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A FLIGHT INVESTIGATION OF BLADE-SECTION AERODYNAMICS FOR A HELICOPTER MAIN ROTOR HAVING 10-64C AIRFOIL SECTIONS

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A FLIGHT INVESTIGATION OF BLADE-SECTION AERODYNAMICS FOR A HELICOPTER MAIN ROTOR HAVING 10-64C AIRFOIL SECTIONS

By

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SUMMARY

A flight investigation has been conducted to obtain data on the aerodynamic characteristics of helicopter main-rotor blades with the 10-64C blade section. The resulting data sets describe vehicle flight state, performance, loads, and aerodynamic pressures at 90-percent blade radius on the teetering rotor. The test envelope included hover, forward flight up to 83 m/s (162 knots), linear climb and descent, descending turns, and symmetrical pull-ups. Related sets of flight-test data are presented. Good agreement is shown between some airfoil pressure distributions obtained from flight tests and from two-dimensional wind-tunnel test and theoretical calculations.

INTRODUCTION

Some of the improvements in the performance and loads characteristics of helicopter rotors are the result of advances in rotorcraft airfoil technology (ref. 1). Current technology is limited to the use of airfoil design methods that assume two-dimensional, steady flow (refs. 2 and 3). The actual flow environment of a rotor is far more complex. The need to relate airfoil design methods to the rotor environment has lead to full-scale flight tests. During the initial tests, baseline data was acquired for a teetering-rotor helicopter flown with standard, production main-rotor blades (ref. 4). Susequent tests were completed with three sets of dynamically similar blades having the same twist and planform (ref. 5 to 8). Each of the three sets of blades was built with a different airfoil; each airfoil was designed with a significantly different method.

This report presents data on blade-section aerodynamic characteristics obtained in the flight tests of a helicopter having the 10-64C as the main-rotor blade section. The instrumented vehicle was flown in hover, level flight up to 83 m/s (162 knots), linear climb and descent, and collective-fixed maneuvers at about 56 m/s (109 knots). Data were obtained on performance, flight-state and control parameters, rotor loads and motions, and airfoil pressure distributions at 90-percent radius on one blade. Detailed data on performance and loads for the helicopter with the 10-64C blades are presented in reference 6. The results of two-dimensional wind-tunnel tests of the 10-64C airfoil are presented in reference 9.

This report provides a limited sampling of the flight data on blade-section aerodynamic characteristics. Detailed listings of data histories are given for

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a variety of flight test conditions. Patterns of data trends are defined for related sets of test conditions. In addition, blade-section pressure distributions from flight are compared to distributions from wind-tunnel tests and theoretical calculations.

SYMBOLS

Positive senses of some axes, angles and accelerations are presented in figure 1.

A_{0s} main-rotor collective pitch angel at 0.75R, measured at blade grips, deg

A_{1f} main-rotor lateral pitch angle, commanded at swashplate, deg

A_{1s} first harmonic of main-rotor lateral pitch angle, measured at blade grip, deg

a speed of sound, m/sec

a_{1s} first harmonic of main-rotor longitudinal flapping with respect to the mast, deg

B_{1s} first harmonic of main-rotor longitudinal pitch angle, measured at blade grip, deg

B_{1s} first harmonic of main-rotor lateral flapping with respect to the mast, deg.

C_L' vehicle load coefficient, $\dfrac{Wn_z}{\rho\pi R^2 (\Omega R)^2}$

C_p airfoil pressure coefficient, $\dfrac{p - p_\infty}{q_\infty}$

C_p^* airfoil pressure coefficient corresponding to a local Mach number of 1.0

C_Q main-rotor mast torque coefficient, $\dfrac{Q}{\rho\pi R^3 (\Omega R)^2}$

c airfoil chord, m

c_c airfoil chord-force coefficient, pressure only, $\frac{1}{c}\int_{\text{Thickness}} (C_{p,f} - C_{p,r})\, dz$

c_l airfoil lift coefficient, section lift/(qc)

c_m airfoil pitching-moment coefficient about quarter chord, pressure $\frac{1}{c}\int_{\text{chord}} \left(C_{p,l} - C_{p,u}\right)\left(0.25 - \frac{x}{c}\right) dx + \frac{1}{c}\int_{\text{thickness}} \left(C_{p,f} - C_{p,r}\right)\frac{z}{c}\, dz$

c_n airfoil normal-force coefficient $\frac{1}{c}\int_{\text{chord}} \left(C_{p,l} - C_{p,u}\right) dx$

f_{3db} frequency for 3db amplitude attenuation, Hz

g acceleration due to gravity, 9.81 m/sec^2

$\dot{h}$ climb rate, m/min

M local Mach number perpendicular to blade leading edge

M_h reference blade-tip Mach number, $\frac{\Omega R}{a}$

n_z normal load factor at aircraft center-of-gravity, g units

p local static pressure at a point on airfoil, P_a

p_f, q_f, r_f orthogonal set of angular rates at aircraft center-of-gravity, rad/sec

p_∞ free-stream static pressure, P_a

Q main-rotor mast torque, N-m

q_∞ free-stream dynamic pressure of blade section, P_a

R blade radius, m (ft)

r radial distance to blade element

T_b blade temperature on upper surface at x/c = 0.6 and r/R = 0.9, C

t airfoil thickness, m; also, time, sec.

t_d delay time due to electronic-induced lag, sec

V aircraft true airspeed m/sec (knots)

W aircraft gross weight, N

X,Y,Z orthogonal set of aircraft body axes (See fig. 1.)

x	airfoil abscissa, positive rearward from leading edge, m
y	airfoil ordinate, positive upward, m
α_c	airfoil angle of attack corrected for lift-interference effects in wind-tunnel test, deg
α_f	fuselage angle of attack, deg
β_f	fuselage angle of side-slip, deg
β_s	main-rotor, shaft-axis teeter angle, (where $\beta_s = a_0 - a_{1_s} \cos\psi - b_{1_s} \sin\psi \ldots$) positive upward, deg
θ_f	fuselage pitch attitude, deg
θ_s	main-rotor, shaft-axis blade pitch at 0.75R, (where $\theta_s = A_0 - A_{1_s}\cos\psi - B_{1_s} \sin\psi - \ldots$), measured at blade grip, deg
μ	tip-speed ratio, $V/(\Omega R)$
ρ	mass density of air, kg/m^3
ϕ_f	fuselage roll attitude, deg
ψ	main-rotor blade azimuth angle measured from downwind position in direction of rotor rotation, deg
Ω	main-rotor rotational speed, rad/sec

Subscripts:

c	mean line
f	forward surface
l	lower surface
r	rearward surface
t	transition to turbulent boundary layer
u	upper surface

EQUIPMENT AND PROCEDURES

Test Vehicles

The test vehicle was the instrumented AH-1G attack helicopter shown in figures 2 and 3. Physical characteristics of the vehicle are given in Table I. The teetering-hub main rotor was similar to the standard production configura-

tion except for blade construction, airfoil section, and some structural-dynamic blade properties. Compared to standard blades, the 10-64C blades have identical planform, twist, and root-end fitting; however, the new blades were built with the 10-64C airfoil contour from about 31-percent blade radius to the tip. One of these blades was instrumented to measure aerodynamic pressures at one spanwise station, as well as bending loads and internal temperatures. Details of blade design and other vehicle features may be found in references 5 and 6.

Airfoil

The 10-64C was designed with the methods described in reference 10. This approach employs the crestline method for predicting drag-divergence Mach numbers for an appropriate range of lift coefficients. The coordinates of the 10-64C were generated using the NACA equations for four- and five-digit airfoils. The thickness distribution is that of an NACA 0010-64 (standard nose radius and maximum thickness at 40 percent chord). The camber is derived from an extrapolation of five-digit airfoil camber; maximum camber is located at 35 percent chord. Figure 4 presents geometric data for this shape; Table II provides the coordinates. Figure 5 presents a comparison of the nominal contour with the profile measured at 90-percent of blade span (the location of the pressure transducers).

Two-dimensional aerodynamic characteristics of the 10-64C airfoil are given in reference 9, which presents data from tests conducted in the Langley 6- by 28-inch wind tunnel at Reynolds numbers close to those for flight. Drag-divergence Mach number was determined to be about 0.83 at zero-lift conditions and 0.72 at a normal-force coefficient of 0.6. Pitching-moment coefficients ranged from -0.015 to 0.020 at subcritical speed and moderate lift; maximum normal-force coefficient was found to be slightly below that of the NACA 0012 airfoil tested in the same facility.

Data System

Data from fuselage-mounted sensors were acquired with the Piloted Aircraft Data System (PADS) described in reference 4. These sensors measured flight-state parameters, control positions, and some rotor and engine parameters. Detail of the PADS sensor system are given in Table III. PADS electronics used a 10-bit data word, a sampling rate of 80 samples per second per channel, and pulse-code modulation (PCM) for digitization. PADS-PCM data channels were multiplexed and recorded on a single tape track.

Data from rotor-mounted sensors were processed by the digital Special Rotor Blade Instrumentation (SRBI) system of reference 11. This system provided 30 channels with 8-bit data words (without parity) and a sampling rate of 1000 samples per second per channel. Data signals for rotor loads, teeter angle, blade pitch angle, blade azimuth angle, and canister temperature were processed in the mast-mounted canister shown in figure 6. The maximum errors for teeter angle, blade pitch angle, blade azimuth angle and blade tmeperature were cal-

culated conservatively to be 0.30o, 0.8o, 0.3o, and 1.0C, respectively. This set of channels is described further in references 5 and 8. Airfoil pressures were sensed by 14 pressure transducers located at 90 percent of rotor radius. Electronics mounted in the blade tip digitized and multiplexed signals for both the blade-section pressures and blade temperature. This data and the canister-processed data were merged and recorded on a single tape track. A schematic of elements of the pressure-transducer installation is presented in figure 7. Some of the equipment used to perform preflight blade-pressure calibration are shown in figure 8. Table IV provides a more detailed description of the pressure data system.

Data Reduction

The pressure-transducer records were processed to produce local pressure and blade-section coefficients for every two degrees of azimuth within each selected rotor revolution. Corrected, dimensional values of local blade-section pressures were nondimensionalized with other data from the PADS and SRBI systems. These results were integrated, using the methods of reference 12, to yield normal-force, chord-force, and pitching-moment coefficients. The integration methods used estimated values of stagnation-point location and trailing-edge pressure coefficient. Details of this procedure are described in Appendix B of reference 8. (All SRBI data were corrected for the effects of temperature and of filter lag. Rotor speed was calculated from SRBI azimuth data rather than PADS tachometer data.) The standard data-reduction process also yielded loads and performance data for the same rotor revolution (ref. 6).

Flight-Test Procedures

Flight-test conditions included hover, level forward flight, linear climb and descent, and collective-fixed maneuvers. Test points for steady, level-flight speed sweeps ranged from about 34 to 83 m/sec (65 to 162 knots) in approximately 5 m/sec (10 knot) increments; each point was held for several seconds. Maneuvers were flown with a target tip-speed ratio of 0.25 (approximately 109 knots) and collective pitch set for steady, level flight at that speed. These manuevers were symmetrical pull-ups and constant-airspeed descending turns. Linear climbs and descents were also flown with the same airspeed target. Emphasis was placed on obtaining a data set that would be useful for comparison with data for the other blade sets flown with this same vehicle (refs. 4 to 8). This required strictly controlled and standardized test procedures, close attention to rotor speed, and control of configuration parameters, such as center of gravity.

DISCUSSION OF RESULTS

Aerodynamic blade-section data for the 10-64C blades are presented in figure 9 through 23 and in Appendices A and B. Table VI provides a guide to test-point conditions for data in the appendices. Although the present analysis

of the data is limited, it does include general considerations for data interpretation, comparisons of data for different flight conditions, and comparisons of flight data with results of both wind-tunnel tests and theoretical calculations.

Data Interpretation

Interpretation of the following data should be influenced by several considerations. First, all flight data were taken at one spanwise station. The 90-percent span location was chosen as a compromise to obtain the greatest range of local Mach numbers while minimizing tip effects. Second, the data were reduced to yield instantaneous rather than averaged data. Unless otherwise noted, all data sets for steady flight conditions are highly periodic with respect to rotor blade azimuth. Third, the cummulative effects from each step of data reduction mean that C_p data should be treated as being more accurate than values of c_n or c_m. Fourth, data interpretation should account for the variation of accuracy as a function of local dynamic pressure and other parameters (that vary with both blade azimuth and vehicle airspeed).

Data accuracy is affected by the methods for integrating pressure distributions to obtain c_n and c_m. The effect of using the method of reference 12 can be inferred from figure 9. The value of c_n for each test condition shown in figure 9 can be computed by integrating either of the two plots for each condition. Each plot on the left hand side of each page illustrates a technique used to avoid the difficulty of fitting curves to data plotted simply as C_p as a function of x/c. Although the flight data for figure 9(f) indicates the presence of an upper-surface shock wave, the curve-fit routine does not produce an appropriate step-type discontinuity in the pressure distribution; however, quantitative assessment of this limitation, indicates that the effect on c_n and c_m should be negligible.

Flight Test Data

Data for three level-flight test conditions are presented in figures 10 and 11 and Appendices A and B. The tip speed ratios of 0.15, 0.25 and 0.37 correspond to airspeeds of 65, 109 and 162 knots, respectively. The data of figure 10 show how parameters proportional to normal force and pitching moment vary as a function of azimuth. (In this case c_nM^2 and c_mM^2 are directly proportional to the dimensional, aerodynamic loads imposed by the local pressure distributions.) The data for $\mu = 0.15$ gives evidence of blade-vortex interactions at approximately $\psi = 90^o$ and 270^o. The salient features of the data for $\mu = 0.37$ are the negative values of c_nM^2 and c_mM^2 in the second quardant of the rotor disk. Figure 11 presents the C_p records used in the preparation of the data of figure 10. Figure 11(a) shows that the effect of blade-vortex interaction is limited to about the first 20 percent of the blade chord, as in similar data for the NLR-1T blade set (ref. 8). The most obvious feature in the data for $\mu = 0.37$ (fig. 11(c)) indicates a collapse of the upper-surface suction peak near the blade-section leading edge

(between about $\psi = 235^{o}$ and $\psi = 310^{o}$). In general, the data presented in figures 10 and 11 is similar to data for similar conditions in reference 8, which reports similar tests with the NLR-1T blades.

Figures 12 and 13 show how the pattern of blade-section aerodynamic behavior for level flight changes as tip-speed ratio is increased incrementally. The only abrupt change in the patterns of azimuthal records of figure 12 is observed as tip-speed ratio increases from 0.34 to 0.37; that change is the previously noted suction-peak collapse (fig. 12(c)). In figure 13, the variation of c_n with M assumes a typical shape similar to a flattened figure eight when vehicle airspeed is sufficiently high (above about $\mu = 0.23$) to prohibit significant blade-vortex interactions. As indicated in figure 13(d), the exact relationship of c_n and c_m with M varies very slightly with time, even in nominally steady test-point conditions.

Figures 14 and 15 provide further insight into the suction-peak collapse at the highest tip-speed ratio for level flight. The phenomenon occurs during each blade revolution but is not highly periodic (fig. 14). The suction increment at $x/c = 0.10$ compensates in large measure for the suction decrement at $x/c = 0.02$. The associated values of airfoil coefficients, obtained by integrating the automatically faired pressure distributions, show no significant effect other than slightly aperiodic behavior on the retreating-blade side of the rotor disk (fig. 15).

Figures 16 and 17 illustrate implied trends in blade-section aerodynamic characteristics already observed in reference 8. First, increments in C_L' for steady, level flight at $\mu = 0.36$ produce increments in c_n and decrements in c_m (fig. 16). This implies that the aerodynamic center of the blade section is shifted rearward as c_n increases. In contrast, the comparison of data for turns and level flight at $\mu = 0.24$ (fig. 17) shows that increased load factor in the turns result in an increase in c_n with an attendant shift in c_m to more nearly positive values.

Comparison of Flight and Wind-Tunnel Data

Blade-section pressure distributions from flight are compared in figures 18 and 19 to wind-tunnel data from reference 9. Although the match of values of c_n and M are not precise, the agreement between the two types of data is good in several cases. Some disagreement can be expected at the leading edge in figure 18(b) due to blade-vortex interaction. Thoughout the comparison, the value of C_p at $x/c = 0.20$ on the upper surface is more positive than is expected from data at other pressure ports; this remains an anomolous condition. The data at higher Mach number shows some disagreement. In two comparisons (fig. 19(b) and 19(c)) a lower-surface, leading-edge suction peak is observed in the wind tunnel but not in flight.

Comparison of Flight Data and Theoretical Calculations

Several aspects of the flight data are considered in figures 20 to 23 by comparing blade-section pressure distribution from flight test with those from theoretical calculations. The theoretical distributions were calculated by using the computer program of reference 13. The input values of lift coefficient, Mach number and Reynolds number were taken from those values for the associated flight test condition at the blade section. The airfoil coordinates were those given in Table II. The forward edge of the turbulent boundary layer on each surface was determined with the estimated values of transition shown in figure 24. The calculation method assumes attached flow about an airfoil in two-dimensional, steady flow.

Hover data is presented in figure 20. These results (for flight 77, run 2) are not identical at all azimuths. These differences are attributable to the effects of the tail-rotor flow, engine exhaust and mast tilt on the inflow and wake.

Flight data for high-speed, level flight is presented in figures 21 and 22. This comparison of flight-data and theory shows the same trends observed in similar flight-test results for the NLR-1T blades (ref. 8). Agreement between flight data and theory is good except for regions typified by comparisons at $\psi = 60^{0}$, 70^{0}, 140^{0}, and 160^{0} in figure 21. The disagreement at the lower values of ψ suggests that the rotor environment acted to simulate an increase of leading-edge camber. The disagreement at the higher values of ψ is primarily an under prediction of lower-surface, leading-edge suction; this trend is opposite to that for $\psi = 60^{0}$ and 70^{0}. More details of the second quadrant behavior are shown in figure 22. Flight data shows a relatively sudden change in the values of C_p measured at $x/c = 0.20$ on the lower surface. Theory for steady, two-dimensional flow suggests that the entire lower-surface, leading-edge suction peak would diminish more gradually.

The collapse of the upper-surface, leading-edge suction peak shown in figures 11(c) and 12(c) is also examined in figure 23. The latter figure compares flight data and theory for the tip-speed ratio associated with the collapse as well as for a slightly lower airspeed that does not produce such a phenomenon. Agreement between appropriate sets of flight data and theory is good except in the case of $\psi = 268^{0}$ and $\mu = 0.37$. This suggests that the phenomenon could be a direct result of the rotor flow environment.
nd theory i

CONCLUDING REMARKS

A flight investigation has been conducted with a teetering-rotor helicopter to obtain data on the aerodynamic characteristics of main-rotor blades having the 10-64C blade-section contour. Chordwise pressure distributions at 90-percent blade radius were measured for a variety of flight conditions. Many of the trends agree with trends defined for blades having the NLR-1T blade-section contour that were tested on the same vehicle. Data as shown which illustrate apparent blade-vortex interactions, the development of some negative section lift on the advancing

blade at high tip-speed ratio, and several phenomena observed at high tip-speed ratios. Good agreement is shown between some airfoil pressure distributions obtained from flight measurements and from two-dimensional wind-tunnel tests and theoretical calculations.

APPENDIX A. - AIRFOIL PRESSURE COEFFICIENT DATA

Computer-generated listings of airfoil pressure coefficient data are identified in terms of flight number, run number, and time. Also given are tip-speed ratio (MU), vehicle load coefficient (CLP), and blade temperature at x/c = 0.60 on the upper surface (TEMP(U60)). One column of pressure coefficient data is given for each pressure orifice location, as designated by a value of x/c (X/C).

The data of Table VI serves as a guide for the contents of this appendix.

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 75 RUN 10 TIME 50641.700 MU= .294 CLP= .00439 TEMP(U60)= 36.1 C = 96.99 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C=	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
AZIMUTH														
0.	-1.290	-.728	-.450	-.443	-.367	-.229	-.035	.086	.490	.193	.090	-.021	-.050	.087
2.	-1.221	-.707	-.440	-.444	-.372	-.226	-.034	.084	.473	.171	.076	-.032	-.055	.085
4.	-1.132	-.691	-.442	-.442	-.367	-.236	-.045	.083	.435	.150	.049	-.044	-.054	.083
6.	-1.043	-.662	-.436	-.442	-.373	-.231	-.044	.081	.403	.130	.039	-.056	-.060	.092
8.	-.956	-.644	-.439	-.432	-.366	-.229	-.043	.079	.362	.111	.039	-.067	-.063	.091
10.	-.892	-.631	-.431	-.432	-.373	-.238	-.043	.077	.334	.096	.011	-.066	-.069	.078
12.	-.833	-.617	-.422	-.430	-.366	-.233	-.051	.076	.310	.090	.005	-.076	-.071	.076
14.	-.794	-.605	-.414	-.432	-.373	-.233	-.050	.074	.287	.072	.005	-.075	-.078	.075
16.	-.740	-.608	-.418	-.439	-.379	-.239	-.049	.073	.265	.061	.005	-.085	-.088	.084
18.	-.706	-.612	-.423	-.435	-.371	-.240	-.050	.076	.259	.054	-.023	-.095	-.088	.082
20.	-.673	-.601	-.415	-.438	-.366	-.245	-.057	.080	.223	.038	-.039	-.104	-.095	.080
22.	-.625	-.604	-.407	-.445	-.372	-.240	-.055	.078	.203	.030	-.052	-.113	-.104	.079
24.	-.595	-.593	-.401	-.440	-.376	-.242	-.054	.077	.184	.023	-.053	-.121	-.103	.077
26.	-.564	-.582	-.404	-.444	-.372	-.245	-.053	.081	.166	.008	-.078	-.129	-.110	.076
28.	-.519	-.574	-.397	-.438	-.379	-.241	-.056	.077	.148	-.005	-.075	-.134	-.118	.075
30.	-.476	-.576	-.393	-.443	-.381	-.244	-.060	.079	.129	-.019	-.064	-.135	-.116	.073
32.	-.439	-.569	-.395	-.450	-.379	-.246	-.059	.081	.101	-.031	-.076	-.143	-.123	.072
34.	-.415	-.571	-.392	-.456	-.385	-.250	-.058	.079	.085	-.044	-.089	-.150	-.122	.071
36.	-.392	-.562	-.394	-.462	-.391	-.252	-.057	.078	.070	-.047	-.094	-.158	-.128	.070
38.	-.365	-.557	-.391	-.469	-.397	-.256	-.061	.077	.056	-.055	-.090	-.160	-.128	.069
40.	-.334	-.558	-.397	-.475	-.403	-.257	-.064	.083	.037	-.067	-.107	-.162	-.135	.072
42.	-.313	-.555	-.398	-.481	-.403	-.262	-.063	.090	.019	-.078	-.113	-.169	-.140	.075
44.	-.294	-.555	-.397	-.487	-.403	-.262	-.062	.083	.014	-.080	-.123	-.176	-.140	.074
46.	-.275	-.554	-.402	-.493	-.409	-.268	-.061	.088	.001	-.088	-.124	-.183	-.145	.073
48.	-.256	-.554	-.403	-.500	-.415	-.267	-.060	.088	-.012	-.099	-.141	-.184	-.145	.077
50.	-.238	-.547	-.403	-.508	-.421	-.264	-.065	.095	-.024	-.099	-.141	-.187	-.149	.080
52.	-.221	-.547	-.409	-.524	-.421	-.271	-.061	.094	-.036	-.108	-.139	-.194	-.150	.079
54.	-.212	-.547	-.414	-.530	-.429	-.270	-.064	.093	-.041	-.119	-.143	-.194	-.154	.078
56.	-.201	-.548	-.414	-.540	-.439	-.278	-.059	.092	-.041	-.118	-.148	-.198	-.155	.077
58.	-.194	-.555	-.416	-.554	-.438	-.276	-.063	.098	-.048	-.117	-.151	-.205	-.158	.076

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 75 RUN 10 TIME 50641.700 MU= .294 CLP= .00439 TEMP(U60)= 36.1 C = 96.99 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
60.	-.183	-.554	-.416	-.561	-.442	-.273	-.064	.097	-.052	-.117	-.143	-.205	-.161	.076
62.	-.177	-.557	-.419	-.572	-.441	-.271	-.057	.097	-.059	-.136	-.166	-.210	-.163	.081
64.	-.166	-.556	-.418	-.581	-.445	-.269	-.062	.097	-.062	-.135	-.165	-.209	-.166	.082
66.	-.161	-.560	-.422	-.587	-.444	-.278	-.055	.102	-.070	-.135	-.172	-.215	-.168	.081
68.	-.149	-.559	-.422	-.600	-.449	-.276	-.055	.102	-.073	-.143	-.161	-.214	-.167	.081
70.	-.146	-.556	-.419	-.601	-.448	-.274	-.055	.101	-.081	-.142	-.138	-.213	-.166	.080
72.	-.134	-.553	-.424	-.604	-.445	-.272	-.054	.100	-.083	-.144	-.158	-.219	-.165	.080
74.	-.119	-.550	-.423	-.612	-.443	-.271	-.054	.100	-.092	-.151	-.172	-.218	-.170	.079
76.	-.105	-.537	-.422	-.620	-.441	-.270	-.055	.100	-.103	-.156	-.191	-.217	-.171	.086
78.	-.079	-.514	-.420	-.622	-.430	-.269	-.059	.099	-.124	-.173	-.203	-.224	-.170	.086
80.	-.052	-.501	-.410	-.620	-.428	-.271	-.055	.099	-.135	-.183	-.232	-.231	-.170	.086
82.	-.013	-.467	-.400	-.618	-.428	-.278	-.060	.099	-.157	-.197	-.223	-.231	-.175	.086
84.	.001	-.443	-.398	-.617	-.436	-.277	-.060	.098	-.190	-.217	-.243	-.238	-.176	.092
86.	.027	-.421	-.389	-.616	-.436	-.277	-.060	.094	-.212	-.233	-.264	-.244	-.176	.092
88.	.054	-.398	-.388	-.607	-.444	-.276	-.060	.095	-.234	-.248	-.282	-.244	-.176	.092
90.	.080	-.377	-.380	-.596	-.446	-.281	-.060	.098	-.257	-.263	-.265	-.246	-.176	.094
92.	.104	-.365	-.379	-.594	-.453	-.281	-.060	.098	-.289	-.267	-.282	-.251	-.176	.099
94.	.120	-.345	-.370	-.595	-.454	-.282	-.060	.098	-.314	-.280	-.278	-.252	-.176	.099
96.	.144	-.332	-.361	-.596	-.454	-.287	-.060	.098	-.345	-.288	-.303	-.252	-.169	.099
98.	.161	-.313	-.355	-.597	-.455	-.288	-.060	.099	-.368	-.295	-.304	-.253	-.169	.100
100.	.184	-.303	-.353	-.588	-.457	-.289	-.060	.099	-.392	-.299	-.329	-.253	-.170	.100
102.	.198	-.289	-.345	-.590	-.458	-.290	-.060	.093	-.412	-.308	-.307	-.254	-.169	.103
104.	.212	-.276	-.341	-.592	-.460	-.291	-.060	.092	-.429	-.327	-.315	-.255	-.164	.108
106.	.221	-.273	-.339	-.594	-.462	-.292	-.061	.093	-.453	-.358	-.327	-.256	-.164	.108
108.	.228	-.263	-.331	-.587	-.464	-.294	-.061	.093	-.474	-.400	-.314	-.253	-.163	.109
110.	.243	-.253	-.328	-.589	-.467	-.295	-.061	.094	-.493	-.435	-.311	-.251	-.159	.109
112.	.251	-.248	-.325	-.581	-.464	-.297	-.062	.094	-.514	-.479	-.321	-.248	-.157	.110
114.	.253	-.250	-.318	-.571	-.463	-.299	-.062	.095	-.529	-.506	-.312	-.247	-.153	.111
116.	.255	-.246	-.311	-.553	-.460	-.301	-.063	.095	-.551	-.512	-.298	-.243	-.152	.112
118.	.265	-.243	-.309	-.538	-.460	-.304	-.063	.089	-.572	-.484	-.289	-.243	-.148	.113

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 75 RUN 10 TIME 50641.700 MU= .294 CLP= .00439 TEMP(U60)= 36.1 C = 96.99 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C=	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
AZIMUTH														
120.	.273	-.245	-.300	-.531	-.457	-.296	-.064	.090	-.589	-.423	-.292	-.239	-.149	.108
122.	.275	-.247	-.295	-.524	-.459	-.298	-.064	.091	-.607	-.361	-.301	-.232	-.147	.113
124.	.278	-.250	-.298	-.517	-.455	-.301	-.065	.092	-.625	-.322	-.287	-.233	-.144	.109
126.	.281	-.252	-.294	-.510	-.449	-.303	-.066	.091	-.644	-.305	-.293	-.228	-.142	.109
128.	.273	-.255	-.295	-.504	-.443	-.296	-.059	.086	-.663	-.310	-.280	-.222	-.139	.110
130.	.261	-.258	-.290	-.492	-.447	-.299	-.060	.087	-.674	-.323	-.264	-.224	-.141	.112
132.	.261	-.261	-.283	-.479	-.433	-.301	-.060	.088	-.692	-.330	-.282	-.218	-.137	.113
134.	.265	-.254	-.285	-.473	-.436	-.295	-.061	.089	-.703	-.343	-.272	-.212	-.136	.114
136.	.255	-.255	-.289	-.466	-.431	-.298	-.062	.090	-.712	-.347	-.261	-.215	-.132	.108
138.	.257	-.259	-.293	-.467	-.426	-.299	-.063	.091	-.722	-.349	-.252	-.209	-.131	.109
140.	.245	-.262	-.287	-.466	-.431	-.294	-.064	.089	-.732	-.345	-.254	-.202	-.127	.111
142.	.233	-.266	-.291	-.460	-.426	-.295	-.063	.085	-.743	-.341	-.246	-.196	-.126	.112
144.	.236	-.270	-.295	-.453	-.421	-.290	-.057	.087	-.741	-.326	-.225	-.189	-.121	.113
146.	.223	-.275	-.299	-.457	-.427	-.290	-.058	.088	-.739	-.324	-.215	-.184	-.121	.107
148.	.210	-.279	-.293	-.454	-.421	-.286	-.059	.090	-.722	-.317	-.218	-.185	-.115	.109
150.	.196	-.284	-.298	-.447	-.416	-.291	-.060	.091	-.706	-.302	-.208	-.178	-.116	.110
152.	.182	-.289	-.303	-.441	-.413	-.290	-.061	.087	-.687	-.287	-.197	-.171	-.109	.112
154.	.168	-.294	-.309	-.446	-.417	-.288	-.062	.085	-.654	-.272	-.185	-.164	-.101	.114
156.	.149	-.302	-.312	-.441	-.411	-.285	-.060	.086	-.620	-.263	-.162	-.156	-.102	.116
158.	.119	-.320	-.308	-.448	-.410	-.284	-.055	.088	-.585	-.244	-.155	-.148	-.095	.119
160.	.103	-.326	-.314	-.442	-.413	-.289	-.057	.090	-.549	-.229	-.163	-.140	-.095	.121
162.	.080	-.332	-.320	-.450	-.412	-.285	-.058	.083	-.507	-.209	-.140	-.136	-.087	.119
164.	.042	-.344	-.327	-.444	-.415	-.285	-.059	.083	-.456	-.193	-.127	-.134	-.079	.115
166.	.011	-.362	-.333	-.453	-.415	-.291	-.060	.085	-.415	-.170	-.114	-.125	-.079	.118
168.	-.018	-.370	-.340	-.461	-.416	-.285	-.055	.086	-.378	-.154	-.100	-.116	-.071	.120
170.	-.060	-.385	-.347	-.456	-.418	-.287	-.052	.088	-.337	-.141	-.085	-.106	-.070	.123
172.	-.094	-.403	-.355	-.466	-.427	-.293	-.053	.090	-.280	-.142	-.070	-.096	-.063	.125
174.	-.128	-.420	-.363	-.472	-.427	-.285	-.054	.092	-.232	-.130	-.054	-.085	-.060	.128
176.	-.176	-.448	-.371	-.469	-.430	-.289	-.056	.094	-.181	-.116	-.038	-.074	-.049	.131
178.	-.225	-.467	-.379	-.479	-.429	-.295	-.048	.084	-.127	-.084	-.020	-.062	-.042	.134

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 75 RUN 10 TIME 50641.700 MU= .294 CLP= .00439 TEMP(U60)= 36.1 C = 96.99 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
180.	-.277	-.489	-.388	-.485	-.433	-.302	-.047	.086	-.071	-.050	-.002	-.060	-.038	.128
182.	-.346	-.508	-.407	-.483	-.443	-.291	-.048	.088	-.025	-.050	.017	-.051	-.031	.127
184.	-.411	-.533	-.423	-.494	-.441	-.297	-.049	.090	.029	-.014	.037	-.038	-.026	.130
186.	-.470	-.553	-.432	-.506	-.447	-.303	-.050	.092	.092	.005	.045	-.036	-.019	.133
188.	-.532	-.581	-.443	-.509	-.457	-.291	-.051	.095	.144	.025	.060	-.024	-.012	.136
190.	-.617	-.617	-.453	-.510	-.453	-.298	-.039	.097	.192	.049	.082	-.010	-.006	.140
192.	-.691	-.637	-.464	-.522	-.461	-.302	-.040	.099	.242	.088	.105	.006	-.006	.143
194.	-.762	-.670	-.491	-.523	-.454	-.291	-.041	.102	.294	.111	.113	.007	.003	.147
196.	-.837	-.691	-.506	-.525	-.463	-.298	-.042	.104	.348	.136	.134	.023	.009	.150
198.	-.941	-.728	-.518	-.538	-.475	-.300	-.041	.107	.385	.155	.160	.024	.009	.138
200.	-1.052	-.749	-.531	-.551	-.465	-.290	-.030	.103	.419	.173	.167	.041	.021	.142
202.	-1.139	-.767	-.544	-.549	-.476	-.297	-.030	.103	.478	.208	.193	.044	.026	.145
204.	-1.229	-.810	-.557	-.554	-.486	-.296	-.031	.115	.517	.222	.222	.060	.026	.149
206.	-1.323	-.830	-.571	-.567	-.475	-.286	-.032	.118	.556	.252	.229	.062	.027	.152
208.	-1.450	-.852	-.584	-.561	-.466	-.293	-.028	.111	.597	.272	.260	.063	.028	.153
210.	-1.551	-.897	-.596	-.568	-.477	-.300	-.017	.106	.637	.291	.266	.069	.028	.142
212.	-1.651	-.919	-.590	-.582	-.483	-.295	-.017	.108	.655	.311	.270	.085	.047	.145
214.	-1.731	-.940	-.604	-.572	-.475	-.287	-.017	.111	.700	.333	.255	.087	.049	.149
216.	-1.842	-.962	-.618	-.581	-.486	-.279	-.018	.113	.741	.353	.285	.096	.050	.152
218.	-1.948	-.984	-.632	-.568	-.489	-.272	-.018	.116	.758	.378	.292	.112	.051	.156
220.	-2.029	-1.006	-.639	-.578	-.482	-.278	-.010	.118	.775	.397	.304	.115	.052	.159
222.	-2.124	-1.029	-.635	-.591	-.493	-.284	-.000	.121	.801	.406	.327	.117	.053	.163
224.	-2.235	-1.051	-.640	-.573	-.492	-.290	-.000	.124	.841	.414	.320	.120	.054	.166
226.	-2.307	-1.062	-.636	-.585	-.486	-.274	-.000	.126	.859	.423	.349	.122	.055	.170
228.	-2.371	-1.063	-.649	-.594	-.482	-.271	-.000	.129	.877	.456	.345	.125	.057	.173
230.	-2.460	-1.084	-.662	-.576	-.476	-.276	.014	.132	.894	.472	.343	.127	.058	.177
232.	-2.549	-1.089	-.662	-.587	-.486	-.281	.021	.134	.912	.481	.356	.130	.059	.180
234.	-2.597	-1.091	-.659	-.592	-.495	-.258	.021	.137	.929	.490	.344	.132	.060	.183
236.	-2.647	-1.111	-.671	-.574	-.485	-.257	.022	.139	.946	.499	.350	.135	.061	.187
238.	-2.712	-1.130	-.665	-.584	-.481	-.262	.022	.141	.962	.507	.356	.137	.062	.190

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 75 RUN 10 TIME 50641.700 MU= .294 CLP= .00439 TEMP(U60)= 36.1 C = 96.99 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
240.	-2.756	-1.127	-.663	-.583	-.489	-.266	.023	.144	.957	.516	.362	.139	.063	.176
242.	-2.799	-1.129	-.654	-.567	-.473	-.270	.023	.146	.955	.524	.367	.141	.064	.171
244.	-2.810	-1.146	-.652	-.575	-.470	-.237	.023	.148	.970	.531	.373	.143	.065	.174
246.	-2.867	-1.135	-.661	-.583	-.477	-.241	.024	.150	.983	.535	.378	.145	.066	.176
248.	-2.882	-1.138	-.670	-.574	-.483	-.244	.024	.152	.995	.514	.383	.147	.067	.178
250.	-2.904	-1.151	-.678	-.559	-.489	-.247	.048	.154	1.007	.552	.387	.149	.068	.181
252.	-2.897	-1.132	-.658	-.565	-.464	-.249	.049	.156	.987	.551	.392	.151	.068	.183
254.	-2.917	-1.135	-.658	-.571	-.464	-.252	.049	.157	.988	.526	.395	.152	.069	.184
256.	-2.942	-1.145	-.664	-.575	-.468	-.254	.050	.158	.996	.531	.399	.153	.070	.186
258.	-2.920	-1.117	-.669	-.556	-.471	-.256	.050	.160	1.004	.535	.402	.155	.070	.187
260.	-2.888	-1.120	-.673	-.543	-.474	-.258	.050	.161	1.010	.538	.404	.156	.071	.189
262.	-2.901	-1.126	-.644	-.546	-.477	-.246	.051	.162	1.016	.541	.407	.156	.071	.190
264.	-2.912	-1.131	-.646	-.549	-.479	-.220	.051	.162	1.020	.543	.408	.157	.071	.190
266.	-2.872	-1.133	-.648	-.550	-.480	-.220	.051	.163	.981	.545	.409	.158	.071	.191
268.	-2.873	-1.095	-.649	-.551	-.476	-.221	.051	.163	.983	.546	.409	.158	.072	.191
270.	-2.830	-1.095	-.649	-.552	-.445	-.221	.051	.163	.984	.546	.371	.158	.072	.191
272.	-2.828	-1.095	-.649	-.551	-.445	-.221	.051	.163	.988	.546	.374	.158	.072	.191
274.	-2.823	-1.093	-.642	-.515	-.444	-.220	.051	.163	1.017	.545	.405	.158	.071	.191
276.	-2.804	-1.090	-.612	-.508	-.443	-.220	.051	.162	.979	.543	.369	.147	.071	.190
278.	-2.754	-1.085	-.609	-.506	-.441	-.219	.051	.162	.975	.541	.367	.128	.071	.190
280.	-2.740	-1.079	-.606	-.503	-.439	-.218	.050	.140	.969	.538	.365	.127	.071	.189
282.	-2.707	-1.073	-.602	-.500	-.436	-.216	.050	.133	.963	.535	.363	.126	.070	.187
284.	-2.671	-1.065	-.598	-.536	-.432	-.215	.050	.154	.969	.503	.360	.125	.070	.186
286.	-2.660	-1.056	-.593	-.532	-.429	-.213	.049	.157	.988	.518	.357	.124	.064	.184
288.	-2.606	-1.045	-.587	-.526	-.425	-.211	.049	.132	.979	.521	.354	.123	.042	.183
290.	-2.578	-1.034	-.581	-.521	-.438	-.209	.048	.128	.968	.516	.350	.122	.041	.181
292.	-2.548	-1.022	-.574	-.515	-.449	-.206	.048	.152	.957	.478	.346	.120	.041	.179
294.	-2.516	-1.009	-.583	-.508	-.444	-.204	.047	.125	.945	.500	.342	.119	.040	.176
296.	-2.482	-.996	-.590	-.501	-.438	-.201	.028	.148	.932	.463	.337	.117	.040	.174
298.	-2.446	-.981	-.582	-.494	-.431	-.198	.041	.146	.919	.455	.332	.097	.039	.171

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 75 RUN 10 TIME 50641.700 MU= .294 CLP= .00439 TEMP(U60)= 36.1 C = 96.99 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
300.	-2.409	-.988	-.573	-.487	-.425	-.229	.026	.144	.905	.448	.327	.088	.039	.169
302.	-2.370	-.987	-.563	-.491	-.418	-.227	.022	.142	.890	.474	.322	.087	.038	.166
304.	-2.330	-.970	-.554	-.505	-.411	-.223	.022	.139	.875	.466	.316	.085	.037	.163
306.	-2.289	-.953	-.544	-.496	-.404	-.219	.021	.137	.884	.454	.311	.084	.037	.160
308.	-2.247	-.935	-.556	-.487	-.421	-.215	.021	.134	.853	.418	.305	.082	.036	.157
310.	-2.204	-.918	-.552	-.478	-.418	-.211	.021	.132	.828	.410	.299	.081	.035	.154
312.	-2.128	-.900	-.541	-.469	-.410	-.207	.020	.129	.811	.402	.269	.079	.035	.151
314.	-2.079	-.909	-.530	-.459	-.402	-.203	.020	.119	.795	.394	.281	.077	.019	.148
316.	-2.036	-.895	-.519	-.468	-.393	-.198	.019	.111	.779	.386	.281	.076	.012	.145
318.	-1.958	-.876	-.508	-.470	-.385	-.202	.019	.121	.762	.377	.276	.074	.012	.142
320.	-1.913	-.857	-.521	-.460	-.377	-.220	.015	.119	.746	.369	.270	.071	.012	.139
322.	-1.871	-.838	-.511	-.450	-.394	-.215	-.000	.116	.729	.361	.264	.050	.011	.136
324.	-1.828	-.820	-.499	-.440	-.385	-.210	-.000	.113	.713	.342	.231	.049	.011	.133
326.	-1.754	-.829	-.488	-.451	-.377	-.205	-.000	.111	.697	.319	.225	.048	-.006	.130
328.	-1.714	-.812	-.477	-.447	-.372	-.212	-.000	.108	.681	.311	.220	.042	-.008	.127
330.	-1.674	-.818	-.469	-.437	-.383	-.222	-.000	.106	.665	.304	.217	.027	-.008	.124
332.	-1.635	-.799	-.476	-.449	-.374	-.217	-.006	.103	.649	.297	.229	.026	-.008	.121
334.	-1.596	-.785	-.469	-.442	-.371	-.212	-.016	.101	.639	.290	.180	.026	-.007	.118
336.	-1.559	-.787	-.475	-.454	-.385	-.221	-.016	.098	.644	.283	.180	.019	-.008	.116
338.	-1.530	-.774	-.469	-.445	-.391	-.226	-.015	.096	.629	.276	.190	.008	-.023	.113
340.	-1.514	-.780	-.472	-.458	-.382	-.220	-.015	.094	.614	.270	.168	.007	-.023	.110
342.	-1.478	-.786	-.468	-.448	-.381	-.215	-.014	.092	.599	.263	.157	-.001	-.025	.107
344.	-1.453	-.783	-.469	-.459	-.384	-.226	-.023	.089	.585	.257	.145	-.009	-.037	.105
346.	-1.446	-.773	-.465	-.448	-.375	-.227	-.028	.087	.571	.251	.164	-.009	-.036	.102
348.	-1.427	-.777	-.465	-.440	-.376	-.221	-.027	.085	.567	.245	.165	-.008	-.035	.100
350.	-1.406	-.771	-.462	-.451	-.376	-.233	-.026	.097	.566	.222	.149	-.008	-.039	.098
352.	-1.385	-.763	-.460	-.458	-.378	-.231	-.026	.095	.553	.232	.145	-.018	-.048	.095
354.	-1.367	-.766	-.459	-.447	-.376	-.226	-.025	.093	.540	.211	.142	-.022	-.047	.093
356.	-1.345	-.758	-.456	-.442	-.379	-.221	-.034	.090	.527	.205	.128	-.022	-.045	.091
358.	-1.300	-.740	-.455	-.446	-.376	-.234	-.036	.088	.504	.200	.106	-.031	-.050	.089

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/10/12.

FLT 77 RUN 2 TIME 50746.200 MU= 0.000 CLP= .00416 TEMP(U60)= 31.5 C = 88.75 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
0.	-.653	-.586	-.432	-.456	-.394	-.168	-.066	.065	.198	.010	-.044	-.088	-.084	.070
2.	-.653	-.576	-.432	-.456	-.394	-.168	-.066	.065	.198	.010	-.046	-.088	-.084	.070
4.	-.653	-.576	-.432	-.456	-.394	-.168	-.066	.065	.188	.010	-.029	-.088	-.084	.070
6.	-.653	-.576	-.432	-.456	-.394	-.168	-.066	.054	.189	.010	-.029	-.097	-.089	.070
8.	-.640	-.587	-.432	-.456	-.394	-.168	-.066	.054	.187	.010	-.037	-.100	-.096	.070
10.	-.632	-.594	-.432	-.456	-.394	-.168	-.066	.054	.179	-.006	-.037	-.100	-.096	.070
12.	-.632	-.594	-.432	-.456	-.394	-.168	-.068	.054	.179	.010	-.037	-.100	-.096	.070
14.	-.634	-.582	-.434	-.457	-.396	-.169	-.066	.055	.165	.006	-.039	-.102	-.097	.068
16.	-.617	-.576	-.433	-.457	-.395	-.168	-.076	.065	.161	-.007	-.038	-.100	-.097	.070
18.	-.611	-.590	-.432	-.456	-.394	-.168	-.066	.062	.161	-.007	-.025	-.100	-.096	.070
20.	-.611	-.594	-.432	-.456	-.394	-.168	-.066	.054	.161	-.007	-.033	-.112	-.096	.070
22.	-.593	-.579	-.432	-.456	-.394	-.168	-.067	.054	.147	-.007	-.037	-.113	-.096	.070
24.	-.590	-.576	-.432	-.456	-.409	-.168	-.077	.054	.143	-.007	-.051	-.113	-.096	.070
26.	-.590	-.576	-.432	-.456	-.395	-.168	-.077	.059	.143	-.007	-.054	-.113	-.104	.070
28.	-.569	-.576	-.432	-.456	-.410	-.168	-.077	.065	.127	-.012	-.039	-.113	-.108	.070
30.	-.568	-.576	-.432	-.468	-.410	-.168	-.077	.065	.125	-.023	-.068	-.113	-.108	.071
32.	-.568	-.576	-.432	-.473	-.410	-.168	-.077	.060	.125	-.023	-.038	-.113	-.098	.082
34.	-.568	-.594	-.432	-.473	-.410	-.168	-.077	.054	.125	-.023	-.037	-.113	-.096	.082
36.	-.568	-.594	-.432	-.473	-.410	-.168	-.077	.060	.125	-.023	-.037	-.113	-.096	.082
38.	-.568	-.592	-.432	-.473	-.410	-.168	-.077	.065	.125	-.023	-.054	-.113	-.096	.079
40.	-.565	-.576	-.432	-.473	-.407	-.168	-.077	.065	.125	-.023	-.054	-.113	-.096	.070
42.	-.547	-.573	-.432	-.459	-.398	-.168	-.077	.058	.123	-.023	-.054	-.113	-.108	.070
44.	-.547	-.562	-.432	-.456	-.410	-.168	-.077	.054	.107	-.033	-.054	-.113	-.108	.074
46.	-.547	-.576	-.432	-.456	-.410	-.176	-.077	.062	.107	-.039	-.054	-.113	-.108	.078
48.	-.541	-.576	-.432	-.473	-.410	-.173	-.077	.065	.107	-.039	-.054	-.113	-.108	.070
50.	-.526	-.576	-.432	-.473	-.410	-.177	-.077	.065	.102	-.039	-.054	-.113	-.108	.070
52.	-.526	-.582	-.432	-.473	-.410	-.182	-.077	.065	.089	-.039	-.054	-.113	-.108	.070
54.	-.526	-.588	-.432	-.473	-.410	-.182	-.077	.065	.089	-.039	-.054	-.113	-.108	.076
56.	-.526	-.576	-.432	-.473	-.410	-.182	-.077	.065	.089	-.039	-.048	-.113	-.108	.082
58.	-.536	-.576	-.432	-.473	-.410	-.182	-.077	.065	.089	-.039	-.043	-.113	-.108	.082

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/10/12.

FLT 77 RUN 2 TIME 50746.200 MU= 0.000 CLP= .00416 TEMP(U60)= 31.5 C = 88.75 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
60.	-.547	-.576	-.432	-.473	-.410	-.182	-.077	.065	.097	-.039	-.054	-.113	-.108	.082
62.	-.547	-.576	-.432	-.473	-.410	-.182	-.077	.054	.107	-.039	-.054	-.113	-.108	.082
64.	-.547	-.576	-.432	-.473	-.410	-.182	-.077	.054	.107	-.039	-.062	-.113	-.108	.082
66.	-.535	-.576	-.432	-.473	-.410	-.182	-.077	.055	.097	-.039	-.070	-.113	-.108	.082
68.	-.526	-.576	-.432	-.473	-.410	-.182	-.077	.065	.089	-.039	-.061	-.113	-.108	.082
70.	-.540	-.576	-.432	-.479	-.410	-.182	-.077	.064	.100	-.039	-.054	-.113	-.102	.082
72.	-.562	-.588	-.442	-.484	-.410	-.182	-.077	.056	.119	-.023	-.043	-.113	-.096	.082
74.	-.568	-.594	-.447	-.480	-.422	-.182	-.077	.065	.125	-.023	-.037	-.113	-.096	.082
76.	-.584	-.594	-.447	-.491	-.425	-.182	-.077	.065	.138	-.021	-.037	-.102	-.096	.072
78.	-.606	-.594	-.447	-.491	-.412	-.182	-.077	.065	.143	-.007	-.037	-.111	-.096	.070
80.	-.628	-.608	-.459	-.491	-.410	-.182	-.077	.062	.157	-.003	-.012	-.101	-.096	.070
82.	-.650	-.612	-.462	-.491	-.410	-.182	-.077	.054	.190	.010	-.016	-.100	-.096	.070
84.	-.672	-.612	-.462	-.491	-.410	-.182	-.077	.058	.198	.010	-.007	-.100	-.096	.070
86.	-.694	-.628	-.462	-.491	-.410	-.182	-.077	.061	.213	.015	-.017	-.100	-.096	.070
88.	-.696	-.630	-.462	-.491	-.425	-.182	-.077	.059	.216	.026	-.020	-.100	-.096	.070
90.	-.716	-.647	-.476	-.491	-.425	-.182	-.077	.065	.216	.026	-.020	-.100	-.096	.070
92.	-.717	-.648	-.476	-.491	-.411	-.182	-.077	.065	.233	.026	.011	-.099	-.096	.070
94.	-.739	-.648	-.476	-.491	-.425	-.182	-.077	.065	.234	.026	.013	-.088	-.096	.070
96.	-.759	-.648	-.476	-.491	-.425	-.182	-.077	.065	.252	.034	-.003	-.088	-.096	.070
98.	-.762	-.649	-.478	-.491	-.425	-.182	-.077	.065	.253	.043	.013	-.088	-.096	.070
100.	-.781	-.666	-.491	-.491	-.425	-.182	-.077	.058	.270	.043	.012	-.088	-.085	.070
102.	-.784	-.666	-.491	-.491	-.425	-.182	-.077	.061	.270	.043	-.003	-.088	-.084	.070
104.	-.806	-.666	-.491	-.491	-.425	-.182	-.077	.058	.273	.052	-.001	-.088	-.084	.070
106.	-.828	-.669	-.491	-.491	-.421	-.182	-.077	.054	.292	.059	.013	-.083	-.084	.070
108.	-.862	-.688	-.491	-.491	-.415	-.182	-.072	.054	.314	.070	.017	-.075	-.084	.070
110.	-.921	-.707	-.496	-.491	-.425	-.182	-.072	.063	.347	.087	.030	-.075	-.084	.070
112.	-.965	-.719	-.506	-.491	-.425	-.182	-.071	.065	.366	.092	.030	-.075	-.084	.070
114.	-1.001	-.726	-.506	-.491	-.419	-.182	-.066	.056	.384	.092	.035	-.075	-.084	.070
116.	-1.031	-.737	-.506	-.492	-.417	-.182	-.066	.054	.403	.105	.053	-.075	-.084	.070
118.	-1.075	-.752	-.512	-.508	-.425	-.182	-.066	.054	.429	.122	.070	-.068	-.084	.070

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/10/12.

FLT 77 RUN 2 TIME 50746.200 MU= 0.000 CLP= .00416 TEMP(U60)= 31.5 C = 88.75 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
120.	-1.129	-.781	-.521	-.508	-.425	-.182	-.066	.065	.459	.139	.074	-.063	-.084	.070
122.	-1.184	-.791	-.528	-.508	-.425	-.182	-.066	.065	.469	.141	.064	-.063	-.084	.063
124.	-1.205	-.791	-.535	-.508	-.425	-.170	-.066	.065	.469	.141	.056	-.063	-.084	.058
126.	-1.205	-.781	-.535	-.508	-.425	-.180	-.066	.065	.459	.141	.039	-.063	-.084	.058
128.	-1.205	-.773	-.535	-.508	-.425	-.182	-.066	.054	.451	.125	.030	-.072	-.084	.067
130.	-1.205	-.773	-.535	-.508	-.425	-.168	-.066	.055	.440	.125	.030	-.075	-.084	.070
132.	-1.191	-.773	-.535	-.508	-.425	-.181	-.066	.065	.433	.126	.030	-.075	-.084	.070
134.	-1.169	-.761	-.535	-.508	-.425	-.182	-.066	.063	.433	.141	.041	-.075	-.084	.070
136.	-1.162	-.768	-.535	-.508	-.425	-.182	-.066	.056	.445	.141	.058	-.065	-.084	.070
138.	-1.179	-.773	-.535	-.508	-.425	-.182	-.066	.063	.464	.141	.064	-.063	-.077	.070
140.	-1.184	-.759	-.535	-.508	-.425	-.182	-.066	.054	.469	.141	.039	-.063	-.072	.070
142.	-1.184	-.755	-.523	-.508	-.412	-.179	-.066	.058	.455	.141	.043	-.063	-.080	.070
144.	-1.184	-.755	-.521	-.508	-.410	-.168	-.066	.061	.451	.141	.047	-.063	-.084	.070
146.	-1.184	-.755	-.521	-.508	-.410	-.168	-.066	.058	.451	.141	.033	-.063	-.084	.070
148.	-1.204	-.772	-.521	-.508	-.410	-.168	-.066	.065	.451	.141	.030	-.063	-.075	.070
150.	-1.205	-.773	-.521	-.508	-.410	-.168	-.066	.060	.451	.141	.045	-.063	-.072	.070
152.	-1.205	-.773	-.521	-.508	-.410	-.168	-.066	.059	.451	.141	.031	-.063	-.072	.070
154.	-1.182	-.755	-.520	-.508	-.410	-.168	-.066	.065	.451	.141	.047	-.063	-.072	.070
156.	-1.141	-.737	-.506	-.495	-.410	-.168	-.066	.065	.432	.134	.047	-.063	-.083	.070
158.	-1.139	-.737	-.506	-.491	-.410	-.168	-.066	.065	.415	.125	.046	-.063	-.073	.070
160.	-1.117	-.737	-.506	-.491	-.410	-.168	-.066	.065	.415	.125	.031	-.063	-.072	.070
162.	-1.099	-.735	-.504	-.491	-.410	-.168	-.066	.065	.415	.125	.047	-.063	-.072	.070
164.	-1.099	-.719	-.491	-.491	-.410	-.168	-.066	.065	.415	.125	.045	-.063	-.072	.070
166.	-1.094	-.716	-.488	-.491	-.410	-.168	-.066	.065	.411	.125	.033	-.063	-.072	.070
168.	-1.072	-.702	-.476	-.491	-.410	-.168	-.066	.065	.401	.125	.050	-.063	-.072	.070
170.	-1.056	-.702	-.476	-.474	-.404	-.168	-.066	.056	.415	.125	.060	-.063	-.072	.070
172.	-1.056	-.696	-.472	-.473	-.394	-.168	-.066	.054	.415	.125	.042	-.063	-.072	.070
174.	-1.056	-.684	-.462	-.473	-.388	-.168	-.066	.054	.415	.125	.030	-.063	-.072	.070
176.	-1.039	-.677	-.462	-.456	-.379	-.157	-.066	.054	.408	.112	.025	-.063	-.072	.070
178.	-.995	-.666	-.462	-.456	-.379	-.154	-.066	.054	.389	.108	.020	-.063	-.072	.070

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/10/12.

FLT 77 RUN 2 TIME 50746.200 MU= 0.000 CLP= .00416 TEMP(U60)= 31.5 C = 88.75 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
180.	-.972	-.666	-.462	-.456	-.387	-.154	-.066	.054	.378	.108	.030	-.063	-.072	.070
182.	-.972	-.666	-.462	-.456	-.394	-.165	-.066	.054	.378	.108	.030	-.063	-.072	.070
184.	-.972	-.666	-.462	-.460	-.394	-.168	-.066	.054	.378	.108	.030	-.063	-.072	.070
186.	-.984	-.675	-.462	-.473	-.394	-.168	-.066	.054	.378	.108	.039	-.063	-.072	.070
188.	-.993	-.684	-.462	-.473	-.394	-.155	-.066	.054	.378	.108	.029	-.063	-.072	.070
190.	-.979	-.695	-.471	-.473	-.394	-.154	-.066	.054	.368	.108	.023	-.063	-.072	.061
192.	-.972	-.702	-.476	-.480	-.394	-.168	-.066	.054	.360	.093	.030	-.063	-.072	.067
194.	-.972	-.714	-.476	-.491	-.406	-.168	-.066	.054	.372	.108	.030	-.073	-.072	.070
196.	-.987	-.707	-.476	-.491	-.410	-.168	-.066	.056	.391	.108	.030	-.075	-.079	.070
198.	-.993	-.688	-.476	-.491	-.410	-.168	-.066	.065	.383	.108	.030	-.075	-.084	.070
200.	-.976	-.684	-.476	-.491	-.410	-.168	-.066	.062	.378	.108	.030	-.075	-.084	.070
202.	-.954	-.669	-.464	-.482	-.410	-.168	-.066	.054	.364	.108	.030	-.075	-.084	.070
204.	-.950	-.666	-.462	-.473	-.395	-.168	-.066	.054	.345	.104	.030	-.075	-.084	.070
206.	-.912	-.650	-.462	-.463	-.394	-.168	-.066	.054	.342	.092	.030	-.063	-.076	.070
208.	-.888	-.631	-.448	-.456	-.394	-.168	-.066	.054	.326	.092	.030	-.063	-.072	.070
210.	-.866	-.630	-.447	-.456	-.394	-.168	-.066	.054	.324	.092	.015	-.064	-.072	.070
212.	-.865	-.612	-.447	-.456	-.394	-.168	-.066	.054	.324	.092	.013	-.075	-.072	.070
214.	-.844	-.630	-.432	-.456	-.394	-.168	-.066	.054	.306	.092	.013	-.073	-.072	.070
216.	-.844	-.612	-.432	-.456	-.394	-.168	-.066	.054	.324	.084	.030	-.063	-.072	.070
218.	-.844	-.612	-.432	-.456	-.394	-.168	-.066	.054	.306	.075	.013	-.063	-.072	.070
220.	-.844	-.612	-.432	-.456	-.394	-.168	-.066	.054	.308	.084	.016	-.063	-.072	.070
222.	-.852	-.615	-.435	-.456	-.394	-.168	-.066	.054	.329	.092	.045	-.063	-.072	.070
224.	-.887	-.630	-.447	-.456	-.390	-.160	-.066	.054	.357	.092	.030	-.063	-.061	.070
226.	-.881	-.630	-.444	-.456	-.379	-.154	-.066	.054	.342	.092	.033	-.063	-.072	.070
228.	-.865	-.625	-.432	-.456	-.379	-.154	-.066	.054	.338	.092	.043	-.063	-.072	.070
230.	-.859	-.612	-.432	-.456	-.379	-.154	-.066	.054	.319	.092	.030	-.063	-.072	.070
232.	-.844	-.618	-.432	-.456	-.379	-.154	-.066	.054	.306	.092	.030	-.063	-.072	.070
234.	-.852	-.630	-.432	-.440	-.379	-.154	-.066	.054	.312	.092	.030	-.063	-.070	.070
236.	-.865	-.630	-.438	-.456	-.379	-.154	-.066	.054	.324	.092	.030	-.063	-.063	.070
238.	-.875	-.637	-.447	-.456	-.379	-.154	-.066	.054	.324	.092	.030	-.063	-.072	.070

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/10/12.

FLT 77 RUN 2 TIME 50746.200 MU= 0.000 CLP= .00416 TEMP(U60)= 31.5 C = 88.75 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
240.	-.887	-.648	-.454	-.456	-.379	-.154	-.066	.054	.324	.092	.023	-.063	-.072	.070
242.	-.898	-.648	-.462	-.456	-.379	-.154	-.066	.054	.333	.092	.013	-.063	-.072	.070
244.	-.908	-.648	-.462	-.456	-.379	-.154	-.066	.054	.342	.092	.013	-.063	-.072	.070
246.	-.933	-.648	-.453	-.456	-.379	-.154	-.066	.054	.352	.092	.022	-.063	-.072	.070
248.	-.963	-.658	-.456	-.456	-.379	-.154	-.066	.054	.371	.108	.030	-.054	-.067	.070
250.	-.985	-.677	-.462	-.456	-.390	-.154	-.066	.054	.389	.109	.030	-.051	-.061	.070
252.	-1.022	-.695	-.472	-.456	-.383	-.154	-.066	.054	.408	.125	.030	-.051	-.061	.070
254.	-1.050	-.702	-.476	-.456	-.379	-.154	-.066	.054	.415	.123	.041	-.051	-.067	.070
256.	-1.056	-.689	-.466	-.456	-.379	-.154	-.066	.054	.415	.108	.036	-.061	-.072	.070
258.	-1.023	-.670	-.462	-.456	-.379	-.154	-.066	.054	.401	.108	.042	-.063	-.072	.070
260.	-.962	-.666	-.450	-.456	-.379	-.154	-.066	.054	.368	.108	.034	-.063	-.072	.070
262.	-.950	-.651	-.447	-.456	-.379	-.154	-.066	.054	.360	.104	.030	-.063	-.072	.070
264.	-.913	-.648	-.447	-.456	-.379	-.154	-.066	.054	.345	.096	.030	-.063	-.072	.070
266.	-.927	-.648	-.460	-.456	-.394	-.154	-.066	.054	.358	.108	.045	-.063	-.072	.070
268.	-.949	-.664	-.462	-.456	-.394	-.154	-.066	.054	.360	.108	.032	-.063	-.072	.070
270.	-.908	-.648	-.447	-.456	-.379	-.154	-.064	.054	.360	.102	.030	-.063	-.072	.070
272.	-.908	-.648	-.462	-.456	-.379	-.154	-.055	.054	.360	.092	.014	-.065	-.072	.070
274.	-.907	-.647	-.447	-.456	-.379	-.154	-.058	.060	.342	.092	.013	-.075	-.072	.070
276.	-.885	-.630	-.447	-.456	-.379	-.154	-.066	.059	.324	.092	.014	-.073	-.072	.070
278.	-.865	-.630	-.447	-.456	-.379	-.154	-.066	.054	.324	.092	.029	-.063	-.072	.070
280.	-.865	-.630	-.445	-.456	-.379	-.154	-.066	.054	.322	.083	.013	-.063	-.072	.070
282.	-.853	-.624	-.432	-.456	-.379	-.154	-.066	.054	.303	.075	.013	-.063	-.072	.070
284.	-.787	-.594	-.429	-.441	-.379	-.154	-.066	.054	.285	.075	.008	-.067	-.072	.070
286.	-.733	-.590	-.414	-.439	-.374	-.154	-.066	.054	.270	.065	-.017	-.075	-.072	.070
288.	-.711	-.571	-.403	-.439	-.369	-.154	-.066	.054	.261	.048	-.007	-.075	-.072	.070
290.	-.696	-.558	-.403	-.439	-.373	-.154	-.066	.045	.234	.043	-.020	-.081	-.072	.070
292.	-.696	-.558	-.403	-.439	-.370	-.154	-.066	.043	.234	.043	-.020	-.082	-.072	.070
294.	-.696	-.565	-.403	-.439	-.379	-.154	-.066	.053	.234	.043	-.020	-.075	-.072	.070
296.	-.696	-.576	-.409	-.439	-.379	-.154	-.066	.054	.234	.043	-.014	-.075	-.072	.070
298.	-.696	-.584	-.418	-.439	-.379	-.154	-.066	.054	.234	.043	-.010	-.075	-.072	.070

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/10/12.

FLT 77 RUN 2 TIME 50746.200 MU= 0.000 CLP= .00416 TEMP(U60)= 31.5 C = 88.75 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
300.	-.706	-.594	-.418	-.442	-.379	-.154	-.066	.054	.234	.043	-.013	-.075	-.072	.070
302.	-.717	-.594	-.418	-.456	-.379	-.154	-.066	.054	.234	.043	-.003	-.075	-.072	.070
304.	-.717	-.594	-.418	-.456	-.379	-.154	-.066	.054	.234	.043	.013	-.075	-.077	.070
306.	-.717	-.594	-.426	-.456	-.379	-.154	-.066	.054	.244	.043	.003	-.075	-.079	.070
308.	-.730	-.594	-.432	-.456	-.379	-.154	-.066	.055	.252	.059	-.011	-.075	-.078	.070
310.	-.738	-.594	-.432	-.456	-.390	-.154	-.066	.064	.252	.043	.007	-.075	-.079	.070
312.	-.738	-.594	-.432	-.456	-.394	-.154	-.066	.054	.252	.044	.013	-.075	-.072	.070
314.	-.754	-.594	-.432	-.456	-.394	-.168	-.066	.054	.252	.059	.013	-.075	-.079	.070
316.	-.759	-.607	-.432	-.456	-.394	-.166	-.066	.057	.265	.059	-.010	-.075	-.084	.070
318.	-.759	-.612	-.444	-.456	-.381	-.154	-.066	.062	.270	.059	-.008	-.075	-.084	.070
320.	-.777	-.612	-.447	-.456	-.379	-.154	-.066	.058	.270	.059	-.003	-.075	-.084	.070
322.	-.781	-.612	-.447	-.456	-.393	-.154	-.066	.061	.270	.059	-.017	-.075	-.084	.070
324.	-.781	-.612	-.447	-.456	-.394	-.154	-.066	.054	.254	.059	-.020	-.075	-.084	.070
326.	-.781	-.612	-.447	-.456	-.394	-.154	-.066	.059	.268	.059	-.020	-.075	-.084	.081
328.	-.781	-.612	-.447	-.456	-.394	-.154	-.066	.065	.270	.059	-.005	-.075	-.084	.070
330.	-.781	-.630	-.447	-.456	-.394	-.154	-.066	.065	.270	.059	-.003	-.075	-.084	.070
332.	-.781	-.630	-.447	-.456	-.394	-.154	-.066	.065	.270	.059	-.020	-.075	-.084	.070
334.	-.781	-.630	-.447	-.469	-.394	-.154	-.066	.065	.271	.059	-.003	-.075	-.084	.070
336.	-.781	-.630	-.447	-.460	-.394	-.154	-.066	.065	.287	.059	.013	-.075	-.084	.070
338.	-.781	-.628	-.447	-.470	-.394	-.154	-.066	.065	.272	.059	-.002	-.075	-.084	.070
340.	-.781	-.612	-.447	-.459	-.394	-.154	-.066	.065	.286	.050	.012	-.075	-.084	.070
342.	-.781	-.612	-.447	-.456	-.394	-.154	-.066	.065	.270	.043	-.003	-.080	-.084	.070
344.	-.775	-.612	-.447	-.456	-.394	-.162	-.066	.065	.266	.043	-.003	-.088	-.084	.070
346.	-.759	-.612	-.447	-.456	-.394	-.168	-.066	.057	.252	.043	-.007	-.088	-.084	.070
348.	-.753	-.612	-.447	-.456	-.394	-.168	-.066	.054	.252	.043	-.012	-.088	-.084	.070
350.	-.738	-.606	-.447	-.473	-.394	-.168	-.066	.063	.246	.031	.004	-.088	-.084	.070
352.	-.738	-.600	-.447	-.456	-.394	-.168	-.066	.056	.234	.039	-.020	-.088	-.084	.070
354.	-.738	-.612	-.447	-.456	-.394	-.157	-.066	.064	.234	.043	-.008	-.088	-.084	.070
356.	-.729	-.604	-.447	-.456	-.394	-.165	-.066	.065	.234	.029	.000	-.088	-.084	.077
358.	-.717	-.602	-.447	-.456	-.394	-.168	-.066	.065	.234	.026	-.027	-.088	-.088	.075

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 78 RUN 12 TIME 54905.700 MU= .332 CLP= .00412 TEMP(U60)= 37.4 C = 99.37 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
0.	-1.354	-.746	-.464	-.455	-.372	-.112	-.046	.070	.524	.183	.103	-.032	-.067	.075
2.	-1.258	-.726	-.452	-.450	-.378	-.118	-.045	.068	.494	.167	.086	-.043	-.065	.073
4.	-1.164	-.708	-.454	-.450	-.369	-.115	-.046	.067	.464	.157	.051	-.044	-.072	.071
6.	-1.094	-.690	-.443	-.444	-.375	-.116	-.053	.065	.419	.138	.062	-.054	-.073	.070
8.	-.990	-.674	-.433	-.445	-.380	-.125	-.052	.063	.392	.119	.031	-.065	-.080	.078
10.	-.926	-.658	-.436	-.439	-.372	-.129	-.053	.062	.365	.101	.029	-.073	-.080	.076
12.	-.850	-.642	-.426	-.440	-.375	-.126	-.059	.060	.326	.084	-.017	-.073	-.088	.075
14.	-.793	-.628	-.428	-.446	-.369	-.128	-.057	.065	.316	.067	-.017	-.083	-.096	.073
16.	-.739	-.615	-.420	-.439	-.374	-.131	-.059	.067	.280	.052	-.030	-.092	-.095	.071
18.	-.688	-.615	-.421	-.441	-.379	-.133	-.064	.066	.257	.037	-.028	-.100	-.102	.070
20.	-.642	-.604	-.414	-.446	-.384	-.135	-.062	.071	.224	.030	-.017	-.108	-.110	.068
22.	-.608	-.603	-.415	-.451	-.385	-.137	-.061	.072	.205	.022	-.035	-.116	-.108	.067
24.	-.566	-.594	-.409	-.455	-.380	-.139	-.064	.071	.186	.008	-.068	-.123	-.115	.065
26.	-.539	-.592	-.412	-.459	-.385	-.141	-.067	.069	.169	-.004	-.069	-.130	-.122	.064
28.	-.512	-.584	-.412	-.464	-.389	-.142	-.065	.068	.152	-.017	-.081	-.137	-.127	.063
30.	-.482	-.587	-.408	-.468	-.393	-.145	-.064	.073	.135	-.029	-.089	-.144	-.126	.062
32.	-.448	-.585	-.407	-.472	-.397	-.146	-.067	.074	.116	-.032	-.094	-.151	-.132	.061
34.	-.419	-.579	-.404	-.476	-.402	-.149	-.069	.072	.097	-.040	-.106	-.157	-.138	.063
36.	-.388	-.581	-.407	-.480	-.406	-.155	-.068	.071	.086	-.042	-.104	-.163	-.143	.066
38.	-.367	-.579	-.410	-.485	-.410	-.155	-.067	.077	.069	-.050	-.122	-.169	-.142	.065
40.	-.340	-.575	-.414	-.500	-.414	-.159	-.066	.076	.063	-.060	-.114	-.175	-.148	.064
42.	-.314	-.578	-.413	-.505	-.418	-.158	-.070	.075	.045	-.070	-.111	-.180	-.151	.063
44.	-.295	-.581	-.411	-.519	-.422	-.162	-.071	.074	.031	-.071	-.135	-.186	-.152	.067
46.	-.270	-.584	-.415	-.525	-.426	-.161	-.070	.080	.019	-.079	-.133	-.191	-.157	.069
48.	-.247	-.582	-.413	-.538	-.430	-.166	-.069	.080	.002	-.089	-.147	-.197	-.163	.068
50.	-.230	-.580	-.413	-.541	-.434	-.164	-.068	.085	-.003	-.098	-.150	-.202	-.165	.067
52.	-.214	-.578	-.412	-.549	-.438	-.162	-.067	.084	-.010	-.097	-.150	-.207	-.166	.071
54.	-.199	-.571	-.412	-.564	-.443	-.167	-.066	.084	-.021	-.106	-.157	-.212	-.168	.073
56.	-.183	-.571	-.411	-.575	-.447	-.166	-.066	.089	-.032	-.105	-.155	-.218	-.170	.072
58.	-.169	-.569	-.413	-.579	-.452	-.171	-.065	.090	-.035	-.114	-.154	-.223	-.175	.071

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 78 RUN 12 TIME 54905.700 MU= .332 CLP= .00412 TEMP(U60)= 37.4 C = 99.37 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
60.	-.163	-.563	-.417	-.584	-.457	-.169	-.064	.094	-.035	-.122	-.172	-.222	-.177	.070
62.	-.153	-.558	-.422	-.589	-.454	-.168	-.064	.095	-.042	-.121	-.181	-.226	-.179	.075
64.	-.148	-.553	-.427	-.599	-.458	-.166	-.057	.101	-.044	-.121	-.172	-.232	-.180	.076
66.	-.138	-.549	-.432	-.609	-.455	-.165	-.056	.105	-.052	-.130	-.175	-.230	-.179	.081
68.	-.124	-.545	-.437	-.615	-.460	-.164	-.050	.104	-.062	-.138	-.176	-.235	-.178	.081
70.	-.101	-.532	-.442	-.615	-.474	-.163	-.050	.103	-.080	-.147	-.191	-.234	-.181	.081
72.	-.076	-.519	-.441	-.617	-.497	-.160	-.049	.103	-.092	-.155	-.193	-.239	-.182	.080
74.	-.052	-.506	-.446	-.618	-.512	-.154	-.049	.102	-.110	-.166	-.217	-.239	-.181	.080
76.	-.006	-.475	-.444	-.615	-.527	-.153	-.050	.102	-.130	-.184	-.245	-.244	-.180	.086
78.	.019	-.452	-.442	-.612	-.542	-.155	-.055	.101	-.159	-.202	-.247	-.250	-.184	.085
80.	.042	-.421	-.441	-.610	-.548	-.159	-.054	.098	-.179	-.220	-.264	-.256	-.185	.086
82.	.077	-.399	-.423	-.601	-.545	-.158	-.054	.094	-.209	-.234	-.255	-.263	-.184	.091
84.	.089	-.379	-.406	-.597	-.526	-.158	-.054	.094	-.228	-.246	-.283	-.269	-.184	.092
86.	.112	-.358	-.388	-.596	-.499	-.160	-.054	.094	-.248	-.260	-.311	-.274	-.184	.097
88.	.136	-.338	-.364	-.596	-.472	-.164	-.056	.094	-.278	-.273	-.329	-.275	-.184	.097
90.	.159	-.318	-.348	-.588	-.448	-.164	-.060	.094	-.297	-.306	-.339	-.281	-.183	.097
92.	.183	-.299	-.332	-.578	-.433	-.164	-.060	.094	-.318	-.356	-.357	-.281	-.184	.097
94.	.204	-.288	-.318	-.569	-.424	-.168	-.060	.094	-.338	-.417	-.360	-.281	-.177	.099
96.	.219	-.268	-.308	-.569	-.419	-.171	-.060	.094	-.360	-.471	-.375	-.281	-.178	.104
98.	.240	-.251	-.294	-.561	-.417	-.172	-.060	.094	-.389	-.518	-.372	-.282	-.178	.104
100.	.252	-.240	-.287	-.553	-.407	-.172	-.060	.090	-.408	-.553	-.386	-.283	-.178	.104
102.	.265	-.223	-.280	-.555	-.387	-.173	-.061	.089	-.425	-.590	-.375	-.281	-.173	.105
104.	.282	-.214	-.273	-.557	-.370	-.173	-.061	.089	-.455	-.616	-.360	-.278	-.172	.108
106.	.299	-.205	-.269	-.550	-.363	-.174	-.061	.089	-.474	-.638	-.358	-.276	-.168	.112
108.	.305	-.196	-.267	-.553	-.360	-.175	-.061	.090	-.491	-.660	-.347	-.271	-.167	.113
110.	.314	-.187	-.260	-.557	-.366	-.176	-.062	.090	-.514	-.683	-.307	-.269	-.163	.114
112.	.321	-.178	-.257	-.559	-.373	-.178	-.066	.091	-.539	-.707	-.299	-.267	-.162	.114
114.	.330	-.173	-.255	-.555	-.385	-.179	-.065	.085	-.564	-.723	-.279	-.261	-.159	.111
116.	.333	-.175	-.253	-.557	-.402	-.180	-.063	.086	-.585	-.747	-.263	-.256	-.158	.109
118.	.336	-.171	-.251	-.552	-.409	-.182	-.064	.080	-.606	-.765	-.247	-.251	-.154	.110

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 78 RUN 12 TIME 54905.700 MU= .332 CLP= .00412 TEMP(U60)= 37.4 C = 99.37 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
120.	.339	-.167	-.249	-.547	-.419	-.184	-.064	.081	-.628	-.791	-.228	-.246	-.153	.111
122.	.343	-.163	-.247	-.539	-.426	-.179	-.065	.082	-.645	-.800	-.219	-.241	-.151	.113
124.	.338	-.160	-.240	-.523	-.431	-.180	-.066	.082	-.669	-.828	-.224	-.236	-.149	.109
126.	.338	-.162	-.234	-.508	-.429	-.182	-.066	.082	-.692	-.838	-.240	-.231	-.143	.108
128.	.342	-.157	-.234	-.496	-.432	-.177	-.067	.077	-.712	-.858	-.243	-.232	-.141	.109
130.	.346	-.155	-.230	-.487	-.430	-.179	-.068	.078	-.732	-.876	-.274	-.228	-.139	.111
132.	.341	-.157	-.231	-.476	-.426	-.181	-.069	.078	-.746	-.847	-.271	-.223	-.138	.112
134.	.342	-.159	-.234	-.471	-.421	-.176	-.063	.073	-.773	-.744	-.272	-.218	-.135	.114
136.	.336	-.162	-.237	-.461	-.417	-.178	-.064	.074	-.790	-.600	-.271	-.213	-.129	.108
138.	.327	-.173	-.241	-.450	-.413	-.174	-.065	.075	-.812	-.498	-.272	-.208	-.128	.109
140.	.318	-.178	-.237	-.446	-.409	-.176	-.066	.076	-.837	-.447	-.258	-.203	-.130	.111
142.	.309	-.181	-.230	-.441	-.405	-.178	-.067	.078	-.842	-.420	-.267	-.198	-.121	.113
144.	.299	-.195	-.242	-.436	-.411	-.172	-.067	.076	-.855	-.395	-.264	-.192	-.118	.107
146.	.289	-.200	-.247	-.439	-.408	-.169	-.062	.072	-.858	-.379	-.245	-.187	-.114	.109
148.	.279	-.216	-.252	-.439	-.404	-.172	-.063	.074	-.861	-.362	-.247	-.180	-.114	.111
150.	.254	-.221	-.256	-.434	-.400	-.172	-.064	.075	-.851	-.344	-.205	-.166	-.109	.113
152.	.242	-.238	-.261	-.429	-.407	-.166	-.065	.076	-.827	-.326	-.229	-.160	-.102	.114
154.	.215	-.243	-.267	-.434	-.403	-.163	-.065	.078	-.802	-.307	-.197	-.153	-.103	.108
156.	.202	-.261	-.272	-.432	-.399	-.163	-.060	.080	-.748	-.287	-.186	-.146	-.097	.110
158.	.172	-.268	-.278	-.427	-.397	-.161	-.061	.076	-.704	-.267	-.150	-.139	-.098	.113
160.	.141	-.288	-.284	-.434	-.403	-.160	-.062	.074	-.647	-.245	-.140	-.132	-.091	.113
162.	.109	-.308	-.290	-.431	-.401	-.158	-.064	.075	-.599	-.223	-.141	-.125	-.083	.108
164.	.075	-.317	-.299	-.438	-.407	-.161	-.061	.077	-.535	-.200	-.128	-.117	-.075	.111
166.	.040	-.337	-.316	-.449	-.407	-.159	-.057	.072	-.471	-.175	-.105	-.108	-.076	.113
168.	-.002	-.349	-.323	-.445	-.412	-.158	-.059	.071	-.417	-.150	-.099	-.100	-.067	.116
170.	-.049	-.373	-.331	-.454	-.412	-.162	-.060	.072	-.356	-.123	-.060	-.086	-.058	.119
172.	-.082	-.399	-.339	-.450	-.417	-.159	-.061	.074	-.285	-.106	-.045	-.075	-.049	.117
174.	-.146	-.421	-.347	-.461	-.418	-.158	-.057	.076	-.222	-.081	-.030	-.071	-.049	.113
176.	-.204	-.438	-.356	-.471	-.422	-.162	-.054	.078	-.156	-.051	-.008	-.054	-.038	.116
178.	-.261	-.467	-.371	-.467	-.424	-.158	-.056	.080	-.093	-.019	.015	-.043	-.027	.119

