	1.001	0.019	0.991	0.020	0.001	0.08	1.13
43	60	2.949	0.976	1027.55	1452.7	89.6	0.962	0.99	1.001	0.026	0.987	0.019	0.005	0.28	1.11
44	60	2.440	0.976	1027.37	1452.4	89.4	0.949	0.99	1.001	0.013	0.944	0.019	0.012	0.67	1.09
45	60	1.940	0.976	1026.61	1452.0	89.1	0.940	0.97	0.999	0.054	0.969	0.018	0.004	0.24	1.09
46	60	1.442	0.976	1027.34	1452.5	89.7	0.942	0.97	1.001	0.061	0.970	0.018	0.001	0.09	1.05
47	60	0.941	0.976	1027.05	1452.5	89.5	0.944	0.97	1.001	0.056	0.972	0.017	0.005	0.30	1.02
48	60	0.400	0.976	1026.75	1452.3	89.3	0.944	0.97	1.001	0.057	0.972	0.017	0.005	0.29	1.01
49	60	-0.104	0.975	1026.50	1452.4	89.6	0.943	0.97	1.001	0.057	0.972	0.017	0.005	0.30	0.99
50	60	-0.604	0.975	1026.70	1451.8	89.2	0.943	0.97	1.000	0.058	0.973	0.016	0.006	0.34	0.94
51	60	-1.104	0.976	1026.76	1452.5	89.5	0.944	0.97	1.000	0.055	0.973	0.014	0.006	0.34	0.83
52	60	-1.604	0.975	1026.30	1452.2	89.5	0.944	0.97	1.001	0.055	0.973	0.015	0.006	0.35	0.89
53	60	-2.104	0.975	1026.15	1452.1	89.5	0.944	0.97	1.001	0.055	0.973	0.015	0.006	0.36	0.90
54	60	-2.604	0.975	1026.23	1451.9	89.6	0.944	0.97	1.000	0.054	0.973	0.015	0.006	0.66	0.89
55	60	-3.105	0.975	1026.08	1452.0	89.7	0.943	0.97	1.002	0.058	0.972	0.014	0.011	0.63	0.84
56	60	-3.602	0.975	1026.68	1451.6	89.4	0.944	0.97	1.001	0.054	0.973	0.014	0.006	0.37	0.87
57	60	-4.104	0.975	1026.17	1452.0	89.9	0.979	1.00	1.004	-0.001	1.003	0.014	0.007	0.39	0.82
58	60	-4.609	0.974	1025.97	1452.0	90.0	0.944	0.97	1.000	0.053	0.974	0.014	0.006	0.35	0.85
59	60	-5.112	0.974	1025.86	1451.4	89.5	0.959	0.99	1.001	0.026	0.987	0.014	0.006	0.37	0.83

AEUC PROPULSION WIND TUNNEL
TRANSONIC 1A

DATE
4-14-77

MAIN SURVEY
UNITED FLOWFLU SURVEY SUMMARY

TEST PART HELICO ALPH
74 7.991 5.07 & PCT

VI 0.02
ZT -14.05
S 401

POINT GP	AT	N	VM	PT	W	IT	HL	VTL/VM	MIL/PT	CPL	UT/VM	VT/VM	WI/VM	AATL	SMIL
5	24.000	0.975	1027.43	1454.2	526.3	90.4	0.972	1.00	1.000	0.006	0.993	0.005	0.085	4.91	0.31
7	24.531	0.975	1027.07	1454.3	526.6	90.7	0.975	1.00	1.000	0.001	0.996	0.006	0.085	4.88	0.36
9	23.045	0.976	1028.07	1454.7	527.4	90.7	0.975	1.00	1.000	0.001	0.996	0.004	0.085	4.87	0.25
11	22.540	0.975	1026.44	1454.1	525.7	90.7	0.971	1.00	1.000	0.005	0.993	0.007	0.086	4.93	0.38
13	22.039	0.975	1025.85	1453.3	526.4	90.6	0.981	1.00	1.000	-0.011	1.002	0.010	0.086	4.88	0.58
15	21.534	0.975	1027.43	1454.3	526.6	90.7	0.978	1.00	1.000	-0.004	0.998	0.007	0.086	4.94	0.42
17	21.036	0.975	1027.59	1455.4	526.8	90.7	0.983	1.00	1.000	-0.013	1.003	0.007	0.086	4.93	0.41
19	20.545	0.975	1027.47	1455.4	526.9	91.0	1.008	1.03	1.003	-0.051	1.024	0.007	0.086	4.82	0.41
21	20.033	0.975	1027.21	1454.7	526.4	90.7	0.988	1.01	1.000	-0.021	1.007	0.007	0.084	4.74	0.39
23	19.530	0.975	1027.00	1454.3	526.2	90.4	0.947	1.01	1.000	-0.020	1.007	0.007	0.084	4.79	0.39
25	19.028	0.975	1027.16	1454.4	526.2	90.8	0.985	1.01	1.000	-0.014	1.006	0.007	0.083	4.72	0.40
27	18.542	0.975	1027.44	1454.6	526.4	90.8	0.980	1.00	1.000	-0.007	1.001	0.004	0.082	4.67	0.25
29	18.036	0.975	1027.22	1453.8	526.1	90.5	0.977	1.00	1.000	-0.003	0.998	0.005	0.081	4.63	0.31
31	17.521	0.975	1027.61	1454.0	526.3	90.8	0.976	1.00	1.000	-0.002	0.998	0.008	0.081	4.62	0.45
33	17.045	0.976	1028.39	1454.0	526.5	90.9	0.973	1.00	1.000	0.005	0.994	0.007	0.080	4.63	0.39
35	16.541	0.976	1028.06	1454.1	526.6	90.6	0.964	0.99	1.001	0.021	0.987	0.012	0.081	4.67	0.68
37	16.023	0.976	1028.26	1453.6	526.5	90.7	0.968	0.99	1.000	0.014	0.990	0.007	0.080	4.64	0.41
39	15.524	0.976	1028.21	1453.3	526.3	90.4	0.963	0.99	1.000	0.022	0.986	0.007	0.081	4.71	0.43
41	15.031	0.976	1027.96	1453.4	526.2	90.9	0.944	0.97	1.000	0.054	0.970	0.005	0.081	4.60	0.28
43	14.534	0.976	1028.21	1453.3	526.3	90.9	0.972	1.00	1.001	0.008	0.993	0.007	0.080	4.61	0.42
45	14.022	0.976	1027.80	1452.7	526.0	90.6	0.958	0.99	1.000	0.030	0.982	0.007	0.083	4.84	0.40
47	13.534	0.976	1027.44	1452.7	525.9	90.8	0.942	0.97	1.000	0.058	0.967	0.008	0.083	4.92	0.50
49	13.033	0.975	1027.79	1452.9	525.9	90.9	0.944	0.97	1.000	0.055	0.969	0.007	0.085	4.99	0.39
51	12.543	0.976	1028.02	1452.4	526.0	90.7	0.945	0.97	1.000	0.055	0.969	0.007	0.085	5.02	0.42
53	12.034	0.976	1027.67	1452.1	525.7	90.6	0.958	0.99	1.000	0.030	0.981	0.007	0.086	5.02	0.42
55	11.532	0.976	1027.94	1452.4	526.0	90.8	0.954	0.99	1.000	0.028	0.982	0.008	0.086	5.03	0.44
57	11.033	0.975	1027.57	1452.5	525.7	90.9	0.961	0.99	1.000	0.024	0.984	0.008	0.089	5.14	0.44
59	10.531	0.976	1028.65	1452.3	526.2	90.8	0.967	0.99	0.999	0.016	0.988	0.008	0.087	5.05	0.45
61	10.024	0.977	1028.69	1452.7	526.6	90.4	0.971	0.99	1.000	0.010	0.991	0.007	0.089	5.12	0.41
63	9.529	0.974	1026.37	1452.1	524.9	90.9	0.970	1.00	1.000	0.007	0.993	0.007	0.089	5.11	0.43

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AEBC PROPULSION WIND TUNNEL
TRANSONIC 161