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 78 RUN 12 TIME 54905.700 MU= .332 CLP= .00412 TEMP(U60)= 37.4 C = 99.37 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
180.	-.333	-.498	-.389	-.479	-.427	-.159	-.057	.082	-.032	.002	.028	-.037	-.019	.122
182.	-.399	-.522	-.399	-.489	-.430	-.153	-.058	.073	.044	.034	.052	-.025	-.016	.125
184.	-.467	-.545	-.417	-.486	-.442	-.154	-.052	.074	.107	.056	.069	-.012	-.007	.129
186.	-.551	-.579	-.437	-.499	-.444	-.158	-.050	.076	.160	.092	.101	.002	-.003	.132
188.	-.639	-.616	-.449	-.513	-.448	-.150	-.051	.078	.227	.115	.124	.016	.006	.136
190.	-.732	-.654	-.461	-.522	-.449	-.153	-.052	.080	.287	.138	.138	.021	.006	.130
192.	-.829	-.682	-.484	-.520	-.455	-.157	-.054	.082	.338	.162	.142	.033	.012	.129
194.	-.931	-.714	-.505	-.535	-.467	-.147	-.044	.083	.406	.187	.146	.049	.021	.133
196.	-1.039	-.757	-.519	-.542	-.466	-.150	-.043	.072	.459	.213	.176	.055	.022	.137
198.	-1.152	-.786	-.533	-.543	-.474	-.154	-.045	.074	.511	.241	.212	.069	.030	.140
200.	-1.270	-.825	-.548	-.558	-.471	-.143	-.046	.076	.591	.268	.242	.074	.039	.144
202.	-1.395	-.855	-.564	-.563	-.479	-.147	-.033	.078	.631	.279	.257	.091	.040	.148
204.	-1.525	-.898	-.580	-.565	-.475	-.149	-.033	.081	.667	.310	.282	.096	.051	.153
206.	-1.661	-.930	-.596	-.581	-.484	-.137	-.034	.083	.693	.339	.278	.116	.059	.141
208.	-1.778	-.956	-.613	-.584	-.477	-.138	-.034	.085	.734	.354	.279	.120	.061	.144
210.	-1.893	-.982	-.611	-.587	-.488	-.127	-.019	.088	.782	.389	.308	.123	.063	.148
212.	-2.043	-1.010	-.624	-.588	-.501	-.130	-.020	.090	.809	.419	.322	.127	.064	.152
214.	-2.172	-1.037	-.641	-.592	-.491	-.129	-.021	.092	.831	.431	.331	.150	.066	.156
216.	-2.303	-1.065	-.636	-.590	-.478	-.117	-.018	.095	.881	.452	.365	.154	.068	.160
218.	-2.438	-1.094	-.651	-.595	-.490	-.120	-.003	.097	.907	.482	.378	.159	.070	.163
220.	-2.540	-1.123	-.668	-.611	-.501	-.116	-.003	.100	.931	.495	.388	.163	.072	.148
222.	-2.645	-1.151	-.660	-.604	-.489	-.105	-.003	.103	.955	.508	.398	.167	.073	.152
224.	-2.752	-1.148	-.677	-.610	-.501	-.107	-.003	.105	.978	.521	.408	.171	.075	.156
226.	-2.857	-1.177	-.691	-.600	-.509	-.100	.003	.108	.970	.534	.386	.175	.077	.160
228.	-2.932	-1.202	-.682	-.607	-.496	-.089	.017	.111	.993	.547	.395	.180	.079	.164
230.	-3.037	-1.199	-.694	-.593	-.501	-.091	.018	.113	1.017	.560	.405	.184	.081	.168
232.	-3.107	-1.220	-.685	-.601	-.488	-.093	.018	.116	1.040	.572	.414	.188	.083	.172
234.	-3.176	-1.217	-.700	-.614	-.499	-.095	.018	.118	1.063	.585	.423	.192	.085	.176
236.	-3.233	-1.234	-.708	-.593	-.500	-.083	.019	.121	1.078	.598	.432	.196	.086	.179
238.	-3.265	-1.230	-.699	-.603	-.487	-.073	.019	.123	1.070	.610	.441	.201	.088	.183

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 78 RUN 12 TIME 54905.700 MU= .332 CLP= .00412 TEMP(U60)= 37.4 C = 99.37 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
240.	-3.315	-1.243	-.703	-.615	-.496	-.075	.032	.126	1.091	.622	.450	.204	.090	.187
242.	-3.344	-1.238	-.693	-.587	-.506	-.076	.044	.128	1.111	.607	.458	.208	.092	.190
244.	-3.403	-1.245	-.705	-.598	-.499	-.077	.045	.130	1.117	.607	.466	.212	.093	.181
246.	-3.440	-1.239	-.704	-.604	-.487	-.058	.046	.132	1.108	.617	.474	.215	.095	.169
248.	-3.442	-1.258	-.694	-.576	-.495	-.051	.046	.135	1.108	.627	.466	.219	.096	.172
250.	-3.439	-1.257	-.703	-.584	-.502	-.052	.047	.136	1.098	.636	.447	.222	.098	.174
252.	-3.432	-1.229	-.696	-.592	-.508	-.053	.048	.138	1.112	.644	.453	.206	.099	.177
254.	-3.419	-1.221	-.685	-.590	-.492	-.053	.048	.140	1.104	.651	.458	.217	.100	.179
256.	-3.401	-1.233	-.693	-.562	-.481	-.054	.049	.141	1.093	.658	.463	.209	.101	.181
258.	-3.379	-1.245	-.699	-.567	-.486	-.054	.049	.143	1.103	.625	.467	.201	.102	.182
260.	-3.383	-1.228	-.682	-.572	-.490	-.055	.050	.141	1.111	.628	.471	.202	.103	.184
262.	-3.371	-1.217	-.672	-.575	-.493	-.055	.050	.119	1.118	.632	.474	.204	.103	.185
264.	-3.369	-1.223	-.675	-.578	-.495	-.055	.050	.141	1.124	.635	.476	.205	.104	.186
266.	-3.343	-1.197	-.678	-.580	-.497	-.056	.050	.116	1.128	.638	.478	.205	.104	.186
268.	-3.295	-1.185	-.679	-.563	-.498	-.056	.050	.117	1.130	.639	.479	.206	.088	.187
270.	-3.283	-1.186	-.680	-.538	-.498	-.056	.050	.117	1.098	.640	.479	.206	.074	.187
272.	-3.239	-1.185	-.679	-.537	-.498	-.056	.050	.117	1.119	.639	.479	.206	.074	.187
274.	-3.221	-1.182	-.678	-.536	-.497	-.056	.050	.116	1.092	.638	.478	.205	.074	.186
276.	-3.210	-1.178	-.676	-.534	-.495	-.050	.050	.116	1.079	.636	.476	.205	.074	.186
278.	-3.147	-1.173	-.672	-.532	-.493	-.024	.050	.115	1.112	.632	.474	.204	.074	.185
280.	-3.121	-1.165	-.668	-.528	-.490	-.032	.050	.115	1.072	.629	.434	.201	.073	.184
282.	-3.048	-1.156	-.663	-.524	-.486	-.046	.049	.114	1.099	.624	.462	.170	.073	.182
284.	-3.018	-1.146	-.657	-.520	-.482	-.033	.049	.113	1.052	.618	.463	.168	.072	.181
286.	-2.987	-1.134	-.650	-.544	-.477	-.053	.048	.112	1.081	.612	.419	.167	.071	.179
288.	-2.953	-1.121	-.643	-.550	-.471	-.053	.048	.110	1.069	.605	.412	.165	.070	.177
290.	-2.915	-1.107	-.635	-.543	-.465	-.052	.047	.109	1.056	.597	.406	.163	.045	.175
292.	-2.874	-1.091	-.626	-.536	-.459	-.051	.046	.107	1.044	.589	.401	.160	.041	.172
294.	-2.831	-1.079	-.616	-.528	-.452	-.051	.037	.106	1.067	.580	.395	.158	.040	.170
296.	-2.785	-1.098	-.606	-.519	-.444	-.050	.020	.104	1.050	.570	.392	.155	.039	.167
298.	-2.737	-1.079	-.596	-.510	-.446	-.049	.020	.102	1.032	.561	.420	.153	.039	.164

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 78 RUN 12 TIME 54905.700 MU= .332 CLP= .00412 TEMP(U60)= 37.4 C = 99.37 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
300.	-2.688	-1.060	-.592	-.501	-.463	-.048	.020	.100	1.020	.550	.412	.150	.038	.161
302.	-2.636	-1.048	-.605	-.526	-.454	-.047	.019	.099	1.024	.540	.397	.147	.037	.158
304.	-2.596	-1.056	-.593	-.518	-.445	-.046	.019	.097	.983	.529	.360	.144	.037	.155
306.	-2.573	-1.034	-.581	-.507	-.436	-.045	.018	.095	.990	.518	.353	.141	.036	.151
308.	-2.517	-1.023	-.568	-.497	-.426	-.044	.018	.093	.969	.507	.355	.138	.035	.148
310.	-2.460	-1.024	-.566	-.520	-.430	-.060	.018	.090	.959	.495	.360	.123	.034	.145
312.	-2.420	-1.001	-.571	-.508	-.437	-.066	.017	.088	.960	.484	.341	.108	.028	.142
314.	-2.386	-.991	-.557	-.500	-.427	-.064	.003	.086	.937	.473	.342	.105	.010	.138
316.	-2.346	-.986	-.556	-.515	-.416	-.063	-.003	.084	.914	.461	.327	.103	.010	.135
318.	-2.308	-.977	-.556	-.503	-.422	-.061	-.003	.102	.892	.450	.323	.100	.010	.131
320.	-2.250	-.968	-.542	-.490	-.423	-.078	-.003	.100	.885	.438	.312	.083	.010	.128
322.	-2.212	-.943	-.542	-.485	-.412	-.079	-.003	.079	.877	.427	.290	.074	.009	.125
324.	-2.169	-.936	-.539	-.494	-.401	-.077	-.003	.095	.855	.416	.270	.072	.001	.122
326.	-2.112	-.941	-.524	-.481	-.408	-.075	-.003	.093	.832	.405	.276	.070	-.010	.118
328.	-2.078	-.927	-.525	-.477	-.405	-.073	-.018	.090	.810	.394	.268	.068	-.010	.115
330.	-2.033	-.920	-.519	-.482	-.412	-.089	-.019	.088	.806	.384	.261	.066	-.010	.112
332.	-2.001	-.904	-.505	-.469	-.406	-.087	-.019	.085	.794	.373	.237	.049	-.009	.109
334.	-1.955	-.898	-.507	-.467	-.395	-.085	-.018	.083	.772	.363	.222	.045	-.019	.106
336.	-1.925	-.881	-.514	-.468	-.403	-.084	-.018	.081	.751	.353	.216	.044	-.026	.103
338.	-1.878	-.876	-.505	-.467	-.395	-.097	-.018	.079	.730	.343	.210	.026	-.025	.100
340.	-1.851	-.877	-.507	-.466	-.384	-.094	-.031	.076	.730	.334	.222	.025	-.035	.098
342.	-1.804	-.877	-.496	-.466	-.393	-.095	-.031	.074	.714	.319	.203	.024	-.039	.095
344.	-1.779	-.856	-.500	-.476	-.402	-.104	-.030	.072	.695	.302	.193	.008	-.038	.092
346.	-1.758	-.853	-.488	-.472	-.392	-.102	-.029	.070	.676	.301	.188	.007	-.048	.090
348.	-1.712	-.852	-.491	-.473	-.400	-.103	-.028	.075	.658	.280	.164	.006	-.050	.088
350.	-1.666	-.850	-.496	-.467	-.390	-.110	-.030	.080	.640	.272	.158	-.007	-.049	.085
352.	-1.645	-.828	-.483	-.469	-.396	-.107	-.039	.078	.623	.265	.154	-.007	-.047	.083
354.	-1.600	-.826	-.471	-.462	-.388	-.110	-.038	.076	.607	.250	.150	-.010	-.058	.081
356.	-1.537	-.804	-.475	-.464	-.392	-.115	-.037	.074	.590	.234	.127	-.020	-.058	.079
358.	-1.492	-.786	-.476	-.456	-.382	-.112	-.040	.072	.555	.219	.106	-.023	-.056	.077

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 78 RUN 30 TIME 56410.100 MU= .240 CLP= .00782 TEMP(U60)= 37.4 C = 99.34 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
0.	-2.080	-1.463	-.577	-.544	-.421	-.126	-.020	.114	.790	.357	.184	.016	-.059	.061
2.	-2.013	-1.263	-.558	-.534	-.420	-.124	-.026	.112	.714	.317	.150	-.001	-.069	.060
4.	-1.929	-1.087	-.548	-.524	-.420	-.130	-.029	.110	.657	.280	.136	-.013	-.076	.065
6.	-1.837	-.986	-.538	-.515	-.413	-.131	-.035	.099	.612	.257	.118	-.018	-.075	.069
8.	-1.740	-.894	-.529	-.506	-.412	-.136	-.044	.087	.563	.226	.116	-.024	-.073	.073
10.	-1.620	-.828	-.525	-.498	-.412	-.137	-.047	.084	.511	.205	.088	-.028	-.072	.077
12.	-1.476	-.788	-.523	-.503	-.405	-.142	-.052	.074	.471	.176	.072	-.034	-.071	.075
14.	-1.325	-.765	-.514	-.495	-.404	-.143	-.054	.071	.433	.156	.061	-.044	-.072	.074
16.	-1.187	-.747	-.506	-.488	-.404	-.148	-.059	.070	.401	.129	.055	-.053	-.079	.073
18.	-1.063	-.720	-.498	-.493	-.403	-.148	-.062	.069	.379	.121	.049	-.057	-.079	.072
20.	-.971	-.699	-.490	-.485	-.404	-.146	-.066	.068	.363	.119	.058	-.062	-.086	.071
22.	-.947	-.698	-.486	-.478	-.403	-.150	-.063	.067	.368	.117	.061	-.065	-.084	.069
24.	-.966	-.721	-.486	-.485	-.404	-.151	-.059	.066	.381	.125	.070	-.064	-.083	.064
26.	-.978	-.751	-.483	-.491	-.403	-.149	-.058	.072	.380	.126	.069	-.064	-.083	.058
28.	-.979	-.786	-.487	-.497	-.409	-.146	-.057	.073	.383	.124	.068	-.067	-.090	.057
30.	-.981	-.824	-.495	-.503	-.409	-.144	-.061	.072	.378	.122	.051	-.076	-.090	.057
32.	-.972	-.848	-.502	-.508	-.409	-.149	-.064	.071	.368	.112	.011	-.084	-.097	.056
34.	-.938	-.858	-.499	-.514	-.410	-.149	-.063	.077	.354	.098	-.002	-.092	-.105	.055
36.	-.890	-.860	-.503	-.520	-.409	-.153	-.062	.077	.337	.076	-.011	-.104	-.112	.058
38.	-.823	-.857	-.503	-.513	-.415	-.154	-.061	.083	.299	.052	-.018	-.112	-.119	.062
40.	-.744	-.843	-.500	-.519	-.421	-.158	-.065	.083	.270	.037	-.035	-.115	-.124	.061
42.	-.687	-.824	-.501	-.525	-.426	-.159	-.067	.082	.241	.025	-.031	-.122	-.123	.064
44.	-.655	-.815	-.499	-.531	-.428	-.163	-.066	.081	.217	.021	-.025	-.125	-.122	.068
46.	-.633	-.806	-.500	-.537	-.427	-.164	-.066	.087	.206	.021	-.027	-.124	-.120	.067
48.	-.617	-.797	-.498	-.543	-.429	-.162	-.065	.087	.204	.021	-.007	-.122	-.120	.066
50.	-.616	-.793	-.503	-.549	-.429	-.161	-.064	.080	.212	.028	.005	-.121	-.125	.066
52.	-.628	-.797	-.507	-.544	-.431	-.164	-.064	.078	.243	.039	.013	-.116	-.117	.065
54.	-.645	-.798	-.512	-.539	-.427	-.166	-.063	.077	.261	.049	.010	-.111	-.116	.064
56.	-.653	-.791	-.517	-.545	-.427	-.164	-.063	.077	.267	.052	-.001	-.113	-.115	.061
58.	-.653	-.784	-.519	-.552	-.433	-.163	-.062	.082	.265	.052	-.010	-.117	-.122	.056

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 78 RUN 30 TIME 56410.100 MU= .240 CLP= .00782 TEMP(U60)= 37.4 C = 99.34 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
60.	-.639	-.778	-.518	-.558	-.436	-.166	-.065	.083	.260	.051	-.009	-.119	-.129	.055
62.	-.634	-.773	-.521	-.565	-.437	-.168	-.068	.082	.249	.044	-.009	-.126	-.134	.058
64.	-.626	-.767	-.523	-.562	-.443	-.172	-.068	.082	.248	.047	-.012	-.130	-.133	.062
66.	-.612	-.765	-.535	-.569	-.450	-.174	-.067	.087	.246	.050	-.015	-.129	-.133	.062
68.	-.613	-.769	-.543	-.576	-.457	-.173	-.067	.088	.247	.050	-.001	-.128	-.132	.061
70.	-.619	-.765	-.556	-.594	-.461	-.172	-.063	.087	.257	.056	-.007	-.128	-.132	.061
72.	-.619	-.761	-.565	-.613	-.459	-.171	-.059	.092	.267	.060	.001	-.130	-.138	.058
74.	-.626	-.758	-.580	-.631	-.457	-.170	-.059	.094	.277	.066	.004	-.134	-.137	.053
76.	-.624	-.758	-.593	-.650	-.452	-.169	-.056	.093	.287	.076	.010	-.134	-.137	.056
78.	-.625	-.766	-.603	-.669	-.444	-.169	-.052	.098	.294	.079	.004	-.133	-.143	.060
80.	-.632	-.775	-.616	-.688	-.440	-.164	-.052	.100	.293	.072	.008	-.136	-.143	.060
82.	-.631	-.784	-.626	-.707	-.429	-.165	-.052	.100	.293	.069	-.011	-.140	-.143	.062
84.	-.627	-.791	-.640	-.727	-.419	-.168	-.049	.105	.290	.062	-.023	-.143	-.143	.067
86.	-.613	-.790	-.648	-.747	-.409	-.163	-.045	.101	.279	.052	-.038	-.147	-.149	.067
88.	-.600	-.787	-.657	-.767	-.400	-.160	-.048	.099	.267	.042	-.032	-.150	-.149	.069
90.	-.587	-.778	-.665	-.788	-.393	-.160	-.052	.104	.257	.032	-.042	-.155	-.149	.074
92.	-.571	-.776	-.674	-.809	-.393	-.164	-.052	.106	.246	.029	-.052	-.155	-.149	.074
94.	-.547	-.766	-.683	-.821	-.394	-.167	-.052	.101	.233	.022	-.061	-.155	-.142	.074
96.	-.525	-.754	-.693	-.823	-.394	-.168	-.052	.099	.214	.013	-.061	-.155	-.142	.076
98.	-.510	-.736	-.701	-.834	-.395	-.168	-.052	.105	.203	.009	-.061	-.155	-.143	.081
100.	-.489	-.729	-.705	-.837	-.399	-.168	-.052	.102	.193	.003	-.063	-.153	-.143	.081
102.	-.477	-.729	-.714	-.849	-.406	-.169	-.052	.100	.182	-.001	-.072	-.148	-.136	.081
104.	-.466	-.720	-.716	-.852	-.410	-.174	-.052	.100	.172	-.007	-.072	-.149	-.137	.082
106.	-.455	-.716	-.719	-.856	-.421	-.178	-.055	.101	.162	-.011	-.074	-.149	-.137	.082
108.	-.444	-.726	-.722	-.859	-.430	-.178	-.059	.101	.151	-.011	-.083	-.150	-.138	.082
110.	-.436	-.723	-.725	-.863	-.435	-.179	-.060	.102	.143	-.011	-.081	-.148	-.131	.083
112.	-.436	-.736	-.729	-.849	-.447	-.180	-.060	.102	.142	-.018	-.063	-.144	-.132	.083
114.	-.431	-.740	-.734	-.832	-.457	-.181	-.060	.103	.131	-.022	-.063	-.142	-.132	.084
116.	-.444	-.745	-.738	-.806	-.462	-.182	-.061	.104	.123	-.022	-.065	-.138	-.126	.084
118.	-.447	-.750	-.743	-.778	-.472	-.184	-.061	.104	.123	-.016	-.073	-.136	-.127	.085

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 78 RUN 30 TIME 56410.100 MU= .240 CLP= .00782 TEMP(U60)= 37.4 C = 99.34 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
120.	-.450	-.755	-.749	-.771	-.476	-.185	-.062	.105	.124	-.018	-.062	-.132	-.120	.083
122.	-.454	-.761	-.755	-.756	-.480	-.186	-.062	.106	.125	-.016	-.041	-.130	-.121	.078
124.	-.457	-.767	-.759	-.720	-.484	-.188	-.063	.107	.126	-.012	-.033	-.123	-.122	.079
126.	-.464	-.776	-.758	-.681	-.488	-.190	-.060	.103	.129	-.012	-.042	-.119	-.116	.080
128.	-.482	-.793	-.763	-.651	-.490	-.187	-.056	.101	.141	-.006	-.033	-.117	-.117	.081
130.	-.501	-.801	-.763	-.633	-.487	-.185	-.057	.102	.144	.005	-.032	-.113	-.110	.081
132.	-.520	-.809	-.769	-.636	-.492	-.187	-.058	.103	.156	.010	-.020	-.111	-.111	.082
134.	-.540	-.818	-.765	-.643	-.495	-.189	-.058	.104	.159	.010	-.011	-.107	-.112	.083
136.	-.561	-.827	-.752	-.640	-.492	-.187	-.059	.105	.171	.016	-.019	-.105	-.105	.082
138.	-.582	-.836	-.729	-.635	-.495	-.185	-.060	.101	.175	.022	.000	-.100	-.106	.077
140.	-.604	-.848	-.698	-.631	-.490	-.187	-.057	.100	.190	.028	-.008	-.099	-.100	.078
142.	-.626	-.868	-.677	-.626	-.488	-.185	-.053	.101	.203	.034	.014	-.094	-.101	.079
144.	-.649	-.868	-.667	-.622	-.491	-.183	-.054	.102	.206	.034	.013	-.093	-.094	.080
146.	-.671	-.880	-.663	-.617	-.484	-.181	-.055	.098	.210	.041	.003	-.087	-.095	.081
148.	-.683	-.888	-.651	-.602	-.473	-.179	-.055	.096	.225	.047	.015	-.086	-.096	.082
150.	-.708	-.876	-.638	-.596	-.477	-.181	-.056	.098	.228	.055	.016	-.080	-.089	.083
152.	-.734	-.875	-.626	-.591	-.472	-.179	-.057	.099	.233	.061	.028	-.079	-.090	.084
154.	-.759	-.870	-.623	-.586	-.470	-.177	-.058	.095	.249	.062	.029	-.073	-.082	.085
156.	-.773	-.843	-.609	-.582	-.474	-.180	-.059	.093	.253	.070	.030	-.072	-.083	.087
158.	-.802	-.830	-.597	-.577	-.469	-.178	-.057	.095	.258	.077	.043	-.065	-.084	.088
160.	-.832	-.828	-.595	-.572	-.464	-.176	-.052	.096	.275	.079	.045	-.064	-.076	.090
162.	-.860	-.827	-.591	-.567	-.462	-.174	-.053	.092	.281	.087	.058	-.057	-.077	.091
164.	-.877	-.824	-.578	-.562	-.467	-.171	-.054	.090	.300	.095	.046	-.056	-.069	.093
166.	-.908	-.809	-.575	-.557	-.464	-.174	-.054	.091	.305	.104	.061	-.046	-.070	.094
168.	-.926	-.808	-.572	-.564	-.469	-.172	-.055	.093	.311	.113	.062	-.039	-.071	.096
170.	-.958	-.808	-.570	-.561	-.464	-.169	-.056	.088	.331	.115	.063	-.037	-.062	.097
172.	-.977	-.821	-.567	-.555	-.461	-.172	-.057	.085	.337	.124	.066	-.029	-.063	.097
174.	-1.014	-.821	-.563	-.562	-.467	-.170	-.055	.087	.345	.134	.097	-.027	-.054	.090
176.	-1.053	-.834	-.560	-.560	-.461	-.167	-.049	.089	.368	.136	.100	-.018	-.054	.092
178.	-1.090	-.833	-.557	-.554	-.457	-.165	-.050	.090	.392	.146	.116	-.019	-.045	.094

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 78 RUN 30 TIME 56410.100 MU= .240 CLP= .00782 TEMP(U60)= 37.4 C = 99.34 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C=	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
AZIMUTH														
180.	-1.112	-.832	-.553	-.547	-.463	-.162	-.051	.092	.415	.157	.103	-.016	-.045	.095
182.	-1.154	-.847	-.549	-.554	-.457	-.165	-.049	.094	.423	.168	.122	-.007	-.045	.097
184.	-1.197	-.845	-.546	-.551	-.452	-.162	-.042	.089	.432	.180	.140	-.007	-.035	.099
186.	-1.242	-.844	-.555	-.544	-.458	-.158	-.043	.085	.458	.183	.127	-.004	-.035	.101
188.	-1.285	-.859	-.551	-.550	-.454	-.156	-.044	.087	.468	.195	.146	.006	-.036	.103
190.	-1.312	-.857	-.547	-.547	-.460	-.152	-.045	.089	.495	.208	.132	.009	-.036	.105
192.	-1.361	-.855	-.557	-.553	-.455	-.155	-.046	.091	.504	.212	.152	.019	-.026	.107
194.	-1.408	-.871	-.551	-.549	-.461	-.152	-.046	.092	.514	.225	.137	.020	-.025	.109
196.	-1.435	-.869	-.547	-.540	-.455	-.147	-.047	.094	.524	.239	.177	.020	-.025	.111
198.	-1.466	-.884	-.558	-.546	-.461	-.150	-.044	.088	.535	.243	.161	.024	-.026	.111
200.	-1.517	-.882	-.567	-.541	-.452	-.147	-.036	.084	.545	.248	.165	.035	-.026	.102
202.	-1.546	-.899	-.562	-.547	-.445	-.141	-.037	.086	.557	.253	.188	.036	-.014	.104
204.	-1.578	-.915	-.572	-.541	-.454	-.144	-.038	.088	.588	.258	.171	.037	-.013	.106
206.	-1.632	-.912	-.566	-.547	-.462	-.146	-.039	.089	.600	.272	.174	.037	-.013	.108
208.	-1.663	-.928	-.575	-.540	-.469	-.143	-.039	.091	.611	.289	.177	.041	-.013	.110
210.	-1.697	-.924	-.569	-.545	-.460	-.136	-.040	.093	.623	.294	.181	.055	-.014	.112
212.	-1.754	-.940	-.579	-.538	-.466	-.139	-.037	.094	.657	.299	.229	.056	-.014	.114
214.	-1.786	-.935	-.589	-.542	-.457	-.141	-.027	.096	.647	.305	.188	.057	-.000	.116
216.	-1.819	-.952	-.581	-.552	-.465	-.137	-.028	.098	.682	.311	.214	.061	.002	.118
218.	-1.854	-.967	-.591	-.544	-.471	-.130	-.028	.100	.694	.316	.218	.076	.002	.120
220.	-1.914	-.960	-.602	-.547	-.460	-.132	-.029	.101	.706	.322	.222	.078	.002	.122
222.	-1.947	-.977	-.611	-.557	-.468	-.134	-.029	.103	.719	.327	.226	.079	.002	.124
224.	-1.979	-.993	-.601	-.547	-.473	-.136	-.030	.096	.731	.333	.230	.080	.017	.126
226.	-2.012	-1.009	-.611	-.550	-.460	-.131	-.030	.089	.743	.338	.259	.085	.019	.129
228.	-2.045	-.999	-.620	-.558	-.468	-.122	-.030	.091	.754	.354	.263	.102	.020	.131
230.	-2.109	-1.014	-.630	-.567	-.475	-.124	-.031	.092	.766	.374	.267	.103	.020	.133
232.	-2.171	-1.029	-.638	-.576	-.479	-.126	-.027	.094	.805	.380	.271	.105	.020	.135
234.	-2.204	-1.044	-.625	-.584	-.464	-.128	-.015	.095	.817	.385	.275	.106	.021	.136
236.	-2.266	-1.058	-.634	-.572	-.471	-.130	-.015	.096	.800	.390	.279	.108	.021	.138
238.	-2.298	-1.072	-.642	-.572	-.477	-.131	-.015	.097	.839	.407	.310	.109	.021	.137

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 78 RUN 30 TIME 56410.100 MU= .240 CLP= .00782 TEMP(U60)= 37.4 C = 99.34 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
240.	-2.361	-1.086	-.650	-.579	-.480	-.125	-.015	.099	.850	.427	.314	.111	.021	.123
242.	-2.424	-1.098	-.658	-.565	-.466	-.114	-.016	.100	.860	.432	.318	.112	.022	.124
244.	-2.486	-1.111	-.666	-.563	-.492	-.116	-.016	.101	.869	.437	.322	.113	.022	.126
246.	-2.546	-1.122	-.673	-.569	-.473	-.117	-.016	.102	.878	.442	.325	.114	.022	.127
248.	-2.572	-1.133	-.679	-.574	-.478	-.118	-.016	.103	.887	.446	.328	.119	.022	.128
250.	-2.632	-1.143	-.685	-.580	-.482	-.119	-.016	.104	.895	.462	.331	.138	.023	.129
252.	-2.690	-1.153	-.665	-.584	-.486	-.120	-.016	.105	.902	.482	.334	.139	.023	.130
254.	-2.745	-1.161	-.671	-.589	-.489	-.121	-.016	.106	.909	.486	.336	.140	.023	.131
256.	-2.764	-1.169	-.700	-.592	-.490	-.114	-.012	.106	.915	.489	.338	.141	.023	.132
258.	-2.817	-1.175	-.678	-.596	-.470	-.101	.003	.107	.920	.492	.370	.142	.023	.133
260.	-2.867	-1.181	-.682	-.577	-.495	-.101	.003	.107	.924	.494	.373	.142	.023	.134
262.	-2.879	-1.186	-.684	-.570	-.472	-.101	.003	.108	.928	.496	.374	.143	.023	.134
264.	-2.926	-1.189	-.687	-.572	-.474	-.102	.003	.108	.931	.498	.375	.143	.024	.135
266.	-2.970	-1.192	-.688	-.573	-.475	-.102	.003	.108	.933	.499	.376	.144	.024	.135
268.	-2.975	-1.194	-.689	-.574	-.477	-.102	.003	.109	.966	.499	.377	.144	.024	.135
270.	-3.051	-1.194	-.689	-.574	-.501	-.102	-.002	.109	.967	.511	.377	.144	.024	.135
272.	-3.088	-1.226	-.715	-.596	-.475	-.102	-.017	.109	.967	.529	.406	.144	.024	.135
274.	-3.122	-1.224	-.714	-.604	-.477	-.102	-.017	.108	.966	.528	.407	.144	.024	.135
276.	-3.190	-1.222	-.713	-.603	-.501	-.109	-.017	.108	.963	.527	.406	.143	.041	.135
278.	-3.219	-1.250	-.737	-.601	-.500	-.123	-.017	.108	.992	.537	.405	.143	.045	.134
280.	-3.281	-1.245	-.708	-.599	-.498	-.123	-.017	.107	.989	.553	.374	.142	.027	.134
282.	-3.340	-1.270	-.730	-.596	-.496	-.122	-.017	.107	1.015	.550	.400	.142	.023	.133
284.	-3.395	-1.264	-.726	-.593	-.493	-.122	-.017	.106	1.010	.547	.399	.141	.023	.132
286.	-3.447	-1.286	-.747	-.610	-.490	-.121	-.016	.106	1.004	.555	.425	.140	.040	.131
288.	-3.495	-1.308	-.742	-.615	-.488	-.120	-.016	.105	1.027	.568	.424	.139	.027	.130
290.	-3.539	-1.328	-.761	-.610	-.507	-.119	-.016	.104	1.020	.574	.420	.138	.023	.129
292.	-3.616	-1.317	-.754	-.625	-.479	-.118	-.016	.103	1.040	.587	.417	.137	.022	.128
294.	-3.652	-1.334	-.747	-.628	-.500	-.117	-.016	.102	1.061	.581	.413	.135	.022	.127
296.	-3.685	-1.350	-.764	-.622	-.494	-.116	-.012	.110	1.051	.575	.408	.134	.022	.126
298.	-3.680	-1.365	-.779	-.634	-.490	-.114	.002	.119	1.068	.569	.404	.133	.022	.124

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 78 RUN 30 TIME 56410.100 MU= .240 CLP= .00782 TEMP(U60)= 37.4 C = 99.34 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C=	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
AZIMUTH														
300.	-3.671	-1.350	-.771	-.636	-.507	-.113	.002	.118	1.057	.562	.399	.129	.022	.121
302.	-3.626	-1.333	-.761	-.628	-.479	-.112	.002	.116	1.044	.555	.368	.109	.006	.102
304.	-3.579	-1.288	-.751	-.620	-.496	-.110	.002	.115	1.030	.538	.362	.106	.002	.101
306.	-3.498	-1.243	-.741	-.612	-.489	-.109	-.001	.113	.963	.515	.332	.087	.002	.100
308.	-3.383	-1.198	-.731	-.603	-.482	-.113	-.015	.112	.946	.498	.325	.086	-.013	.098
310.	-3.269	-1.153	-.698	-.594	-.475	-.124	-.014	.110	.932	.475	.320	.084	-.016	.097
312.	-3.156	-1.134	-.687	-.585	-.469	-.122	-.014	.108	.892	.468	.315	.083	-.016	.095
314.	-3.075	-1.116	-.676	-.576	-.484	-.120	-.017	.107	.902	.460	.310	.082	-.016	.095
316.	-2.995	-1.099	-.665	-.567	-.476	-.119	-.030	.105	.864	.453	.305	.080	-.015	.109
318.	-2.916	-1.105	-.654	-.557	-.468	-.117	-.029	.103	.873	.445	.300	.079	-.015	.108
320.	-2.866	-1.087	-.663	-.564	-.460	-.115	-.029	.101	.836	.438	.295	.076	-.015	.106
322.	-2.817	-1.092	-.652	-.563	-.453	-.118	-.028	.100	.843	.430	.290	.059	-.015	.104
324.	-2.767	-1.098	-.641	-.553	-.465	-.127	-.030	.098	.853	.423	.307	.058	-.014	.102
326.	-2.718	-1.102	-.648	-.558	-.457	-.125	-.042	.096	.839	.415	.282	.057	-.014	.100
328.	-2.696	-1.105	-.637	-.556	-.449	-.123	-.041	.094	.846	.415	.296	.056	-.014	.099
330.	-2.647	-1.108	-.644	-.560	-.441	-.125	-.040	.093	.832	.421	.292	.055	-.014	.097
332.	-2.624	-1.110	-.650	-.557	-.452	-.134	-.039	.091	.838	.414	.287	.054	-.013	.095
334.	-2.601	-1.112	-.639	-.561	-.444	-.131	-.039	.089	.824	.406	.281	.053	-.025	.093
336.	-2.553	-1.113	-.644	-.558	-.454	-.129	-.038	.088	.829	.405	.276	.052	-.027	.091
338.	-2.504	-1.093	-.649	-.561	-.446	-.131	-.037	.086	.815	.410	.271	.051	-.027	.090
340.	-2.457	-1.092	-.638	-.557	-.438	-.138	-.036	.084	.819	.403	.266	.050	-.026	.088
342.	-2.433	-1.111	-.642	-.560	-.447	-.136	-.036	.083	.824	.388	.261	.048	-.026	.086
344.	-2.387	-1.111	-.646	-.569	-.456	-.133	-.037	.081	.810	.375	.238	.034	-.036	.084
346.	-2.342	-1.109	-.634	-.564	-.447	-.135	-.046	.085	.813	.386	.266	.033	-.038	.071
348.	-2.297	-1.089	-.637	-.566	-.455	-.141	-.046	.091	.817	.397	.298	.034	-.037	.081
350.	-2.275	-1.104	-.655	-.573	-.447	-.139	-.045	.089	.838	.413	.313	.045	-.036	.080
352.	-2.254	-1.121	-.644	-.581	-.454	-.136	-.042	.093	.877	.433	.325	.045	-.036	.078
354.	-2.232	-1.240	-.646	-.576	-.446	-.134	-.030	.097	.916	.436	.320	.044	-.035	.065
356.	-2.191	-1.411	-.635	-.576	-.437	-.131	-.020	.106	.903	.422	.268	.042	-.044	.064
358.	-2.130	-1.529	-.609	-.572	-.429	-.125	-.020	.117	.853	.393	.227	.029	-.045	.062

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 80 RUN 31 TIME 52235.700 MU= .245 CLP= .00784 TEMP(U60)= 37.8 C =100.00 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
0.	-2.060	-.999	-.578	-.552	-.436	-.140	-.048	.083	.668	.283	.155	-.002	-.052	.076
2.	-1.959	-.962	-.579	-.550	-.442	-.147	-.047	.082	.635	.262	.128	-.014	-.051	.075
4.	-1.880	-.942	-.583	-.549	-.449	-.147	-.047	.080	.620	.241	.120	-.014	-.050	.074
6.	-1.769	-.925	-.574	-.556	-.456	-.153	-.056	.079	.580	.221	.118	-.025	-.057	.073
8.	-1.676	-.923	-.575	-.562	-.448	-.153	-.058	.077	.550	.201	.102	-.025	-.059	.071
10.	-1.590	-.908	-.568	-.559	-.442	-.160	-.063	.071	.522	.187	.083	-.037	-.068	.068
12.	-1.538	-.892	-.569	-.558	-.446	-.159	-.064	.065	.527	.189	.094	-.046	-.068	.069
14.	-1.511	-.906	-.572	-.554	-.452	-.164	-.069	.068	.534	.200	.121	-.045	-.066	.068
16.	-1.485	-.950	-.575	-.564	-.458	-.161	-.060	.072	.569	.211	.122	-.044	-.065	.066
18.	-1.478	-.966	-.577	-.575	-.450	-.162	-.059	.075	.591	.217	.133	-.043	-.072	.065
20.	-1.471	-.952	-.580	-.590	-.456	-.166	-.058	.079	.598	.213	.132	-.043	-.073	.055
22.	-1.448	-.937	-.583	-.590	-.461	-.163	-.057	.083	.589	.210	.104	-.044	-.080	.054
24.	-1.408	-.979	-.598	-.590	-.455	-.161	-.056	.086	.566	.201	.088	-.063	-.088	.053
26.	-1.386	-1.021	-.600	-.595	-.459	-.162	-.055	.085	.543	.185	.073	-.072	-.096	.052
28.	-1.349	-1.062	-.602	-.591	-.453	-.165	-.057	.088	.520	.170	.046	-.080	-.104	.051
30.	-1.312	-1.087	-.594	-.582	-.459	-.163	-.062	.091	.499	.149	.031	-.089	-.112	.050
32.	-1.261	-1.072	-.596	-.583	-.464	-.164	-.061	.090	.464	.127	.018	-.097	-.112	.051
34.	-1.213	-1.056	-.588	-.589	-.470	-.171	-.060	.089	.431	.124	.043	-.104	-.118	.058
36.	-1.181	-1.029	-.581	-.604	-.473	-.174	-.060	.092	.425	.124	.055	-.102	-.117	.057
38.	-1.148	-1.001	-.583	-.612	-.469	-.172	-.061	.095	.407	.110	.041	-.101	-.116	.056
40.	-1.105	-.950	-.577	-.617	-.473	-.174	-.066	.089	.402	.108	.030	-.100	-.114	.056
42.	-1.078	-.914	-.581	-.622	-.467	-.177	-.065	.084	.400	.125	.042	-.098	-.113	.057
44.	-1.067	-.896	-.585	-.617	-.464	-.175	-.064	.083	.431	.134	.065	-.097	-.112	.063
46.	-1.066	-.924	-.599	-.610	-.467	-.173	-.064	.082	.437	.133	.072	-.096	-.110	.060
48.	-1.040	-.946	-.612	-.614	-.464	-.171	-.063	.082	.421	.126	.028	-.097	-.109	.053
50.	-1.015	-.936	-.615	-.619	-.468	-.173	-.062	.081	.415	.119	.029	-.103	-.116	.053
52.	-.990	-.927	-.621	-.615	-.466	-.176	-.062	.080	.400	.118	.037	-.104	-.115	.052
54.	-.969	-.919	-.635	-.620	-.469	-.174	-.061	.084	.395	.117	.026	-.112	-.122	.052
56.	-.955	-.908	-.647	-.626	-.468	-.177	-.064	.081	.379	.110	.015	-.116	-.121	.051
58.	-.922	-.891	-.653	-.632	-.474	-.179	-.067	.083	.368	.104	.015	-.115	-.120	.051

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 80 RUN 31 TIME 52235.700 MU= .245 CLP= .00784 TEMP(U60)= 37.8 C =100.00 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
60.	-.904	-.884	-.665	-.649	-.478	-.178	-.067	.085	.375	.103	.017	-.114	-.127	.050
62.	-.897	-.883	-.670	-.657	-.477	-.176	-.066	.089	.375	.103	.026	-.116	-.126	.050
64.	-.891	-.897	-.677	-.674	-.481	-.175	-.063	.091	.384	.109	.026	-.121	-.125	.050
66.	-.885	-.905	-.691	-.692	-.478	-.174	-.058	.090	.390	.112	.028	-.120	-.131	.049
68.	-.880	-.923	-.704	-.700	-.472	-.173	-.058	.090	.388	.111	.029	-.122	-.131	.049
70.	-.875	-.935	-.712	-.718	-.463	-.172	-.054	.095	.386	.110	.004	-.126	-.131	.049
72.	-.867	-.933	-.724	-.726	-.457	-.171	-.051	.096	.384	.110	.004	-.129	-.137	.051
74.	-.850	-.937	-.730	-.744	-.445	-.170	-.050	.101	.379	.102	-.001	-.133	-.137	.056
76.	-.829	-.930	-.739	-.764	-.434	-.165	-.050	.102	.373	.092	-.014	-.136	-.143	.055
78.	-.804	-.916	-.752	-.794	-.422	-.161	-.050	.102	.369	.081	-.009	-.143	-.143	.058
80.	-.779	-.902	-.759	-.814	-.415	-.161	-.050	.102	.342	.071	-.023	-.147	-.142	.062
82.	-.738	-.889	-.766	-.843	-.410	-.166	-.050	.101	.326	.053	-.041	-.150	-.143	.062
84.	-.697	-.872	-.771	-.853	-.404	-.168	-.050	.101	.303	.040	-.051	-.154	-.149	.065
86.	-.657	-.849	-.770	-.863	-.404	-.168	-.050	.101	.280	.030	-.059	-.158	-.149	.069
88.	-.622	-.826	-.769	-.872	-.408	-.168	-.050	.095	.258	.012	-.066	-.161	-.149	.069
90.	-.590	-.804	-.773	-.871	-.417	-.167	-.054	.100	.236	-.000	-.079	-.161	-.147	.069
92.	-.551	-.782	-.778	-.858	-.422	-.173	-.056	.101	.213	-.010	-.079	-.161	-.141	.073
94.	-.518	-.760	-.775	-.820	-.432	-.175	-.056	.095	.191	-.020	-.083	-.161	-.141	.076
96.	-.486	-.744	-.763	-.744	-.447	-.175	-.056	.094	.169	-.031	-.094	-.166	-.142	.076
98.	-.453	-.739	-.750	-.660	-.453	-.182	-.061	.094	.147	-.041	-.096	-.170	-.142	.077
100.	-.434	-.735	-.739	-.590	-.459	-.184	-.063	.095	.130	-.042	-.090	-.165	-.142	.077
102.	-.416	-.726	-.727	-.553	-.470	-.184	-.064	.095	.119	-.051	-.095	-.163	-.140	.077
104.	-.397	-.718	-.720	-.548	-.476	-.185	-.064	.095	.103	-.062	-.111	-.163	-.136	.077
106.	-.379	-.715	-.709	-.561	-.478	-.186	-.064	.088	.081	-.063	-.118	-.164	-.136	.078
108.	-.360	-.712	-.694	-.577	-.480	-.186	-.064	.089	.064	-.063	-.113	-.160	-.134	.078
110.	-.349	-.704	-.669	-.602	-.482	-.187	-.065	.089	.053	-.073	-.108	-.158	-.130	.078
112.	-.337	-.697	-.635	-.625	-.485	-.188	-.065	.090	.041	-.074	-.103	-.158	-.128	.079
114.	-.333	-.689	-.601	-.640	-.482	-.189	-.065	.090	.030	-.075	-.099	-.154	-.124	.079
116.	-.327	-.682	-.577	-.656	-.481	-.191	-.066	.091	.025	-.075	-.094	-.152	-.125	.080
118.	-.324	-.675	-.568	-.666	-.478	-.192	-.066	.091	.019	-.076	-.094	-.148	-.123	.080

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 80 RUN 31 TIME 52235.700 MU= .245 CLP= .00784 TEMP(U60)= 37.8 C =100.00 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
120.	-.326	-.669	-.563	-.653	-.478	-.186	-.067	.085	.014	-.076	-.089	-.147	-.119	.081
122.	-.329	-.662	-.552	-.626	-.475	-.187	-.061	.085	.007	-.077	-.091	-.142	-.120	.081
124.	-.332	-.663	-.543	-.608	-.476	-.188	-.061	.086	.002	-.088	-.090	-.141	-.117	.082
126.	-.344	-.662	-.531	-.590	-.472	-.190	-.061	.086	.002	-.089	-.086	-.136	-.114	.083
128.	-.352	-.663	-.517	-.580	-.466	-.184	-.062	.080	.002	-.079	-.094	-.135	-.111	.078
130.	-.356	-.662	-.508	-.581	-.468	-.186	-.062	.081	.002	-.080	-.099	-.130	-.108	.076
132.	-.359	-.648	-.496	-.575	-.465	-.187	-.063	.081	.010	-.081	-.079	-.129	-.109	.077
134.	-.373	-.639	-.488	-.565	-.459	-.181	-.064	.082	.014	-.081	-.074	-.124	-.106	.078
136.	-.382	-.625	-.483	-.556	-.461	-.183	-.064	.083	.023	-.071	-.071	-.123	-.103	.079
138.	-.397	-.624	-.471	-.552	-.458	-.185	-.058	.084	.028	-.071	-.052	-.117	-.105	.080
140.	-.407	-.623	-.463	-.544	-.453	-.179	-.058	.084	.028	-.061	-.044	-.117	-.101	.081
142.	-.423	-.617	-.458	-.545	-.447	-.180	-.059	.078	.037	-.060	-.045	-.111	-.099	.082
144.	-.433	-.622	-.454	-.539	-.441	-.174	-.060	.079	.042	-.051	-.054	-.111	-.095	.076
146.	-.451	-.620	-.440	-.534	-.445	-.176	-.060	.080	.052	-.049	-.050	-.104	-.092	.075
148.	-.473	-.615	-.433	-.528	-.441	-.170	-.053	.081	.057	-.038	-.047	-.105	-.094	.076
150.	-.484	-.621	-.436	-.522	-.435	-.171	-.054	.080	.068	-.028	-.038	-.098	-.089	.078
152.	-.491	-.619	-.434	-.515	-.429	-.165	-.055	.075	.072	-.028	-.025	-.089	-.081	.079
154.	-.512	-.614	-.428	-.509	-.434	-.168	-.055	.076	.084	-.026	-.022	-.090	-.079	.080
156.	-.523	-.621	-.423	-.510	-.430	-.169	-.056	.077	.089	-.016	-.022	-.082	-.080	.081
158.	-.546	-.619	-.418	-.503	-.424	-.163	-.057	.078	.102	-.013	-.012	-.083	-.075	.082
160.	-.557	-.614	-.412	-.498	-.430	-.166	-.049	.076	.119	-.003	-.009	-.074	-.073	.084
162.	-.567	-.609	-.396	-.498	-.424	-.167	-.050	.071	.124	-.003	-.009	-.075	-.067	.085
164.	-.593	-.617	-.399	-.500	-.418	-.161	-.051	.072	.139	.001	.015	-.065	-.065	.087
166.	-.622	-.627	-.406	-.499	-.425	-.161	-.052	.073	.157	.015	.020	-.066	-.059	.088
168.	-.634	-.624	-.402	-.492	-.419	-.156	-.053	.075	.162	.026	.008	-.057	-.057	.090
170.	-.663	-.634	-.408	-.485	-.412	-.159	-.052	.076	.179	.031	.032	-.057	-.050	.091
172.	-.695	-.630	-.415	-.488	-.419	-.158	-.044	.077	.199	.042	.037	-.047	-.048	.093
174.	-.709	-.640	-.410	-.486	-.427	-.153	-.045	.079	.220	.048	.024	-.047	-.049	.095
176.	-.742	-.652	-.417	-.489	-.420	-.156	-.046	.080	.226	.059	.052	-.037	-.041	.096
178.	-.777	-.648	-.411	-.487	-.427	-.155	-.047	.082	.246	.066	.056	-.037	-.039	.098

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 80 RUN 31 TIME 52235.700 MU= .245 CLP= .00784 TEMP(U60)= 37.8 C =100.00 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
180.	-.792	-.659	-.418	-.491	-.420	-.150	-.048	.083	.286	.077	.057	-.026	-.040	.100
182.	-.850	-.672	-.426	-.488	-.413	-.153	-.049	.079	.293	.085	.074	-.025	-.031	.102
184.	-.889	-.685	-.434	-.492	-.421	-.151	-.047	.075	.317	.104	.077	-.014	-.029	.104
186.	-.929	-.699	-.428	-.488	-.428	-.146	-.039	.076	.342	.116	.096	-.013	-.019	.106
188.	-.970	-.712	-.436	-.492	-.421	-.149	-.040	.078	.350	.126	.098	-.002	-.018	.108
190.	-1.013	-.707	-.445	-.488	-.429	-.146	-.041	.079	.395	.138	.118	.001	-.018	.108
192.	-1.057	-.721	-.453	-.493	-.435	-.141	-.042	.081	.404	.149	.121	.012	-.019	.099
194.	-1.102	-.735	-.463	-.502	-.429	-.144	-.043	.083	.433	.171	.142	.012	-.007	.101
196.	-1.149	-.752	-.472	-.497	-.437	-.147	-.043	.076	.461	.184	.126	.016	-.006	.103
198.	-1.200	-.784	-.481	-.502	-.443	-.143	-.044	.072	.472	.198	.148	.028	-.006	.105
200.	-1.272	-.783	-.491	-.512	-.436	-.138	-.041	.074	.503	.211	.153	.032	.008	.107
202.	-1.328	-.818	-.500	-.504	-.445	-.141	-.033	.075	.536	.216	.175	.044	.009	.110
204.	-1.404	-.834	-.510	-.511	-.449	-.143	-.033	.077	.566	.220	.181	.045	.009	.112
206.	-1.459	-.850	-.520	-.521	-.442	-.138	-.034	.078	.580	.236	.204	.051	.009	.114
208.	-1.520	-.867	-.531	-.531	-.451	-.133	-.035	.080	.612	.250	.208	.063	.025	.116
210.	-1.607	-.884	-.537	-.521	-.454	-.136	-.035	.081	.628	.267	.215	.064	.025	.118
212.	-1.689	-.900	-.535	-.528	-.447	-.138	-.036	.083	.660	.282	.235	.071	.026	.121
214.	-1.757	-.917	-.562	-.538	-.456	-.141	-.037	.084	.677	.300	.220	.084	.027	.123
216.	-1.850	-.940	-.572	-.548	-.464	-.134	-.037	.086	.715	.315	.228	.085	.043	.125
218.	-1.946	-.977	-.582	-.558	-.466	-.129	-.031	.087	.749	.321	.252	.094	.044	.128
220.	-2.043	-.995	-.593	-.568	-.459	-.131	-.023	.089	.763	.342	.257	.107	.045	.130
222.	-2.143	-1.012	-.603	-.553	-.467	-.133	-.023	.091	.776	.356	.261	.108	.046	.132
224.	-2.244	-1.030	-.614	-.561	-.475	-.136	-.024	.092	.796	.379	.272	.110	.047	.134
226.	-2.348	-1.055	-.624	-.571	-.483	-.126	-.024	.094	.830	.394	.296	.112	.047	.129
228.	-2.453	-1.092	-.634	-.580	-.481	-.121	-.015	.095	.844	.400	.301	.123	.048	.121
230.	-2.560	-1.109	-.644	-.589	-.474	-.123	-.008	.097	.857	.406	.306	.136	.049	.123
232.	-2.668	-1.126	-.654	-.570	-.481	-.125	-.008	.098	.870	.432	.318	.138	.050	.124
234.	-2.777	-1.143	-.664	-.578	-.488	-.127	-.008	.100	.892	.445	.343	.140	.050	.126
236.	-2.887	-1.159	-.673	-.587	-.484	-.114	-.008	.101	.925	.472	.348	.142	.051	.128
238.	-2.984	-1.174	-.673	-.595	-.476	-.110	-.008	.102	.938	.485	.353	.144	.052	.130

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 80 RUN 31 TIME 52235.700 MU= .245 CLP= .00784 TEMP(U60)= 37.8 C =100.00 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C=	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
AZIMUTH														
240.	-3.059	-1.190	-.666	-.600	-.469	-.111	-.008	.104	.950	.491	.357	.145	.052	.131
242.	-3.149	-1.204	-.674	-.579	-.461	-.113	-.008	.105	.961	.497	.361	.147	.058	.133
244.	-3.243	-1.218	-.682	-.586	-.479	-.114	-.008	.106	.972	.503	.366	.149	.069	.135
246.	-3.316	-1.231	-.689	-.592	-.485	-.115	.004	.107	.983	.508	.370	.150	.059	.136
248.	-3.370	-1.243	-.696	-.598	-.476	-.099	.011	.108	.992	.513	.373	.152	.076	.137
250.	-3.419	-1.255	-.703	-.604	-.480	-.095	.011	.109	1.002	.518	.377	.153	.077	.139
252.	-3.486	-1.265	-.709	-.604	-.484	-.096	.011	.110	1.010	.522	.393	.155	.071	.140
254.	-3.532	-1.275	-.714	-.582	-.488	-.097	.011	.111	1.018	.526	.400	.156	.063	.141
256.	-3.576	-1.283	-.719	-.585	-.491	-.098	.011	.112	1.024	.557	.399	.157	.078	.142
258.	-3.636	-1.291	-.723	-.589	-.494	-.098	.011	.113	1.030	.563	.419	.158	.079	.143
260.	-3.694	-1.297	-.726	-.599	-.496	-.099	.011	.113	1.036	.566	.421	.174	.079	.143
262.	-3.749	-1.320	-.729	-.627	-.498	-.099	.011	.114	1.040	.568	.423	.182	.079	.144
264.	-3.801	-1.340	-.732	-.629	-.500	-.099	.011	.114	1.043	.570	.424	.183	.080	.144
266.	-3.850	-1.343	-.749	-.630	-.501	-.100	.011	.113	1.064	.571	.441	.183	.080	.145
268.	-3.919	-1.345	-.762	-.631	-.502	-.100	.012	.094	1.081	.602	.457	.184	.080	.145
270.	-3.977	-1.365	-.762	-.631	-.502	-.100	.012	.112	1.081	.603	.440	.184	.080	.145
272.	-4.016	-1.378	-.762	-.631	-.502	-.100	.012	.095	1.081	.602	.443	.184	.080	.145
274.	-4.050	-1.397	-.778	-.630	-.501	-.100	.011	.114	1.099	.602	.457	.183	.080	.145
276.	-4.081	-1.407	-.786	-.629	-.500	-.099	.011	.114	1.110	.600	.456	.183	.080	.144
278.	-4.135	-1.402	-.784	-.627	-.498	-.099	.011	.114	1.107	.600	.454	.182	.069	.144
280.	-4.171	-1.418	-.781	-.636	-.496	-.099	.011	.113	1.124	.626	.472	.182	.057	.143
282.	-4.217	-1.423	-.795	-.654	-.494	-.098	.007	.108	1.130	.625	.482	.181	.057	.125
284.	-4.246	-1.437	-.802	-.651	-.495	-.100	.011	.092	1.142	.645	.475	.177	.054	.117
286.	-4.228	-1.460	-.814	-.647	-.489	-.097	.011	.111	1.147	.648	.474	.178	.054	.119
288.	-4.252	-1.482	-.814	-.654	-.507	-.096	.030	.106	1.163	.670	.493	.177	.056	.101
290.	-4.265	-1.502	-.827	-.667	-.486	-.095	.031	.089	1.186	.664	.478	.176	.055	.097
292.	-4.264	-1.497	-.826	-.661	-.476	-.092	.030	.093	1.207	.658	.464	.174	.055	.096
294.	-4.260	-1.482	-.818	-.654	-.471	-.072	.030	.107	1.181	.647	.438	.153	.042	.077
296.	-4.223	-1.467	-.809	-.647	-.466	-.071	.030	.106	1.136	.611	.425	.149	.033	.073
298.	-4.146	-1.402	-.800	-.640	-.461	-.071	.029	.105	1.116	.576	.398	.127	.020	.073

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 80 RUN 31 TIME 52235.700 MU= .245 CLP= .00784 TEMP(U60)= 37.8 C =100.00 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
300.	-4.030	-1.348	-.771	-.632	-.479	-.070	.029	.104	1.079	.541	.364	.124	.012	.072
302.	-3.877	-1.301	-.736	-.624	-.452	-.069	.029	.109	1.035	.513	.331	.103	.012	.071
304.	-3.719	-1.253	-.722	-.616	-.467	-.072	.028	.120	1.015	.499	.320	.101	.012	.070
306.	-3.592	-1.231	-.712	-.607	-.487	-.087	.028	.125	1.001	.472	.316	.099	-.001	.088
308.	-3.501	-1.188	-.702	-.599	-.458	-.086	.026	.135	.962	.465	.311	.078	-.008	.087
310.	-3.384	-1.191	-.691	-.590	-.473	-.084	.010	.126	.967	.458	.306	.076	-.008	.085
312.	-3.295	-1.176	-.680	-.580	-.467	-.088	.008	.113	.956	.451	.302	.075	-.007	.084
314.	-3.239	-1.157	-.669	-.571	-.459	-.100	-.007	.111	.941	.444	.297	.074	-.007	.101
316.	-3.156	-1.163	-.679	-.578	-.452	-.104	-.007	.110	.925	.437	.292	.073	-.007	.099
318.	-3.101	-1.170	-.669	-.578	-.467	-.115	-.007	.108	.934	.429	.309	.072	-.007	.097
320.	-3.047	-1.152	-.657	-.568	-.459	-.113	-.010	.106	.920	.430	.307	.070	-.007	.096
322.	-3.023	-1.156	-.666	-.575	-.452	-.111	-.022	.104	.928	.438	.301	.069	-.007	.096
324.	-2.969	-1.161	-.655	-.573	-.465	-.115	-.025	.094	.913	.430	.274	.068	-.007	.109
326.	-2.915	-1.164	-.663	-.579	-.458	-.124	-.037	.084	.920	.422	.289	.067	-.007	.107
328.	-2.890	-1.167	-.651	-.576	-.469	-.128	-.036	.083	.904	.423	.285	.065	-.006	.105
330.	-2.835	-1.169	-.658	-.582	-.462	-.136	-.035	.089	.911	.428	.280	.064	-.006	.103
332.	-2.782	-1.171	-.664	-.577	-.472	-.133	-.035	.095	.894	.420	.296	.063	-.006	.101
334.	-2.730	-1.173	-.653	-.583	-.465	-.131	-.034	.093	.900	.412	.269	.059	-.006	.096
336.	-2.703	-1.194	-.659	-.594	-.473	-.135	-.037	.091	.884	.404	.285	.045	-.019	.082
338.	-2.650	-1.195	-.664	-.604	-.467	-.141	-.046	.089	.909	.406	.281	.044	-.020	.081
340.	-2.602	-1.214	-.669	-.614	-.477	-.145	-.045	.088	.893	.428	.298	.047	-.020	.082
342.	-2.573	-1.209	-.674	-.606	-.483	-.150	-.044	.086	.903	.448	.349	.057	-.020	.092
344.	-2.530	-1.193	-.680	-.628	-.477	-.147	-.043	.084	.965	.469	.344	.060	-.006	.086
346.	-2.525	-1.242	-.698	-.622	-.486	-.151	-.038	.083	.990	.497	.357	.069	-.005	.075
348.	-2.500	-1.374	-.701	-.627	-.490	-.148	-.030	.089	1.032	.514	.369	.068	-.018	.070
350.	-2.475	-1.578	-.698	-.634	-.477	-.138	-.024	.092	1.060	.512	.367	.066	-.018	.059
352.	-2.441	-1.728	-.663	-.608	-.455	-.129	-.012	.099	1.008	.472	.275	.061	-.018	.058
354.	-2.366	-1.755	-.609	-.577	-.446	-.120	-.010	.109	.899	.410	.234	.042	-.030	.057
356.	-2.281	-1.535	-.586	-.564	-.442	-.125	-.016	.111	.833	.362	.199	.020	-.042	.056
358.	-2.211	-1.277	-.578	-.554	-.445	-.135	-.021	.100	.795	.342	.193	.006	-.053	.063

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 80 RUN 33 TIME 52435.200 MU= .243 CLP= .00439 TEMP(U60)= 37.8 C =100.00 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
0.	-.978	-.661	-.439	-.446	-.385	-.128	-.048	.074	.357	.085	.027	-.051	-.074	.077
2.	-.919	-.634	-.434	-.437	-.381	-.125	-.047	.072	.331	.080	.009	-.062	-.073	.075
4.	-.840	-.619	-.426	-.429	-.374	-.123	-.047	.071	.306	.061	.005	-.062	-.080	.074
6.	-.779	-.607	-.418	-.431	-.381	-.123	-.056	.070	.282	.048	-.009	-.073	-.082	.073
8.	-.741	-.612	-.424	-.431	-.375	-.131	-.055	.068	.259	.047	-.012	-.084	-.081	.071
10.	-.727	-.603	-.418	-.434	-.384	-.131	-.054	.072	.237	.041	.002	-.083	-.088	.070
12.	-.675	-.592	-.410	-.432	-.377	-.138	-.053	.072	.231	.030	-.039	-.093	-.089	.069
14.	-.643	-.598	-.417	-.436	-.385	-.135	-.054	.070	.211	.024	-.043	-.093	-.096	.068
16.	-.632	-.589	-.410	-.434	-.380	-.137	-.061	.074	.191	.008	-.027	-.103	-.097	.066
18.	-.602	-.579	-.404	-.438	-.386	-.142	-.060	.073	.172	-.007	-.041	-.112	-.104	.065
20.	-.573	-.569	-.409	-.435	-.382	-.139	-.059	.072	.168	-.015	-.056	-.119	-.104	.064
22.	-.545	-.562	-.404	-.440	-.387	-.142	-.058	.071	.148	-.021	-.056	-.120	-.112	.063
24.	-.518	-.567	-.409	-.449	-.384	-.145	-.061	.070	.118	-.035	-.070	-.129	-.121	.062
26.	-.488	-.558	-.403	-.444	-.388	-.143	-.066	.069	.114	-.041	-.085	-.135	-.119	.061
28.	-.453	-.550	-.397	-.451	-.386	-.147	-.065	.074	.094	-.049	-.106	-.136	-.118	.064
30.	-.438	-.542	-.394	-.445	-.390	-.149	-.064	.076	.066	-.062	-.095	-.145	-.125	.069
32.	-.401	-.534	-.400	-.453	-.388	-.153	-.063	.075	.050	-.065	-.108	-.149	-.124	.068
34.	-.378	-.531	-.403	-.447	-.396	-.154	-.066	.074	.035	-.073	-.117	-.151	-.131	.067
36.	-.356	-.534	-.398	-.455	-.398	-.152	-.070	.073	.016	-.086	-.123	-.159	-.131	.066
38.	-.335	-.527	-.397	-.463	-.398	-.157	-.069	.072	-.004	-.088	-.140	-.167	-.139	.065
40.	-.314	-.526	-.399	-.470	-.400	-.158	-.068	.079	-.009	-.097	-.138	-.170	-.144	.065
42.	-.294	-.528	-.399	-.466	-.401	-.156	-.067	.071	-.022	-.108	-.137	-.173	-.143	.064
44.	-.275	-.522	-.401	-.474	-.408	-.161	-.066	.069	-.036	-.119	-.135	-.175	-.143	.068
46.	-.263	-.516	-.401	-.479	-.409	-.161	-.066	.077	-.049	-.120	-.150	-.179	-.148	.071
48.	-.252	-.517	-.402	-.477	-.411	-.160	-.071	.076	-.062	-.129	-.152	-.180	-.149	.070
50.	-.243	-.518	-.404	-.485	-.419	-.166	-.072	.084	-.068	-.129	-.137	-.184	-.153	.070
52.	-.240	-.520	-.411	-.493	-.419	-.165	-.071	.083	-.074	-.139	-.148	-.185	-.152	.075
54.	-.229	-.528	-.411	-.501	-.422	-.164	-.071	.082	-.079	-.138	-.146	-.184	-.151	.076
56.	-.221	-.529	-.414	-.509	-.430	-.171	-.070	.081	-.079	-.137	-.146	-.189	-.149	.076
58.	-.219	-.532	-.415	-.518	-.430	-.169	-.069	.081	-.086	-.136	-.143	-.189	-.152	.075

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 80 RUN 33 TIME 52435.200 MU= .243 CLP= .00439 TEMP(U60)= 37.8 C =100.00 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C=	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
AZIMUTH														
60.	-.217	-.532	-.418	-.521	-.434	-.168	-.069	.080	-.090	-.146	-.152	-.188	-.155	.075
62.	-.205	-.537	-.418	-.522	-.434	-.167	-.068	.081	-.098	-.146	-.167	-.194	-.158	.074
64.	-.200	-.537	-.423	-.531	-.439	-.174	-.068	.087	-.101	-.155	-.161	-.193	-.161	.074
66.	-.187	-.533	-.430	-.534	-.438	-.173	-.067	.086	-.109	-.154	-.165	-.192	-.160	.073
68.	-.183	-.530	-.430	-.537	-.445	-.172	-.067	.086	-.121	-.150	-.141	-.191	-.159	.073
70.	-.182	-.537	-.436	-.546	-.444	-.171	-.067	.085	-.123	-.141	-.142	-.190	-.158	.072
72.	-.182	-.537	-.435	-.549	-.442	-.170	-.066	.085	-.102	-.140	-.152	-.189	-.157	.072
74.	-.194	-.534	-.442	-.546	-.440	-.169	-.066	.085	-.098	-.140	-.154	-.189	-.157	.072
76.	-.207	-.532	-.441	-.544	-.438	-.169	-.066	.084	-.087	-.139	-.163	-.196	-.156	.071
78.	-.207	-.531	-.449	-.542	-.437	-.171	-.066	.084	-.085	-.143	-.174	-.195	-.155	.071
80.	-.179	-.529	-.448	-.549	-.435	-.176	-.065	.084	-.097	-.153	-.185	-.196	-.155	.071
82.	-.150	-.516	-.447	-.551	-.435	-.175	-.065	.083	-.108	-.164	-.174	-.202	-.161	.072
84.	-.121	-.503	-.446	-.550	-.444	-.175	-.065	.083	-.132	-.174	-.196	-.203	-.162	.078
86.	-.094	-.479	-.436	-.549	-.443	-.175	-.065	.083	-.156	-.190	-.196	-.210	-.162	.078
88.	-.078	-.467	-.433	-.540	-.443	-.175	-.067	.083	-.180	-.206	-.197	-.210	-.162	.078
90.	-.050	-.453	-.415	-.537	-.443	-.174	-.072	.083	-.204	-.217	-.219	-.212	-.162	.078
92.	-.021	-.431	-.406	-.537	-.443	-.175	-.072	.083	-.228	-.228	-.241	-.218	-.162	.080
94.	.004	-.417	-.396	-.528	-.443	-.175	-.072	.083	-.252	-.239	-.247	-.218	-.162	.086
96.	.022	-.396	-.387	-.527	-.444	-.180	-.072	.083	-.277	-.250	-.231	-.218	-.162	.086
98.	.046	-.385	-.378	-.528	-.444	-.183	-.072	.083	-.304	-.262	-.243	-.218	-.162	.086
100.	.060	-.374	-.372	-.518	-.445	-.184	-.073	.084	-.338	-.281	-.252	-.219	-.162	.086
102.	.075	-.359	-.369	-.519	-.443	-.179	-.073	.084	-.360	-.288	-.256	-.220	-.155	.086
104.	.090	-.345	-.361	-.509	-.438	-.177	-.073	.084	-.381	-.297	-.261	-.220	-.156	.087
106.	.104	-.341	-.352	-.500	-.440	-.177	-.073	.078	-.410	-.309	-.258	-.221	-.157	.087
108.	.119	-.331	-.344	-.501	-.437	-.178	-.074	.077	-.429	-.313	-.263	-.222	-.157	.087
110.	.128	-.320	-.340	-.493	-.433	-.179	-.074	.078	-.456	-.315	-.257	-.218	-.156	.088
112.	.135	-.310	-.337	-.494	-.436	-.180	-.074	.078	-.478	-.326	-.253	-.216	-.151	.088
114.	.151	-.305	-.329	-.485	-.432	-.181	-.075	.078	-.499	-.329	-.269	-.217	-.149	.089
116.	.159	-.301	-.321	-.478	-.431	-.182	-.075	.079	-.521	-.341	-.279	-.213	-.145	.089
118.	.160	-.297	-.313	-.478	-.434	-.183	-.070	.080	-.537	-.345	-.257	-.212	-.146	.090

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 80 RUN 33 TIME 52435.200 MU= .243 CLP= .00439 TEMP(U60)= 37.8 C =100.00 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C=	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
AZIMUTH														
120.	.170	-.292	-.311	-.473	-.430	-.185	-.069	.080	-.554	-.336	-.254	-.207	-.147	.091
122.	.177	-.289	-.313	-.473	-.429	-.178	-.069	.080	-.571	-.339	-.256	-.206	-.144	.091
124.	.178	-.292	-.309	-.464	-.425	-.179	-.070	.075	-.589	-.341	-.265	-.208	-.141	.092
126.	.169	-.294	-.308	-.460	-.426	-.181	-.071	.081	-.598	-.333	-.257	-.203	-.142	.093
128.	.167	-.297	-.311	-.460	-.421	-.182	-.071	.075	-.604	-.335	-.250	-.203	-.139	.094
130.	.168	-.300	-.306	-.457	-.423	-.176	-.072	.075	-.610	-.328	-.244	-.197	-.136	.095
132.	.170	-.303	-.307	-.455	-.418	-.177	-.073	.076	-.616	-.329	-.234	-.190	-.133	.096
134.	.159	-.306	-.310	-.454	-.420	-.179	-.066	.077	-.623	-.320	-.224	-.191	-.131	.097
136.	.158	-.310	-.304	-.452	-.415	-.180	-.066	.078	-.619	-.314	-.223	-.184	-.132	.098
138.	.146	-.313	-.306	-.451	-.407	-.174	-.067	.079	-.612	-.315	-.226	-.186	-.127	.090
140.	.146	-.317	-.310	-.448	-.412	-.176	-.068	.076	-.618	-.306	-.207	-.179	-.126	.091
142.	.132	-.321	-.303	-.449	-.417	-.176	-.069	.072	-.613	-.297	-.217	-.181	-.128	.092
144.	.133	-.325	-.307	-.446	-.410	-.171	-.068	.073	-.593	-.287	-.185	-.173	-.122	.094
146.	.118	-.330	-.311	-.447	-.415	-.174	-.062	.074	-.586	-.283	-.184	-.166	-.122	.095
148.	.102	-.334	-.315	-.443	-.409	-.173	-.063	.075	-.565	-.281	-.200	-.167	-.115	.096
150.	.086	-.339	-.320	-.445	-.413	-.169	-.064	.076	-.543	-.272	-.176	-.159	-.116	.098
152.	.071	-.344	-.323	-.441	-.406	-.167	-.065	.077	-.520	-.262	-.178	-.153	-.108	.099
154.	.067	-.349	-.317	-.444	-.401	-.164	-.066	.078	-.497	-.245	-.166	-.153	-.109	.101
156.	.034	-.354	-.320	-.438	-.407	-.166	-.067	.079	-.473	-.228	-.153	-.144	-.101	.102
158.	.016	-.363	-.314	-.443	-.410	-.169	-.064	.081	-.449	-.217	-.143	-.139	-.102	.101
160.	-.003	-.382	-.319	-.436	-.407	-.165	-.059	.082	-.421	-.206	-.142	-.137	-.104	.095
162.	-.023	-.388	-.325	-.442	-.409	-.163	-.060	.076	-.385	-.194	-.129	-.128	-.095	.097
164.	-.043	-.394	-.330	-.449	-.406	-.166	-.061	.074	-.367	-.182	-.119	-.123	-.096	.098
166.	-.064	-.406	-.336	-.441	-.408	-.162	-.062	.076	-.326	-.170	-.117	-.120	-.087	.100
168.	-.085	-.425	-.342	-.449	-.406	-.160	-.063	.077	-.297	-.157	-.107	-.110	-.087	.102
170.	-.115	-.432	-.348	-.456	-.407	-.163	-.064	.078	-.267	-.144	-.104	-.100	-.079	.104
172.	-.151	-.440	-.354	-.448	-.406	-.166	-.066	.080	-.236	-.130	-.083	-.096	-.078	.105
174.	-.176	-.448	-.360	-.454	-.413	-.160	-.061	.071	-.204	-.116	-.063	-.091	-.070	.107
176.	-.212	-.457	-.368	-.447	-.414	-.161	-.058	.080	-.172	-.103	-.058	-.088	-.072	.108
178.	-.250	-.474	-.375	-.456	-.414	-.163	-.058	.073	-.137	-.086	-.042	-.081	-.071	.111

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 80 RUN 33 TIME 52435.200 MU= .243 CLP= .00439 TEMP(U60)= 37.8 C =100.00 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
180.	-.288	-.493	-.389	-.464	-.420	-.155	-.059	.074	-.090	-.070	-.031	-.077	-.062	.106
182.	-.327	-.502	-.404	-.468	-.428	-.156	-.060	.075	-.043	-.053	-.013	-.070	-.059	.103
184.	-.371	-.512	-.403	-.463	-.426	-.159	-.062	.077	-.014	-.036	.005	-.057	-.052	.105
186.	-.426	-.533	-.404	-.472	-.428	-.162	-.053	.078	.018	-.018	.016	-.054	-.053	.107
188.	-.468	-.564	-.411	-.475	-.436	-.166	-.052	.080	.060	.000	.024	-.044	-.047	.109
190.	-.519	-.583	-.419	-.470	-.431	-.155	-.053	.081	.104	.020	.037	-.042	-.041	.111
192.	-.563	-.595	-.428	-.480	-.435	-.158	-.054	.083	.149	.040	.045	-.031	-.042	.114
194.	-.619	-.606	-.436	-.489	-.444	-.160	-.055	.084	.196	.058	.060	-.029	-.035	.116
196.	-.685	-.635	-.445	-.499	-.437	-.149	-.056	.082	.229	.062	.068	-.016	-.029	.118
198.	-.753	-.653	-.454	-.498	-.442	-.152	-.057	.073	.257	.084	.069	-.015	-.029	.107
200.	-.823	-.666	-.462	-.496	-.451	-.155	-.057	.075	.304	.107	.087	.000	-.030	.108
202.	-.872	-.679	-.472	-.506	-.441	-.155	-.045	.076	.338	.126	.111	.001	-.020	.110
204.	-.943	-.713	-.481	-.516	-.448	-.145	-.046	.078	.369	.134	.118	.017	-.016	.112
206.	-1.020	-.730	-.490	-.512	-.457	-.148	-.047	.079	.402	.153	.120	.018	-.016	.114
208.	-1.099	-.744	-.500	-.512	-.444	-.151	-.048	.081	.435	.163	.143	.018	-.016	.117
210.	-1.152	-.758	-.509	-.522	-.453	-.148	-.046	.082	.469	.182	.149	.020	-.003	.119
212.	-1.235	-.797	-.519	-.532	-.460	-.139	-.034	.084	.504	.185	.152	.037	.000	.121
214.	-1.291	-.813	-.529	-.524	-.447	-.142	-.035	.085	.540	.199	.154	.037	.000	.123
216.	-1.377	-.828	-.538	-.526	-.455	-.144	-.035	.087	.577	.216	.207	.038	.000	.126
218.	-1.435	-.843	-.548	-.536	-.464	-.147	-.036	.089	.589	.220	.186	.043	.000	.128
220.	-1.494	-.858	-.558	-.523	-.472	-.141	-.037	.090	.625	.237	.189	.058	.000	.130
222.	-1.560	-.873	-.568	-.527	-.475	-.133	-.037	.092	.636	.253	.192	.059	.000	.132
224.	-1.649	-.887	-.577	-.536	-.464	-.135	-.038	.093	.651	.257	.199	.060	.019	.129
226.	-1.711	-.902	-.582	-.545	-.471	-.138	-.031	.095	.687	.278	.222	.061	.019	.118
228.	-1.774	-.917	-.572	-.554	-.471	-.128	-.021	.096	.704	.293	.207	.070	.019	.120
230.	-1.838	-.931	-.581	-.563	-.461	-.122	-.022	.098	.731	.297	.233	.084	.020	.122
232.	-1.903	-.945	-.590	-.542	-.468	-.123	-.022	.099	.728	.302	.237	.085	.020	.124
234.	-1.955	-.959	-.599	-.550	-.474	-.125	-.022	.101	.761	.326	.240	.087	.020	.126
236.	-1.997	-.972	-.607	-.556	-.469	-.127	-.023	.102	.771	.339	.244	.088	.021	.127
238.	-2.062	-.985	-.615	-.534	-.460	-.113	-.011	.104	.782	.343	.247	.089	.021	.129

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 80 RUN 33 TIME 52435.200 MU= .243 CLP= .00439 TEMP(U60)= 37.8 C =100.00 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C=	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
AZIMUTH														
240.	-2.110	-.998	-.623	-.541	-.466	-.109	-.004	.105	.791	.348	.250	.090	.021	.131
242.	-2.154	-1.010	-.618	-.547	-.472	-.110	-.004	.106	.801	.352	.253	.091	.021	.132
244.	-2.198	-1.021	-.611	-.554	-.477	-.111	-.004	.107	.825	.356	.256	.092	.022	.134
246.	-2.222	-1.032	-.617	-.553	-.482	-.112	-.004	.109	.852	.359	.259	.093	.022	.135
248.	-2.266	-1.024	-.624	-.533	-.469	-.113	-.004	.110	.843	.363	.261	.094	.022	.136
250.	-2.304	-1.018	-.613	-.537	-.462	-.093	-.004	.111	.853	.366	.264	.095	.022	.138
252.	-2.323	-1.027	-.607	-.542	-.466	-.092	-.004	.112	.855	.369	.284	.096	.023	.139
254.	-2.340	-1.034	-.611	-.546	-.469	-.093	-.004	.112	.847	.372	.281	.096	.023	.140
256.	-2.356	-1.041	-.615	-.549	-.472	-.094	-.004	.113	.853	.375	.270	.097	.023	.141
258.	-2.369	-1.047	-.619	-.553	-.452	-.094	-.004	.114	.881	.377	.271	.098	.023	.142
260.	-2.381	-1.027	-.622	-.555	-.447	-.095	-.004	.114	.873	.379	.273	.098	.023	.142
262.	-2.391	-1.022	-.624	-.558	-.449	-.095	-.004	.115	.866	.380	.274	.099	.023	.143
264.	-2.398	-1.025	-.626	-.543	-.450	-.095	-.004	.115	.868	.381	.299	.099	.023	.143
266.	-2.404	-1.027	-.628	-.526	-.451	-.095	-.004	.115	.870	.382	.308	.099	.023	.144
268.	-2.407	-1.029	-.629	-.527	-.452	-.096	-.004	.116	.872	.383	.309	.099	.023	.144
270.	-2.408	-1.029	-.629	-.527	-.452	-.096	-.004	.116	.872	.383	.281	.099	.023	.144
272.	-2.368	-1.029	-.602	-.527	-.452	-.096	-.004	.116	.872	.383	.276	.099	.023	.144
274.	-2.362	-1.028	-.599	-.526	-.451	-.095	-.004	.115	.870	.382	.305	.099	.023	.144
276.	-2.357	-1.025	-.598	-.525	-.450	-.095	.000	.115	.869	.393	.308	.099	.023	.143
278.	-2.350	-1.022	-.596	-.524	-.449	-.095	.012	.115	.866	.412	.307	.095	.023	.143
280.	-2.341	-1.018	-.594	-.522	-.447	-.095	-.004	.114	.862	.410	.273	.074	.023	.142
282.	-2.329	-1.013	-.591	-.519	-.445	-.094	-.004	.114	.860	.408	.271	.074	.023	.142
284.	-2.316	-1.007	-.587	-.516	-.443	-.094	-.004	.100	.888	.390	.270	.073	.023	.141
286.	-2.301	-1.001	-.584	-.513	-.440	-.093	-.004	.090	.882	.372	.268	.073	.001	.140
288.	-2.284	-.993	-.579	-.509	-.436	-.092	-.004	.090	.871	.387	.266	.072	.000	.139
290.	-2.265	-.985	-.575	-.505	-.433	-.091	-.004	.089	.835	.397	.264	.072	.000	.138
292.	-2.245	-.976	-.569	-.500	-.429	-.091	-.004	.104	.827	.375	.261	.071	.000	.137
294.	-2.223	-.967	-.564	-.495	-.425	-.090	-.004	.109	.819	.360	.259	.070	.000	.135
296.	-2.188	-.957	-.558	-.490	-.420	-.089	-.004	.107	.802	.356	.256	.070	.000	.134
298.	-2.124	-.936	-.552	-.485	-.416	-.088	-.004	.106	.778	.352	.245	.069	.000	.132

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 80 RUN 33 TIME 52435.200 MU= .243 CLP= .00439 TEMP(U60)= 37.8 C =100.00 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
300.	-2.033	-.892	-.536	-.479	-.411	-.087	-.004	.105	.782	.326	.211	.068	.000	.131
302.	-1.907	-.860	-.513	-.473	-.406	-.086	-.004	.086	.750	.315	.187	.056	.000	.129
304.	-1.806	-.837	-.506	-.467	-.400	-.085	-.004	.100	.717	.288	.185	.045	.000	.127
306.	-1.707	-.807	-.488	-.460	-.395	-.083	-.004	.083	.669	.278	.171	.044	.000	.126
308.	-1.608	-.781	-.479	-.454	-.389	-.082	-.004	.099	.646	.251	.151	.031	-.006	.112
310.	-1.530	-.754	-.484	-.447	-.383	-.081	-.004	.098	.620	.243	.149	.022	-.020	.114
312.	-1.471	-.742	-.477	-.440	-.377	-.080	-.004	.078	.610	.240	.147	.022	-.019	.108
314.	-1.432	-.730	-.469	-.433	-.387	-.079	-.017	.095	.600	.211	.144	.021	-.026	.099
316.	-1.388	-.735	-.462	-.426	-.390	-.095	-.021	.092	.591	.206	.142	.021	-.038	.098
318.	-1.352	-.734	-.454	-.427	-.383	-.095	-.020	.076	.581	.203	.125	.021	-.037	.096
320.	-1.329	-.722	-.461	-.439	-.377	-.093	-.020	.090	.571	.199	.111	.005	-.036	.094
322.	-1.327	-.727	-.460	-.431	-.388	-.092	-.020	.089	.561	.196	.109	.001	-.036	.093
324.	-1.313	-.723	-.452	-.434	-.387	-.090	-.019	.087	.551	.192	.107	.001	-.035	.091
326.	-1.290	-.729	-.444	-.441	-.380	-.090	-.019	.086	.541	.189	.105	.001	-.034	.089
328.	-1.290	-.722	-.452	-.433	-.392	-.104	-.019	.084	.550	.185	.103	.001	-.044	.088
330.	-1.272	-.728	-.448	-.425	-.388	-.102	-.033	.082	.546	.182	.101	-.015	-.050	.086
332.	-1.248	-.720	-.440	-.429	-.380	-.100	-.033	.081	.536	.178	.100	-.016	-.049	.085
334.	-1.250	-.727	-.449	-.433	-.373	-.099	-.032	.079	.506	.175	.098	-.016	-.048	.083
336.	-1.229	-.737	-.443	-.438	-.386	-.100	-.032	.078	.513	.172	.096	-.015	-.058	.097
338.	-1.231	-.726	-.452	-.439	-.379	-.111	-.031	.076	.506	.168	.094	-.016	-.061	.080
340.	-1.209	-.733	-.444	-.430	-.392	-.109	-.030	.075	.496	.165	.092	-.031	-.060	.093
342.	-1.212	-.742	-.436	-.437	-.384	-.106	-.030	.073	.486	.162	.090	-.030	-.059	.091
344.	-1.215	-.728	-.445	-.435	-.378	-.110	-.032	.079	.499	.159	.089	-.029	-.058	.090
346.	-1.217	-.736	-.437	-.442	-.388	-.117	-.042	.077	.468	.156	.087	-.029	-.057	.088
348.	-1.193	-.742	-.447	-.439	-.383	-.115	-.041	.077	.480	.153	.085	-.031	-.068	.086
350.	-1.173	-.728	-.454	-.447	-.391	-.113	-.040	.081	.471	.150	.082	-.042	-.068	.085
352.	-1.168	-.714	-.445	-.442	-.384	-.117	-.039	.080	.462	.147	.063	-.041	-.067	.083
354.	-1.125	-.700	-.439	-.450	-.376	-.122	-.039	.078	.450	.134	.059	-.041	-.066	.081
356.	-1.094	-.687	-.444	-.444	-.374	-.119	-.043	.077	.421	.113	.039	-.044	-.065	.080
358.	-1.032	-.674	-.436	-.436	-.379	-.117	-.049	.075	.394	.104	.026	-.052	-.076	.078

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/27.