DATE
4-14-77

MINI SURVEY
401
FIELD SURVEY SUMMARY

TEST PART HEADLINE ALPH 4140
1F-445 75 2.930 5.07 4.901
VI 0.03 -14.04

POINT	GP	AI	IA	Vm	VI	TI	ML	VTL/VH	PIL/PI	CPL	UT/VH	VT/VH	WT/VH	AATL	SMIL
1	31	9.074	0.976	1027.15	1451.1	90.7	0.940	1.00	1.000	-0.007	1.000	0.005	0.009	5.07	0.28
3	32	8.525	0.975	1027.19	1451.4	90.5	0.973	1.00	1.000	0.004	0.994	0.007	0.008	5.08	0.42
5	33	8.044	0.974	1026.61	1451.0	90.7	0.975	1.00	1.000	-0.001	0.997	0.008	0.009	5.05	0.47
7	34	7.534	0.975	1027.46	1451.9	90.7	0.940	1.00	1.000	-0.007	1.000	0.008	0.007	4.99	0.44
9	35	7.030	0.975	1026.69	1451.0	90.3	0.973	1.00	1.000	0.002	0.995	0.008	0.006	4.97	0.45
11	36	6.534	0.975	1026.85	1451.7	90.7	0.967	0.99	1.000	0.014	0.989	0.006	0.006	4.97	0.35
13	37	5.024	0.975	1027.54	1451.7	90.7	0.966	0.99	1.000	0.016	0.988	0.008	0.008	5.07	0.45
15	38	5.537	0.975	1027.22	1451.1	90.7	0.965	0.99	1.000	0.014	0.987	0.007	0.006	4.96	0.43
17	39	5.037	0.975	1027.53	1451.5	90.7	0.967	0.99	1.000	0.014	0.989	0.008	0.005	4.93	0.47
19	40	4.537	0.975	1027.39	1451.4	90.6	0.962	0.99	1.000	0.023	0.985	0.007	0.006	4.99	0.43
21	41	4.034	0.976	1027.48	1451.2	90.4	0.961	0.99	1.000	0.025	0.984	0.008	0.006	4.99	0.46
23	42	3.529	0.975	1027.25	1450.8	90.7	0.960	0.99	1.000	0.027	0.983	0.006	0.007	5.05	0.35
25	43	3.035	0.975	1027.37	1451.2	90.7	0.960	0.99	1.000	0.026	0.983	0.008	0.007	5.05	0.47
27	44	2.543	0.975	1027.23	1451.3	90.6	0.981	1.00	1.004	-0.003	1.001	0.008	0.009	5.07	0.45
29	45	2.046	0.975	1027.31	1451.1	90.8	0.958	0.99	1.000	0.029	0.982	0.008	0.008	5.14	0.44
31	46	1.548	0.975	1027.20	1450.7	90.6	0.959	0.99	1.000	0.029	0.982	0.008	0.009	5.14	0.44
33	47	1.048	0.975	1027.33	1451.3	90.7	0.944	0.97	1.000	0.054	0.969	0.008	0.008	5.27	0.46
35	48	0.545	0.975	1027.35	1451.0	90.8	0.958	0.99	1.000	0.029	0.981	0.007	0.009	5.24	0.41
37	49	0.032	0.975	1027.65	1450.6	90.7	0.958	0.99	1.000	0.030	0.981	0.007	0.009	5.27	0.43
39	50	-0.454	0.975	1026.90	1450.7	90.7	0.959	0.99	1.000	0.027	0.982	0.008	0.009	5.29	0.48
41	51	-0.958	0.975	1027.34	1450.8	90.8	0.962	0.99	1.000	0.023	0.984	0.008	0.009	5.34	0.45
43	52	-1.486	0.975	1027.46	1451.0	90.7	0.970	1.00	1.001	0.010	0.991	0.004	0.009	5.32	0.25
45	53	-1.969	0.975	1027.45	1450.6	90.7	0.966	0.99	1.000	0.017	0.987	0.008	0.009	5.36	0.48
47	54	-2.466	0.975	1027.59	1450.7	90.7	0.963	0.99	1.000	0.020	0.985	0.008	0.009	5.39	0.47
49	55	-2.963	0.975	1027.35	1451.0	90.8	0.972	1.00	1.000	0.006	0.993	0.005	0.009	5.36	0.28
51	56	-3.473	0.975	1026.75	1450.4	90.5	0.967	0.99	1.000	0.014	0.989	0.008	0.009	5.39	0.48
53	57	-3.972	0.975	1026.90	1450.7	90.7	0.991	1.01	1.005	-0.021	1.010	0.008	0.009	5.34	0.46
55	58	-4.466	0.974	1026.68	1450.3	90.7	0.966	0.99	1.000	0.014	0.988	0.008	0.009	5.42	0.48
57	59	-4.925	0.974	1026.74	1450.3	90.7	0.970	1.00	1.000	0.009	0.991	0.008	0.009	5.36	0.49
59	60	-5.429	0.974	1026.53	1450.0	90.5	0.968	0.99	1.000	0.011	0.990	0.009	0.009	5.39	0.50

TEST PART MEX10-0 ALPMM WIND 5.07 & PCF 3.001

DATE 4-14-77

AEDC PROPUSSION WIND TUNNEL TRANSONIC 16T

DATE 4-14-77

INTEK FLOWFIELD SURVEY SUMMARY

POINT	OP	AI	VI	PT	U	IT	"L	VTL/VH	PIL/PT	CPL	UT/VH	VT/VH	WT/VH	AATL	SWTL
1	25	26.051	0.973	1025.30	1455.5	525.4	90.3	0.969	1.00	1.001	0.997	0.007	-0.005	-0.28	0.40
2	25	23.028	0.973	1025.16	1458.1	526.4	90.1	0.984	1.01	1.004	1.014	0.007	-0.005	-0.29	0.41
3	25	21.914	0.975	1027.26	1460.2	524.5	90.4	0.976	1.00	1.001	1.000	0.007	-0.006	-0.32	0.42
4	25	21.143	0.975	1025.64	1460.3	527.0	90.5	0.970	1.00	1.001	0.997	0.007	-0.003	-0.19	0.40
5	25	19.439	0.974	1026.02	1459.4	527.7	90.4	0.982	1.01	1.000	1.007	0.005	-0.004	-0.23	0.28
6	25	19.052	0.974	1025.40	1459.1	527.3	90.1	0.984	1.01	1.000	1.009	0.007	-0.005	-0.30	0.42
7	25	17.970	0.974	1026.29	1460.6	528.1	90.5	0.992	1.02	1.001	1.015	0.006	-0.007	-0.39	0.31
8	25	17.052	0.974	1026.22	1461.0	528.3	90.4	0.979	1.00	1.001	1.004	0.007	-0.008	-0.47	0.42
9	25	15.949	0.975	1026.35	1460.3	528.2	90.1	0.969	1.00	1.001	0.995	0.007	-0.009	-0.51	0.41
10	25	14.933	0.974	1026.09	1460.4	527.9	90.5	0.962	0.99	1.001	0.990	0.007	-0.008	-0.44	0.42
11	25	13.976	0.974	1025.37	1460.9	527.8	90.4	0.944	0.97	1.001	0.974	0.007	-0.007	-0.41	0.41
12	25	13.049	0.974	1026.00	1460.4	527.9	90.4	0.943	0.97	1.000	0.973	0.007	-0.006	-0.35	0.38
13	25	11.921	0.974	1025.76	1460.5	527.8	90.4	0.944	0.97	1.001	0.974	0.007	-0.004	-0.22	0.43
14	25	11.064	0.975	1027.06	1460.9	528.0	90.1	0.969	0.99	1.001	0.994	0.012	-0.003	-0.17	0.69
15	25	9.924	0.976	1027.53	1461.8	529.2	90.5	0.965	0.99	1.001	0.991	0.007	-0.001	-0.06	0.41
16	25	8.942	0.976	1027.35	1462.0	529.3	90.3	0.969	0.99	1.001	0.994	0.008	-0.001	-0.03	0.45
17	25	7.963	0.976	1027.61	1463.4	529.9	90.4	0.977	1.00	1.001	1.001	0.007	-0.001	-0.06	0.39
18	25	6.887	0.976	1027.76	1463.3	529.9	90.4	0.972	1.00	1.001	0.996	0.010	-0.002	-0.10	0.58
20	25	5.945	0.977	1026.48	1460.2	523.4	90.4	0.940	0.97	0.999	0.972	0.008	-0.003	-0.16	0.45
21	25	4.959	0.974	1025.56	1451.8	524.7	90.2	0.968	1.00	1.000	0.995	0.007	-0.002	-0.14	0.40
22	25	3.991	0.974	1025.99	1452.0	525.2	90.4	0.964	0.99	1.001	0.992	0.007	-0.002	-0.13	0.38
23	25	3.045	0.973	1024.93	1452.8	524.7	90.1	0.959	0.99	1.001	0.988	0.007	-0.002	-0.12	0.41
24	25	1.918	0.974	1026.03	1456.3	526.5	90.3	0.968	0.99	1.001	0.995	0.007	-0.001	-0.08	0.41
25	25	0.984	0.975	1027.07	1460.4	528.5	90.4	0.969	0.99	1.001	0.994	0.007	-0.000	-0.00	0.39
26	25	0.059	0.974	1025.25	1461.6	528.5	90.4	0.963	0.99	1.001	0.990	0.007	-0.000	-0.02	0.38
27	25	-0.990	0.974	1026.45	1464.5	529.6	90.5	0.960	0.99	1.001	0.988	0.007	0.002	0.13	0.39
28	25	-1.938	0.975	1026.47	1462.9	529.1	90.3	0.944	0.97	1.000	0.973	0.007	0.003	0.16	0.41
29	25	-3.028	0.974	1026.45	1459.6	527.9	90.4	0.959	0.99	1.000	0.987	0.004	0.003	0.19	0.25
30	25	-3.940	0.975	1025.18	1456.7	526.3	90.1	0.944	0.97	1.000	0.974	0.007	0.003	0.19	0.44
31	25	-5.034	0.973	1025.04	1455.2	525.6	90.3	0.964	0.99	1.000	0.993	0.008	0.007	0.40	0.46

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TEST PAHT HEX10-6 ALPHA WIND YI 21 RUN SURVEY DATE AEDC PROPULSION WIND TUNNEL
 TF-445 H3 2.466 5.06 PCI 14.16 0.0 5 403 *-14-77 TRANSONIC 16T

OUTER FLOWFIELD SURVEY SUMMARY

POINT GP	AI	II	VM	MI	U	IT	ML	VTL/VM	PIL/PT	CPL	UT/VM	VI/VM	WI/VM	AATL	SMTL
1 25	-4.568	0.976	1027.48	1456.1	523.6	90.4	0.962	0.99	1.000	0.024	0.988	0.017	0.006	0.32	1.00
2 25	-3.956	0.974	1026.74	1444.5	522.4	90.7	0.960	0.99	1.000	0.025	0.988	0.017	0.006	0.32	0.99
3 25	-2.959	0.974	1025.79	1435.2	523.3	90.5	0.968	1.00	1.001	0.011	0.995	0.017	0.006	0.32	0.97
4 25	-2.074	0.975	1027.10	1446.9	523.5	90.7	0.968	0.99	1.001	0.016	0.992	0.017	0.005	0.31	1.00
5 25	-0.948	0.976	1027.60	1438.7	524.7	90.3	0.968	0.99	1.001	0.016	0.993	0.019	0.005	0.31	1.09
6 25	0.052	0.976	1027.72	1430.4	525.1	90.7	0.962	0.99	1.001	0.025	0.988	0.020	0.005	0.30	1.14
7 25	1.145	0.976	1027.54	1452.2	525.8	90.4	0.971	1.00	1.001	0.009	0.996	0.021	0.007	0.39	1.19
8 25	1.948	0.977	1029.06	1452.5	526.6	90.7	0.963	0.99	1.001	0.026	0.988	0.021	0.005	0.28	1.20
9 25	3.033	0.975	1026.58	1449.0	524.4	90.3	0.943	0.97	1.000	0.056	0.972	0.023	0.005	0.30	1.33
10 25	3.945	0.975	1027.40	1447.0	523.4	90.5	0.959	0.99	1.000	0.028	0.986	0.022	0.005	0.30	1.30
11 25	4.856	0.976	1027.62	1445.1	523.2	90.4	0.965	0.99	1.000	0.019	0.990	0.023	0.004	0.25	1.34
12 25	6.165	0.975	1027.17	1442.5	522.0	90.6	0.970	1.00	1.000	0.009	0.995	0.023	0.006	0.36	1.33
13 25	7.037	0.975	1026.60	1440.5	521.1	90.2	0.974	1.00	1.002	0.004	0.999	0.022	0.010	0.58	1.25
14 25	8.029	0.975	1027.59	1439.1	520.9	90.7	0.982	1.01	1.001	-0.011	1.006	0.019	0.006	0.35	1.10
15 25	9.029	0.975	1026.85	1437.4	519.4	90.7	0.973	1.00	1.001	0.004	0.998	0.018	0.006	0.36	1.04
16 25	10.029	0.975	1027.38	1435.8	519.7	90.5	0.976	1.00	1.001	0.000	1.000	0.020	0.008	0.48	1.16
17 25	10.966	0.974	1026.85	1435.6	519.2	90.8	0.969	1.00	1.001	0.011	0.995	0.021	0.006	0.36	1.22
18 25	11.946	0.975	1026.66	1435.2	519.2	90.4	0.965	0.99	1.001	0.017	0.992	0.022	0.007	0.41	1.29
19 25	13.041	0.975	1027.16	1435.6	519.5	90.6	0.964	0.99	1.001	0.021	0.990	0.023	0.006	0.35	1.34
20 25	14.017	0.975	1027.13	1439.9	521.0	90.7	0.980	1.00	1.001	-0.006	1.004	0.026	0.009	0.51	1.46
21 25	15.066	0.975	1027.39	1442.2	521.9	90.8	0.982	1.01	1.001	-0.009	1.005	0.027	0.010	0.55	1.52
22 25	15.995	0.975	1027.30	1442.4	522.3	90.4	0.981	1.00	1.001	-0.008	1.004	0.027	0.011	0.63	1.55
23 25	17.146	0.975	1027.53	1444.8	522.9	90.7	0.992	1.01	1.001	-0.027	1.014	0.026	0.014	0.79	1.46
24 25	17.919	0.975	1027.51	1445.3	523.1	90.7	1.011	1.03	1.001	-0.060	1.030	0.022	0.016	0.90	1.22
25 25	19.041	0.976	1028.20	1444.2	523.1	90.6	1.039	1.05	1.001	-0.105	1.053	0.014	0.020	1.08	0.76
26 25	19.783	0.976	1028.15	1443.2	522.7	90.6	1.060	1.07	1.000	-0.141	1.070	0.006	0.023	1.24	0.34
27 25	21.042	0.975	1027.18	1440.9	521.3	90.7	0.939	0.97	1.000	0.062	0.968	0.009	0.027	1.59	0.55
28 25	21.964	0.974	1026.35	1440.1	520.7	90.6	0.967	0.99	1.003	0.017	0.993	0.013	0.026	1.48	0.74
29 25	22.937	0.975	1026.72	1439.3	520.6	90.5	0.971	1.00	1.000	0.007	0.996	0.007	0.025	1.42	0.43
30 25	23.845	0.974	1026.75	1439.4	520.5	90.8	0.963	0.99	1.000	0.020	0.990	0.015	0.024	1.38	0.85

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TEST PART MEX10-0 ALFAM W145
 YF-445 85 2.997 -5.12 * PCI

DATE
 4-14-77

AFJIC PROPULSION WIND TUNNEL
 TRANSONIC 14T

NUM SURVEY
 5 501

WJTEM FLOWFIELD SUPPLY SUMMARY

POINT GP	XT	M	VM	PT	W	TI	ML	VTL/VM	PIL/PT	CPL	UT/VM	VT/VM	WT/VM	AATL	SRTL
0 25	-5.027	0.975	1027.14	1463.9	529.6	90.8	0.966	0.89	1.001	0.017	0.992	0.007	0.006	0.33	0.43
1 25	-4.174	0.975	1027.12	1460.4	521.2	90.5	0.972	1.00	1.001	0.007	0.997	0.008	0.006	0.33	0.46
2 25	-3.024	0.976	1025.12	1452.5	524.4	90.8	0.986	1.01	1.003	-0.020	1.012	0.008	0.005	0.29	0.46
4 25	-1.975	0.974	1025.14	1452.0	524.9	90.5	0.941	0.97	1.000	0.057	0.971	0.008	0.004	0.25	0.48
5 25	-1.056	0.974	1025.01	1452.3	524.9	90.6	0.985	0.99	1.001	0.016	0.992	0.010	0.004	0.22	0.58
6 25	-0.073	0.977	1024.74	1454.8	527.3	90.6	0.962	0.99	1.001	0.027	0.997	0.008	0.002	0.12	0.45
7 25	1.017	0.978	1024.53	1450.8	525.7	90.7	0.941	0.97	1.000	0.061	0.969	0.007	0.000	0.01	0.44
8 25	2.031	0.973	1025.31	1451.2	526.1	90.6	0.958	0.99	1.001	0.027	0.987	0.008	-0.000	-0.01	0.44
9 25	3.060	0.975	1027.67	1454.3	525.4	90.8	0.967	0.99	1.001	0.017	0.993	0.007	-0.002	-0.12	0.38
10 25	4.064	0.977	1024.78	1452.7	526.5	90.7	0.968	0.99	1.000	0.015	0.992	0.007	-0.003	-0.16	0.42
11 25	4.977	0.977	1024.60	1451.3	526.0	90.7	0.971	1.00	1.000	0.010	0.995	0.008	-0.003	-0.17	0.45
12 25	4.385	0.976	1024.12	1450.4	525.3	90.7	0.977	1.00	1.000	-0.001	1.001	0.007	-0.003	-0.14	0.43
14 25	6.989	0.975	1027.09	1452.3	525.5	90.6	0.992	1.01	1.001	-0.024	1.014	0.012	0.000	0.02	0.68
15 25	7.944	0.975	1027.04	1452.4	525.5	90.6	0.992	1.01	1.000	-0.029	1.015	0.005	0.002	0.11	0.26
16 25	8.979	0.976	1027.46	1451.7	525.6	90.4	0.985	1.01	1.000	-0.016	1.008	0.008	0.005	0.27	0.44
17 25	10.017	0.976	1027.84	1451.1	525.7	90.1	0.981	1.00	1.001	-0.007	1.004	0.008	0.002	0.14	0.45
18 25	10.943	0.974	1026.50	1450.6	524.9	89.8	0.968	0.99	1.000	0.013	0.994	0.007	0.002	0.12	0.41
19 25	11.942	0.974	1026.45	1450.9	524.8	90.1	0.977	1.00	1.001	-0.003	1.002	0.008	0.003	0.16	0.45
20 25	13.007	0.975	1026.36	1452.0	525.2	90.1	0.982	1.01	1.000	-0.013	1.007	0.008	0.002	0.13	0.43
21 25	13.991	0.975	1026.54	1452.7	525.6	89.7	0.992	1.01	1.001	-0.028	1.014	0.006	0.003	0.19	0.34
22 25	14.978	0.974	1025.66	1452.3	525.2	89.7	0.996	1.02	1.001	-0.036	1.018	0.008	0.006	0.32	0.47
23 25	15.973	0.975	1026.28	1453.3	525.6	90.1	1.002	1.02	1.001	-0.046	1.023	0.008	0.009	0.51	0.47
24 25	17.036	0.974	1025.72	1453.7	525.5	90.0	1.010	1.03	1.001	-0.060	1.030	0.009	0.014	0.80	0.49
25 25	17.940	0.974	1025.43	1454.1	525.5	90.1	1.018	1.04	1.000	-0.075	1.037	0.009	0.018	1.00	0.48
26 25	19.023	0.974	1025.52	1454.6	525.8	90.0	1.037	1.05	1.001	-0.107	1.054	0.009	0.024	1.31	0.48
27 25	20.019	0.974	1025.08	1454.5	525.6	89.7	1.048	1.06	1.000	-0.125	1.062	0.009	0.029	1.57	0.49
28 25	20.948	0.973	1024.92	1453.5	525.0	90.0	0.981	1.01	1.000	-0.014	1.006	0.007	0.032	1.84	0.43
29 25	22.024	0.973	1025.01	1453.5	525.0	90.1	0.937	0.97	1.000	0.042	0.968	0.008	0.028	1.65	0.45
30 25	22.975	0.974	1025.52	1452.6	525.1	89.9	0.938	0.97	1.000	0.061	0.969	0.007	0.025	1.49	0.43
31 25	24.063	0.973	1024.97	1451.4	524.4	89.8	0.941	0.97	1.000	0.057	0.971	0.008	0.024	1.40	0.45

TEST NAME: 25 3.000
 DATE: 4-12-77
 AEDC PROPULSION WIND TUNNEL
 TRANSONIC 16T

Z: -1.00
 MACH: 4
 RPM: 3000

Y: 4.07
 X: 4.01
 PT: 4.01

INNER FLOWFIELD SURVEY SUMMARY

POINT	GP	X	Y	Z	PT	U	TT	ML	VML/VH	PTL/PI	CPL	UL/VH	VL/VH	WL/VH	TAL	SPL
4	1	18.457	1.024	1070.005	1433.5	541.1	89.9	1.010	0.99	0.994	0.022	0.988	0.011	0.002	0.11	0.64
6	2	18.483	1.025	1069.95	1433.1	540.6	89.8	0.944	0.97	0.997	0.047	0.974	0.015	0.010	0.60	0.86
8	3	18.046	1.026	1070.04	1435.6	542.0	89.7	1.134	1.09	0.994	-0.183	1.088	0.015	0.029	1.54	0.78
10	4	17.538	1.028	1072.43	1433.7	542.0	89.7	1.210	1.14	0.993	-0.283	1.137	-0.008	0.070	3.51	-0.39
12	5	17.038	1.023	1064.64	1433.8	540.2	89.7	1.188	1.11	0.994	-0.229	1.111	-0.005	0.044	2.25	-0.26
14	6	16.522	1.026	1071.01	1431.9	540.7	89.7	1.093	1.05	0.994	-0.107	1.053	-0.002	0.012	0.68	-0.13
16	7	16.036	1.024	1070.75	1434.5	541.2	89.6	1.046	1.02	0.999	-0.034	1.016	-0.002	-0.001	-0.03	-0.09
18	8	15.535	1.026	1071.21	1434.2	541.7	89.6	1.017	0.99	0.999	0.014	0.942	-0.001	-0.009	-0.51	-0.05
20	9	15.036	1.027	1071.64	1433.4	542.0	89.4	1.000	0.98	1.000	0.043	0.978	0.001	-0.020	-1.16	0.05
22	10	14.537	1.025	1070.20	1433.2	540.8	89.6	0.988	0.97	0.999	0.060	0.969	0.005	-0.027	-1.60	0.30
24	11	14.037	1.024	1069.58	1431.9	539.9	89.8	0.977	0.96	0.999	0.077	0.960	0.011	-0.034	-2.04	0.63
26	12	13.538	1.025	1070.56	1431.5	540.3	89.9	0.941	0.93	0.999	0.137	0.930	0.019	-0.040	-2.44	1.14
28	13	13.030	1.025	1070.54	1432.9	540.7	90.0	0.946	0.93	1.000	0.147	0.925	0.030	-0.038	-2.35	1.85
30	14	12.537	1.025	1069.50	1432.6	540.3	89.5	0.932	0.92	0.999	0.152	0.922	0.038	-0.026	-1.61	2.33
32	15	12.041	1.025	1070.31	1433.5	541.1	89.7	0.942	0.93	0.999	0.136	0.931	0.029	-0.014	-0.87	1.78
34	16	11.544	1.026	1070.87	1434.7	541.7	89.7	0.942	0.93	0.999	0.136	0.930	0.029	-0.008	-0.48	1.81
36	17	11.041	1.026	1071.33	1435.8	542.2	89.8	0.965	0.95	0.999	0.099	0.950	0.022	-0.005	-0.28	1.35
38	18	10.537	1.026	1070.66	1436.4	542.2	89.8	0.994	0.97	0.999	0.049	0.974	0.015	-0.002	-0.12	0.86