FLT 80 RUN 38 TIME 52653.700 MU= .234 CLP= .00723 TEMP(U60)= 37.0 C = 98.68 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C=	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
AZIMUTH														
0.	-2.020	-.977	-.588	-.541	-.414	-.140	-.041	.088	.763	.340	.191	.014	-.045	.068
2.	-1.974	-.942	-.585	-.530	-.412	-.137	-.040	.088	.720	.309	.189	.009	-.044	.068
4.	-1.918	-.907	-.569	-.521	-.413	-.135	-.041	.097	.660	.271	.152	.002	-.053	.061
6.	-1.847	-.867	-.546	-.512	-.407	-.143	-.040	.085	.613	.246	.116	-.018	-.055	.060
8.	-1.737	-.825	-.523	-.504	-.400	-.142	-.045	.084	.561	.202	.075	-.034	-.064	.064
10.	-1.589	-.787	-.505	-.494	-.400	-.140	-.048	.082	.509	.178	.052	-.038	-.064	.070
12.	-1.425	-.756	-.496	-.486	-.400	-.137	-.054	.071	.467	.160	.054	-.044	-.068	.073
14.	-1.266	-.736	-.488	-.478	-.393	-.144	-.056	.069	.427	.130	.044	-.048	-.062	.072
16.	-1.123	-.708	-.480	-.470	-.395	-.144	-.055	.068	.388	.112	.037	-.054	-.068	.071
18.	-.993	-.681	-.473	-.466	-.394	-.141	-.061	.067	.357	.095	.028	-.064	-.071	.070
20.	-.896	-.662	-.465	-.470	-.388	-.148	-.062	.066	.328	.093	.014	-.067	-.076	.069
22.	-.838	-.652	-.458	-.463	-.390	-.147	-.061	.065	.308	.078	-.001	-.073	-.079	.068
24.	-.810	-.650	-.458	-.460	-.389	-.145	-.068	.064	.296	.076	.006	-.082	-.084	.067
26.	-.798	-.656	-.457	-.464	-.392	-.152	-.069	.063	.284	.075	.013	-.084	-.086	.066
28.	-.797	-.677	-.457	-.461	-.391	-.151	-.068	.063	.288	.087	.034	-.083	-.091	.065
30.	-.813	-.703	-.462	-.473	-.393	-.158	-.067	.071	.307	.086	.045	-.082	-.090	.064
32.	-.825	-.721	-.468	-.486	-.400	-.156	-.066	.070	.315	.085	.031	-.081	-.088	.056
34.	-.831	-.731	-.473	-.483	-.399	-.154	-.067	.070	.311	.071	.010	-.087	-.091	.053
36.	-.816	-.744	-.472	-.491	-.404	-.153	-.064	.075	.297	.068	-.010	-.096	-.100	.051
38.	-.790	-.754	-.473	-.498	-.401	-.150	-.063	.076	.260	.057	-.030	-.104	-.108	.058
40.	-.742	-.749	-.470	-.500	-.404	-.158	-.062	.075	.255	.044	-.039	-.112	-.111	.060
42.	-.664	-.732	-.472	-.500	-.411	-.165	-.069	.074	.226	.032	-.046	-.120	-.114	.059
44.	-.623	-.719	-.478	-.507	-.418	-.163	-.069	.073	.205	.032	-.042	-.120	-.117	.058
46.	-.612	-.712	-.476	-.514	-.425	-.162	-.068	.074	.199	.031	-.022	-.119	-.115	.065
48.	-.617	-.713	-.478	-.521	-.423	-.168	-.068	.080	.197	.031	-.021	-.118	-.110	.058
50.	-.614	-.710	-.484	-.529	-.428	-.166	-.067	.079	.204	.031	-.017	-.116	-.109	.057
52.	-.631	-.722	-.490	-.531	-.426	-.165	-.066	.078	.224	.032	.004	-.115	-.112	.063
54.	-.655	-.740	-.496	-.531	-.422	-.163	-.066	.077	.247	.043	.011	-.114	-.111	.064
56.	-.668	-.759	-.494	-.533	-.427	-.163	-.065	.077	.261	.052	-.006	-.113	-.110	.056
58.	-.677	-.777	-.498	-.535	-.426	-.169	-.065	.076	.261	.049	-.013	-.112	-.109	.055

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/27.

FLT 80 RUN 38 TIME 52653.700 MU= .234 CLP= .00723 TEMP(U60)= 37.0 C = 98.68 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C=	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
AZIMUTH														
60.	-.686	-.786	-.504	-.537	-.422	-.168	-.064	.076	.259	.040	-.004	-.119	-.113	.054
62.	-.684	-.793	-.502	-.533	-.429	-.167	-.073	.075	.258	.040	-.010	-.119	-.121	.054
64.	-.680	-.800	-.508	-.536	-.438	-.168	-.070	.074	.254	.039	-.014	-.119	-.124	.052
66.	-.675	-.797	-.514	-.551	-.435	-.173	-.070	.077	.254	.039	-.013	-.126	-.122	.053
68.	-.671	-.802	-.512	-.564	-.442	-.172	-.070	.081	.253	.042	-.003	-.125	-.121	.053
70.	-.668	-.800	-.518	-.579	-.450	-.171	-.069	.081	.252	.050	-.001	-.124	-.126	.053
72.	-.664	-.796	-.517	-.593	-.448	-.172	-.069	.083	.261	.049	-.001	-.124	-.128	.052
74.	-.674	-.792	-.532	-.602	-.456	-.177	-.068	.088	.271	.053	-.001	-.123	-.127	.052
76.	-.673	-.800	-.540	-.618	-.455	-.176	-.061	.087	.272	.060	-.001	-.123	-.127	.052
78.	-.684	-.798	-.566	-.639	-.453	-.176	-.061	.087	.281	.059	-.011	-.130	-.132	.052
80.	-.682	-.796	-.575	-.653	-.452	-.175	-.061	.087	.292	.059	-.002	-.130	-.134	.052
82.	-.681	-.805	-.592	-.663	-.451	-.175	-.061	.090	.292	.059	-.011	-.131	-.133	.059
84.	-.680	-.816	-.610	-.673	-.450	-.175	-.061	.094	.292	.059	-.022	-.137	-.133	.059
86.	-.679	-.815	-.619	-.675	-.449	-.174	-.059	.097	.292	.055	-.033	-.138	-.139	.059
88.	-.665	-.826	-.628	-.667	-.449	-.174	-.055	.101	.280	.044	-.023	-.145	-.140	.059
90.	-.664	-.825	-.647	-.631	-.449	-.174	-.061	.097	.268	.034	-.033	-.146	-.140	.060
92.	-.650	-.814	-.656	-.586	-.450	-.174	-.061	.097	.268	.028	-.044	-.153	-.140	.066
94.	-.624	-.814	-.666	-.550	-.459	-.174	-.061	.101	.245	.023	-.055	-.153	-.140	.066
96.	-.610	-.804	-.676	-.525	-.461	-.175	-.061	.101	.234	.012	-.056	-.153	-.141	.066
98.	-.583	-.794	-.678	-.503	-.471	-.178	-.061	.101	.223	.002	-.077	-.154	-.141	.067
100.	-.558	-.784	-.689	-.491	-.472	-.183	-.061	.102	.211	-.009	-.067	-.154	-.141	.068
102.	-.544	-.774	-.699	-.490	-.473	-.184	-.061	.102	.189	-.014	-.077	-.154	-.142	.074
104.	-.520	-.766	-.703	-.500	-.477	-.184	-.061	.098	.178	-.020	-.078	-.155	-.142	.075
106.	-.508	-.769	-.714	-.514	-.486	-.185	-.062	.095	.165	-.025	-.079	-.155	-.135	.075
108.	-.494	-.773	-.717	-.528	-.489	-.186	-.062	.095	.144	-.031	-.089	-.156	-.135	.075
110.	-.471	-.774	-.720	-.552	-.491	-.187	-.062	.096	.132	-.036	-.091	-.157	-.136	.076
112.	-.459	-.769	-.724	-.578	-.493	-.188	-.062	.096	.121	-.042	-.098	-.158	-.137	.076
114.	-.448	-.771	-.726	-.594	-.496	-.189	-.063	.097	.110	-.047	-.080	-.159	-.137	.076
116.	-.436	-.766	-.719	-.620	-.496	-.190	-.064	.098	.098	-.047	-.084	-.157	-.131	.077
118.	-.428	-.768	-.699	-.648	-.493	-.192	-.065	.097	.089	-.048	-.100	-.153	-.131	.077

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/27.

FLT 80 RUN 38 TIME 52653.700 MU= .234 CLP= .00723 TEMP(U60)= 37.0 C = 98.68 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
120.	-.429	-.765	-.668	-.666	-.497	-.193	-.064	.093	.086	-.048	-.083	-.151	-.134	.077
122.	-.420	-.767	-.641	-.683	-.496	-.194	-.065	.092	.075	-.055	-.082	-.146	-.125	.079
124.	-.424	-.764	-.619	-.666	-.493	-.196	-.065	.093	.066	-.060	-.082	-.147	-.126	.079
126.	-.423	-.768	-.604	-.635	-.497	-.192	-.066	.093	.064	-.060	-.083	-.145	-.127	.080
128.	-.416	-.765	-.591	-.628	-.498	-.190	-.066	.094	.055	-.061	-.084	-.141	-.128	.081
130.	-.420	-.765	-.587	-.609	-.491	-.192	-.067	.095	.056	-.061	-.085	-.143	-.121	.081
132.	-.424	-.751	-.579	-.615	-.489	-.194	-.068	.096	.056	-.062	-.082	-.140	-.123	.082
134.	-.434	-.750	-.563	-.609	-.490	-.196	-.068	.097	.057	-.062	-.071	-.137	-.123	.083
136.	-.449	-.754	-.552	-.603	-.489	-.192	-.064	.091	.057	-.063	-.063	-.138	-.117	.084
138.	-.454	-.744	-.547	-.596	-.489	-.192	-.062	.098	.058	-.064	-.060	-.135	-.116	.081
140.	-.459	-.731	-.542	-.590	-.483	-.194	-.062	.100	.059	-.065	-.056	-.132	-.111	.077
142.	-.465	-.726	-.536	-.585	-.483	-.189	-.063	.094	.059	-.065	-.065	-.129	-.112	.078
144.	-.471	-.722	-.529	-.591	-.483	-.189	-.064	.094	.060	-.066	-.066	-.126	-.113	.079
146.	-.477	-.717	-.517	-.585	-.477	-.192	-.065	.095	.061	-.067	-.071	-.127	-.113	.080
148.	-.483	-.707	-.513	-.579	-.477	-.194	-.066	.088	.062	-.057	-.076	-.124	-.107	.081
150.	-.490	-.694	-.508	-.573	-.477	-.189	-.067	.089	.063	-.056	-.068	-.121	-.108	.082
152.	-.497	-.683	-.498	-.567	-.478	-.190	-.062	.090	.063	-.057	-.058	-.117	-.107	.083
154.	-.504	-.670	-.487	-.561	-.478	-.185	-.060	.091	.064	-.058	-.049	-.114	-.102	.085
156.	-.512	-.665	-.482	-.555	-.472	-.185	-.061	.093	.072	-.047	-.051	-.116	-.103	.086
158.	-.519	-.660	-.476	-.548	-.466	-.180	-.061	.085	.074	-.046	-.050	-.111	-.102	.087
160.	-.527	-.655	-.471	-.542	-.460	-.181	-.062	.086	.075	-.046	-.046	-.109	-.097	.089
162.	-.536	-.649	-.459	-.536	-.462	-.184	-.063	.087	.084	-.034	-.038	-.104	-.095	.090
164.	-.544	-.644	-.454	-.543	-.461	-.177	-.064	.089	.085	-.034	-.039	-.102	-.089	.091
166.	-.553	-.638	-.447	-.537	-.454	-.179	-.058	.090	.087	-.020	-.032	-.096	-.091	.093
168.	-.563	-.642	-.443	-.529	-.457	-.182	-.057	.081	.068	-.034	-.032	-.094	-.092	.095
170.	-.572	-.643	-.443	-.527	-.455	-.174	-.058	.082	.099	-.021	-.025	-.087	-.089	.096
172.	-.582	-.637	-.436	-.531	-.448	-.177	-.059	.084	.108	-.021	-.017	-.085	-.084	.098
174.	-.593	-.641	-.430	-.523	-.451	-.169	-.060	.085	.110	-.021	-.009	-.087	-.081	.100
176.	-.603	-.653	-.432	-.521	-.448	-.171	-.061	.087	.122	-.005	-.001	-.079	-.076	.093
178.	-.628	-.653	-.430	-.524	-.452	-.174	-.062	.088	.132	-.005	-.011	-.078	-.077	.092

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/27.

FLT 80 RUN 38 TIME 52653.700 MU= .234 CLP= .00723 TEMP(U60)= 37.0 C = 98.68 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
180.	-.647	-.658	-.433	-.516	-.449	-.165	-.063	.088	.134	.011	.002	-.069	-.073	.093
182.	-.658	-.659	-.441	-.514	-.452	-.168	-.064	.080	.149	.012	.016	-.068	-.068	.095
184.	-.686	-.664	-.439	-.516	-.448	-.171	-.055	.083	.170	.028	.027	-.069	-.069	.097
186.	-.706	-.676	-.442	-.514	-.452	-.161	-.055	.093	.180	.029	.035	-.059	-.064	.098
188.	-.735	-.676	-.439	-.524	-.448	-.164	-.056	.084	.197	.031	.035	-.058	-.059	.100
190.	-.756	-.682	-.442	-.526	-.452	-.167	-.057	.086	.221	.048	.036	-.047	-.060	.102
192.	-.788	-.695	-.451	-.516	-.447	-.170	-.058	.088	.231	.051	.037	-.046	-.061	.104
194.	-.809	-.693	-.459	-.514	-.452	-.172	-.059	.089	.236	.069	.051	-.034	-.054	.106
196.	-.843	-.701	-.455	-.523	-.460	-.162	-.048	.091	.271	.073	.058	-.033	-.049	.108
198.	-.885	-.714	-.459	-.524	-.453	-.165	-.061	.093	.288	.091	.073	-.034	-.050	.110
200.	-.928	-.727	-.468	-.522	-.459	-.167	-.049	.094	.310	.093	.081	-.021	-.042	.112
202.	-.951	-.741	-.477	-.532	-.467	-.156	-.050	.092	.338	.098	.098	-.020	-.037	.114
204.	-.991	-.737	-.471	-.531	-.459	-.159	-.051	.083	.350	.117	.105	-.020	-.038	.103
206.	-1.037	-.746	-.476	-.529	-.465	-.162	-.052	.085	.374	.123	.107	-.005	-.039	.104
208.	-1.084	-.760	-.484	-.539	-.455	-.163	-.053	.086	.386	.142	.109	-.005	-.029	.105
210.	-1.106	-.774	-.493	-.537	-.461	-.152	-.054	.088	.413	.145	.111	-.005	-.024	.107
212.	-1.153	-.788	-.502	-.535	-.470	-.155	-.055	.090	.445	.153	.132	.012	-.025	.109
214.	-1.204	-.802	-.511	-.545	-.478	-.158	-.055	.091	.457	.173	.139	.012	-.014	.111
216.	-1.255	-.816	-.520	-.540	-.487	-.160	-.042	.087	.487	.182	.141	.013	-.009	.113
218.	-1.307	-.830	-.529	-.539	-.473	-.163	-.042	.078	.522	.202	.164	.031	-.009	.115
220.	-1.361	-.844	-.538	-.548	-.481	-.161	-.043	.079	.557	.206	.171	.032	-.009	.117
222.	-1.415	-.882	-.547	-.557	-.489	-.150	-.044	.081	.569	.217	.174	.050	-.009	.119
224.	-1.501	-.899	-.556	-.566	-.496	-.153	-.044	.082	.603	.237	.176	.051	.004	.121
226.	-1.559	-.913	-.565	-.575	-.481	-.155	-.045	.083	.641	.249	.179	.052	.008	.123
228.	-1.616	-.927	-.573	-.566	-.488	-.158	-.046	.084	.653	.270	.182	.054	.009	.125
230.	-1.707	-.941	-.582	-.565	-.495	-.160	-.047	.086	.689	.274	.209	.073	.009	.127
232.	-1.766	-.954	-.590	-.573	-.502	-.156	-.047	.087	.701	.287	.214	.074	.009	.128
234.	-1.860	-.996	-.598	-.581	-.509	-.145	-.044	.088	.739	.308	.217	.075	.009	.130
236.	-1.920	-1.010	-.606	-.559	-.514	-.147	-.031	.089	.749	.312	.247	.076	.009	.132
238.	-1.981	-1.023	-.614	-.567	-.497	-.149	-.031	.090	.759	.327	.251	.077	.026	.134

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/27.

FLT 80 RUN 38 TIME 52653.700 MU= .234 CLP= .00723 TEMP(U60)= 37.0 C = 98.68 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
240.	-2.675	-1.035	-.622	-.574	-.503	-.150	-.031	.091	.798	.347	.254	.082	.029	.135
242.	-2.136	-1.047	-.629	-.581	-.505	-.144	-.032	.093	.807	.351	.257	.100	.030	.137
244.	-2.198	-1.058	-.635	-.587	-.487	-.133	-.032	.094	.817	.368	.289	.101	.030	.135
246.	-2.292	-1.071	-.642	-.593	-.492	-.134	-.032	.106	.855	.387	.292	.102	.030	.119
248.	-2.354	-1.110	-.648	-.599	-.497	-.135	-.033	.104	.863	.390	.295	.103	.030	.120
250.	-2.446	-1.119	-.653	-.604	-.501	-.136	-.027	.096	.871	.394	.297	.104	.031	.121
252.	-2.504	-1.128	-.658	-.608	-.505	-.137	-.014	.109	.878	.411	.300	.105	.031	.122
254.	-2.560	-1.136	-.663	-.613	-.509	-.138	-.014	.118	.884	.429	.302	.105	.031	.123
256.	-2.615	-1.143	-.667	-.590	-.512	-.129	-.014	.119	.893	.431	.304	.106	.031	.124
258.	-2.668	-1.150	-.671	-.588	-.508	-.118	-.014	.106	.927	.434	.308	.107	.032	.125
260.	-2.720	-1.155	-.674	-.591	-.489	-.118	-.014	.099	.931	.452	.334	.107	.032	.125
262.	-2.770	-1.165	-.677	-.593	-.490	-.119	-.014	.100	.935	.467	.308	.108	.032	.126
264.	-2.809	-1.196	-.679	-.595	-.492	-.119	-.014	.100	.938	.451	.313	.108	.032	.126
266.	-2.824	-1.198	-.680	-.596	-.493	-.119	-.014	.100	.940	.458	.341	.108	.032	.126
268.	-2.867	-1.200	-.681	-.597	-.494	-.120	-.014	.100	.941	.470	.341	.108	.032	.127
270.	-2.908	-1.200	-.681	-.597	-.494	-.120	-.014	.100	.941	.471	.341	.117	.032	.127
272.	-2.936	-1.200	-.681	-.597	-.494	-.120	-.014	.100	.948	.470	.341	.131	.032	.127
274.	-2.943	-1.198	-.680	-.596	-.493	-.119	-.014	.100	.973	.470	.341	.131	.032	.134
276.	-2.987	-1.196	-.679	-.595	-.492	-.119	-.014	.100	.971	.469	.347	.131	.032	.140
278.	-3.046	-1.201	-.684	-.593	-.490	-.119	-.014	.100	.968	.487	.370	.130	.032	.126
280.	-3.085	-1.229	-.701	-.591	-.489	-.118	-.014	.099	.964	.495	.369	.130	.032	.125
282.	-3.149	-1.247	-.698	-.588	-.497	-.118	-.016	.099	.969	.493	.367	.129	.032	.125
284.	-3.211	-1.241	-.695	-.585	-.514	-.119	-.019	.095	.986	.487	.364	.127	.031	.122
286.	-3.270	-1.243	-.702	-.615	-.514	-.119	-.018	.094	.986	.504	.358	.124	.026	.120
288.	-3.324	-1.267	-.715	-.610	-.510	-.119	-.018	.093	1.001	.509	.355	.124	.026	.119
290.	-3.374	-1.289	-.709	-.606	-.506	-.118	-.018	.093	.994	.505	.361	.123	.026	.118
292.	-3.420	-1.299	-.712	-.600	-.502	-.117	-.018	.092	.996	.522	.379	.122	.025	.117
294.	-3.463	-1.298	-.722	-.597	-.497	-.116	-.018	.108	1.018	.524	.376	.120	.025	.116
296.	-3.518	-1.316	-.725	-.619	-.492	-.114	-.018	.110	1.028	.519	.372	.119	.025	.115
298.	-3.560	-1.321	-.732	-.612	-.487	-.113	-.015	.109	1.029	.536	.368	.118	.025	.113

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/27.

FLT 80 RUN 38 TIME 52653.700 MU= .234 CLP= .00723 TEMP(U60)= 37.0 C = 98.68 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C=	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
AZIMUTH														
300.	-3.554	-1.318	-.733	-.609	-.492	-.110	-.013	.111	1.038	.516	.366	.118	.025	.114
302.	-3.530	-1.320	-.736	-.626	-.497	-.108	-.013	.110	1.028	.506	.354	.107	.024	.114
304.	-3.486	-1.291	-.727	-.618	-.491	-.106	-.013	.108	1.004	.499	.332	.096	.009	.113
306.	-3.429	-1.245	-.717	-.610	-.484	-.105	-.001	.124	.973	.471	.317	.083	.009	.101
308.	-3.344	-1.199	-.697	-.602	-.478	-.104	-.007	.124	.947	.460	.296	.074	.009	.091
310.	-3.230	-1.154	-.664	-.589	-.471	-.118	-.012	.122	.905	.431	.292	.073	.003	.090
312.	-3.083	-1.109	-.642	-.557	-.464	-.120	-.012	.120	.877	.422	.276	.072	-.010	.088
314.	-2.921	-1.078	-.632	-.549	-.457	-.118	-.012	.118	.850	.393	.269	.071	-.010	.098
316.	-2.764	-1.061	-.622	-.540	-.450	-.116	-.024	.099	.836	.384	.279	.058	-.010	.103
318.	-2.656	-1.044	-.613	-.532	-.457	-.114	-.028	.098	.836	.378	.263	.050	-.009	.102
320.	-2.583	-1.027	-.614	-.529	-.445	-.112	-.027	.096	.823	.372	.257	.049	-.009	.100
322.	-2.526	-1.023	-.613	-.539	-.428	-.126	-.027	.094	.809	.366	.253	.049	-.009	.098
324.	-2.483	-1.018	-.603	-.530	-.435	-.125	-.025	.093	.795	.360	.249	.048	-.009	.097
326.	-2.458	-1.014	-.604	-.527	-.435	-.124	-.038	.091	.782	.375	.244	.047	-.009	.095
328.	-2.427	-1.021	-.602	-.536	-.428	-.122	-.040	.090	.781	.369	.229	.046	-.009	.093
330.	-2.401	-1.013	-.592	-.526	-.434	-.119	-.039	.088	.778	.363	.225	.045	-.008	.092
332.	-2.403	-1.009	-.593	-.524	-.433	-.132	-.039	.087	.778	.356	.233	.044	-.008	.090
334.	-2.398	-1.014	-.589	-.530	-.425	-.131	-.038	.085	.774	.350	.239	.044	-.008	.089
336.	-2.381	-1.018	-.590	-.527	-.431	-.129	-.037	.083	.773	.344	.222	.043	-.008	.087
338.	-2.381	-1.022	-.586	-.532	-.429	-.126	-.037	.082	.782	.357	.221	.042	-.008	.085
340.	-2.372	-1.025	-.587	-.530	-.421	-.124	-.036	.080	.776	.351	.226	.041	-.015	.084
342.	-2.337	-1.028	-.582	-.534	-.427	-.136	-.035	.079	.761	.344	.222	.040	-.022	.082
344.	-2.311	-1.030	-.595	-.532	-.424	-.134	-.049	.077	.761	.338	.217	.040	-.021	.081
346.	-2.294	-1.032	-.596	-.535	-.432	-.133	-.050	.076	.752	.329	.211	.025	-.030	.077
348.	-2.259	-1.047	-.597	-.533	-.429	-.131	-.049	.085	.764	.325	.219	.022	-.037	.075
350.	-2.217	-1.054	-.603	-.535	-.435	-.142	-.048	.084	.763	.337	.221	.022	-.037	.074
352.	-2.194	-1.054	-.596	-.533	-.430	-.139	-.047	.082	.763	.346	.242	.021	-.036	.073
354.	-2.176	-1.068	-.597	-.542	-.436	-.138	-.046	.081	.782	.345	.249	.021	-.035	.071
356.	-2.142	-1.045	-.601	-.551	-.431	-.147	-.045	.079	.806	.370	.270	.032	-.035	.070
358.	-2.137	-1.021	-.606	-.551	-.437	-.144	-.044	.081	.815	.378	.263	.033	-.034	.069

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 3 TIME 49433.100 MU= .147 CLP= .00504 TEMP(U60)= 31.9 C = 89.38 F

X/C=	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
0.	-1.325	-.827	-.582	-.522	-.433	-.181	-.094	.068	.446	.111	.001	-.063	-.121	.045
2.	-1.280	-.817	-.591	-.516	-.428	-.179	-.093	.076	.438	.100	-.001	-.078	-.120	.045
4.	-1.219	-.808	-.584	-.529	-.428	-.177	-.092	.080	.414	.099	-.019	-.087	-.132	.044
6.	-1.180	-.799	-.578	-.525	-.437	-.175	-.090	.079	.406	.086	-.019	-.086	-.131	.044
8.	-1.135	-.785	-.571	-.519	-.431	-.172	-.088	.080	.385	.080	-.018	-.090	-.130	.044
10.	-1.078	-.761	-.564	-.513	-.426	-.170	-.089	.078	.377	.065	-.021	-.098	-.139	.044
12.	-1.044	-.753	-.559	-.528	-.423	-.169	-.088	.077	.349	.057	-.037	-.098	-.140	.042
14.	-1.008	-.745	-.553	-.522	-.426	-.177	-.094	.076	.331	.043	-.043	-.103	-.139	.042
16.	-.973	-.737	-.547	-.517	-.431	-.180	-.098	.075	.321	.038	-.049	-.109	-.137	.042
18.	-.930	-.730	-.542	-.512	-.427	-.178	-.097	.074	.297	.023	-.043	-.116	-.139	.041
20.	-.883	-.722	-.543	-.509	-.431	-.176	-.096	.074	.281	.019	-.061	-.121	-.147	.041
22.	-.851	-.715	-.547	-.520	-.435	-.174	-.095	.073	.270	.004	-.080	-.127	-.149	.040
24.	-.808	-.708	-.541	-.515	-.431	-.172	-.094	.072	.247	.001	-.089	-.131	-.157	.040
26.	-.766	-.701	-.536	-.510	-.426	-.182	-.094	.071	.216	-.015	-.089	-.139	-.156	.040
28.	-.736	-.694	-.531	-.510	-.433	-.182	-.093	.071	.195	-.016	-.097	-.142	-.154	.039
30.	-.693	-.677	-.526	-.519	-.435	-.180	-.092	.070	.182	-.033	-.095	-.141	-.153	.039
32.	-.656	-.664	-.521	-.514	-.431	-.179	-.091	.070	.162	-.033	-.106	-.149	-.151	.038
34.	-.628	-.658	-.517	-.516	-.427	-.177	-.100	.069	.141	-.050	-.120	-.151	-.150	.038
36.	-.601	-.652	-.512	-.523	-.435	-.188	-.100	.068	.121	-.066	-.130	-.160	-.155	.038
38.	-.574	-.634	-.508	-.518	-.435	-.187	-.100	.068	.114	-.065	-.135	-.161	-.159	.047
40.	-.532	-.624	-.504	-.514	-.432	-.185	-.099	.067	.087	-.067	-.134	-.159	-.165	.049
42.	-.518	-.619	-.500	-.510	-.428	-.184	-.098	.067	.063	-.081	-.145	-.169	-.168	.048
44.	-.497	-.614	-.508	-.515	-.425	-.182	-.097	.066	.072	-.083	-.148	-.169	-.167	.048
46.	-.472	-.610	-.507	-.520	-.436	-.181	-.097	.066	.047	-.096	-.160	-.168	-.166	.048
48.	-.448	-.606	-.504	-.516	-.434	-.182	-.097	.065	.025	-.099	-.149	-.179	-.165	.047
50.	-.424	-.586	-.488	-.513	-.431	-.191	-.106	.065	.022	-.115	-.159	-.177	-.164	.047
52.	-.401	-.581	-.483	-.510	-.429	-.189	-.105	.064	-.009	-.130	-.160	-.177	-.171	.047
54.	-.378	-.561	-.480	-.506	-.426	-.188	-.105	.064	-.029	-.140	-.174	-.187	-.173	.046
56.	-.335	-.557	-.478	-.504	-.424	-.187	-.104	.064	-.063	-.145	-.189	-.186	-.172	.047
58.	-.294	-.537	-.488	-.513	-.436	-.186	-.103	.063	-.080	-.161	-.205	-.185	-.171	.057

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 3 TIME 49433.100 MU= .147 CLP= .00504 TEMP(U60)= 31.9 C = 89.38 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C=	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
AZIMUTH														
60.	-.292	-.535	-.473	-.514	-.433	-.190	-.103	.063	-.097	-.169	-.188	-.184	-.170	.057
62.	-.293	-.550	-.471	-.512	-.434	-.196	-.102	.063	-.096	-.168	-.171	-.186	-.169	.056
64.	-.312	-.564	-.482	-.523	-.444	-.195	-.102	.069	-.093	-.159	-.141	-.194	-.179	.056
66.	-.330	-.577	-.480	-.524	-.442	-.194	-.101	.073	-.062	-.151	-.155	-.189	-.179	.056
68.	-.345	-.572	-.478	-.522	-.440	-.193	-.101	.072	-.065	-.151	-.154	-.181	-.178	.052
70.	-.340	-.556	-.476	-.520	-.443	-.193	-.101	.065	-.078	-.150	-.156	-.180	-.177	.045
72.	-.319	-.551	-.475	-.518	-.451	-.192	-.105	.061	-.078	-.150	-.165	-.175	-.166	.045
74.	-.298	-.537	-.477	-.517	-.450	-.198	-.110	.061	-.082	-.149	-.153	-.168	-.166	.045
76.	-.284	-.535	-.485	-.531	-.449	-.202	-.110	.061	-.094	-.138	-.144	-.167	-.164	.049
78.	-.290	-.544	-.484	-.530	-.448	-.202	-.110	.061	-.089	-.134	-.121	-.162	-.154	.050
80.	-.324	-.577	-.488	-.529	-.447	-.201	-.109	.061	-.061	-.111	-.111	-.155	-.154	.049
82.	-.390	-.609	-.496	-.530	-.446	-.201	-.109	.061	.002	-.092	-.091	-.155	-.154	.055
84.	-.476	-.641	-.501	-.543	-.446	-.192	-.103	.061	.073	-.076	-.090	-.149	-.153	.049
86.	-.555	-.674	-.508	-.543	-.445	-.189	-.099	.061	.123	-.061	-.084	-.144	-.153	.044
88.	-.604	-.699	-.514	-.542	-.445	-.189	-.099	.071	.158	-.045	-.082	-.144	-.153	.044
90.	-.643	-.715	-.521	-.542	-.445	-.189	-.092	.071	.175	-.044	-.090	-.144	-.153	.044
92.	-.660	-.723	-.528	-.542	-.445	-.189	-.089	.071	.183	-.044	-.098	-.144	-.153	.044
94.	-.672	-.724	-.534	-.543	-.445	-.189	-.089	.071	.183	-.044	-.106	-.144	-.153	.044
96.	-.668	-.724	-.534	-.543	-.446	-.190	-.098	.071	.183	-.044	-.106	-.144	-.153	.044
98.	-.649	-.715	-.535	-.544	-.446	-.190	-.099	.071	.173	-.044	-.106	-.144	-.154	.044
100.	-.631	-.699	-.536	-.545	-.447	-.190	-.099	.071	.157	-.045	-.096	-.144	-.154	.044
102.	-.612	-.684	-.537	-.539	-.448	-.191	-.100	.071	.151	-.059	-.091	-.145	-.154	.044
104.	-.594	-.681	-.538	-.531	-.449	-.191	-.100	.072	.140	-.059	-.091	-.145	-.154	.054
106.	-.576	-.670	-.539	-.532	-.450	-.191	-.100	.072	.123	-.059	-.102	-.145	-.148	.055
108.	-.557	-.655	-.530	-.534	-.451	-.192	-.100	.072	.107	-.062	-.107	-.146	-.145	.055
110.	-.539	-.654	-.529	-.536	-.453	-.193	-.101	.072	.090	-.075	-.107	-.135	-.145	.055
112.	-.521	-.642	-.520	-.528	-.441	-.193	-.100	.072	.087	-.075	-.095	-.135	-.146	.056
114.	-.521	-.628	-.520	-.524	-.442	-.194	-.093	.073	.073	-.080	-.106	-.136	-.146	.056
116.	-.505	-.613	-.522	-.526	-.444	-.195	-.100	.073	.071	-.091	-.108	-.136	-.147	.056
118.	-.487	-.615	-.511	-.528	-.431	-.196	-.092	.073	.056	-.091	-.109	-.137	-.139	.056

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 3 TIME 49433.100 MU= .147 CLP= .00504 TEMP(U60)= 31.9 C = 89.38 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
120.	-.489	-.601	-.513	-.531	-.433	-.193	-.093	.074	.055	-.092	-.110	-.138	-.137	.057
122.	-.472	-.604	-.502	-.522	-.436	-.186	-.093	.074	.038	-.092	-.110	-.138	-.138	.057
124.	-.473	-.591	-.504	-.520	-.436	-.187	-.094	.068	.039	-.093	-.111	-.139	-.139	.057
126.	-.457	-.593	-.494	-.510	-.426	-.188	-.094	.064	.038	-.093	-.111	-.140	-.139	.058
128.	-.457	-.579	-.495	-.510	-.429	-.189	-.095	.064	.022	-.102	-.113	-.141	-.140	.058
130.	-.439	-.567	-.486	-.513	-.431	-.191	-.095	.065	.020	-.110	-.129	-.142	-.141	.058
132.	-.425	-.568	-.487	-.501	-.434	-.192	-.096	.065	.002	-.111	-.130	-.139	-.142	.059
134.	-.428	-.558	-.479	-.503	-.437	-.193	-.097	.066	-.013	-.112	-.131	-.132	-.143	.059
136.	-.426	-.562	-.482	-.506	-.435	-.195	-.097	.066	-.017	-.113	-.132	-.133	-.144	.059
138.	-.414	-.566	-.482	-.510	-.428	-.196	-.098	.067	-.031	-.113	-.129	-.134	-.144	.060
140.	-.410	-.565	-.475	-.497	-.432	-.189	-.099	.067	-.031	-.114	-.112	-.135	-.134	.060
142.	-.399	-.557	-.479	-.501	-.435	-.187	-.100	.068	-.032	-.115	-.106	-.136	-.136	.061
144.	-.402	-.555	-.483	-.504	-.439	-.188	-.100	.068	-.032	-.116	-.119	-.130	-.137	.061
146.	-.406	-.548	-.481	-.492	-.435	-.190	-.101	.069	-.032	-.117	-.120	-.126	-.138	.062
148.	-.409	-.553	-.476	-.496	-.431	-.192	-.102	.070	-.032	-.104	-.121	-.127	-.136	.062
150.	-.413	-.558	-.481	-.501	-.435	-.193	-.095	.070	-.024	-.102	-.114	-.128	-.128	.063
152.	-.429	-.563	-.485	-.501	-.439	-.195	-.093	.071	-.023	-.103	-.105	-.121	-.129	.064
154.	-.443	-.569	-.481	-.492	-.433	-.197	-.093	.071	-.024	-.104	-.115	-.117	-.130	.064
156.	-.448	-.574	-.479	-.496	-.431	-.187	-.094	.072	-.014	-.105	-.107	-.118	-.132	.065
158.	-.452	-.580	-.483	-.496	-.435	-.187	-.095	.073	-.014	-.106	-.090	-.119	-.133	.065
160.	-.457	-.573	-.488	-.487	-.427	-.189	-.096	.072	-.003	-.089	-.102	-.110	-.134	.066
162.	-.477	-.572	-.493	-.492	-.427	-.191	-.097	.064	.018	-.090	-.099	-.108	-.129	.057
164.	-.490	-.578	-.499	-.497	-.431	-.193	-.098	.073	.025	-.089	-.093	-.109	-.124	.065
166.	-.495	-.584	-.492	-.503	-.436	-.181	-.099	.063	.040	-.073	-.081	-.111	-.125	.057
168.	-.519	-.590	-.493	-.499	-.426	-.183	-.100	.064	.046	-.074	-.090	-.099	-.127	.056
170.	-.530	-.581	-.498	-.494	-.427	-.185	-.102	.064	.063	-.075	-.096	-.099	-.128	.056
172.	-.536	-.583	-.504	-.499	-.432	-.187	-.103	.065	.069	-.076	-.082	-.100	-.129	.057
174.	-.563	-.589	-.494	-.505	-.437	-.190	-.104	.066	.069	-.072	-.094	-.086	-.121	.058
176.	-.573	-.596	-.497	-.510	-.442	-.192	-.105	.061	.089	-.058	-.066	-.087	-.118	.058
178.	-.579	-.603	-.503	-.503	-.447	-.194	-.106	.053	.093	-.052	-.060	-.088	-.120	.059

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 3 TIME 49433.100 MU= .147 CLP= .00504 TEMP(U60)= 31.9 C = 89.38 F

X/C=	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
180.	-.611	-.609	-.509	-.501	-.452	-.196	-.107	.060	.114	-.039	-.042	-.089	-.121	.060
182.	-.644	-.616	-.515	-.507	-.456	-.198	-.109	.069	.117	-.040	-.041	-.089	-.122	.060
184.	-.653	-.624	-.521	-.513	-.443	-.195	-.110	.070	.141	-.031	-.061	-.076	-.112	.061
186.	-.686	-.631	-.527	-.518	-.448	-.187	-.111	.063	.165	-.020	-.020	-.074	-.110	.062
188.	-.697	-.638	-.533	-.524	-.454	-.190	-.108	.065	.169	-.020	-.042	-.062	-.112	.062
190.	-.733	-.646	-.537	-.512	-.455	-.192	-.100	.063	.195	-.009	-.041	-.063	-.113	.063
192.	-.765	-.653	-.526	-.514	-.444	-.194	-.101	.058	.218	.001	-.023	-.064	-.114	.064
194.	-.779	-.661	-.532	-.520	-.449	-.196	-.102	.059	.221	.001	-.040	-.064	-.116	.065
196.	-.817	-.668	-.539	-.526	-.454	-.189	-.103	.059	.228	.015	-.021	-.065	-.117	.065
198.	-.849	-.676	-.545	-.532	-.453	-.184	-.104	.060	.256	.024	-.013	-.059	-.118	.066
200.	-.867	-.684	-.551	-.515	-.444	-.186	-.105	.061	.278	.039	.014	-.050	-.118	.067
202.	-.897	-.691	-.557	-.520	-.449	-.188	-.107	.061	.281	.047	-.010	-.050	-.105	.068
204.	-.918	-.699	-.563	-.526	-.454	-.190	-.108	.062	.292	.047	.025	-.051	-.106	.068
206.	-.959	-.707	-.570	-.532	-.459	-.193	-.109	.063	.313	.048	.017	-.043	-.107	.069
208.	-.988	-.725	-.576	-.538	-.464	-.195	-.110	.063	.326	.067	.010	-.034	-.108	.070
210.	-1.012	-.748	-.582	-.544	-.469	-.197	-.111	.064	.357	.073	.026	-.035	-.105	.071
212.	-1.055	-.756	-.589	-.550	-.474	-.199	-.113	.065	.376	.074	.026	-.035	-.093	.071
214.	-1.098	-.764	-.595	-.555	-.479	-.201	-.114	.066	.393	.096	.037	-.024	-.094	.072
216.	-1.142	-.772	-.601	-.555	-.484	-.203	-.115	.066	.411	.100	.064	-.018	-.095	.073
218.	-1.186	-.780	-.607	-.541	-.474	-.205	-.116	.067	.430	.125	.077	-.018	-.096	.074
220.	-1.231	-.804	-.613	-.546	-.486	-.189	-.117	.068	.462	.127	.092	-.018	-.097	.074
222.	-1.276	-.823	-.619	-.551	-.482	-.190	-.119	.068	.478	.129	.105	-.018	-.098	.062
224.	-1.322	-.849	-.625	-.557	-.480	-.192	-.104	.069	.501	.155	.106	-.018	-.090	.058
226.	-1.368	-.866	-.631	-.562	-.484	-.194	-.104	.069	.516	.156	.107	-.002	-.082	.058
228.	-1.439	-.874	-.636	-.567	-.488	-.196	-.105	.070	.540	.158	.126	.001	-.082	.059
230.	-1.494	-.903	-.642	-.572	-.492	-.197	-.105	.071	.553	.163	.116	.001	-.083	.059
232.	-1.541	-.917	-.666	-.576	-.497	-.199	-.106	.071	.580	.187	.109	.001	-.084	.060
234.	-1.589	-.924	-.676	-.581	-.500	-.200	-.107	.072	.592	.194	.110	.001	-.084	.060
236.	-1.666	-.956	-.681	-.585	-.504	-.202	-.108	.072	.621	.216	.111	.001	-.085	.061
238.	-1.718	-.967	-.686	-.589	-.508	-.203	-.109	.073	.630	.218	.135	.002	-.086	.061

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 3 TIME 49433.100 MU= .147 CLP= .00504 TEMP(U60)= 31.9 C = 89.38 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
240.	-1.799	-.974	-.690	-.593	-.511	-.205	-.110	.073	.661	.228	.141	.021	-.086	.062
242.	-1.848	-1.009	-.695	-.597	-.515	-.206	-.110	.074	.668	.248	.141	.021	-.087	.062
244.	-1.932	-1.016	-.699	-.601	-.518	-.207	-.111	.074	.702	.250	.142	.021	-.087	.062
246.	-2.016	-1.052	-.704	-.604	-.521	-.209	-.112	.075	.707	.263	.171	.022	-.088	.063
248.	-2.100	-1.059	-.731	-.608	-.524	-.201	-.112	.075	.742	.281	.172	.026	-.088	.063
250.	-2.184	-1.093	-.735	-.611	-.526	-.190	-.113	.076	.775	.296	.174	.043	-.071	.063
252.	-2.273	-1.101	-.738	-.613	-.528	-.190	-.113	.076	.782	.311	.203	.043	-.069	.064
254.	-2.393	-1.133	-.741	-.641	-.530	-.191	-.106	.076	.813	.328	.204	.043	-.069	.064
256.	-2.506	-1.142	-.749	-.648	-.532	-.192	-.095	.076	.816	.342	.204	.043	-.070	.064
258.	-2.598	-1.171	-.771	-.650	-.534	-.193	-.095	.077	.824	.343	.210	.051	-.070	.064
260.	-2.717	-1.181	-.773	-.651	-.535	-.193	-.096	.077	.859	.363	.235	.065	-.070	.064
262.	-2.825	-1.207	-.775	-.653	-.527	-.193	-.096	.093	.885	.393	.242	.065	-.070	.065
264.	-2.905	-1.219	-.784	-.654	-.511	-.194	-.096	.081	.895	.403	.265	.065	-.070	.065
266.	-2.984	-1.242	-.802	-.653	-.511	-.179	-.096	.077	.918	.425	.265	.065	-.070	.065
268.	-3.062	-1.231	-.793	-.625	-.512	-.173	-.096	.077	.908	.432	.255	.065	-.070	.065
270.	-3.090	-1.187	-.778	-.622	-.499	-.173	-.096	.096	.863	.409	.236	.065	-.070	.065
272.	-3.017	-1.122	-.755	-.590	-.485	-.173	-.096	.078	.785	.355	.201	.065	-.070	.065
274.	-2.829	-1.043	-.714	-.564	-.470	-.173	-.083	.097	.701	.295	.135	.052	-.070	.053
276.	-2.522	-.961	-.687	-.557	-.457	-.154	-.077	.077	.636	.236	.105	.030	-.077	.045
278.	-2.179	-.896	-.660	-.532	-.456	-.151	-.077	.096	.570	.203	.089	.022	-.091	.044
280.	-1.880	-.848	-.647	-.531	-.455	-.150	-.092	.075	.522	.173	.073	.007	-.090	.044
282.	-1.636	-.814	-.630	-.520	-.454	-.170	-.095	.057	.507	.172	.060	.001	-.090	.044
284.	-1.479	-.800	-.618	-.498	-.453	-.171	-.095	.054	.486	.143	.059	-.016	-.090	.060
286.	-1.412	-.797	-.616	-.497	-.451	-.170	-.095	.040	.472	.143	.059	-.020	-.090	.064
288.	-1.396	-.794	-.614	-.495	-.450	-.169	-.112	.056	.470	.142	.059	-.020	-.089	.064
290.	-1.362	-.790	-.611	-.506	-.448	-.169	-.095	.056	.468	.142	.059	-.020	-.089	.063
292.	-1.376	-.786	-.608	-.520	-.445	-.168	-.112	.056	.489	.141	.058	-.020	-.088	.063
294.	-1.376	-.782	-.625	-.502	-.443	-.167	-.112	.055	.494	.140	.058	-.020	-.088	.063
296.	-1.368	-.803	-.605	-.501	-.441	-.166	-.111	.055	.516	.140	.058	-.020	-.101	.062
298.	-1.360	-.829	-.619	-.511	-.462	-.165	-.110	.055	.493	.146	.057	-.020	-.107	.062

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 3 TIME 49433.100 MU= .147 CLP= .00504 TEMP(U60)= 31.9 C = 89.38 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
300.	-1.384	-.827	-.618	-.508	-.461	-.164	-.110	.062	.512	.157	.057	-.021	-.106	.062
302.	-1.377	-.822	-.614	-.504	-.458	-.163	-.106	.073	.512	.146	.057	-.040	-.105	.061
304.	-1.401	-.816	-.610	-.501	-.454	-.162	-.090	.072	.508	.163	.056	-.039	-.104	.061
306.	-1.391	-.838	-.605	-.517	-.451	-.161	-.094	.072	.533	.162	.082	-.039	-.104	.060
308.	-1.415	-.833	-.600	-.500	-.447	-.167	-.106	.071	.529	.160	.056	-.039	-.103	.060
310.	-1.435	-.853	-.597	-.510	-.444	-.178	-.105	.071	.525	.159	.082	-.038	-.102	.059
312.	-1.427	-.849	-.613	-.512	-.440	-.176	-.105	.070	.523	.158	.079	-.038	-.101	.059
314.	-1.449	-.867	-.608	-.508	-.436	-.175	-.104	.070	.544	.156	.057	-.038	-.100	.058
316.	-1.469	-.863	-.603	-.503	-.438	-.173	-.103	.069	.539	.155	.080	-.037	-.099	.058
318.	-1.489	-.878	-.597	-.523	-.452	-.171	-.102	.068	.539	.153	.079	-.037	-.116	.057
320.	-1.508	-.876	-.597	-.520	-.447	-.170	-.101	.068	.556	.168	.078	-.044	-.115	.057
322.	-1.526	-.888	-.607	-.540	-.451	-.168	-.100	.067	.551	.175	.077	-.055	-.114	.056
324.	-1.543	-.887	-.608	-.536	-.461	-.166	-.099	.066	.553	.174	.077	-.054	-.113	.056
326.	-1.559	-.896	-.617	-.531	-.457	-.165	-.098	.066	.567	.190	.076	-.054	-.112	.055
328.	-1.575	-.897	-.610	-.550	-.452	-.176	-.097	.065	.570	.194	.075	-.053	-.111	.054
330.	-1.589	-.903	-.612	-.544	-.447	-.179	-.096	.079	.581	.192	.074	-.053	-.110	.054
332.	-1.603	-.905	-.618	-.542	-.454	-.177	-.095	.080	.585	.190	.083	-.042	-.108	.053
334.	-1.631	-.921	-.611	-.557	-.459	-.175	-.094	.079	.594	.188	.096	-.034	-.107	.053
336.	-1.643	-.924	-.615	-.551	-.454	-.173	-.093	.078	.587	.186	.095	-.034	-.106	.052
338.	-1.641	-.927	-.618	-.545	-.449	-.171	-.092	.077	.581	.184	.094	-.033	-.105	.052
340.	-1.652	-.928	-.611	-.545	-.444	-.169	-.091	.076	.574	.182	.081	-.033	-.104	.040
342.	-1.645	-.917	-.616	-.556	-.439	-.168	-.090	.076	.568	.180	.069	-.033	-.102	.035
344.	-1.626	-.907	-.617	-.550	-.434	-.166	-.089	.075	.561	.178	.069	-.032	-.101	.046
346.	-1.588	-.896	-.610	-.543	-.429	-.164	-.088	.074	.555	.176	.054	-.045	-.100	.049
348.	-1.562	-.886	-.603	-.537	-.440	-.163	-.087	.073	.548	.171	.060	-.048	-.107	.049
350.	-1.523	-.876	-.610	-.541	-.439	-.176	-.099	.072	.542	.150	.066	-.047	-.113	.048
352.	-1.499	-.866	-.608	-.547	-.434	-.174	-.099	.071	.536	.148	.050	-.061	-.112	.048
354.	-1.460	-.856	-.601	-.541	-.429	-.172	-.097	.071	.512	.142	.027	-.062	-.111	.047
356.	-1.416	-.846	-.594	-.534	-.424	-.170	-.096	.070	.483	.125	.022	-.061	-.119	.046
358.	-1.373	-.837	-.587	-.528	-.438	-.171	-.095	.074	.473	.123	.022	-.075	-.123	.046

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 8 TIME 49846.000 MU= .246 CLP= .00514 TEMP(U60)= 31.9 C = 89.38 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
0.	-1.639	-.864	-.565	-.498	-.402	-.155	-.089	.063	.544	.189	.075	-.033	-.100	.041
2.	-1.559	-.848	-.556	-.501	-.394	-.156	-.087	.062	.515	.171	.056	-.047	-.098	.041
4.	-1.455	-.832	-.546	-.499	-.405	-.164	-.085	.061	.483	.161	.035	-.060	-.107	.040
6.	-1.378	-.817	-.536	-.490	-.397	-.161	-.084	.060	.453	.146	.014	-.061	-.108	.039
8.	-1.304	-.802	-.542	-.495	-.392	-.163	-.085	.059	.444	.136	.013	-.072	-.106	.038
10.	-1.233	-.787	-.533	-.492	-.400	-.169	-.093	.058	.415	.122	.050	-.070	-.116	.038
12.	-1.164	-.775	-.524	-.498	-.396	-.172	-.091	.064	.389	.112	.031	-.072	-.115	.037
14.	-1.103	-.779	-.530	-.493	-.403	-.176	-.090	.068	.380	.101	.027	-.081	-.113	.036
16.	-1.077	-.766	-.521	-.500	-.399	-.173	-.088	.067	.357	.089	-.023	-.083	-.123	.036
18.	-1.018	-.756	-.515	-.495	-.405	-.170	-.091	.066	.348	.080	-.023	-.095	-.122	.035
20.	-.975	-.759	-.518	-.502	-.403	-.168	-.096	.065	.323	.069	-.025	-.106	-.132	.035
22.	-.921	-.746	-.510	-.496	-.407	-.172	-.095	.064	.303	.061	-.039	-.117	-.130	.034
24.	-.879	-.735	-.506	-.505	-.406	-.174	-.093	.063	.294	.049	-.042	-.123	-.140	.034
26.	-.830	-.728	-.508	-.497	-.410	-.172	-.092	.062	.276	.032	-.058	-.132	-.148	.033
28.	-.790	-.730	-.505	-.507	-.409	-.177	-.091	.061	.267	.027	-.074	-.143	-.146	.033
30.	-.745	-.719	-.507	-.515	-.412	-.178	-.089	.060	.246	.015	-.089	-.146	-.146	.032
32.	-.707	-.709	-.505	-.509	-.413	-.176	-.088	.068	.219	-.001	-.098	-.150	-.155	.032
34.	-.657	-.699	-.506	-.517	-.415	-.182	-.093	.069	.188	-.017	-.103	-.154	-.161	.037
36.	-.618	-.689	-.499	-.512	-.416	-.182	-.095	.068	.176	-.032	-.105	-.164	-.159	.041
38.	-.581	-.680	-.499	-.518	-.417	-.180	-.094	.067	.159	-.034	-.101	-.166	-.160	.041
40.	-.546	-.680	-.499	-.515	-.412	-.187	-.093	.076	.140	-.060	-.115	-.171	-.169	.040
42.	-.510	-.679	-.500	-.521	-.424	-.186	-.099	.065	.122	-.061	-.121	-.173	-.174	.040
44.	-.478	-.671	-.500	-.519	-.429	-.184	-.100	.065	.105	-.075	-.128	-.178	-.172	.039
46.	-.443	-.664	-.494	-.528	-.433	-.182	-.099	.073	.086	-.074	-.141	-.187	-.174	.046
48.	-.413	-.657	-.497	-.537	-.432	-.190	-.098	.073	.073	-.087	-.154	-.187	-.178	.048
50.	-.391	-.650	-.496	-.541	-.437	-.188	-.097	.072	.062	-.087	-.167	-.194	-.181	.048
52.	-.369	-.643	-.491	-.548	-.446	-.197	-.096	.073	.046	-.099	-.161	-.194	-.184	.047
54.	-.348	-.648	-.496	-.559	-.445	-.195	-.095	.080	.031	-.098	-.155	-.201	-.182	.047
56.	-.341	-.646	-.494	-.561	-.451	-.193	-.094	.079	.016	-.099	-.153	-.200	-.180	.046
58.	-.324	-.652	-.499	-.570	-.460	-.191	-.093	.081	.001	-.109	-.152	-.198	-.179	.046

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 8 TIME 49846.000 MU= .246 CLP= .00514 TEMP(U60)= 31.9 C = 89.38 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
60.	-.319	-.661	-.498	-.580	-.458	-.192	-.093	.087	-.003	-.111	-.172	-.206	-.178	.046
62.	-.302	-.659	-.494	-.590	-.454	-.198	-.092	.086	-.015	-.121	-.176	-.205	-.183	.054
64.	-.283	-.654	-.501	-.600	-.463	-.197	-.091	.086	-.029	-.124	-.175	-.213	-.184	.054
66.	-.264	-.650	-.499	-.610	-.460	-.195	-.091	.085	-.043	-.132	-.174	-.212	-.190	.054
68.	-.246	-.646	-.496	-.611	-.458	-.194	-.090	.085	-.058	-.136	-.173	-.211	-.191	.053
70.	-.244	-.643	-.493	-.617	-.467	-.196	-.090	.084	-.071	-.143	-.172	-.209	-.190	.053
72.	-.243	-.626	-.502	-.618	-.465	-.202	-.089	.084	-.072	-.142	-.171	-.208	-.189	.053
74.	-.242	-.610	-.500	-.625	-.462	-.201	-.089	.083	-.058	-.136	-.158	-.208	-.188	.053
76.	-.241	-.608	-.499	-.636	-.461	-.200	-.089	.083	-.070	-.129	-.157	-.207	-.187	.052
78.	-.242	-.619	-.507	-.637	-.461	-.199	-.088	.083	-.057	-.128	-.158	-.206	-.187	.052
80.	-.253	-.617	-.505	-.646	-.469	-.199	-.088	.083	-.057	-.135	-.181	-.208	-.186	.052
82.	-.236	-.615	-.504	-.647	-.468	-.198	-.088	.082	-.059	-.147	-.183	-.214	-.186	.052
84.	-.219	-.612	-.506	-.645	-.467	-.198	-.088	.082	-.073	-.152	-.193	-.214	-.185	.052
86.	-.198	-.597	-.511	-.644	-.467	-.198	-.088	.082	-.087	-.160	-.198	-.217	-.185	.052
88.	-.170	-.583	-.499	-.644	-.466	-.198	-.087	.082	-.100	-.172	-.218	-.223	-.185	.055
90.	-.149	-.565	-.488	-.644	-.466	-.198	-.092	.082	-.118	-.185	-.218	-.227	-.185	.060
92.	-.117	-.542	-.477	-.644	-.466	-.198	-.096	.082	-.146	-.198	-.221	-.232	-.185	.060
94.	-.090	-.524	-.470	-.631	-.467	-.198	-.096	.082	-.174	-.211	-.235	-.232	-.185	.060
96.	-.074	-.502	-.470	-.632	-.473	-.198	-.096	.082	-.202	-.224	-.244	-.232	-.185	.060
98.	-.051	-.484	-.467	-.630	-.480	-.198	-.096	.082	-.225	-.237	-.244	-.233	-.186	.061
100.	-.033	-.463	-.461	-.607	-.475	-.206	-.096	.083	-.246	-.250	-.255	-.233	-.186	.066
102.	-.017	-.457	-.457	-.595	-.471	-.209	-.097	.083	-.274	-.253	-.265	-.234	-.187	.070
104.	.007	-.445	-.448	-.586	-.472	-.201	-.097	.083	-.297	-.265	-.259	-.235	-.187	.070
106.	.023	-.426	-.438	-.592	-.474	-.201	-.097	.083	-.319	-.267	-.260	-.236	-.185	.070
108.	.040	-.414	-.428	-.601	-.476	-.202	-.098	.084	-.342	-.281	-.268	-.237	-.180	.070
110.	.047	-.410	-.426	-.590	-.471	-.203	-.098	.083	-.366	-.282	-.268	-.238	-.181	.071
112.	.058	-.403	-.421	-.580	-.469	-.204	-.099	.076	-.388	-.284	-.271	-.232	-.178	.071
114.	.075	-.392	-.412	-.569	-.472	-.205	-.099	.076	-.405	-.286	-.278	-.231	-.174	.072
116.	.081	-.389	-.411	-.564	-.475	-.206	-.100	.077	-.422	-.300	-.272	-.224	-.175	.072
118.	.081	-.382	-.405	-.562	-.469	-.208	-.101	.077	-.439	-.302	-.269	-.224	-.176	.073

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 8 TIME 49846.000 MU= .246 CLP= .00514 TEMP(U60)= 31.9 C = 89.38 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
120.	.095	-.381	-.396	-.552	-.470	-.209	-.101	.075	-.457	-.303	-.261	-.226	-.177	.073
122.	.099	-.384	-.397	-.543	-.474	-.211	-.102	.069	-.465	-.294	-.270	-.219	-.173	.074
124.	.100	-.387	-.400	-.540	-.478	-.213	-.094	.073	-.481	-.296	-.265	-.220	-.171	.074
126.	.101	-.391	-.393	-.537	-.470	-.215	-.095	.077	-.500	-.296	-.253	-.222	-.166	.075
128.	.086	-.394	-.395	-.536	-.474	-.217	-.096	.071	-.507	-.288	-.253	-.214	-.164	.076
130.	.085	-.398	-.399	-.532	-.466	-.216	-.097	.072	-.512	-.287	-.243	-.206	-.166	.076
132.	.069	-.402	-.403	-.532	-.470	-.211	-.098	.073	-.504	-.280	-.231	-.207	-.168	.077
134.	.069	-.407	-.408	-.528	-.462	-.213	-.099	.073	-.523	-.278	-.246	-.200	-.162	.077
136.	.070	-.411	-.413	-.529	-.455	-.212	-.100	.074	-.514	-.267	-.236	-.201	-.161	.069
138.	.052	-.416	-.417	-.525	-.459	-.207	-.101	.075	-.504	-.255	-.223	-.194	-.155	.070
140.	.035	-.421	-.423	-.527	-.452	-.210	-.103	.070	-.494	-.250	-.226	-.194	-.155	.071
142.	.033	-.427	-.428	-.521	-.456	-.213	-.101	.067	-.485	-.253	-.213	-.188	-.157	.072
144.	.014	-.432	-.432	-.525	-.450	-.210	-.095	.068	-.488	-.249	-.188	-.187	-.149	.070
146.	-.005	-.438	-.426	-.519	-.453	-.207	-.097	.069	-.463	-.245	-.203	-.178	-.151	.063
148.	-.026	-.444	-.432	-.524	-.445	-.210	-.098	.070	-.449	-.249	-.192	-.173	-.142	.064
150.	-.042	-.451	-.438	-.516	-.441	-.206	-.099	.071	-.421	-.243	-.189	-.171	-.144	.065
152.	-.048	-.458	-.445	-.507	-.447	-.204	-.101	.072	-.395	-.240	-.165	-.166	-.145	.066
154.	-.069	-.465	-.452	-.514	-.449	-.208	-.097	.064	-.379	-.233	-.168	-.164	-.137	.067
156.	-.092	-.472	-.459	-.505	-.446	-.211	-.093	.072	-.348	-.220	-.166	-.154	-.139	.068
158.	-.115	-.485	-.461	-.513	-.447	-.206	-.095	.075	-.322	-.207	-.156	-.149	-.139	.069
160.	-.139	-.505	-.459	-.520	-.445	-.205	-.096	.066	-.302	-.193	-.153	-.146	-.132	.070
162.	-.163	-.514	-.467	-.512	-.445	-.209	-.098	.076	-.269	-.178	-.138	-.142	-.131	.071
164.	-.199	-.522	-.474	-.519	-.444	-.202	-.100	.068	-.242	-.178	-.122	-.137	-.124	.072
166.	-.238	-.532	-.483	-.512	-.452	-.203	-.101	.068	-.218	-.166	-.113	-.126	-.122	.074
168.	-.265	-.541	-.491	-.521	-.450	-.206	-.103	.069	-.182	-.150	-.107	-.123	-.115	.075
170.	-.294	-.561	-.500	-.526	-.451	-.210	-.105	.070	-.154	-.134	-.099	-.116	-.117	.076
172.	-.324	-.581	-.509	-.520	-.448	-.201	-.107	.072	-.114	-.118	-.091	-.104	-.114	.078
174.	-.369	-.592	-.519	-.530	-.450	-.203	-.109	.073	-.075	-.100	-.073	-.091	-.108	.079
176.	-.411	-.603	-.518	-.533	-.459	-.207	-.100	.074	-.042	-.083	-.065	-.089	-.104	.071
178.	-.461	-.614	-.521	-.529	-.454	-.211	-.100	.074	.001	-.083	-.055	-.079	-.098	.068

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 8 TIME 49846.000 MU= .246 CLP= .00514 TEMP(U60)= 31.9 C = 89.38 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
180.	-.505	-.640	-.531	-.539	-.458	-.200	-.102	.063	.046	-.044	-.047	-.077	-.100	.070
182.	-.561	-.660	-.541	-.541	-.466	-.204	-.104	.065	.078	-.026	-.035	-.066	-.094	.071
184.	-.606	-.673	-.538	-.539	-.460	-.208	-.106	.066	.103	-.024	-.028	-.065	-.089	.072
186.	-.667	-.703	-.544	-.549	-.465	-.212	-.108	.067	.146	-.003	.002	-.052	-.091	.074
188.	-.715	-.723	-.555	-.549	-.474	-.214	-.110	.069	.198	.020	.031	-.051	-.083	.075
190.	-.782	-.737	-.550	-.548	-.465	-.204	-.112	.070	.232	.043	.038	-.036	-.079	.077
192.	-.856	-.773	-.574	-.559	-.472	-.208	-.100	.066	.262	.067	.038	-.037	-.081	.078
194.	-.907	-.770	-.589	-.570	-.482	-.212	-.102	.057	.315	.085	.078	-.020	-.082	.080
196.	-.984	-.783	-.600	-.567	-.470	-.212	-.104	.058	.351	.094	.067	-.020	-.084	.065
198.	-1.067	-.798	-.612	-.568	-.479	-.203	-.106	.059	.385	.121	.087	-.003	-.072	.066
200.	-1.121	-.840	-.625	-.580	-.489	-.207	-.108	.068	.420	.139	.114	-.003	-.070	.068
202.	-1.208	-.857	-.637	-.591	-.497	-.211	-.110	.079	.457	.152	.094	-.003	-.071	.069
204.	-1.267	-.874	-.649	-.603	-.485	-.208	-.108	.071	.494	.170	.120	-.000	-.057	.070
206.	-1.360	-.893	-.640	-.594	-.494	-.200	-.097	.064	.505	.185	.124	.016	-.056	.072
208.	-1.452	-.938	-.652	-.599	-.504	-.204	-.099	.065	.543	.203	.152	.016	-.057	.073
210.	-1.520	-.956	-.665	-.611	-.509	-.208	-.101	.066	.556	.221	.155	.022	-.058	.075
212.	-1.615	-.974	-.678	-.598	-.498	-.212	-.103	.068	.598	.238	.158	.037	-.059	.076
214.	-1.683	-.993	-.691	-.605	-.508	-.205	-.105	.069	.636	.243	.161	.038	-.060	.077
216.	-1.760	-1.011	-.704	-.617	-.510	-.199	-.107	.070	.654	.265	.164	.039	-.061	.079
218.	-1.859	-1.030	-.717	-.628	-.500	-.203	-.100	.072	.691	.281	.167	.048	-.061	.080
220.	-1.931	-1.049	-.730	-.609	-.509	-.206	-.092	.073	.704	.286	.171	.062	-.042	.082
222.	-2.005	-1.067	-.734	-.619	-.518	-.210	-.093	.074	.725	.312	.181	.063	-.043	.083
224.	-2.079	-1.086	-.728	-.598	-.515	-.198	-.095	.075	.762	.327	.208	.064	-.044	.075
226.	-2.155	-1.104	-.741	-.608	-.507	-.194	-.096	.077	.775	.332	.211	.065	-.045	.064
228.	-2.232	-1.122	-.753	-.618	-.515	-.197	-.098	.078	.788	.338	.215	.079	-.045	.065
230.	-2.310	-1.140	-.765	-.628	-.523	-.200	-.100	.079	.800	.369	.230	.091	-.046	.066
232.	-2.388	-1.158	-.777	-.632	-.515	-.204	-.101	.080	.813	.381	.255	.093	-.047	.067
234.	-2.467	-1.175	-.788	-.612	-.508	-.207	-.087	.082	.825	.386	.244	.094	-.048	.068
236.	-2.546	-1.191	-.784	-.621	-.516	-.210	-.082	.083	.836	.392	.244	.079	-.048	.069
238.	-2.601	-1.208	-.780	-.629	-.523	-.190	-.083	.084	.867	.397	.266	.071	-.040	.070

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 8 TIME 49846.000 MU= .246 CLP= .00514 TEMP(U60)= 31.9 C = 89.38 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
240.	-2.660	-1.223	-.790	-.638	-.529	-.189	-.084	.085	.876	.402	.269	.072	-.025	.071
242.	-2.711	-1.238	-.800	-.645	-.514	-.192	-.085	.086	.869	.442	.272	.073	-.025	.072
244.	-2.771	-1.253	-.809	-.653	-.509	-.194	-.086	.087	.879	.447	.275	.074	-.026	.073
246.	-2.817	-1.241	-.818	-.647	-.515	-.196	-.087	.088	.889	.452	.278	.075	-.026	.074
248.	-2.878	-1.240	-.826	-.629	-.520	-.197	-.088	.089	.898	.457	.281	.076	-.026	.074
250.	-2.918	-1.251	-.834	-.635	-.525	-.173	-.089	.090	.906	.461	.284	.100	-.026	.075
252.	-2.943	-1.262	-.841	-.640	-.529	-.174	-.089	.090	.914	.465	.286	.080	-.041	.076
254.	-2.965	-1.272	-.822	-.645	-.533	-.175	-.066	.091	.921	.468	.288	.103	-.053	.076
256.	-2.985	-1.280	-.820	-.630	-.506	-.177	-.067	.092	.927	.471	.290	.106	-.053	.077
258.	-3.003	-1.288	-.825	-.614	-.505	-.178	-.090	.092	.932	.474	.292	.106	-.054	.077
260.	-3.018	-1.294	-.829	-.617	-.508	-.178	-.067	.093	.937	.477	.293	.079	-.054	.078
262.	-3.030	-1.300	-.833	-.619	-.510	-.179	-.067	.093	.941	.479	.295	.079	-.054	.078
264.	-3.040	-1.304	-.804	-.621	-.511	-.180	-.067	.093	.944	.480	.296	.079	-.054	.078
266.	-3.047	-1.307	-.804	-.623	-.513	-.180	-.067	.094	.946	.481	.296	.080	-.054	.078
268.	-3.100	-1.269	-.805	-.624	-.513	-.180	-.068	.094	.947	.482	.297	.080	-.055	.079
270.	-3.053	-1.268	-.805	-.624	-.514	-.181	-.068	.094	.948	.482	.297	.080	-.055	.079
272.	-3.054	-1.307	-.805	-.624	-.513	-.180	-.068	.094	.947	.482	.297	.085	-.055	.079
274.	-3.091	-1.268	-.804	-.592	-.513	-.180	-.067	.094	.946	.481	.296	.108	-.055	.078
276.	-3.040	-1.300	-.802	-.582	-.512	-.180	-.067	.093	.944	.480	.296	.108	-.054	.078
278.	-3.038	-1.259	-.799	-.580	-.510	-.166	-.067	.093	.941	.479	.295	.100	-.054	.078
280.	-3.066	-1.254	-.796	-.578	-.500	-.150	-.067	.093	.937	.477	.298	.079	-.054	.078
282.	-3.051	-1.248	-.792	-.575	-.471	-.150	-.066	.092	.933	.474	.325	.079	-.054	.077
284.	-3.033	-1.241	-.788	-.571	-.478	-.149	-.066	.092	.927	.472	.297	.078	-.053	.077
286.	-3.013	-1.232	-.782	-.568	-.499	-.148	-.066	.091	.930	.468	.319	.078	-.053	.076
288.	-2.991	-1.234	-.777	-.563	-.495	-.147	-.065	.090	.944	.465	.286	.077	-.053	.076
290.	-2.981	-1.252	-.770	-.559	-.491	-.163	-.065	.090	.917	.461	.284	.076	-.052	.075
292.	-2.984	-1.241	-.763	-.555	-.487	-.171	-.064	.089	.925	.457	.281	.076	-.052	.074
294.	-2.938	-1.228	-.755	-.585	-.482	-.169	-.063	.088	.889	.452	.279	.075	-.051	.074
296.	-2.879	-1.201	-.747	-.579	-.477	-.168	-.063	.087	.880	.447	.276	.074	-.051	.073
298.	-2.826	-1.164	-.739	-.573	-.471	-.166	-.062	.086	.870	.442	.272	.073	-.050	.072

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 8 TIME 49846.000 MU= .246 CLP= .00514 TEMP(U60)= 31.9 C = 89.38 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
300.	-2.768	-1.150	-.730	-.566	-.466	-.164	-.061	.085	.859	.437	.255	.072	-.049	.071
302.	-2.689	-1.118	-.706	-.552	-.460	-.162	-.060	.084	.848	.402	.231	.071	-.049	.070
304.	-2.565	-1.084	-.681	-.516	-.454	-.138	-.060	.083	.819	.392	.228	.070	-.048	.069
306.	-2.443	-1.069	-.672	-.509	-.447	-.132	-.059	.082	.789	.387	.208	.053	-.048	.068
308.	-2.346	-1.033	-.662	-.501	-.441	-.131	-.058	.081	.778	.350	.188	.044	-.056	.067
310.	-2.243	-1.002	-.652	-.494	-.434	-.129	-.075	.079	.766	.343	.186	.026	-.069	.050
312.	-2.151	-.987	-.642	-.497	-.427	-.149	-.077	.078	.733	.337	.183	.019	-.068	.060
314.	-2.076	-.971	-.632	-.511	-.420	-.148	-.076	.077	.729	.301	.180	.019	-.067	.064
316.	-2.001	-.955	-.621	-.502	-.413	-.145	-.075	.076	.707	.296	.177	.019	-.066	.063
318.	-1.956	-.938	-.611	-.494	-.428	-.143	-.073	.074	.707	.291	.174	.018	-.065	.062
320.	-1.922	-.945	-.619	-.485	-.427	-.140	-.072	.073	.681	.286	.150	-.001	-.075	.061
322.	-1.888	-.937	-.615	-.491	-.419	-.138	-.071	.072	.684	.281	.138	-.004	-.083	.060
324.	-1.854	-.944	-.604	-.498	-.412	-.138	-.070	.070	.679	.276	.136	-.004	-.082	.059
326.	-1.820	-.933	-.593	-.504	-.427	-.154	-.068	.075	.691	.271	.133	-.004	-.093	.058
328.	-1.816	-.941	-.602	-.492	-.422	-.151	-.067	.080	.685	.266	.131	-.004	-.098	.057
330.	-1.817	-.928	-.594	-.487	-.414	-.148	-.066	.066	.672	.261	.128	-.024	-.096	.056
332.	-1.786	-.936	-.583	-.489	-.406	-.145	-.064	.065	.659	.256	.126	-.023	-.094	.055
334.	-1.783	-.921	-.593	-.497	-.423	-.142	-.066	.064	.646	.260	.123	-.023	-.093	.054
336.	-1.782	-.929	-.583	-.497	-.414	-.146	-.079	.071	.634	.262	.121	-.022	-.091	.053
338.	-1.780	-.939	-.572	-.506	-.408	-.156	-.077	.079	.648	.251	.119	-.022	-.089	.052
340.	-1.777	-.921	-.582	-.503	-.421	-.153	-.076	.077	.636	.261	.141	-.021	-.087	.051
342.	-1.776	-.954	-.572	-.513	-.416	-.157	-.074	.076	.650	.256	.138	-.021	-.086	.050
344.	-1.802	-.937	-.580	-.509	-.427	-.164	-.073	.074	.637	.251	.136	-.021	-.099	.049
346.	-1.823	-.944	-.571	-.518	-.418	-.161	-.077	.073	.626	.246	.133	-.020	-.099	.048
348.	-1.822	-.951	-.578	-.512	-.410	-.158	-.085	.071	.637	.241	.130	-.020	-.097	.047
350.	-1.839	-.953	-.570	-.502	-.407	-.155	-.083	.070	.624	.236	.128	-.019	-.095	.046
352.	-1.825	-.934	-.578	-.513	-.414	-.152	-.082	.069	.612	.232	.122	-.019	-.093	.045
354.	-1.790	-.916	-.582	-.505	-.406	-.158	-.080	.067	.600	.227	.097	-.019	-.106	.044
356.	-1.755	-.899	-.571	-.516	-.405	-.162	-.078	.066	.583	.209	.078	-.024	-.104	.043
358.	-1.714	-.881	-.565	-.507	-.410	-.158	-.084	.065	.555	.198	.077	-.033	-.102	.042

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 10 TIME 50060.100 MU= .296 CLP= .00508 TEMP(U60)= 31.9 C = 89.38 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C=	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
AZIMUTH														
0.	-1.866	-.912	-.570	-.513	-.402	-.160	-.080	.058	.588	.226	.096	-.022	-.084	.036
2.	-1.804	-.892	-.557	-.512	-.396	-.157	-.078	.056	.553	.204	.088	-.036	-.088	.035
4.	-1.719	-.872	-.559	-.501	-.387	-.156	-.089	.055	.535	.196	.072	-.037	-.095	.034
6.	-1.612	-.853	-.549	-.501	-.395	-.164	-.087	.054	.507	.177	.066	-.049	-.098	.033
8.	-1.526	-.834	-.552	-.499	-.404	-.163	-.086	.053	.492	.168	.049	-.062	-.096	.033
10.	-1.425	-.816	-.542	-.499	-.396	-.170	-.095	.052	.465	.151	.029	-.061	-.103	.044
12.	-1.326	-.817	-.530	-.496	-.404	-.167	-.093	.056	.435	.142	.042	-.073	-.113	.031
14.	-1.253	-.801	-.534	-.498	-.396	-.167	-.091	.061	.424	.128	.027	-.072	-.114	.031
16.	-1.162	-.803	-.524	-.494	-.404	-.173	-.089	.060	.380	.119	-.024	-.084	-.122	.030
18.	-1.095	-.787	-.514	-.496	-.397	-.169	-.090	.059	.372	.100	-.026	-.095	-.131	.029
20.	-1.012	-.772	-.518	-.504	-.403	-.166	-.097	.058	.346	.081	-.026	-.105	-.131	.029
22.	-.951	-.759	-.509	-.499	-.398	-.168	-.095	.057	.322	.071	-.026	-.116	-.138	.028
24.	-.893	-.760	-.512	-.503	-.402	-.171	-.093	.062	.298	.062	-.041	-.125	-.137	.028
26.	-.834	-.746	-.505	-.497	-.398	-.174	-.091	.065	.276	.045	-.057	-.135	-.145	.027
28.	-.763	-.736	-.507	-.502	-.406	-.176	-.090	.064	.254	.029	-.073	-.144	-.143	.027
30.	-.712	-.737	-.499	-.509	-.409	-.173	-.088	.063	.233	.022	-.096	-.149	-.151	.030
32.	-.662	-.724	-.493	-.502	-.406	-.177	-.091	.069	.213	.003	-.087	-.151	-.159	.036
34.	-.614	-.716	-.495	-.508	-.409	-.178	-.095	.064	.193	-.017	-.107	-.159	-.157	.035
36.	-.567	-.717	-.491	-.515	-.412	-.182	-.093	.068	.175	-.031	-.104	-.167	-.165	.035
38.	-.522	-.710	-.496	-.522	-.422	-.183	-.097	.069	.152	-.035	-.131	-.175	-.171	.034
40.	-.479	-.710	-.497	-.530	-.421	-.181	-.100	.068	.124	-.045	-.119	-.183	-.170	.034
42.	-.444	-.700	-.490	-.537	-.428	-.185	-.098	.075	.107	-.058	-.121	-.186	-.177	.038
44.	-.413	-.696	-.488	-.557	-.435	-.186	-.097	.075	.091	-.071	-.129	-.189	-.183	.042
46.	-.381	-.696	-.489	-.564	-.442	-.191	-.096	.074	.075	-.083	-.137	-.196	-.180	.042
48.	-.351	-.687	-.482	-.571	-.449	-.191	-.094	.082	.059	-.084	-.157	-.204	-.181	.046
50.	-.322	-.679	-.482	-.578	-.449	-.188	-.093	.081	.044	-.095	-.163	-.205	-.185	.050
52.	-.302	-.678	-.482	-.585	-.451	-.194	-.092	.080	.029	-.095	-.167	-.209	-.186	.049
54.	-.291	-.670	-.477	-.592	-.458	-.193	-.091	.079	.022	-.106	-.172	-.216	-.190	.049
56.	-.279	-.664	-.478	-.600	-.465	-.191	-.090	.079	.015	-.105	-.170	-.217	-.191	.048
58.	-.260	-.656	-.478	-.611	-.464	-.198	-.089	.085	.001	-.116	-.169	-.221	-.195	.048

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 10 TIME 50060.100 MU= .296 CLP= .00508 TEMP(U60)= 31.9 C = 89.38 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
60.	-.242	-.644	-.481	-.623	-.468	-.197	-.088	.079	-.005	-.115	-.174	-.222	-.193	.047
62.	-.224	-.639	-.488	-.627	-.467	-.195	-.088	.092	-.013	-.115	-.186	-.227	-.195	.047
64.	-.217	-.634	-.494	-.638	-.464	-.194	-.087	.086	-.027	-.125	-.189	-.227	-.198	.053
66.	-.204	-.629	-.502	-.638	-.460	-.192	-.086	.092	-.040	-.126	-.187	-.233	-.197	.054
68.	-.188	-.625	-.501	-.646	-.457	-.191	-.086	.091	-.053	-.137	-.186	-.232	-.195	.054
70.	-.183	-.621	-.506	-.649	-.445	-.190	-.085	.090	-.065	-.144	-.185	-.231	-.199	.054
72.	-.170	-.617	-.514	-.652	-.431	-.189	-.085	.090	-.068	-.134	-.184	-.238	-.201	.053
74.	-.154	-.604	-.513	-.654	-.418	-.188	-.077	.089	-.078	-.136	-.192	-.237	-.200	.061
76.	-.151	-.599	-.519	-.658	-.405	-.187	-.083	.089	-.080	-.147	-.203	-.245	-.199	.061
78.	-.124	-.586	-.519	-.661	-.393	-.186	-.076	.089	-.102	-.158	-.215	-.244	-.199	.061
80.	-.093	-.571	-.517	-.659	-.391	-.185	-.077	.088	-.116	-.173	-.246	-.251	-.198	.060
82.	-.063	-.545	-.525	-.657	-.368	-.185	-.083	.088	-.140	-.192	-.250	-.251	-.197	.061
84.	-.033	-.531	-.525	-.655	-.357	-.185	-.083	.088	-.153	-.203	-.260	-.259	-.203	.068
86.	-.018	-.505	-.514	-.654	-.356	-.187	-.083	.088	-.178	-.219	-.272	-.259	-.205	.068
88.	.012	-.480	-.503	-.654	-.346	-.193	-.083	.084	-.203	-.237	-.272	-.266	-.205	.069
90.	.040	-.467	-.501	-.645	-.347	-.193	-.083	.080	-.229	-.249	-.295	-.268	-.205	.076
92.	.057	-.442	-.471	-.633	-.358	-.193	-.085	.080	-.254	-.261	-.295	-.275	-.205	.076
94.	.082	-.418	-.451	-.631	-.367	-.193	-.090	.085	-.279	-.272	-.298	-.275	-.197	.076
96.	.087	-.406	-.431	-.621	-.370	-.197	-.090	.083	-.294	-.278	-.330	-.276	-.197	.076
98.	.114	-.392	-.411	-.621	-.382	-.202	-.091	.080	-.320	-.292	-.331	-.276	-.197	.076
100.	.130	-.370	-.394	-.612	-.394	-.203	-.091	.080	-.344	-.302	-.332	-.277	-.198	.077
102.	.145	-.359	-.385	-.613	-.403	-.203	-.091	.081	-.361	-.318	-.337	-.275	-.190	.077
104.	.161	-.348	-.376	-.615	-.404	-.204	-.092	.081	-.388	-.351	-.355	-.270	-.191	.080
106.	.177	-.333	-.370	-.618	-.406	-.205	-.092	.081	-.412	-.396	-.342	-.272	-.192	.086
108.	.188	-.313	-.369	-.621	-.408	-.206	-.092	.082	-.431	-.446	-.329	-.269	-.192	.086
110.	.194	-.306	-.364	-.612	-.415	-.207	-.093	.082	-.456	-.496	-.343	-.266	-.186	.086
112.	.205	-.308	-.366	-.616	-.424	-.208	-.094	.083	-.477	-.538	-.345	-.263	-.185	.087
114.	.206	-.310	-.369	-.620	-.433	-.210	-.094	.076	-.496	-.569	-.323	-.260	-.180	.088
116.	.208	-.312	-.367	-.623	-.441	-.211	-.095	.076	-.506	-.598	-.310	-.257	-.181	.088
118.	.210	-.315	-.364	-.618	-.451	-.213	-.096	.076	-.523	-.585	-.313	-.256	-.180	.089