TEST PART HEX10-0 ALPHA 5.009 5.000 4.008 Y Z HMM SURVEY DATE AEDC PROPULSION WIND TUNNEL
 TF-405 27 3.009 5.000 4.008 -0.96 4 3NR 4-12-77 TRANSONIC 16T

INNER FLOWFIELD SURVEY SUMMARY

POINT GP	A	N	V1	PT	G	TT	ML	VMI/VM	PTL/PT	CPL	UL/VM	VL/VM	WL/VM	AAL	SWL
7	1	19.027	1.025	1070.14	1432.5	540.4	89.8	1.034	1.01	0.998	-0.016	1.005	0.052	0.045	2.58 2.94
9	2	18.537	1.025	1070.06	1431.3	540.6	89.6	1.030	1.00	0.997	-0.011	1.001	0.053	0.052	2.96 3.01
11	3	18.029	1.027	1071.55	1420.9	539.9	89.5	1.120	1.07	0.999	-0.148	1.070	0.050	0.070	3.76 2.68
13	4	17.536	1.025	1070.20	1439.7	539.8	89.8	1.045	1.05	0.997	-0.100	1.045	0.040	0.058	3.20 2.19
15	5	17.026	1.025	1069.74	1436.9	542.0	89.5	1.061	1.03	0.999	-0.058	1.027	0.033	0.044	2.45 1.86
17	6	16.517	1.025	1070.36	1440.6	543.5	89.9	1.066	0.98	1.000	0.030	0.944	0.035	0.023	1.34 2.05
19	7	16.024	1.026	1071.08	1430.7	540.1	90.0	0.971	0.95	1.003	0.044	0.954	0.039	0.010	0.60 2.33
21	8	15.532	1.025	1069.82	1426.7	538.3	89.4	0.940	0.93	1.002	0.144	0.928	0.044	0.005	0.30 2.70
23	9	15.025	1.025	1070.60	1433.7	539.7	89.7	0.922	0.92	1.000	0.169	0.914	0.049	-0.002	-0.12 3.06
25	10	14.519	1.026	1070.75	1431.2	540.2	89.8	0.906	0.90	1.000	0.198	0.899	0.060	-0.007	-0.44 3.84
27	11	14.031	1.025	1070.10	1432.8	540.6	89.6	0.899	0.90	1.002	0.212	0.893	0.068	-0.000	-0.03 4.38
29	12	13.524	1.026	1070.58	1434.9	541.6	89.7	0.876	0.87	1.002	0.252	0.871	0.084	0.005	0.34 5.50
31	13	13.032	1.026	1071.29	1433.4	541.3	89.9	0.857	0.86	1.002	0.286	0.851	0.104	0.028	1.87 7.00
33	14	12.527	1.026	1070.97	1430.1	539.8	90.0	0.873	0.87	1.001	0.256	0.863	0.101	0.072	4.74 6.65
35	15	12.017	1.026	1071.01	1432.1	540.7	89.9	0.904	0.90	1.001	0.203	0.891	0.076	0.093	5.94 4.86
37	16	11.530	1.026	1070.46	1436.0	542.0	89.7	0.922	0.91	1.002	0.173	0.908	0.056	0.096	6.06 3.50
39	17	11.033	1.026	1071.18	1437.0	542.9	89.8	0.933	0.92	1.001	0.155	0.918	0.042	0.094	5.86 2.64
41	18	10.519	1.026	1070.82	1436.7	542.3	89.8	0.934	0.92	0.995	0.145	0.919	0.033	0.093	5.79 2.03

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TEST PART MEX10-0 ALFHM WJNG Y 7 MIN SURVEY
 TF-445 31 3.004 -5.07 4 PCI 4.07 -1.12 4 30H

DATE 4-12-77

AEDC PROPUSSION WIND TUNNEL
 TRANSONIC 16T

INNER FLOWFIELD SURVEY SUMMARY

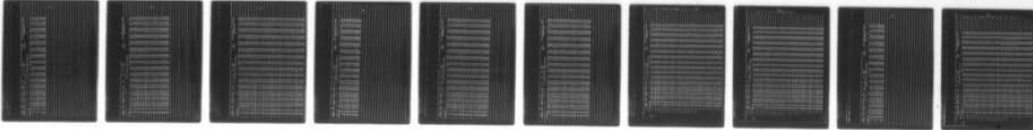
POINT GP	A	M	V ₀	PT	0	TT	ML	VML/V ₀	PTL/PT	CPL	UL/V ₀	VL/V ₀	WL/V ₀	AAL	SWL	
11	1	19.159	1.026	1071.05	1436.2	542.2	90.0	1.017	0.99	0.995	0.004	0.992	-0.029	-0.033	-1.08	-1.08
13	2	18.508	1.026	1071.63	1435.8	542.3	90.1	0.976	0.96	0.978	0.051	0.938	-0.022	-0.029	-1.75	-1.32
36	2	17.971	1.025	1069.86	1433.1	540.7	89.5	1.289	1.20	0.979	-0.409	1.196	-0.035	0.075	3.61	-1.68
43	2	17.971	1.025	1070.20	1433.0	540.7	89.8	1.241	1.20	0.979	-0.411	1.197	-0.038	0.075	3.59	-1.82
47	2	17.971	1.025	1070.30	1433.4	540.8	89.9	1.290	1.20	0.979	-0.410	1.196	-0.034	0.075	3.61	-1.63
49	3	17.975	1.024	1069.24	1432.1	539.9	89.6	1.269	1.20	0.979	-0.410	1.196	-0.034	0.075	3.60	-1.63
51	4	17.521	1.025	1070.28	1432.6	540.4	90.1	1.273	1.19	0.982	-0.386	1.185	-0.037	0.062	3.01	-1.81
53	5	16.993	1.025	1069.49	1432.2	540.1	89.6	1.234	1.16	0.992	-0.324	1.159	-0.032	0.023	1.14	-1.60
55	6	16.524	1.025	1069.94	1432.5	540.2	90.0	1.220	1.15	0.994	-0.302	1.149	-0.038	0.008	0.38	-1.90
57	7	15.019	1.025	1070.44	1432.7	540.7	89.8	1.208	1.14	0.994	-0.285	1.140	-0.036	-0.005	-0.27	-1.81
59	8	15.506	1.026	1070.83	1432.9	540.9	89.9	1.201	1.14	0.996	-0.271	1.134	-0.046	-0.017	-0.85	-2.32
61	9	15.027	1.026	1071.29	1433.4	541.2	90.1	1.187	1.12	0.996	-0.251	1.123	-0.048	-0.030	-1.54	-2.46
63	10	14.521	1.025	1070.35	1433.1	540.8	89.7	1.182	1.12	0.996	-0.245	1.119	-0.054	-0.038	-1.95	-2.75
65	11	13.995	1.025	1070.79	1433.4	540.9	90.1	1.175	1.12	0.995	-0.236	1.114	-0.060	-0.050	-2.55	-3.10
67	12	13.521	1.025	1070.40	1433.2	540.9	89.7	1.226	1.15	0.988	-0.315	1.149	-0.085	-0.037	-1.86	-4.22
69	13	13.019	1.026	1071.24	1433.6	541.3	90.0	1.206	1.14	0.999	-0.273	1.123	-0.124	-0.139	-7.04	-6.29
71	14	12.512	1.026	1070.81	1433.8	541.4	89.5	1.065	1.03	1.000	-0.061	1.018	-0.029	-0.160	-8.94	-1.65
73	15	12.029	1.025	1070.51	1433.6	541.0	89.8	0.978	0.96	1.001	0.079	0.951	0.011	-0.140	-8.37	0.65
75	16	11.520	1.027	1071.90	1434.4	541.9	89.9	0.943	0.93	1.001	0.140	0.923	0.023	-0.120	-7.42	1.41
77	17	10.997	1.027	1071.66	1434.9	542.0	90.0	0.961	0.95	1.002	0.109	0.940	0.019	-0.109	-6.60	1.16

AD-A062 275

NIELSEN ENGINEERING AND RESEARCH INC MOUNTAIN VIEW CALIF F/G 1/3
DATA REPORT FOR A TEST PROGRAM TO STUDY TRANSONIC FLOW FIELDS A--ETC(U)
JUL 77 S C PERKINS, S S STAHARA, M J HEMSCH F44620-75-C-0047
NEAR-TR-138-VOL-6 AFOSR-TR-78-1490 NL

UNCLASSIFIED

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TEST PART HEX10-6 ALFHH WING Y Z RUN SURVEY DATE AEDC PROPULSION WIND TUNNEL
 1F-445 63 3.012 -0.01 PCT -4.00 -1.00 4 312 4-13-77 TRANSONIC 1A7

UPPER FLOWFIELD SURVEY SUMMARY

POINT	GP	X	M	V _T	PT	Q	TT	AL	VML/VM	PTL/PT	CPL	UL/VM	VL/VM	WL/VM	AAL	SWL
1	0	10.002	1.024	1001.16	1400.1	556.1	100.6	1.013	0.99	1.000	0.012	0.993	0.010	0.028	1.60	0.57
3	0	10.002	1.024	1070.26	1471.6	556.6	100.1	1.034	1.01	1.000	-0.017	1.008	0.010	0.023	1.29	0.58
4	0	10.981	1.024	1000.37	1432.5	555.2	101.0	0.976	0.96	1.000	0.074	0.961	-0.003	0.002	0.12	-0.17
5	0	12.006	1.024	1000.20	1471.0	556.6	101.0	0.939	0.93	1.000	0.141	0.930	-0.016	-0.008	-0.47	-0.98
6	0	13.019	1.023	1074.26	1470.3	553.9	101.0	0.930	0.92	1.000	0.155	0.922	-0.014	-0.024	-1.51	-0.86
7	0	13.987	1.024	1073.89	1470.2	554.1	101.1	0.944	0.93	1.000	0.130	0.935	0.007	-0.021	-1.31	0.40
8	0	15.041	1.023	1074.45	1470.1	553.8	101.1	0.992	0.97	1.000	0.051	0.974	0.018	-0.013	-0.78	1.05
9	0	16.035	1.022	1077.76	1469.1	552.9	100.6	1.036	1.01	1.000	-0.023	1.011	0.021	0.002	0.13	1.20
10	0	17.036	1.021	1077.62	1472.2	553.9	100.6	1.156	1.11	0.994	-0.211	1.104	0.028	0.053	2.73	1.47
11	0	17.986	1.025	1000.17	1475.2	556.1	100.2	1.122	1.08	0.993	-0.161	1.076	0.009	0.034	1.82	0.48
12	0	19.009	1.026	1001.63	1474.8	556.9	100.6	1.034	1.01	0.999	-0.014	1.006	0.007	-0.004	-0.20	0.38

TEST PART NEXIUM ALPHA WIND TUNNEL
 YF-445 64 3.006 -0.007 4 PCI 1.99 -0.40 4 307

DATE 4-13-77

AEDC PROPULSION WIND TUNNEL
 TRANSONIC 16T

INNER FLOWFIELD SURVEY SUMMARY

POINT	OP	A	M	W	PT	Q	TT	ML	VML/VM	PTL/PT	CPL	UL/VM	VL/VM	HL/VM	AAL	SWL
2	0	19.000	1.021	1077.21	1471.6	553.6	100.5	1.056	1.03	1.000	-0.055	1.028	0.013	0.012	0.67	0.73
3	0	19.651	1.026	1081.41	1473.6	556.2	100.8	1.060	1.03	1.000	-0.055	1.027	0.014	0.015	0.65	1.01
4	0	18.333	1.027	1082.12	1472.7	556.3	100.7	1.051	1.02	0.998	-0.042	1.019	0.024	0.022	1.21	1.35
5	0	18.070	1.027	1082.79	1472.3	556.5	100.7	1.057	1.03	0.998	-0.049	1.031	0.034	0.033	1.84	1.91
6	0	17.850	1.027	1082.98	1471.4	555.9	100.8	1.049	1.05	0.998	-0.104	1.048	0.039	0.043	2.35	2.14
7	0	17.318	1.027	1082.08	1470.5	555.6	100.3	1.096	1.05	0.997	-0.112	1.053	0.035	0.041	2.25	1.93
8	0	16.946	1.027	1082.37	1470.5	555.6	100.6	1.094	1.05	0.998	-0.108	1.052	0.029	0.037	2.03	1.56
9	0	16.645	1.026	1081.82	1469.6	555.0	100.7	1.086	1.05	1.000	-0.096	1.047	0.021	0.029	1.60	1.17
10	0	16.334	1.026	1081.60	1468.6	554.5	100.7	1.075	1.04	1.000	-0.079	1.039	0.016	0.021	1.13	0.88
11	0	16.031	1.026	1081.41	1469.0	554.4	100.6	1.065	1.03	1.000	-0.061	1.031	0.012	0.013	0.70	0.67
12	0	15.657	1.027	1082.25	1469.5	555.1	100.7	1.046	1.02	1.000	-0.029	1.015	0.009	0.000	-0.00	0.49
13	0	15.356	1.026	1081.47	1469.3	554.8	100.5	1.042	1.01	1.001	-0.024	1.012	0.009	-0.001	-0.08	0.49
14	0	15.042	1.027	1082.72	1471.2	556.1	100.6	1.023	1.00	1.000	0.009	0.996	0.005	-0.012	-0.69	0.31
15	0	14.663	1.025	1080.25	1471.1	554.8	100.6	1.017	0.99	1.000	0.013	0.994	0.003	-0.012	-0.71	0.20
16	0	14.303	1.025	1080.02	1471.6	555.1	100.2	1.012	0.99	1.001	0.021	0.990	0.002	-0.017	-1.00	0.13
17	0	14.012	1.025	1080.00	1472.1	555.3	100.3	1.006	0.98	1.001	0.032	0.985	0.002	-0.021	-1.19	0.09
18	0	13.637	1.025	1080.38	1472.5	555.6	100.1	0.996	0.98	1.000	0.048	0.976	0.001	-0.024	-1.44	0.03
19	0	13.395	1.025	1080.29	1472.9	555.7	100.2	0.983	0.97	1.001	0.070	0.965	-0.001	-0.031	-1.83	-0.03
20	0	13.004	1.026	1081.72	1474.0	556.0	100.4	0.985	0.97	1.001	0.067	0.966	-0.001	-0.032	-1.89	-0.08
21	0	12.636	1.026	1081.18	1474.1	556.5	100.4	0.975	0.96	1.001	0.083	0.958	-0.000	-0.036	-2.13	-0.01
22	0	12.327	1.026	1081.51	1473.4	556.4	100.4	0.965	0.95	1.001	0.101	0.944	0.002	-0.040	-2.39	0.11
23	0	12.007	1.026	1081.42	1473.6	556.4	100.4	0.959	0.95	1.000	0.110	0.944	0.004	-0.042	-2.57	0.21
24	0	11.672	1.026	1081.79	1473.2	556.4	100.6	0.941	0.93	1.000	0.141	0.929	0.006	-0.045	-2.75	0.37
25	0	11.317	1.027	1082.82	1473.1	556.7	100.4	0.940	0.93	1.000	0.143	0.927	0.013	-0.044	-2.71	0.77
26	0	10.975	1.027	1082.31	1472.5	556.4	100.6	0.939	0.93	1.000	0.146	0.926	0.018	-0.038	-2.35	1.09
27	0	10.649	1.027	1082.39	1471.7	556.2	100.3	0.970	0.95	1.000	0.094	0.953	0.021	-0.025	-1.49	1.29
28	0	10.324	1.026	1083.07	1471.5	556.4	100.5	1.003	0.98	1.000	0.041	0.979	0.021	-0.011	-0.62	1.25
29	0	9.994	1.027	1081.83	1470.2	555.5	100.1	1.020	0.99	1.000	0.011	0.994	0.019	-0.003	-0.15	1.07