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 10 TIME 50060.100 MU= .296 CLP= .00508 TEMP(U60)= 31.9 C = 89.38 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C=	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
AZIMUTH														
120.	.211	-.317	-.367	-.623	-.460	-.215	-.097	.077	-.541	-.533	-.315	-.252	-.176	.084
122.	.213	-.320	-.370	-.626	-.471	-.217	-.097	.078	-.560	-.429	-.318	-.251	-.177	.082
124.	.215	-.324	-.374	-.618	-.480	-.211	-.092	.078	-.580	-.343	-.315	-.247	-.176	.083
126.	.218	-.327	-.378	-.611	-.478	-.212	-.091	.079	-.592	-.306	-.305	-.240	-.172	.084
128.	.210	-.331	-.382	-.600	-.479	-.214	-.094	.080	-.607	-.284	-.295	-.233	-.170	.085
130.	.205	-.334	-.380	-.589	-.486	-.218	-.093	.080	-.621	-.289	-.286	-.234	-.168	.078
132.	.197	-.338	-.380	-.591	-.482	-.210	-.094	.082	-.628	-.303	-.292	-.229	-.165	.077
134.	.183	-.343	-.393	-.584	-.475	-.213	-.096	.083	-.635	-.309	-.292	-.221	-.162	.079
136.	.181	-.347	-.401	-.578	-.479	-.215	-.097	.082	-.643	-.323	-.282	-.223	-.164	.080
138.	.170	-.352	-.398	-.571	-.475	-.218	-.098	.076	-.652	-.313	-.252	-.217	-.160	.081
140.	.154	-.357	-.410	-.565	-.468	-.220	-.100	.077	-.650	-.304	-.244	-.209	-.159	.073
142.	.138	-.362	-.409	-.558	-.474	-.213	-.100	.078	-.644	-.294	-.247	-.202	-.155	.073
144.	.122	-.368	-.413	-.552	-.457	-.207	-.093	.076	-.638	-.284	-.251	-.194	-.153	.074
146.	.105	-.387	-.419	-.536	-.462	-.210	-.095	.071	-.632	-.274	-.243	-.197	-.149	.076
148.	.088	-.396	-.426	-.523	-.456	-.211	-.096	.072	-.598	-.259	-.219	-.189	-.141	.077
150.	.070	-.402	-.434	-.526	-.450	-.207	-.096	.073	-.573	-.243	-.219	-.181	-.140	.078
152.	.052	-.409	-.428	-.524	-.457	-.210	-.090	.075	-.534	-.237	-.194	-.174	-.143	.080
154.	.033	-.417	-.435	-.517	-.438	-.210	-.091	.076	-.508	-.222	-.195	-.175	-.136	.080
156.	.012	-.425	-.444	-.522	-.446	-.206	-.093	.072	-.482	-.212	-.183	-.167	-.137	.072
158.	-.028	-.449	-.451	-.519	-.452	-.210	-.095	.068	-.438	-.191	-.154	-.158	-.129	.073
160.	-.050	-.460	-.446	-.525	-.448	-.209	-.097	.069	-.393	-.178	-.156	-.148	-.131	.074
162.	-.075	-.485	-.455	-.521	-.454	-.206	-.098	.070	-.362	-.173	-.142	-.139	-.122	.076
164.	-.117	-.497	-.464	-.529	-.450	-.210	-.100	.064	-.315	-.168	-.128	-.132	-.112	.077
166.	-.146	-.523	-.474	-.524	-.460	-.208	-.103	.061	-.280	-.143	-.112	-.131	-.114	.075
168.	-.195	-.534	-.484	-.533	-.465	-.206	-.105	.063	-.230	-.121	-.099	-.120	-.104	.068
170.	-.246	-.550	-.494	-.526	-.463	-.210	-.107	.064	-.190	-.105	-.094	-.109	-.105	.070
172.	-.300	-.577	-.505	-.537	-.467	-.207	-.103	.065	-.138	-.089	-.062	-.097	-.096	.071
174.	-.355	-.596	-.516	-.549	-.459	-.206	-.099	.067	-.088	-.059	-.049	-.085	-.096	.073
176.	-.413	-.624	-.528	-.541	-.458	-.210	-.102	.068	-.016	-.034	-.044	-.073	-.086	.074
178.	-.474	-.646	-.540	-.553	-.469	-.215	-.104	.058	.027	-.015	-.031	-.066	-.086	.076

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 10 TIME 50060.100 MU= .296 CLP= .00508 TEMP(U60)= 31.9 C = 89.38 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
180.	-.537	-.675	-.545	-.564	-.471	-.209	-.106	.058	.073	.005	-.018	-.060	-.076	.078
182.	-.604	-.699	-.539	-.558	-.472	-.210	-.109	.059	.121	.026	.017	-.046	-.078	.080
184.	-.673	-.729	-.541	-.571	-.483	-.215	-.111	.060	.171	.066	.039	-.031	-.076	.082
186.	-.758	-.757	-.554	-.580	-.483	-.220	-.104	.062	.223	.074	.063	-.025	-.066	.083
188.	-.848	-.788	-.568	-.575	-.486	-.211	-.102	.063	.278	.116	.077	-.015	-.063	.085
190.	-.928	-.807	-.592	-.589	-.498	-.214	-.105	.065	.335	.144	.090	-.010	-.053	.077
192.	-1.011	-.827	-.616	-.604	-.496	-.219	-.107	.066	.382	.171	.104	.002	-.055	.073
194.	-1.115	-.862	-.631	-.611	-.500	-.208	-.110	.068	.432	.199	.120	.008	-.056	.075
196.	-1.238	-.894	-.646	-.608	-.512	-.212	-.099	.070	.481	.205	.134	.022	-.050	.077
198.	-1.344	-.916	-.662	-.623	-.508	-.217	-.099	.069	.521	.234	.153	.026	-.041	.079
200.	-1.444	-.957	-.678	-.628	-.514	-.203	-.101	.056	.562	.242	.183	.043	-.042	.081
202.	-1.548	-.989	-.695	-.627	-.508	-.208	-.104	.057	.586	.272	.197	.047	-.043	.083
204.	-1.681	-1.014	-.712	-.642	-.515	-.213	-.106	.063	.621	.278	.202	.048	-.034	.085
206.	-1.802	-1.038	-.730	-.644	-.528	-.216	-.091	.074	.667	.290	.207	.068	-.026	.087
208.	-1.919	-1.064	-.727	-.644	-.518	-.203	-.093	.061	.691	.325	.212	.071	-.027	.089
210.	-2.040	-1.115	-.740	-.660	-.527	-.208	-.095	.063	.733	.350	.217	.073	-.027	.091
212.	-2.166	-1.147	-.758	-.659	-.514	-.208	-.096	.064	.757	.343	.246	.075	-.028	.073
214.	-2.296	-1.174	-.776	-.660	-.524	-.196	-.080	.066	.803	.373	.232	.077	-.029	.075
216.	-2.430	-1.202	-.769	-.676	-.537	-.200	-.082	.067	.796	.392	.260	.101	-.029	.076
218.	-2.530	-1.229	-.784	-.670	-.520	-.205	-.084	.069	.843	.422	.270	.104	-.030	.078
220.	-2.630	-1.224	-.802	-.651	-.530	-.202	-.086	.070	.865	.432	.276	.106	-.031	.080
222.	-2.773	-1.250	-.791	-.654	-.513	-.190	-.088	.072	.884	.441	.282	.108	-.012	.082
224.	-2.875	-1.277	-.808	-.668	-.524	-.194	-.090	.074	.903	.451	.289	.111	-.008	.083
226.	-2.941	-1.302	-.826	-.655	-.535	-.198	-.091	.075	.923	.461	.295	.113	-.008	.085
228.	-3.048	-1.294	-.840	-.660	-.541	-.202	-.086	.077	.942	.470	.303	.115	-.008	.087
230.	-3.149	-1.320	-.828	-.673	-.524	-.193	-.072	.078	.957	.480	.343	.118	-.009	.089
232.	-3.211	-1.346	-.845	-.687	-.534	-.183	-.073	.080	.945	.489	.350	.120	-.009	.091
234.	-3.272	-1.364	-.854	-.665	-.535	-.186	-.074	.081	.998	.498	.357	.122	-.009	.092
236.	-3.331	-1.355	-.843	-.673	-.519	-.190	-.076	.083	1.008	.507	.363	.125	-.009	.085
238.	-3.389	-1.379	-.858	-.646	-.528	-.193	-.077	.084	.992	.516	.362	.127	-.009	.069

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 10 TIME 50060.100 MU= .296 CLP= .00508 TEMP(U60)= 31.9 C = 89.38 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
240.	-3.431	-1.402	-.872	-.655	-.537	-.178	-.078	.086	.998	.525	.336	.129	-.009	.070
242.	-3.449	-1.411	-.875	-.665	-.546	-.170	-.066	.087	.981	.533	.341	.131	-.009	.071
244.	-3.500	-1.402	-.863	-.674	-.538	-.172	-.054	.088	.995	.541	.346	.133	-.010	.072
246.	-3.549	-1.421	-.875	-.642	-.523	-.174	-.055	.089	1.009	.549	.351	.135	-.010	.073
248.	-3.573	-1.422	-.872	-.650	-.530	-.177	-.056	.091	1.022	.556	.355	.136	-.010	.074
250.	-3.585	-1.412	-.860	-.658	-.517	-.179	-.056	.092	1.035	.562	.360	.138	-.010	.075
252.	-3.624	-1.427	-.870	-.658	-.503	-.181	-.057	.093	1.046	.568	.364	.140	-.010	.075
254.	-3.632	-1.419	-.878	-.627	-.508	-.183	-.057	.094	1.035	.574	.367	.141	-.010	.076
256.	-3.637	-1.407	-.886	-.632	-.512	-.184	-.058	.094	1.018	.579	.370	.142	-.010	.077
258.	-3.664	-1.418	-.893	-.637	-.516	-.186	-.058	.095	1.026	.583	.373	.143	-.010	.077
260.	-3.655	-1.427	-.876	-.641	-.520	-.187	-.059	.096	1.033	.587	.376	.144	-.010	.078
262.	-3.652	-1.435	-.864	-.644	-.522	-.157	-.059	.096	1.038	.547	.378	.145	-.011	.078
264.	-3.667	-1.441	-.868	-.647	-.525	-.188	-.059	.097	1.043	.593	.379	.146	-.011	.079
266.	-3.640	-1.414	-.871	-.649	-.526	-.156	-.059	.097	1.046	.595	.380	.146	-.026	.079
268.	-3.629	-1.400	-.872	-.650	-.527	-.156	-.060	.097	1.048	.596	.381	.119	-.042	.079
270.	-3.631	-1.401	-.873	-.651	-.527	-.156	-.060	.097	1.048	.596	.381	.142	-.025	.079
272.	-3.585	-1.400	-.872	-.629	-.527	-.156	-.060	.097	1.048	.596	.381	.146	-.011	.079
274.	-3.566	-1.398	-.871	-.625	-.526	-.156	-.059	.097	1.046	.595	.380	.146	-.030	.079
276.	-3.556	-1.394	-.868	-.647	-.525	-.156	-.059	.097	1.043	.593	.379	.146	-.042	.079
278.	-3.541	-1.388	-.865	-.645	-.522	-.155	-.059	.096	1.039	.591	.378	.145	-.042	.078
280.	-3.522	-1.381	-.860	-.641	-.520	-.154	-.059	.096	1.033	.587	.376	.112	-.042	.078
282.	-3.449	-1.372	-.855	-.610	-.516	-.153	-.058	.095	1.026	.584	.373	.111	-.041	.077
284.	-3.419	-1.361	-.848	-.587	-.512	-.152	-.058	.095	1.019	.579	.371	.110	-.041	.077
286.	-3.389	-1.350	-.841	-.612	-.508	-.151	-.057	.094	1.010	.574	.367	.109	-.041	.076
288.	-3.356	-1.337	-.833	-.621	-.503	-.149	-.057	.093	1.000	.569	.364	.108	-.040	.075
290.	-3.320	-1.322	-.824	-.614	-.498	-.148	-.056	.092	.989	.563	.360	.107	-.040	.075
292.	-3.281	-1.309	-.814	-.607	-.492	-.146	-.056	.091	.979	.556	.356	.106	-.039	.074
294.	-3.245	-1.334	-.804	-.599	-.486	-.144	-.055	.090	1.010	.549	.351	.104	-.039	.073
296.	-3.246	-1.316	-.793	-.591	-.479	-.142	-.054	.088	.996	.541	.346	.103	-.038	.072
298.	-3.199	-1.297	-.781	-.582	-.472	-.140	-.053	.087	.982	.533	.341	.101	-.038	.071

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 10 TIME 50060.100 MU= .296 CLP= .00508 TEMP(U60)= 31.9 C = 89.38 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C=	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
AZIMUTH														
300.	-3.150	-1.277	-.769	-.573	-.465	-.153	-.053	.086	.967	.525	.336	.100	-.037	.070
302.	-3.098	-1.256	-.757	-.564	-.457	-.164	-.052	.084	.951	.517	.331	.098	-.037	.069
304.	-3.046	-1.243	-.751	-.554	-.460	-.145	-.051	.083	.935	.508	.325	.097	-.036	.067
306.	-3.004	-1.252	-.763	-.582	-.464	-.148	-.050	.081	.918	.499	.319	.095	-.035	.066
308.	-2.982	-1.229	-.749	-.573	-.446	-.156	-.049	.080	.901	.490	.313	.081	-.035	.065
310.	-2.925	-1.206	-.735	-.562	-.458	-.153	-.048	.078	.895	.480	.307	.077	-.034	.064
312.	-2.867	-1.182	-.720	-.551	-.449	-.150	-.060	.077	.904	.471	.301	.090	-.033	.062
314.	-2.809	-1.172	-.717	-.539	-.440	-.147	-.069	.075	.886	.461	.295	.088	-.033	.061
316.	-2.750	-1.170	-.720	-.532	-.431	-.144	-.067	.074	.868	.451	.289	.086	-.032	.060
318.	-2.692	-1.145	-.705	-.551	-.437	-.141	-.066	.072	.849	.442	.270	.084	-.037	.059
320.	-2.633	-1.120	-.690	-.539	-.442	-.137	-.065	.071	.846	.432	.244	.068	-.054	.057
322.	-2.574	-1.095	-.674	-.534	-.432	-.134	-.063	.069	.846	.394	.253	.057	-.052	.056
324.	-2.516	-1.088	-.659	-.548	-.423	-.131	-.062	.067	.827	.382	.249	.056	-.051	.055
326.	-2.459	-1.078	-.659	-.535	-.413	-.149	-.076	.066	.808	.374	.228	.054	-.050	.054
328.	-2.402	-1.053	-.655	-.532	-.422	-.147	-.078	.064	.790	.365	.206	.037	-.049	.052
330.	-2.369	-1.048	-.656	-.541	-.421	-.144	-.076	.063	.771	.356	.205	.031	-.057	.051
332.	-2.326	-1.035	-.649	-.528	-.411	-.141	-.075	.061	.772	.348	.195	.030	-.067	.050
334.	-2.295	-1.030	-.634	-.515	-.420	-.138	-.073	.060	.765	.340	.197	.029	-.065	.049
336.	-2.275	-1.035	-.619	-.503	-.416	-.154	-.071	.058	.747	.332	.202	.028	-.063	.048
338.	-2.255	-1.039	-.621	-.503	-.426	-.150	-.069	.057	.729	.324	.216	.011	-.062	.046
340.	-2.234	-1.022	-.612	-.518	-.420	-.149	-.068	.056	.732	.316	.200	.008	-.060	.045
342.	-2.213	-1.018	-.615	-.533	-.410	-.162	-.083	.054	.722	.308	.207	.008	-.070	.044
344.	-2.192	-.999	-.604	-.533	-.421	-.158	-.081	.053	.704	.301	.189	.008	-.075	.043
346.	-2.171	-1.019	-.608	-.534	-.413	-.154	-.079	.052	.709	.294	.160	.008	-.073	.042
348.	-2.149	-1.002	-.596	-.532	-.424	-.154	-.077	.051	.696	.287	.171	.007	-.083	.041
350.	-2.101	-.978	-.600	-.519	-.414	-.164	-.077	.056	.680	.280	.171	.006	-.086	.040
352.	-2.051	-.977	-.606	-.522	-.425	-.160	-.088	.063	.664	.273	.146	-.009	-.084	.039
354.	-2.003	-.978	-.593	-.518	-.415	-.156	-.086	.062	.648	.267	.141	-.009	-.082	.038
356.	-1.957	-.956	-.579	-.521	-.405	-.158	-.084	.061	.633	.261	.138	-.009	-.080	.037
358.	-1.911	-.935	-.584	-.515	-.396	-.164	-.082	.059	.618	.246	.134	-.011	-.090	.037

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 12 TIME 50237.100 MU= .343 CLP= .00505 TEMP(U60)= 31.9 C = 89.38 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
0.	-2.162	-1.020	-.609	-.525	-.401	-.155	-.074	.076	.713	.299	.171	.003	-.070	.041
2.	-2.080	-.993	-.603	-.529	-.400	-.151	-.072	.062	.673	.288	.146	-.003	-.072	.032
4.	-1.989	-.968	-.588	-.515	-.398	-.147	-.070	.073	.644	.264	.122	-.012	-.080	.026
6.	-1.903	-.954	-.581	-.507	-.388	-.156	-.077	.059	.617	.255	.100	-.026	-.082	.033
8.	-1.819	-.929	-.574	-.509	-.389	-.154	-.078	.057	.571	.214	.069	-.039	-.089	.037
10.	-1.715	-.897	-.560	-.502	-.396	-.150	-.077	.056	.539	.207	.069	-.042	-.092	.036
12.	-1.619	-.876	-.556	-.503	-.392	-.159	-.084	.054	.504	.185	.064	-.051	-.102	.035
14.	-1.523	-.855	-.549	-.497	-.394	-.155	-.084	.055	.466	.163	.047	-.063	-.107	.034
16.	-1.409	-.847	-.546	-.497	-.389	-.164	-.082	.063	.448	.143	.025	-.074	-.110	.034
18.	-1.293	-.834	-.538	-.492	-.392	-.161	-.090	.062	.414	.124	-.009	-.085	-.119	.033
20.	-1.182	-.827	-.526	-.498	-.399	-.169	-.089	.060	.394	.120	-.020	-.095	-.128	.032
22.	-1.091	-.827	-.525	-.504	-.405	-.166	-.087	.062	.361	.101	.002	-.104	-.130	.031
24.	-1.009	-.826	-.517	-.510	-.411	-.173	-.085	.065	.344	.087	-.011	-.114	-.134	.031
26.	-.930	-.825	-.517	-.515	-.404	-.169	-.084	.060	.324	.082	-.030	-.123	-.135	.030
28.	-.855	-.825	-.520	-.520	-.408	-.168	-.091	.066	.302	.065	-.045	-.131	-.140	.030
30.	-.799	-.811	-.523	-.526	-.426	-.173	-.090	.064	.280	.053	-.035	-.140	-.147	.029
32.	-.731	-.796	-.515	-.531	-.420	-.172	-.097	.063	.259	.048	-.068	-.148	-.155	.028
34.	-.680	-.795	-.505	-.536	-.425	-.177	-.095	.062	.239	.033	-.073	-.155	-.162	.028
36.	-.633	-.782	-.508	-.550	-.430	-.177	-.094	.065	.220	.019	-.072	-.163	-.169	.028
38.	-.588	-.769	-.499	-.559	-.435	-.184	-.092	.069	.201	.005	-.083	-.170	-.176	.036
40.	-.544	-.756	-.503	-.564	-.441	-.187	-.090	.072	.183	-.008	-.108	-.177	-.174	.036
42.	-.501	-.730	-.506	-.569	-.446	-.184	-.089	.076	.166	-.021	-.107	-.184	-.179	.035
44.	-.446	-.719	-.499	-.584	-.451	-.186	-.088	.079	.149	-.034	-.118	-.191	-.178	.036
46.	-.409	-.708	-.503	-.592	-.456	-.188	-.086	.082	.133	-.046	-.119	-.198	-.183	.043
48.	-.385	-.697	-.507	-.597	-.464	-.186	-.085	.081	.118	-.058	-.151	-.204	-.182	.042
50.	-.348	-.676	-.511	-.612	-.478	-.188	-.084	.080	.104	-.070	-.139	-.211	-.188	.041
52.	-.315	-.665	-.515	-.619	-.483	-.190	-.083	.079	.099	-.074	-.148	-.217	-.194	.044
54.	-.293	-.647	-.517	-.624	-.495	-.187	-.082	.083	.073	-.080	-.150	-.224	-.200	.049
56.	-.263	-.639	-.511	-.630	-.519	-.185	-.081	.091	.062	-.091	-.171	-.230	-.206	.048
58.	-.245	-.629	-.508	-.635	-.539	-.183	-.080	.092	.059	-.094	-.181	-.236	-.204	.048

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 12 TIME 50237.100 MU= .343 CLP= .00505 TEMP(U60)= 31.9 C = 89.38 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
60.	-.228	-.613	-.514	-.629	-.566	-.181	-.079	.097	.045	-.093	-.188	-.242	-.209	.051
62.	-.211	-.604	-.515	-.635	-.589	-.179	-.074	.098	.036	-.092	-.186	-.249	-.209	.055
64.	-.200	-.590	-.514	-.641	-.610	-.178	-.066	.104	.031	-.100	-.184	-.255	-.213	.058
66.	-.192	-.585	-.520	-.648	-.632	-.170	-.058	.104	.019	-.111	-.183	-.257	-.212	.061
68.	-.176	-.576	-.522	-.655	-.648	-.160	-.055	.110	.006	-.112	-.186	-.255	-.210	.061
70.	-.154	-.565	-.518	-.660	-.664	-.151	-.054	.110	-.006	-.120	-.196	-.258	-.209	.061
72.	-.118	-.556	-.515	-.656	-.675	-.142	-.049	.102	-.024	-.131	-.211	-.260	-.210	.060
74.	-.075	-.541	-.517	-.652	-.681	-.133	-.047	.109	-.048	-.151	-.222	-.263	-.214	.065
76.	-.040	-.526	-.514	-.649	-.688	-.124	-.046	.108	-.071	-.162	-.232	-.270	-.213	.067
78.	-.004	-.512	-.507	-.646	-.695	-.122	-.041	.100	-.095	-.183	-.253	-.277	-.215	.072
80.	.029	-.491	-.500	-.644	-.696	-.122	-.045	.100	-.125	-.193	-.280	-.290	-.219	.074
82.	.057	-.466	-.489	-.642	-.701	-.121	-.046	.107	-.154	-.214	-.300	-.300	-.218	.079
84.	.094	-.434	-.478	-.640	-.702	-.113	-.046	.107	-.177	-.224	-.317	-.307	-.217	.081
86.	.116	-.406	-.468	-.635	-.701	-.121	-.046	.106	-.201	-.238	-.332	-.321	-.217	.087
88.	.139	-.383	-.451	-.628	-.701	-.121	-.046	.105	-.224	-.282	-.357	-.330	-.213	.088
90.	.167	-.359	-.438	-.627	-.700	-.121	-.046	.099	-.248	-.336	-.375	-.338	-.209	.095
92.	.184	-.336	-.422	-.622	-.701	-.121	-.053	.101	-.271	-.390	-.370	-.346	-.209	.096
94.	.198	-.322	-.395	-.611	-.701	-.121	-.053	.104	-.295	-.440	-.409	-.347	-.205	.096
96.	.224	-.292	-.375	-.601	-.693	-.123	-.053	.099	-.320	-.476	-.422	-.348	-.202	.096
98.	.240	-.277	-.357	-.591	-.694	-.129	-.053	.099	-.344	-.521	-.414	-.341	-.203	.103
100.	.255	-.266	-.339	-.588	-.696	-.130	-.053	.100	-.369	-.560	-.423	-.333	-.198	.104
102.	.269	-.255	-.320	-.583	-.689	-.130	-.054	.100	-.384	-.584	-.426	-.326	-.197	.104
104.	.285	-.244	-.312	-.574	-.692	-.133	-.061	.101	-.409	-.608	-.438	-.312	-.191	.105
106.	.300	-.233	-.294	-.573	-.695	-.140	-.061	.101	-.435	-.629	-.451	-.305	-.191	.105
108.	.316	-.223	-.295	-.568	-.689	-.140	-.061	.098	-.450	-.644	-.530	-.299	-.185	.106
110.	.318	-.212	-.287	-.569	-.694	-.141	-.062	.095	-.477	-.664	-.590	-.290	-.185	.106
112.	.321	-.203	-.280	-.564	-.699	-.146	-.062	.095	-.493	-.686	-.605	-.278	-.180	.107
114.	.336	-.216	-.282	-.566	-.702	-.152	-.065	.096	-.510	-.708	-.601	-.271	-.180	.108
116.	.339	-.218	-.285	-.570	-.700	-.157	-.070	.092	-.539	-.731	-.639	-.265	-.174	.107
118.	.342	-.220	-.287	-.575	-.703	-.163	-.071	.090	-.566	-.756	-.658	-.259	-.175	.102

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 12 TIME 50237.100 MU= .343 CLP= .00505 TEMP(U60)= 31.9 C = 89.38 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C=	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
AZIMUTH														
120.	.342	-.222	-.290	-.581	-.696	-.164	-.072	.085	-.576	-.773	-.685	-.253	-.169	.103
122.	.334	-.224	-.293	-.587	-.675	-.171	-.076	.084	-.602	-.788	-.694	-.250	-.170	.104
124.	.338	-.230	-.296	-.594	-.627	-.176	-.081	.085	-.612	-.809	-.683	-.249	-.164	.102
126.	.337	-.238	-.300	-.600	-.563	-.178	-.083	.086	-.632	-.830	-.520	-.243	-.166	.098
128.	.331	-.236	-.307	-.596	-.518	-.188	-.084	.079	-.654	-.854	-.298	-.241	-.167	.099
130.	.329	-.248	-.319	-.615	-.489	-.192	-.089	.079	-.677	-.876	-.238	-.240	-.163	.100
132.	.318	-.251	-.327	-.611	-.477	-.195	-.093	.081	-.699	-.891	-.214	-.233	-.162	.098
134.	.313	-.255	-.338	-.619	-.477	-.197	-.095	.082	-.717	-.914	-.231	-.232	-.156	.095
136.	.311	-.259	-.343	-.610	-.490	-.200	-.096	.083	-.734	-.908	-.264	-.230	-.151	.096
138.	.299	-.263	-.348	-.581	-.497	-.203	-.097	.076	-.753	-.829	-.276	-.224	-.153	.092
140.	.287	-.274	-.354	-.565	-.493	-.207	-.093	.077	-.765	-.689	-.286	-.218	-.153	.090
142.	.274	-.286	-.353	-.564	-.481	-.210	-.092	.078	-.778	-.575	-.292	-.211	-.146	.092
144.	.261	-.291	-.354	-.570	-.471	-.214	-.094	.079	-.792	-.500	-.269	-.205	-.142	.093
146.	.248	-.305	-.361	-.565	-.475	-.218	-.095	.071	-.789	-.439	-.246	-.198	-.141	.088
148.	.223	-.316	-.375	-.561	-.475	-.212	-.097	.073	-.781	-.390	-.244	-.191	-.138	.087
150.	.203	-.332	-.379	-.556	-.461	-.215	-.099	.074	-.761	-.354	-.240	-.184	-.135	.089
152.	.175	-.355	-.391	-.546	-.453	-.209	-.101	.074	-.737	-.316	-.210	-.176	-.133	.082
154.	.125	-.379	-.403	-.531	-.448	-.213	-.103	.067	-.697	-.279	-.199	-.169	-.130	.082
156.	.099	-.403	-.411	-.533	-.454	-.218	-.098	.068	-.644	-.254	-.181	-.161	-.121	.084
158.	.063	-.416	-.421	-.537	-.466	-.223	-.100	.068	-.590	-.230	-.178	-.153	-.121	.084
160.	.023	-.439	-.431	-.541	-.464	-.217	-.102	.066	-.520	-.206	-.158	-.145	-.110	.086
162.	-.036	-.467	-.441	-.544	-.459	-.220	-.103	.060	-.455	-.190	-.140	-.136	-.112	.077
164.	-.064	-.496	-.451	-.549	-.453	-.215	-.096	.061	-.392	-.161	-.113	-.126	-.110	.078
166.	-.128	-.527	-.462	-.551	-.463	-.220	-.097	.063	-.325	-.130	-.095	-.116	-.100	.080
168.	-.178	-.541	-.473	-.557	-.459	-.221	-.097	.065	-.255	-.097	-.063	-.105	-.090	.082
170.	-.248	-.573	-.482	-.558	-.467	-.216	-.100	.068	-.179	-.068	-.059	-.080	-.087	.086
172.	-.325	-.607	-.510	-.566	-.478	-.221	-.102	.070	-.121	-.044	-.025	-.068	-.078	.086
174.	-.383	-.643	-.523	-.580	-.474	-.222	-.105	.071	-.041	-.015	-.024	-.056	-.067	.077
176.	-.468	-.661	-.537	-.580	-.484	-.219	-.108	.066	.043	.013	-.023	-.043	-.066	.079
178.	-.558	-.700	-.551	-.590	-.478	-.224	-.111	.062	.108	.054	.037	-.032	-.068	.081

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 12 TIME 50237.100 MU= .343 CLP= .00505 TEMP(U60)= 31.9 C = 89.38 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
180.	-.648	-.741	-.566	-.589	-.475	-.223	-.109	.063	.159	.086	.077	-.029	-.056	.083
182.	-.729	-.784	-.581	-.601	-.488	-.221	-.103	.065	.233	.109	.081	-.014	-.043	.086
184.	-.854	-.825	-.597	-.617	-.496	-.219	-.106	.067	.307	.134	.108	.002	-.044	.088
186.	-.964	-.848	-.618	-.614	-.495	-.217	-.109	.069	.364	.174	.150	.013	-.044	.090
188.	-1.079	-.877	-.651	-.629	-.509	-.223	-.112	.059	.425	.210	.154	.019	-.030	.093
190.	-1.209	-.928	-.669	-.647	-.516	-.230	-.107	.057	.489	.240	.158	.038	-.029	.089
192.	-1.357	-.973	-.688	-.640	-.516	-.225	-.103	.058	.549	.271	.175	.049	-.015	.082
194.	-1.492	-1.009	-.708	-.658	-.522	-.225	-.106	.060	.592	.304	.217	.059	-.015	.084
196.	-1.647	-1.057	-.729	-.651	-.523	-.218	-.109	.062	.637	.319	.223	.070	-.012	.086
198.	-1.830	-1.098	-.750	-.670	-.527	-.219	-.101	.063	.685	.328	.239	.083	.002	.089
200.	-2.007	-1.147	-.771	-.690	-.529	-.225	-.097	.065	.734	.360	.263	.094	.002	.091
202.	-2.190	-1.181	-.782	-.705	-.545	-.215	-.100	.067	.773	.375	.283	.097	.002	.094
204.	-2.364	-1.215	-.792	-.695	-.546	-.217	-.103	.069	.811	.411	.307	.113	.009	.097
206.	-2.529	-1.251	-.815	-.691	-.550	-.224	-.092	.071	.851	.426	.316	.124	.023	.100
208.	-2.720	-1.287	-.839	-.711	-.548	-.210	-.090	.073	.875	.467	.326	.128	.024	.103
210.	-2.871	-1.324	-.847	-.722	-.554	-.214	-.092	.075	.901	.482	.335	.148	.024	.106
212.	-3.021	-1.362	-.860	-.720	-.549	-.220	-.095	.077	.927	.495	.363	.159	.025	.092
214.	-3.192	-1.379	-.885	-.728	-.556	-.202	-.079	.080	.953	.510	.367	.163	.026	.089
216.	-3.340	-1.405	-.890	-.727	-.548	-.208	-.078	.082	1.004	.527	.386	.168	.026	.091
218.	-3.478	-1.444	-.883	-.732	-.556	-.212	-.080	.084	1.019	.573	.386	.173	.027	.094
220.	-3.585	-1.456	-.899	-.714	-.571	-.193	-.083	.087	1.035	.588	.385	.177	.028	.097
222.	-3.720	-1.485	-.923	-.712	-.558	-.199	-.085	.089	1.033	.604	.395	.182	.029	.099
224.	-3.867	-1.525	-.921	-.731	-.568	-.204	-.063	.091	1.051	.621	.406	.187	.029	.102
226.	-4.018	-1.530	-.939	-.728	-.550	-.204	-.064	.094	1.078	.637	.417	.192	.030	.105
228.	-4.127	-1.562	-.933	-.729	-.561	-.185	-.066	.096	1.069	.642	.427	.197	.031	.080
230.	-4.277	-1.562	-.952	-.747	-.575	-.190	-.068	.098	1.090	.629	.438	.202	.032	.082
232.	-4.383	-1.595	-.975	-.737	-.551	-.195	-.069	.101	1.116	.644	.448	.207	.032	.084
234.	-4.485	-1.589	-.961	-.709	-.563	-.189	-.071	.089	1.098	.659	.459	.211	.033	.086
236.	-4.584	-1.623	-.982	-.710	-.576	-.171	-.072	.091	1.074	.674	.427	.216	.034	.088
238.	-4.629	-1.611	-1.001	-.725	-.584	-.175	-.066	.091	1.097	.689	.479	.215	.035	.089

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 12 TIME 50237.100 MU= .343 CLP= .00505 TEMP(U60)= 31.9 C = 89.38 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
240.	-4.719	-1.641	-.984	-.704	-.559	-.179	-.046	.079	1.119	.703	.443	.192	.035	.091
242.	-4.751	-1.627	-.999	-.707	-.570	-.182	-.047	.080	1.137	.694	.452	.196	.036	.093
244.	-4.787	-1.650	-.981	-.720	-.571	-.186	-.048	.082	1.112	.683	.461	.199	.037	.095
246.	-4.859	-1.635	-.998	-.732	-.546	-.189	-.049	.083	1.131	.695	.468	.203	.037	.096
248.	-4.874	-1.651	-1.005	-.699	-.555	-.192	-.049	.085	1.140	.678	.476	.206	.038	.098
250.	-4.883	-1.633	-.986	-.704	-.564	-.174	-.050	.086	1.113	.699	.483	.209	.038	.099
252.	-4.885	-1.642	-1.000	-.714	-.571	-.183	-.051	.087	1.128	.694	.490	.212	.036	.101
254.	-4.880	-1.622	-.999	-.723	-.578	-.176	-.051	.088	1.127	.686	.496	.215	.008	.102
256.	-4.867	-1.640	-.979	-.678	-.585	-.164	-.052	.089	1.100	.694	.487	.217	.040	.103
258.	-4.847	-1.636	-.988	-.684	-.570	-.166	-.052	.090	1.110	.700	.454	.219	.040	.104
260.	-4.819	-1.614	-.996	-.690	-.547	-.167	-.053	.091	1.119	.706	.458	.221	.041	.105
262.	-4.812	-1.625	-1.003	-.694	-.551	-.168	-.053	.091	1.127	.711	.461	.222	.041	.106
264.	-4.806	-1.633	-.987	-.698	-.554	-.169	-.053	.092	1.133	.714	.463	.224	.041	.106
266.	-4.756	-1.612	-.966	-.701	-.556	-.170	-.054	.092	1.137	.717	.465	.200	.030	.107
268.	-4.698	-1.587	-.968	-.690	-.557	-.170	-.054	.092	1.140	.719	.466	.186	.004	.107
270.	-4.671	-1.588	-.943	-.648	-.558	-.170	-.054	.092	1.140	.719	.467	.186	.004	.107
272.	-4.627	-1.587	-.949	-.647	-.557	-.170	-.054	.092	1.140	.719	.466	.186	.004	.107
274.	-4.548	-1.583	-.937	-.646	-.556	-.170	-.054	.092	1.137	.717	.465	.186	.004	.107
276.	-4.508	-1.578	-.916	-.643	-.554	-.169	-.053	.092	1.133	.715	.463	.185	.004	.106
278.	-4.438	-1.569	-.912	-.640	-.551	-.168	-.053	.091	1.127	.711	.461	.184	.004	.106
280.	-4.389	-1.559	-.906	-.636	-.547	-.167	-.053	.091	1.120	.706	.458	.183	.004	.105
282.	-4.354	-1.547	-.898	-.631	-.543	-.166	-.052	.090	1.111	.701	.454	.181	.004	.104
284.	-4.313	-1.532	-.890	-.625	-.538	-.164	-.052	.089	1.100	.694	.450	.180	.004	.103
286.	-4.267	-1.515	-.880	-.618	-.532	-.163	-.051	.088	1.088	.686	.445	.178	.004	.102
288.	-4.160	-1.497	-.870	-.611	-.526	-.161	-.051	.087	1.120	.678	.440	.175	.004	.101
290.	-4.096	-1.477	-.858	-.602	-.519	-.159	-.050	.086	1.068	.669	.434	.173	.004	.100
292.	-4.036	-1.455	-.884	-.624	-.511	-.156	-.049	.085	1.092	.659	.428	.171	.004	.098
294.	-3.973	-1.480	-.874	-.634	-.503	-.154	-.049	.083	1.080	.649	.421	.168	.004	.097
296.	-3.964	-1.458	-.859	-.623	-.497	-.151	-.048	.082	1.062	.638	.414	.165	.004	.095
298.	-3.892	-1.432	-.843	-.612	-.524	-.148	-.047	.081	1.043	.626	.406	.162	.004	.093

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 12 TIME 50237.100 MU= .343 CLP= .00505 TEMP(U60)= 31.9 C = 89.38 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
300.	-3.818	-1.406	-.829	-.600	-.481	-.146	-.046	.079	1.073	.614	.398	.159	.003	.091
302.	-3.741	-1.423	-.849	-.624	-.507	-.143	-.045	.077	1.098	.602	.392	.156	.003	.083
304.	-3.670	-1.394	-.831	-.621	-.497	-.140	-.044	.076	1.075	.589	.423	.152	.003	.064
306.	-3.636	-1.369	-.813	-.607	-.486	-.137	-.043	.074	1.051	.576	.374	.149	-.026	.086
308.	-3.563	-1.376	-.795	-.593	-.475	-.133	-.042	.072	1.028	.563	.371	.136	-.026	.084
310.	-3.521	-1.353	-.784	-.579	-.474	-.147	-.053	.071	1.003	.574	.398	.113	-.025	.082
312.	-3.449	-1.354	-.792	-.565	-.489	-.156	-.066	.069	.988	.576	.388	.121	-.025	.080
314.	-3.413	-1.320	-.772	-.590	-.477	-.153	-.064	.067	.997	.561	.387	.135	-.024	.078
316.	-3.376	-1.299	-.763	-.576	-.465	-.149	-.063	.066	.983	.547	.397	.132	-.024	.076
318.	-3.319	-1.292	-.765	-.561	-.453	-.145	-.061	.064	.986	.533	.370	.129	-.023	.074
320.	-3.249	-1.272	-.745	-.549	-.455	-.141	-.060	.062	.960	.519	.374	.112	-.022	.072
322.	-3.189	-1.261	-.737	-.568	-.461	-.137	-.058	.082	.948	.505	.340	.096	-.022	.070
324.	-3.141	-1.243	-.735	-.557	-.448	-.133	-.056	.082	.945	.491	.331	.094	-.021	.068
326.	-3.120	-1.245	-.715	-.571	-.436	-.130	-.055	.058	.935	.506	.322	.091	-.027	.066
328.	-3.075	-1.228	-.709	-.562	-.441	-.146	-.069	.078	.928	.496	.313	.089	-.042	.064
330.	-3.029	-1.212	-.702	-.565	-.441	-.146	-.072	.075	.919	.482	.304	.086	-.041	.063
332.	-2.983	-1.211	-.698	-.533	-.428	-.141	-.070	.073	.909	.469	.280	.068	-.040	.061
334.	-2.960	-1.190	-.689	-.550	-.434	-.137	-.068	.071	.884	.455	.274	.060	-.039	.059
336.	-2.926	-1.176	-.685	-.555	-.431	-.154	-.066	.069	.877	.443	.279	.058	-.047	.057
338.	-2.879	-1.173	-.675	-.550	-.437	-.150	-.064	.067	.883	.430	.271	.056	-.056	.056
340.	-2.808	-1.169	-.672	-.552	-.431	-.146	-.062	.065	.869	.418	.281	.055	-.055	.054
342.	-2.754	-1.144	-.660	-.548	-.419	-.143	-.061	.063	.864	.406	.264	.053	-.053	.053
344.	-2.709	-1.133	-.658	-.547	-.427	-.157	-.076	.062	.848	.395	.249	.052	-.052	.051
346.	-2.639	-1.128	-.662	-.545	-.438	-.152	-.073	.060	.824	.388	.261	.033	-.061	.050
348.	-2.566	-1.123	-.647	-.555	-.429	-.148	-.071	.058	.801	.396	.240	.031	-.066	.048
350.	-2.495	-1.118	-.647	-.551	-.417	-.148	-.069	.057	.821	.385	.229	.030	-.064	.047
352.	-2.426	-1.112	-.632	-.550	-.426	-.157	-.069	.061	.806	.382	.222	.030	-.074	.045
354.	-2.386	-1.084	-.633	-.559	-.415	-.152	-.080	.069	.828	.386	.236	.029	-.076	.030
356.	-2.349	-1.077	-.635	-.552	-.404	-.153	-.078	.067	.831	.376	.252	.026	-.074	.042
358.	-2.286	-1.049	-.619	-.552	-.412	-.160	-.076	.072	.788	.357	.187	.012	-.072	.028

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 13 TIME 50398.900 MU= .371 CLP= .00547 TEMP(U60)= 31.9 C = 89.38 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
0.	-2.512	-1.060	-.665	-.547	-.402	-.138	-.057	.057	.782	.379	.219	.034	-.063	.019
2.	-2.415	-1.030	-.647	-.531	-.393	-.134	-.055	.063	.760	.360	.212	.031	-.076	.019
4.	-2.319	-1.002	-.646	-.533	-.398	-.130	-.054	.067	.737	.339	.166	.014	-.076	.018
6.	-2.205	-.977	-.628	-.522	-.391	-.133	-.057	.066	.698	.319	.162	.003	-.074	.018
8.	-2.102	-.968	-.614	-.508	-.394	-.137	-.063	.064	.676	.291	.155	-.001	-.085	.017
10.	-2.011	-.947	-.611	-.513	-.384	-.141	-.067	.062	.637	.265	.135	-.015	-.084	.017
12.	-1.896	-.942	-.595	-.501	-.380	-.143	-.072	.061	.601	.252	.123	-.029	-.093	.017
14.	-1.802	-.938	-.585	-.506	-.387	-.148	-.070	.059	.572	.233	.089	-.041	-.093	.021
16.	-1.705	-.933	-.581	-.495	-.393	-.148	-.075	.058	.551	.210	.069	-.053	-.103	.027
18.	-1.607	-.929	-.573	-.501	-.392	-.154	-.077	.056	.519	.188	.056	-.058	-.110	.027
20.	-1.517	-.925	-.567	-.506	-.391	-.153	-.081	.055	.489	.180	.048	-.064	-.110	.026
22.	-1.440	-.921	-.560	-.511	-.396	-.158	-.081	.055	.461	.164	.038	-.073	-.119	.026
24.	-1.365	-.917	-.553	-.516	-.401	-.156	-.080	.054	.435	.145	.023	-.083	-.122	.026
26.	-1.275	-.905	-.549	-.517	-.397	-.163	-.088	.063	.408	.126	.016	-.101	-.123	.026
28.	-1.191	-.895	-.543	-.511	-.400	-.162	-.088	.062	.391	.121	-.005	-.105	-.133	.024
30.	-1.110	-.883	-.542	-.516	-.406	-.169	-.086	.069	.362	.103	-.015	-.112	-.136	.023
32.	-1.032	-.865	-.534	-.527	-.411	-.166	-.093	.067	.344	.087	-.019	-.121	-.145	.023
34.	-.944	-.837	-.533	-.540	-.417	-.172	-.090	.069	.326	.071	-.033	-.129	-.151	.022
36.	-.868	-.817	-.534	-.545	-.420	-.170	-.091	.075	.306	.060	-.035	-.136	-.153	.032
38.	-.800	-.803	-.528	-.549	-.427	-.176	-.095	.073	.284	.054	-.068	-.145	-.160	.031
40.	-.733	-.776	-.528	-.562	-.430	-.174	-.096	.072	.266	.041	-.061	-.151	-.160	.032
42.	-.672	-.761	-.532	-.572	-.437	-.180	-.094	.074	.245	.026	-.072	-.161	-.165	.031
44.	-.611	-.736	-.524	-.585	-.442	-.180	-.092	.078	.227	.012	-.084	-.175	-.172	.038
46.	-.568	-.724	-.537	-.594	-.447	-.183	-.090	.077	.209	-.001	-.108	-.174	-.178	.038
48.	-.512	-.712	-.530	-.608	-.454	-.180	-.088	.076	.192	-.013	-.107	-.181	-.185	.037
50.	-.469	-.690	-.532	-.615	-.467	-.181	-.086	.076	.178	-.024	-.116	-.189	-.181	.038
52.	-.422	-.681	-.536	-.631	-.472	-.183	-.086	.080	.162	-.029	-.116	-.202	-.187	.040
54.	-.398	-.669	-.538	-.625	-.481	-.181	-.086	.081	.146	-.037	-.127	-.209	-.193	.044
56.	-.368	-.651	-.535	-.630	-.503	-.185	-.085	.086	.133	-.049	-.139	-.216	-.193	.043
58.	-.343	-.644	-.539	-.635	-.530	-.186	-.079	.087	.128	-.053	-.143	-.222	-.199	.046

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 13 TIME 50398.900 MU= .371 CLP= .00547 TEMP(U60)= 31.9 C = 89.38 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
60.	-.315	-.632	-.540	-.640	-.552	-.183	-.075	.093	.114	-.059	-.137	-.228	-.204	.051
62.	-.296	-.618	-.538	-.647	-.578	-.176	-.070	.093	.101	-.062	-.151	-.234	-.201	.050
64.	-.280	-.612	-.544	-.664	-.605	-.172	-.067	.099	.086	-.071	-.160	-.236	-.202	.049
66.	-.263	-.601	-.544	-.667	-.621	-.164	-.061	.106	.073	-.072	-.147	-.234	-.206	.054
68.	-.246	-.590	-.545	-.665	-.644	-.154	-.053	.105	.060	-.082	-.145	-.238	-.207	.056
70.	-.221	-.586	-.551	-.672	-.657	-.144	-.051	.104	.047	-.082	-.150	-.244	-.211	.056
72.	-.174	-.575	-.551	-.675	-.670	-.135	-.043	.105	.027	-.093	-.168	-.251	-.209	.055
74.	-.125	-.559	-.547	-.671	-.678	-.125	-.043	.110	.004	-.113	-.200	-.257	-.207	.056
76.	-.072	-.544	-.545	-.667	-.686	-.117	-.043	.102	-.029	-.136	-.218	-.265	-.210	.061
78.	-.038	-.521	-.535	-.664	-.693	-.109	-.041	.102	-.057	-.157	-.237	-.272	-.213	.068
80.	.003	-.505	-.522	-.662	-.699	-.108	-.043	.102	-.088	-.178	-.265	-.286	-.212	.077
82.	.044	-.482	-.512	-.653	-.699	-.108	-.043	.101	-.115	-.197	-.308	-.294	-.217	.076
84.	.085	-.457	-.493	-.647	-.707	-.108	-.042	.101	-.149	-.207	-.296	-.309	-.219	.083
86.	.100	-.422	-.481	-.639	-.706	-.108	-.042	.101	-.174	-.225	-.312	-.317	-.218	.084
88.	.141	-.398	-.462	-.634	-.705	-.108	-.042	.101	-.198	-.266	-.344	-.332	-.212	.090
90.	.168	-.363	-.443	-.626	-.705	-.108	-.042	.101	-.233	-.320	-.356	-.340	-.211	.090
92.	.183	-.340	-.433	-.623	-.705	-.108	-.045	.101	-.256	-.375	-.398	-.348	-.211	.092
94.	.209	-.318	-.413	-.615	-.704	-.112	-.047	.101	-.281	-.429	-.399	-.355	-.204	.098
96.	.226	-.305	-.386	-.605	-.697	-.116	-.045	.101	-.305	-.472	-.399	-.355	-.204	.098
98.	.251	-.282	-.366	-.595	-.696	-.116	-.049	.101	-.330	-.506	-.398	-.356	-.204	.101
100.	.266	-.262	-.341	-.585	-.692	-.122	-.050	.102	-.355	-.541	-.396	-.354	-.198	.106
102.	.281	-.252	-.326	-.576	-.690	-.125	-.050	.102	-.380	-.568	-.417	-.343	-.197	.106
104.	.296	-.241	-.314	-.567	-.688	-.126	-.050	.096	-.402	-.593	-.444	-.328	-.192	.107
106.	.312	-.230	-.300	-.559	-.691	-.126	-.054	.096	-.421	-.618	-.495	-.314	-.191	.107
108.	.322	-.219	-.287	-.561	-.689	-.126	-.057	.097	-.447	-.643	-.537	-.298	-.186	.108
110.	.331	-.209	-.274	-.555	-.690	-.128	-.058	.097	-.469	-.651	-.576	-.289	-.184	.109
112.	.340	-.198	-.272	-.559	-.695	-.136	-.057	.098	-.492	-.677	-.609	-.277	-.181	.109
114.	.352	-.194	-.267	-.564	-.700	-.137	-.065	.099	-.513	-.704	-.636	-.268	-.179	.111
116.	.360	-.196	-.266	-.569	-.707	-.139	-.067	.092	-.530	-.734	-.661	-.262	-.176	.111
118.	.363	-.206	-.269	-.574	-.706	-.141	-.067	.092	-.557	-.764	-.669	-.256	-.174	.106

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 13 TIME 50398.900 MU= .371 CLP= .00547 TEMP(U60)= 31.9 C = 89.38 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C=	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
AZIMUTH														
120.	.367	-.203	-.272	-.575	-.711	-.150	-.068	.091	-.580	-.785	-.688	-.250	-.172	.105
122.	.359	-.212	-.275	-.575	-.710	-.153	-.076	.087	-.599	-.817	-.702	-.244	-.169	.107
124.	.360	-.217	-.278	-.582	-.697	-.162	-.077	.088	-.619	-.845	-.720	-.238	-.168	.108
126.	.351	-.220	-.291	-.589	-.662	-.166	-.079	.089	-.640	-.863	-.741	-.232	-.164	.109
128.	.355	-.223	-.296	-.596	-.591	-.175	-.087	.086	-.662	-.895	-.753	-.235	-.164	.102
130.	.344	-.238	-.300	-.605	-.531	-.181	-.088	.079	-.685	-.915	-.547	-.228	-.159	.103
132.	.348	-.242	-.315	-.613	-.505	-.189	-.090	.080	-.709	-.928	-.260	-.224	-.160	.097
134.	.337	-.247	-.320	-.613	-.490	-.192	-.091	.080	-.720	-.942	-.208	-.225	-.154	.098
136.	.326	-.261	-.325	-.619	-.488	-.200	-.095	.078	-.746	-.957	-.177	-.221	-.156	.100
138.	.317	-.256	-.332	-.607	-.496	-.208	-.099	.079	-.771	-.951	-.224	-.222	-.149	.099
140.	.315	-.272	-.347	-.576	-.505	-.212	-.096	.081	-.784	-.879	-.285	-.216	-.151	.094
142.	.290	-.277	-.350	-.570	-.505	-.216	-.097	.075	-.798	-.736	-.290	-.210	-.145	.092
144.	.278	-.286	-.348	-.566	-.493	-.213	-.099	.074	-.813	-.615	-.292	-.203	-.148	.088
146.	.265	-.302	-.355	-.576	-.489	-.214	-.101	.076	-.823	-.523	-.274	-.201	-.149	.090
148.	.244	-.314	-.362	-.586	-.486	-.218	-.103	.077	-.818	-.454	-.246	-.200	-.141	.092
150.	.220	-.330	-.369	-.580	-.482	-.222	-.105	.069	-.802	-.401	-.241	-.186	-.134	.093
152.	.195	-.352	-.384	-.564	-.478	-.227	-.107	.070	-.778	-.349	-.226	-.174	-.129	.089
154.	.149	-.385	-.399	-.560	-.482	-.222	-.110	.072	-.736	-.308	-.199	-.167	-.128	.087
156.	.104	-.411	-.407	-.556	-.483	-.226	-.104	.072	-.683	-.267	-.179	-.159	-.119	.089
158.	.065	-.427	-.417	-.557	-.479	-.219	-.104	.064	-.617	-.241	-.159	-.150	-.116	.083
160.	.024	-.460	-.436	-.564	-.487	-.224	-.107	.066	-.541	-.214	-.146	-.141	-.113	.082
162.	-.034	-.496	-.451	-.567	-.474	-.229	-.109	.067	-.461	-.185	-.132	-.121	-.110	.084
164.	-.085	-.527	-.463	-.581	-.480	-.223	-.101	.066	-.390	-.151	-.105	-.110	-.105	.086
166.	-.151	-.559	-.474	-.586	-.477	-.227	-.104	.059	-.307	-.109	-.085	-.099	-.095	.088
168.	-.225	-.594	-.487	-.582	-.473	-.222	-.106	.061	-.231	-.089	-.053	-.088	-.084	.078
170.	-.303	-.630	-.514	-.578	-.484	-.227	-.109	.062	-.154	-.054	-.016	-.076	-.083	.080
172.	-.386	-.668	-.529	-.586	-.497	-.229	-.109	.065	-.074	-.016	-.030	-.064	-.075	.083
174.	-.447	-.687	-.541	-.602	-.491	-.224	-.112	.068	.015	.017	.009	-.049	-.071	.087
176.	-.561	-.728	-.557	-.618	-.502	-.230	-.116	.062	.084	.048	.069	-.035	-.061	.089
178.	-.658	-.772	-.573	-.619	-.501	-.231	-.122	.056	.195	.089	.054	-.021	-.047	.091

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 13 TIME 50398.900 MU= .371 CLP= .00547 TEMP(U60)= 31.9 C = 89.38 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C=	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
AZIMUTH														
180.	-.762	-.818	-.595	-.633	-.518	-.230	-.120	.057	.248	.122	.094	-.007	-.051	.092
182.	-.869	-.861	-.628	-.631	-.527	-.237	-.115	.059	.324	.148	.120	.009	-.037	.090
184.	-.983	-.892	-.647	-.648	-.521	-.234	-.118	.060	.384	.190	.142	.027	-.037	.082
186.	-1.112	-.938	-.666	-.668	-.523	-.234	-.122	.062	.447	.227	.152	.038	-.023	.085
188.	-1.270	-.975	-.686	-.664	-.539	-.242	-.126	.064	.514	.258	.182	.047	-.021	.087
190.	-1.437	-1.032	-.707	-.684	-.545	-.249	-.117	.066	.575	.291	.213	.068	-.008	.090
192.	-1.613	-1.080	-.738	-.705	-.548	-.240	-.116	.054	.635	.329	.237	.079	-.002	.094
194.	-1.799	-1.127	-.773	-.722	-.565	-.245	-.121	.053	.700	.363	.257	.093	.013	.097
196.	-1.998	-1.177	-.799	-.723	-.570	-.236	-.125	.055	.750	.377	.277	.103	.010	.099
198.	-2.206	-1.215	-.825	-.737	-.578	-.241	-.114	.073	.805	.416	.286	.121	.019	.102
200.	-2.402	-1.273	-.851	-.740	-.578	-.249	-.114	.058	.844	.457	.312	.130	.031	.105
202.	-2.621	-1.325	-.860	-.764	-.589	-.235	-.118	.060	.871	.472	.353	.134	.032	.108
204.	-2.806	-1.367	-.880	-.774	-.585	-.243	-.122	.061	.922	.487	.354	.158	.033	.094
206.	-3.010	-1.411	-.908	-.765	-.598	-.248	-.105	.063	.961	.508	.379	.166	.047	.094
208.	-3.199	-1.456	-.913	-.773	-.590	-.235	-.108	.065	.992	.551	.400	.171	.058	.097
210.	-3.388	-1.502	-.938	-.777	-.607	-.237	-.112	.068	1.023	.577	.413	.201	.060	.100
212.	-3.627	-1.516	-.968	-.787	-.594	-.225	-.112	.070	1.056	.620	.426	.207	.061	.103
214.	-3.837	-1.561	-.968	-.812	-.611	-.232	-.095	.072	1.089	.639	.472	.214	.063	.106
216.	-4.050	-1.609	-.998	-.810	-.598	-.228	-.095	.076	1.084	.662	.489	.221	.065	.110
218.	-4.217	-1.620	-1.022	-.793	-.613	-.216	-.100	.078	1.123	.683	.472	.230	.073	.116
220.	-4.357	-1.665	-1.026	-.809	-.628	-.223	-.101	.081	1.148	.703	.482	.235	.070	.118
222.	-4.528	-1.677	-1.047	-.797	-.614	-.215	-.098	.083	1.149	.724	.501	.244	.078	.123
224.	-4.678	-1.718	-1.053	-.816	-.626	-.209	-.085	.084	1.169	.718	.503	.249	.074	.114
226.	-4.855	-1.732	-1.073	-.797	-.617	-.215	-.087	.086	1.155	.723	.492	.256	.076	.098
228.	-5.011	-1.767	-1.076	-.818	-.618	-.221	-.090	.088	1.152	.744	.528	.263	.078	.101
230.	-5.144	-1.766	-1.092	-.795	-.611	-.204	-.092	.091	1.168	.764	.524	.271	.080	.103
232.	-5.137	-1.763	-1.096	-.811	-.627	-.199	-.095	.093	1.166	.785	.553	.278	.082	.106
234.	-5.056	-1.779	-1.125	-.789	-.620	-.205	-.076	.096	1.175	.805	.537	.264	.075	.109
236.	-4.994	-1.798	-1.131	-.798	-.615	-.210	-.068	.098	1.175	.782	.551	.257	.053	.112
238.	-4.948	-1.844	-1.138	-.777	-.630	-.215	-.070	.067	1.175	.797	.539	.263	.054	.115

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 13 TIME 50398.900 MU= .371 CLP= .00547 TEMP(U60)= 31.9 C = 89.38 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
240.	-4.863	-1.911	-1.137	-.795	-.645	-.220	-.071	.068	1.177	.815	.527	.269	.055	.117
242.	-4.766	-1.918	-1.145	-.812	-.624	-.225	-.073	.070	1.203	.782	.538	.275	.056	.092
244.	-4.560	-1.977	-1.169	-.807	-.624	-.190	-.074	.071	1.189	.799	.549	.281	.057	.086
246.	-4.243	-2.119	-1.156	-.790	-.636	-.194	-.076	.073	1.151	.814	.560	.286	.059	.087
248.	-4.000	-2.280	-1.165	-.776	-.648	-.198	-.077	.074	1.156	.829	.570	.291	.060	.089
250.	-3.835	-2.292	-1.144	-.760	-.611	-.201	-.079	.075	1.176	.829	.580	.296	.061	.090
252.	-3.605	-2.426	-1.154	-.772	-.617	-.204	-.080	.076	1.140	.801	.589	.301	.062	.092
254.	-3.632	-2.358	-1.170	-.744	-.626	-.194	-.081	.077	1.149	.812	.597	.305	.062	.093
256.	-3.675	-2.196	-1.185	-.732	-.630	-.167	-.082	.078	1.163	.822	.605	.309	.063	.094
258.	-3.565	-2.339	-1.147	-.740	-.586	-.168	-.083	.079	1.176	.831	.552	.304	.064	.095
260.	-3.529	-2.239	-1.152	-.698	-.592	-.170	-.084	.056	1.182	.838	.557	.282	.065	.096
262.	-3.531	-2.265	-1.114	-.691	-.596	-.171	-.084	.040	1.131	.845	.562	.305	.065	.097
264.	-3.394	-2.346	-1.110	-.695	-.600	-.172	-.085	.040	1.138	.815	.565	.275	.065	.097
266.	-3.229	-2.423	-1.086	-.698	-.602	-.173	-.081	.071	1.143	.794	.567	.277	.066	.098
268.	-3.044	-2.460	-1.110	-.638	-.580	-.169	-.081	.054	1.149	.802	.571	.280	.062	.101
270.	-2.991	-2.459	-1.072	-.635	-.544	-.172	-.063	.041	1.154	.799	.576	.280	.031	.101
272.	-3.056	-2.494	-1.076	-.637	-.548	-.174	-.046	.040	1.146	.796	.569	.277	.023	.098
274.	-3.277	-2.297	-1.097	-.636	-.547	-.173	-.046	.040	1.143	.794	.567	.277	.023	.098
276.	-3.580	-2.050	-1.147	-.633	-.576	-.172	-.045	.040	1.138	.791	.565	.275	.023	.097
278.	-3.874	-1.905	-1.166	-.644	-.597	-.171	-.075	.040	1.132	.786	.562	.274	.023	.097
280.	-4.067	-1.861	-1.127	-.686	-.592	-.170	-.084	.039	1.123	.780	.558	.272	.023	.096
282.	-4.185	-1.844	-1.096	-.680	-.587	-.169	-.083	.039	1.113	.773	.552	.269	.023	.095
284.	-4.191	-1.825	-1.084	-.672	-.580	-.167	-.082	.031	1.101	.765	.547	.266	.022	.094
286.	-4.194	-1.802	-1.071	-.664	-.573	-.165	-.081	.008	1.132	.763	.540	.263	.022	.093
288.	-4.154	-1.778	-1.056	-.655	-.565	-.162	-.080	.038	1.134	.801	.532	.260	.022	.092
290.	-4.151	-1.751	-1.040	-.645	-.557	-.160	-.079	.037	1.117	.789	.569	.256	.021	.090
292.	-4.092	-1.722	-1.023	-.634	-.548	-.157	-.077	.022	1.098	.761	.571	.251	.021	.089
294.	-4.148	-1.691	-1.005	-.623	-.538	-.155	-.076	-.001	1.079	.727	.561	.247	.021	.087
296.	-4.208	-1.713	-.986	-.611	-.528	-.152	-.082	.016	1.112	.747	.550	.242	.020	.086
298.	-4.327	-1.680	-1.011	-.638	-.517	-.149	-.107	.034	1.092	.732	.539	.237	.020	.084

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 13 TIME 50398.900 MU= .371 CLP= .00547 TEMP(U60)= 31.9 C = 89.38 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
300.	-4.441	-1.648	-.989	-.638	-.506	-.145	-.104	.034	1.072	.717	.527	.232	.020	.082
302.	-4.602	-1.659	-.967	-.624	-.504	-.142	-.102	.033	1.098	.700	.515	.227	.019	.080
304.	-4.736	-1.629	-.952	-.609	-.527	-.139	-.087	.032	1.072	.712	.503	.222	.019	.078
306.	-4.807	-1.631	-.962	-.640	-.514	-.135	-.066	.031	1.056	.714	.491	.216	.018	.076
308.	-4.849	-1.589	-.937	-.627	-.501	-.132	-.065	.030	1.069	.695	.478	.211	.018	.075
310.	-4.840	-1.563	-.913	-.610	-.488	-.128	-.063	.055	1.056	.677	.466	.205	.017	.073
312.	-4.803	-1.570	-.903	-.598	-.475	-.125	-.061	.059	1.060	.659	.468	.200	.017	.071
314.	-4.726	-1.555	-.901	-.621	-.481	-.121	-.060	.057	1.049	.675	.467	.194	.016	.069
316.	-4.621	-1.531	-.893	-.604	-.487	-.118	-.058	.055	1.046	.663	.428	.189	.016	.067
318.	-4.516	-1.510	-.885	-.596	-.473	-.141	-.076	.054	1.038	.644	.416	.183	.015	.065
320.	-4.435	-1.489	-.859	-.610	-.482	-.140	-.080	.052	1.028	.625	.425	.178	.004	.063
322.	-4.322	-1.487	-.854	-.591	-.480	-.136	-.078	.051	1.022	.644	.430	.173	-.012	.061
324.	-4.193	-1.457	-.840	-.588	-.465	-.132	-.075	.049	1.007	.625	.417	.167	-.012	.059
326.	-4.065	-1.440	-.837	-.593	-.477	-.154	-.073	.048	1.003	.606	.404	.162	-.011	.057
328.	-3.941	-1.435	-.820	-.592	-.469	-.149	-.093	.053	1.011	.587	.392	.157	-.011	.056
330.	-3.820	-1.428	-.819	-.592	-.455	-.145	-.090	.060	.989	.577	.406	.153	-.011	.054
332.	-3.702	-1.390	-.798	-.593	-.441	-.140	-.088	.052	.988	.583	.400	.148	-.010	.052
334.	-3.587	-1.377	-.799	-.588	-.456	-.136	-.085	.064	.963	.565	.360	.142	-.027	.051
336.	-3.514	-1.368	-.776	-.591	-.443	-.132	-.082	.062	.964	.548	.374	.117	-.031	.049
338.	-3.444	-1.358	-.778	-.582	-.455	-.136	-.080	.060	.967	.543	.364	.113	-.030	.048
340.	-3.375	-1.318	-.778	-.564	-.441	-.144	-.077	.058	.939	.556	.353	.109	-.029	.046
342.	-3.307	-1.308	-.757	-.571	-.432	-.140	-.075	.056	.941	.553	.342	.106	-.028	.045
344.	-3.240	-1.298	-.754	-.582	-.438	-.136	-.073	.054	.938	.520	.332	.103	-.027	.043
346.	-3.167	-1.281	-.736	-.568	-.425	-.132	-.070	.053	.915	.510	.326	.092	-.045	.036
348.	-3.071	-1.249	-.731	-.576	-.420	-.139	-.066	.051	.909	.503	.331	.078	-.043	.023
350.	-2.977	-1.222	-.715	-.560	-.421	-.140	-.064	.052	.891	.491	.303	.077	-.041	.024
352.	-2.888	-1.168	-.706	-.566	-.418	-.137	-.064	.048	.883	.474	.296	.075	-.041	.023
354.	-2.804	-1.145	-.696	-.553	-.418	-.133	-.062	.047	.854	.460	.276	.062	-.056	.021
356.	-2.722	-1.125	-.686	-.557	-.406	-.143	-.060	.060	.840	.446	.264	.053	-.054	.021
358.	-2.643	-1.092	-.677	-.546	-.407	-.142	-.059	.059	.829	.413	.258	.051	-.052	.020

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 83 RUN 25 TIME 52732.500 MU= .236 CLP= .00436 TEMP(U60)= 31.9 C = 89.37 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C=	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
AZIMUTH														
0.	-.663	-.571	-.387	-.411	-.348	-.141	-.071	.063	.219	.035	-.025	-.101	-.105	.058
2.	-.648	-.560	-.388	-.407	-.351	-.138	-.069	.061	.215	.019	-.050	-.104	-.107	.057
4.	-.572	-.532	-.380	-.413	-.351	-.146	-.068	.060	.185	.003	-.058	-.110	-.113	.056
6.	-.503	-.505	-.367	-.402	-.345	-.145	-.067	.059	.147	-.013	-.065	-.120	-.115	.055
8.	-.465	-.480	-.360	-.382	-.339	-.142	-.074	.058	.127	-.014	-.072	-.122	-.120	.054
10.	-.437	-.454	-.347	-.379	-.333	-.150	-.075	.057	.108	-.028	-.093	-.127	-.122	.060
12.	-.368	-.422	-.335	-.385	-.327	-.149	-.074	.046	.057	-.057	-.123	-.136	-.127	.063
14.	-.256	-.391	-.322	-.379	-.330	-.146	-.072	.055	-.018	-.086	-.129	-.138	-.124	.062
16.	-.160	-.360	-.304	-.373	-.330	-.144	-.071	.054	-.089	-.113	-.134	-.143	-.122	.061
18.	-.094	-.339	-.293	-.367	-.325	-.142	-.077	.044	-.143	-.127	-.140	-.144	-.124	.060
20.	-.067	-.334	-.288	-.361	-.328	-.139	-.078	.043	-.172	-.126	-.145	-.149	-.129	.059
22.	-.076	-.336	-.284	-.355	-.328	-.146	-.077	.042	-.185	-.137	-.150	-.157	-.130	.058
24.	-.083	-.346	-.286	-.353	-.323	-.146	-.076	.051	-.197	-.149	-.154	-.158	-.134	.057
26.	-.072	-.348	-.287	-.362	-.326	-.152	-.075	.050	-.209	-.160	-.166	-.162	-.136	.056
28.	-.054	-.343	-.289	-.367	-.334	-.151	-.080	.050	-.220	-.171	-.171	-.170	-.140	.056
30.	-.036	-.338	-.291	-.365	-.334	-.149	-.081	.058	-.239	-.169	-.175	-.171	-.141	.055
32.	-.028	-.334	-.287	-.371	-.337	-.156	-.080	.048	-.257	-.179	-.173	-.175	-.149	.054
34.	-.028	-.329	-.289	-.369	-.337	-.155	-.079	.056	-.260	-.178	-.176	-.176	-.152	.053
36.	-.028	-.332	-.290	-.374	-.340	-.153	-.078	.056	-.257	-.175	-.187	-.180	-.150	.053
38.	-.036	-.342	-.293	-.373	-.340	-.159	-.077	.055	-.254	-.185	-.185	-.180	-.149	.052
40.	-.051	-.351	-.294	-.381	-.343	-.158	-.076	.054	-.251	-.183	-.177	-.178	-.150	.051
42.	-.066	-.360	-.297	-.386	-.351	-.156	-.082	.054	-.248	-.170	-.168	-.182	-.154	.051
44.	-.073	-.369	-.298	-.385	-.351	-.154	-.082	.053	-.238	-.178	-.172	-.183	-.155	.050
46.	-.072	-.378	-.301	-.393	-.347	-.161	-.082	.053	-.229	-.177	-.171	-.187	-.159	.050
48.	-.071	-.380	-.308	-.398	-.350	-.160	-.081	.052	-.227	-.175	-.175	-.188	-.160	.049
50.	-.070	-.383	-.310	-.397	-.351	-.158	-.080	.060	-.224	-.174	-.179	-.192	-.164	.049
52.	-.070	-.386	-.312	-.405	-.354	-.165	-.085	.059	-.222	-.172	-.177	-.199	-.165	.048
54.	-.069	-.389	-.314	-.411	-.362	-.164	-.086	.058	-.220	-.181	-.182	-.200	-.169	.053
56.	-.068	-.391	-.317	-.410	-.370	-.170	-.085	.058	-.218	-.180	-.180	-.198	-.167	.055
58.	-.068	-.394	-.324	-.419	-.377	-.170	-.085	.057	-.217	-.179	-.179	-.196	-.166	.055

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 83 RUN 25 TIME 52732.500 MU= .236 CLP= .00436 TEMP(U60)= 31.9 C = 89.37 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C=	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
AZIMUTH														
60.	-.075	-.404	-.332	-.430	-.378	-.176	-.090	.057	-.215	-.177	-.183	-.201	-.165	.054
62.	-.081	-.413	-.339	-.444	-.382	-.175	-.085	.064	-.213	-.176	-.182	-.202	-.164	.054
64.	-.081	-.422	-.341	-.447	-.390	-.174	-.083	.064	-.206	-.175	-.163	-.200	-.165	.054
66.	-.088	-.431	-.344	-.464	-.398	-.173	-.082	.063	-.192	-.174	-.162	-.205	-.169	.053
68.	-.094	-.441	-.352	-.473	-.399	-.179	-.082	.063	-.186	-.173	-.173	-.206	-.171	.053
70.	-.101	-.450	-.360	-.485	-.404	-.179	-.081	.070	-.185	-.172	-.172	-.205	-.175	.058
72.	-.106	-.460	-.368	-.502	-.412	-.179	-.087	.070	-.178	-.171	-.176	-.210	-.174	.060
74.	-.106	-.470	-.370	-.511	-.414	-.178	-.082	.070	-.171	-.170	-.187	-.211	-.174	.060
76.	-.098	-.480	-.374	-.523	-.419	-.184	-.080	.077	-.171	-.180	-.186	-.210	-.173	.060
78.	-.092	-.477	-.382	-.538	-.427	-.184	-.080	.077	-.176	-.180	-.191	-.215	-.175	.059
80.	-.083	-.470	-.386	-.539	-.430	-.184	-.080	.076	-.181	-.189	-.201	-.222	-.179	.059
82.	-.070	-.469	-.390	-.549	-.429	-.184	-.080	.076	-.187	-.200	-.212	-.224	-.179	.064
84.	-.056	-.462	-.393	-.559	-.434	-.183	-.080	.076	-.198	-.210	-.222	-.229	-.179	.066
86.	-.035	-.450	-.398	-.567	-.438	-.190	-.079	.076	-.210	-.220	-.227	-.231	-.181	.066
88.	-.015	-.438	-.402	-.569	-.437	-.191	-.079	.076	-.227	-.220	-.232	-.237	-.186	.066
90.	-.002	-.427	-.402	-.577	-.443	-.191	-.079	.083	-.250	-.241	-.249	-.239	-.186	.071
92.	.020	-.415	-.407	-.580	-.447	-.191	-.079	.076	-.273	-.252	-.270	-.239	-.186	.074
94.	.039	-.404	-.412	-.589	-.447	-.191	-.079	.076	-.291	-.262	-.265	-.245	-.186	.074
96.	.052	-.393	-.412	-.589	-.448	-.191	-.080	.076	-.309	-.263	-.266	-.248	-.186	.074
98.	.074	-.382	-.407	-.590	-.449	-.199	-.080	.076	-.326	-.274	-.282	-.248	-.184	.079
100.	.094	-.371	-.404	-.592	-.450	-.200	-.080	.077	-.351	-.285	-.288	-.249	-.179	.082
102.	.107	-.361	-.400	-.593	-.458	-.193	-.080	.083	-.375	-.307	-.278	-.249	-.180	.082
104.	.122	-.350	-.397	-.592	-.456	-.200	-.086	.077	-.394	-.308	-.285	-.250	-.180	.082
106.	.136	-.340	-.393	-.586	-.461	-.202	-.088	.077	-.419	-.320	-.302	-.251	-.181	.082
108.	.150	-.329	-.385	-.586	-.460	-.203	-.088	.077	-.438	-.322	-.298	-.252	-.182	.083
110.	.165	-.319	-.378	-.577	-.458	-.204	-.089	.078	-.452	-.334	-.305	-.253	-.183	.083
112.	.171	-.309	-.370	-.569	-.461	-.205	-.083	.078	-.473	-.336	-.318	-.255	-.181	.084
114.	.181	-.306	-.362	-.564	-.464	-.206	-.082	.079	-.499	-.338	-.319	-.250	-.177	.084
116.	.196	-.301	-.355	-.564	-.460	-.207	-.083	.079	-.520	-.340	-.321	-.249	-.178	.085
118.	.203	-.290	-.353	-.557	-.459	-.201	-.083	.080	-.536	-.342	-.317	-.251	-.179	.085

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 83 RUN 25 TIME 52732.500 MU= .236 CLP= .00436 TEMP(U60)= 31.9 C = 89.37 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C=	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
AZIMUTH														
120.	.213	-.287	-.350	-.546	-.456	-.202	-.084	.080	-.552	-.355	-.314	-.247	-.177	.086
122.	.220	-.283	-.349	-.530	-.455	-.203	-.085	.081	-.575	-.347	-.304	-.247	-.174	.086
124.	.222	-.280	-.346	-.522	-.452	-.205	-.085	.081	-.598	-.361	-.296	-.249	-.176	.087
126.	.233	-.275	-.332	-.511	-.445	-.199	-.086	.074	-.616	-.365	-.286	-.244	-.174	.088
128.	.232	-.272	-.321	-.499	-.438	-.200	-.087	.075	-.634	-.368	-.291	-.244	-.170	.089
130.	.237	-.275	-.320	-.500	-.439	-.202	-.088	.076	-.653	-.371	-.304	-.240	-.172	.090
132.	.246	-.277	-.317	-.493	-.443	-.204	-.089	.076	-.672	-.375	-.294	-.240	-.170	.090
134.	.248	-.273	-.310	-.486	-.440	-.206	-.089	.069	-.685	-.379	-.293	-.236	-.167	.091
136.	.251	-.270	-.302	-.478	-.434	-.200	-.084	.070	-.700	-.383	-.295	-.230	-.165	.092
138.	.254	-.273	-.302	-.475	-.435	-.202	-.083	.071	-.714	-.388	-.293	-.230	-.162	.087
140.	.257	-.277	-.305	-.477	-.432	-.195	-.084	.079	-.730	-.380	-.289	-.226	-.164	.086
142.	.250	-.280	-.309	-.470	-.426	-.197	-.085	.072	-.745	-.385	-.287	-.227	-.163	.087
144.	.247	-.275	-.306	-.462	-.428	-.200	-.087	.073	-.754	-.389	-.276	-.223	-.159	.088
146.	.240	-.273	-.299	-.455	-.425	-.193	-.081	.074	-.764	-.382	-.276	-.223	-.161	.089
148.	.237	-.277	-.291	-.452	-.419	-.195	-.080	.075	-.774	-.374	-.285	-.219	-.160	.090
150.	.230	-.281	-.291	-.454	-.412	-.198	-.081	.076	-.785	-.366	-.274	-.219	-.157	.092
152.	.227	-.285	-.295	-.446	-.405	-.191	-.083	.077	-.796	-.371	-.274	-.215	-.155	.086
154.	.230	-.289	-.292	-.443	-.407	-.194	-.084	.077	-.799	-.363	-.260	-.208	-.152	.085
156.	.234	-.284	-.284	-.445	-.404	-.187	-.077	.070	-.796	-.355	-.254	-.209	-.150	.086
158.	.226	-.283	-.284	-.438	-.398	-.189	-.077	.071	-.802	-.347	-.264	-.204	-.146	.087
160.	.211	-.287	-.288	-.430	-.400	-.182	-.078	.072	-.797	-.352	-.243	-.205	-.149	.089
162.	.208	-.292	-.285	-.426	-.397	-.185	-.080	.072	-.787	-.343	-.228	-.200	-.147	.090
164.	.199	-.297	-.276	-.429	-.399	-.188	-.081	.065	-.784	-.334	-.241	-.192	-.143	.092
166.	.196	-.301	-.276	-.420	-.396	-.180	-.082	.066	-.771	-.325	-.242	-.193	-.141	.093
168.	.187	-.307	-.281	-.417	-.388	-.183	-.075	.067	-.751	-.316	-.213	-.188	-.137	.095
170.	.170	-.312	-.286	-.419	-.391	-.186	-.075	.068	-.730	-.320	-.206	-.179	-.135	.088
172.	.166	-.317	-.282	-.415	-.387	-.178	-.076	.069	-.709	-.295	-.216	-.180	-.131	.087
174.	.156	-.323	-.282	-.417	-.390	-.181	-.077	.070	-.686	-.284	-.211	-.174	-.128	.089
176.	.138	-.329	-.287	-.413	-.386	-.184	-.079	.072	-.663	-.273	-.198	-.174	-.124	.090
178.	.119	-.335	-.292	-.421	-.388	-.175	-.080	.073	-.639	-.262	-.174	-.168	-.121	.092

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 83 RUN 25 TIME 52732.500 MU= .236 CLP= .00436 TEMP(U60)= 31.9 C = 89.37 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
180.	.100	-.341	-.297	-.428	-.384	-.178	-.082	.074	-.614	-.250	-.184	-.158	-.117	.094
182.	.080	-.347	-.303	-.430	-.375	-.169	-.073	.076	-.576	-.237	-.181	-.159	-.113	.095
184.	.059	-.354	-.309	-.426	-.377	-.172	-.073	.075	-.541	-.224	-.148	-.151	-.109	.097
186.	.037	-.360	-.314	-.428	-.384	-.175	-.075	.066	-.513	-.211	-.136	-.141	-.111	.099
188.	.014	-.367	-.320	-.424	-.392	-.178	-.076	.067	-.483	-.197	-.128	-.141	-.107	.101
190.	-.009	-.374	-.326	-.432	-.399	-.168	-.078	.069	-.439	-.182	-.111	-.133	-.102	.103
192.	-.033	-.395	-.333	-.440	-.394	-.171	-.079	.070	-.398	-.167	-.106	-.121	-.104	.105
194.	-.075	-.410	-.339	-.441	-.397	-.174	-.069	.069	-.364	-.152	-.120	-.120	-.099	.107
196.	-.110	-.417	-.346	-.436	-.391	-.178	-.069	.059	-.328	-.153	-.106	-.111	-.094	.098
198.	-.137	-.440	-.352	-.445	-.393	-.166	-.070	.062	-.277	-.136	-.067	-.110	-.096	.097
200.	-.166	-.456	-.359	-.446	-.401	-.170	-.072	.073	-.243	-.119	-.064	-.100	-.091	.099
202.	-.214	-.464	-.366	-.440	-.394	-.173	-.073	.063	-.211	-.102	-.061	-.099	-.085	.101
204.	-.253	-.488	-.373	-.449	-.396	-.176	-.074	.064	-.169	-.101	-.054	-.088	-.079	.103
206.	-.305	-.506	-.380	-.457	-.404	-.179	-.076	.065	-.125	-.063	-.041	-.087	-.073	.104
208.	-.347	-.515	-.387	-.466	-.411	-.166	-.077	.066	-.079	-.062	-.033	-.075	-.074	.106
210.	-.382	-.525	-.394	-.474	-.403	-.169	-.079	.067	-.032	-.041	-.020	-.074	-.076	.096
212.	-.438	-.551	-.401	-.474	-.405	-.173	-.067	.069	.017	-.019	.018	-.061	-.077	.094
214.	-.485	-.569	-.408	-.468	-.412	-.175	-.066	.070	.052	.002	.021	-.059	-.070	.096
216.	-.545	-.596	-.430	-.476	-.420	-.161	-.068	.071	.079	.004	.012	-.060	-.063	.098
218.	-.594	-.615	-.444	-.484	-.427	-.164	-.069	.072	.123	.028	.044	-.047	-.064	.100
220.	-.636	-.626	-.452	-.493	-.417	-.167	-.070	.074	.161	.050	.063	-.044	-.065	.101
222.	-.678	-.637	-.459	-.491	-.418	-.170	-.071	.075	.209	.053	.064	-.045	-.066	.103
224.	-.744	-.647	-.467	-.483	-.425	-.172	-.072	.076	.250	.077	.065	-.030	-.068	.105
226.	-.799	-.657	-.474	-.491	-.432	-.156	-.058	.077	.282	.081	.066	-.027	-.059	.106
228.	-.844	-.668	-.482	-.498	-.420	-.159	-.057	.079	.296	.106	.084	-.028	-.051	.093
230.	-.915	-.678	-.489	-.506	-.421	-.161	-.058	.080	.319	.109	.077	-.028	-.052	.091
232.	-.948	-.688	-.496	-.502	-.427	-.163	-.059	.081	.353	.135	.087	-.029	-.053	.092
234.	-1.011	-.718	-.486	-.492	-.433	-.165	-.060	.078	.368	.137	.098	-.029	-.054	.094
236.	-1.045	-.737	-.486	-.499	-.419	-.147	-.061	.064	.393	.139	.099	-.012	-.054	.095
238.	-1.084	-.746	-.492	-.505	-.418	-.149	-.061	.069	.429	.144	.100	-.009	-.055	.096