TEST PAMT HXLU-6 ALPHA-4
 YF-445 4R 3.007 -0.01 + PCT

DATE 4-13-77

WIND SURVEY 401
 WIND FLUMFIELD SURVEY SUMMARY

AEC PROPULSION WIND TUNNEL
 TRANSONIC 16T

POINT GP	AI	M	V1	PI	U	TI	ML	VTL/VM	P/L/P/T	CPL	UI/VM	VI/VM	WI/VM	AATL	SWTL
1	24.017	1.027	1071.52	1427.9	539.3	89.9	0.997	0.98	1.000	0.049	0.916	0.004	0.003	0.16	0.26
2	23.540	1.025	1069.91	1435.5	541.5	89.8	1.004	0.98	1.000	0.034	0.983	0.005	0.007	0.41	0.30
3	23.030	1.025	1070.09	1432.4	540.6	89.4	1.045	1.05	0.999	-0.094	1.044	0.007	0.021	1.14	0.39
4	22.534	1.025	1069.71	1428.4	538.9	89.4	1.040	1.04	0.999	-0.049	1.044	0.006	0.020	1.11	0.35
5	22.034	1.025	1069.73	1429.4	539.2	89.5	1.073	1.04	1.000	-0.077	1.038	0.006	0.017	0.95	0.33
6	21.534	1.025	1070.04	1430.4	539.6	89.8	1.061	1.03	1.000	-0.057	1.029	0.005	0.014	0.79	0.29
7	21.043	1.025	1069.96	1431.0	539.9	89.6	1.052	1.02	1.000	-0.043	1.022	0.007	0.011	0.64	0.41
8	20.548	1.025	1069.63	1431.7	540.0	89.6	1.038	1.01	1.000	-0.021	1.011	0.005	0.011	0.61	0.29
9	20.039	1.025	1069.98	1432.2	540.2	89.9	1.030	1.00	1.000	-0.008	1.004	0.003	0.008	0.44	0.17
10	19.543	1.025	1070.34	1432.7	540.6	89.8	1.020	1.00	1.000	0.009	0.996	0.005	0.006	0.33	0.29
11	19.036	1.025	1069.69	1432.0	540.2	89.5	1.016	0.99	1.000	0.014	0.993	0.001	0.005	0.27	0.03
12	18.532	1.025	1069.78	1431.6	540.1	89.5	1.007	0.99	1.000	0.030	0.985	0.004	0.003	0.18	0.24
13	18.044	1.025	1069.92	1431.3	540.1	89.4	1.001	0.98	1.000	0.039	0.980	0.004	0.002	0.13	0.24
14	17.543	1.025	1069.81	1430.7	539.8	89.4	0.999	0.98	1.000	0.043	0.978	0.004	0.001	0.06	0.23
15	17.033	1.025	1070.13	1429.8	539.6	89.5	0.998	0.98	1.000	0.045	0.978	0.006	0.000	0.00	0.37
16	16.530	1.026	1070.62	1430.0	539.9	89.7	0.996	0.98	1.000	0.049	0.976	0.003	-0.000	-0.03	0.20
17	16.047	1.026	1071.25	1431.4	540.6	89.8	0.995	0.97	1.001	0.052	0.975	0.004	0.002	0.10	0.22
18	15.534	1.026	1071.18	1432.8	541.1	89.7	0.995	0.97	1.001	0.052	0.975	0.004	-0.002	-0.14	0.25
19	15.040	1.026	1071.11	1434.2	541.5	89.8	0.992	0.97	1.000	0.056	0.972	0.004	-0.002	-0.13	0.24
20	14.533	1.025	1069.71	1433.0	540.5	89.7	0.980	0.96	1.000	0.072	0.964	0.004	-0.004	-0.24	0.25
21	14.035	1.025	1069.57	1429.1	539.1	89.4	0.978	0.97	1.000	0.069	0.966	0.004	-0.002	-0.09	0.25
22	13.531	1.025	1069.47	1426.2	538.0	89.2	0.973	0.96	1.000	0.077	0.962	0.004	-0.001	-0.04	0.23
23	13.031	1.026	1070.21	1426.5	538.4	89.4	1.013	0.99	1.001	0.022	0.990	0.006	0.004	0.23	0.33
24	12.531	1.025	1070.35	1426.2	538.3	89.6	1.043	1.01	1.000	-0.028	1.014	0.006	0.010	0.54	0.35
25	12.032	1.026	1070.79	1425.7	538.2	89.7	1.045	1.01	1.000	-0.030	1.015	0.006	0.009	0.49	0.32
26	11.530	1.026	1070.52	1429.8	539.6	89.7	1.042	1.01	1.001	-0.026	1.013	0.005	0.007	0.42	0.29
27	11.040	1.025	1070.27	1433.9	541.0	89.8	1.013	0.99	0.996	0.014	0.991	0.005	0.006	0.36	0.28
28	10.534	1.026	1070.74	1435.6	541.8	89.9	1.030	1.00	1.000	-0.007	1.004	0.005	0.004	0.24	0.31
29	10.037	1.026	1070.61	1436.3	542.1	89.8	1.024	1.00	1.000	0.002	0.999	0.004	0.007	0.38	0.25
30	9.531	1.025	1069.78	1436.6	542.0	89.5	1.012	0.99	1.000	0.022	0.989	0.004	0.001	0.07	0.26
31	9.040	1.025	1069.74	1436.7	542.0	89.5	1.009	0.99	1.000	0.027	0.987	0.004	0.000	0.00	0.25
32	8.535	1.025	1070.11	1435.7	541.8	89.5	1.019	0.99	1.003	0.015	0.995	0.004	-0.002	-0.10	0.26
33	8.037	1.026	1070.33	1432.3	540.6	89.5	1.003	0.98	1.000	0.037	0.982	0.003	-0.002	-0.13	0.20
34	7.524	1.025	1070.12	1429.2	539.3	89.6	0.982	0.96	1.000	0.071	0.964	0.004	-0.009	-0.56	0.26
35	7.032	1.025	1070.41	1426.9	538.5	89.7	0.940	0.96	1.000	0.074	0.963	0.004	-0.010	-0.58	0.26
36	6.535	1.026	1071.00	1426.7	538.6	89.9	0.996	0.98	1.001	0.049	0.976	0.004	-0.004	-0.25	0.25
37	6.034	1.025	1070.11	1429.0	539.1	89.8	0.991	0.97	1.001	0.058	0.972	0.005	-0.005	-0.32	0.28
38	5.535	1.025	1070.42	1432.1	540.4	89.9	0.985	0.97	1.001	0.066	0.968	0.004	-0.005	-0.29	0.24
39	5.037	1.026	1070.68	1435.1	541.9	90.0	0.981	0.97	1.001	0.068	0.967	0.004	-0.005	-0.31	0.25
40	4.547	1.026	1070.75	1435.8	541.9	90.0	0.985	0.96	1.001	0.073	0.964	0.004	-0.004	-0.25	0.25
41	4.034	1.026	1070.75	1436.0	542.0	89.9	0.977	0.96	1.000	0.070	0.960	0.004	-0.005	-0.29	0.26
42	3.536	1.025	1069.95	1435.4	541.5	89.7	0.977	0.96	1.000	0.079	0.961	0.004	-0.005	-0.28	0.23
43	3.034	1.026	1070.55	1435.6	541.8	89.7	0.979	0.96	1.000	0.076	0.958	0.004	-0.004	-0.25	0.26
44	2.540	1.025	1070.05	1435.2	541.6	89.5	0.974	0.96	1.000	0.084	0.956	0.004	-0.004	-0.25	0.22
45	2.036	1.025	1070.40	1435.5	541.7	89.7	0.978	0.96	1.001	0.078	0.961	0.004	-0.003	-0.18	0.24
46	1.536	1.026	1070.51	1436.3	542.1	89.7	0.978	0.96	1.000	0.079	0.961	0.004	-0.003	-0.18	0.23
47	1.038	1.025	1070.46	1436.4	542.0	89.9	0.976	0.96	1.000	0.082	0.959	0.004	-0.001	-0.07	0.22

TEST PART HEADQUARTERS ALPHAM WING 49 3.006 -0.01 4 PCT -0.01 4 PCT YI ZT MUM SURVEY 501 4-13-77 AEDC PROPUSSION WIND TUNNEL THANSONIC 1A1

OUTLET FLOWFIELD SURVEY SUMMARY

POINT GP	X1	A	V14	P1	W	IT	ML	VTL/VM	PIL/PT	CPL	UT/VM	VT/VM	WI/VM	AATL	SMTL
2	48	0.542	1.025	1069.36	1435.0	541.2	89.4	0.974	1.000	0.043	0.959	0.004	-0.001	-0.04	0.23
4	49	0.036	1.024	1069.42	1435.5	541.4	89.6	0.977	1.001	0.079	0.961	0.004	0.000	0.03	0.24
6	50	-0.459	1.025	1070.50	1435.7	541.6	89.8	0.979	1.000	0.076	0.962	0.005	0.002	0.11	0.27
8	51	-0.961	1.025	1069.96	1435.8	541.6	89.6	0.984	1.000	0.067	0.967	0.004	0.003	0.19	0.22
10	52	-1.456	1.025	1070.20	1435.7	541.7	89.8	0.984	1.001	0.068	0.966	0.004	0.003	0.18	0.22
12	53	-1.960	1.025	1070.40	1435.5	541.6	89.9	0.992	1.001	0.055	0.973	0.004	0.004	0.25	0.26
14	54	-2.453	1.025	1070.19	1435.1	541.4	89.8	0.998	1.001	0.048	0.978	0.004	0.006	0.33	0.25
16	55	-2.960	1.025	1070.49	1435.3	541.7	89.8	1.001	1.000	0.040	0.980	0.004	0.003	0.16	0.24
18	56	-3.464	1.025	1070.09	1434.9	541.3	89.9	0.990	1.000	0.057	0.972	0.004	0.004	0.23	0.23
20	57	-3.962	1.025	1070.05	1435.2	541.6	89.5	1.001	1.001	0.041	0.980	0.004	0.005	0.30	0.26
22	58	-4.464	1.025	1069.35	1434.4	541.0	89.3	0.994	1.001	0.050	0.975	0.004	0.005	0.27	0.25
24	59	-4.969	1.025	1069.69	1434.9	541.3	89.6	0.995	1.000	0.049	0.976	0.004	0.005	0.27	0.26
26	60	-5.470	1.025	1070.44	1435.2	541.6	89.7	0.997	1.000	0.045	0.977	0.005	0.006	0.33	0.28
28	61	-5.969	1.025	1069.99	1434.9	541.4	89.6	0.998	1.000	0.044	0.978	0.004	0.005	0.27	0.26

TEST PAINT MEXI-U-6 ALPHM 4-13-77 AEDC PROPLUSION WIND TUNNEL
 1F-625 50 3.002 -0.201 * PCT 14316 403 5 403

DATE 4-13-77

QUIER FLOWFIELD SURVEY SUMMARY

POINT GP	AI	M	V1	WT	N	TI	ML	VTL/VM	PIL/PI	CPL	UT/VM	VT/VM	W1/VM	AATL	SWTL
1	28.046	1.025	1070.27	1436.0	541.1	89.6	0.999	0.44	1.000	0.043	0.978	0.010	0.005	0.28	0.59
2	23.546	1.024	1069.09	1433.9	540.6	89.4	0.996	0.98	1.000	0.046	0.977	0.010	0.004	0.21	0.61
3	23.042	1.025	1069.41	1435.4	541.6	89.4	1.003	0.98	1.000	0.036	0.982	0.010	0.004	0.23	0.59
4	22.546	1.026	1070.30	1435.5	541.4	89.4	1.008	0.99	1.000	0.029	0.985	0.009	0.004	0.21	0.54
5	22.046	1.026	1070.50	1435.7	541.9	89.7	1.013	0.99	1.001	0.021	0.990	0.009	0.005	0.26	0.51
6	21.542	1.026	1070.57	1436.0	542.2	89.8	1.011	0.99	0.999	0.023	0.988	0.006	0.005	0.30	0.37
7	21.041	1.025	1070.72	1436.9	542.3	90.0	1.052	1.02	1.000	-0.044	1.021	0.000	0.014	0.78	0.01
8	20.541	1.026	1070.82	1436.9	542.3	89.8	1.070	1.04	0.999	-0.072	1.036	-0.004	0.018	0.97	-0.22
9	20.044	1.025	1070.83	1437.1	542.3	89.9	1.068	1.03	1.002	-0.065	1.034	-0.021	0.017	0.93	-0.07
10	19.529	1.026	1070.78	1437.4	542.5	90.0	1.056	1.02	1.000	-0.048	1.024	0.003	0.011	0.59	0.15
11	19.032	1.026	1070.58	1437.0	542.3	89.8	1.043	1.01	1.000	-0.027	1.014	0.006	0.008	0.46	0.32
12	18.544	1.025	1070.08	1436.5	542.1	89.5	1.033	1.01	1.000	-0.013	1.007	0.010	0.006	0.33	0.56
13	18.037	1.025	1070.32	1436.7	542.2	89.7	1.024	1.00	1.000	0.002	0.999	0.011	0.004	0.23	0.63
14	17.540	1.026	1070.82	1437.1	542.5	89.9	1.016	0.99	1.000	0.016	0.992	0.014	0.002	0.11	0.80
15	17.037	1.026	1070.80	1436.1	542.1	89.9	1.009	0.99	1.001	0.029	0.986	0.016	0.001	0.05	0.96
16	16.538	1.026	1070.93	1437.0	541.7	89.9	0.998	0.98	1.001	0.046	0.977	0.018	0.002	0.09	1.05
17	16.035	1.026	1071.41	1436.4	541.7	90.0	0.994	0.97	1.000	0.054	0.973	0.018	0.001	0.03	1.03
18	15.536	1.027	1071.74	1433.9	541.6	90.0	0.994	0.97	1.001	0.053	0.974	0.018	0.000	0.02	1.04
19	15.042	1.027	1071.56	1432.4	541.0	89.9	1.008	0.98	1.004	0.035	0.985	0.019	0.000	0.01	1.04
20	14.538	1.027	1071.26	1432.0	540.9	89.6	0.990	0.97	1.001	0.060	0.970	0.018	0.001	0.08	1.05
21	14.043	1.025	1070.44	1430.6	539.9	89.9	0.987	0.97	1.000	0.063	0.969	0.017	0.002	0.09	1.03
22	13.535	1.025	1070.07	1429.5	539.3	89.8	0.983	0.97	1.000	0.069	0.965	0.017	0.002	0.13	0.99
23	13.056	1.025	1070.42	1429.4	539.3	90.0	0.995	0.98	1.000	0.049	0.976	0.011	0.004	0.22	0.66
24	12.579	1.025	1070.16	1429.1	539.1	90.1	1.018	0.99	1.000	0.012	0.994	0.010	0.004	0.54	0.57
25	12.074	1.026	1070.92	1428.1	540.6	90.1	1.035	1.01	1.001	-0.014	1.008	0.008	0.010	0.58	0.43
26	11.531	1.025	1070.04	1430.4	539.6	89.8	1.022	1.00	1.000	0.005	0.997	0.009	0.008	0.48	0.53
27	11.020	1.025	1070.25	1426.2	538.2	89.7	1.011	0.99	1.000	0.022	0.989	0.011	0.010	0.58	0.61
28	10.534	1.025	1070.18	1427.6	538.6	89.8	1.018	0.99	1.000	0.012	0.994	0.011	0.007	0.43	0.64
29	10.037	1.025	1069.87	1431.4	540.0	89.6	1.018	0.99	1.000	0.012	0.994	0.013	0.006	0.36	0.77
30	9.525	1.025	1070.35	1433.3	540.8	89.8	1.012	0.99	1.000	0.022	0.989	0.015	0.004	0.22	0.87