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 83 RUN 25 TIME 52732.500 MU= .236 CLP= .00436 TEMP(U60)= 31.9 C = 89.37 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
240.	-1.133	-.755	-.498	-.500	-.423	-.151	-.062	.085	.444	.171	.101	-.009	-.056	.097
242.	-1.157	-.742	-.504	-.488	-.428	-.153	-.045	.086	.449	.176	.103	-.009	-.056	.099
244.	-1.196	-.763	-.509	-.493	-.412	-.153	-.044	.087	.497	.203	.143	-.009	-.057	.100
246.	-1.218	-.780	-.514	-.498	-.410	-.134	-.045	.088	.522	.205	.145	-.009	-.057	.101
248.	-1.257	-.788	-.519	-.503	-.414	-.136	-.045	.085	.527	.207	.136	-.010	-.058	.102
250.	-1.279	-.772	-.524	-.507	-.417	-.137	-.046	.073	.532	.209	.117	-.010	-.059	.102
252.	-1.289	-.768	-.528	-.498	-.421	-.138	-.046	.086	.536	.211	.108	-.010	-.059	.103
254.	-1.327	-.774	-.512	-.484	-.424	-.139	-.046	.070	.540	.212	.129	-.010	-.059	.104
256.	-1.345	-.779	-.508	-.487	-.404	-.140	-.047	.071	.543	.217	.119	-.010	-.060	.105
258.	-1.353	-.783	-.511	-.489	-.423	-.141	-.047	.071	.546	.245	.131	-.010	-.060	.105
260.	-1.388	-.787	-.514	-.492	-.408	-.141	-.047	.071	.549	.246	.141	-.010	-.060	.087
262.	-1.404	-.790	-.516	-.494	-.404	-.142	-.047	.072	.551	.247	.142	-.010	-.061	.085
264.	-1.408	-.792	-.517	-.495	-.405	-.142	-.048	.072	.553	.248	.142	.010	-.061	.085
266.	-1.411	-.794	-.518	-.496	-.406	-.142	-.048	.072	.578	.249	.143	-.007	-.061	.085
268.	-1.413	-.795	-.519	-.497	-.406	-.143	-.048	.072	.589	.249	.143	-.010	-.061	.085
270.	-1.413	-.795	-.519	-.497	-.406	-.143	-.048	.072	.589	.249	.143	-.010	-.061	.085
272.	-1.413	-.795	-.519	-.497	-.406	-.143	-.048	.072	.589	.249	.143	-.010	-.061	.085
274.	-1.441	-.794	-.518	-.496	-.406	-.142	-.048	.072	.588	.249	.143	-.010	-.061	.085
276.	-1.447	-.792	-.517	-.495	-.405	-.142	-.048	.072	.587	.248	.142	-.010	-.061	.085
278.	-1.443	-.790	-.516	-.494	-.404	-.142	-.047	.072	.585	.247	.142	-.010	-.061	.085
280.	-1.438	-.787	-.514	-.492	-.402	-.141	-.047	.071	.607	.246	.141	-.010	-.060	.084
282.	-1.461	-.783	-.511	-.490	-.400	-.141	-.047	.071	.613	.245	.141	-.010	-.060	.084
284.	-1.462	-.804	-.509	-.487	-.398	-.140	-.047	.071	.610	.249	.140	-.010	-.060	.083
286.	-1.453	-.807	-.505	-.484	-.396	-.139	-.046	.070	.606	.272	.139	-.010	-.059	.083
288.	-1.472	-.801	-.522	-.480	-.393	-.138	-.046	.070	.602	.265	.138	-.010	-.059	.082
290.	-1.469	-.820	-.524	-.477	-.390	-.137	-.046	.069	.597	.244	.137	-.010	-.059	.082
292.	-1.456	-.820	-.520	-.472	-.386	-.136	-.045	.069	.592	.266	.136	-.010	-.058	.081
294.	-1.472	-.812	-.515	-.468	-.383	-.134	-.045	.068	.586	.264	.135	-.029	-.057	.080
296.	-1.465	-.804	-.510	-.478	-.402	-.133	-.045	.067	.604	.261	.133	-.031	-.057	.079
298.	-1.449	-.820	-.524	-.488	-.402	-.132	-.044	.066	.605	.258	.132	-.030	-.069	.079

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 83 RUN 25 TIME 52732.500 MU= .236 CLP= .00436 TEMP(U60)= 31.9 C = 89.37 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
300.	-1.462	-.817	-.523	-.482	-.397	-.130	-.044	.066	.575	.250	.109	-.030	-.076	.078
302.	-1.422	-.807	-.517	-.477	-.392	-.131	-.043	.065	.561	.224	.100	-.030	-.075	.077
304.	-1.397	-.797	-.510	-.471	-.410	-.147	-.042	.064	.554	.221	.099	-.029	-.074	.076
306.	-1.351	-.786	-.504	-.478	-.408	-.145	-.042	.063	.546	.218	.098	-.029	-.073	.075
308.	-1.298	-.753	-.497	-.486	-.402	-.143	-.059	.068	.516	.210	.076	-.047	-.084	.074
310.	-1.245	-.736	-.490	-.479	-.396	-.141	-.058	.080	.480	.186	.068	-.048	-.089	.073
312.	-1.193	-.725	-.482	-.472	-.390	-.139	-.057	.079	.466	.178	.067	-.047	-.088	.072
314.	-1.142	-.714	-.475	-.464	-.384	-.137	-.056	.077	.437	.155	.066	-.046	-.087	.070
316.	-1.092	-.680	-.467	-.457	-.378	-.135	-.056	.076	.446	.147	.065	-.063	-.085	.069
318.	-1.042	-.664	-.460	-.450	-.372	-.133	-.055	.075	.402	.125	.044	-.063	-.084	.068
320.	-.994	-.653	-.452	-.442	-.366	-.131	-.054	.074	.384	.123	.038	-.062	-.094	.067
322.	-.972	-.642	-.445	-.435	-.360	-.128	-.053	.072	.377	.121	.037	-.078	-.098	.066
324.	-.930	-.631	-.437	-.427	-.374	-.129	-.052	.071	.350	.119	.037	-.078	-.097	.065
326.	-.909	-.620	-.429	-.420	-.369	-.141	-.051	.070	.339	.112	.036	-.076	-.095	.064
328.	-.893	-.609	-.422	-.412	-.363	-.139	-.051	.069	.333	.092	.035	-.075	-.093	.063
330.	-.877	-.598	-.414	-.417	-.356	-.136	-.064	.067	.307	.091	.017	-.090	-.092	.061
332.	-.837	-.587	-.407	-.421	-.350	-.134	-.063	.066	.297	.089	.012	-.089	-.100	.060
334.	-.818	-.576	-.415	-.413	-.343	-.131	-.062	.065	.292	.082	.011	-.087	-.103	.059
336.	-.802	-.585	-.395	-.405	-.337	-.129	-.061	.064	.286	.070	.011	-.085	-.102	.058
338.	-.787	-.578	-.400	-.398	-.349	-.129	-.059	.063	.281	.079	-.006	-.084	-.100	.057
340.	-.773	-.567	-.395	-.402	-.344	-.139	-.058	.061	.258	.062	-.010	-.082	-.098	.056
342.	-.758	-.556	-.388	-.404	-.355	-.137	-.058	.060	.249	.061	-.010	-.095	-.096	.055
344.	-.722	-.564	-.395	-.396	-.349	-.134	-.069	.059	.226	.055	-.010	-.094	-.104	.054
346.	-.705	-.557	-.390	-.400	-.343	-.135	-.068	.058	.219	.040	-.025	-.092	-.106	.053
348.	-.692	-.564	-.383	-.401	-.336	-.143	-.067	.057	.214	.039	-.029	-.090	-.104	.052
350.	-.700	-.556	-.376	-.404	-.346	-.141	-.065	.056	.210	.038	-.028	-.089	-.102	.051
352.	-.690	-.563	-.383	-.405	-.341	-.138	-.064	.055	.207	.038	-.028	-.100	-.109	.063
354.	-.677	-.555	-.392	-.397	-.335	-.138	-.063	.054	.203	.037	-.012	-.098	-.111	.062
356.	-.664	-.561	-.386	-.401	-.344	-.146	-.062	.057	.199	.041	.021	-.097	-.109	.060
358.	-.692	-.586	-.393	-.411	-.354	-.143	-.061	.064	.243	.053	-.003	-.095	-.107	.059

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 83 RUN 26 TIME 52833.000 MU= .244 CLP= .00457 TEMP(U60)= 31.9 C = 89.37 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
0.	-1.946	-.996	-.600	-.530	-.420	-.158	-.069	.068	.648	.273	.132	-.039	-.076	.050
2.	-1.899	-.978	-.596	-.537	-.413	-.165	-.068	.067	.624	.252	.110	-.046	-.084	.049
4.	-1.852	-.969	-.594	-.527	-.414	-.165	-.067	.066	.603	.245	.097	-.051	-.086	.048
6.	-1.807	-.961	-.583	-.521	-.414	-.162	-.074	.065	.582	.225	.096	-.058	-.093	.047
8.	-1.752	-.943	-.580	-.525	-.406	-.159	-.075	.064	.572	.220	.085	-.061	-.091	.046
10.	-1.699	-.927	-.577	-.521	-.409	-.168	-.074	.062	.552	.199	.066	-.069	-.095	.045
12.	-1.648	-.910	-.567	-.524	-.418	-.166	-.073	.061	.524	.195	.057	-.071	-.105	.044
14.	-1.584	-.895	-.566	-.515	-.415	-.163	-.071	.060	.496	.176	.046	-.079	-.109	.044
16.	-1.516	-.879	-.561	-.512	-.420	-.160	-.080	.059	.470	.158	.049	-.090	-.113	.043
18.	-1.436	-.865	-.562	-.520	-.416	-.169	-.079	.060	.445	.152	.033	-.091	-.117	.051
20.	-1.337	-.851	-.556	-.521	-.421	-.166	-.078	.068	.433	.122	.012	-.099	-.121	.052
22.	-1.252	-.837	-.547	-.513	-.417	-.165	-.087	.064	.413	.118	.007	-.109	-.124	.051
24.	-1.158	-.824	-.549	-.513	-.410	-.172	-.085	.059	.378	.101	-.005	-.119	-.122	.051
26.	-1.080	-.811	-.543	-.512	-.417	-.169	-.084	.065	.365	.088	-.020	-.117	-.127	.050
28.	-1.007	-.799	-.535	-.513	-.412	-.169	-.083	.064	.346	.082	-.035	-.127	-.135	.049
30.	-.937	-.788	-.539	-.521	-.419	-.175	-.082	.063	.312	.067	-.037	-.135	-.136	.048
32.	-.869	-.777	-.532	-.519	-.426	-.172	-.082	.066	.290	.052	-.049	-.134	-.142	.048
34.	-.803	-.766	-.525	-.512	-.420	-.173	-.088	.071	.271	.042	-.063	-.143	-.142	.047
36.	-.739	-.756	-.530	-.515	-.416	-.178	-.087	.070	.252	.036	-.076	-.151	-.148	.046
38.	-.694	-.746	-.523	-.513	-.422	-.175	-.086	.064	.248	.022	-.090	-.159	-.148	.046
40.	-.651	-.737	-.517	-.517	-.418	-.177	-.088	.064	.201	.008	-.076	-.165	-.155	.045
42.	-.608	-.728	-.512	-.525	-.426	-.181	-.093	.067	.184	-.006	-.100	-.166	-.154	.047
44.	-.567	-.719	-.516	-.532	-.431	-.179	-.092	.066	.168	-.019	-.086	-.174	-.161	.053
46.	-.528	-.711	-.510	-.529	-.426	-.177	-.090	.066	.149	-.032	-.090	-.179	-.159	.053
48.	-.489	-.701	-.505	-.535	-.425	-.180	-.090	.065	.122	-.037	-.121	-.180	-.166	.052
50.	-.455	-.683	-.502	-.531	-.432	-.182	-.089	.064	.107	-.044	-.109	-.184	-.165	.052
52.	-.430	-.676	-.505	-.538	-.436	-.180	-.088	.070	.088	-.065	-.111	-.186	-.164	.051
54.	-.398	-.670	-.501	-.546	-.432	-.179	-.087	.071	.064	-.072	-.123	-.194	-.170	.054
56.	-.373	-.660	-.496	-.554	-.433	-.183	-.086	.071	.050	-.080	-.135	-.197	-.169	.059
58.	-.345	-.645	-.492	-.549	-.436	-.185	-.085	.070	.036	-.092	-.146	-.200	-.169	.058

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 83 RUN 26 TIME 52833.000 MU= .244 CLP= .00457 TEMP(U60)= 31.9 C = 89.37 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
60.	-.320	-.640	-.492	-.546	-.438	-.183	-.085	.077	.017	-.103	-.149	-.203	-.174	.058
62.	-.293	-.630	-.495	-.553	-.441	-.182	-.089	.077	-.005	-.105	-.149	-.206	-.173	.057
64.	-.268	-.618	-.492	-.551	-.438	-.188	-.086	.069	-.018	-.114	-.163	-.209	-.174	.062
66.	-.243	-.614	-.488	-.558	-.441	-.188	-.083	.076	-.031	-.126	-.167	-.213	-.179	.065
68.	-.227	-.604	-.486	-.557	-.443	-.187	-.088	.076	-.044	-.137	-.179	-.215	-.178	.064
70.	-.210	-.588	-.483	-.564	-.448	-.186	-.084	.075	-.063	-.137	-.184	-.220	-.177	.064
72.	-.185	-.572	-.481	-.564	-.449	-.185	-.088	.075	-.082	-.148	-.196	-.221	-.176	.064
74.	-.164	-.557	-.478	-.570	-.447	-.193	-.089	.075	-.094	-.159	-.192	-.220	-.176	.063
76.	-.148	-.542	-.477	-.572	-.446	-.192	-.089	.074	-.107	-.169	-.196	-.219	-.179	.063
78.	-.132	-.527	-.468	-.578	-.444	-.191	-.088	.074	-.119	-.170	-.212	-.225	-.182	.063
80.	-.128	-.513	-.464	-.576	-.443	-.191	-.088	.074	-.131	-.179	-.207	-.226	-.182	.063
82.	-.116	-.499	-.463	-.580	-.442	-.190	-.088	.074	-.144	-.179	-.211	-.226	-.181	.070
84.	-.101	-.495	-.462	-.586	-.450	-.190	-.088	.074	-.166	-.181	-.214	-.225	-.181	.070
86.	-.086	-.484	-.461	-.585	-.451	-.190	-.087	.074	-.181	-.192	-.205	-.225	-.181	.070
88.	-.071	-.471	-.461	-.584	-.451	-.190	-.087	.073	-.194	-.203	-.211	-.225	-.175	.070
90.	-.057	-.459	-.452	-.584	-.451	-.190	-.087	.073	-.206	-.215	-.204	-.225	-.173	.070
92.	-.042	-.457	-.451	-.577	-.451	-.190	-.087	.073	-.230	-.223	-.222	-.225	-.173	.070
94.	-.041	-.446	-.451	-.573	-.451	-.190	-.087	.074	-.244	-.223	-.225	-.225	-.173	.070
96.	-.027	-.434	-.442	-.566	-.452	-.193	-.088	.074	-.257	-.228	-.215	-.225	-.173	.071
98.	-.012	-.434	-.442	-.572	-.452	-.199	-.088	.074	-.270	-.235	-.215	-.226	-.173	.078
100.	-.011	-.423	-.434	-.567	-.453	-.199	-.088	.074	-.284	-.236	-.250	-.226	-.167	.079
102.	.002	-.412	-.434	-.557	-.455	-.200	-.088	.074	-.297	-.236	-.249	-.225	-.166	.079
104.	.004	-.412	-.426	-.556	-.454	-.197	-.089	.074	-.311	-.243	-.217	-.219	-.167	.079
106.	.017	-.403	-.426	-.558	-.447	-.193	-.089	.075	-.325	-.249	-.229	-.220	-.167	.079
108.	.017	-.404	-.420	-.550	-.449	-.194	-.089	.070	-.339	-.251	-.230	-.218	-.160	.080
110.	.017	-.406	-.420	-.551	-.451	-.195	-.090	.067	-.352	-.252	-.229	-.213	-.161	.080
112.	.017	-.409	-.414	-.543	-.454	-.196	-.090	.074	-.356	-.253	-.218	-.215	-.162	.081
114.	.017	-.411	-.413	-.534	-.453	-.197	-.091	.070	-.368	-.247	-.215	-.212	-.162	.081
116.	.017	-.414	-.409	-.537	-.449	-.198	-.091	.069	-.374	-.245	-.232	-.209	-.155	.078
118.	.017	-.416	-.408	-.528	-.452	-.199	-.092	.069	-.386	-.246	-.221	-.206	-.156	.074

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 83 RUN 26 TIME 52833.000 MU= .244 CLP= .00457 TEMP(U60)= 31.9 C = 89.37 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C=	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
AZIMUTH														
120.	.018	-.415	-.404	-.531	-.450	-.201	-.093	.070	-.385	-.239	-.210	-.203	-.158	.074
122.	.018	-.410	-.407	-.524	-.447	-.202	-.088	.070	-.379	-.238	-.199	-.204	-.157	.075
124.	.011	-.413	-.411	-.527	-.445	-.197	-.086	.071	-.382	-.230	-.188	-.201	-.152	.076
126.	.002	-.417	-.409	-.518	-.444	-.197	-.087	.063	-.386	-.230	-.187	-.199	-.150	.076
128.	.002	-.421	-.407	-.512	-.448	-.199	-.088	.072	-.389	-.221	-.196	-.195	-.146	.077
130.	-.006	-.425	-.405	-.517	-.445	-.201	-.089	.064	-.386	-.222	-.192	-.187	-.147	.078
132.	-.023	-.430	-.404	-.519	-.445	-.203	-.090	.065	-.376	-.212	-.181	-.186	-.145	.079
134.	-.030	-.434	-.409	-.511	-.442	-.196	-.090	.066	-.366	-.214	-.184	-.181	-.141	.079
136.	-.041	-.439	-.406	-.503	-.434	-.198	-.091	.066	-.356	-.216	-.176	-.181	-.143	.074
138.	-.047	-.444	-.407	-.495	-.436	-.200	-.093	.067	-.354	-.206	-.159	-.175	-.140	.072
140.	-.060	-.450	-.412	-.492	-.432	-.193	-.094	.068	-.339	-.209	-.147	-.175	-.137	.073
142.	-.078	-.455	-.417	-.499	-.434	-.195	-.086	.067	-.324	-.210	-.126	-.169	-.133	.074
144.	-.097	-.461	-.413	-.499	-.440	-.198	-.087	.063	-.313	-.199	-.128	-.161	-.131	.075
146.	-.116	-.468	-.416	-.491	-.435	-.199	-.088	.068	-.290	-.190	-.144	-.162	-.133	.076
148.	-.136	-.474	-.412	-.490	-.439	-.193	-.090	.062	-.275	-.189	-.139	-.154	-.128	.077
150.	-.141	-.481	-.415	-.497	-.433	-.196	-.091	.063	-.250	-.178	-.126	-.156	-.126	.078
152.	-.160	-.488	-.422	-.496	-.438	-.199	-.092	.060	-.235	-.166	-.113	-.147	-.121	.079
154.	-.181	-.495	-.416	-.497	-.431	-.199	-.094	.055	-.208	-.153	-.112	-.139	-.120	.080
156.	-.204	-.503	-.422	-.495	-.438	-.194	-.093	.055	-.178	-.146	-.087	-.140	-.114	.082
158.	-.227	-.511	-.441	-.497	-.431	-.197	-.087	.056	-.148	-.142	-.071	-.131	-.113	.083
160.	-.251	-.536	-.448	-.494	-.438	-.196	-.088	.057	-.132	-.129	-.101	-.123	-.106	.084
162.	-.295	-.529	-.442	-.498	-.443	-.192	-.090	.058	-.100	-.115	-.072	-.123	-.106	.086
164.	-.320	-.554	-.450	-.506	-.438	-.195	-.091	.059	-.083	-.101	-.041	-.113	-.108	.085
166.	-.349	-.564	-.458	-.501	-.443	-.198	-.093	.060	-.048	-.086	-.042	-.106	-.099	.077
168.	-.395	-.573	-.466	-.507	-.438	-.196	-.094	.061	-.015	-.071	-.041	-.104	-.089	.079
170.	-.428	-.584	-.474	-.516	-.446	-.193	-.096	.062	.009	-.055	-.024	-.093	-.090	.080
172.	-.480	-.598	-.483	-.509	-.449	-.197	-.093	.064	.060	-.039	-.010	-.086	-.079	.082
174.	-.534	-.624	-.491	-.517	-.446	-.200	-.088	.065	.084	-.022	-.007	-.083	-.080	.083
176.	-.584	-.640	-.496	-.527	-.449	-.196	-.090	.066	.120	-.005	.016	-.071	-.070	.085
178.	-.626	-.667	-.494	-.518	-.446	-.194	-.091	.067	.148	.014	.044	-.065	-.071	.086

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 83 RUN 26 TIME 52833.000 MU= .244 CLP= .00457 TEMP(U60)= 31.9 C = 89.37 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
180.	-.686	-.679	-.504	-.528	-.455	-.198	-.093	.058	.192	.046	.045	-.060	-.071	.088
182.	-.748	-.693	-.513	-.538	-.456	-.202	-.095	.057	.230	.057	.052	-.053	-.061	.090
184.	-.812	-.706	-.523	-.548	-.455	-.206	-.089	.058	.264	.073	.060	-.047	-.062	.091
186.	-.878	-.728	-.533	-.556	-.463	-.199	-.086	.059	.304	.094	.063	-.041	-.060	.093
188.	-.947	-.755	-.544	-.549	-.472	-.199	-.088	.060	.332	.116	.097	-.033	-.051	.087
190.	-1.019	-.770	-.555	-.560	-.471	-.203	-.089	.061	.371	.139	.111	-.028	-.052	.083
192.	-1.093	-.785	-.566	-.567	-.472	-.194	-.091	.063	.402	.162	.123	-.019	-.053	.084
194.	-1.169	-.813	-.577	-.561	-.469	-.196	-.093	.064	.422	.167	.137	-.014	-.048	.086
196.	-1.249	-.840	-.588	-.566	-.471	-.200	-.095	.065	.467	.171	.152	-.014	-.040	.088
198.	-1.313	-.857	-.600	-.561	-.480	-.204	-.085	.066	.497	.196	.152	-.002	-.041	.090
200.	-1.387	-.874	-.612	-.572	-.475	-.192	-.084	.068	.522	.221	.145	.002	-.041	.091
202.	-1.474	-.891	-.624	-.584	-.479	-.195	-.086	.069	.558	.227	.148	.002	-.042	.093
204.	-1.542	-.909	-.636	-.585	-.488	-.198	-.087	.071	.577	.253	.167	.002	-.034	.095
206.	-1.625	-.926	-.633	-.582	-.479	-.186	-.074	.072	.589	.261	.178	.017	-.027	.097
208.	-1.696	-.964	-.640	-.594	-.485	-.189	-.075	.073	.620	.287	.182	.020	-.028	.099
210.	-1.760	-.968	-.653	-.592	-.494	-.193	-.076	.075	.659	.292	.223	.020	-.028	.101
212.	-1.854	-.981	-.665	-.591	-.503	-.197	-.078	.076	.678	.304	.219	.021	-.029	.103
214.	-1.927	-.999	-.678	-.602	-.490	-.200	-.079	.078	.690	.329	.197	.040	-.029	.087
216.	-2.026	-1.018	-.690	-.597	-.498	-.199	-.081	.079	.703	.335	.218	.040	-.030	.106
218.	-2.101	-1.036	-.681	-.597	-.507	-.188	-.082	.080	.716	.341	.250	.041	-.031	.090
220.	-2.140	-1.055	-.692	-.608	-.491	-.192	-.084	.073	.756	.357	.258	.042	-.016	.092
222.	-2.213	-1.074	-.704	-.618	-.500	-.195	-.081	.065	.771	.380	.262	.043	-.012	.093
224.	-2.287	-1.092	-.716	-.608	-.506	-.191	-.068	.066	.784	.386	.267	.047	-.013	.095
226.	-2.362	-1.110	-.726	-.610	-.491	-.181	-.070	.067	.797	.393	.271	.065	-.013	.096
228.	-2.438	-1.126	-.715	-.620	-.499	-.184	-.071	.068	.810	.399	.275	.066	-.013	.098
230.	-2.509	-1.115	-.726	-.605	-.507	-.187	-.072	.069	.823	.406	.280	.067	-.013	.099
232.	-2.548	-1.132	-.737	-.609	-.514	-.189	-.073	.070	.836	.412	.287	.068	-.013	.101
234.	-2.593	-1.148	-.743	-.618	-.514	-.192	-.074	.071	.848	.418	.314	.069	-.014	.102
236.	-2.660	-1.164	-.732	-.627	-.501	-.195	-.075	.072	.860	.442	.298	.070	-.014	.104
238.	-2.696	-1.172	-.742	-.635	-.507	-.184	-.076	.073	.872	.460	.328	.071	-.014	.105

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 83 RUN 26 TIME 52833.000 MU= .244 CLP= .00457 TEMP(U60)= 31.9 C = 89.37 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C= AZIMUTH	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
240.	-2.742	-1.161	-.751	-.611	-.514	-.177	-.077	.074	.883	.466	.324	.072	-.014	.107
242.	-2.804	-1.175	-.751	-.618	-.520	-.179	-.067	.075	.893	.471	.304	.073	-.014	.108
244.	-2.836	-1.189	-.741	-.625	-.526	-.181	-.058	.076	.904	.477	.307	.074	-.014	.109
246.	-2.866	-1.202	-.749	-.632	-.518	-.183	-.058	.076	.913	.482	.310	.074	-.015	.110
248.	-2.877	-1.213	-.756	-.638	-.506	-.185	-.059	.077	.922	.487	.313	.075	-.015	.111
250.	-2.879	-1.209	-.763	-.639	-.511	-.167	-.060	.078	.931	.491	.316	.076	-.015	.112
252.	-2.903	-1.199	-.769	-.615	-.515	-.164	-.060	.079	.939	.495	.319	.076	-.015	.113
254.	-2.947	-1.208	-.760	-.620	-.519	-.165	-.061	.079	.928	.499	.321	.077	-.015	.114
256.	-2.987	-1.216	-.751	-.624	-.523	-.166	-.061	.080	.934	.502	.324	.078	-.015	.115
258.	-3.005	-1.223	-.755	-.627	-.506	-.167	-.061	.080	.938	.505	.325	.078	-.015	.099
260.	-3.020	-1.229	-.759	-.630	-.497	-.168	-.062	.081	.946	.508	.327	.078	-.015	.092
262.	-3.004	-1.234	-.762	-.633	-.499	-.168	-.062	.081	.944	.510	.328	.079	-.015	.093
264.	-2.998	-1.238	-.764	-.635	-.500	-.169	-.062	.081	.932	.511	.329	.079	-.016	.093
266.	-3.005	-1.241	-.766	-.637	-.501	-.169	-.062	.081	.934	.513	.330	.079	-.016	.093
268.	-3.009	-1.216	-.767	-.622	-.502	-.170	-.062	.081	.936	.513	.331	.079	-.016	.093
270.	-3.011	-1.206	-.745	-.602	-.502	-.170	-.062	.081	.936	.514	.331	.057	-.016	.094
272.	-2.974	-1.205	-.737	-.602	-.502	-.170	-.062	.081	.936	.513	.331	.054	-.016	.093
274.	-2.962	-1.204	-.736	-.601	-.501	-.169	-.062	.081	.934	.513	.303	.054	-.016	.093
276.	-2.955	-1.201	-.734	-.600	-.500	-.169	-.062	.081	.932	.512	.322	.054	-.016	.093
278.	-2.946	-1.197	-.732	-.598	-.499	-.168	-.062	.081	.929	.510	.328	.053	-.015	.093
280.	-2.934	-1.193	-.729	-.595	-.497	-.168	-.062	.081	.926	.508	.297	.053	-.015	.092
282.	-2.920	-1.187	-.726	-.592	-.494	-.167	-.061	.080	.921	.505	.291	.053	-.015	.092
284.	-2.860	-1.180	-.721	-.589	-.491	-.166	-.061	.080	.916	.490	.289	.053	-.015	.092
286.	-2.841	-1.172	-.717	-.585	-.488	-.165	-.061	.079	.910	.466	.287	.049	-.015	.091
288.	-2.820	-1.163	-.711	-.581	-.485	-.164	-.060	.079	.903	.463	.285	.027	-.035	.090
290.	-2.793	-1.154	-.705	-.576	-.481	-.162	-.060	.078	.896	.459	.283	.027	-.038	.089
292.	-2.730	-1.143	-.699	-.571	-.476	-.161	-.059	.077	.887	.455	.280	.027	-.038	.089
294.	-2.697	-1.132	-.692	-.565	-.472	-.159	-.059	.076	.879	.450	.278	.027	-.037	.088
296.	-2.634	-1.120	-.685	-.559	-.467	-.158	-.058	.076	.869	.445	.275	.026	-.037	.087
298.	-2.605	-1.108	-.677	-.582	-.461	-.156	-.057	.075	.860	.440	.272	.026	-.037	.086

AIRFOIL PRESSURE DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 83 RUN 26 TIME 52833.000 MU= .244 CLP= .00457 TEMP(U60)= 31.9 C = 89.37 F

	UPPER SURFACE CP VALUES								LOWER SURFACE CP VALUES					
X/C=	.02	.10	.20	.35	.50	.70	.80	.90	.02	.10	.20	.50	.70	.90
AZIMUTH														
300.	-2.564	-1.094	-.669	-.579	-.456	-.154	-.057	.074	.849	.435	.268	.026	-.036	.085
302.	-2.502	-1.081	-.661	-.571	-.460	-.152	-.056	.073	.839	.430	.265	.025	-.036	.084
304.	-2.469	-1.066	-.652	-.564	-.473	-.150	-.055	.072	.828	.424	.254	.025	-.035	.091
306.	-2.422	-1.052	-.643	-.556	-.466	-.148	-.054	.071	.816	.418	.227	.015	-.035	.103
308.	-2.362	-1.036	-.643	-.548	-.459	-.146	-.054	.070	.804	.412	.224	.003	-.034	.091
310.	-2.326	-1.032	-.650	-.542	-.452	-.144	-.053	.069	.792	.406	.221	.002	-.034	.089
312.	-2.290	-1.036	-.640	-.561	-.445	-.157	-.064	.068	.792	.400	.228	.002	-.038	.098
314.	-2.254	-1.019	-.629	-.552	-.452	-.160	-.070	.067	.798	.393	.242	.002	-.053	.085
316.	-2.234	-1.017	-.631	-.548	-.457	-.157	-.069	.066	.785	.387	.227	.002	-.052	.075
318.	-2.232	-1.015	-.633	-.562	-.449	-.155	-.067	.065	.772	.380	.219	.002	-.051	.074
320.	-2.229	-1.013	-.622	-.553	-.442	-.152	-.066	.063	.773	.374	.230	.002	-.050	.073
322.	-2.224	-1.025	-.624	-.543	-.434	-.167	-.065	.062	.774	.367	.226	.002	-.049	.072
324.	-2.218	-1.035	-.623	-.541	-.442	-.166	-.064	.063	.776	.361	.222	.002	-.048	.070
326.	-2.232	-1.028	-.625	-.550	-.442	-.163	-.063	.078	.774	.379	.218	.002	-.047	.069
328.	-2.256	-1.026	-.622	-.540	-.434	-.160	-.062	.076	.776	.372	.214	.002	-.046	.068
330.	-2.278	-1.034	-.625	-.539	-.443	-.157	-.060	.075	.772	.365	.210	.002	-.046	.066
332.	-2.275	-1.042	-.620	-.544	-.440	-.154	-.059	.073	.775	.358	.206	.002	-.054	.065
334.	-2.286	-1.048	-.624	-.545	-.450	-.153	-.058	.072	.768	.355	.202	.002	-.061	.064
336.	-2.279	-1.054	-.617	-.548	-.445	-.165	-.072	.071	.772	.368	.198	.002	-.059	.063
338.	-2.288	-1.059	-.621	-.549	-.437	-.162	-.071	.069	.764	.356	.195	.002	-.058	.062
340.	-2.278	-1.063	-.613	-.550	-.447	-.159	-.069	.068	.749	.331	.191	-.014	-.057	.060
342.	-2.262	-1.067	-.617	-.552	-.440	-.159	-.068	.067	.754	.331	.187	-.014	-.056	.059
344.	-2.246	-1.049	-.608	-.551	-.432	-.169	-.067	.065	.743	.340	.183	-.014	-.066	.058
346.	-2.204	-1.049	-.613	-.554	-.423	-.165	-.065	.064	.729	.333	.180	-.014	-.069	.057
348.	-2.187	-1.052	-.620	-.551	-.434	-.162	-.064	.063	.714	.319	.176	-.013	-.067	.056
350.	-2.145	-1.032	-.626	-.540	-.427	-.159	-.063	.068	.722	.300	.173	-.015	-.066	.055
352.	-2.103	-1.034	-.614	-.544	-.436	-.161	-.062	.074	.708	.295	.150	-.028	-.077	.054
354.	-2.063	-1.035	-.603	-.539	-.428	-.167	-.061	.073	.694	.289	.147	-.027	-.077	.053
356.	-2.023	-1.015	-.607	-.545	-.422	-.164	-.063	.071	.661	.283	.143	-.030	-.076	.052
358.	-1.985	-.998	-.598	-.538	-.429	-.161	-.071	.070	.648	.278	.122	-.040	-.074	.051

APPENDIX B. - AIRFOIL COEFFICIENT DATA

The listings of airfoil coefficient data are presented as reduced copies of two-page sets of computer listings. The top of each page segment contains identification as to flight number, run number, and time. The ratio of Reynolds number per unit Mach number is identified as RN/M; blade azimuth is listed in degrees. CN, CC, and CM identify columns of normal-force, chordwise-force, and pitching-moment coefficients, respectively.

The data of Table VI serves as a guide to this set of listings.

AIRFOIL COEFFICIENT DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 75 RUN 10 TIME 50641.700 RN/M= 14.87 MILLION ROTOR SPEED= 33.9621 RAD/SEC

AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M
0.0	.407	-.017	-.002	.600	60.0	.199	.002	-.013	.770	120.0	.053	.005	-.039	.770
2.0	.391	-.015	-.003	.607	62.0	.193	.001	-.013	.773	122.0	.058	.005	-.039	.766
4.0	.374	-.014	-.005	.614	64.0	.194	.001	-.013	.776	124.0	.062	.005	-.038	.762
6.0	.359	-.012	-.007	.620	66.0	.192	.001	-.013	.779	126.0	.061	.005	-.038	.758
8.0	.342	-.010	-.007	.627	68.0	.196	.001	-.014	.781	128.0	.062	.005	-.039	.754
10.0	.329	-.009	-.007	.634	70.0	.199	.002	-.014	.784	130.0	.063	.004	-.039	.750
12.0	.315	-.007	-.007	.641	72.0	.193	.002	-.013	.786	132.0	.056	.004	-.039	.746
14.0	.309	-.007	-.008	.647	74.0	.188	.002	-.013	.788	134.0	.056	.003	-.040	.741
16.0	.306	-.006	-.009	.654	76.0	.184	.002	-.014	.790	136.0	.056	.003	-.039	.736
18.0	.294	-.005	-.008	.660	78.0	.171	.002	-.015	.791	138.0	.059	.003	-.040	.731
20.0	.280	-.005	-.008	.667	80.0	.158	.003	-.015	.793	140.0	.062	.002	-.041	.726
22.0	.270	-.004	-.008	.673	82.0	.152	.004	-.017	.794	142.0	.066	.002	-.041	.721
24.0	.262	-.004	-.008	.680	84.0	.141	.004	-.018	.795	144.0	.072	.002	-.041	.715
26.0	.249	-.003	-.008	.686	86.0	.129	.004	-.020	.795	146.0	.078	.002	-.040	.710
28.0	.241	-.002	-.008	.692	88.0	.119	.005	-.021	.796	148.0	.077	.002	-.040	.704
30.0	.241	-.002	-.009	.698	90.0	.115	.005	-.022	.796	150.0	.084	.002	-.040	.698
32.0	.231	-.001	-.009	.704	92.0	.107	.005	-.024	.796	152.0	.093	.002	-.041	.692
34.0	.226	-.001	-.010	.709	94.0	.102	.006	-.025	.795	154.0	.105	.002	-.041	.686
36.0	.221	-.000	-.010	.715	96.0	.094	.006	-.027	.795	156.0	.114	.002	-.040	.680
38.0	.220	.000	-.011	.720	98.0	.089	.006	-.027	.794	158.0	.126	.002	-.040	.673
40.0	.215	.000	-.011	.726	100.0	.079	.006	-.028	.793	160.0	.133	.002	-.040	.667
42.0	.209	.000	-.011	.731	102.0	.080	.006	-.030	.791	162.0	.147	.003	-.040	.661
44.0	.205	.001	-.012	.736	104.0	.076	.006	-.032	.790	164.0	.157	.003	-.040	.654
46.0	.203	.001	-.011	.741	106.0	.070	.006	-.033	.788	166.0	.174	.003	-.040	.647
48.0	.200	.001	-.013	.745	108.0	.067	.005	-.035	.786	168.0	.187	.002	-.039	.641
50.0	.198	.001	-.012	.750	110.0	.064	.005	-.037	.784	170.0	.200	.002	-.039	.634
52.0	.198	.001	-.013	.754	112.0	.057	.005	-.038	.782	172.0	.219	.002	-.040	.627
54.0	.198	.001	-.013	.758	114.0	.054	.004	-.039	.779	174.0	.234	.001	-.039	.621
56.0	.199	.002	-.014	.762	116.0	.053	.004	-.040	.776	176.0	.253	.001	-.040	.614
58.0	.197	.001	-.013	.766	118.0	.054	.004	-.041	.773	178.0	.276	.001	-.041	.607

AIRFOIL COEFFICIENT DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 75 RUN 10 TIME 50641.700 RN/M= 14.87 MILLION ROTOR SPEED= 33.9621 RAD/SEC

AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M
180.0	.293	.000	-.039	.600	240.0	.768	-.060	-.005	.430	300.0	.658	-.048	.001	.430
182.0	.310	-.001	-.038	.593	242.0	.766	-.061	-.003	.427	302.0	.653	-.047	.001	.434
184.0	.334	-.002	-.038	.586	244.0	.766	-.062	-.000	.424	304.0	.646	-.046	.001	.437
186.0	.352	-.002	-.038	.580	246.0	.774	-.064	-.000	.421	306.0	.635	-.044	.001	.441
188.0	.372	-.004	-.037	.573	248.0	.777	-.064	-.001	.418	308.0	.627	-.043	-.000	.446
190.0	.395	-.005	-.036	.566	250.0	.784	-.065	.000	.416	310.0	.616	-.042	-.001	.450
192.0	.421	-.006	-.036	.559	252.0	.777	-.065	.000	.414	312.0	.598	-.040	-.001	.454
194.0	.436	-.008	-.034	.553	254.0	.779	-.065	-.000	.412	314.0	.591	-.039	.000	.459
196.0	.462	-.009	-.034	.546	256.0	.786	-.066	-.000	.410	316.0	.582	-.037	.000	.464
198.0	.482	-.012	-.031	.540	258.0	.783	-.065	-.001	.408	318.0	.570	-.035	.000	.469
200.0	.502	-.015	-.031	.533	260.0	.782	-.064	-.001	.407	320.0	.564	-.033	-.001	.474
202.0	.525	-.016	-.030	.527	262.0	.780	-.064	-.001	.406	322.0	.551	-.032	-.002	.479
204.0	.551	-.018	-.029	.520	264.0	.778	-.065	.001	.405	324.0	.532	-.031	-.002	.485
206.0	.564	-.021	-.026	.514	266.0	.776	-.065	.000	.405	326.0	.521	-.029	-.001	.490
208.0	.583	-.023	-.025	.508	268.0	.772	-.064	.000	.404	328.0	.511	-.028	-.001	.496
210.0	.603	-.026	-.022	.502	270.0	.758	-.063	.001	.404	330.0	.504	-.027	-.002	.502
212.0	.622	-.029	-.023	.496	272.0	.758	-.063	.001	.404	332.0	.501	-.026	-.002	.508
214.0	.628	-.031	-.021	.491	274.0	.758	-.062	.002	.405	334.0	.484	-.025	-.003	.514
216.0	.652	-.034	-.019	.485	276.0	.739	-.062	.002	.405	336.0	.486	-.024	-.004	.520
218.0	.667	-.037	-.018	.479	278.0	.728	-.060	.003	.406	338.0	.478	-.022	-.003	.526
220.0	.682	-.039	-.017	.474	280.0	.727	-.060	.001	.407	340.0	.472	-.022	-.002	.533
222.0	.700	-.042	-.016	.469	282.0	.723	-.059	.001	.408	342.0	.461	-.022	-.002	.539
224.0	.709	-.045	-.015	.464	284.0	.718	-.058	.001	.410	344.0	.456	-.021	-.002	.546
226.0	.719	-.047	-.013	.459	286.0	.714	-.057	.003	.412	346.0	.454	-.021	-.002	.552
228.0	.728	-.049	-.012	.455	288.0	.707	-.055	.003	.414	348.0	.451	-.020	-.002	.559
230.0	.735	-.052	-.010	.450	290.0	.702	-.053	.002	.416	350.0	.445	-.020	-.002	.566
232.0	.750	-.054	-.010	.446	292.0	.691	-.053	.002	.418	352.0	.439	-.019	-.001	.572
234.0	.750	-.055	-.008	.442	294.0	.690	-.051	.001	.421	354.0	.431	-.019	-.001	.579
236.0	.755	-.057	-.006	.438	296.0	.678	-.051	.002	.424	356.0	.424	-.019	-.001	.586
238.0	.765	-.059	-.006	.434	298.0	.661	-.050	.003	.427	358.0	.413	-.017	-.002	.593

AIRFOIL COEFFICIENT DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/10/12.

FLT 77 RUN 2 TIME 50746.200 RN/M= 14.88 MILLION ROTOR SPEED= 33.9433 RAD/SEC

AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M
0.0	.276	-.006	-.008	.600	60.0	.259	-.004	-.011	.600	120.0	.398	-.015	.000	.600
2.0	.274	-.005	-.008	.600	62.0	.261	-.004	-.012	.600	122.0	.400	-.016	.002	.600
4.0	.277	-.005	-.008	.600	64.0	.259	-.004	-.012	.600	124.0	.397	-.017	.004	.600
6.0	.275	-.005	-.008	.600	66.0	.256	-.004	-.012	.600	126.0	.394	-.017	.003	.600
8.0	.272	-.005	-.007	.600	68.0	.256	-.004	-.011	.600	128.0	.390	-.017	.001	.600
10.0	.271	-.005	-.007	.600	70.0	.260	-.004	-.012	.600	130.0	.387	-.017	.002	.600
12.0	.272	-.005	-.007	.600	72.0	.271	-.005	-.012	.600	132.0	.387	-.017	.001	.600
14.0	.269	-.005	-.007	.600	74.0	.274	-.005	-.011	.600	134.0	.388	-.016	.001	.600
16.0	.266	-.005	-.007	.600	76.0	.279	-.005	-.011	.600	136.0	.397	-.016	.000	.600
18.0	.270	-.005	-.007	.600	78.0	.276	-.005	-.009	.600	138.0	.401	-.016	.000	.600
20.0	.266	-.005	-.007	.600	80.0	.289	-.006	-.009	.600	140.0	.397	-.016	-.001	.600
22.0	.262	-.005	-.008	.600	82.0	.294	-.005	-.009	.600	142.0	.391	-.016	.001	.600
24.0	.261	-.004	-.009	.600	84.0	.297	-.006	-.008	.600	144.0	.388	-.016	.002	.600
26.0	.257	-.004	-.007	.600	86.0	.298	-.006	-.007	.600	146.0	.385	-.016	.002	.600
28.0	.259	-.004	-.007	.600	88.0	.302	-.006	-.008	.600	148.0	.388	-.017	.002	.600
30.0	.254	-.004	-.008	.600	90.0	.305	-.007	-.007	.600	150.0	.392	-.017	.002	.600
32.0	.265	-.005	-.010	.600	92.0	.310	-.007	-.006	.600	152.0	.389	-.017	.001	.600
34.0	.268	-.005	-.011	.600	94.0	.318	-.007	-.007	.600	154.0	.388	-.016	.001	.600
36.0	.267	-.005	-.010	.600	96.0	.317	-.008	-.007	.600	156.0	.378	-.015	.001	.600
38.0	.263	-.005	-.010	.600	98.0	.321	-.008	-.007	.600	158.0	.377	-.016	.000	.600
40.0	.258	-.004	-.009	.600	100.0	.328	-.008	-.008	.600	160.0	.373	-.015	.000	.600
42.0	.253	-.004	-.008	.600	102.0	.325	-.008	-.007	.600	162.0	.375	-.015	-.000	.600
44.0	.253	-.004	-.010	.600	104.0	.326	-.009	-.007	.600	164.0	.371	-.014	-.001	.600
46.0	.255	-.004	-.010	.600	106.0	.335	-.009	-.007	.600	166.0	.368	-.014	-.001	.600
48.0	.255	-.004	-.009	.600	108.0	.342	-.010	-.006	.600	168.0	.367	-.013	-.001	.600
50.0	.255	-.004	-.009	.600	110.0	.354	-.011	-.004	.600	170.0	.366	-.013	-.002	.600
52.0	.256	-.004	-.010	.600	112.0	.359	-.012	-.003	.600	172.0	.360	-.013	-.001	.600
54.0	.257	-.004	-.010	.600	114.0	.363	-.012	-.003	.600	174.0	.354	-.012	-.001	.600
56.0	.259	-.004	-.011	.600	116.0	.371	-.013	-.002	.600	176.0	.344	-.012	-.000	.600
58.0	.260	-.004	-.011	.600	118.0	.388	-.014	-.002	.600	178.0	.338	-.011	-.001	.600

AIRFOIL COEFFICIENT DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/10/12.

FLT 77 RUN 2 TIME 50746.200 RN/M= 14.88 MILLION ROTOR SPEED= 33.9433 RAD/SEC

AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M
180.0	.340	-.011	-.002	.600	240.0	.327	-.010	-.003	.600	300.0	.287	-.006	-.007	.600
182.0	.344	-.011	-.003	.600	242.0	.327	-.010	-.003	.600	302.0	.292	-.006	-.007	.600
184.0	.345	-.011	-.003	.600	244.0	.328	-.010	-.003	.600	304.0	.294	-.006	-.007	.600
186.0	.350	-.011	-.003	.600	246.0	.330	-.010	-.002	.600	306.0	.294	-.006	-.006	.600
188.0	.347	-.012	-.002	.600	248.0	.340	-.011	-.003	.600	308.0	.294	-.006	-.006	.600
190.0	.345	-.012	-.001	.600	250.0	.349	-.011	-.003	.600	310.0	.297	-.007	-.006	.600
192.0	.350	-.012	-.003	.600	252.0	.354	-.012	-.002	.600	312.0	.302	-.006	-.007	.600
194.0	.354	-.012	-.003	.600	254.0	.358	-.013	-.000	.600	314.0	.305	-.006	-.007	.600
196.0	.354	-.012	-.002	.600	256.0	.349	-.013	.000	.600	316.0	.301	-.007	-.006	.600
198.0	.350	-.012	-.001	.600	258.0	.345	-.012	-.000	.600	318.0	.299	-.007	-.004	.600
200.0	.349	-.011	-.001	.600	260.0	.337	-.011	-.002	.600	320.0	.301	-.007	-.004	.600
202.0	.344	-.010	-.003	.600	262.0	.333	-.010	-.002	.600	322.0	.300	-.008	-.004	.600
204.0	.339	-.010	-.002	.600	264.0	.330	-.010	-.003	.600	324.0	.300	-.008	-.005	.600
206.0	.337	-.010	-.004	.600	266.0	.339	-.010	-.003	.600	326.0	.303	-.008	-.006	.600
208.0	.331	-.009	-.005	.600	268.0	.340	-.011	-.002	.600	328.0	.302	-.008	-.004	.600
210.0	.327	-.008	-.005	.600	270.0	.331	-.009	-.002	.600	330.0	.305	-.008	-.004	.600
212.0	.321	-.008	-.005	.600	272.0	.328	-.010	-.002	.600	332.0	.301	-.008	-.004	.600
214.0	.320	-.008	-.005	.600	274.0	.321	-.010	-.001	.600	334.0	.307	-.008	-.004	.600
216.0	.325	-.007	-.006	.600	276.0	.319	-.009	-.003	.600	336.0	.309	-.008	-.004	.600
218.0	.320	-.008	-.007	.600	278.0	.324	-.009	-.004	.600	338.0	.307	-.008	-.004	.600
220.0	.321	-.008	-.006	.600	280.0	.320	-.009	-.004	.600	340.0	.306	-.007	-.004	.600
222.0	.329	-.008	-.006	.600	282.0	.316	-.009	-.004	.600	342.0	.300	-.008	-.004	.600
224.0	.332	-.009	-.005	.600	284.0	.304	-.007	-.005	.600	344.0	.299	-.007	-.004	.600
226.0	.326	-.009	-.003	.600	286.0	.289	-.006	-.006	.600	346.0	.299	-.007	-.006	.600
228.0	.326	-.008	-.004	.600	288.0	.284	-.005	-.006	.600	348.0	.298	-.007	-.006	.600
230.0	.321	-.008	-.004	.600	290.0	.278	-.005	-.008	.600	350.0	.300	-.007	-.006	.600
232.0	.320	-.008	-.004	.600	292.0	.277	-.005	-.008	.600	352.0	.293	-.007	-.006	.600
234.0	.319	-.008	-.004	.600	294.0	.280	-.005	-.007	.600	354.0	.294	-.007	-.005	.600
236.0	.325	-.009	-.005	.600	296.0	.283	-.005	-.007	.600	356.0	.296	-.007	-.006	.600
238.0	.326	-.009	-.004	.600	298.0	.286	-.006	-.007	.600	358.0	.289	-.007	-.006	.600

AIRFOIL COEFFICIENT DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 78 RUN 12 TIME 54905.700 RN/M= 14.63 MILLION ROTOR SPEED= 34.0876 RAD/SEC

AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M
0.0	.392	-.020	.009	.599	60.0	.172	.001	-.003	.790	120.0	-.008	.002	-.038	.790
2.0	.375	-.017	.007	.606	62.0	.169	.001	-.003	.794	122.0	-.007	.001	-.039	.786
4.0	.357	-.015	.007	.614	64.0	.169	.001	-.002	.797	124.0	-.013	.001	-.040	.782
6.0	.346	-.014	.005	.622	66.0	.169	.001	-.003	.800	126.0	-.018	.000	-.041	.777
8.0	.330	-.012	.003	.629	68.0	.167	.001	-.003	.803	128.0	-.024	-.000	-.042	.773
10.0	.318	-.010	.002	.637	70.0	.163	.001	-.004	.806	130.0	-.032	-.001	-.043	.768
12.0	.299	-.009	.001	.645	72.0	.161	.002	-.006	.809	132.0	-.030	-.001	-.043	.763
14.0	.288	-.008	.002	.652	74.0	.155	.002	-.007	.811	134.0	-.022	-.001	-.041	.758
16.0	.275	-.007	.001	.660	76.0	.143	.003	-.009	.813	136.0	-.012	.001	-.039	.752
18.0	.268	-.006	.000	.667	78.0	.136	.003	-.011	.815	138.0	-.004	.001	-.037	.746
20.0	.262	-.005	.001	.674	80.0	.126	.004	-.012	.816	140.0	.002	.001	-.036	.741
22.0	.253	-.005	.000	.681	82.0	.117	.005	-.014	.817	142.0	.005	.001	-.037	.735
24.0	.238	-.004	.000	.688	84.0	.099	.005	-.014	.818	144.0	.010	.000	-.036	.728
26.0	.234	-.004	.000	.695	86.0	.081	.005	-.014	.819	146.0	.018	.000	-.036	.722
28.0	.226	-.003	.000	.702	88.0	.064	.005	-.014	.819	148.0	.024	-.000	-.036	.716
30.0	.220	-.003	-.000	.709	90.0	.047	.005	-.014	.819	150.0	.041	-.000	-.037	.709
32.0	.214	-.003	-.000	.716	92.0	.030	.005	-.015	.819	152.0	.044	-.001	-.037	.702
34.0	.208	-.002	-.001	.722	94.0	.019	.005	-.017	.819	154.0	.056	-.000	-.035	.696
36.0	.207	-.002	-.002	.728	96.0	.007	.004	-.019	.818	156.0	.067	-.000	-.034	.689
38.0	.200	-.002	-.001	.735	98.0	-.003	.004	-.021	.817	158.0	.082	.000	-.034	.681
40.0	.200	-.001	-.002	.741	100.0	-.015	.004	-.022	.816	160.0	.098	.000	-.034	.674
42.0	.197	-.001	-.002	.746	102.0	-.021	.004	-.023	.815	162.0	.108	.000	-.033	.667
44.0	.194	-.001	-.003	.752	104.0	-.025	.003	-.024	.813	164.0	.126	.001	-.033	.660
46.0	.191	-.000	-.002	.757	106.0	-.029	.003	-.025	.811	166.0	.146	.001	-.032	.652
48.0	.186	-.000	-.003	.763	108.0	-.029	.003	-.026	.809	168.0	.160	.001	-.032	.645
50.0	.181	-.000	-.002	.768	110.0	-.023	.003	-.028	.806	170.0	.187	.001	-.033	.637
52.0	.181	.000	-.003	.773	112.0	-.024	.003	-.030	.803	172.0	.204	.001	-.032	.630
54.0	.179	.000	-.004	.777	114.0	-.019	.002	-.032	.800	174.0	.220	.000	-.030	.622
56.0	.177	.001	-.003	.782	116.0	-.014	.002	-.034	.797	176.0	.246	-.000	-.030	.614
58.0	.176	.001	-.003	.786	118.0	-.011	.002	-.036	.794	178.0	.268	-.001	-.029	.607

AIRFOIL COEFFICIENT DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 78 RUN 12 TIME 54905.700 RN/M= 14.63 MILLION ROTOR SPEED= 34.0876 RAD/SEC

AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M
180.0	.290	-.002	-.029	.599	240.0	.841	-.080	.011	.408	300.0	.709	-.057	.013	.407
182.0	.315	-.002	-.029	.591	242.0	.841	-.081	.011	.404	302.0	.705	-.056	.013	.411
184.0	.338	-.003	-.029	.583	244.0	.848	-.082	.013	.400	304.0	.688	-.055	.013	.416
186.0	.368	-.005	-.028	.576	246.0	.845	-.084	.016	.397	306.0	.676	-.054	.013	.420
188.0	.395	-.007	-.027	.568	248.0	.842	-.084	.017	.394	308.0	.664	-.052	.013	.425
190.0	.414	-.008	-.025	.560	250.0	.843	-.085	.016	.391	310.0	.663	-.051	.012	.429
192.0	.435	-.010	-.024	.553	252.0	.840	-.084	.016	.389	312.0	.649	-.049	.012	.435
194.0	.461	-.013	-.023	.545	254.0	.839	-.083	.015	.387	314.0	.636	-.047	.013	.440
196.0	.488	-.015	-.022	.538	256.0	.833	-.083	.017	.385	316.0	.628	-.046	.013	.445
198.0	.518	-.017	-.022	.531	258.0	.832	-.083	.016	.383	318.0	.618	-.046	.014	.451
200.0	.544	-.020	-.020	.523	260.0	.832	-.083	.015	.381	320.0	.605	-.044	.013	.457
202.0	.569	-.023	-.019	.516	262.0	.835	-.081	.013	.380	322.0	.591	-.042	.012	.463
204.0	.594	-.027	-.018	.509	264.0	.836	-.082	.014	.379	324.0	.577	-.041	.014	.469
206.0	.615	-.031	-.015	.502	266.0	.837	-.080	.012	.379	326.0	.568	-.040	.014	.475
208.0	.630	-.034	-.013	.495	268.0	.830	-.078	.012	.378	328.0	.561	-.039	.014	.482
210.0	.650	-.037	-.010	.488	270.0	.822	-.078	.014	.378	330.0	.559	-.037	.011	.488
212.0	.673	-.041	-.009	.482	272.0	.821	-.076	.013	.378	332.0	.538	-.036	.012	.495
214.0	.694	-.045	-.008	.475	274.0	.817	-.076	.013	.378	334.0	.526	-.035	.013	.502
216.0	.710	-.048	-.005	.469	276.0	.813	-.076	.013	.379	336.0	.520	-.034	.013	.509
218.0	.732	-.052	-.003	.463	278.0	.804	-.074	.015	.380	338.0	.508	-.033	.013	.516
220.0	.748	-.055	-.000	.457	280.0	.791	-.074	.014	.381	340.0	.505	-.032	.013	.523
222.0	.756	-.059	.002	.451	282.0	.783	-.071	.014	.383	342.0	.496	-.031	.013	.530
224.0	.772	-.061	.002	.445	284.0	.773	-.070	.015	.384	344.0	.489	-.030	.011	.538
226.0	.778	-.065	.004	.440	286.0	.768	-.068	.013	.386	346.0	.479	-.029	.013	.545
228.0	.785	-.068	.007	.435	288.0	.760	-.067	.013	.389	348.0	.470	-.028	.012	.553
230.0	.797	-.071	.007	.430	290.0	.747	-.065	.015	.391	350.0	.459	-.028	.013	.560
232.0	.806	-.073	.009	.425	292.0	.736	-.064	.015	.394	352.0	.454	-.027	.011	.568
234.0	.821	-.075	.008	.420	294.0	.728	-.062	.015	.397	354.0	.442	-.026	.012	.575
236.0	.827	-.077	.010	.416	296.0	.721	-.061	.015	.400	356.0	.430	-.024	.011	.583
238.0	.828	-.078	.011	.412	298.0	.717	-.059	.014	.404	358.0	.415	-.023	.010	.591

AIRFOIL COEFFICIENT DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 78 RUN 30 TIME 56410.100 RN/M= 14.67 MILLION ROTOR SPEED= 35.1711 RAD/SEC

AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M
0.0	.584	-.048	.031	.618	60.0	.318	-.008	.003	.761	120.0	.355	-.009	-.008	.761
2.0	.537	-.043	.028	.624	62.0	.315	-.008	.003	.764	122.0	.359	-.009	-.008	.758
4.0	.502	-.038	.024	.630	64.0	.315	-.007	.002	.767	124.0	.359	-.009	-.008	.755
6.0	.478	-.034	.019	.636	66.0	.318	-.007	.001	.769	126.0	.357	-.009	-.008	.752
8.0	.458	-.031	.014	.641	68.0	.324	-.007	.001	.771	128.0	.359	-.009	-.007	.748
10.0	.435	-.027	.010	.647	70.0	.329	-.007	.001	.773	130.0	.360	-.010	-.007	.745
12.0	.417	-.024	.007	.653	72.0	.331	-.007	.003	.775	132.0	.368	-.010	-.007	.741
14.0	.396	-.021	.005	.658	74.0	.334	-.007	.004	.777	134.0	.374	-.011	-.007	.737
16.0	.378	-.017	.003	.664	76.0	.341	-.007	.004	.778	136.0	.374	-.011	-.007	.733
18.0	.365	-.014	.001	.669	78.0	.343	-.008	.005	.780	138.0	.378	-.011	-.007	.729
20.0	.355	-.012	.001	.675	80.0	.346	-.008	.006	.781	140.0	.377	-.011	-.007	.724
22.0	.352	-.011	.000	.680	82.0	.345	-.009	.006	.782	142.0	.382	-.012	-.006	.720
24.0	.359	-.012	.002	.685	84.0	.345	-.009	.006	.782	144.0	.383	-.012	-.006	.715
26.0	.360	-.013	.004	.691	86.0	.340	-.009	.007	.783	146.0	.384	-.013	-.006	.711
28.0	.363	-.013	.005	.696	88.0	.341	-.010	.007	.783	148.0	.383	-.013	-.005	.706
30.0	.362	-.014	.006	.701	90.0	.338	-.010	.006	.783	150.0	.386	-.013	-.006	.701
32.0	.354	-.015	.007	.706	92.0	.339	-.010	.006	.783	152.0	.387	-.014	-.005	.696
34.0	.345	-.014	.008	.710	94.0	.339	-.009	.004	.783	154.0	.391	-.014	-.006	.691
36.0	.337	-.014	.007	.715	96.0	.338	-.009	.002	.782	156.0	.390	-.013	-.007	.685
38.0	.325	-.013	.007	.720	98.0	.337	-.009	.002	.782	158.0	.392	-.013	-.006	.680
40.0	.314	-.011	.005	.724	100.0	.337	-.008	.000	.781	160.0	.393	-.014	-.006	.675
42.0	.309	-.010	.003	.729	102.0	.341	-.008	-.001	.780	162.0	.399	-.014	-.006	.669
44.0	.308	-.010	.002	.733	104.0	.341	-.008	-.002	.778	164.0	.399	-.014	-.007	.664
46.0	.306	-.009	.001	.737	106.0	.342	-.008	-.004	.777	166.0	.405	-.015	-.007	.658
48.0	.309	-.009	.001	.741	108.0	.343	-.008	-.004	.775	168.0	.411	-.015	-.008	.653
50.0	.313	-.008	.001	.745	110.0	.346	-.008	-.005	.773	170.0	.414	-.015	-.008	.647
52.0	.322	-.008	.001	.748	112.0	.352	-.008	-.006	.771	172.0	.420	-.016	-.008	.641
54.0	.325	-.008	.001	.752	114.0	.351	-.008	-.007	.769	174.0	.430	-.016	-.008	.636
56.0	.323	-.008	.002	.755	116.0	.352	-.009	-.007	.767	176.0	.435	-.017	-.007	.630
58.0	.319	-.008	.003	.758	118.0	.350	-.009	-.007	.764	178.0	.441	-.018	-.007	.624

AIRFOIL COEFFICIENT DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 78 RUN 30 TIME 56410.100 RN/M= 14.67 MILLION ROTOR SPEED= 35.1711 RAD/SEC

AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M
180.0	.441	-.018	-.006	.618	240.0	.675	-.049	.006	.476	300.0	.828	-.089	.028	.475
182.0	.453	-.019	-.006	.613	242.0	.676	-.052	.008	.473	302.0	.797	-.087	.033	.478
184.0	.459	-.020	-.006	.607	244.0	.687	-.053	.008	.470	304.0	.785	-.084	.031	.481
186.0	.462	-.021	-.006	.601	246.0	.692	-.055	.010	.468	306.0	.756	-.081	.030	.485
188.0	.474	-.022	-.005	.595	248.0	.700	-.056	.009	.465	308.0	.738	-.077	.029	.488
190.0	.475	-.022	-.004	.590	250.0	.715	-.058	.009	.463	310.0	.720	-.072	.027	.492
192.0	.489	-.023	-.006	.584	252.0	.721	-.059	.010	.461	312.0	.705	-.069	.025	.496
194.0	.491	-.024	-.005	.578	254.0	.728	-.061	.010	.460	314.0	.697	-.066	.024	.500
196.0	.498	-.025	-.004	.573	256.0	.733	-.062	.011	.458	316.0	.687	-.064	.021	.504
198.0	.504	-.026	-.004	.567	258.0	.735	-.064	.014	.457	318.0	.678	-.062	.021	.508
200.0	.508	-.027	-.002	.562	260.0	.741	-.065	.014	.456	320.0	.670	-.061	.020	.512
202.0	.517	-.028	-.002	.557	262.0	.738	-.065	.015	.455	322.0	.659	-.060	.021	.517
204.0	.521	-.029	-.002	.551	264.0	.742	-.067	.015	.454	324.0	.661	-.058	.019	.521
206.0	.528	-.029	-.002	.546	266.0	.746	-.068	.016	.454	326.0	.653	-.057	.019	.526
208.0	.536	-.030	-.001	.541	268.0	.749	-.068	.016	.453	328.0	.651	-.056	.019	.531
210.0	.541	-.031	-.001	.536	270.0	.758	-.069	.016	.453	330.0	.648	-.055	.019	.536
212.0	.558	-.032	-.000	.531	272.0	.772	-.071	.017	.453	332.0	.649	-.055	.018	.541
214.0	.554	-.034	-.001	.526	274.0	.775	-.072	.017	.454	334.0	.641	-.054	.019	.546
216.0	.568	-.034	-.000	.521	276.0	.785	-.074	.015	.454	336.0	.639	-.053	.019	.551
218.0	.577	-.036	-.000	.517	278.0	.797	-.075	.015	.455	338.0	.633	-.051	.018	.556
220.0	.582	-.037	.001	.512	280.0	.787	-.076	.017	.456	340.0	.627	-.050	.018	.562
222.0	.592	-.038	.001	.508	282.0	.799	-.078	.019	.457	342.0	.627	-.049	.017	.567
224.0	.600	-.039	-.001	.504	284.0	.799	-.079	.020	.458	344.0	.615	-.048	.018	.573
226.0	.611	-.040	-.001	.500	286.0	.815	-.082	.019	.460	346.0	.613	-.047	.020	.578
228.0	.622	-.041	-.001	.496	288.0	.819	-.083	.022	.461	348.0	.621	-.045	.017	.584
230.0	.634	-.042	-.000	.492	290.0	.826	-.085	.023	.463	350.0	.632	-.045	.018	.589
232.0	.646	-.044	.000	.488	292.0	.826	-.086	.025	.465	352.0	.637	-.044	.019	.595
234.0	.648	-.045	.002	.485	294.0	.831	-.087	.025	.468	354.0	.643	-.046	.024	.601
236.0	.654	-.047	.002	.482	296.0	.831	-.089	.027	.470	356.0	.639	-.049	.029	.607
238.0	.669	-.048	.003	.478	298.0	.831	-.090	.029	.473	358.0	.622	-.051	.032	.612

AIRFOIL COEFFICIENT DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 80 RUN 31 TIME 52235.700 RN/M= 14.59 MILLION ROTOR SPEED= 34.6196 RAD/SEC

AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M
0.0	.531	-.039	.015	.607	60.0	.397	-.014	.006	.751	120.0	.283	-.005	-.013	.751
2.0	.512	-.037	.013	.613	62.0	.398	-.014	.006	.753	122.0	.277	-.005	-.013	.748
4.0	.504	-.034	.011	.619	64.0	.403	-.014	.007	.756	124.0	.274	-.005	-.013	.745
6.0	.491	-.032	.009	.625	66.0	.407	-.014	.008	.758	126.0	.273	-.005	-.014	.741
8.0	.480	-.030	.007	.630	68.0	.409	-.015	.008	.761	128.0	.267	-.005	-.013	.738
10.0	.462	-.028	.007	.636	70.0	.405	-.015	.010	.763	130.0	.268	-.005	-.013	.734
12.0	.459	-.026	.006	.642	72.0	.405	-.015	.010	.765	132.0	.269	-.004	-.014	.730
14.0	.468	-.025	.005	.647	74.0	.403	-.016	.011	.766	134.0	.267	-.005	-.013	.726
16.0	.475	-.025	.007	.653	76.0	.396	-.015	.012	.768	136.0	.267	-.004	-.014	.722
18.0	.479	-.025	.009	.659	78.0	.396	-.015	.012	.769	138.0	.271	-.004	-.014	.718
20.0	.479	-.024	.009	.664	80.0	.391	-.015	.011	.770	140.0	.270	-.004	-.013	.714
22.0	.469	-.024	.010	.669	82.0	.386	-.014	.009	.771	142.0	.273	-.005	-.014	.709
24.0	.459	-.024	.012	.675	84.0	.379	-.014	.009	.772	144.0	.269	-.005	-.012	.705
26.0	.455	-.025	.013	.680	86.0	.372	-.013	.007	.772	146.0	.272	-.005	-.013	.700
28.0	.444	-.025	.015	.685	88.0	.366	-.012	.005	.773	148.0	.270	-.005	-.011	.695
30.0	.433	-.025	.015	.690	90.0	.359	-.012	.004	.773	150.0	.276	-.005	-.012	.690
32.0	.423	-.024	.014	.695	92.0	.355	-.011	.001	.773	152.0	.280	-.005	-.013	.685
34.0	.423	-.023	.012	.700	94.0	.346	-.010	-.001	.772	154.0	.282	-.005	-.013	.680
36.0	.423	-.022	.011	.705	96.0	.327	-.009	-.001	.772	156.0	.286	-.006	-.013	.675
38.0	.415	-.021	.010	.709	98.0	.309	-.008	-.002	.771	158.0	.286	-.006	-.012	.669
40.0	.407	-.019	.008	.714	100.0	.299	-.008	-.002	.770	160.0	.292	-.006	-.013	.664
42.0	.408	-.018	.006	.718	102.0	.291	-.007	-.003	.769	162.0	.291	-.006	-.014	.659
44.0	.413	-.017	.006	.722	104.0	.284	-.007	-.005	.768	164.0	.301	-.006	-.013	.653
46.0	.418	-.017	.007	.726	106.0	.282	-.007	-.006	.766	166.0	.309	-.007	-.013	.648
48.0	.409	-.017	.007	.730	108.0	.284	-.006	-.007	.765	168.0	.308	-.007	-.013	.642
50.0	.406	-.017	.007	.734	110.0	.285	-.006	-.009	.763	170.0	.316	-.008	-.013	.636
52.0	.404	-.016	.007	.738	112.0	.285	-.005	-.010	.761	172.0	.326	-.008	-.013	.631
54.0	.399	-.016	.008	.741	114.0	.284	-.005	-.011	.759	174.0	.326	-.008	-.013	.625
56.0	.395	-.016	.007	.745	116.0	.284	-.005	-.012	.756	176.0	.340	-.009	-.013	.619
58.0	.395	-.015	.006	.748	118.0	.285	-.005	-.012	.753	178.0	.345	-.009	-.013	.613

AIRFOIL COEFFICIENT DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 80 RUN 31 TIME 52235.700 RN/M= 14.59 MILLION ROTOR SPEED= 34.6196 RAD/SEC

AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M
180.0	.352	-.009	-.012	.608	240.0	.753	-.070	.013	.464	300.0	.811	-.098	.043	.464
182.0	.363	-.011	-.013	.602	242.0	.759	-.072	.014	.462	302.0	.770	-.093	.043	.467
184.0	.377	-.011	-.013	.596	244.0	.774	-.075	.013	.459	304.0	.752	-.088	.040	.470
186.0	.386	-.012	-.013	.590	246.0	.782	-.077	.015	.456	306.0	.744	-.084	.035	.474
188.0	.396	-.014	-.013	.585	248.0	.787	-.080	.016	.454	308.0	.716	-.081	.038	.477
190.0	.407	-.014	-.012	.579	250.0	.794	-.082	.017	.452	310.0	.710	-.077	.035	.481
192.0	.416	-.015	-.010	.573	252.0	.804	-.083	.018	.450	312.0	.700	-.074	.033	.484
194.0	.430	-.016	-.010	.568	254.0	.806	-.085	.019	.449	314.0	.696	-.072	.029	.488
196.0	.438	-.017	-.011	.562	256.0	.816	-.086	.019	.447	316.0	.692	-.070	.028	.492
198.0	.457	-.018	-.011	.556	258.0	.827	-.088	.019	.446	318.0	.696	-.069	.026	.497
200.0	.467	-.020	-.010	.551	260.0	.839	-.090	.019	.445	320.0	.685	-.067	.025	.501
202.0	.486	-.021	-.010	.546	262.0	.852	-.092	.019	.444	322.0	.686	-.066	.025	.506
204.0	.498	-.023	-.009	.540	264.0	.858	-.094	.019	.443	324.0	.682	-.065	.021	.510
206.0	.511	-.025	-.008	.535	266.0	.868	-.095	.020	.443	326.0	.686	-.063	.020	.515
208.0	.529	-.026	-.009	.530	268.0	.882	-.097	.020	.442	328.0	.683	-.062	.019	.520
210.0	.539	-.028	-.008	.525	270.0	.882	-.099	.022	.442	330.0	.681	-.061	.019	.525
212.0	.554	-.030	-.007	.520	272.0	.888	-.100	.021	.442	332.0	.680	-.060	.018	.530
214.0	.570	-.032	-.007	.515	274.0	.894	-.102	.024	.443	334.0	.668	-.058	.019	.535
216.0	.587	-.035	-.007	.510	276.0	.897	-.103	.024	.443	336.0	.667	-.058	.021	.540
218.0	.607	-.038	-.005	.506	278.0	.896	-.104	.026	.444	338.0	.667	-.056	.021	.545
220.0	.623	-.041	-.004	.501	280.0	.904	-.105	.028	.445	340.0	.677	-.055	.019	.551
222.0	.633	-.043	-.003	.497	282.0	.909	-.106	.030	.446	342.0	.694	-.054	.017	.556
224.0	.650	-.046	-.002	.493	284.0	.912	-.107	.032	.447	344.0	.698	-.052	.017	.562
226.0	.667	-.049	.001	.489	286.0	.912	-.108	.034	.448	346.0	.713	-.052	.018	.567
228.0	.680	-.052	.004	.485	288.0	.921	-.109	.036	.450	348.0	.727	-.054	.023	.573
230.0	.695	-.055	.005	.481	290.0	.922	-.109	.037	.452	350.0	.740	-.058	.029	.579
232.0	.707	-.058	.006	.477	292.0	.915	-.109	.038	.454	352.0	.712	-.061	.034	.584
234.0	.726	-.061	.007	.474	294.0	.885	-.109	.045	.456	354.0	.670	-.061	.036	.590
236.0	.738	-.064	.010	.470	296.0	.868	-.107	.045	.459	356.0	.616	-.055	.033	.596
238.0	.746	-.067	.012	.467	298.0	.837	-.103	.045	.461	358.0	.580	-.047	.026	.601

AIRFOIL COEFFICIENT DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 80 RUN 33 TIME 52435.200 RN/M= 14.74 MILLION ROTOR SPEED= 34.0444 RAD/SEC

AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M
0.0	.329	-.012	.001	.600	60.0	.174	-.001	-.008	.740	120.0	.054	.002	-.026	.740
2.0	.311	-.011	.001	.605	62.0	.168	-.001	-.007	.742	122.0	.052	.002	-.026	.737
4.0	.298	-.009	.000	.611	64.0	.171	-.001	-.008	.745	124.0	.048	.002	-.027	.734
6.0	.286	-.008	-.001	.616	66.0	.170	-.001	-.008	.747	126.0	.051	.001	-.027	.730
8.0	.280	-.007	-.001	.622	68.0	.176	-.001	-.009	.750	128.0	.053	.001	-.027	.727
10.0	.280	-.007	-.001	.628	70.0	.179	-.001	-.008	.752	130.0	.055	.001	-.027	.724
12.0	.262	-.006	-.001	.633	72.0	.178	-.000	-.008	.753	132.0	.059	.001	-.028	.720
14.0	.261	-.006	-.001	.639	74.0	.179	-.001	-.008	.755	134.0	.063	.001	-.028	.716
16.0	.254	-.006	-.001	.644	76.0	.175	-.001	-.007	.756	136.0	.064	.001	-.028	.712
18.0	.245	-.005	-.002	.650	78.0	.173	-.001	-.007	.758	138.0	.061	.000	-.026	.708
20.0	.235	-.004	-.001	.655	80.0	.170	-.001	-.008	.759	140.0	.070	.000	-.027	.704
22.0	.232	-.004	-.002	.660	82.0	.165	.000	-.008	.760	142.0	.070	.000	-.028	.699
24.0	.224	-.004	-.001	.665	84.0	.158	.000	-.010	.760	144.0	.080	.001	-.028	.695
26.0	.215	-.003	-.002	.670	86.0	.149	.001	-.011	.761	146.0	.086	.000	-.028	.690
28.0	.207	-.003	-.003	.675	88.0	.142	.001	-.012	.761	148.0	.085	.000	-.027	.685
30.0	.202	-.003	-.003	.680	90.0	.130	.001	-.013	.761	150.0	.096	.000	-.027	.680
32.0	.197	-.002	-.004	.685	92.0	.118	.002	-.014	.761	152.0	.100	.000	-.027	.676
34.0	.192	-.002	-.004	.690	94.0	.110	.002	-.015	.761	154.0	.104	.001	-.026	.671
36.0	.187	-.002	-.004	.695	96.0	.108	.003	-.016	.760	156.0	.116	.000	-.027	.665
38.0	.179	-.001	-.004	.699	98.0	.101	.003	-.018	.760	158.0	.124	.000	-.027	.660
40.0	.176	-.001	-.004	.704	100.0	.092	.003	-.019	.759	160.0	.127	.000	-.024	.655
42.0	.173	-.001	-.004	.708	102.0	.087	.002	-.019	.758	162.0	.140	.000	-.026	.650
44.0	.174	-.001	-.006	.712	104.0	.078	.003	-.020	.757	164.0	.150	.000	-.026	.644
46.0	.168	-.001	-.006	.716	106.0	.074	.003	-.021	.755	166.0	.156	.000	-.025	.639
48.0	.165	-.001	-.006	.720	108.0	.068	.003	-.021	.753	168.0	.168	.000	-.025	.633
50.0	.169	-.000	-.006	.723	110.0	.066	.003	-.022	.752	170.0	.181	-.000	-.026	.628
52.0	.168	-.001	-.007	.727	112.0	.065	.003	-.024	.750	172.0	.192	-.000	-.025	.622
54.0	.172	-.001	-.007	.730	114.0	.057	.002	-.024	.747	174.0	.207	-.001	-.026	.617
56.0	.174	-.001	-.008	.734	116.0	.052	.002	-.025	.745	176.0	.212	-.001	-.024	.611
58.0	.175	-.001	-.008	.737	118.0	.055	.002	-.026	.742	178.0	.229	-.001	-.024	.605

AIRFOIL COEFFICIENT DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 80 RUN 33 TIME 52435.200 RN/M= 14.74 MILLION ROTOR SPEED= 34.0444 RAD/SEC

AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M
180.0	.242	-.002	-.023	.600	240.0	.612	-.043	.004	.459	300.0	.545	-.038	.009	.459
182.0	.258	-.002	-.023	.594	242.0	.619	-.044	.004	.457	302.0	.522	-.035	.006	.462
184.0	.272	-.002	-.023	.588	244.0	.626	-.045	.004	.454	304.0	.502	-.032	.007	.465
186.0	.285	-.003	-.022	.583	246.0	.632	-.046	.004	.452	306.0	.486	-.030	.004	.469
188.0	.303	-.004	-.022	.577	248.0	.630	-.047	.005	.450	308.0	.458	-.027	.006	.472
190.0	.312	-.005	-.020	.572	250.0	.627	-.048	.008	.448	310.0	.443	-.025	.007	.475
192.0	.329	-.005	-.020	.566	252.0	.634	-.048	.008	.446	312.0	.436	-.023	.005	.479
194.0	.345	-.006	-.020	.560	254.0	.637	-.049	.007	.444	314.0	.425	-.022	.006	.483
196.0	.360	-.008	-.019	.555	256.0	.639	-.050	.008	.443	316.0	.423	-.021	.005	.487
198.0	.370	-.009	-.018	.550	258.0	.640	-.050	.009	.441	318.0	.416	-.020	.004	.491
200.0	.390	-.010	-.017	.544	260.0	.639	-.050	.009	.440	320.0	.405	-.019	.006	.495
202.0	.403	-.011	-.016	.539	262.0	.640	-.050	.008	.439	322.0	.403	-.020	.006	.500
204.0	.422	-.013	-.016	.534	264.0	.644	-.050	.009	.439	324.0	.400	-.019	.005	.504
206.0	.433	-.014	-.015	.529	266.0	.645	-.051	.009	.438	326.0	.397	-.019	.005	.509
208.0	.445	-.016	-.013	.524	268.0	.645	-.051	.009	.438	328.0	.399	-.018	.005	.514
210.0	.460	-.017	-.013	.519	270.0	.640	-.051	.009	.438	330.0	.390	-.018	.006	.518
212.0	.478	-.020	-.012	.514	272.0	.634	-.050	.008	.438	332.0	.384	-.017	.006	.523
214.0	.484	-.021	-.011	.509	274.0	.639	-.049	.008	.438	334.0	.383	-.018	.006	.528
216.0	.507	-.023	-.010	.505	276.0	.638	-.049	.009	.439	336.0	.387	-.018	.005	.534
218.0	.514	-.024	-.010	.500	278.0	.636	-.049	.010	.439	338.0	.383	-.017	.006	.539
220.0	.527	-.025	-.009	.496	280.0	.622	-.049	.010	.440	340.0	.379	-.017	.005	.544
222.0	.536	-.027	-.008	.491	282.0	.618	-.048	.010	.441	342.0	.378	-.017	.005	.549
224.0	.547	-.030	-.007	.487	284.0	.617	-.047	.009	.442	344.0	.376	-.017	.005	.555
226.0	.560	-.031	-.005	.483	286.0	.610	-.046	.010	.444	346.0	.379	-.017	.004	.560
228.0	.565	-.033	-.003	.479	288.0	.606	-.046	.010	.446	348.0	.375	-.017	.005	.566
230.0	.580	-.035	-.002	.476	290.0	.601	-.045	.010	.447	350.0	.370	-.016	.006	.571
232.0	.585	-.037	-.002	.472	292.0	.592	-.045	.011	.449	352.0	.362	-.016	.005	.577
234.0	.598	-.038	-.001	.469	294.0	.585	-.044	.011	.452	354.0	.357	-.015	.004	.582
236.0	.605	-.039	-.000	.465	296.0	.577	-.043	.011	.454	356.0	.345	-.015	.003	.588
238.0	.604	-.041	.003	.462	298.0	.566	-.042	.010	.457	358.0	.330	-.013	.004	.594

AIRFOIL COEFFICIENT DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/27.

FLT 80 RUN 38 TIME 52653.700 RN/M= 14.72 MILLION ROTOR SPEED= 34.6195 RAD/SEC

AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M
0.0	.542	-.036	.017	.609	60.0	.316	-.009	.002	.746	120.0	.318	-.008	-.008	.746
2.0	.527	-.035	.016	.615	62.0	.315	-.009	.002	.749	122.0	.320	-.008	-.010	.743
4.0	.498	-.034	.016	.620	64.0	.317	-.009	.002	.751	124.0	.313	-.008	-.010	.740
6.0	.470	-.032	.015	.626	66.0	.318	-.009	.002	.754	126.0	.307	-.008	-.009	.737
8.0	.436	-.029	.013	.631	68.0	.323	-.009	.002	.756	128.0	.304	-.007	-.010	.734
10.0	.413	-.026	.010	.637	70.0	.327	-.009	.002	.758	130.0	.301	-.008	-.010	.731
12.0	.396	-.022	.006	.642	72.0	.329	-.008	.002	.760	132.0	.301	-.007	-.010	.727
14.0	.378	-.019	.003	.648	74.0	.335	-.009	.002	.761	134.0	.302	-.007	-.011	.723
16.0	.358	-.016	.002	.653	76.0	.339	-.009	.002	.763	136.0	.302	-.008	-.011	.719
18.0	.340	-.013	.000	.658	78.0	.341	-.009	.004	.764	138.0	.300	-.008	-.010	.715
20.0	.327	-.010	-.001	.663	80.0	.345	-.009	.004	.765	140.0	.299	-.007	-.010	.711
22.0	.314	-.009	-.001	.669	82.0	.349	-.009	.003	.766	142.0	.296	-.007	-.010	.707
24.0	.309	-.009	-.001	.674	84.0	.348	-.010	.004	.767	144.0	.297	-.007	-.011	.702
26.0	.310	-.008	-.001	.679	86.0	.345	-.010	.005	.767	146.0	.292	-.007	-.011	.698
28.0	.316	-.009	-.000	.684	88.0	.343	-.010	.006	.767	148.0	.294	-.007	-.012	.693
30.0	.326	-.009	.000	.688	90.0	.337	-.011	.005	.767	150.0	.293	-.007	-.012	.688
32.0	.329	-.010	.001	.693	92.0	.326	-.010	.005	.767	152.0	.293	-.007	-.012	.684
34.0	.321	-.010	.002	.698	94.0	.318	-.010	.005	.767	154.0	.293	-.007	-.013	.679
36.0	.313	-.010	.004	.702	96.0	.312	-.010	.005	.767	156.0	.290	-.007	-.012	.674
38.0	.305	-.010	.004	.707	98.0	.303	-.009	.004	.766	158.0	.290	-.007	-.012	.669
40.0	.298	-.010	.003	.711	100.0	.302	-.009	.002	.765	160.0	.290	-.007	-.013	.664
42.0	.289	-.008	.001	.715	102.0	.300	-.009	.001	.764	162.0	.294	-.007	-.013	.658
44.0	.287	-.007	.000	.719	104.0	.300	-.008	-.000	.763	164.0	.294	-.007	-.014	.653
46.0	.293	-.007	-.001	.723	106.0	.305	-.009	-.002	.761	166.0	.295	-.007	-.013	.648
48.0	.295	-.007	-.001	.727	108.0	.303	-.009	-.002	.760	168.0	.296	-.007	-.014	.642
50.0	.298	-.007	-.001	.730	110.0	.306	-.008	-.003	.758	170.0	.300	-.007	-.014	.637
52.0	.307	-.007	-.001	.734	112.0	.307	-.008	-.004	.756	172.0	.303	-.007	-.015	.631
54.0	.314	-.008	.000	.737	114.0	.313	-.008	-.005	.754	174.0	.302	-.007	-.014	.626
56.0	.314	-.008	.001	.740	116.0	.315	-.008	-.006	.751	176.0	.309	-.007	-.014	.621
58.0	.317	-.008	.001	.743	118.0	.315	-.008	-.007	.749	178.0	.310	-.008	-.013	.615

AIRFOIL COEFFICIENT DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/27.

FLT 80 RUN 38 TIME 52653.700 RN/M= 14.72 MILLION ROTOR SPEED= 34.6195 RAD/SEC

AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M
180.0	.316	-.008	-.013	.610	240.0	.637	-.041	-.004	.473	300.0	.793	-.085	.026	.472
182.0	.325	-.008	-.015	.604	242.0	.649	-.043	-.004	.470	302.0	.789	-.084	.026	.475
184.0	.330	-.008	-.013	.598	244.0	.658	-.045	-.001	.467	304.0	.769	-.082	.028	.478
186.0	.336	-.009	-.013	.593	246.0	.666	-.047	.003	.465	306.0	.741	-.080	.030	.481
188.0	.342	-.010	-.014	.588	248.0	.677	-.050	.004	.463	308.0	.717	-.076	.030	.485
190.0	.352	-.010	-.014	.582	250.0	.687	-.052	.004	.461	310.0	.697	-.072	.027	.488
192.0	.355	-.011	-.013	.577	252.0	.693	-.054	.006	.459	312.0	.670	-.067	.026	.492
194.0	.367	-.011	-.015	.571	254.0	.700	-.056	.007	.458	314.0	.652	-.063	.022	.496
196.0	.374	-.012	-.014	.566	256.0	.701	-.057	.009	.456	316.0	.639	-.058	.019	.500
198.0	.383	-.012	-.013	.561	258.0	.706	-.058	.010	.455	318.0	.625	-.055	.018	.504
200.0	.396	-.013	-.014	.555	260.0	.714	-.060	.011	.454	320.0	.614	-.053	.018	.508
202.0	.408	-.014	-.013	.550	262.0	.715	-.061	.012	.453	322.0	.610	-.051	.016	.512
204.0	.410	-.014	-.012	.545	264.0	.721	-.063	.012	.452	324.0	.604	-.050	.016	.516
206.0	.421	-.015	-.012	.540	266.0	.728	-.064	.012	.452	326.0	.601	-.049	.015	.521
208.0	.430	-.016	-.012	.535	268.0	.732	-.065	.013	.451	328.0	.596	-.049	.015	.526
210.0	.435	-.017	-.011	.530	270.0	.737	-.066	.013	.451	330.0	.590	-.048	.015	.530
212.0	.453	-.018	-.012	.526	272.0	.743	-.066	.012	.451	332.0	.592	-.048	.014	.535
214.0	.467	-.019	-.012	.521	274.0	.746	-.066	.012	.452	334.0	.592	-.048	.014	.540
216.0	.477	-.020	-.012	.517	276.0	.749	-.067	.012	.452	336.0	.587	-.047	.014	.545
218.0	.495	-.021	-.012	.512	278.0	.755	-.069	.014	.453	338.0	.588	-.047	.015	.550
220.0	.506	-.022	-.012	.508	280.0	.761	-.071	.015	.454	340.0	.585	-.047	.016	.555
222.0	.523	-.024	-.011	.504	282.0	.766	-.073	.016	.455	342.0	.583	-.046	.015	.560
224.0	.539	-.026	-.011	.500	284.0	.769	-.074	.016	.456	344.0	.581	-.045	.015	.566
226.0	.547	-.028	-.010	.496	286.0	.776	-.075	.017	.457	346.0	.574	-.045	.016	.571
228.0	.557	-.029	-.009	.492	288.0	.781	-.077	.019	.459	348.0	.571	-.044	.018	.576
230.0	.579	-.031	-.010	.488	290.0	.784	-.079	.020	.461	350.0	.575	-.043	.017	.582
232.0	.589	-.033	-.009	.485	292.0	.790	-.080	.021	.463	352.0	.576	-.042	.017	.587
234.0	.603	-.036	-.006	.482	294.0	.789	-.082	.024	.465	354.0	.580	-.042	.017	.593
236.0	.614	-.037	-.005	.478	296.0	.795	-.084	.025	.467	356.0	.590	-.040	.016	.598
238.0	.621	-.039	-.005	.476	298.0	.796	-.085	.027	.470	358.0	.588	-.039	.016	.604

AIRFOIL COEFFICIENT DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 3 TIME 49433.100 RN/M= 15.23 MILLION ROTOR SPEED= 33.9869 RAD/SEC

AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M
0.0	.396	-.020	.008	.606	60.0	.178	-.002	-.009	.691	120.0	.248	-.005	-.008	.691
2.0	.385	-.020	.009	.609	62.0	.183	-.002	-.009	.693	122.0	.243	-.005	-.007	.690
4.0	.372	-.018	.010	.613	64.0	.192	-.002	-.007	.695	124.0	.242	-.004	-.008	.688
6.0	.368	-.017	.009	.616	66.0	.193	-.002	-.006	.696	126.0	.237	-.004	-.008	.686
8.0	.358	-.016	.008	.619	68.0	.195	-.003	-.006	.697	128.0	.234	-.004	-.009	.684
10.0	.345	-.015	.009	.623	70.0	.192	-.002	-.006	.699	130.0	.228	-.003	-.009	.681
12.0	.338	-.014	.008	.626	72.0	.193	-.002	-.008	.700	132.0	.227	-.003	-.010	.679
14.0	.331	-.014	.006	.630	74.0	.197	-.001	-.010	.701	134.0	.227	-.003	-.011	.677
16.0	.325	-.013	.005	.633	76.0	.203	-.001	-.011	.702	136.0	.228	-.003	-.011	.674
18.0	.316	-.012	.005	.636	78.0	.212	-.001	-.012	.702	138.0	.227	-.004	-.011	.672
20.0	.306	-.011	.006	.639	80.0	.224	-.002	-.011	.703	140.0	.227	-.004	-.011	.669
22.0	.298	-.011	.005	.643	82.0	.241	-.003	-.009	.704	142.0	.228	-.003	-.011	.667
24.0	.287	-.010	.006	.646	84.0	.254	-.004	-.006	.704	144.0	.228	-.003	-.012	.664
26.0	.280	-.009	.004	.649	86.0	.267	-.005	-.003	.704	146.0	.227	-.003	-.012	.661
28.0	.274	-.009	.004	.652	88.0	.274	-.006	-.001	.704	148.0	.228	-.003	-.012	.658
30.0	.270	-.008	.002	.655	90.0	.278	-.007	.000	.705	150.0	.233	-.003	-.012	.655
32.0	.259	-.007	.002	.658	92.0	.279	-.008	.001	.704	152.0	.240	-.004	-.013	.652
34.0	.251	-.007	.001	.661	94.0	.279	-.008	.001	.704	154.0	.237	-.004	-.012	.649
36.0	.246	-.006	.000	.664	96.0	.279	-.008	.001	.704	156.0	.238	-.004	-.011	.646
38.0	.241	-.005	-.001	.667	98.0	.277	-.008	.000	.704	158.0	.243	-.004	-.011	.643
40.0	.235	-.005	-.001	.669	100.0	.276	-.007	-.000	.703	160.0	.243	-.004	-.011	.640
42.0	.224	-.005	-.001	.672	102.0	.273	-.007	-.001	.702	162.0	.248	-.004	-.011	.636
44.0	.223	-.004	-.001	.674	104.0	.272	-.007	-.002	.702	164.0	.254	-.005	-.012	.633
46.0	.219	-.004	-.002	.677	106.0	.269	-.006	-.004	.701	166.0	.257	-.004	-.010	.630
48.0	.214	-.004	-.002	.679	108.0	.264	-.006	-.005	.700	168.0	.259	-.005	-.010	.626
50.0	.207	-.003	-.004	.681	110.0	.265	-.006	-.006	.699	170.0	.258	-.005	-.010	.623
52.0	.200	-.003	-.004	.684	112.0	.261	-.005	-.006	.697	172.0	.264	-.005	-.010	.619
54.0	.188	-.002	-.004	.686	114.0	.255	-.005	-.006	.696	174.0	.270	-.005	-.012	.616
56.0	.179	-.002	-.005	.688	116.0	.253	-.005	-.007	.695	176.0	.283	-.005	-.012	.613
58.0	.177	-.002	-.008	.689	118.0	.249	-.005	-.007	.693	178.0	.287	-.005	-.013	.609

AIRFOIL COEFFICIENT DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 3 TIME 49433.100 RN/M= 15.23 MILLION ROTOR SPEED= 33.9869 RAD/SEC

AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M
180.0	.295	-.005	-.012	.606	240.0	.558	-.031	.002	.520	300.0	.442	-.021	.003	.520
182.0	.300	-.006	-.011	.602	242.0	.568	-.033	.003	.518	302.0	.431	-.021	.005	.522
184.0	.303	-.007	-.012	.599	244.0	.576	-.035	.004	.517	304.0	.430	-.021	.006	.524
186.0	.318	-.007	-.011	.595	246.0	.593	-.037	.006	.515	306.0	.439	-.021	.006	.526
188.0	.322	-.007	-.012	.592	248.0	.605	-.040	.008	.514	308.0	.432	-.022	.006	.528
190.0	.325	-.008	-.011	.589	250.0	.622	-.042	.008	.513	310.0	.443	-.022	.005	.530
192.0	.331	-.008	-.010	.585	252.0	.636	-.044	.009	.512	312.0	.443	-.022	.005	.532
194.0	.332	-.008	-.010	.582	254.0	.653	-.048	.011	.511	314.0	.440	-.023	.007	.534
196.0	.341	-.009	-.009	.578	256.0	.662	-.051	.013	.510	316.0	.444	-.023	.007	.537
198.0	.349	-.010	-.008	.575	258.0	.677	-.054	.013	.509	318.0	.448	-.024	.008	.539
200.0	.358	-.010	-.008	.572	260.0	.697	-.057	.015	.508	320.0	.447	-.024	.009	.542
202.0	.361	-.011	-.009	.569	262.0	.707	-.060	.018	.508	322.0	.450	-.025	.010	.545
204.0	.373	-.011	-.009	.565	264.0	.717	-.062	.019	.507	324.0	.452	-.025	.010	.547
206.0	.381	-.012	-.009	.562	266.0	.726	-.065	.022	.507	326.0	.455	-.025	.011	.550
208.0	.390	-.013	-.009	.559	268.0	.720	-.066	.023	.507	328.0	.459	-.026	.010	.553
210.0	.402	-.013	-.008	.556	270.0	.703	-.067	.024	.507	330.0	.458	-.026	.011	.556
212.0	.411	-.014	-.009	.553	272.0	.670	-.064	.021	.507	332.0	.465	-.026	.011	.559
214.0	.425	-.015	-.009	.550	274.0	.611	-.059	.021	.507	334.0	.476	-.027	.011	.562
216.0	.438	-.016	-.009	.548	276.0	.557	-.050	.018	.507	336.0	.475	-.028	.011	.565
218.0	.444	-.016	-.008	.545	278.0	.511	-.041	.016	.508	338.0	.472	-.028	.011	.568
220.0	.453	-.017	-.006	.542	280.0	.481	-.034	.010	.508	340.0	.466	-.028	.013	.572
222.0	.459	-.018	-.003	.540	282.0	.463	-.027	.005	.509	342.0	.462	-.028	.013	.575
224.0	.468	-.020	-.002	.537	284.0	.444	-.023	.001	.510	344.0	.460	-.028	.012	.578
226.0	.482	-.021	-.003	.535	286.0	.440	-.022	-.001	.511	346.0	.448	-.027	.012	.582
228.0	.494	-.023	-.002	.532	288.0	.437	-.021	-.000	.512	348.0	.444	-.026	.012	.585
230.0	.501	-.024	-.001	.530	290.0	.435	-.021	.000	.513	350.0	.444	-.025	.010	.588
232.0	.511	-.025	-.000	.528	292.0	.438	-.020	-.000	.514	352.0	.433	-.024	.011	.592
234.0	.518	-.027	.000	.526	294.0	.436	-.020	-.000	.515	354.0	.421	-.023	.010	.595
236.0	.531	-.029	.002	.524	296.0	.434	-.020	.002	.517	356.0	.411	-.023	.010	.599
238.0	.542	-.030	.002	.522	298.0	.442	-.021	.001	.518	358.0	.402	-.021	.010	.602

AIRFOIL COEFFICIENT DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 8 TIME 49846.000 RN/M= 15.24 MILLION ROTOR SPEED= 34.0542 RAD/SEC

AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M
0.0	.436	-.027	.014	.607	60.0	.207	-.003	-.001	.751	120.0	.095	.002	-.022	.751
2.0	.418	-.025	.013	.613	62.0	.207	-.003	-.002	.754	122.0	.097	.002	-.024	.748
4.0	.401	-.023	.012	.619	64.0	.206	-.003	-.003	.756	124.0	.097	.002	-.024	.745
6.0	.385	-.021	.011	.624	66.0	.204	-.002	-.003	.759	126.0	.097	.001	-.024	.741
8.0	.376	-.019	.011	.630	68.0	.201	-.002	-.003	.761	128.0	.103	.001	-.025	.738
10.0	.376	-.017	.009	.636	70.0	.203	-.002	-.004	.763	130.0	.106	.001	-.025	.734
12.0	.364	-.016	.008	.642	72.0	.203	-.002	-.005	.765	132.0	.110	.001	-.024	.730
14.0	.358	-.015	.007	.647	74.0	.206	-.001	-.005	.767	134.0	.109	.000	-.025	.727
16.0	.341	-.015	.008	.653	76.0	.208	-.001	-.005	.768	136.0	.110	.000	-.023	.722
18.0	.331	-.013	.007	.658	78.0	.211	-.002	-.005	.769	138.0	.118	.000	-.024	.718
20.0	.323	-.013	.008	.664	80.0	.208	-.002	-.005	.771	140.0	.121	.000	-.024	.714
22.0	.311	-.012	.007	.669	82.0	.203	-.002	-.005	.771	142.0	.128	.000	-.024	.709
24.0	.304	-.010	.007	.675	84.0	.199	-.002	-.005	.772	144.0	.134	-.000	-.024	.705
26.0	.291	-.010	.008	.680	86.0	.194	-.001	-.006	.773	146.0	.134	-.000	-.023	.700
28.0	.284	-.009	.007	.685	88.0	.183	-.001	-.007	.773	148.0	.142	-.001	-.023	.695
30.0	.276	-.008	.006	.690	90.0	.177	-.000	-.008	.773	150.0	.144	-.001	-.022	.690
32.0	.264	-.008	.007	.695	92.0	.167	.000	-.009	.773	152.0	.153	-.001	-.022	.685
34.0	.259	-.007	.005	.700	94.0	.156	.001	-.010	.773	154.0	.161	-.001	-.023	.680
36.0	.251	-.006	.004	.705	96.0	.150	.001	-.011	.772	156.0	.167	-.001	-.022	.675
38.0	.248	-.006	.003	.709	98.0	.145	.001	-.013	.771	158.0	.176	-.001	-.021	.669
40.0	.236	-.005	.004	.714	100.0	.135	.001	-.014	.771	160.0	.186	-.002	-.022	.664
42.0	.236	-.004	.002	.718	102.0	.128	.001	-.015	.769	162.0	.195	-.002	-.021	.658
44.0	.229	-.004	.002	.722	104.0	.121	.002	-.015	.768	164.0	.206	-.002	-.021	.653
46.0	.221	-.004	.002	.726	106.0	.117	.002	-.016	.767	166.0	.219	-.003	-.022	.647
48.0	.218	-.003	.000	.730	108.0	.112	.002	-.018	.765	168.0	.230	-.003	-.022	.642
50.0	.212	-.003	.000	.734	110.0	.107	.002	-.018	.763	170.0	.243	-.003	-.021	.636
52.0	.212	-.002	-.001	.738	112.0	.105	.002	-.020	.761	172.0	.254	-.004	-.020	.630
54.0	.211	-.002	-.000	.741	114.0	.100	.002	-.021	.759	174.0	.272	-.004	-.021	.624
56.0	.211	-.002	-.001	.745	116.0	.101	.002	-.022	.756	176.0	.281	-.004	-.019	.619
58.0	.213	-.003	-.002	.748	118.0	.097	.002	-.022	.754	178.0	.292	-.005	-.019	.613

AIRFOIL COEFFICIENT DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 8 TIME 49846.000 RN/M= 15.24 MILLION ROTOR SPEED= 34.0542 RAD/SEC

AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M
180.0	.307	-.005	-.017	.607	240.0	.716	-.058	.012	.463	300.0	.674	-.059	.021	.463
182.0	.325	-.006	-.018	.601	242.0	.724	-.060	.014	.460	302.0	.653	-.056	.020	.466
184.0	.332	-.007	-.018	.596	244.0	.732	-.062	.015	.458	304.0	.626	-.053	.020	.469
186.0	.356	-.008	-.017	.590	246.0	.736	-.063	.015	.455	306.0	.603	-.050	.020	.473
188.0	.374	-.009	-.017	.584	248.0	.739	-.064	.015	.453	308.0	.580	-.047	.020	.476
190.0	.385	-.010	-.016	.578	250.0	.750	-.066	.016	.451	310.0	.556	-.043	.022	.480
192.0	.402	-.012	-.014	.573	252.0	.747	-.066	.019	.449	312.0	.550	-.040	.018	.484
194.0	.429	-.012	-.016	.567	254.0	.754	-.067	.019	.447	314.0	.542	-.038	.016	.487
196.0	.430	-.013	-.012	.561	256.0	.751	-.068	.021	.446	316.0	.530	-.037	.015	.492
198.0	.451	-.015	-.012	.556	258.0	.753	-.068	.021	.445	318.0	.525	-.035	.014	.496
200.0	.472	-.016	-.011	.550	260.0	.747	-.069	.023	.444	320.0	.509	-.035	.016	.500
202.0	.481	-.018	-.009	.545	262.0	.750	-.069	.023	.443	322.0	.500	-.034	.017	.505
204.0	.498	-.020	-.009	.540	264.0	.748	-.070	.023	.442	324.0	.497	-.033	.017	.509
206.0	.511	-.022	-.008	.534	266.0	.750	-.070	.023	.441	326.0	.497	-.031	.016	.514
208.0	.533	-.024	-.007	.529	268.0	.749	-.070	.023	.441	328.0	.492	-.031	.017	.519
210.0	.548	-.026	-.007	.524	270.0	.747	-.069	.023	.441	330.0	.481	-.031	.018	.524
212.0	.561	-.028	-.005	.519	272.0	.753	-.070	.023	.441	332.0	.476	-.031	.018	.529
214.0	.573	-.030	-.004	.514	274.0	.753	-.070	.022	.441	334.0	.479	-.031	.016	.534
216.0	.584	-.032	-.002	.510	276.0	.751	-.069	.022	.442	336.0	.477	-.031	.017	.539
218.0	.599	-.035	-.000	.505	278.0	.740	-.068	.023	.443	338.0	.477	-.031	.017	.545
220.0	.614	-.037	-.002	.500	280.0	.729	-.069	.026	.443	340.0	.482	-.030	.016	.550
222.0	.629	-.039	-.001	.496	282.0	.726	-.069	.027	.445	342.0	.486	-.031	.016	.556
224.0	.634	-.040	.003	.492	284.0	.719	-.068	.027	.446	344.0	.485	-.031	.016	.561
226.0	.640	-.043	.006	.488	286.0	.723	-.067	.025	.447	346.0	.484	-.032	.017	.567
228.0	.657	-.045	.006	.484	288.0	.714	-.067	.026	.449	348.0	.483	-.032	.017	.572
230.0	.677	-.047	.006	.480	290.0	.714	-.067	.024	.451	350.0	.479	-.032	.017	.578
232.0	.691	-.049	.007	.476	292.0	.711	-.066	.024	.453	352.0	.478	-.032	.016	.584
234.0	.693	-.052	.009	.473	294.0	.708	-.065	.023	.455	354.0	.467	-.031	.017	.589
236.0	.696	-.054	.011	.469	296.0	.698	-.063	.022	.458	356.0	.456	-.030	.016	.595
238.0	.704	-.056	.013	.466	298.0	.686	-.061	.021	.460	358.0	.446	-.029	.015	.601

AIRFOIL COEFFICIENT DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 10 TIME 50060.100 RN/M= 15.23 MILLION ROTOR SPEED= 34.0744 RAD/SEC

AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M
0.0	.470	-.032	.016	.607	60.0	.202	-.001	-.002	.780	120.0	.051	.001	-.030	.780
2.0	.451	-.031	.016	.614	62.0	.196	-.001	-.000	.783	122.0	.060	.002	-.028	.776
4.0	.436	-.029	.015	.621	64.0	.196	-.001	-.001	.787	124.0	.068	.003	-.027	.773
6.0	.422	-.026	.014	.628	66.0	.192	-.001	-.001	.789	126.0	.074	.003	-.027	.769
8.0	.409	-.024	.012	.635	68.0	.191	-.001	-.001	.792	128.0	.080	.003	-.028	.765
10.0	.397	-.022	.009	.642	70.0	.188	-.001	-.001	.795	130.0	.080	.003	-.028	.760
12.0	.384	-.019	.011	.649	72.0	.184	-.001	.000	.797	132.0	.078	.002	-.027	.756
14.0	.373	-.018	.011	.656	74.0	.179	-.001	-.000	.799	134.0	.081	.001	-.028	.751
16.0	.351	-.017	.010	.662	76.0	.172	-.001	.000	.801	136.0	.083	.001	-.028	.746
18.0	.337	-.015	.011	.669	78.0	.163	-.001	.000	.802	138.0	.092	.001	-.030	.741
20.0	.328	-.013	.009	.675	80.0	.149	-.000	-.000	.804	140.0	.097	.000	-.029	.736
22.0	.315	-.012	.009	.682	82.0	.139	-.000	-.001	.805	142.0	.099	.000	-.028	.730
24.0	.306	-.011	.009	.688	84.0	.129	.000	-.001	.806	144.0	.099	-.000	-.027	.725
26.0	.289	-.010	.009	.695	86.0	.119	.001	-.002	.806	146.0	.105	-.001	-.028	.719
28.0	.280	-.009	.008	.701	88.0	.109	.001	-.003	.807	148.0	.116	-.001	-.028	.713
30.0	.269	-.008	.008	.707	90.0	.100	.002	-.005	.807	150.0	.123	-.001	-.027	.707
32.0	.263	-.007	.007	.713	92.0	.088	.002	-.006	.807	152.0	.134	-.000	-.027	.701
34.0	.253	-.006	.005	.719	94.0	.082	.003	-.008	.806	154.0	.135	-.000	-.025	.695
36.0	.247	-.005	.005	.724	96.0	.070	.003	-.009	.806	156.0	.145	-.000	-.025	.688
38.0	.238	-.005	.005	.730	98.0	.066	.003	-.011	.805	158.0	.166	-.000	-.025	.682
40.0	.234	-.004	.005	.735	100.0	.059	.004	-.013	.804	160.0	.174	-.000	-.025	.676
42.0	.230	-.004	.004	.741	102.0	.056	.004	-.015	.802	162.0	.187	-.001	-.025	.669
44.0	.228	-.003	.003	.746	104.0	.049	.004	-.017	.801	164.0	.203	-.001	-.026	.662
46.0	.224	-.003	.002	.751	106.0	.045	.003	-.019	.799	166.0	.216	-.001	-.025	.656
48.0	.216	-.003	.001	.755	108.0	.042	.003	-.021	.797	168.0	.233	-.001	-.024	.649
50.0	.211	-.002	.001	.760	110.0	.035	.002	-.023	.795	170.0	.246	-.002	-.024	.642
52.0	.210	-.002	-.000	.764	112.0	.033	.002	-.025	.792	172.0	.269	-.003	-.023	.635
54.0	.205	-.002	-.000	.769	114.0	.040	.001	-.028	.790	174.0	.286	-.004	-.022	.628
56.0	.205	-.001	-.000	.773	116.0	.043	.001	-.029	.787	176.0	.305	-.004	-.022	.621
58.0	.202	-.001	-.001	.776	118.0	.044	.001	-.030	.783	178.0	.326	-.005	-.022	.614

AIRFOIL COEFFICIENT DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 10 TIME 50060.100 RN/M= 15.23 MILLION ROTOR SPEED= 34.0744 RAD/SEC

AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M
180.0	.344	-.006	-.022	.607	240.0	.830	-.083	.022	.435	300.0	.746	-.072	.028	.434
182.0	.364	-.007	-.021	.600	242.0	.834	-.084	.023	.431	302.0	.736	-.070	.026	.438
184.0	.390	-.008	-.021	.593	244.0	.837	-.085	.024	.428	304.0	.724	-.069	.027	.442
186.0	.412	-.009	-.020	.587	246.0	.839	-.087	.025	.425	306.0	.727	-.068	.026	.446
188.0	.431	-.011	-.018	.580	248.0	.845	-.088	.025	.422	308.0	.712	-.067	.026	.450
190.0	.454	-.012	-.017	.573	250.0	.845	-.088	.026	.420	310.0	.701	-.064	.025	.454
192.0	.475	-.014	-.016	.566	252.0	.850	-.089	.027	.418	312.0	.694	-.062	.023	.459
194.0	.495	-.016	-.013	.559	254.0	.848	-.089	.027	.416	314.0	.683	-.060	.023	.464
196.0	.519	-.019	-.012	.552	256.0	.851	-.089	.026	.414	316.0	.673	-.059	.023	.469
198.0	.541	-.022	-.012	.546	258.0	.857	-.091	.026	.412	318.0	.663	-.057	.022	.474
200.0	.567	-.024	-.011	.539	260.0	.859	-.090	.026	.411	320.0	.641	-.054	.023	.479
202.0	.585	-.027	-.009	.533	262.0	.851	-.091	.027	.410	322.0	.626	-.052	.023	.484
204.0	.605	-.031	-.009	.526	264.0	.864	-.091	.026	.409	324.0	.617	-.051	.022	.490
206.0	.628	-.034	-.008	.520	266.0	.853	-.090	.029	.408	326.0	.608	-.049	.020	.496
208.0	.639	-.037	-.006	.514	268.0	.841	-.089	.032	.408	328.0	.592	-.047	.020	.501
210.0	.662	-.040	-.004	.508	270.0	.851	-.089	.029	.408	330.0	.585	-.046	.020	.507
212.0	.674	-.044	.001	.502	272.0	.849	-.088	.027	.408	332.0	.573	-.045	.021	.513
214.0	.687	-.048	.004	.496	274.0	.844	-.087	.028	.408	334.0	.567	-.044	.021	.520
216.0	.715	-.052	.004	.490	276.0	.843	-.086	.029	.409	336.0	.565	-.043	.019	.526
218.0	.729	-.054	.006	.485	278.0	.840	-.086	.029	.410	338.0	.561	-.043	.020	.532
220.0	.737	-.057	.007	.479	280.0	.825	-.085	.031	.411	340.0	.554	-.042	.019	.539
222.0	.747	-.061	.009	.474	282.0	.813	-.083	.031	.412	342.0	.555	-.041	.018	.545
224.0	.766	-.065	.009	.469	284.0	.804	-.082	.030	.414	344.0	.546	-.040	.018	.552
226.0	.778	-.067	.010	.464	286.0	.801	-.081	.030	.415	346.0	.540	-.040	.019	.559
228.0	.790	-.069	.011	.459	288.0	.796	-.080	.029	.417	348.0	.537	-.039	.018	.566
230.0	.804	-.073	.014	.455	290.0	.787	-.078	.029	.420	350.0	.528	-.038	.018	.572
232.0	.815	-.076	.015	.450	292.0	.778	-.077	.029	.422	352.0	.516	-.037	.018	.579
234.0	.824	-.077	.016	.446	294.0	.775	-.076	.030	.425	354.0	.507	-.036	.018	.586
236.0	.825	-.078	.018	.442	296.0	.766	-.076	.030	.428	356.0	.499	-.035	.017	.593
238.0	.827	-.081	.020	.438	298.0	.755	-.074	.029	.431	358.0	.489	-.033	.017	.600

AIRFOIL COEFFICIENT DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 12 TIME 50237.100 RN/M= 15.25 MILLION ROTOR SPEED= 34.0210 RAD/SEC

AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M
0.0	.534	-.040	.022	.607	60.0	.208	.001	-.001	.807	120.0	-.040	.002	-.044	.807
2.0	.517	-.038	.021	.615	62.0	.209	.001	-.002	.810	122.0	-.043	.001	-.045	.802
4.0	.490	-.036	.022	.623	64.0	.208	.002	-.002	.814	124.0	-.048	.000	-.044	.798
6.0	.475	-.034	.019	.631	66.0	.210	.001	-.003	.818	126.0	-.026	-.000	-.042	.793
8.0	.452	-.032	.018	.639	68.0	.209	.001	-.004	.821	128.0	.010	-.000	-.042	.789
10.0	.438	-.029	.016	.647	70.0	.204	.002	-.004	.824	130.0	.022	-.001	-.042	.784
12.0	.424	-.027	.015	.655	72.0	.196	.002	-.005	.826	132.0	.026	-.002	-.042	.778
14.0	.404	-.025	.014	.662	74.0	.185	.003	-.005	.829	134.0	.024	-.003	-.044	.773
16.0	.386	-.022	.014	.670	76.0	.175	.003	-.006	.831	136.0	.022	-.003	-.045	.767
18.0	.363	-.020	.013	.678	78.0	.163	.004	-.007	.832	138.0	.025	-.003	-.044	.761
20.0	.351	-.017	.012	.686	80.0	.147	.004	-.008	.834	140.0	.034	-.002	-.041	.755
22.0	.346	-.016	.012	.693	82.0	.133	.004	-.009	.835	142.0	.045	-.002	-.040	.749
24.0	.335	-.014	.011	.700	84.0	.118	.005	-.009	.836	144.0	.059	-.001	-.039	.742
26.0	.323	-.013	.011	.708	86.0	.105	.006	-.011	.837	146.0	.074	-.001	-.039	.736
28.0	.312	-.012	.010	.715	88.0	.086	.006	-.013	.837	148.0	.083	-.001	-.037	.729
30.0	.309	-.010	.009	.722	90.0	.072	.005	-.016	.838	150.0	.091	-.001	-.036	.722
32.0	.292	-.009	.009	.729	92.0	.059	.005	-.017	.837	152.0	.103	-.001	-.034	.715
34.0	.284	-.008	.008	.736	94.0	.040	.005	-.019	.837	154.0	.118	-.001	-.033	.708
36.0	.278	-.007	.008	.742	96.0	.025	.005	-.020	.836	156.0	.137	-.001	-.033	.701
38.0	.271	-.006	.007	.749	98.0	.021	.005	-.024	.835	158.0	.152	-.001	-.033	.693
40.0	.261	-.005	.006	.755	100.0	.014	.005	-.026	.834	160.0	.171	-.001	-.033	.686
42.0	.252	-.004	.006	.761	102.0	.007	.005	-.027	.833	162.0	.187	-.001	-.031	.678
44.0	.245	-.003	.005	.767	104.0	.005	.005	-.030	.831	164.0	.206	-.001	-.029	.670
46.0	.241	-.003	.004	.773	106.0	-.001	.005	-.032	.829	166.0	.231	-.001	-.029	.663
48.0	.231	-.003	.003	.778	108.0	-.018	.005	-.033	.826	168.0	.254	-.002	-.028	.655
50.0	.231	-.002	.002	.783	110.0	-.031	.004	-.035	.824	170.0	.278	-.002	-.028	.647
52.0	.226	-.001	.002	.789	112.0	-.032	.004	-.038	.821	172.0	.309	-.003	-.028	.639
54.0	.221	-.001	.001	.793	114.0	-.029	.003	-.039	.818	174.0	.328	-.004	-.026	.631
56.0	.214	.000	.001	.798	116.0	-.034	.003	-.041	.814	176.0	.349	-.005	-.026	.623
58.0	.211	.000	-.000	.802	118.0	-.037	.002	-.043	.811	178.0	.383	-.006	-.024	.615

AIRFOIL COEFFICIENT DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 12 TIME 50237.100 RN/M= 15.25 MILLION ROTOR SPEED= 34.0210 RAD/SEC

AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M
180.0	.407	-.008	-.023	.607	240.0	1.010	-.128	.032	.407	300.0	.857	-.094	.029	.406
182.0	.434	-.009	-.023	.599	242.0	1.019	-.128	.031	.403	302.0	.862	-.092	.028	.410
184.0	.466	-.012	-.021	.591	244.0	1.025	-.130	.030	.399	304.0	.849	-.089	.029	.415
186.0	.493	-.014	-.019	.582	246.0	1.032	-.132	.031	.396	306.0	.826	-.088	.029	.419
188.0	.523	-.016	-.020	.574	248.0	1.034	-.133	.031	.392	308.0	.810	-.086	.030	.424
190.0	.553	-.019	-.019	.567	250.0	1.032	-.133	.031	.389	310.0	.802	-.084	.029	.429
192.0	.578	-.023	-.016	.559	252.0	1.041	-.133	.030	.387	312.0	.802	-.082	.027	.435
194.0	.610	-.026	-.014	.551	254.0	1.038	-.132	.032	.384	314.0	.800	-.079	.025	.440
196.0	.632	-.030	-.012	.543	256.0	1.031	-.133	.030	.382	316.0	.789	-.078	.025	.446
198.0	.663	-.036	-.011	.535	258.0	1.025	-.133	.031	.381	318.0	.773	-.076	.026	.452
200.0	.697	-.041	-.009	.528	260.0	1.023	-.132	.031	.379	320.0	.756	-.074	.026	.458
202.0	.721	-.045	-.007	.520	262.0	1.028	-.132	.031	.378	322.0	.738	-.072	.027	.464
204.0	.749	-.050	-.005	.513	264.0	1.029	-.132	.030	.377	324.0	.725	-.071	.028	.471
206.0	.775	-.055	-.005	.505	266.0	1.015	-.129	.032	.376	326.0	.721	-.069	.027	.477
208.0	.798	-.061	-.001	.498	268.0	1.001	-.126	.034	.376	328.0	.711	-.067	.028	.484
210.0	.825	-.066	-.000	.491	270.0	.990	-.125	.034	.375	330.0	.703	-.066	.027	.491
212.0	.845	-.070	.003	.484	272.0	.989	-.124	.034	.376	332.0	.680	-.065	.028	.498
214.0	.860	-.076	.007	.477	274.0	.982	-.121	.033	.376	334.0	.672	-.064	.028	.505
216.0	.879	-.080	.009	.471	276.0	.975	-.120	.032	.377	336.0	.670	-.062	.027	.512
218.0	.898	-.085	.011	.464	278.0	.968	-.118	.032	.378	338.0	.662	-.060	.027	.520
220.0	.906	-.088	.013	.458	280.0	.960	-.116	.031	.379	340.0	.656	-.059	.026	.527
222.0	.922	-.093	.015	.452	282.0	.953	-.115	.031	.380	342.0	.641	-.057	.026	.535
224.0	.943	-.098	.017	.446	284.0	.944	-.113	.031	.382	344.0	.637	-.055	.023	.543
226.0	.956	-.103	.019	.440	286.0	.933	-.111	.031	.384	346.0	.628	-.053	.024	.550
228.0	.961	-.107	.024	.435	288.0	.921	-.107	.030	.387	348.0	.615	-.051	.024	.558
230.0	.980	-.111	.024	.430	290.0	.907	-.105	.029	.389	350.0	.606	-.049	.024	.566
232.0	.993	-.115	.026	.425	292.0	.905	-.103	.029	.392	352.0	.599	-.047	.024	.574
234.0	.998	-.118	.026	.420	294.0	.899	-.102	.029	.395	354.0	.593	-.045	.026	.582
236.0	1.003	-.123	.028	.415	296.0	.887	-.101	.029	.399	356.0	.592	-.044	.024	.590
238.0	1.023	-.124	.028	.411	298.0	.877	-.098	.027	.402	358.0	.563	-.042	.025	.598

AIRFOIL COEFFICIENT DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 13 TIME 50398.900 RN/M= 15.23 MILLION ROTOR SPEED= 33.4843 RAD/SEC

AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M
0.0	.589	-.049	.028	.597	60.0	.238	-.000	.001	.809	120.0	-.048	.002	-.044	.809
2.0	.567	-.046	.029	.605	62.0	.234	.000	-.000	.813	122.0	-.049	.001	-.046	.805
4.0	.542	-.043	.028	.614	64.0	.235	.000	-.001	.817	124.0	-.051	.000	-.048	.800
6.0	.522	-.041	.027	.622	66.0	.237	.000	-.001	.821	126.0	-.057	-.001	-.047	.795
8.0	.507	-.038	.025	.631	68.0	.234	.001	-.002	.824	128.0	-.073	-.002	-.045	.790
10.0	.488	-.036	.024	.639	70.0	.231	.001	-.002	.827	130.0	-.037	-.002	-.045	.785
12.0	.467	-.033	.024	.648	72.0	.220	.002	-.002	.830	132.0	.017	-.002	-.045	.779
14.0	.452	-.031	.021	.656	74.0	.204	.002	-.002	.833	134.0	.026	-.002	-.046	.773
16.0	.435	-.029	.020	.664	76.0	.191	.003	-.004	.835	136.0	.036	-.003	-.047	.767
18.0	.423	-.027	.019	.673	78.0	.177	.003	-.005	.837	138.0	.028	-.004	-.048	.761
20.0	.413	-.026	.018	.681	80.0	.161	.003	-.007	.838	140.0	.023	-.004	-.046	.755
22.0	.402	-.024	.017	.689	82.0	.140	.004	-.007	.840	142.0	.037	-.003	-.045	.748
24.0	.389	-.023	.016	.697	84.0	.130	.005	-.009	.841	144.0	.045	-.002	-.042	.741
26.0	.373	-.021	.016	.704	86.0	.115	.005	-.009	.842	146.0	.060	-.002	-.040	.734
28.0	.358	-.019	.016	.712	88.0	.094	.006	-.011	.842	148.0	.078	-.002	-.040	.727
30.0	.348	-.017	.015	.719	90.0	.075	.006	-.013	.842	150.0	.093	-.001	-.041	.720
32.0	.337	-.015	.014	.727	92.0	.054	.005	-.015	.842	152.0	.107	-.001	-.040	.712
34.0	.325	-.013	.013	.734	94.0	.042	.005	-.018	.842	154.0	.127	-.001	-.038	.704
36.0	.317	-.012	.011	.741	96.0	.030	.005	-.019	.841	156.0	.146	-.002	-.037	.697
38.0	.303	-.010	.010	.748	98.0	.019	.006	-.021	.840	158.0	.161	-.001	-.035	.689
40.0	.297	-.009	.009	.754	100.0	.011	.005	-.023	.839	160.0	.184	-.001	-.035	.681
42.0	.288	-.007	.008	.761	102.0	.003	.005	-.025	.837	162.0	.207	-.001	-.034	.673
44.0	.276	-.006	.007	.767	104.0	-.004	.005	-.028	.835	164.0	.232	-.002	-.032	.664
46.0	.270	-.005	.006	.773	106.0	-.016	.005	-.030	.833	166.0	.259	-.002	-.032	.656
48.0	.263	-.004	.006	.779	108.0	-.024	.005	-.032	.830	168.0	.280	-.003	-.030	.648
50.0	.257	-.003	.004	.785	110.0	-.034	.004	-.034	.827	170.0	.311	-.003	-.029	.639
52.0	.252	-.002	.004	.790	112.0	-.038	.004	-.036	.824	172.0	.334	-.005	-.028	.631
54.0	.245	-.002	.004	.795	114.0	-.042	.004	-.039	.821	174.0	.361	-.005	-.027	.622
56.0	.239	-.001	.002	.800	116.0	-.044	.003	-.041	.817	176.0	.403	-.007	-.028	.614
58.0	.239	-.001	.001	.805	118.0	-.046	.002	-.042	.814	178.0	.427	-.008	-.027	.605

AIRFOIL COEFFICIENT DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/12/06.

FLT 81 RUN 13 TIME 50398.900 RN/M= 15.23 MILLION ROTOR SPEED= 33.4843 RAD/SEC

AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M
180.0	.461	-.010	-.026	.597	240.0	1.167	-.139	.021	.384	300.0	1.006	-.120	.029	.384
182.0	.494	-.012	-.025	.588	242.0	1.162	-.135	.023	.380	302.0	1.004	-.125	.032	.388
184.0	.521	-.014	-.022	.580	244.0	1.163	-.127	.025	.376	304.0	1.001	-.128	.033	.393
186.0	.551	-.017	-.021	.571	246.0	1.139	-.085	.021	.372	306.0	1.001	-.130	.035	.398
188.0	.583	-.021	-.020	.563	248.0	1.159	-.103	.021	.369	308.0	.986	-.129	.036	.403
190.0	.625	-.025	-.020	.554	250.0	1.146	-.098	.021	.366	310.0	.965	-.128	.039	.408
192.0	.661	-.030	-.018	.546	252.0	1.156	-.103	.019	.363	312.0	.954	-.127	.041	.414
194.0	.702	-.035	-.019	.537	254.0	1.151	-.100	.018	.361	314.0	.951	-.124	.040	.420
196.0	.729	-.040	-.015	.529	256.0	1.134	-.084	.018	.358	316.0	.929	-.120	.039	.426
198.0	.763	-.046	-.012	.521	258.0	1.124	-.096	.022	.357	318.0	.916	-.116	.036	.432
200.0	.800	-.052	-.012	.513	260.0	1.104	-.086	.019	.355	320.0	.908	-.112	.035	.439
202.0	.833	-.059	-.009	.505	262.0	1.113	-.095	.016	.354	322.0	.895	-.109	.037	.445
204.0	.859	-.064	-.006	.497	264.0	1.106	-.094	.017	.352	324.0	.874	-.104	.036	.452
206.0	.890	-.070	-.005	.489	266.0	1.100	-.092	.019	.352	326.0	.867	-.100	.032	.459
208.0	.914	-.077	-.002	.482	268.0	1.089	-.087	.018	.351	328.0	.851	-.096	.032	.466
210.0	.951	-.083	-.001	.474	270.0	1.073	-.084	.021	.351	330.0	.839	-.092	.032	.474
212.0	.974	-.090	.003	.467	272.0	1.076	-.088	.024	.351	332.0	.823	-.088	.031	.481
214.0	1.011	-.097	.005	.460	274.0	1.067	-.086	.023	.352	334.0	.800	-.085	.032	.489
216.0	1.034	-.106	.008	.452	276.0	1.050	-.049	.019	.352	336.0	.783	-.082	.034	.497
218.0	1.049	-.111	.009	.446	278.0	1.083	-.109	.021	.353	338.0	.777	-.080	.032	.504
220.0	1.073	-.116	.011	.439	280.0	1.084	-.115	.021	.355	340.0	.763	-.077	.031	.512
222.0	1.089	-.122	.013	.433	282.0	1.078	-.119	.022	.356	342.0	.751	-.075	.031	.521
224.0	1.104	-.128	.016	.426	284.0	1.069	-.119	.022	.358	344.0	.743	-.072	.030	.529
226.0	1.110	-.134	.020	.420	286.0	1.064	-.117	.021	.361	346.0	.720	-.070	.033	.537
228.0	1.137	-.140	.021	.414	288.0	1.051	-.116	.024	.363	348.0	.707	-.066	.033	.545
230.0	1.142	-.144	.024	.409	290.0	1.046	-.115	.024	.366	350.0	.688	-.063	.031	.554
232.0	1.157	-.144	.022	.403	292.0	1.031	-.113	.023	.369	352.0	.673	-.060	.029	.562
234.0	1.147	-.143	.024	.398	294.0	1.020	-.113	.021	.372	354.0	.650	-.057	.030	.571
236.0	1.144	-.141	.026	.393	296.0	1.016	-.115	.026	.376	356.0	.635	-.055	.030	.579
238.0	1.154	-.141	.022	.389	298.0	1.016	-.118	.027	.380	358.0	.620	-.052	.028	.588

AIRFOIL COEFFICIENT DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 83 RUN 25 TIME 52732.500 RN/M= 15.06 MILLION ROTOR SPEED= 35.0096 RAD/SEC

AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M
0.0	.247	-.005	.001	.621	60.0	.101	.004	-.009	.762	120.0	.045	.003	-.025	.763
2.0	.237	-.004	.001	.627	62.0	.105	.003	-.008	.765	122.0	.044	.003	-.025	.760
4.0	.225	-.003	-.000	.633	64.0	.112	.003	-.008	.768	124.0	.040	.003	-.026	.757
6.0	.206	-.001	-.001	.638	66.0	.116	.003	-.008	.770	126.0	.037	.003	-.026	.753
8.0	.193	-.000	-.001	.644	68.0	.119	.003	-.008	.772	128.0	.031	.003	-.026	.750
10.0	.181	.001	-.003	.650	70.0	.124	.003	-.008	.774	130.0	.029	.003	-.027	.746
12.0	.160	.002	-.005	.655	72.0	.129	.002	-.008	.776	132.0	.030	.002	-.028	.743
14.0	.140	.003	-.007	.661	74.0	.130	.002	-.008	.778	134.0	.029	.002	-.029	.739
16.0	.121	.004	-.009	.666	76.0	.133	.002	-.008	.779	136.0	.025	.002	-.029	.735
18.0	.108	.005	-.011	.672	78.0	.134	.002	-.008	.781	138.0	.024	.002	-.029	.730
20.0	.100	.006	-.011	.677	80.0	.128	.002	-.008	.782	140.0	.023	.002	-.028	.726
22.0	.095	.005	-.011	.682	82.0	.127	.002	-.009	.783	142.0	.023	.001	-.029	.722
24.0	.091	.004	-.009	.688	84.0	.124	.002	-.010	.783	144.0	.025	.001	-.030	.717
26.0	.088	.004	-.010	.693	86.0	.121	.003	-.011	.784	146.0	.021	.001	-.028	.713
28.0	.084	.005	-.010	.698	88.0	.116	.003	-.011	.784	148.0	.020	.000	-.029	.708
30.0	.079	.005	-.009	.703	90.0	.110	.003	-.012	.784	150.0	.023	.000	-.029	.703
32.0	.077	.005	-.010	.708	92.0	.105	.003	-.014	.784	152.0	.020	-.000	-.028	.698
34.0	.074	.005	-.009	.712	94.0	.102	.003	-.014	.784	154.0	.026	-.000	-.028	.693
36.0	.072	.005	-.009	.717	96.0	.099	.003	-.015	.783	156.0	.026	.000	-.028	.688
38.0	.075	.004	-.009	.722	98.0	.094	.003	-.017	.783	158.0	.024	-.000	-.029	.682
40.0	.081	.004	-.009	.726	100.0	.090	.003	-.018	.782	160.0	.028	-.000	-.028	.677
42.0	.085	.004	-.009	.730	102.0	.086	.003	-.019	.781	162.0	.034	-.000	-.028	.672
44.0	.085	.004	-.008	.735	104.0	.083	.003	-.020	.780	164.0	.037	-.000	-.030	.666
46.0	.087	.004	-.008	.739	106.0	.076	.003	-.021	.778	166.0	.036	-.000	-.029	.661
48.0	.088	.004	-.007	.742	108.0	.072	.004	-.022	.776	168.0	.046	-.000	-.029	.655
50.0	.085	.004	-.006	.746	110.0	.065	.004	-.022	.775	170.0	.053	-.000	-.029	.650
52.0	.087	.004	-.006	.750	112.0	.058	.004	-.023	.772	172.0	.051	.000	-.027	.644
54.0	.088	.004	-.007	.753	114.0	.056	.004	-.024	.770	174.0	.059	.000	-.028	.638
56.0	.093	.004	-.008	.756	116.0	.052	.004	-.024	.768	176.0	.066	.000	-.027	.633
58.0	.097	.004	-.009	.760	118.0	.048	.004	-.024	.765	178.0	.077	.000	-.027	.627

AIRFOIL COEFFICIENT DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 83 RUN 25 TIME 52732.500 RN/M= 15.06 MILLION ROTOR SPEED= 35.0096 RAD/SEC

AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M
180.0	.085	.000	-.027	.621	240.0	.418	-.016	-.004	.480	300.0	.433	-.023	.010	.480
182.0	.088	.000	-.026	.616	242.0	.418	-.016	-.004	.478	302.0	.424	-.022	.009	.483
184.0	.103	.000	-.026	.610	244.0	.432	-.017	-.001	.475	304.0	.425	-.021	.006	.486
186.0	.117	.001	-.027	.604	246.0	.435	-.018	.001	.473	306.0	.421	-.019	.006	.489
188.0	.126	.001	-.027	.599	248.0	.439	-.019	.001	.470	308.0	.400	-.018	.007	.493
190.0	.139	.001	-.027	.593	250.0	.438	-.019	-.000	.468	310.0	.385	-.017	.007	.496
192.0	.152	.001	-.027	.588	252.0	.435	-.019	.000	.466	312.0	.377	-.016	.007	.500
194.0	.158	.000	-.026	.582	254.0	.441	-.020	-.000	.465	314.0	.367	-.015	.006	.504
196.0	.168	.000	-.026	.577	256.0	.438	-.020	.001	.463	316.0	.352	-.013	.006	.508
198.0	.183	.000	-.024	.571	258.0	.447	-.020	.000	.462	318.0	.336	-.013	.005	.512
200.0	.196	-.000	-.023	.566	260.0	.446	-.021	.004	.461	320.0	.326	-.011	.005	.516
202.0	.205	-.001	-.024	.560	262.0	.447	-.021	.004	.460	322.0	.314	-.011	.007	.521
204.0	.221	-.001	-.024	.555	264.0	.454	-.021	.003	.459	324.0	.310	-.010	.005	.525
206.0	.238	-.002	-.024	.550	266.0	.451	-.021	.004	.459	326.0	.306	-.009	.004	.530
208.0	.250	-.002	-.023	.545	268.0	.451	-.021	.005	.458	328.0	.300	-.009	.004	.535
210.0	.259	-.002	-.020	.540	270.0	.451	-.021	.005	.458	330.0	.287	-.008	.004	.540
212.0	.280	-.003	-.019	.535	272.0	.451	-.021	.005	.458	332.0	.279	-.007	.004	.545
214.0	.291	-.004	-.019	.530	274.0	.452	-.022	.005	.459	334.0	.275	-.007	.005	.550
216.0	.300	-.005	-.017	.526	276.0	.451	-.022	.005	.459	336.0	.269	-.007	.005	.555
218.0	.324	-.006	-.017	.521	278.0	.450	-.022	.005	.460	338.0	.267	-.006	.004	.560
220.0	.336	-.006	-.016	.517	280.0	.449	-.021	.005	.461	340.0	.264	-.006	.002	.565
222.0	.343	-.007	-.015	.512	282.0	.449	-.021	.006	.462	342.0	.258	-.006	.002	.571
224.0	.357	-.008	-.015	.508	284.0	.450	-.022	.006	.463	344.0	.254	-.005	.002	.576
226.0	.365	-.009	-.013	.504	286.0	.450	-.022	.007	.465	346.0	.247	-.005	.002	.582
228.0	.373	-.010	-.011	.500	288.0	.450	-.022	.007	.466	348.0	.246	-.005	.001	.587
230.0	.379	-.012	-.010	.497	290.0	.448	-.023	.007	.468	350.0	.247	-.005	.001	.593
232.0	.389	-.012	-.009	.493	292.0	.447	-.022	.008	.470	352.0	.245	-.005	.001	.598
234.0	.397	-.013	-.008	.490	294.0	.438	-.023	.009	.472	354.0	.245	-.005	.001	.604
236.0	.404	-.014	-.007	.486	296.0	.441	-.022	.008	.475	356.0	.255	-.004	.000	.610
238.0	.412	-.015	-.007	.483	298.0	.442	-.022	.009	.477	358.0	.260	-.005	.002	.615

AIRFOIL COEFFICIENT DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 83 RUN 26 TIME 52833.000 RN/M= 15.16 MILLION ROTOR SPEED= 33.9970 RAD/SEC

AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M
0.0	.501	-.036	.018	.605	60.0	.205	-.002	-.001	.747	120.0	.124	.001	-.021	.747
2.0	.487	-.034	.018	.611	62.0	.202	-.002	-.002	.750	122.0	.124	.002	-.021	.744
4.0	.476	-.033	.018	.616	64.0	.197	-.002	-.004	.752	124.0	.129	.001	-.021	.741
6.0	.464	-.032	.018	.622	66.0	.192	-.001	-.004	.755	126.0	.130	.001	-.021	.738
8.0	.455	-.031	.017	.628	68.0	.186	-.001	-.004	.757	128.0	.130	.001	-.021	.734
10.0	.442	-.029	.016	.633	70.0	.181	-.001	-.005	.759	130.0	.135	.001	-.022	.731
12.0	.433	-.028	.016	.639	72.0	.174	-.000	-.006	.761	132.0	.142	.001	-.022	.727
14.0	.418	-.027	.016	.645	74.0	.173	.000	-.007	.763	134.0	.142	.000	-.022	.723
16.0	.406	-.025	.015	.650	76.0	.168	.000	-.008	.764	136.0	.141	.000	-.021	.719
18.0	.400	-.023	.012	.656	78.0	.159	.001	-.008	.765	138.0	.147	.000	-.021	.715
20.0	.382	-.021	.012	.661	80.0	.155	.001	-.008	.767	140.0	.150	.000	-.020	.710
22.0	.368	-.019	.011	.666	82.0	.154	.001	-.009	.767	142.0	.161	-.000	-.021	.706
24.0	.355	-.018	.009	.672	84.0	.153	.001	-.010	.768	144.0	.168	-.000	-.022	.701
26.0	.344	-.016	.009	.677	86.0	.152	.001	-.011	.769	146.0	.166	-.000	-.020	.697
28.0	.329	-.014	.009	.682	88.0	.147	.001	-.012	.769	148.0	.173	-.001	-.021	.692
30.0	.323	-.013	.008	.687	90.0	.145	.002	-.013	.769	150.0	.179	-.000	-.021	.687
32.0	.312	-.012	.007	.692	92.0	.137	.002	-.014	.769	152.0	.191	-.000	-.022	.682
34.0	.298	-.010	.007	.697	94.0	.134	.002	-.014	.769	154.0	.198	-.000	-.022	.677
36.0	.287	-.009	.007	.701	96.0	.132	.002	-.015	.768	156.0	.208	-.001	-.022	.672
38.0	.277	-.008	.006	.706	98.0	.134	.002	-.016	.767	158.0	.220	-.001	-.021	.666
40.0	.271	-.007	.005	.710	100.0	.124	.002	-.017	.767	160.0	.224	-.002	-.022	.661
42.0	.264	-.007	.004	.715	102.0	.121	.002	-.018	.765	162.0	.234	-.002	-.021	.656
44.0	.262	-.006	.003	.719	104.0	.126	.002	-.018	.764	164.0	.251	-.002	-.020	.650
46.0	.253	-.005	.002	.723	106.0	.119	.002	-.018	.763	166.0	.260	-.002	-.020	.645
48.0	.241	-.005	.002	.727	108.0	.119	.002	-.020	.761	168.0	.268	-.003	-.020	.639
50.0	.238	-.004	.001	.731	110.0	.121	.002	-.020	.759	170.0	.284	-.003	-.020	.633
52.0	.234	-.004	.000	.734	112.0	.121	.002	-.020	.757	172.0	.299	-.004	-.020	.628
54.0	.225	-.004	.001	.738	114.0	.121	.001	-.020	.755	174.0	.311	-.005	-.018	.622
56.0	.220	-.003	-.001	.741	116.0	.119	.001	-.021	.752	176.0	.329	-.006	-.019	.616
58.0	.212	-.003	-.002	.744	118.0	.120	.001	-.021	.750	178.0	.342	-.007	-.017	.611

AIRFOIL COEFFICIENT DATA .9 BLADE RADIUS NASA-LANGLEY AH-1G 78/11/30.

FLT 83 RUN 26 TIME 52833.000 RN/M= 15.16 MILLION ROTOR SPEED= 33.9970 RAD/SEC

AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M	AZIMUTH	CN	CC	CM	M
180.0	.359	-.007	-.018	.605	240.0	.725	-.059	.009	.463	300.0	.643	-.053	.018	.463
182.0	.375	-.008	-.018	.599	242.0	.729	-.061	.010	.460	302.0	.635	-.051	.017	.466
184.0	.389	-.010	-.017	.594	244.0	.735	-.062	.010	.457	304.0	.630	-.050	.015	.469
186.0	.404	-.011	-.016	.588	246.0	.740	-.063	.011	.455	306.0	.615	-.048	.014	.472
188.0	.424	-.012	-.015	.582	248.0	.744	-.063	.012	.453	308.0	.600	-.047	.016	.475
190.0	.439	-.014	-.014	.576	250.0	.744	-.064	.013	.451	310.0	.595	-.046	.016	.479
192.0	.454	-.015	-.012	.571	252.0	.742	-.064	.013	.449	312.0	.599	-.045	.013	.483
194.0	.467	-.017	-.011	.565	254.0	.747	-.065	.014	.447	314.0	.593	-.043	.014	.487
196.0	.483	-.019	-.011	.560	256.0	.751	-.066	.014	.446	316.0	.586	-.042	.015	.491
198.0	.498	-.020	-.010	.554	258.0	.748	-.067	.017	.444	318.0	.584	-.042	.015	.495
200.0	.506	-.022	-.008	.549	260.0	.749	-.067	.018	.443	320.0	.580	-.042	.016	.499
202.0	.520	-.024	-.007	.543	262.0	.750	-.067	.018	.442	322.0	.580	-.042	.015	.504
204.0	.536	-.026	-.007	.538	264.0	.751	-.067	.018	.442	324.0	.580	-.042	.015	.508
206.0	.546	-.029	-.005	.533	266.0	.753	-.068	.018	.441	326.0	.579	-.043	.017	.513
208.0	.563	-.031	-.004	.528	268.0	.749	-.067	.017	.441	328.0	.575	-.043	.018	.518
210.0	.580	-.032	-.004	.523	270.0	.735	-.067	.019	.441	330.0	.577	-.044	.018	.523
212.0	.591	-.034	-.003	.518	272.0	.731	-.066	.018	.441	332.0	.574	-.044	.019	.528
214.0	.599	-.036	-.000	.513	274.0	.725	-.065	.018	.441	334.0	.575	-.044	.019	.533
216.0	.617	-.039	-.001	.508	276.0	.727	-.065	.018	.442	336.0	.577	-.043	.018	.538
218.0	.625	-.041	.002	.504	278.0	.726	-.065	.018	.442	338.0	.575	-.044	.019	.543
220.0	.637	-.042	.002	.499	280.0	.717	-.064	.018	.443	340.0	.566	-.044	.019	.549
222.0	.653	-.044	.001	.495	282.0	.713	-.064	.018	.444	342.0	.565	-.044	.019	.554
224.0	.661	-.046	.003	.491	284.0	.706	-.062	.018	.446	344.0	.560	-.043	.019	.559
226.0	.672	-.049	.005	.487	286.0	.698	-.061	.017	.447	346.0	.554	-.042	.019	.565
228.0	.682	-.050	.005	.483	288.0	.683	-.060	.020	.449	348.0	.553	-.042	.019	.571
230.0	.687	-.052	.005	.479	290.0	.677	-.060	.020	.451	350.0	.543	-.041	.019	.576
232.0	.698	-.053	.005	.476	292.0	.669	-.058	.020	.453	352.0	.531	-.040	.020	.582
234.0	.711	-.055	.006	.472	294.0	.662	-.057	.019	.455	354.0	.525	-.039	.019	.588
236.0	.714	-.057	.007	.469	296.0	.653	-.055	.019	.457	356.0	.517	-.038	.019	.593
238.0	.726	-.058	.008	.466	298.0	.651	-.054	.018	.460	358.0	.504	-.037	.018	.599

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TABLE I.- BASIC AIRCRAFT CHARACTERISTICS

Empty weight, N (lb.)	28,160 (6330)
Fuel capacity, N (lb.)	7,250 (1630)
Powerplant	Lycoming T53-L-13B
Nominal transmission limit at 100% rpm, kw (hp)	.820 (1100)
Wing:	
Airfoil	
Root	NACA 0030
Tip	NACA 0024
Semi-span (panel only), m (ft)	1.09 (3.56)
Area (panels only), m^2 (ft^2)	1.63 (17.6)
Chord:	
Root, m (ft)	0.88 (2.89)
Tip, m (ft)	0.62 (2.04)
Incidence angle (chord line), deg	14.0
Leading-edge sweep, deg	15.2
Dihedral angle, deg	0.0
Horizontal tail:	
Airfoil	.inverted Clark Y
Semi-span (panel only), m (ft)	0.78 (2.54)
Area (panels only), m^2 (ft^2)	0.95 (10.2)
Chord:	
Root, m (ft)	0.75 (2.45)
Tip, m (ft)	0.54 (1.78)
Leading-edge sweep, deg	19.9
Dihedral angle, deg	0.0
Vertical tail:	
Airfoil	
Root	cambered, 14% thick
Tip	cambered, 15% thick
Span (above tail boom), m (ft)	1.64 (5.38)
Area, m^2 (ft^2)	1.73 (18.6)
Chord:	
Root, m (ft)	1.42 (4.67)
Tip, m (ft)	69 (2.25)
Leading-edge sweep, deg	50.0
Twist, deg	nonlinear

TABLE I.- Concluded

Main rotor:

Number of blades	2
Airfoil	10-64C
Radius (R), m (ft)	6.706 (22.0)
Chord, m (ft)	0.686 (2.25)
Taper	1:1
Solidity	0.0651
Twist, deg	-10/R
Flapwise inertia, kg-m^2 (slug-ft^2)	2120 (1560)
Lock number	5.05
Nominal tip speed, m/sec (ft/sec)	227.5 (746.6)
Hub precone angle, deg	2.75
Pitch-flap coupling, deg	0.0
Blade pitch range at 0.75 R, deg	-11.9, +39.2
Trim tab -	
Width, m (ft)	0.191 (0.75)
Overhang length, m (ft)	0.042 (0.138)
In-board edge	0.761 R
Blade weight, kN (lb)*	1.267 (284.9), 1.263 (284.0)
Blade static center of gravity	
Chordwise, c	.246, .245
Spanwise, R	.5409, .5333
Blade measured torsional natural frequency, H_z*	16.7, 17.0

Tail rotor:

Number of blades	2
Airfoil	
0.25 tail-rotor radius	NACA 0018
Tip	cambered, 8% thick
Radius	1.295 (4.25)
Chord, m (ft)	0.292 (0.96)
Taper	1:1
Solidity	0.144
Twist, deg	0.0
Equivalent root cut-out	35
Nominal tip speed, m/sec (ft/sec)	227.5 (746.4)
Blade pitch range, deg[3]	-14.7, +15.3
Hub precone angle, deg	1
Pitch-flap coupling, deg	30

*Characteristics given for instrumented and uninstrumented blade, respectively

TABLE II. - COORDINATES OF 10-64C AIRFOIL

x/c	y_u/c	x/c	y_l/c
0.00000	0.00000	0.00000	0.00000
.00631	.01182	.00613	-.00908
.01228	.01659	.01295	-.01344
.01981	.02070	.01997	-.01640
.02913	.02441	.02883	-.01897
.04072	.02819	.04054	-.02170
.05471	.03202	.05575	-.02450
.09059	.03943	.09220	-.02884
.14814	.04765	.15286	-.03323
.20098	.05278	.20283	-.03561
.25089	.05615	.25015	-.03732
.30780	.05859	.30429	-.03877
.35507	.05960	.34940	-.03959
.40614	.05970	.41539	-.04014
.46074	.05873	.46898	-.03995
.51845	.05654	.52565	-.03908
.57867	.05307	.58482	-.03738
.64055	.04837	.64568	-.03473
.70302	.04253	.70715	-.03110
.76468	.03574	.76787	-.02658
.82383	.02829	.82615	-.02139
.87842	.02063	.87998	-.01586
.92603	.01335	.92696	-.01045
.96382	.00719	.96433	-.00579
.98896	.00293	.98909	-.00251
1.00000	.00100	1.00000	-.00100

TABLE III.- PADS-PCM DATA SYSTEM CHARACTERISTICS

Parameter	System Accuracy (a)	Digital Channel Precision	Filter Frequency (b)
Aerodynamic Flight State:			
dynamic pressure - regular	70 Pa	14 Pa	1 Hz
- sensitive	14 Pa	3 Pa	———
static pressure - regular	500 Pa	200 Pa	———
- sensitive	70 Pa	40 Pa	
angle of attack	.1°	.18°	10 Hz
angle of sideslip	.1°	.18°	10 Hz
total temperature	.06°C	.1°C	———
Inertial Flight State:			
roll attitude	.5°	.36°	———
pitch attitude	.5°	.18°	———
heading	3.0°	.72°	———
angular rates	.01 rad/sec	.044 rad/sec	10 Hz
longitudinal acceleration	.001 g	.004 g	10 Hz
lateral acceleration	.001 g	.003 g	10 Hz
normal acceleration	.005 g	.009 g	10 Hz
Control Positions:			
lateral servo	.1°	.04°	10 Hz
longitudinal servo	.1°	.07°	10 Hz
collective servo	.1°	.05°	10 Hz
horizontal fin	.1°	.02°	10 Hz
pedal position	.16°	.07°	10 Hz
tail-rotor collective	.1°	.07°	10 Hz
Rotor/Engine Parameters:			
main-rotor speed - regular	.5%	.23%	———
- sensitive	.1%	.05%	———
main-rotor azimuth	1°	22.5°	———
engine torque pressure	3 kPa	1.3 kPa	———
fuel quantity	60 N	40 N	———

Notes: (a) accuracy of analog signal before digitization

(b) frequency at 3 db roll-off for constant delay, 4 pole Bessel Filters

TABLE IV. - CHARACTERISTICS OF SELECTED ROTOR-DATA PARAMETERS

PARAMETER	ANALOG SYSTEM ACCURACY	DIGITAL CHANNEL PRECISION	MAXIMUM* FINAL-DATA ERROR
Q	112 N-m	124 N-m	.32 kN-m
T_b	-	$.40^o$ C	1.0^o C
β_s	$.1^o$	$.11^o$	$.3^o$
θ_s	$.1^o$	$.25^o$	$.8^o$
ψ	-	1.41^o	$.3^o$

*NOTE: Accuracy bound for absolute value of single digital-data value

TABLE V. - CHARACTERISTICS OF BLADE PRESSURE-DATA SYSTEM

SURFACE	ORIFICE LOCATION		PRECISION* kPa	f_{3db} Hz
	$\frac{x}{c}$	$\frac{y}{c}$		
Upper	.02	.0208	.545	124
	.10	.0411	.460	120
	.20	.0527	.373	113
	.35	.0595	.431	138
	.50	.0574	.406	100
	.70	.0428	.318	80
	.80	.0314	.280	51
	.90	.0174	.290	70
Lower	.02	-.0164	.466	125
	.10	-.0296	.417	89
	.20	-.0355	.423	115
	.50	-.0396	.309	94
	.70	-.0316	.294	109
	.90	-.0136	.200	84

*NOTE: Increment per unit digital input, approximately 1/8 of maximum possible error band width

TABLE VI. - CATALOG OF FLIGHT TEST-POINT CONDITIONS

FLIGHT CONDITION	HOVER	LEVEL FLIGHT			
FLIGHT NO. - RUN NO.	77-2	81-3	80-33	81-8	75-10
μ	0.0	0.147	0.243	0.246	0.294
V, knots	0.0	65.2	107.9	109.4	130.1
M_h	0.67	0.66	0.66	0.67	0.67
C_L'	0.0042	0.0050	0.0044	0.0051	0.0044
n_z, g units	1.03	1.01	1.07	1.04	1.02
$\dot{h}$, m/min	--	-71.	32.	-12.	-21.
α_f, degrees	--	-0.7	-1.6	-2.0	-3.3
ϕ_f, degrees	0.0	0.0	0.4	-0.8	-0.3
θ_f, degrees	-0.8	-2.7	-1.1	-2.2	-3.6
p_f, rad/sec	0.00	-0.01	0.01	0.01	0.01
q_f, rad/sec	0.00	0.00	0.00	0.01	0.01
r_f, rad/sec	-0.03	-0.01	-0.01	0.00	0.00
$\dot{p}_f$, rad/sec^2	-0.06	-0.02	-0.02	-0.01	0.03
$\dot{q}_f$, rad/sec^2	0.02	-0.01	-0.02	0.01	-0.01
$\dot{r}_f$, rad/sec^2	0.02	-0.01	0.00	0.02	-0.03
C_Q	0.00026	0.00020	0.00021	0.00025	0.00028
A_{0s}, degrees	7.9	7.7	7.9	9.3	9.6
A_{1s}, degrees	-1.8	-1.1	-0.5	-0.8	-0.7
B_{1s}, degrees	-1.1	2.4	5.4	5.5	7.2
a_{1s}, degrees	1.3	-0.2	-1.4	-1.0	-2.0
b_{1s}, degrees	-1.6	0.3	-0.2	-0.1	-0.4
Ω, rad/sec	33.94	33.99	34.04	34.05	33.96
a, rad/sec	342.0	339.1	343.2	339.0	342.1

TABLE VI. - (CONTINUED)

FLIGHT CONDITION	LEVEL FLIGHT				CLIMB
Flight no. - Run no.	81-10	78-12	81-12	81-13	83-26
μ	0.296	0.332	0.343	0.371	0.244
V, knots	131.4	147.5	152.1	161.8	108.3
M_h	0.67	0.66	0.67	0.66	0.67
C_L'	0.0051	0.0041	0.0051	0.0055	0.0046
n_z, g units	1.04	1.01	1.03	1.09	1.06
$\dot{h}$, m/min	6.	-1.	-1.	-20.	-716.
α_f, degrees	-3.4	-5.5	-5.3	-5.5	10.5
ϕ_f, degrees	-0.4	0.7	-0.3	-2.0	-0.2
θ_f, degrees	-3.3	-5.5	-5.3	-5.7	1.9
p_f, rad/sec	0.00	0.01	0.00	0.00	-0.01
q_f, rad/sec	0.01	0.01	0.01	0.01	0.01
r_f, rad/sec	0.00	0.00	0.00	0.00	0.00
$\dot{p}_f$, rad/sec^2	0.00	-0.10	-0.02	0.02	0.01
$\dot{q}_f$, rad/sec^2	-0.01	0.00	0.01	-0.01	0.02
$\dot{r}_f$, rad/sec^2	0.00	-0.01	0.02	-0.02	0.00
C_Q	0.00031	0.00036	0.00041	0.00048	0.00044
A_{0s}, degrees	10.7	11.3	12.9	14.4	12.4
A_{1s}, degrees	-0.7	-0.5	-1.0	-1.6	-1.1
B_{1s}, degrees	7.2	8.7	9.2	10.3	8.0
a_{1s}, degrees	-1.4	-2.3	-1.6	-1.1	-2.5
b_{1s}, degrees	-0.4	-0.7	-0.8	-0.9	-0.8
Ω, rad/sec	34.07	34.09	34.02	33.48	34.00
a, m/sec	339.1	344.1	339.0	339.1	339.7

TABLE VI. - (CONCLUDED)

FLIGHT CONDITION	DESCENT	RIGHT TURN	LEFT TURN	PULL-UP
Flight no. - Run no.	83-25	78-30	80-31	80-38
μ	0.236	0.240	0.245	0.234
V, knots	107.8	110.1	110.6	105.4
M_h	0.69	0.68	0.67	0.66
C_L'	0.0044	0.0078	0.0078	0.0072
n_z, g units	1.08	2.06	2.01	1.83
$\dot{h}$, m/min	-800.	-898.	-912.	-506.
α_f, degrees	11.0	6.1	5.8	6.6
ϕ_f, degrees	0.0	58.5	-48.2	0.4
θ_f, degrees	-2.9	-10.4	-15.3	-2.4
p_f, rad/sec	-0.01	0.10	-0.08	-0.01
q_f, rad/sec	0.00	0.27	0.25	0.20
r_f, rad/sec	0.00	0.16	-0.14	0.04
$\dot{p}_f$, rad/sec^2	-0.01	0.18	-0.20	0.11
$\dot{q}_f$, rad/sec^2	0.00	0.01	0.07	0.07
$\dot{r}_f$, rad/sec^2	-0.02	0.04	0.02	0.06
C_Q	0.00000	0.00006	0.00011	0.00008
A_{0s}, degrees	2.8	7.1	7.7	6.4
A_{1s}, degrees	0.4	0.1	-0.5	-0.4
B_{1s}, degrees	2.2	1.7	2.2	1.1
a_{1s}, degrees	-0.9	0.1	0.5	0.5
b_{1s}, degrees	1.1	1.0	1.0	1.4
Ω, rad/sec	35.01	35.17	34.62	34.62
a, m/sec	340.5	343.8	344.4	343.3

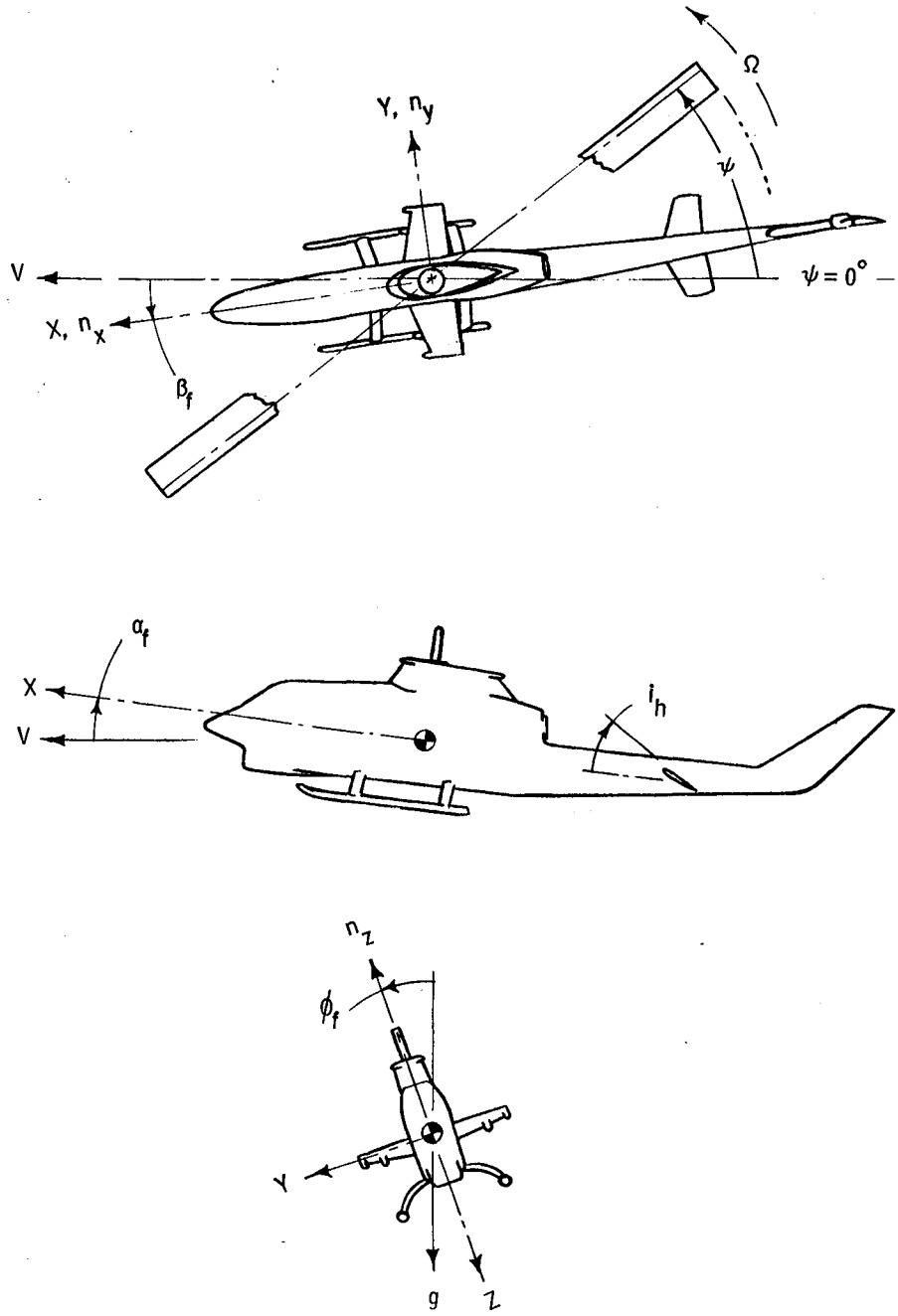


Figure 1. - Aircraft schematic and conventions used to define senses of axes, angles and accelerations.

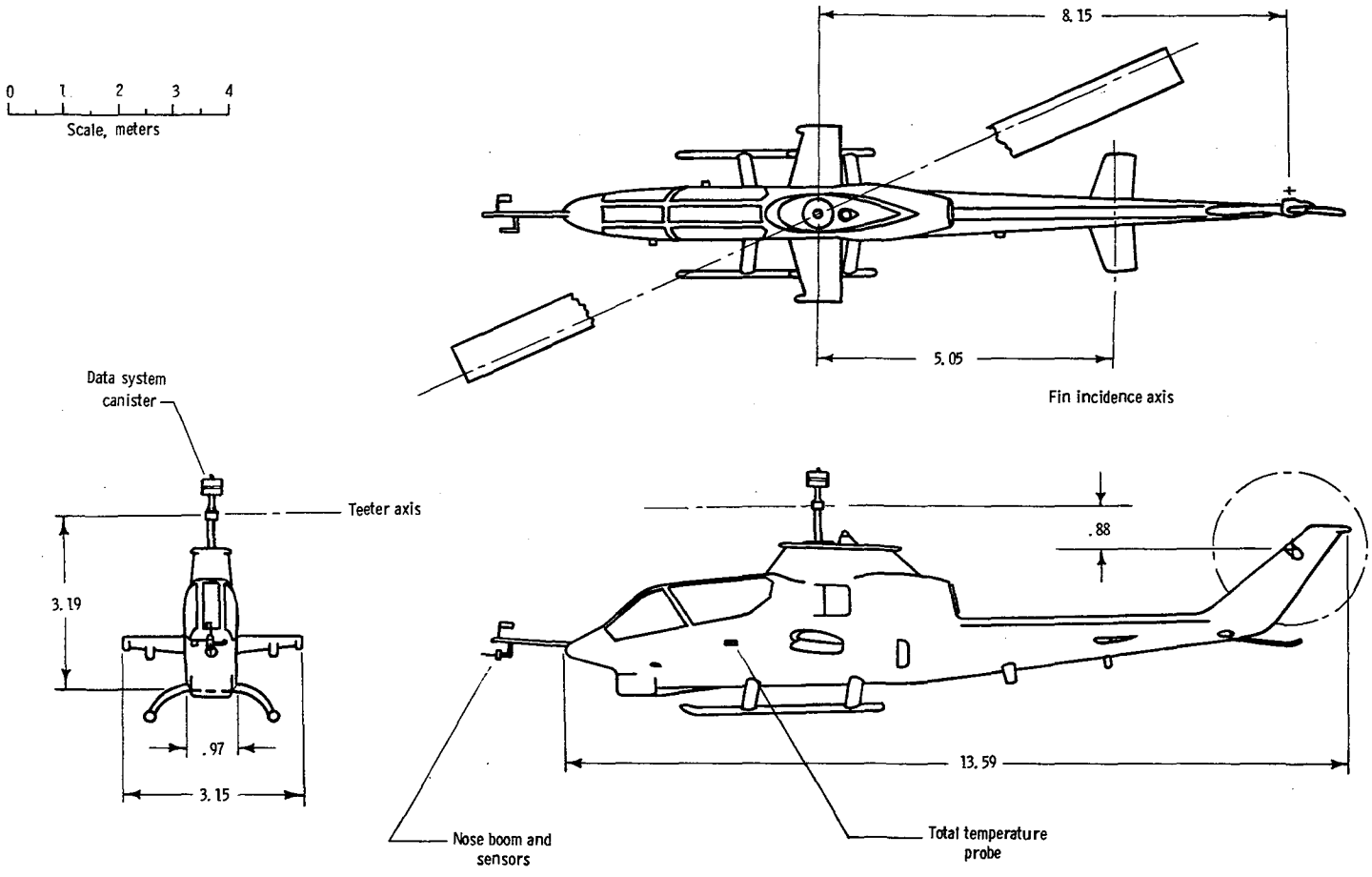


Figure 2. - Three-view scale drawing of aircraft. All dimensions are given in meters.