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TEST POINT MANT WEX10-6 ALPHA4
 1F-405 S1 2.095 -0.001 PCT 14.16

DATE 4-13-77

MUN SURVEY 403
 ZT 0.02 5
 OUTER FLOWFIELD SURVEY SUMMARY

AEDC PROPULSION WIND TUNNEL
 TRANSONIC 1A1

POINT GP	AI	M	VM	PI	U	TT	ML	VTL/VM	MFL/PT	CPL	UT/VM	VT/VM	WT/VM	AATL	SHTL
1 31	9.078	1.025	1069.71	1431.1	539.6	89.8	1.006	0.98	1.000	0.032	0.984	0.016	0.005	0.29	0.93
3 32	8.542	1.025	1064.95	1430.6	539.7	89.7	1.000	0.98	1.000	0.041	0.979	0.017	0.004	0.23	0.99
5 33	8.038	1.025	1070.17	1431.6	540.1	89.6	0.985	0.97	0.998	0.043	0.967	0.018	0.003	0.20	1.04
7 34	7.541	1.025	1070.62	1432.3	540.5	89.9	1.019	0.99	1.003	0.014	0.995	0.019	-0.000	-0.00	1.07
9 35	7.041	1.025	1070.74	1433.1	540.8	90.1	0.997	0.98	1.000	0.046	0.977	0.019	0.002	0.10	1.13
11 36	6.536	1.025	1070.69	1433.2	540.9	90.0	0.997	0.98	1.001	0.047	0.977	0.020	0.000	0.00	1.19
13 37	6.044	1.025	1070.54	1433.5	541.1	90.1	0.997	0.98	1.000	0.048	0.976	0.021	0.001	0.03	1.22
15 38	5.531	1.025	1070.46	1433.1	541.2	90.2	0.996	0.98	1.001	0.049	0.976	0.020	-0.000	-0.01	1.20
17 39	5.041	1.025	1070.66	1433.3	541.4	90.1	0.988	0.97	1.001	0.061	0.970	0.023	-0.000	-0.01	1.36
19 40	4.540	1.025	1070.48	1432.6	540.5	90.0	0.995	0.98	1.000	0.049	0.976	0.017	0.000	0.00	0.99
21 41	4.038	1.025	1070.73	1432.5	540.7	89.9	0.986	0.97	1.000	0.065	0.968	0.020	-0.001	-0.03	1.23
23 42	3.556	1.025	1070.32	1431.9	540.3	89.8	0.981	0.96	1.000	0.071	0.964	0.020	0.000	0.00	1.19
25 43	3.056	1.025	1070.20	1430.9	540.0	89.6	0.983	0.97	1.000	0.069	0.965	0.019	0.001	0.05	1.15
27 44	2.525	1.025	1070.40	1431.1	540.1	89.7	0.987	0.97	1.001	0.064	0.968	0.019	0.000	0.01	1.13
29 45	2.039	1.025	1070.29	1430.7	539.8	89.9	0.982	0.96	1.000	0.071	0.965	0.018	0.000	0.01	1.09
31 46	1.537	1.025	1071.18	1430.9	540.2	90.1	0.988	0.97	1.001	0.063	0.969	0.017	0.000	0.02	1.02
33 47	1.036	1.025	1070.79	1431.1	540.1	90.0	0.989	0.97	1.001	0.060	0.971	0.017	0.000	0.01	0.98
35 48	0.537	1.025	1070.46	1431.4	540.0	90.1	0.987	0.97	1.001	0.063	0.969	0.015	-0.000	-0.01	0.92
37 49	0.036	1.025	1070.71	1431.7	540.3	90.1	0.989	0.97	1.000	0.060	0.970	0.015	-0.000	-0.02	0.89
39 50	-0.460	1.025	1070.82	1432.5	540.6	90.1	0.991	0.97	1.000	0.057	0.971	0.014	-0.000	-0.01	0.85
41 51	-0.961	1.025	1069.98	1432.2	540.2	89.8	0.989	0.97	1.000	0.059	0.971	0.014	-0.000	-0.01	0.80
43 52	-1.469	1.025	1069.79	1432.2	540.2	89.8	0.996	0.98	1.001	0.047	0.977	0.014	0.000	0.01	0.80
45 53	-1.968	1.025	1070.24	1432.7	540.6	89.8	0.999	0.99	1.000	0.043	0.979	0.012	0.001	0.07	0.69
47 54	-2.471	1.025	1069.99	1432.7	540.3	89.6	1.010	0.99	1.003	0.028	0.988	0.012	0.002	0.12	0.67
49 55	-2.968	1.025	1069.78	1431.8	540.0	89.8	1.000	0.98	1.001	0.041	0.980	0.011	0.002	0.10	0.67
51 56	-3.473	1.025	1070.02	1431.9	540.1	89.9	1.001	0.98	1.000	0.039	0.981	0.011	0.002	0.10	0.66
53 57	-3.979	1.025	1069.92	1431.5	539.9	90.0	1.001	0.98	1.001	0.039	0.981	0.011	0.002	0.09	0.63
55 58	-4.469	1.025	1070.25	1431.0	539.8	90.1	1.001	0.98	1.000	0.039	0.980	0.013	0.002	0.12	0.77
57 59	-4.976	1.025	1069.90	1430.9	539.6	90.1	0.998	0.98	1.000	0.044	0.978	0.011	0.001	0.05	0.66
59 60	-4.976	1.025	1070.51	1431.7	540.1	90.2	1.004	0.98	1.001	0.035	0.983	0.011	0.002	0.11	0.66