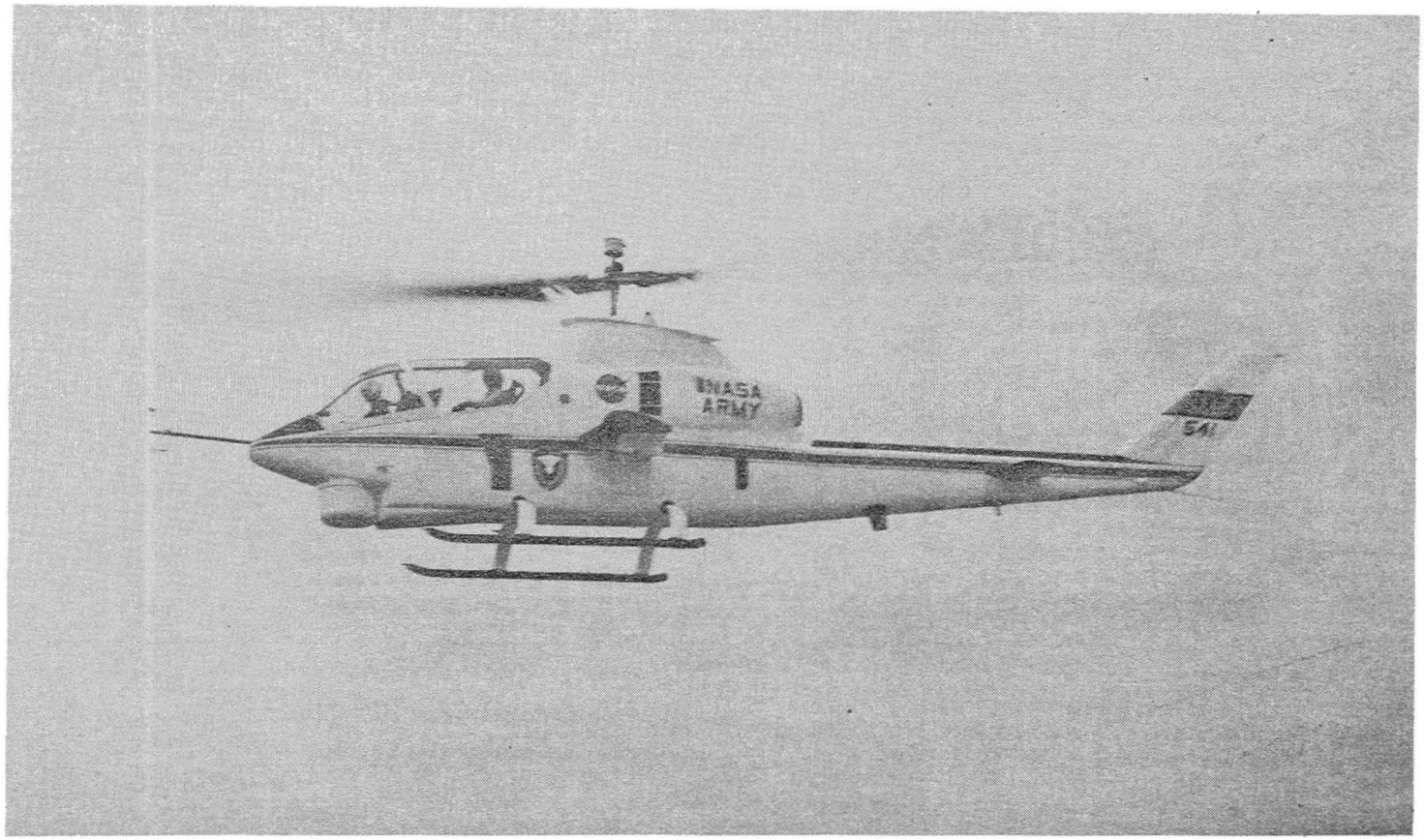


Figure 3. - Flight-test vehicle.

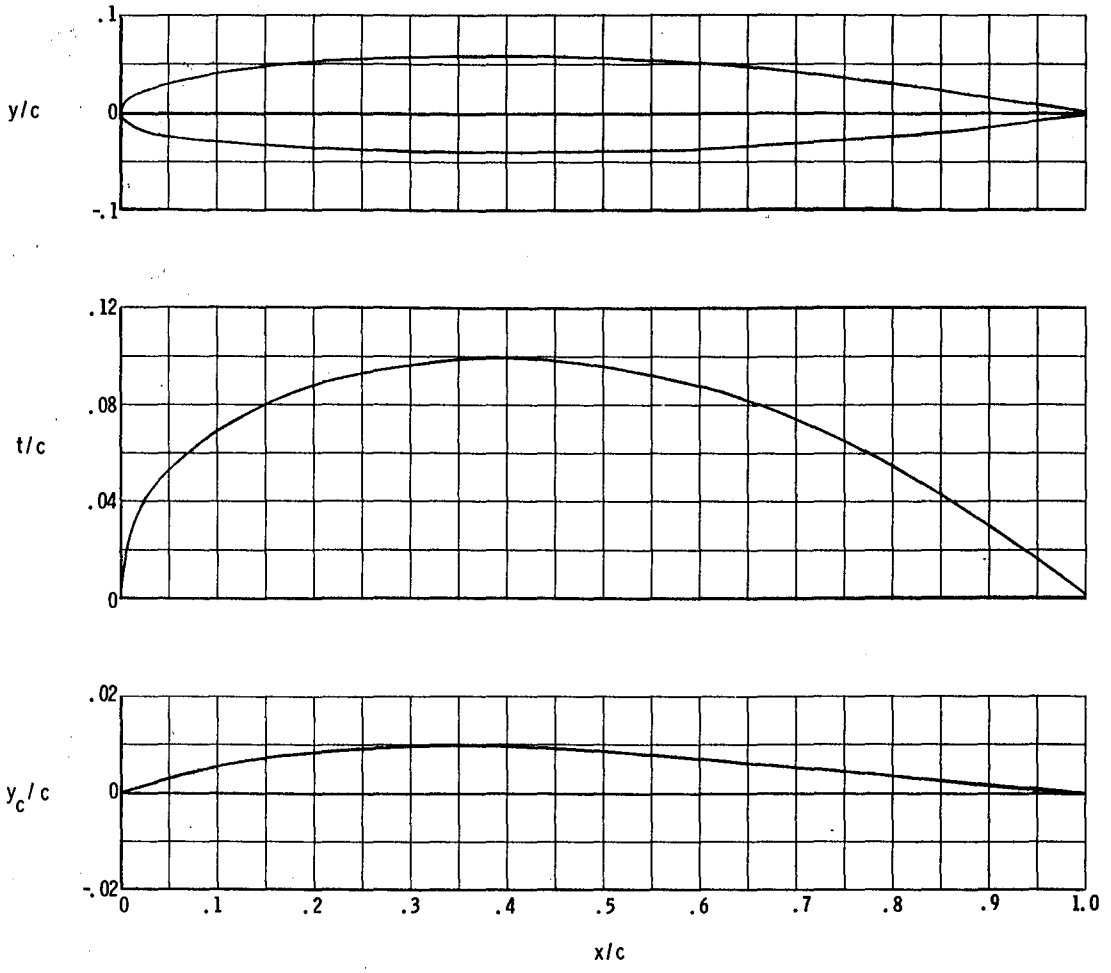


Figure 4. - Geometric characteristics of 10-64C airfoil.

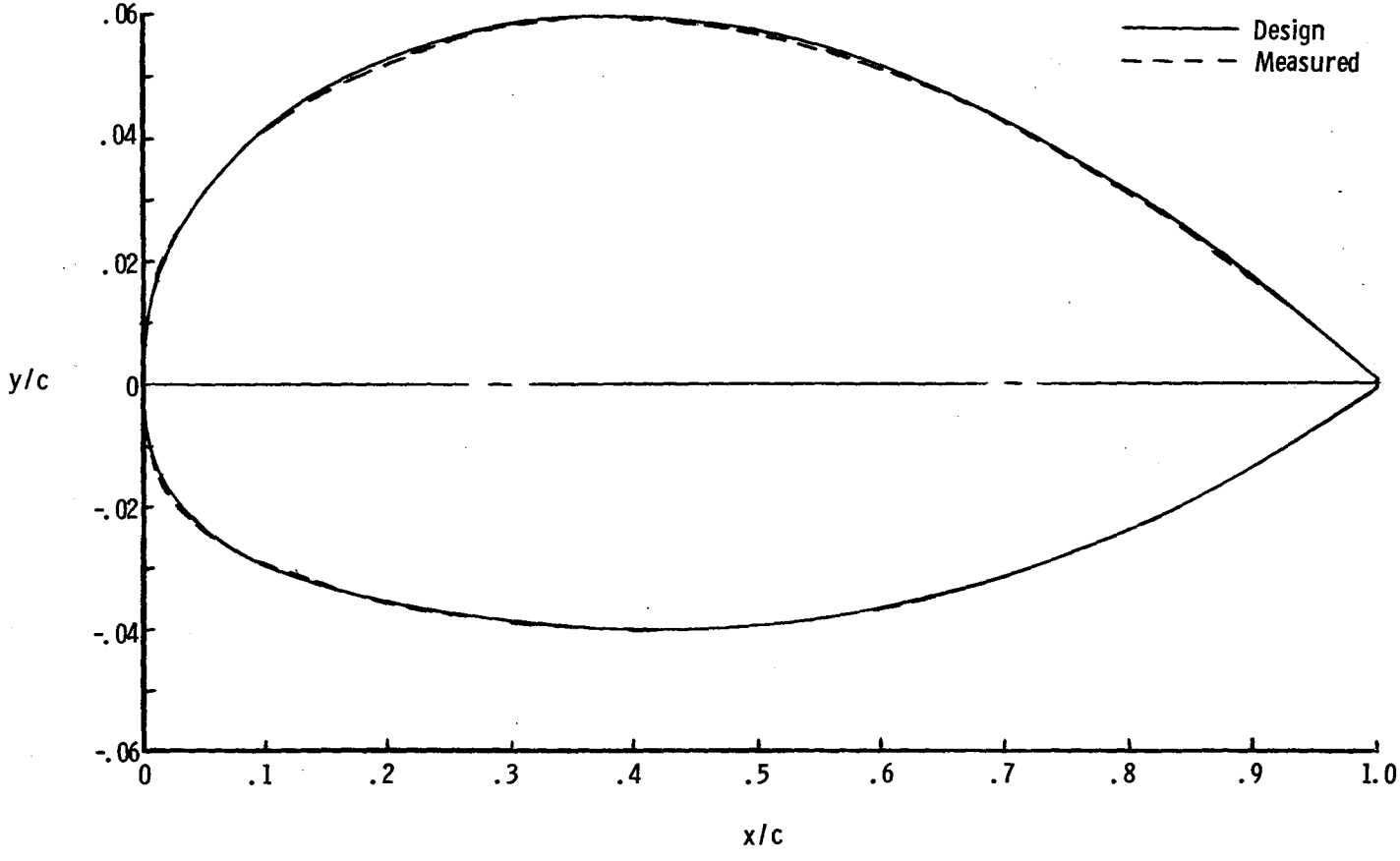


Figure 5. - Comparison of design blade-section coordinates and coordinates measured at 0.9 R.

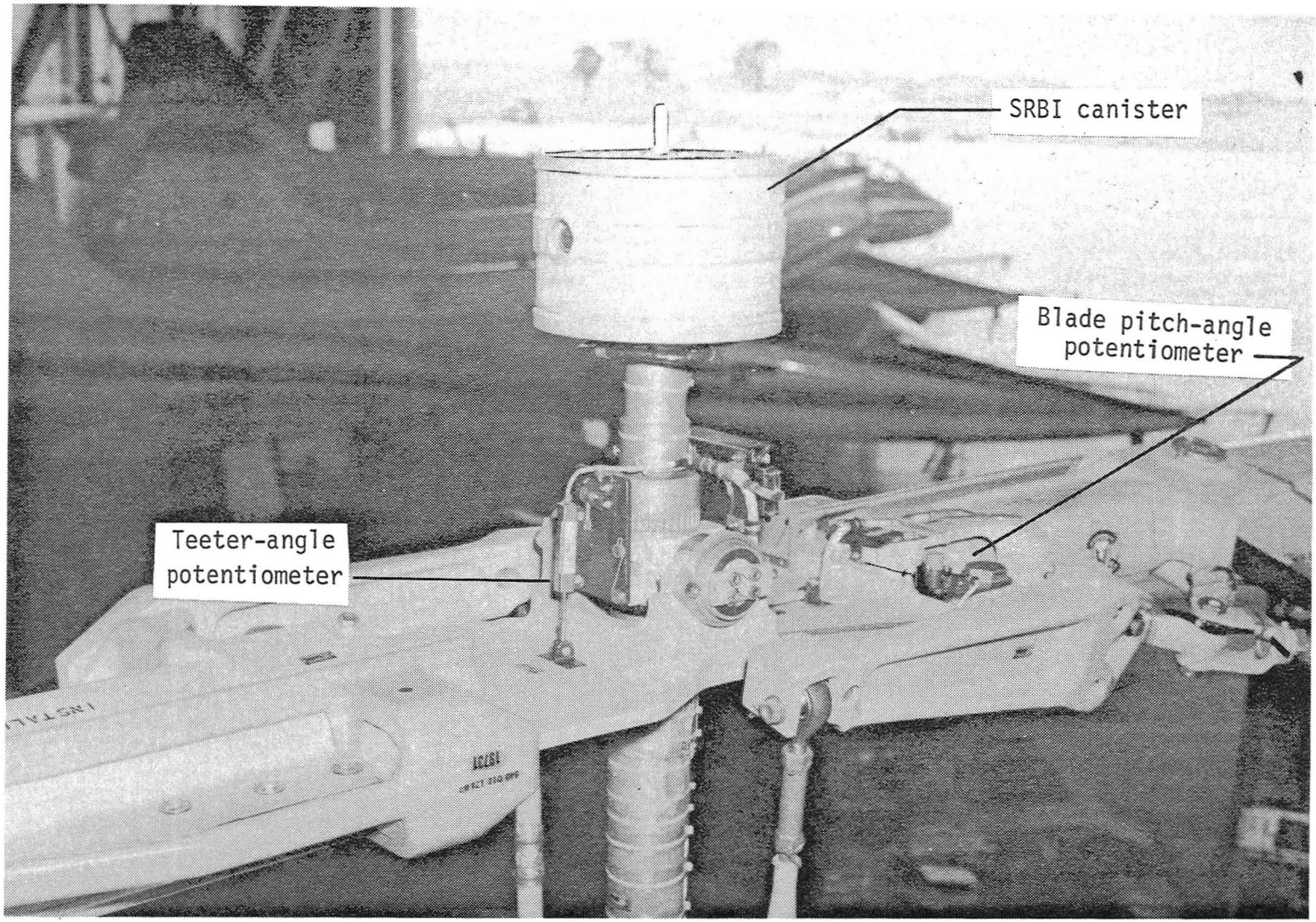


Figure 6.- Data canister and hub instrumentation.

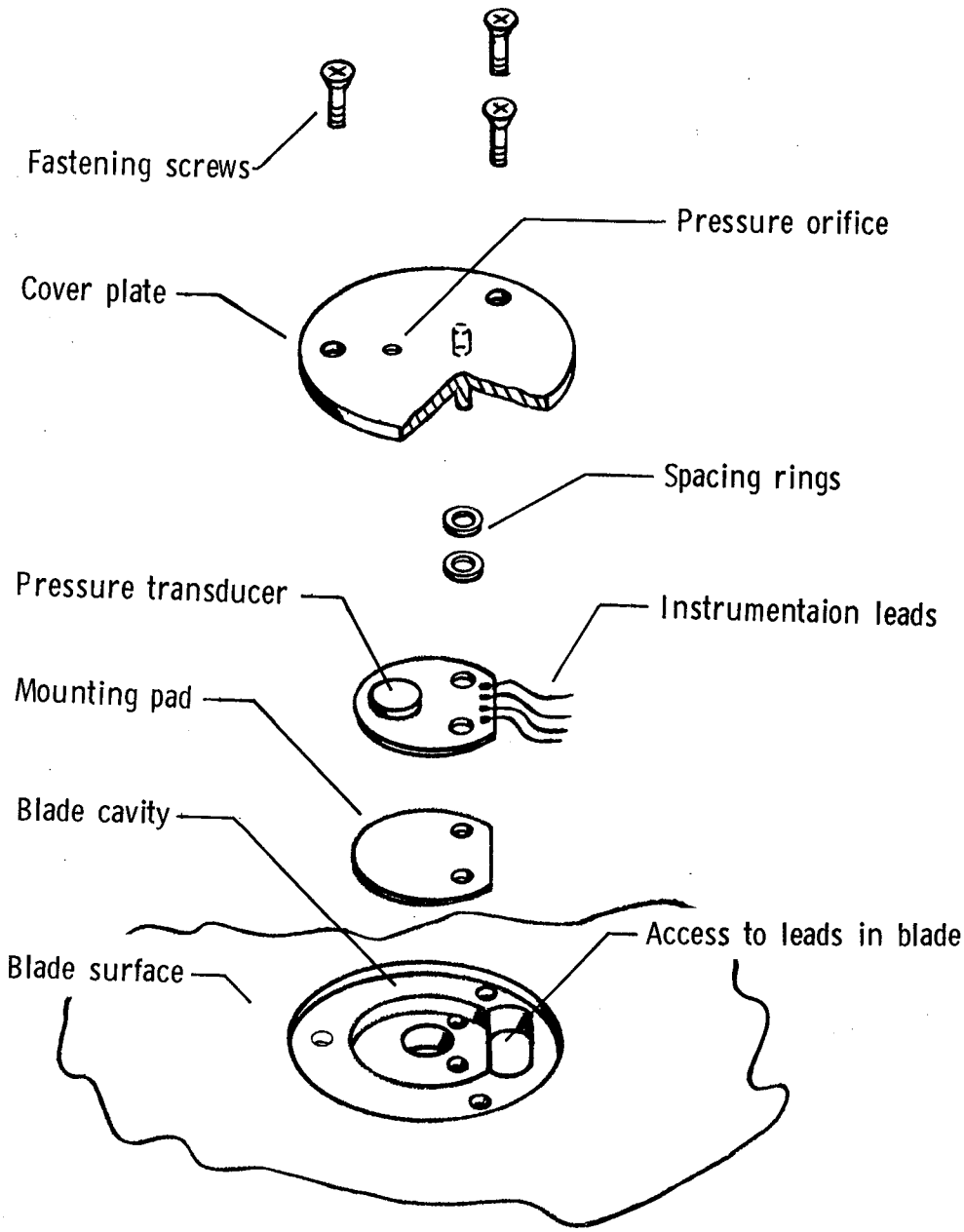
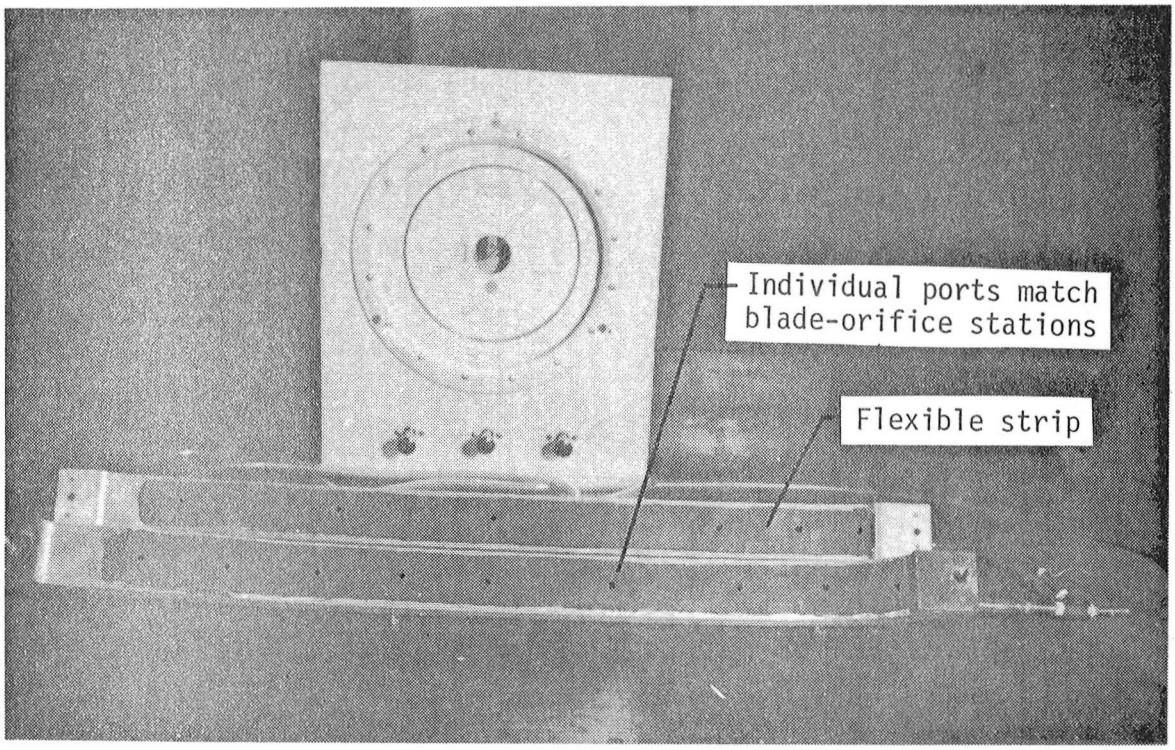
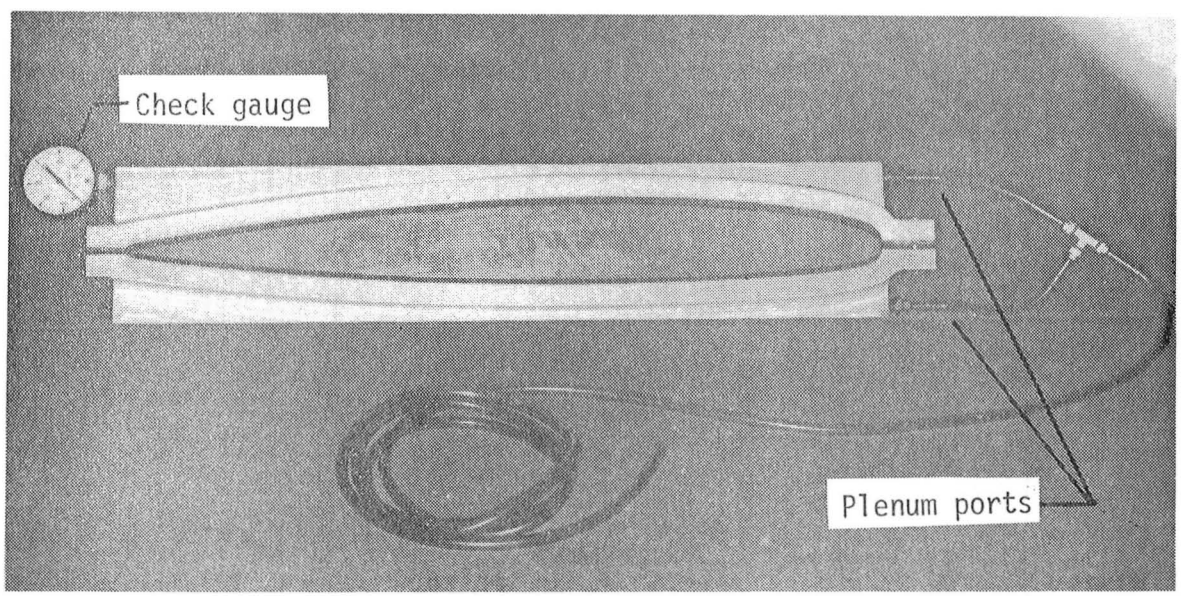


Figure 7.- Exploded-view drawing of typical pressure-transducer installation.

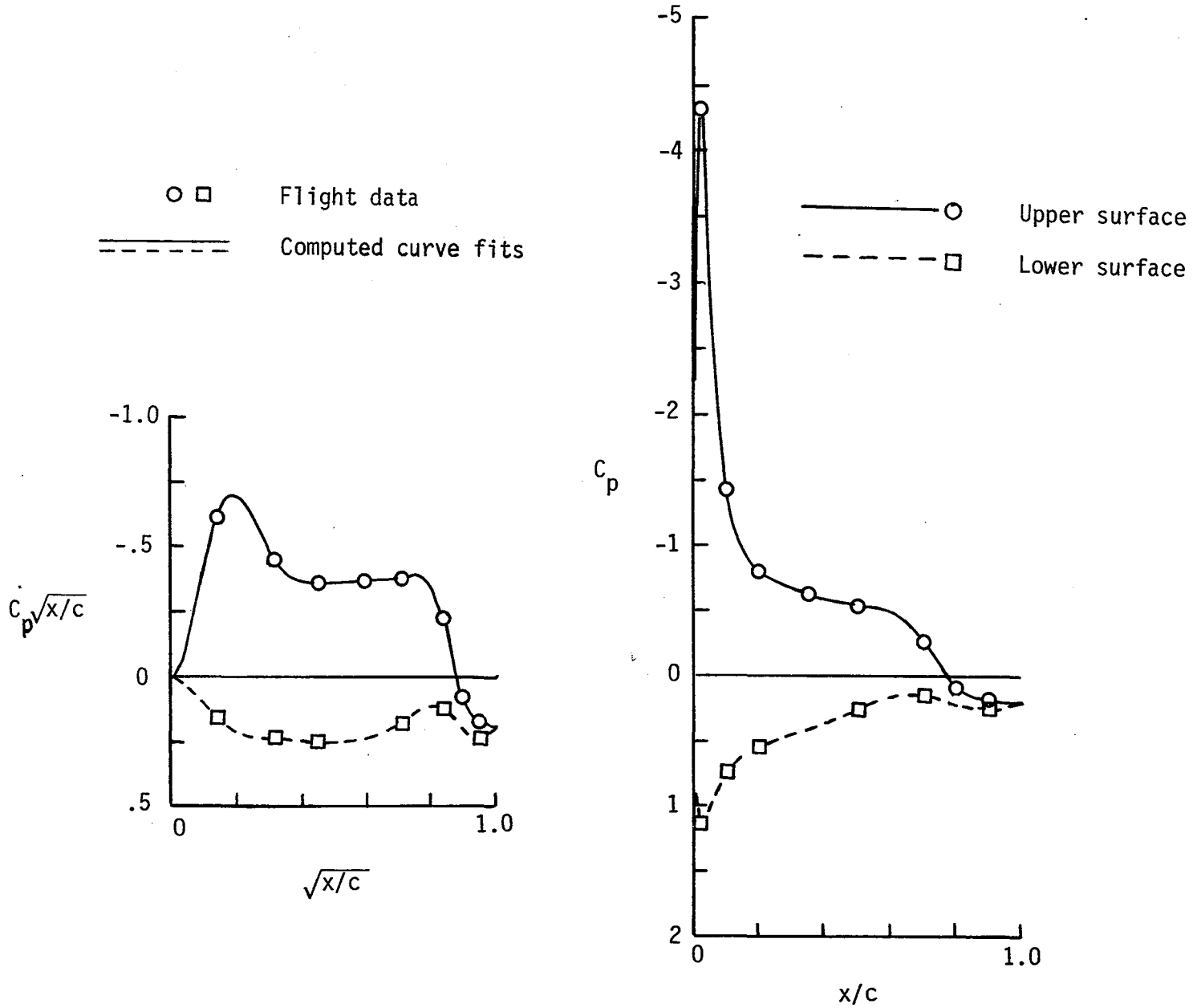


(a) Read-out gauge and fixture interior surfaces.



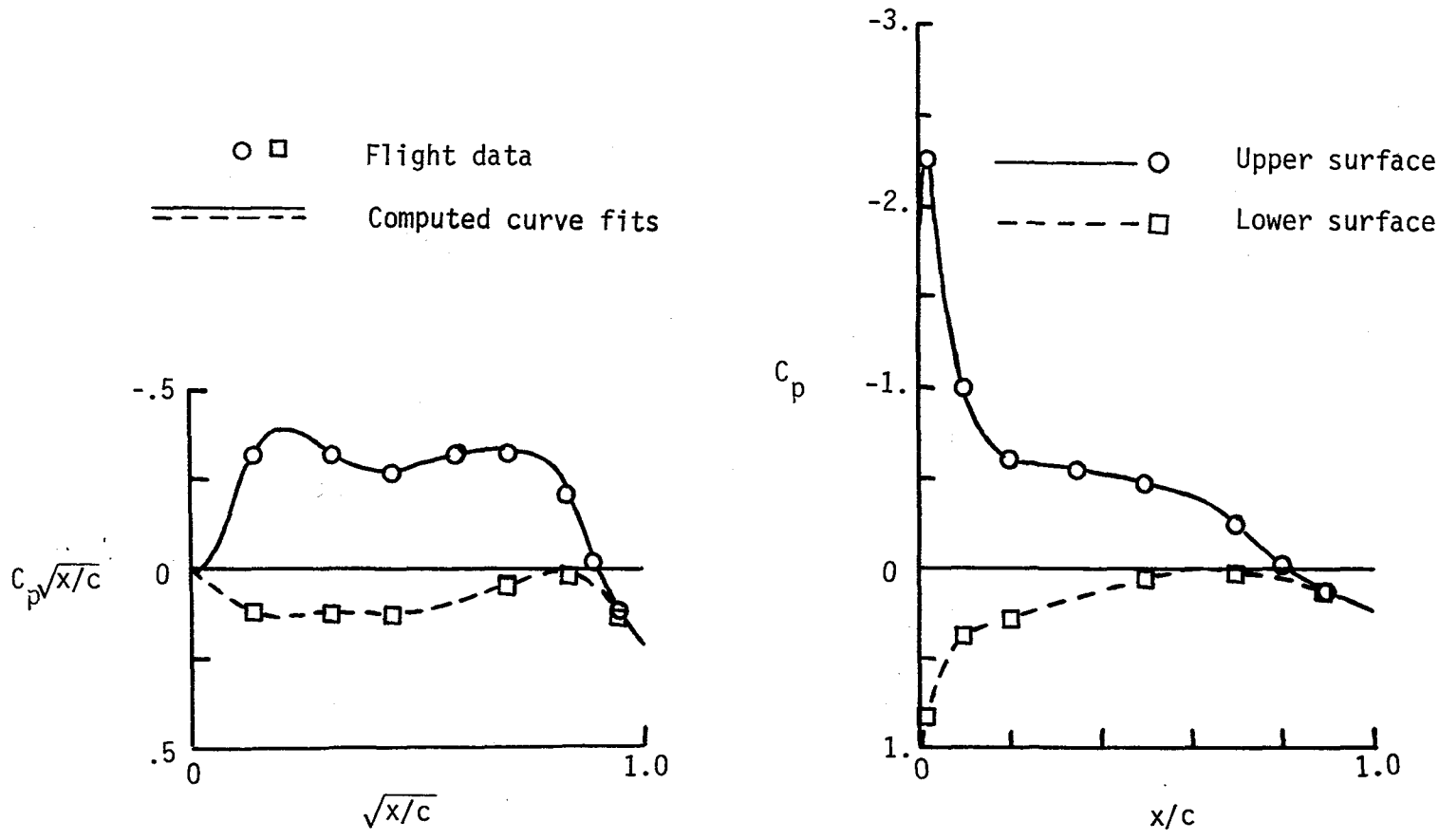
(b) Fixture installed on model blade section.

Figure 8. - Blade-section pressure fixture for preflight calibration.



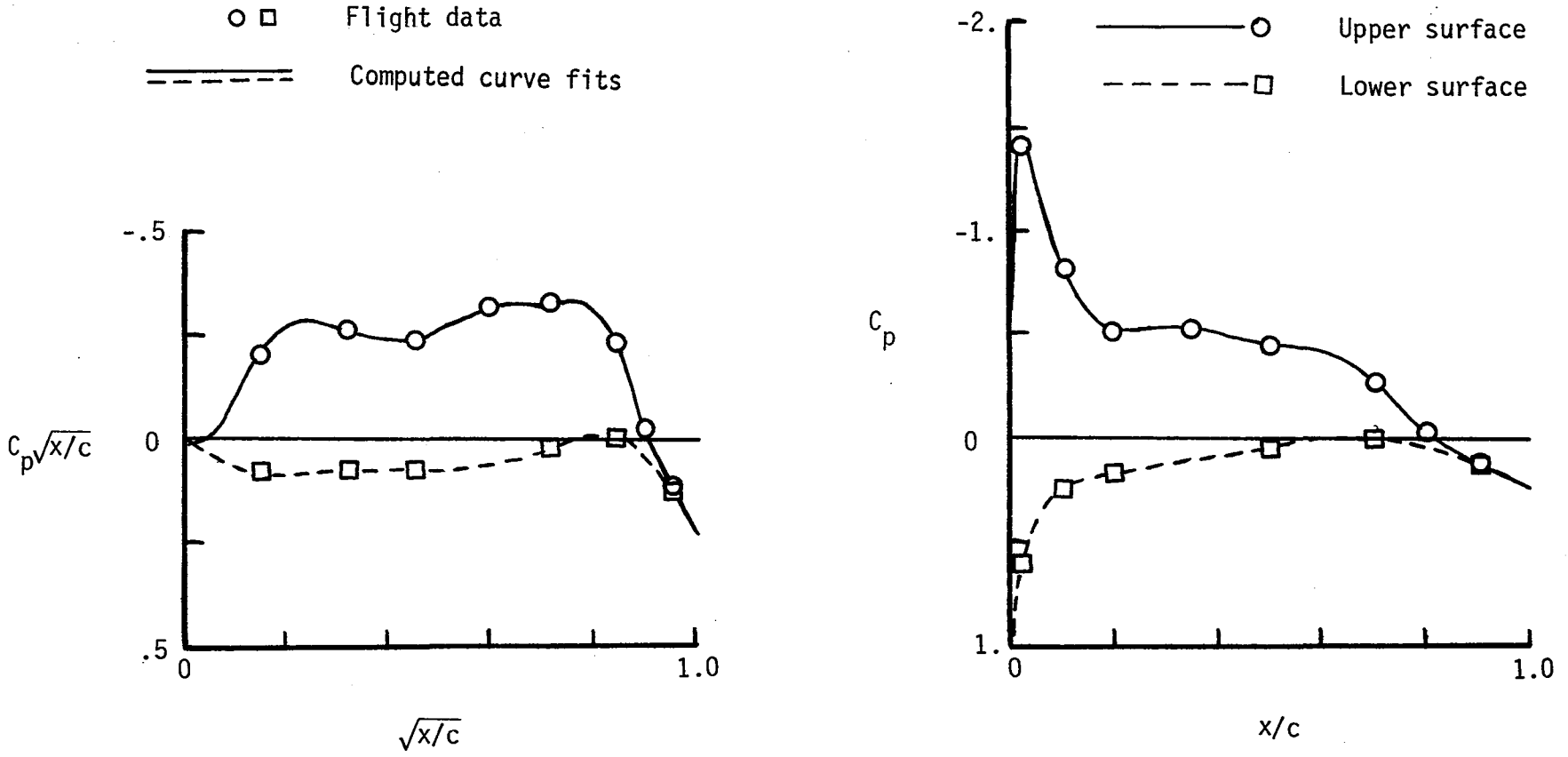
(a) M = 0.352, c_n = 1.04, c_m = 0.002, ψ = 270°.

Figure 9. - Samples of curve-fits to flight data on blade-section pressures. r/R = 0.9.



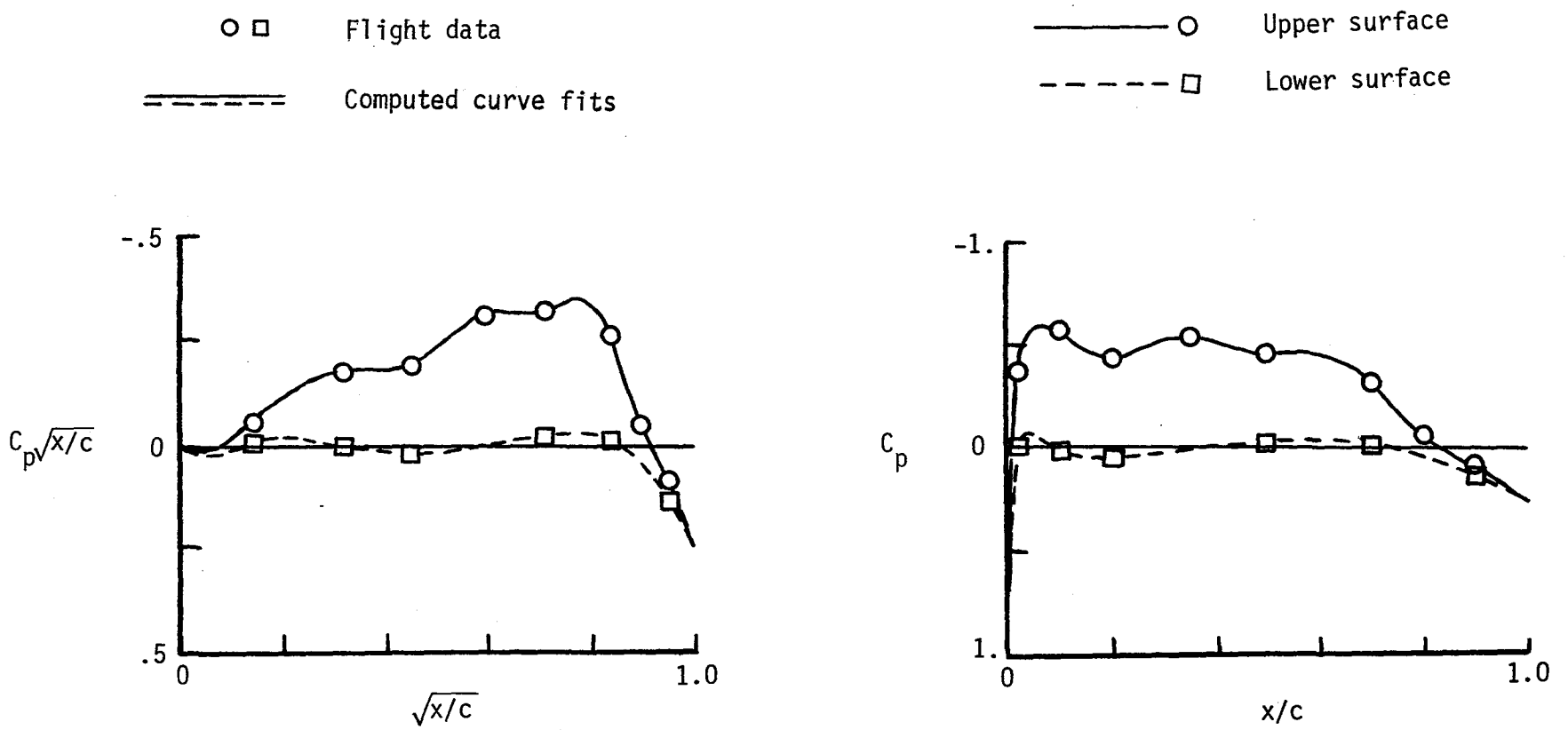
(b) M = 0.501, c_n = 0.65, c_m = -0.003, $\psi = 270^o$.

Figure 9. - Continued.



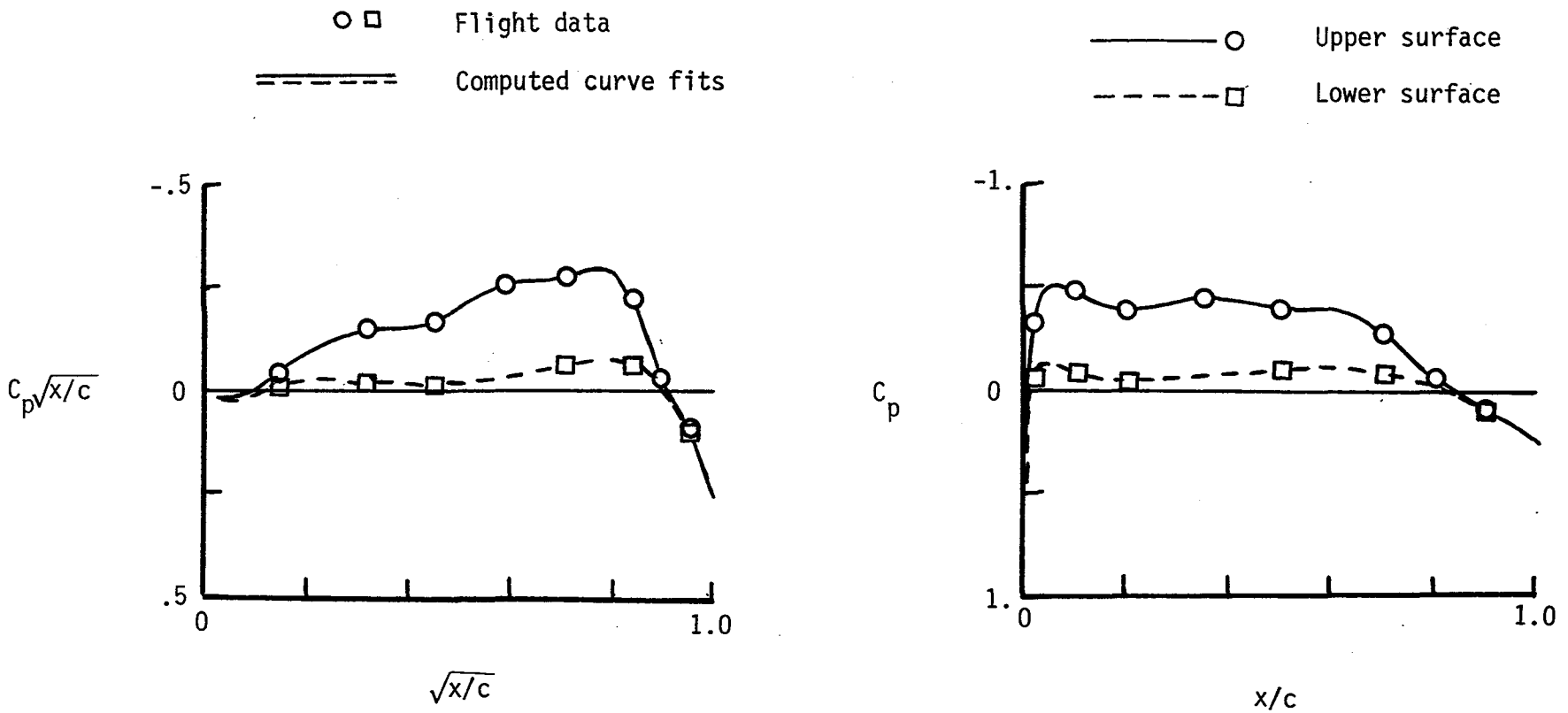
(c) M = 0.508, c_n = 0.53, c_m = -0.017, ψ = 250°.

Figure 9. - Continued.



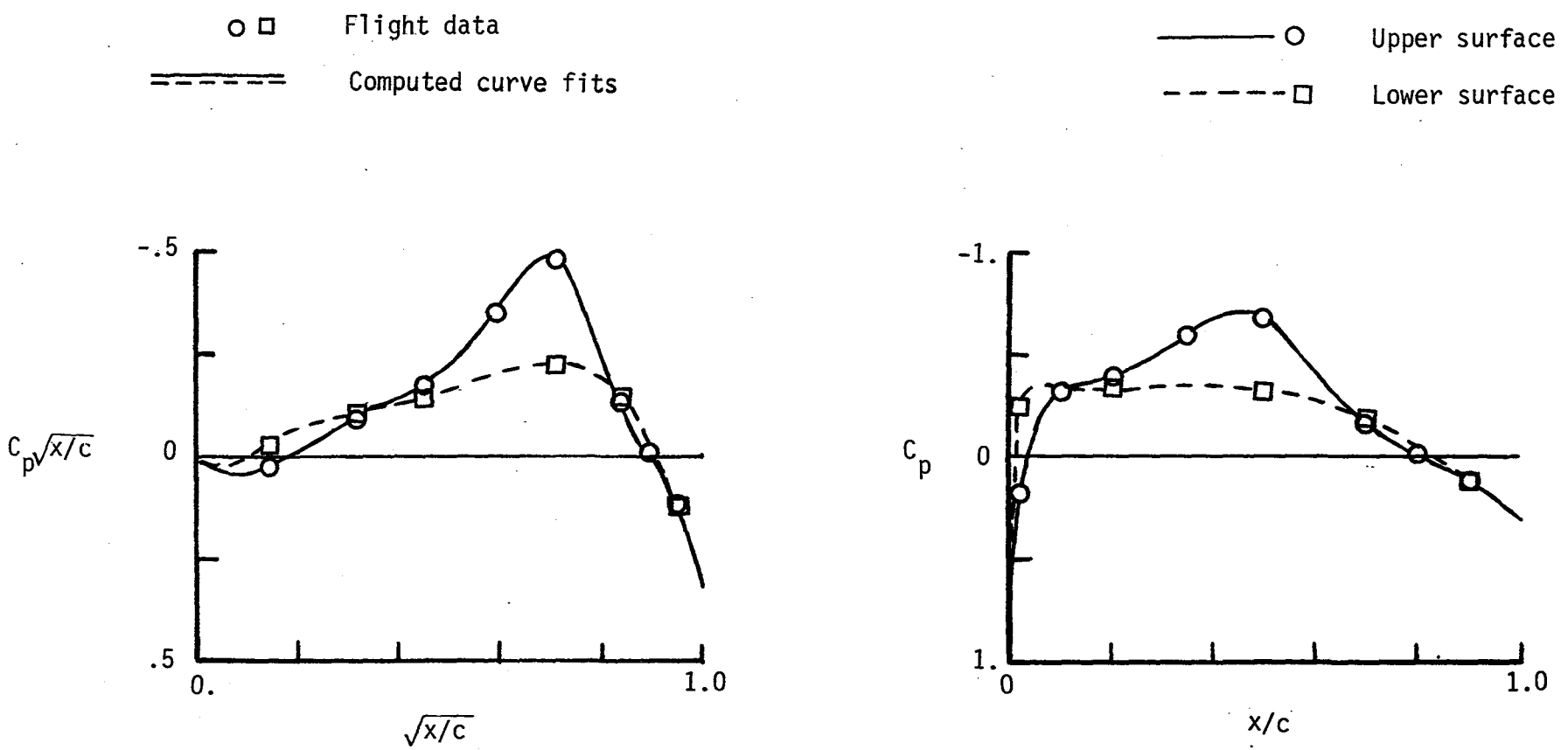
(d) M = 0.602, c_n = 0.36, c_m = -0.043, ψ = 180°.

Figure 9. - Continued.



(e) M = 0.602, c_n = 0.24, c_m = -0.026, $\psi = 180^o$.

Figure 9. - Continued.



(f) M = 0.845, c_n = 0.08, c_m = -0.020, $\psi = 90^o$.

Figure 9. - Concluded.

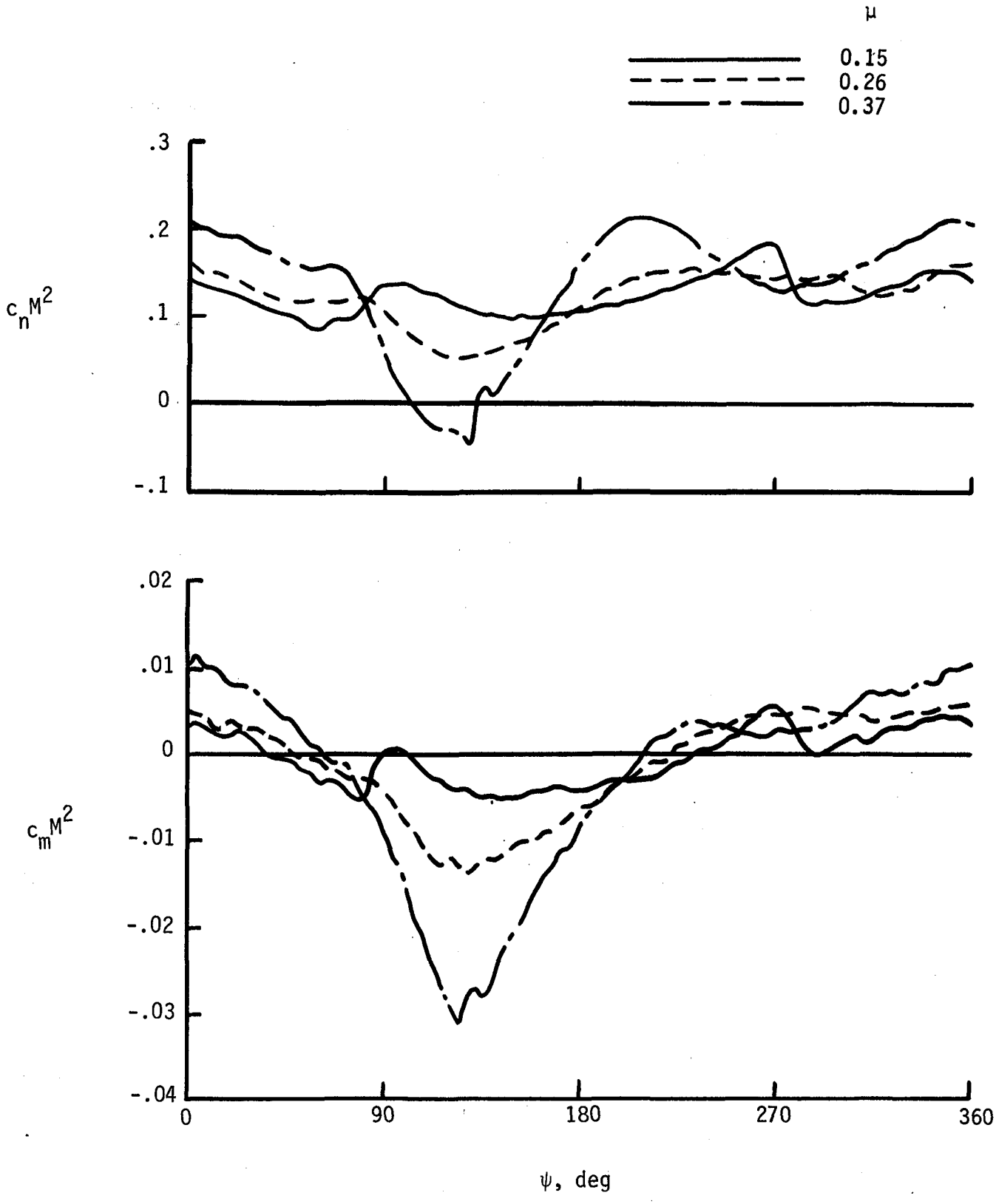
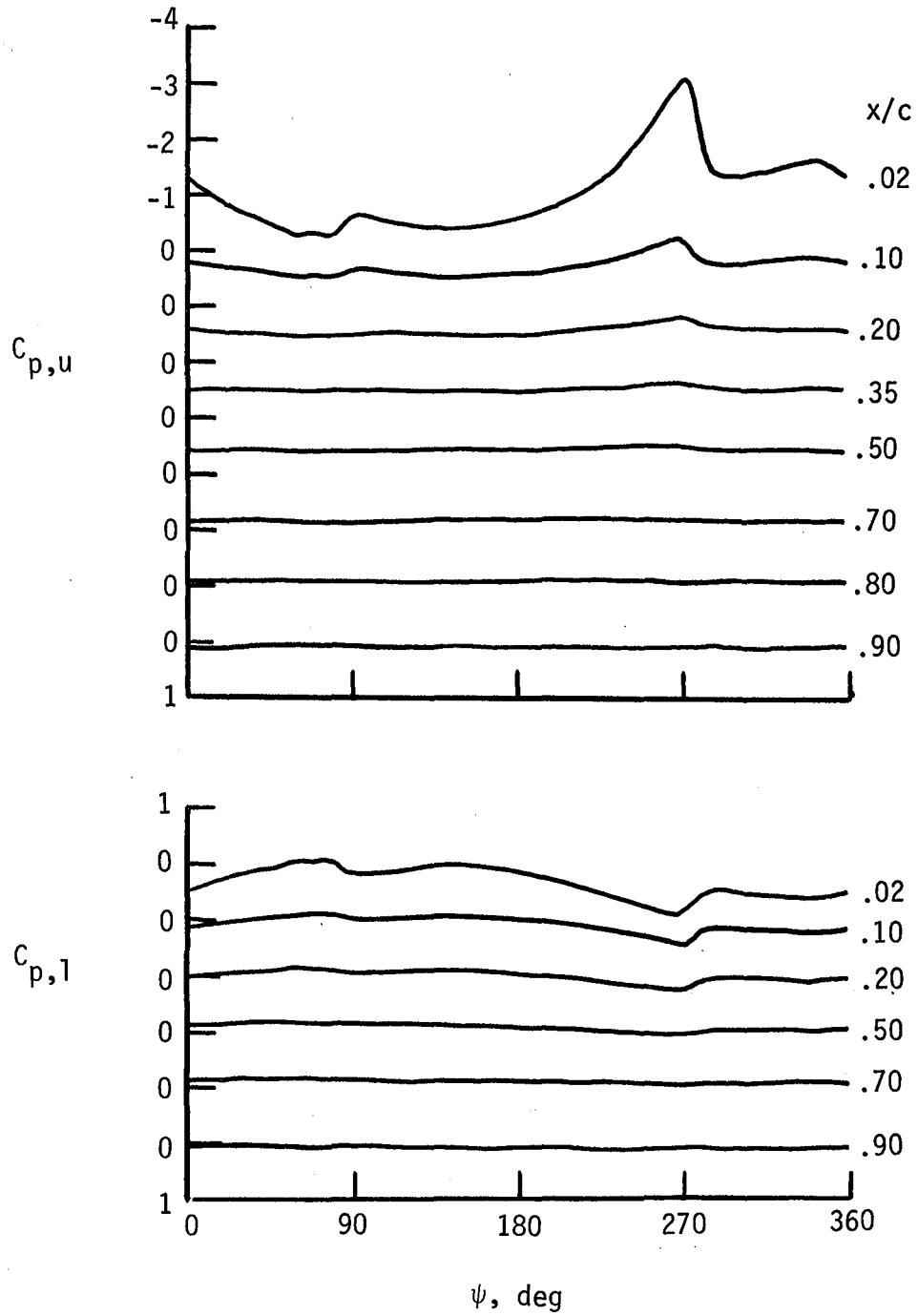
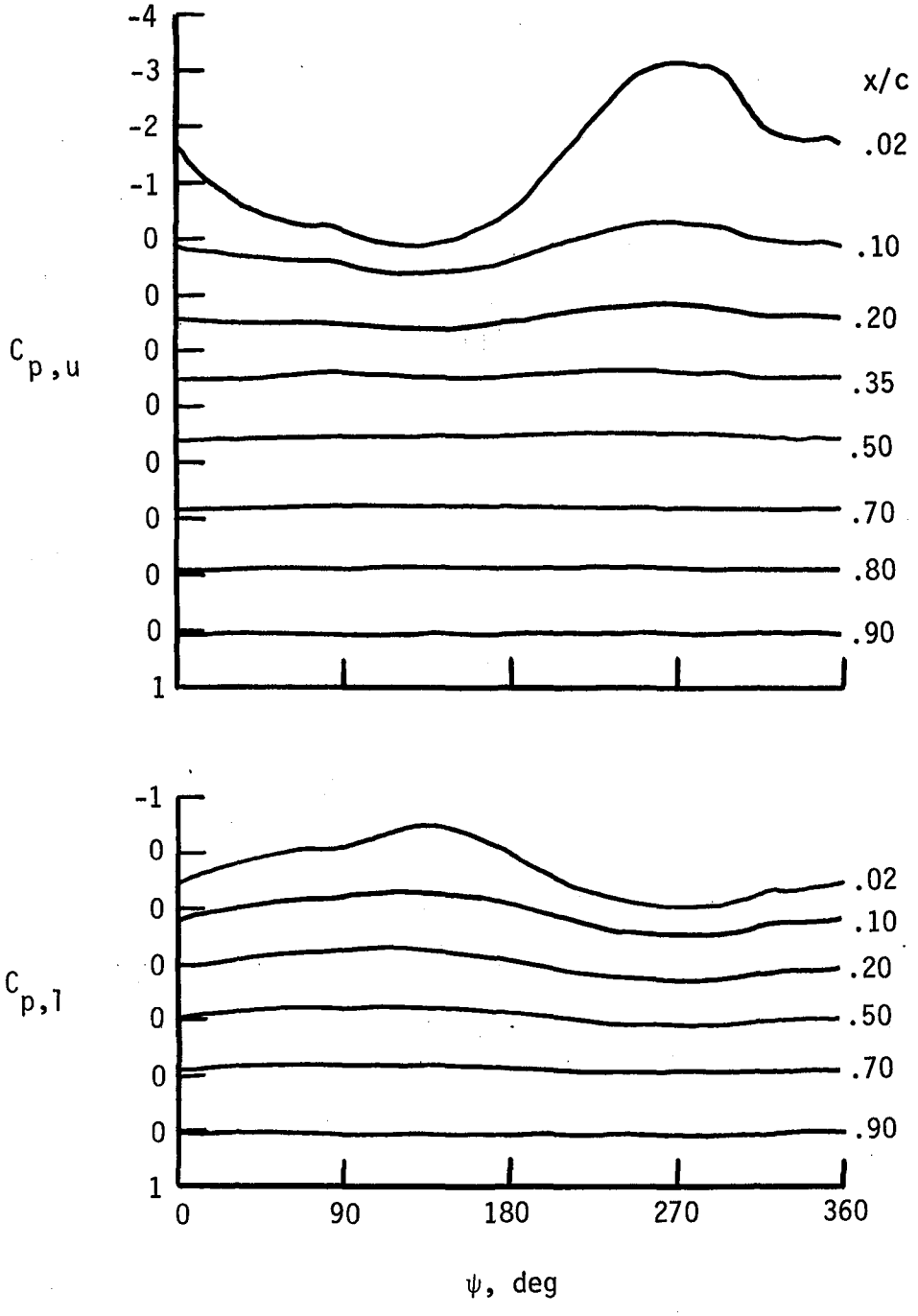


Figure 10. - Variation of blade-section aerodynamic loads with blade azimuth for level flight (flight 81). r/R = 0.9.



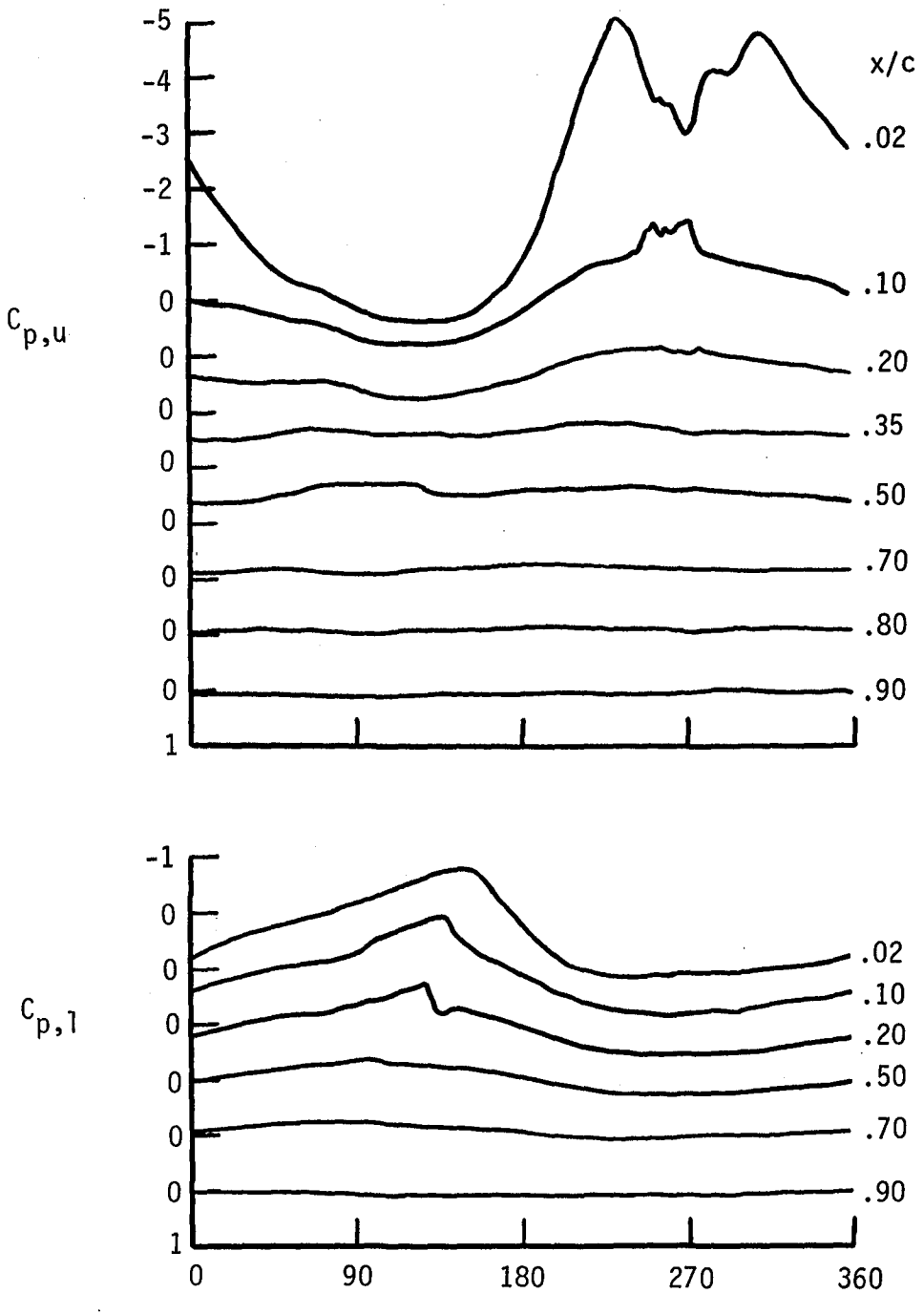
(a) $\mu = 0.15$

Figure 11. - Pressure coefficient records for several values of tip-speed ratio in level flight.



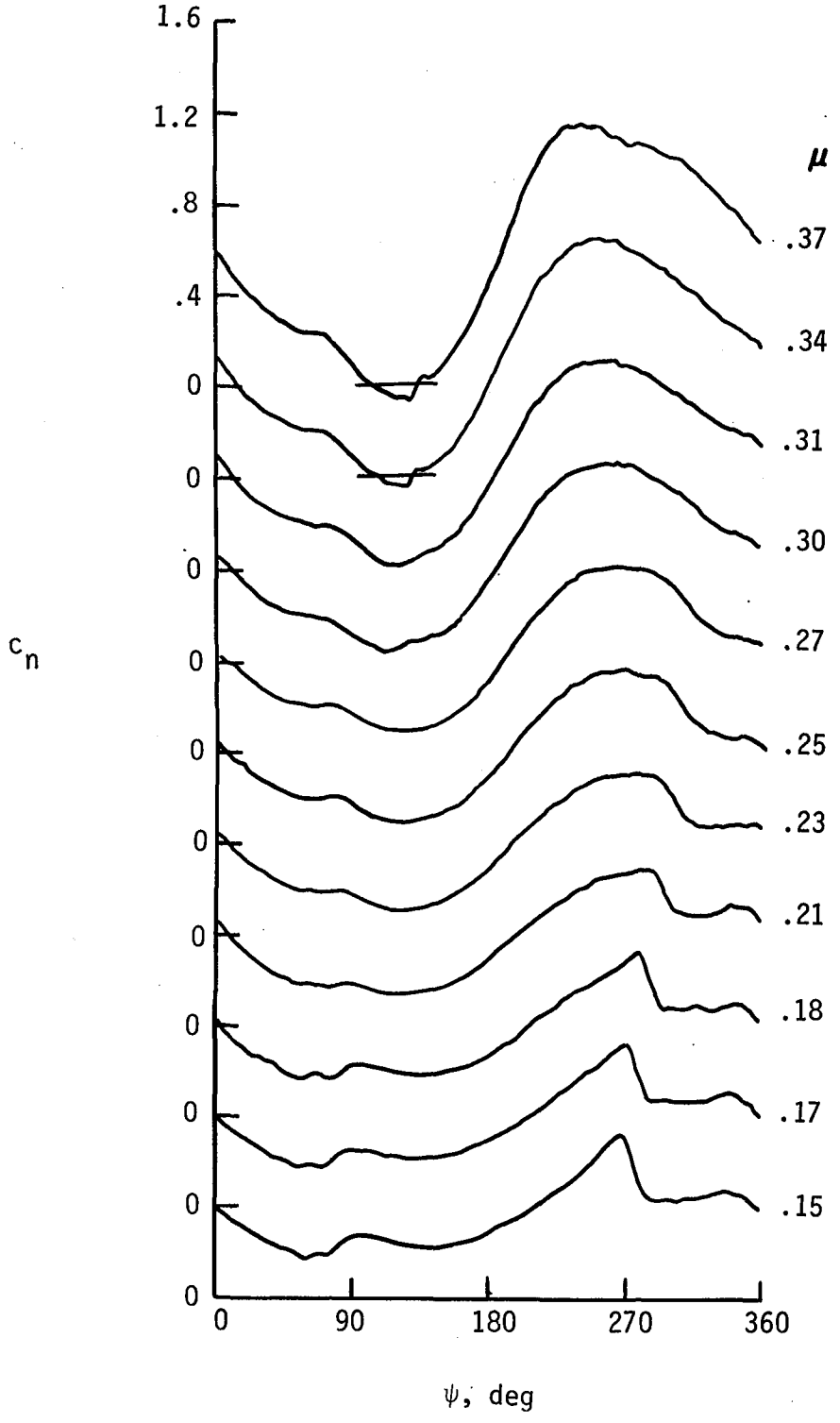
(b) $\mu = 0.25$

Figure 11. - continued.



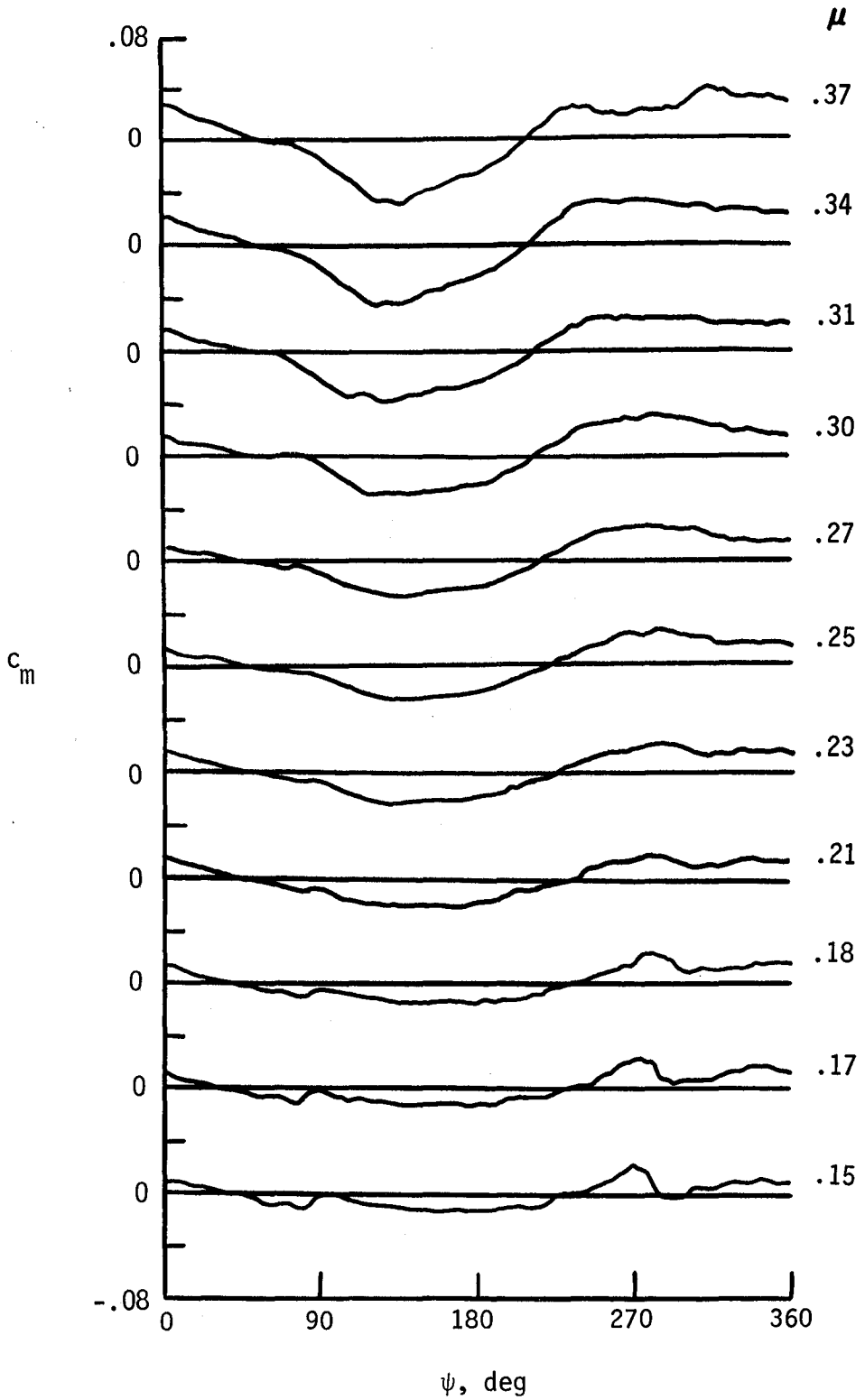
(c) $\mu = 0.37$

Figure 11. - concluded.



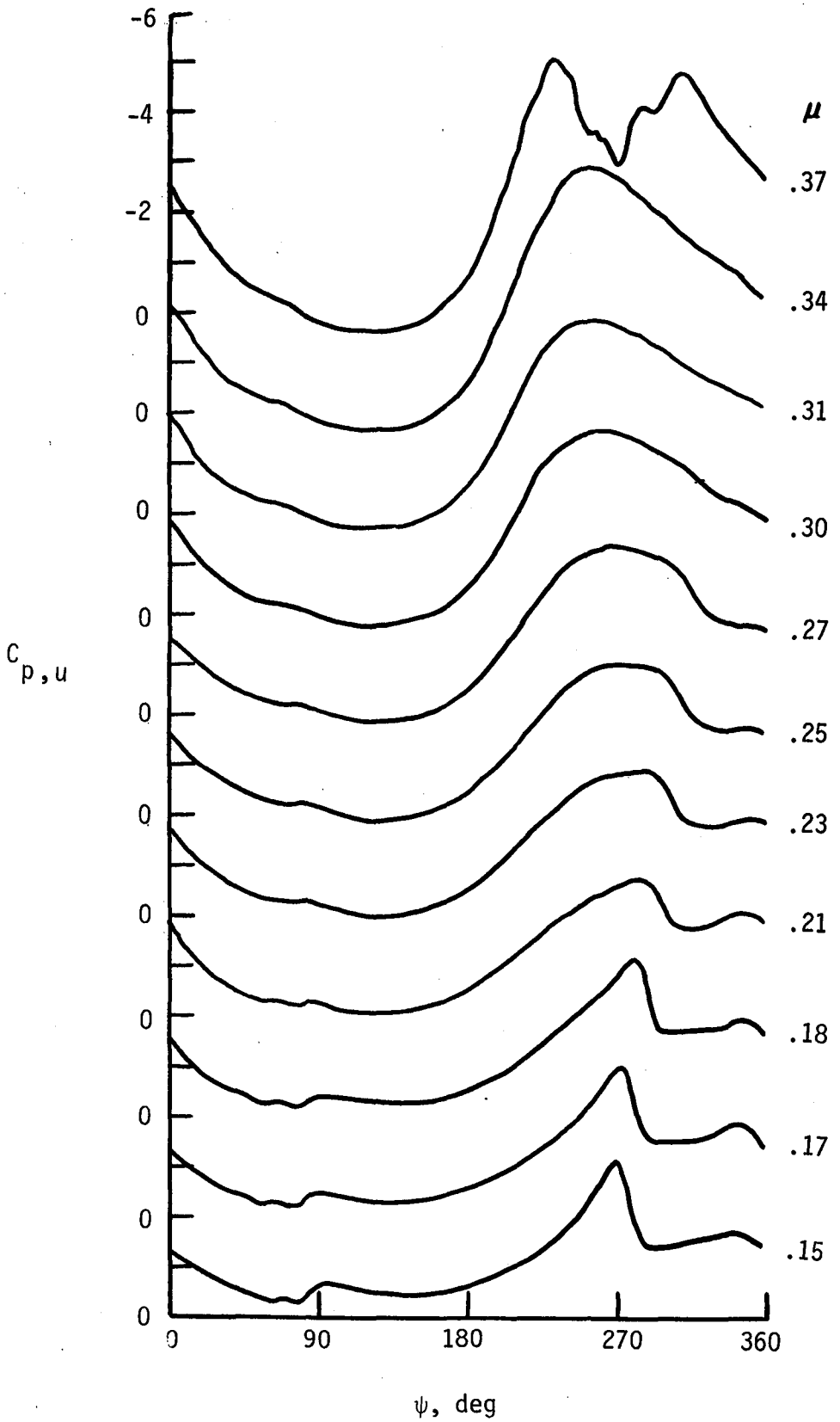
(a) Normal-force coefficient.

Figure 12. - Variation of blade-section aerodynamic characteristics with blade azimuth at a series of tip-speed ratios (flight 81) r/R = 0.9.



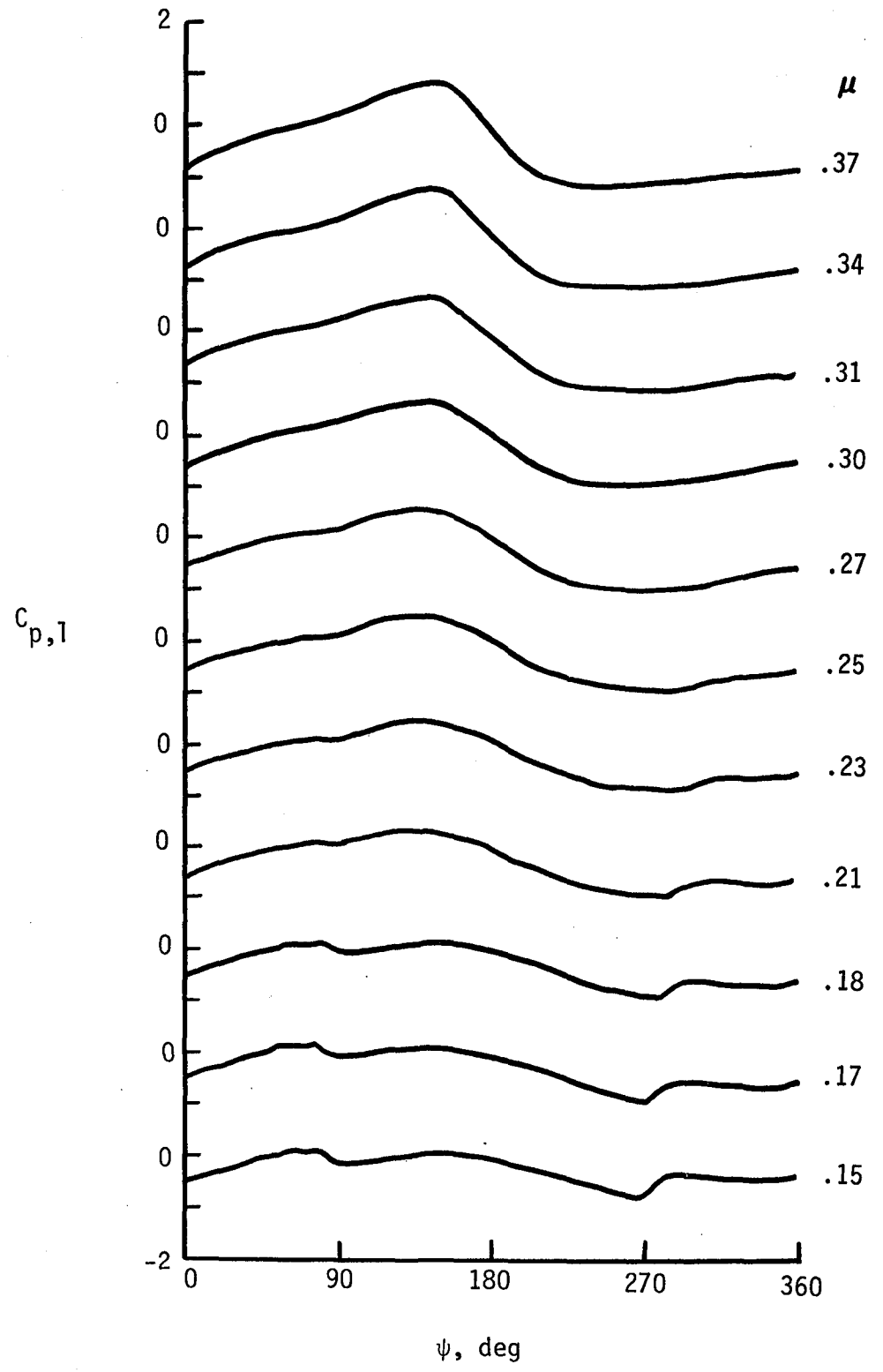
(b) Pitching-moment coefficient

Figure 12. - Continued.



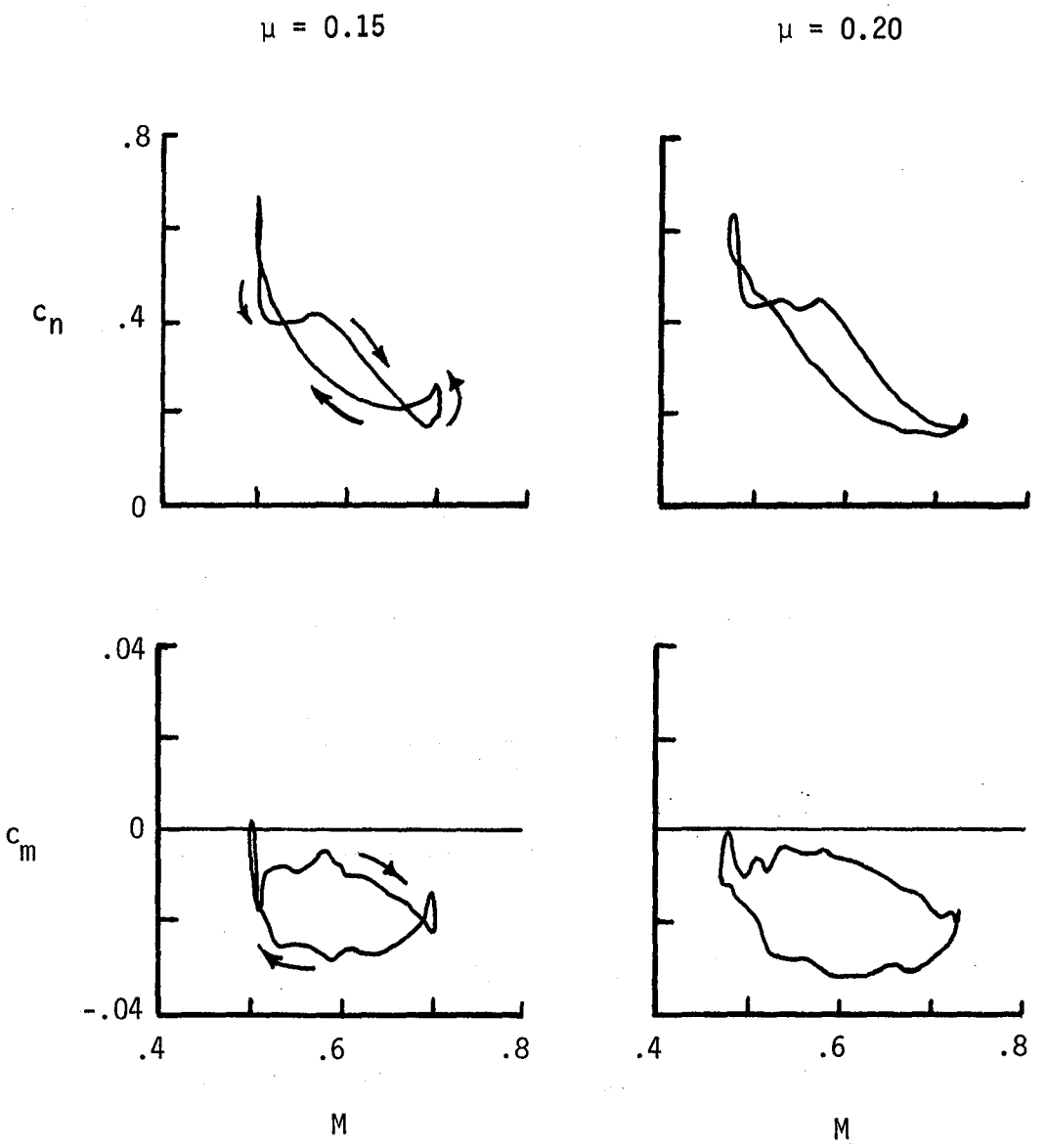
(c) Upper-surface pressure coefficient; x/c = 0.02.

Figure 12. - Continued



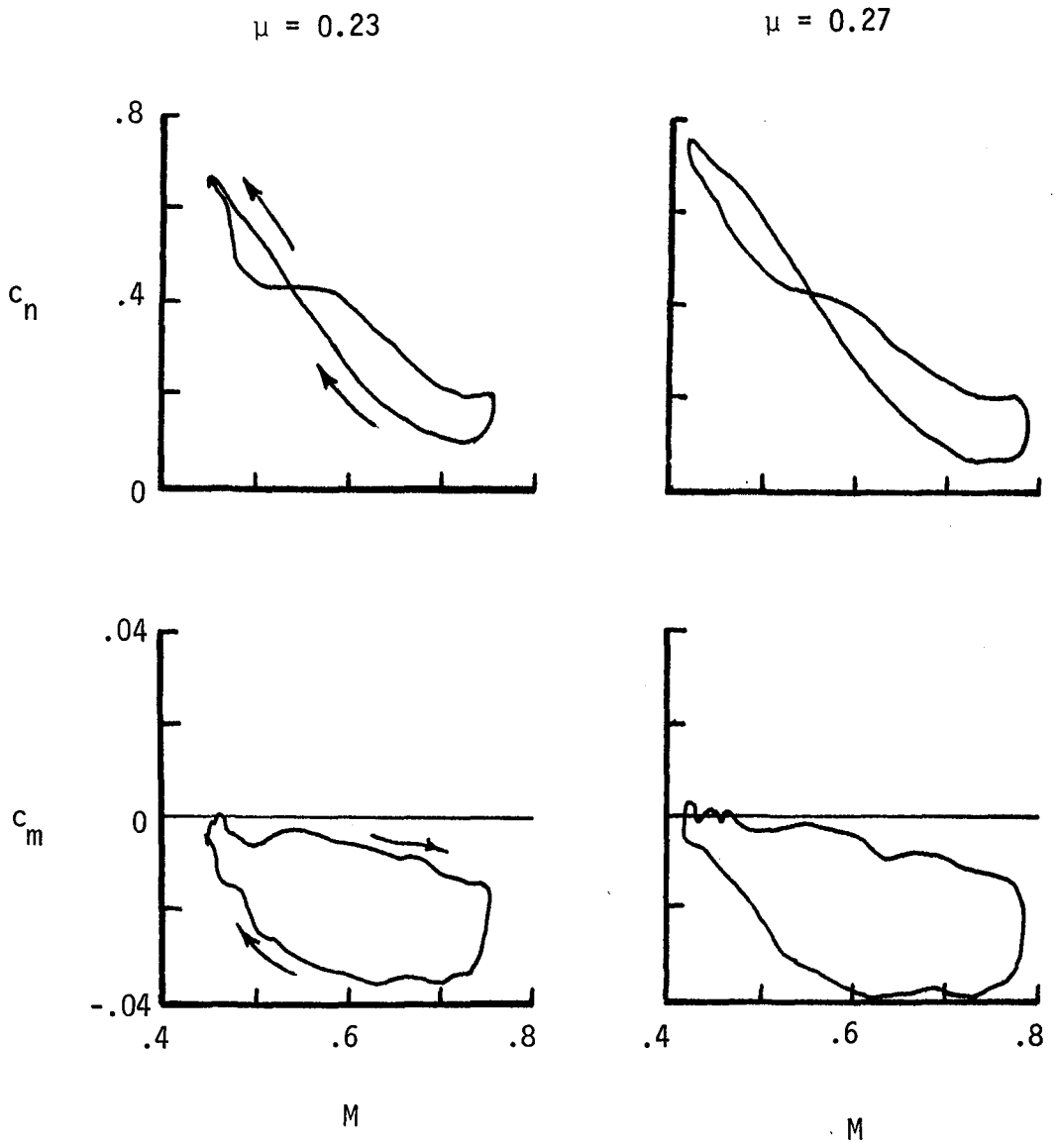
(d) Lower-surface pressure coefficient; x/c = 0.02.