TEST PANT MEX10-6 ALPHA 507.0 PLT -0.00 -13.19 5 901 DATE 4-14-77 AEC PROPLUSION WIND TUNNEL TRANSONIC 16T

UNITED STATES GOVERNMENT SURVEY SUMMARY

POINT GP	AT	M	VM	MT	U	IT	ML	VTL/VM	PIL/PT	CPL	UI/VM	VI/VM	WI/VM	AAIL	SWTL
1 25	-5.076	1.027	1070.02	1420.0	535.3	90.5	1.007	1.000	1.000	0.027	0.987	0.006	0.005	0.29	0.35
2 25	-5.002	1.027	1071.04	1420.0	534.4	90.3	1.021	1.000	1.002	0.012	0.995	0.007	0.005	0.29	0.36
3 25	-5.081	1.027	1072.06	1430.2	541.6	90.5	1.025	1.000	1.002	0.006	0.999	0.006	0.005	0.28	0.36
4 25	-3.951	1.026	1069.73	1430.3	541.5	90.2	1.008	0.998	1.001	0.034	0.980	0.005	0.006	0.32	0.31
5 25	-3.566	1.026	1069.83	1430.3	542.3	90.5	1.000	0.994	1.001	0.040	0.980	0.005	0.006	0.26	0.31
6 25	-3.403	1.025	1069.05	1434.4	542.1	90.6	0.995	0.998	1.001	0.046	0.977	0.006	0.005	0.29	0.34
7 25	-2.253	1.025	1069.39	1438.9	542.3	90.1	0.948	0.998	1.001	0.043	0.974	0.006	0.009	0.55	0.35
8 25	-1.947	1.025	1070.04	1439.9	543.0	90.6	0.940	0.997	1.000	0.057	0.972	0.006	0.008	0.49	0.34
9 25	-1.576	1.026	1069.65	1439.4	542.7	90.3	0.999	0.998	1.000	0.041	0.940	0.008	0.004	0.24	0.47
10 25	-0.974	1.026	1070.44	1440.1	544.4	90.4	1.007	0.998	1.001	0.034	0.943	0.005	0.003	0.18	0.31
11 25	-0.540	1.026	1070.19	1439.4	542.9	90.6	0.945	0.997	1.001	0.055	0.968	0.006	0.003	0.16	0.36
12 25	-0.067	1.025	1070.36	1439.5	542.9	90.4	0.949	0.997	1.001	0.059	0.971	0.005	0.001	0.08	0.32
13 25	0.521	1.025	1071.72	1439.4	543.0	90.4	0.978	0.996	1.001	0.077	0.962	0.002	0.001	0.06	0.11
14 25	0.944	1.026	1071.47	1440.1	543.5	90.7	0.944	0.997	1.001	0.048	0.946	0.005	0.000	0.02	0.30
15 25	1.011	1.025	1070.47	1439.5	543.2	90.4	0.945	0.997	1.001	0.047	0.947	0.007	-0.001	-0.06	0.40
16 25	1.544	1.026	1071.47	1440.1	543.6	90.5	0.947	0.997	1.001	0.064	0.968	0.006	-0.002	-0.12	0.33
17 25	2.065	1.026	1071.72	1440.6	543.8	90.6	0.947	0.997	1.001	0.064	0.969	0.005	-0.006	-0.23	0.32
18 25	2.574	1.026	1071.41	1439.4	543.4	90.4	0.943	0.997	1.001	0.071	0.965	0.005	-0.004	-0.23	0.30
19 25	3.067	1.026	1071.52	1440.6	543.9	90.4	0.940	0.996	1.001	0.076	0.963	0.005	-0.007	-0.39	0.33
20 25	3.577	1.026	1070.00	1439.9	542.9	90.4	0.944	0.998	0.999	0.047	0.976	0.006	-0.017	-1.01	0.35
21 25	4.051	1.026	1069.74	1439.5	542.6	90.5	0.945	0.997	1.000	0.064	0.964	0.006	-0.009	-0.50	0.37
22 25	4.541	1.024	1069.00	1439.1	542.2	90.2	0.946	0.997	1.001	0.062	0.970	0.005	-0.005	-0.32	0.24
23 25	5.046	1.024	1069.19	1439.7	542.6	90.5	0.940	0.997	1.001	0.054	0.973	0.006	-0.005	-0.24	0.41
24 25	5.576	1.024	1069.39	1439.1	542.6	90.2	0.990	0.997	1.000	0.055	0.973	0.006	-0.006	-0.53	0.37
25 25	6.076	1.025	1070.68	1439.4	543.1	90.6	0.991	0.997	1.001	0.055	0.973	0.006	-0.005	-0.30	0.36
26 25	6.593	1.026	1070.13	1439.4	542.8	90.3	0.992	0.997	1.001	0.054	0.973	0.006	-0.004	-0.24	0.36
27 25	7.110	1.025	1070.70	1439.1	543.1	90.4	0.994	0.997	1.000	0.051	0.975	0.006	-0.004	-0.24	0.37
28 25	7.644	1.025	1070.73	1439.0	543.1	90.4	0.946	0.998	1.001	0.047	0.977	0.006	-0.004	-0.24	0.35
29 25	8.176	1.024	1070.03	1439.2	542.5	90.6	1.001	0.998	1.001	0.034	0.981	0.006	-0.003	-0.19	0.32
30 25	8.704	1.024	1069.40	1439.5	542.1	90.3	1.004	0.998	1.000	0.033	0.984	0.007	-0.002	-0.14	0.40
31 25	9.220	1.025	1070.62	1439.2	542.4	90.4	1.006	0.999	1.000	0.030	0.985	0.006	-0.001	-0.06	0.35
32 25	9.735	1.025	1070.84	1439.5	542.9	90.6	1.017	0.999	1.001	0.014	0.994	0.006	-0.000	-0.01	0.34
33 25	10.253	1.026	1070.02	1439.2	542.9	90.2	1.015	0.999	1.000	0.014	0.993	0.006	0.002	0.11	0.36
34 25	10.776	1.025	1070.97	1439.3	543.1	90.5	1.027	1.000	1.001	-0.002	1.001	0.007	0.002	0.13	0.39
35 25	11.291	1.025	1070.56	1439.1	543.0	90.4	1.031	1.000	1.000	-0.008	1.004	0.009	0.003	0.18	0.50
36 25	12.054	1.025	1071.26	1439.4	543.1	90.5	1.008	0.997	1.000	0.029	0.986	0.004	0.001	0.05	0.35
37 25	12.853	1.025	1071.42	1439.6	543.1	90.4	0.944	0.997	1.000	0.061	0.970	0.005	-0.003	-0.18	0.30
38 25	13.543	1.026	1069.60	1439.3	542.5	90.4	0.975	0.996	1.000	0.075	0.963	0.006	-0.006	-0.33	0.37
39 25	14.467	1.026	1070.24	1439.6	542.4	90.5	0.941	0.994	1.001	0.072	0.955	0.006	-0.009	-0.47	0.38
40 25	15.566	1.025	1070.47	1439.1	543.2	90.2	0.974	0.996	1.000	0.077	0.962	0.006	-0.009	-0.54	0.34
41 25	16.720	1.025	1070.32	1439.0	542.7	90.4	0.940	0.996	1.001	0.074	0.963	0.006	-0.010	-0.58	0.37
42 25	17.910	1.025	1071.04	1439.4	543.4	90.6	0.948	0.997	1.000	0.048	0.966	0.007	-0.011	-0.66	0.40
43 25	19.141	1.024	1069.73	1439.4	542.8	90.3	0.940	0.994	1.001	0.072	0.964	0.007	-0.011	-0.64	0.39
44 25	20.424	1.024	1069.63	1439.4	542.2	90.4	0.961	0.997	1.001	0.071	0.965	0.007	-0.011	-0.64	0.41
45 25	21.761	1.025	1070.51	1439.0	542.7	90.6	0.946	0.997	1.001	0.064	0.964	0.006	-0.011	-0.65	0.36
46 25	23.155	1.025	1071.51	1439.0	543.3	90.7	0.945	0.997	1.001	0.067	0.967	0.010	-0.011	-0.66	0.61
47 25	24.607	1.024	1070.57	1439.4	542.7	90.6	0.946	0.994	1.000	0.047	0.977	0.006	-0.004	-0.64	0.38
48 25	26.125	1.025	1070.42	1439.2	542.4	90.6	0.947	0.994	1.000	0.047	0.977	0.007	-0.010	-0.61	0.42
49 25	27.706	1.024	1070.12	1439.4	542.4	90.5	1.000	0.994	1.001	0.040	0.940	0.007	-0.010	-0.57	0.41
50 25	29.351	1.025	1070.64	1439.0	542.5	90.5	1.006	0.998	1.000	0.032	0.944	0.007	-0.009	-0.50	0.41
51 25	31.063	1.024	1070.04	1437.6	542.1	90.3	1.011	0.999	1.000	0.022	0.949	0.006	-0.007	-0.40	0.34
52 25	32.844	1.024	1069.64	1437.0	541.6	90.4	1.014	1.000	1.001	0.010	0.945	0.009	-0.005	-0.30	0.44
53 25	34.697	1.024	1069.21	1436.9	541.4	90.5	1.031	1.001	1.000	-0.025	1.004	0.007	-0.003	-0.23	0.40
54 25	36.624	1.024	1069.71	1435.9	541.3	90.3	1.040	1.001	1.000	-0.051	1.006	0.007	-0.003	-0.16	0.37
55 25	38.627	1.024	1069.40	1435.1	540.9	90.5	1.056	1.003	1.000	-0.051	1.025	0.007	-0.004	-0.25	0.40
56 25	40.706	1.023	1069.04	1434.3	540.3	90.2	1.060	1.003	1.000	-0.050	1.029	0.007	-0.004	-0.23	0.38
57 25	42.861	1.026	1071.54	1433.9	541.3	90.4	1.064	1.003	1.000	-0.068	1.034	0.007	-0.004	-0.27	0.40
58 25	45.095	1.024	1070.10	1433.0	540.3	90.4	1.032	1.001	1.000	-0.012	1.006	0.009	0.000	0.01	0.52
59 25	47.416	1.024	1070.34	1433.3	540.7	90.6	1.023	1.000	1.000	0.003	0.999	0.007	-0.004	-0.22	0.38

TEST POINT REFLECT ALPHM WIND VI ZT MW SURVEY DATE AECD PROPUSSION WIND TUNNEL TRANSONIC IAT

1F-005 02 301R 507.8 OCT 16.16 0.0 5 403 4-10-77

UJTEM FLOWFIELD SURVEY SUMMARY

Table with columns: POINT, A1, V1, V2, V3, V4, V5, V6, V7, V8, V9, V10, V11, V12, V13, V14, V15, V16, V17, V18, V19, V20, V21, V22, V23, V24, V25, V26, V27, V28, V29, V30, V31, V32, V33, V34, V35, V36, V37, V38, V39, V40, V41, V42, V43, V44, V45, V46, V47, V48, V49, V50. Rows 1-60.

TEST PART REXIUS-6 ALFHM WING YI ZI NUM SURVEY DATE AEDC PROPULSION WIND TUNNEL
 1F-495 81 3.011 5.07 PCT 14.16 1.00 5 403 4-14-77 TRANSONIC 16T

OUTER FLOWFIELD SURVEY SUMMARY

POINT	GM	AT	M	VM	WT	U	TI	ML	VTL/VM	PTL/PT	CPL	UT/VM	VT/VM	WT/VM	AATL	SWTL
1	25	24.036	1.025	1070.28	1482.2	543.2	90.4	1.015	0.99	1.001	0.017	0.992	0.011	0.025	1.42	0.64
2	25	23.494	1.026	1072.14	1441.7	544.5	90.7	1.021	1.00	1.001	0.009	0.946	0.011	0.024	1.39	0.62
3	25	22.967	1.027	1072.49	1433.2	543.8	90.4	1.021	1.00	1.000	0.009	0.995	0.010	0.024	1.34	0.57
4	25	22.531	1.026	1071.60	1436.9	542.4	90.6	1.025	1.00	1.000	0.002	0.999	0.014	0.024	1.34	0.41
5	25	22.076	1.025	1070.96	1434.5	541.3	90.5	1.020	1.00	0.999	0.007	0.996	0.009	0.023	1.32	0.52
6	25	21.626	1.025	1070.94	1433.2	540.8	90.4	1.021	1.05	0.998	-0.106	1.052	-0.000	0.023	1.24	-0.00
7	25	21.013	1.025	1070.78	1435.5	541.5	90.7	1.128	1.08	0.999	-0.162	1.080	-0.006	0.023	1.24	-0.33
8	25	20.503	1.024	1070.02	1436.3	541.6	90.2	1.124	1.08	0.999	-0.156	1.078	-0.008	0.023	1.22	-0.43
9	25	20.030	1.026	1071.73	1436.5	543.0	90.7	1.113	1.07	1.000	-0.137	1.069	-0.004	0.021	1.13	-0.21
10	25	19.482	1.026	1071.75	1439.3	543.5	90.4	1.095	1.05	1.000	-0.108	1.054	0.002	0.019	1.02	0.11