Figure 12. - Concluded.



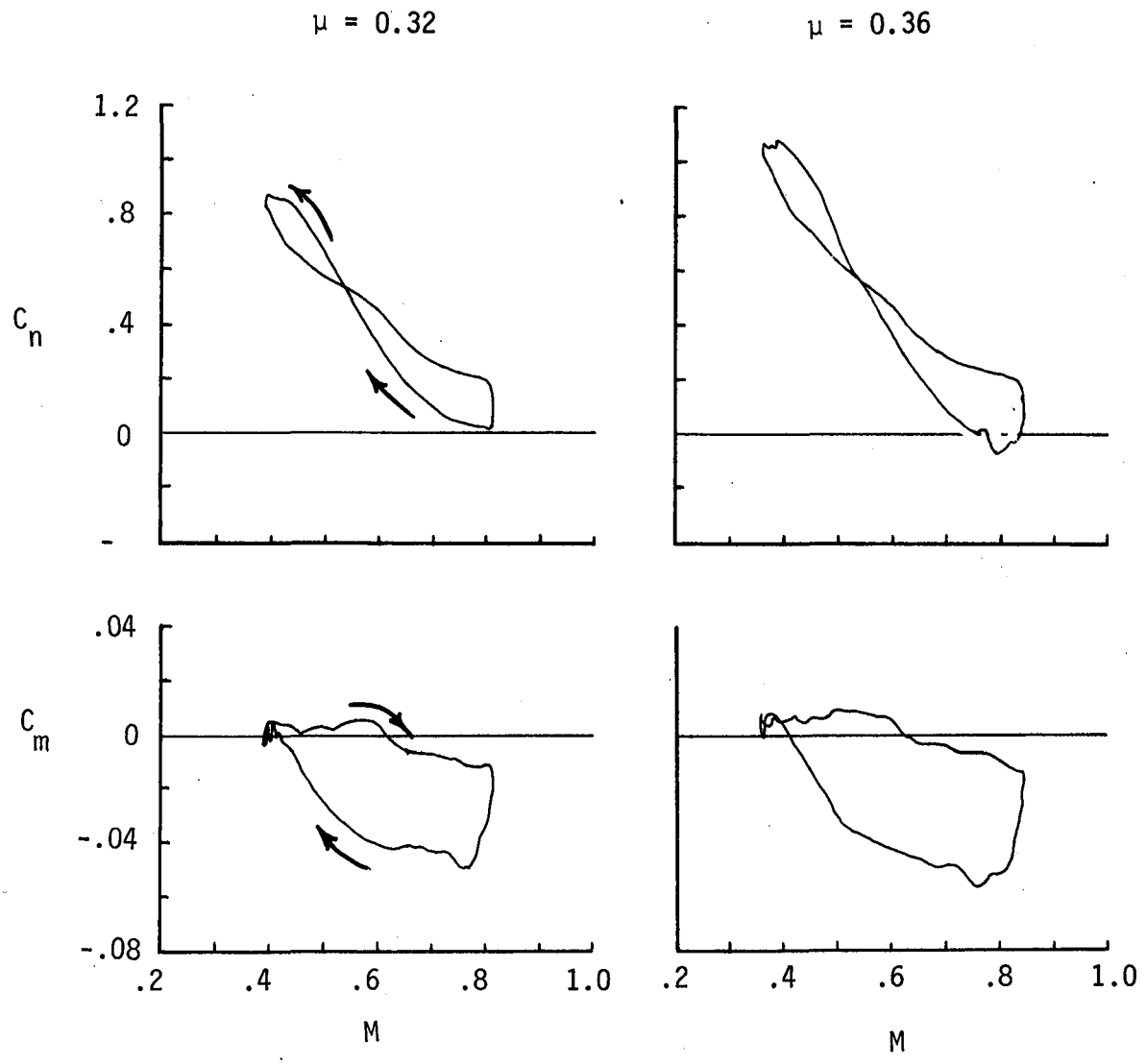
(a) Transition airspeeds; $\bar{C}_L' = 0.0044$.

Figure 13. - Blade-section operating conditions at a series of tip-speed ratios in level flight. r/R = 0.9.



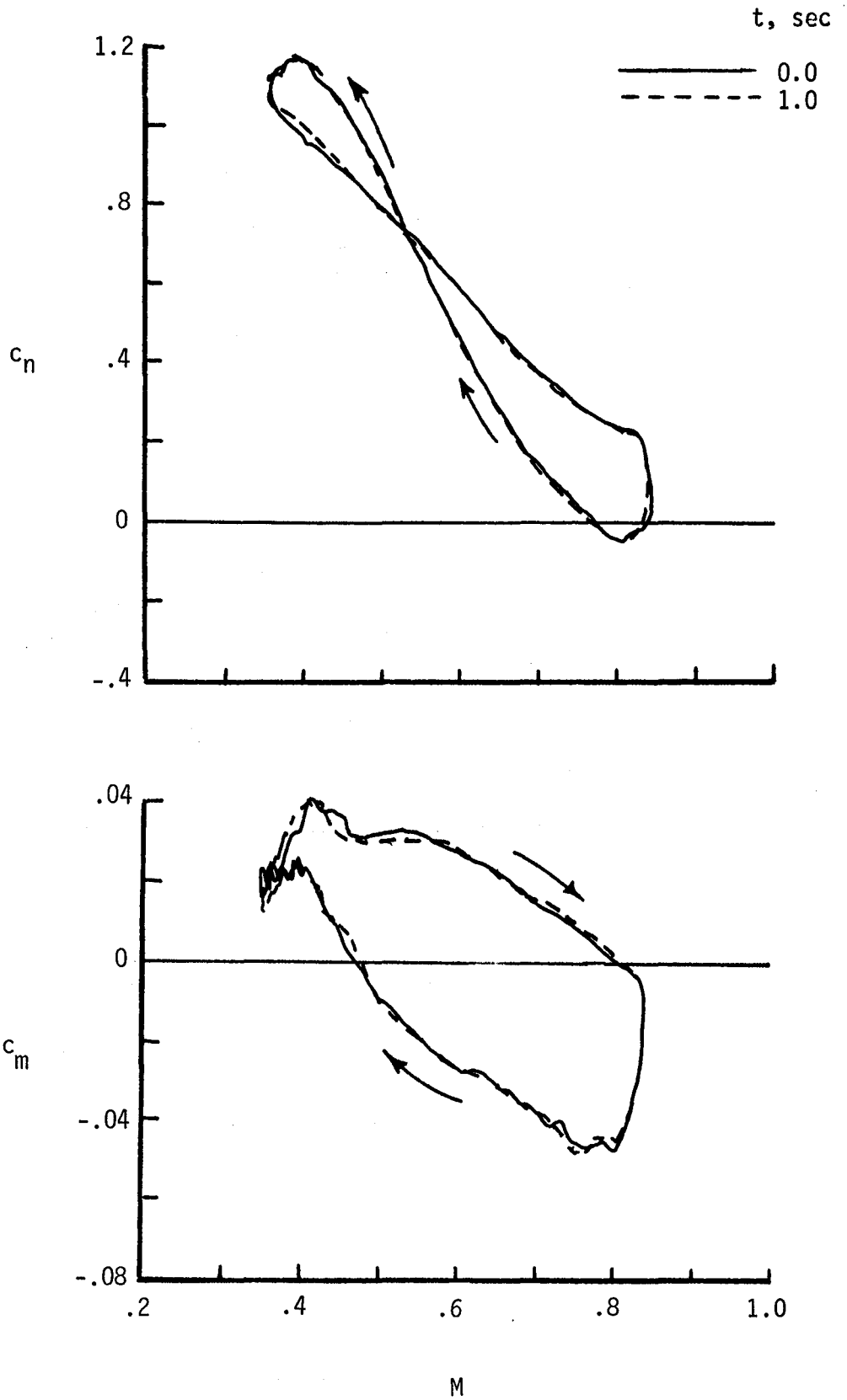
(b) Cruise conditions; $\bar{C}_L' = 0.0045$.

Figure 13. - Continued.



(c) High-speed condition; $\bar{C}_L' = 0.0044$.

Figure 13. - Continued.



(d) High-speed condition; $\mu = 0.37$; $C_L' = 0.0054$.

Figure 13. - Concluded.

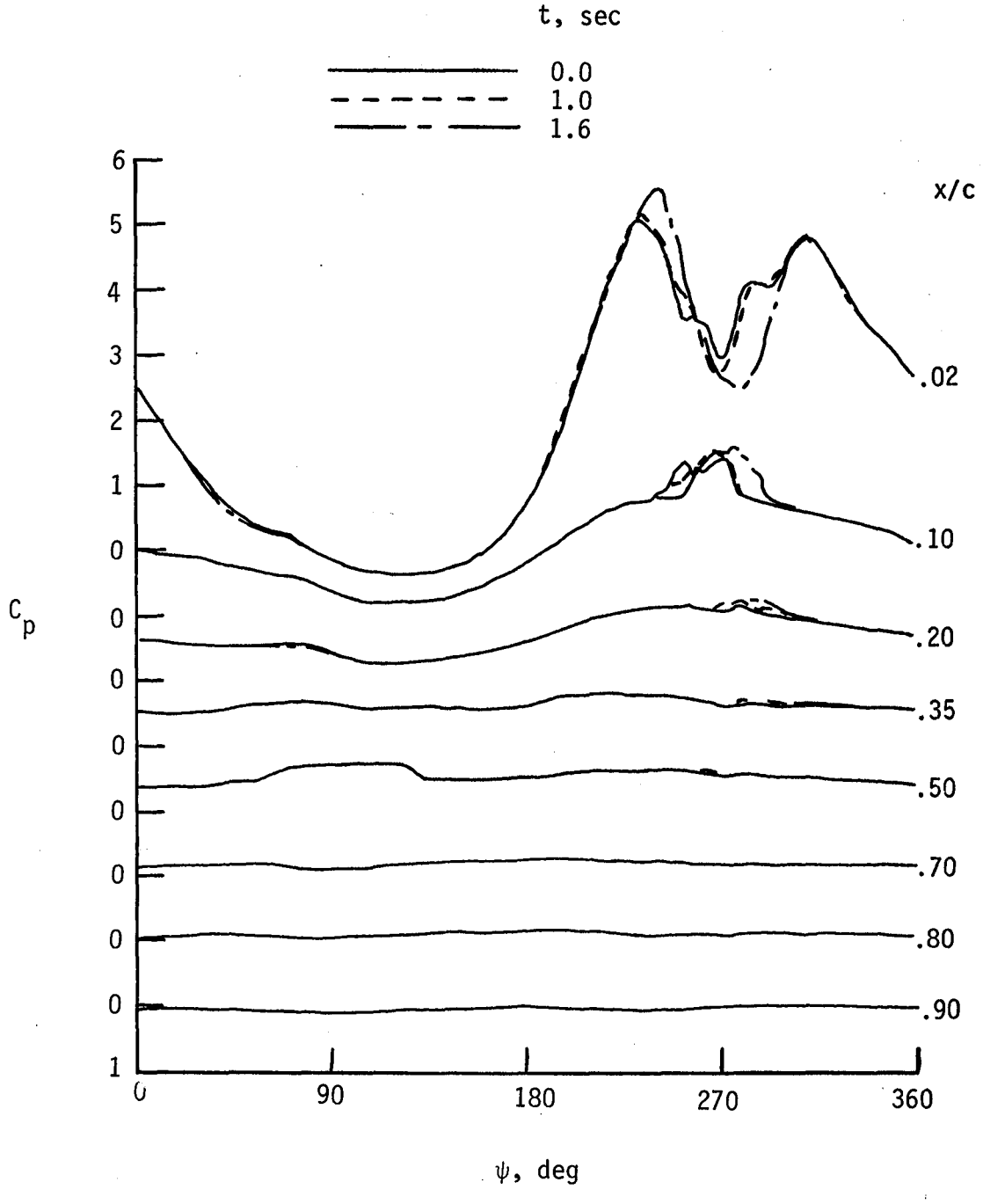


Figure 14. - Variation of local pressure coefficient with blade azimuth for three rotor revolutions at the same test condition. $\mu = 0.37$; $C_L' = 0.0054$; $r/R = 0.9$.

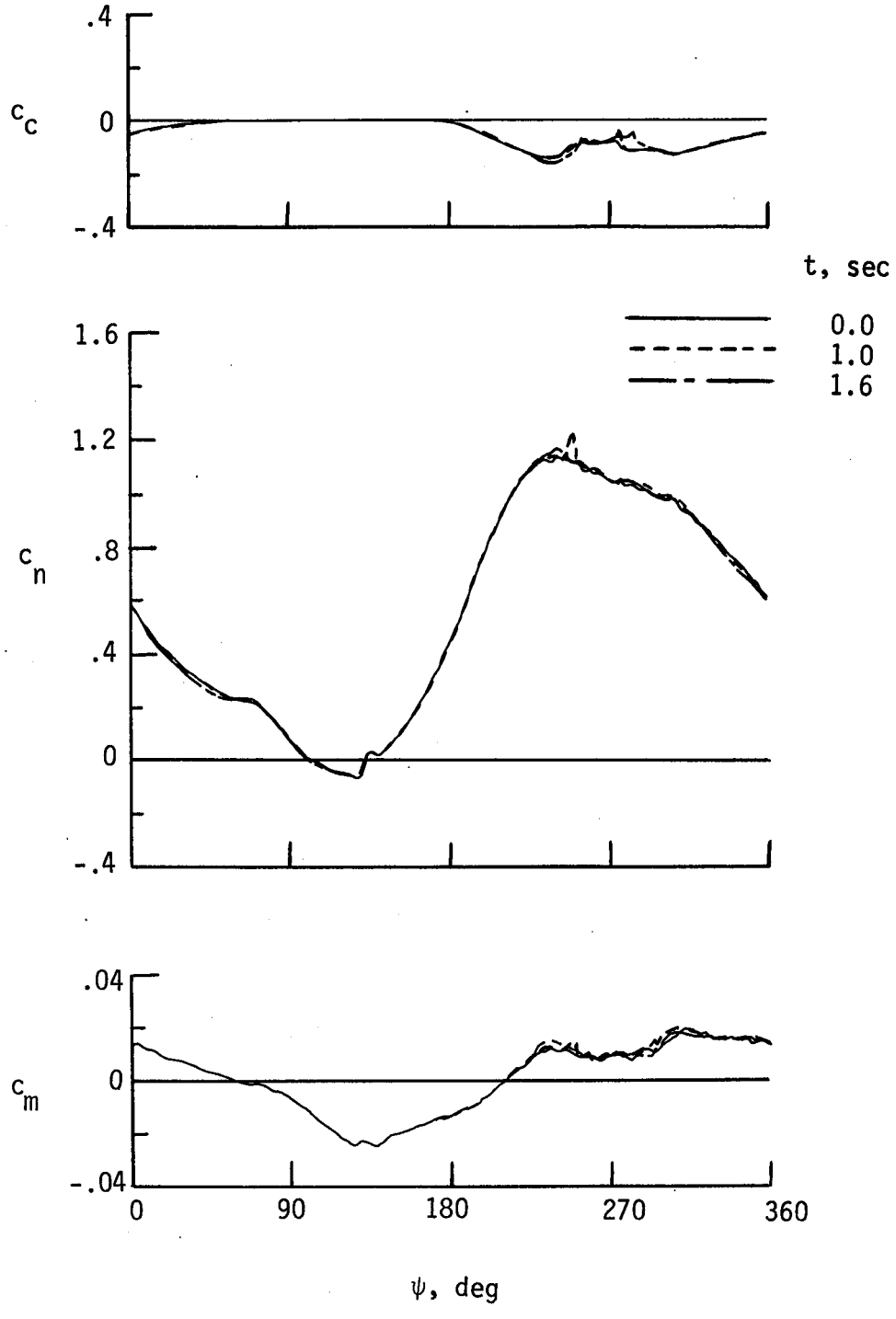


Figure 15. - Variation of blade-section aerodynamic characteristics with blade azimuth for three rotor revolutions at the same test condition. $\mu = 0.37$; $C'_L = 0.0054$; $r/R = 0.9$.

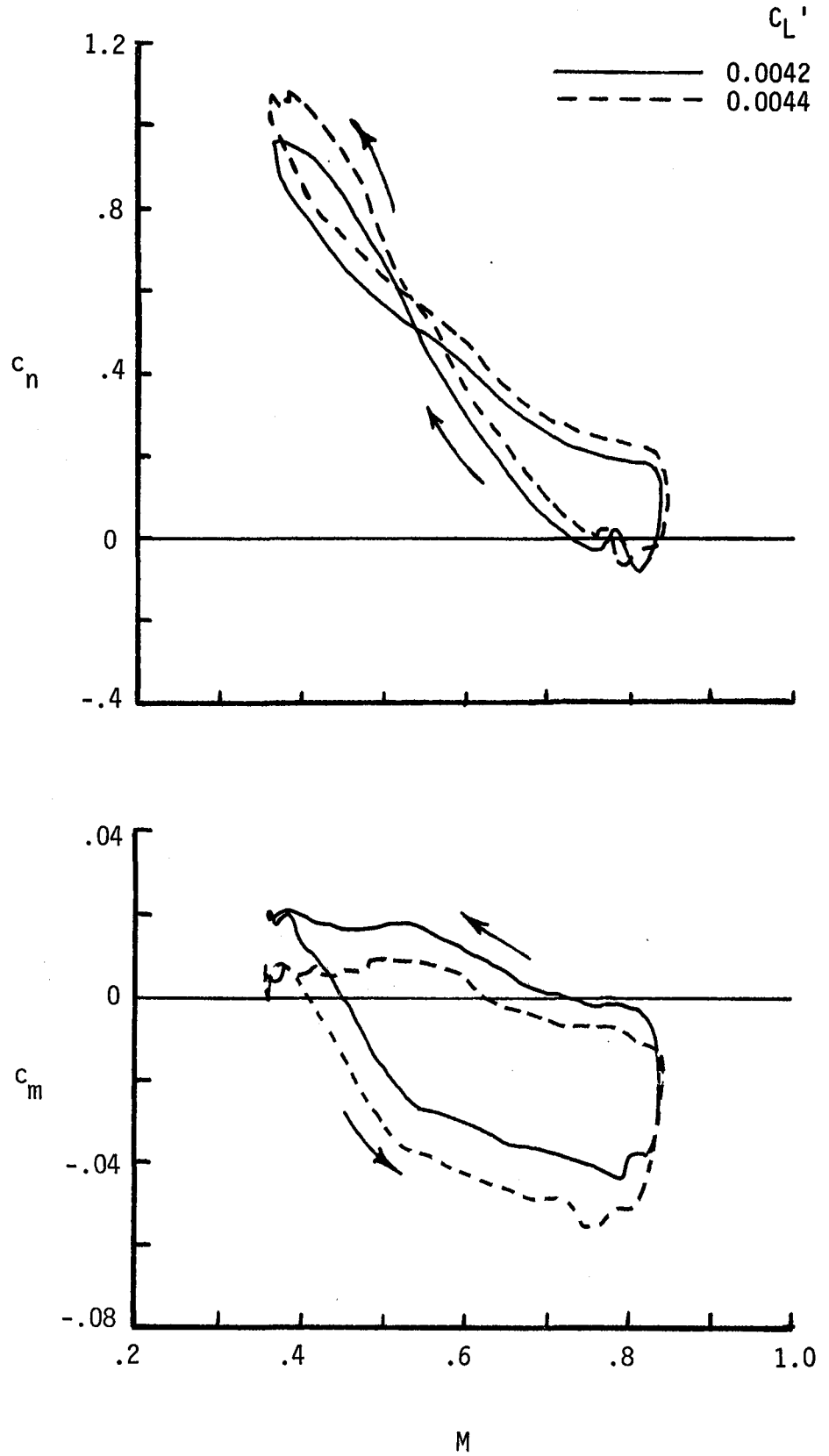


Figure 16. - Blade-section operating conditions at $\mu = 0.36$ and two values of vehicle lift coefficient for level flight. $r/R = 0.9$.

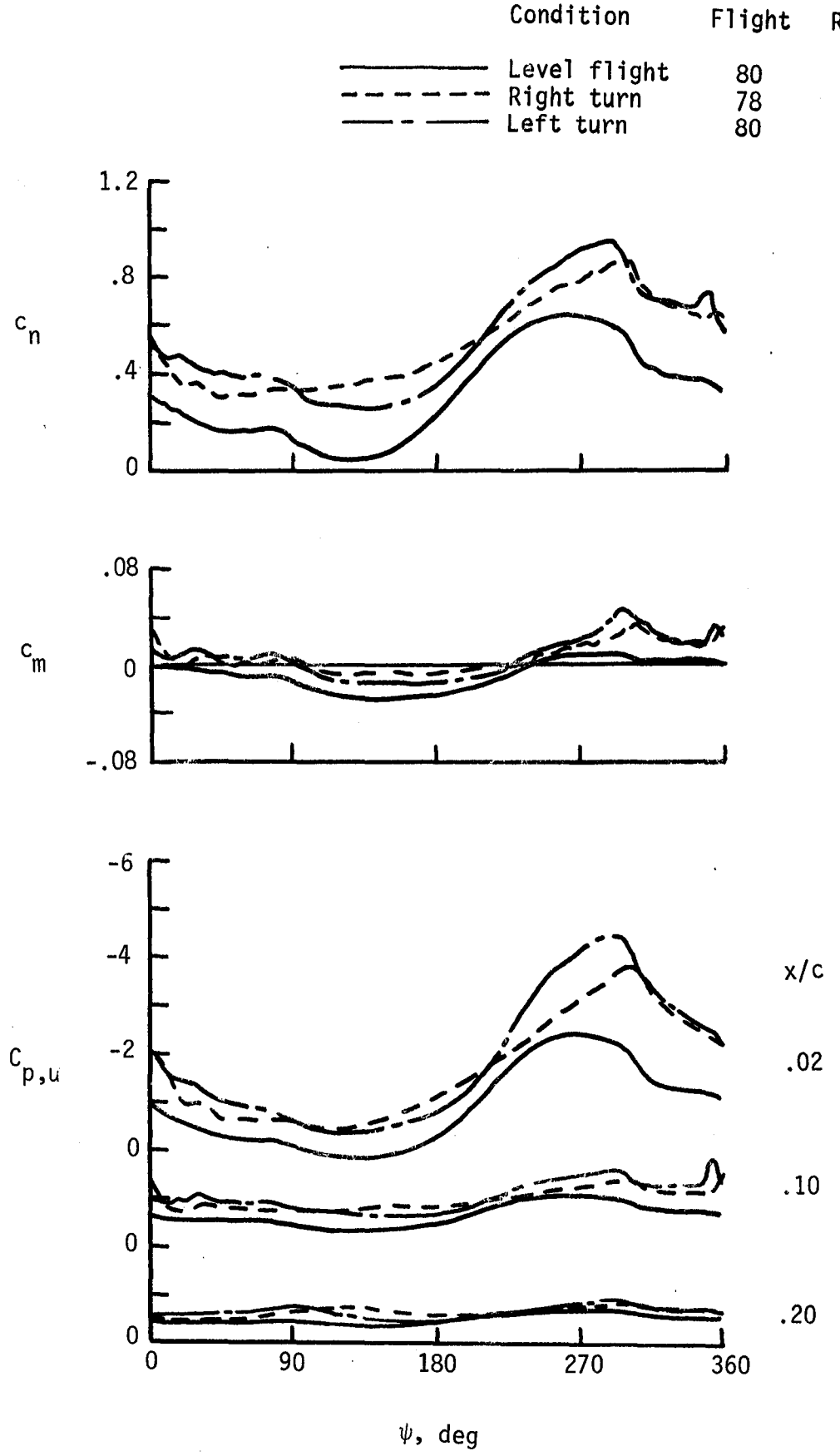
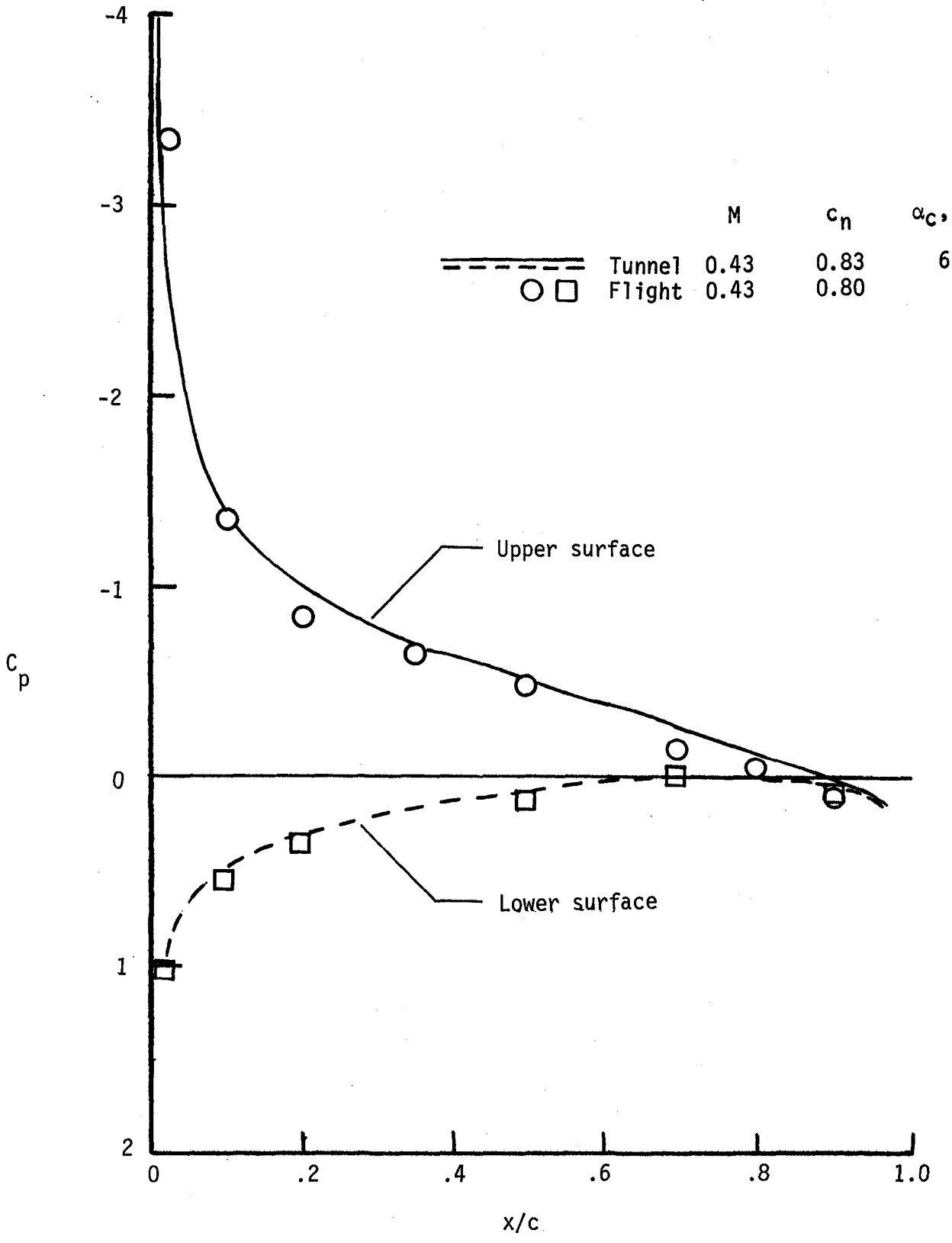
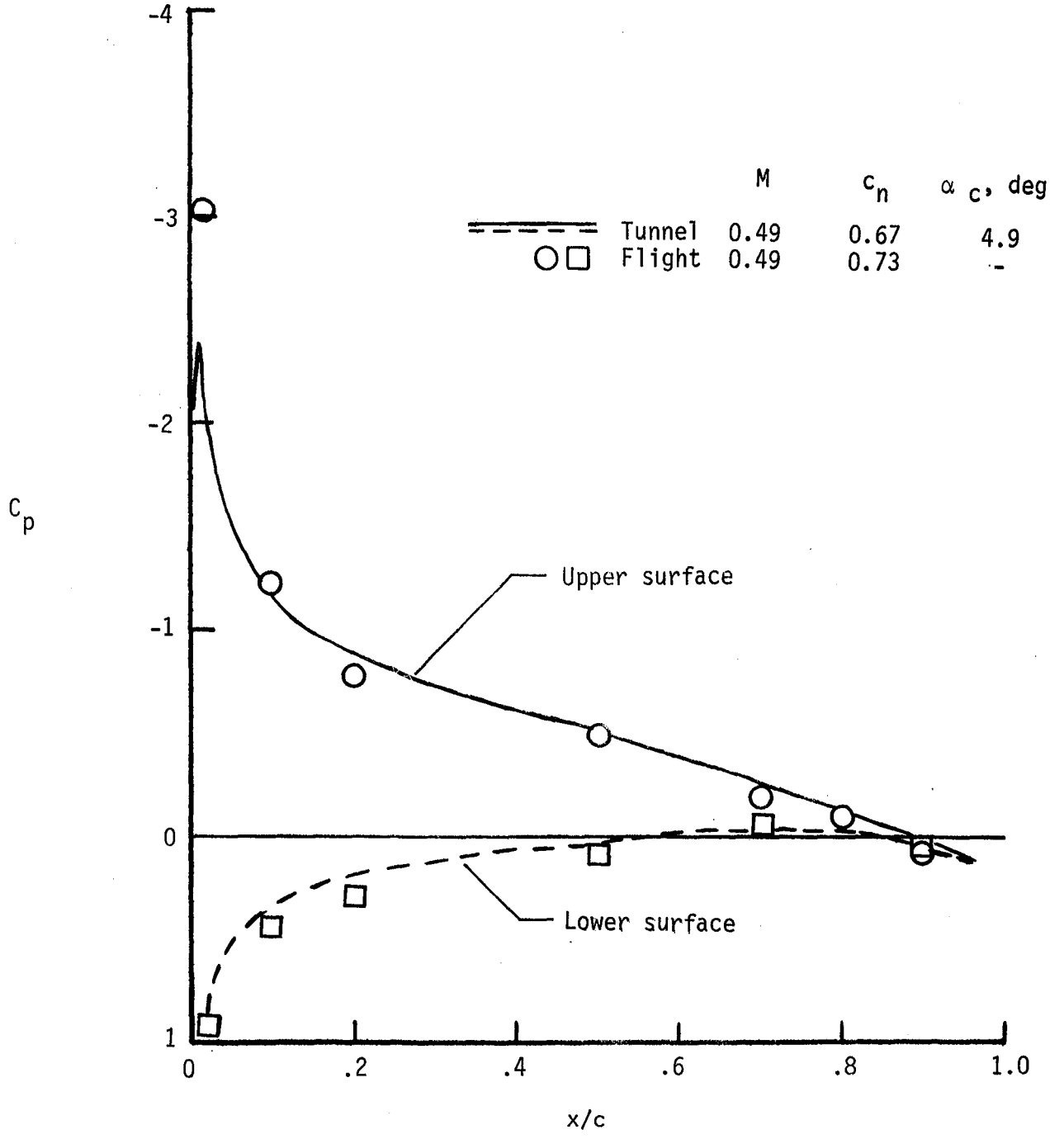


Figure 17. - Azimuthal variation of c_n, c_m and $C_{P,u}$ for level flight and turns at $\mu = 0.24$. $r/R = 0.9$.



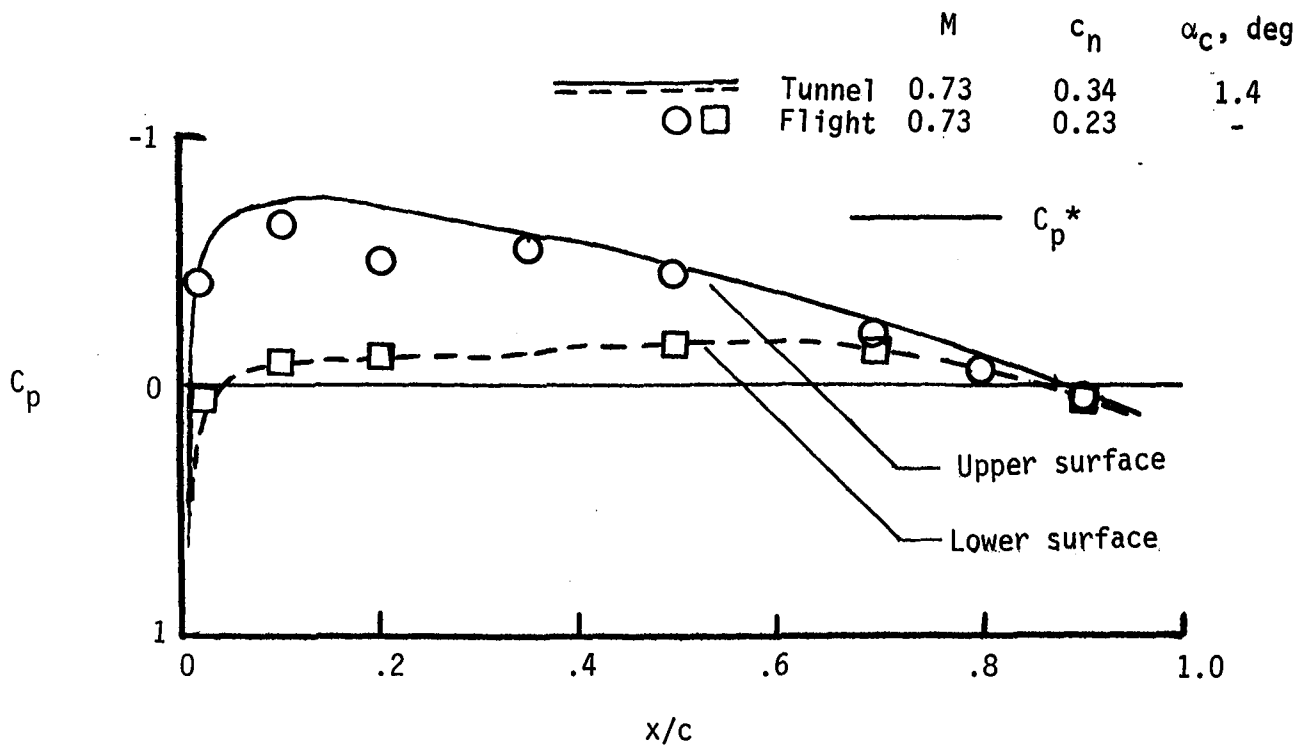
(a) $\mu = 0.27$, $C_L' = 0.0052$.

Figure 18. - Comparison of blade-section pressure data from level flight ($\psi = 270^o$, $r/R = 0.9$) and wind-tunnel test (ref. 9.).

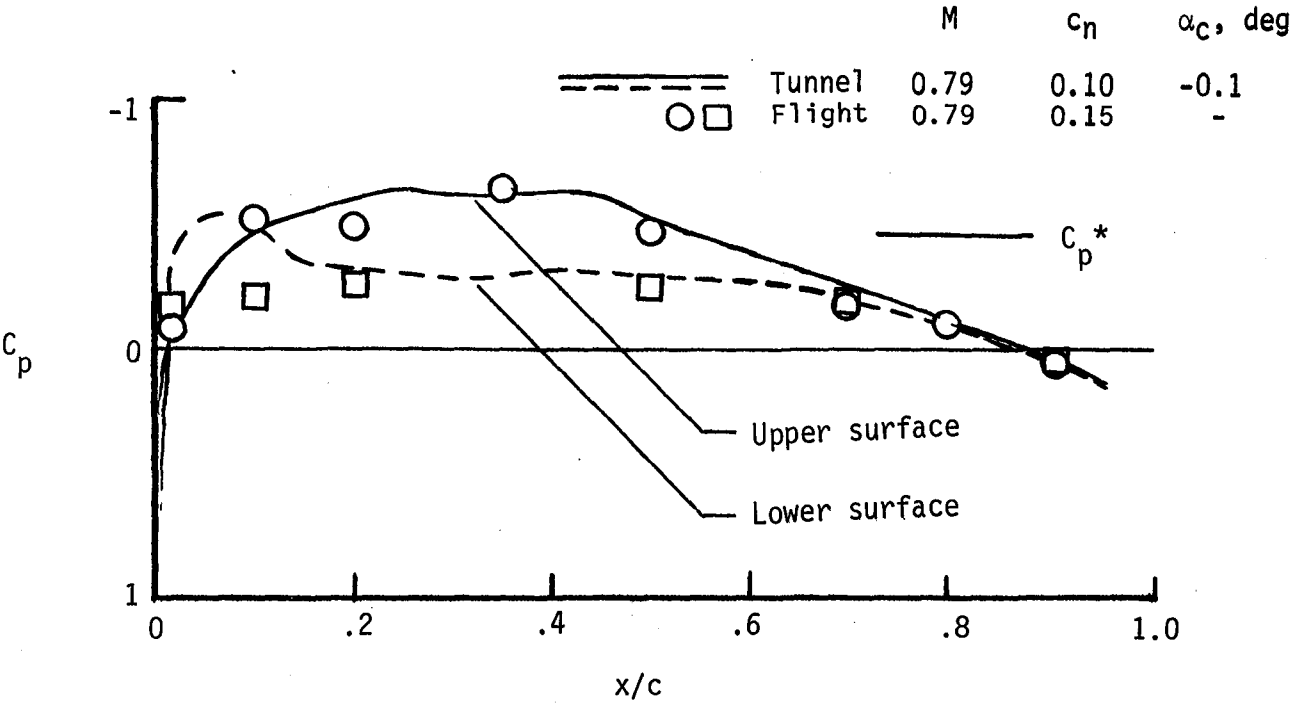


(b) $\mu = 0.17$, $C_L' = 0.0050$.

Figure 18. - Concluded.

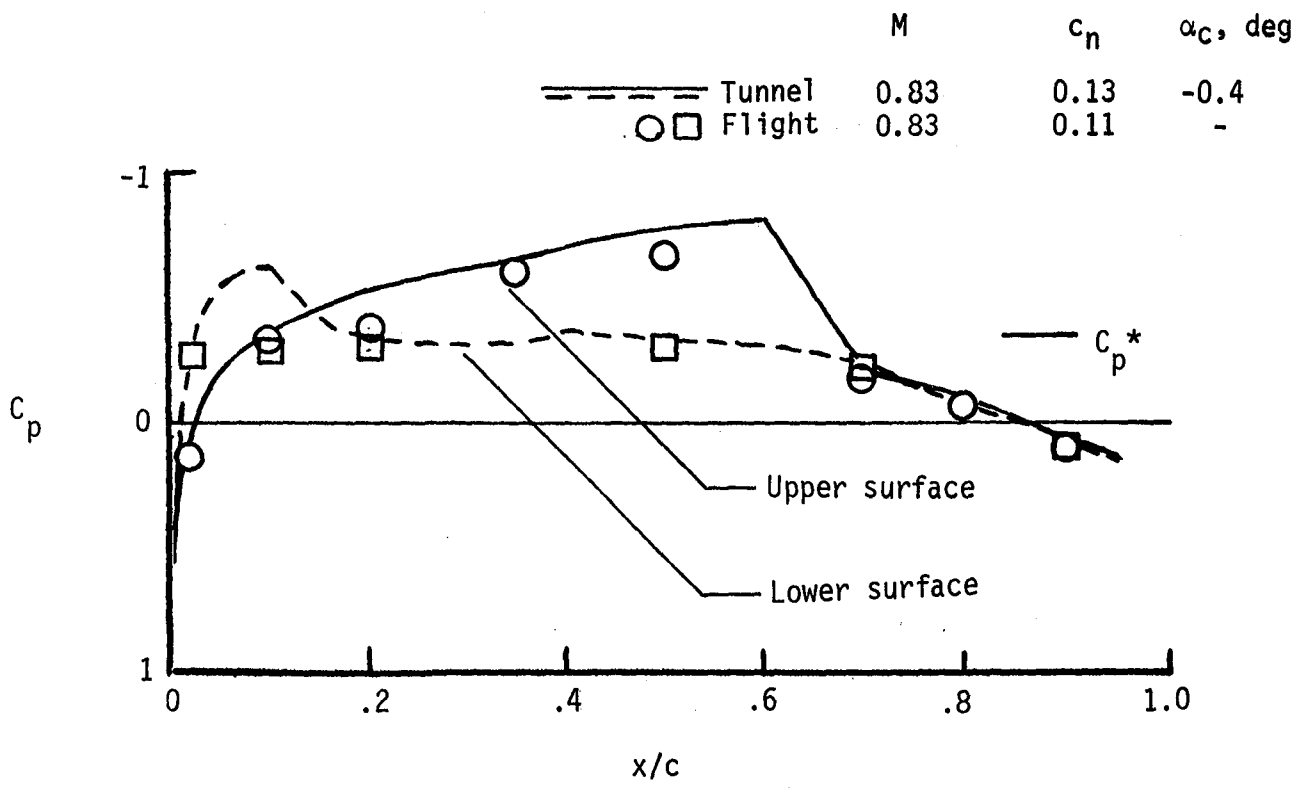


(a) μ = 0.18, C_L' = 0.0051.



(b) μ = 0.27, C_L' = 0.0052.

Figure 19. - Comparison of blade-section pressure data from level flight (ψ = 90°, r/R = 0.9) and wind-tunnel test (ref. 9).



(c) μ = 0.33, C_L' = 0.0043.

Figure 19. - Concluded.

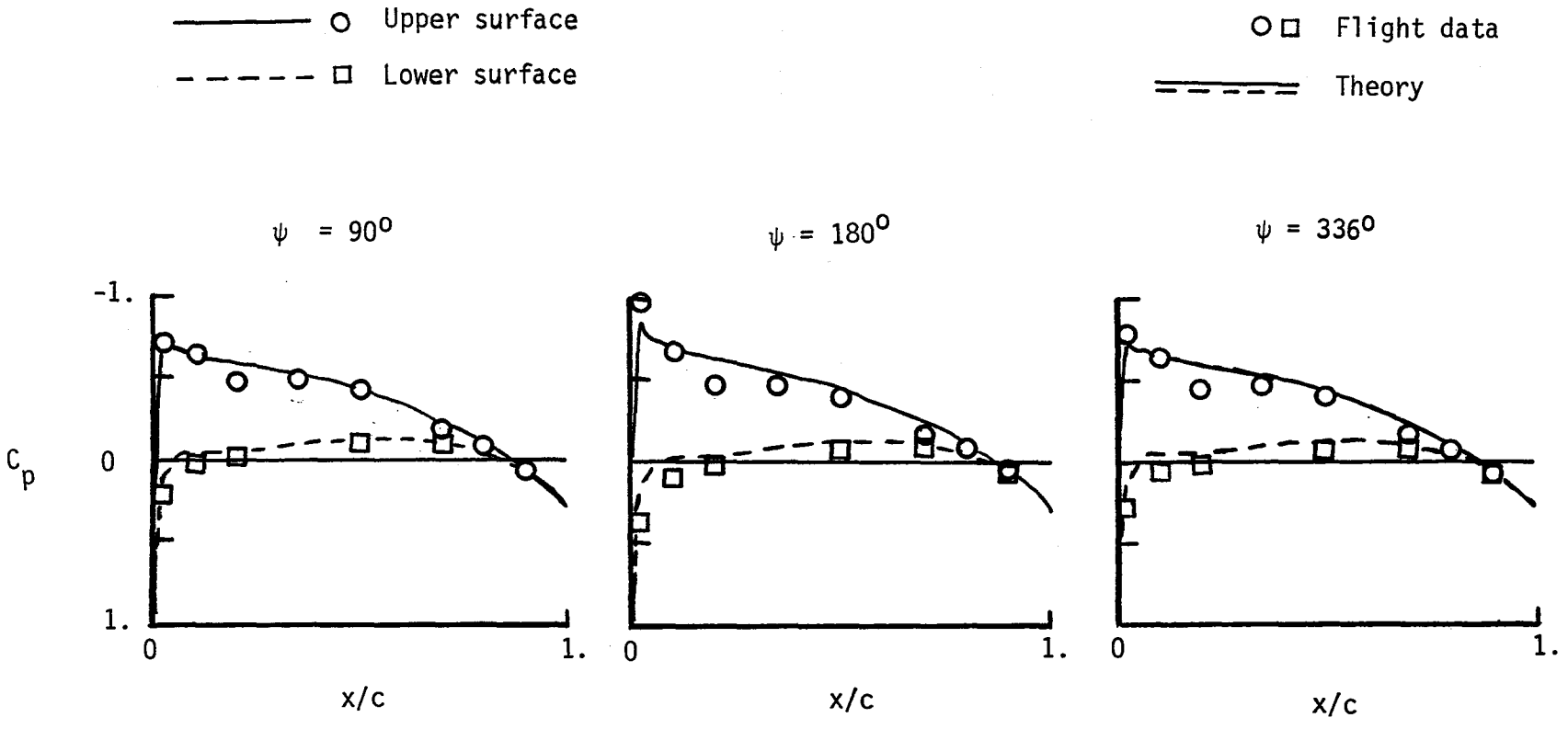


Figure 20. - Comparison of blade-section pressure data from hover (flight 77, run 2, r/R = 0.9) and theory (ref. 13).

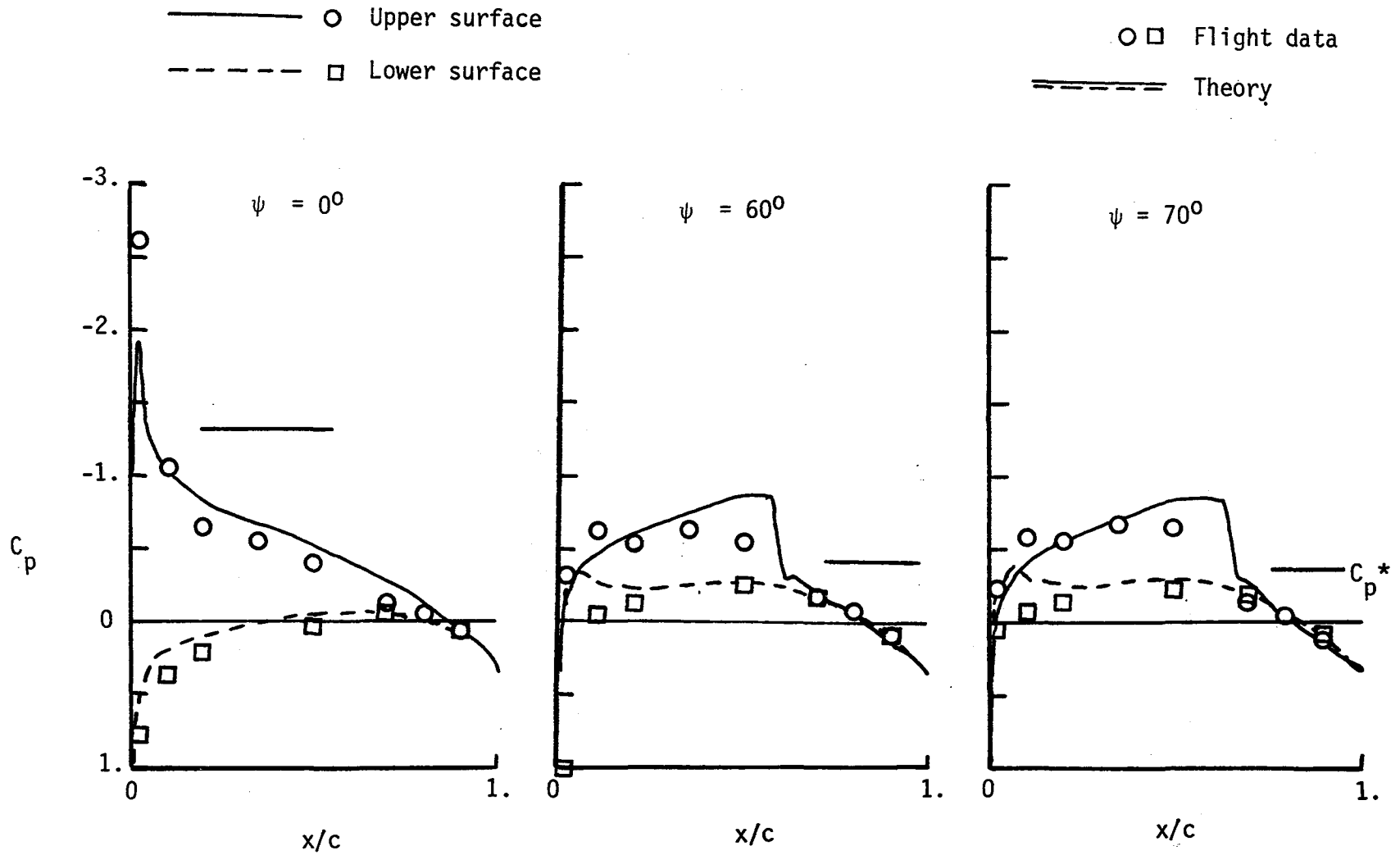


Figure 21. - Comparison of blade-section pressure data from level flight at μ= 0.37 (flight 81, run 13, r/R = 0.9) and theory (ref. 13).

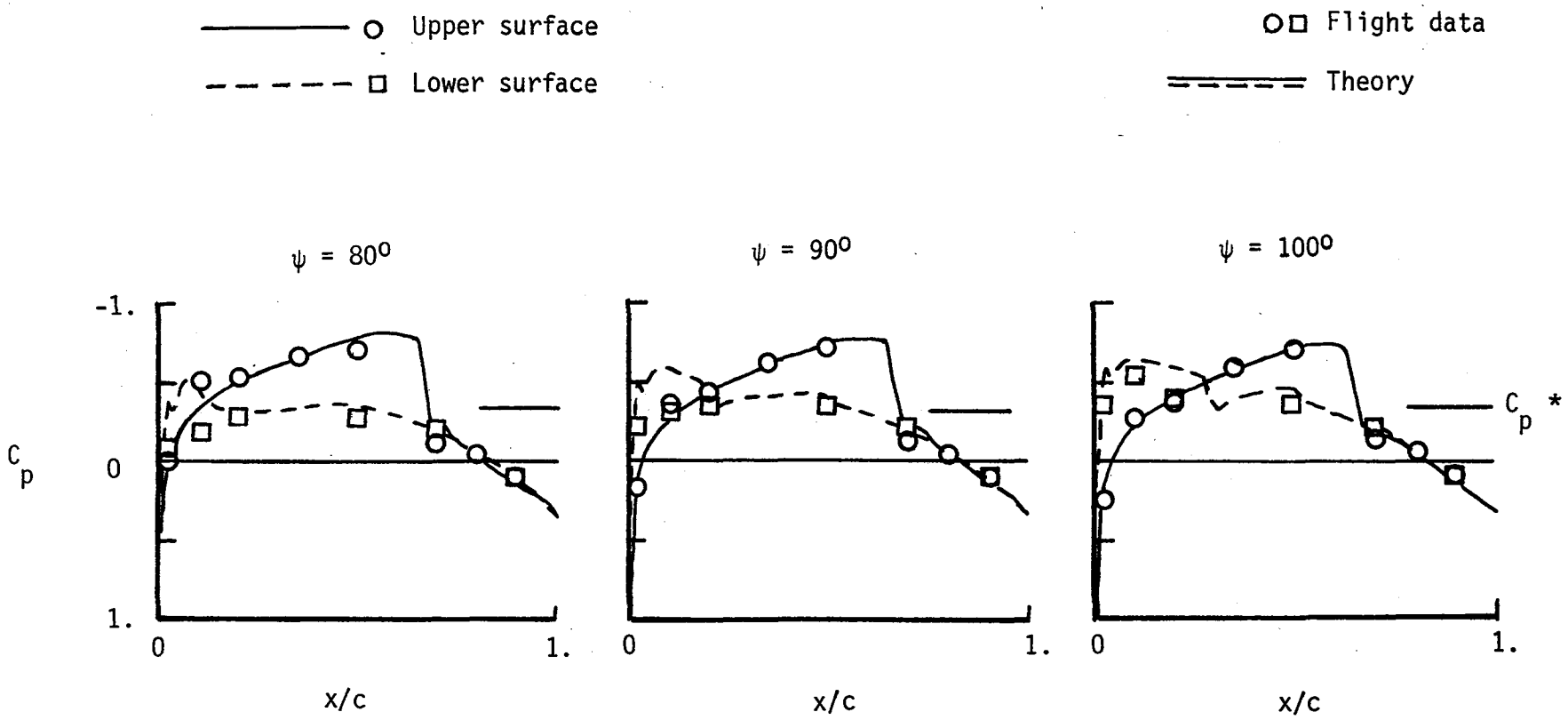


Figure 21. - Continued.

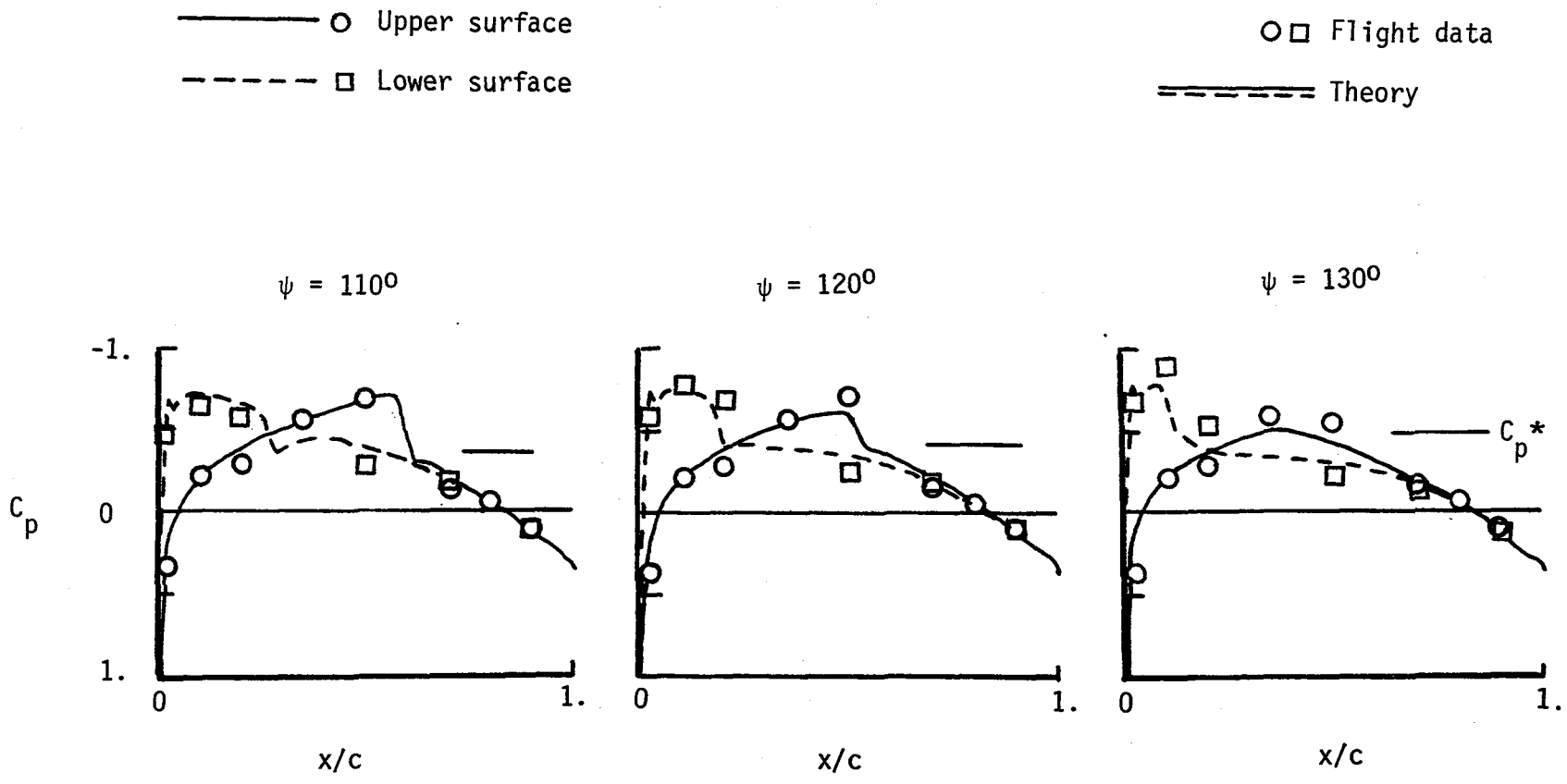


Figure 21. - Continued.

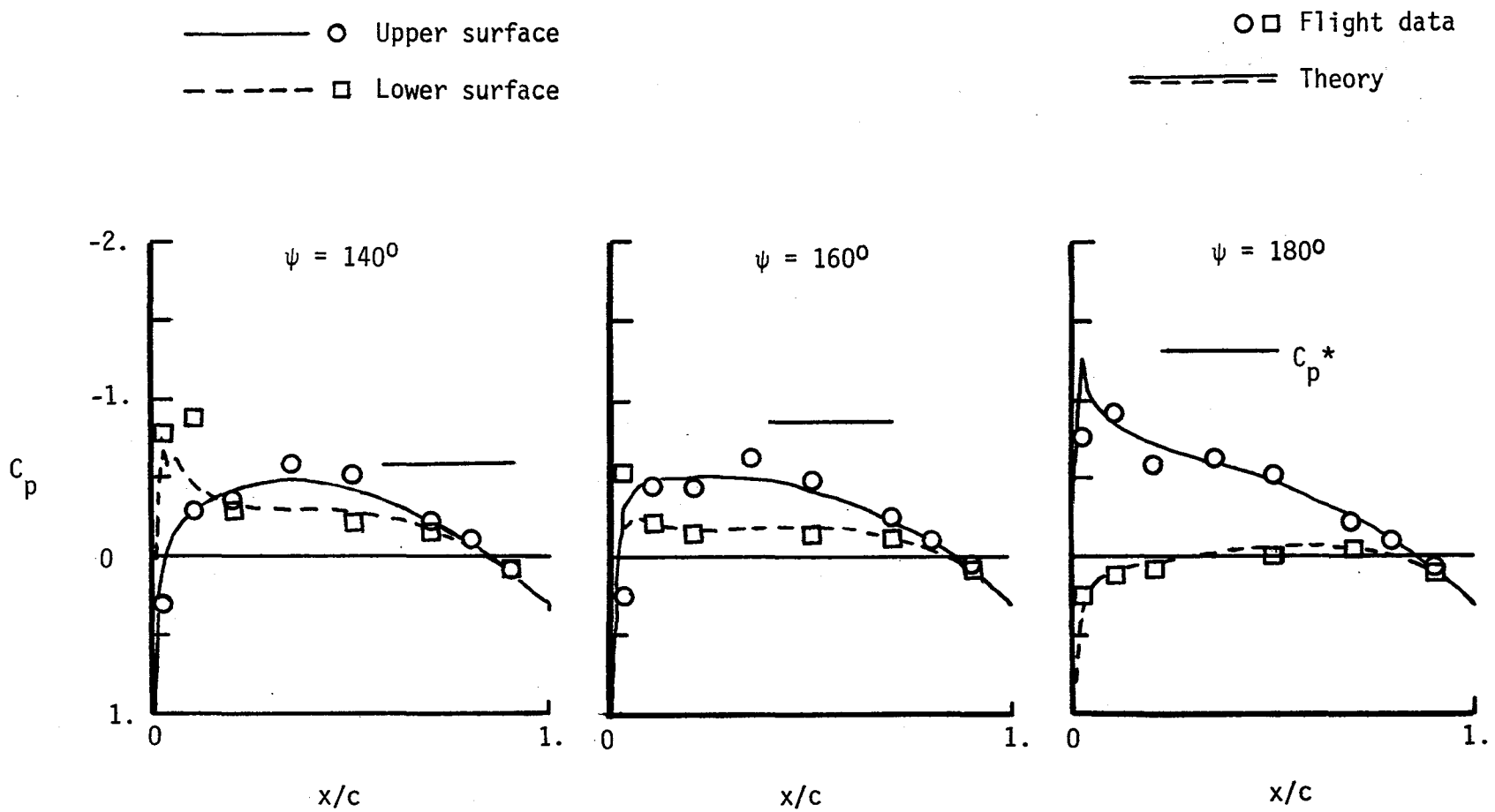


Figure 21. - Continued.

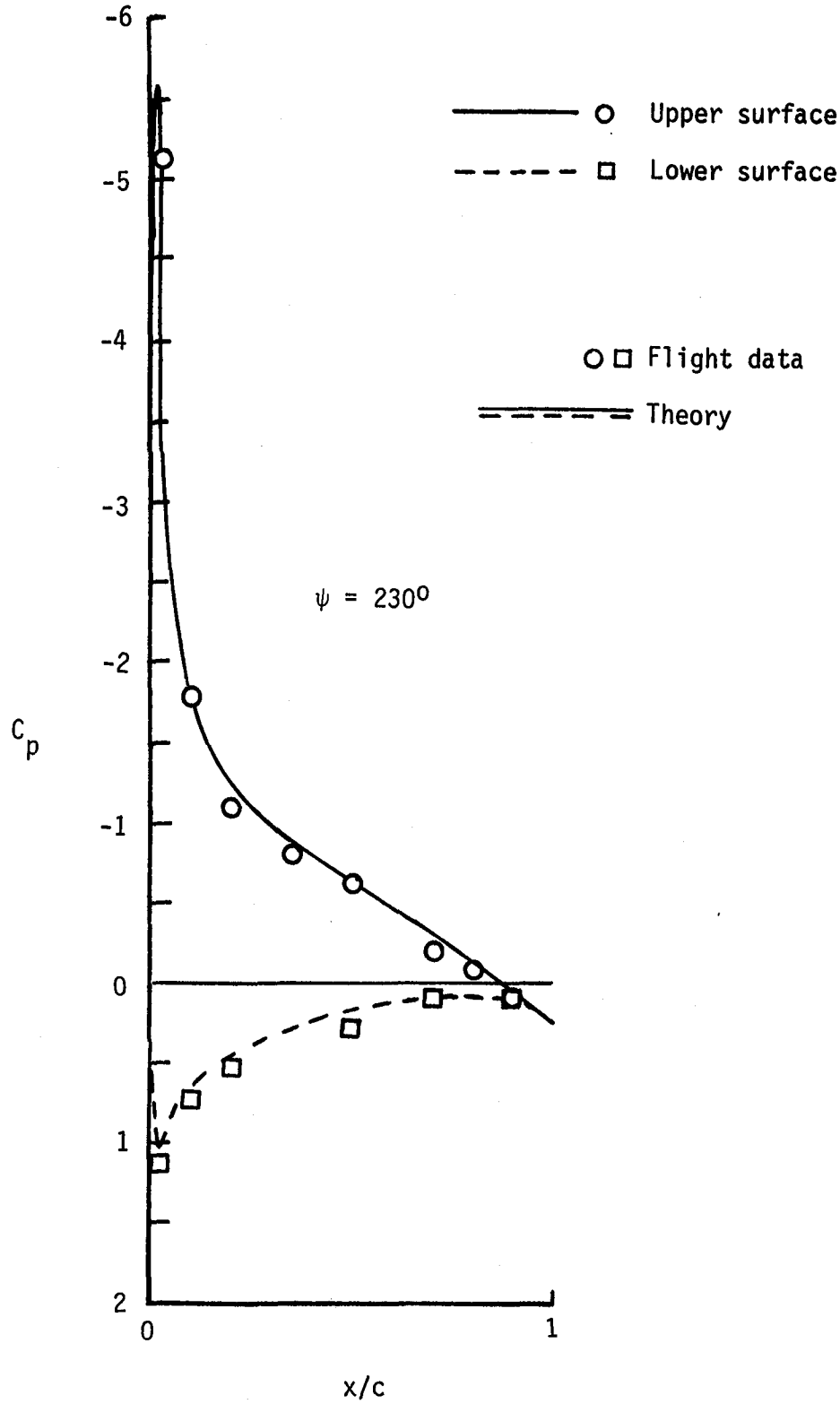


Figure 21. - Concluded.

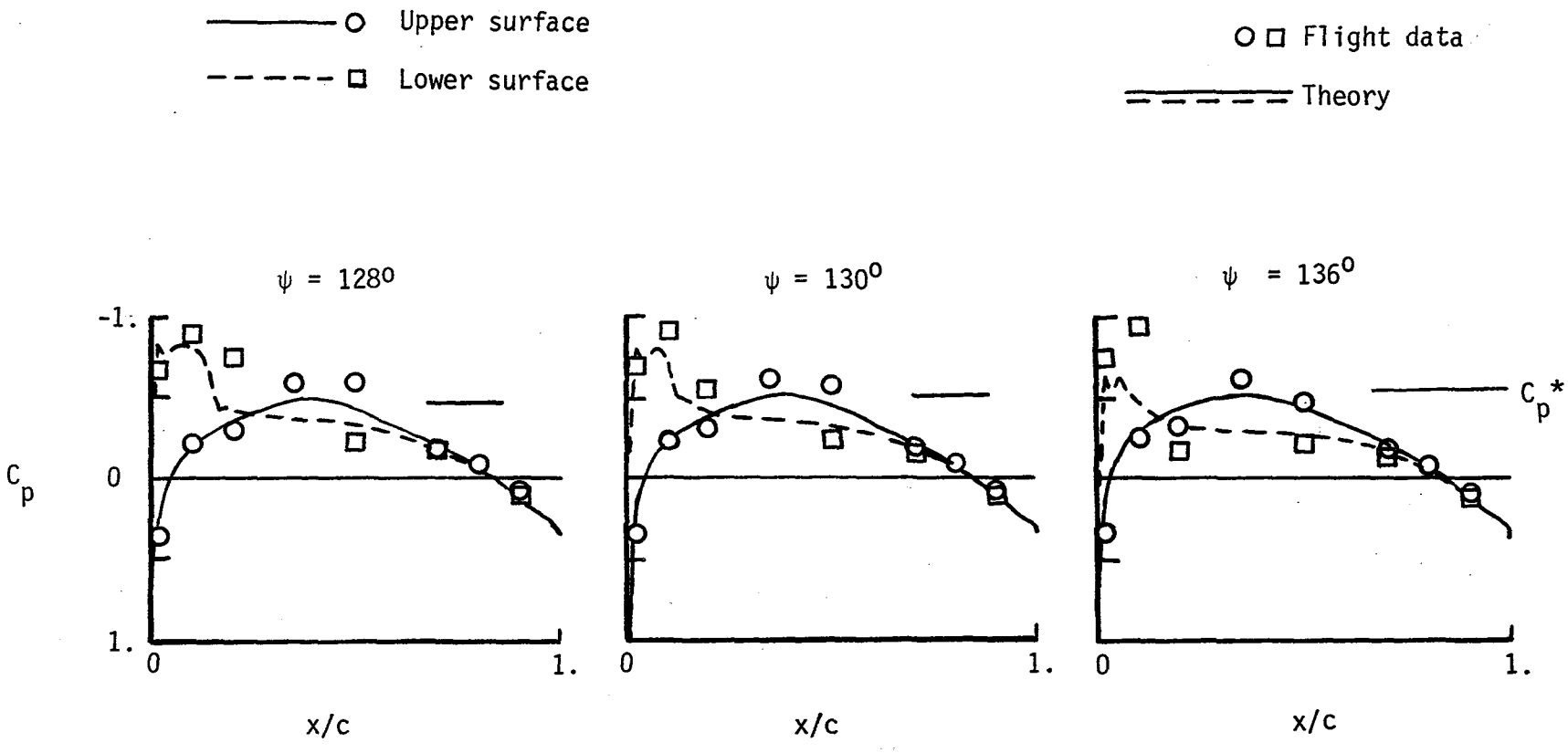
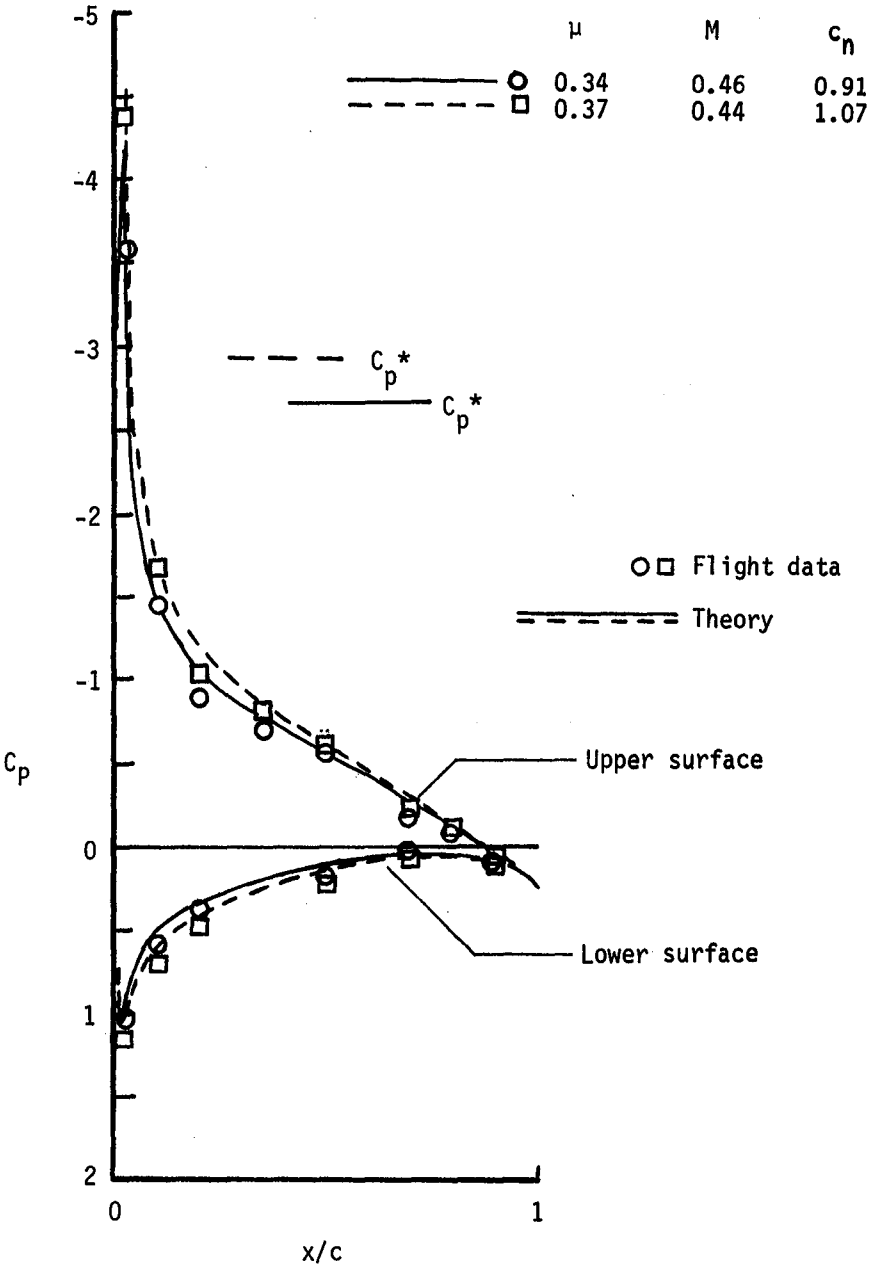
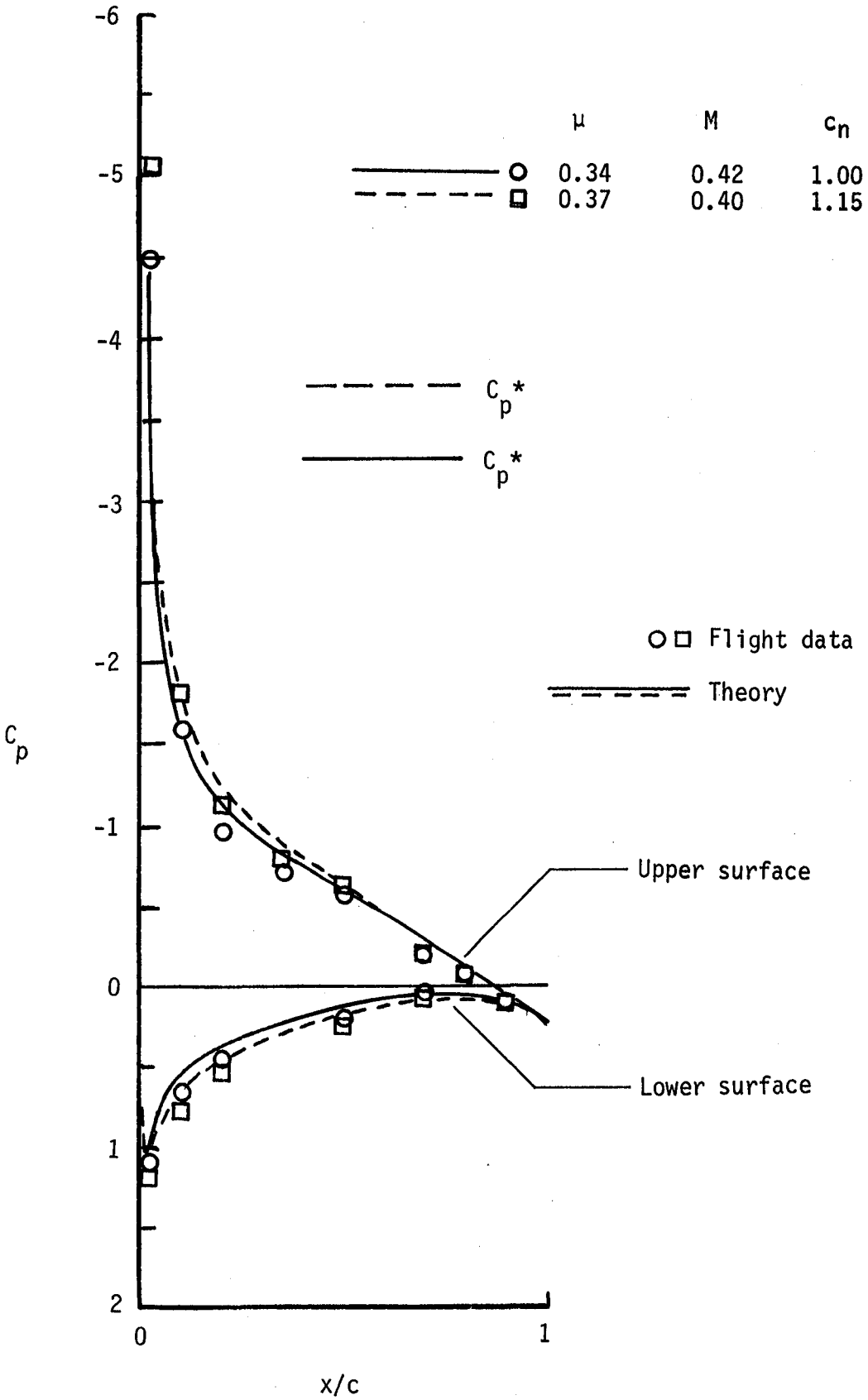


Figure 22. - Comparison of blade-section pressure distributions for selected azimuths for high-speed level flight (flight 81, run 13, r/R = 0.9) and theory (ref. 13).



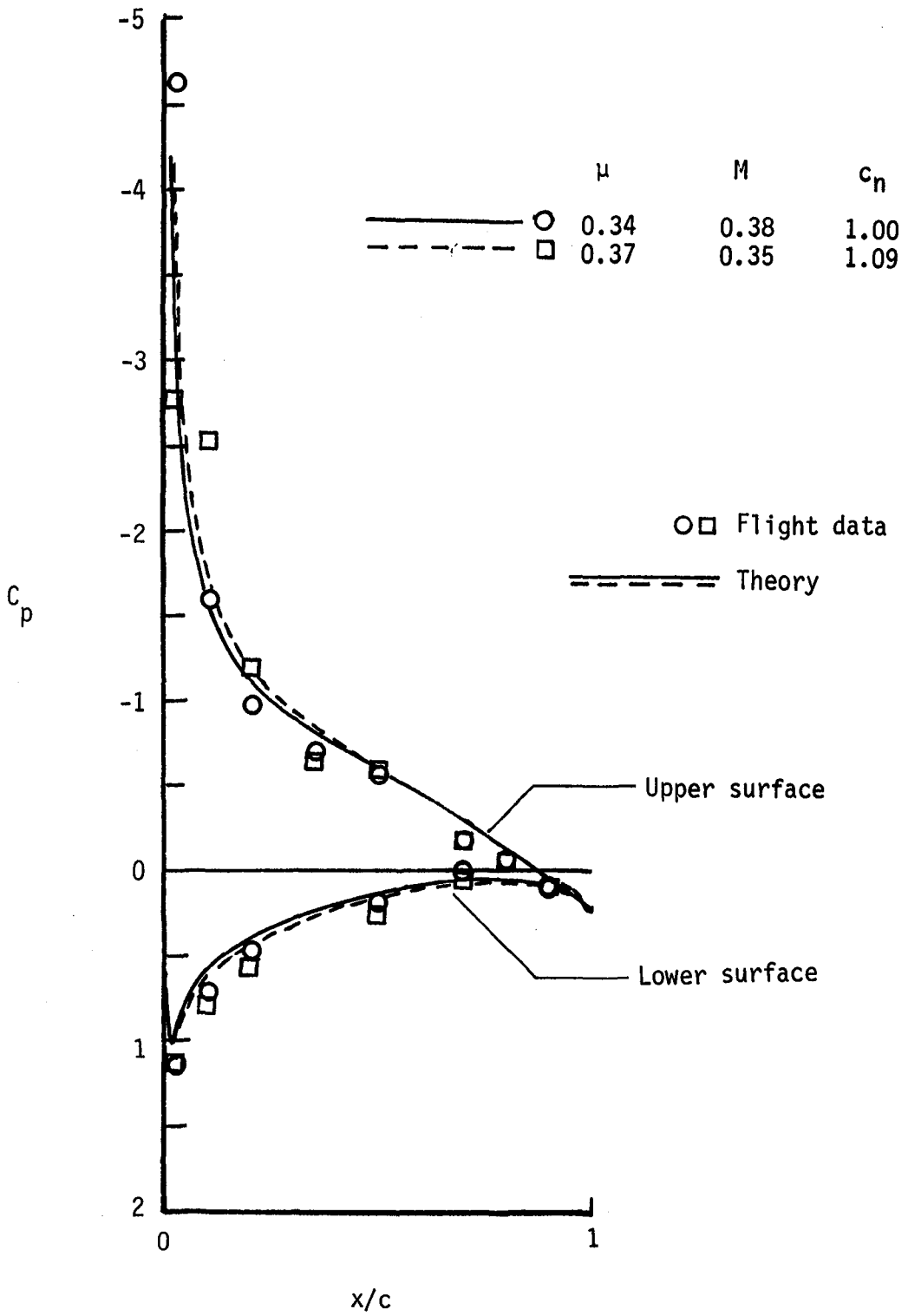
(a) $\psi = 220^{o}$

Figure 23. - Comparison of sets of blade-section pressure distributions for flight (flight 81, runs 12 and 13, r/R = 0.9) and theory (ref. 13).



(b) $\psi = 234^{o}$

Figure 23. - Continued



(c) $\psi = 268^{o}$

Figure 23, - Concluded.

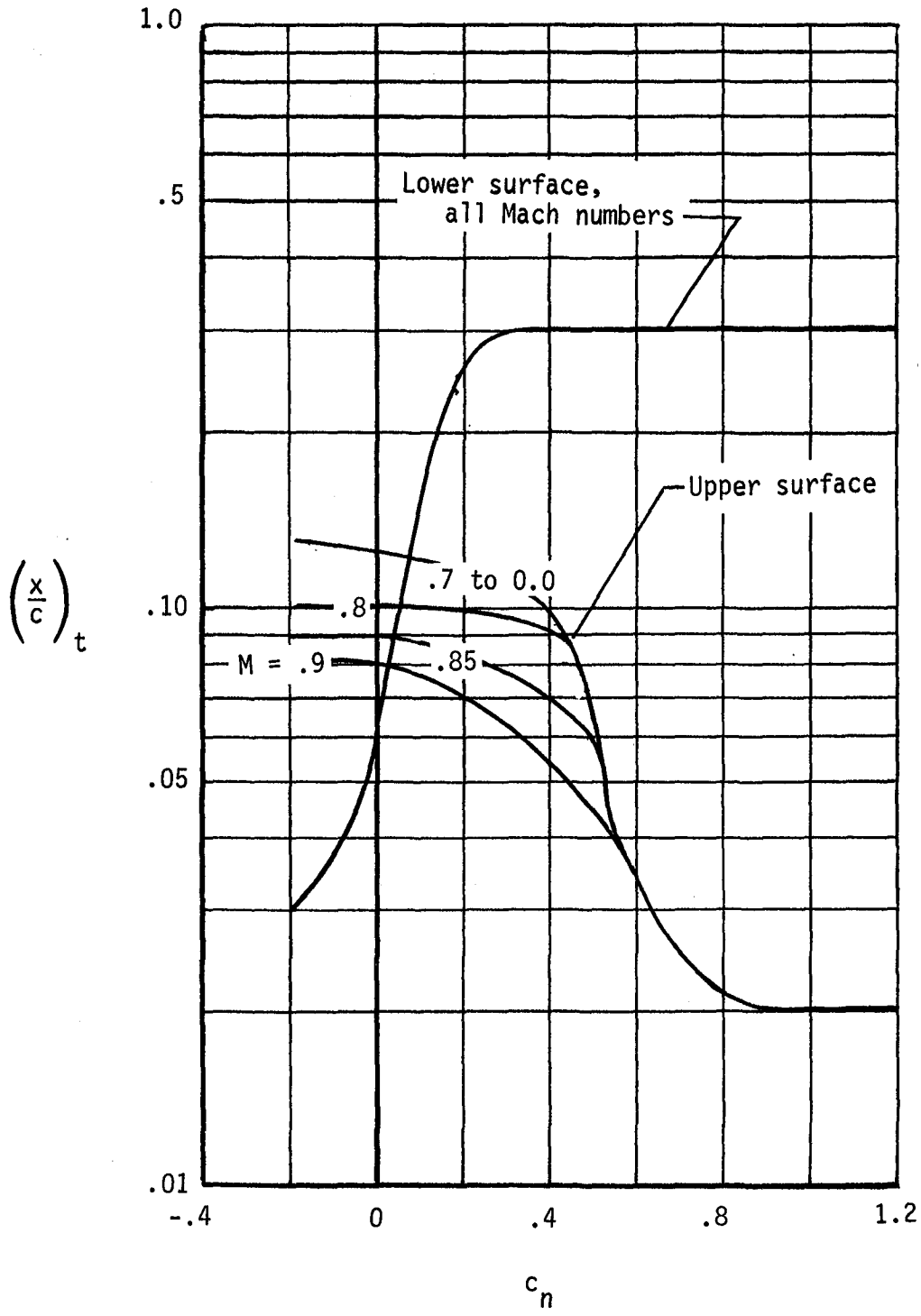


Figure 24. - Predicted blade-section boundary-layer transition for 10-64C blade section.

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15. Supplementary Notes

16. Abstract

A flight investigation has obtained pressure data at 90-percent blade radius for a helicopter main rotor with 10-64C blade sections. Concurrent measurements were made of vehicle flight state, performance and some rotor loads. The test envelope included hover, level flight from about 65 to 162 knots, climb and descent, and collective-fixed maneuvers. Good agreement is shown between some sets of airfoil pressure distributions obtained in flight and those from two-dimensional wind-tunnel tests or theoretical calculations.

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