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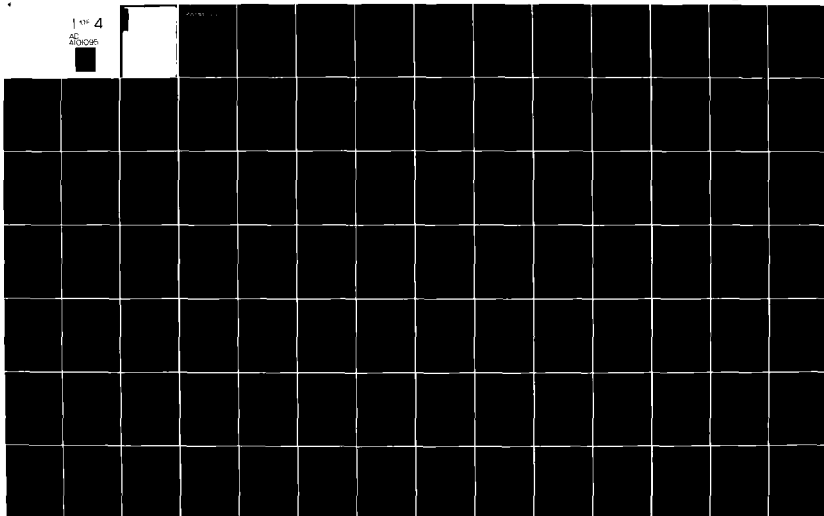
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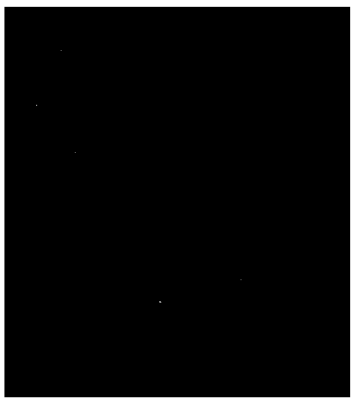
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(E) Data Report. ~~Velocity~~ Velocity
and Temperature Profile Data for Zero
Pressure Gradient, Fully Turbulent
Boundary Layers.

Contract No. F49620-78-C-0064

Project-Task 2307/A4

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DATE January 1981

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Experimental research has been conducted to determine the influence of a free-stream turbulence on zero pressure gradient, fully turbulent boundary layer flow. Convective heat transfer coefficients, boundary layer mean velocity and temperature profile data, and wall static pressure distribution data were obtained for five flow conditions of constant free-stream velocity and free-stream turbulence intensities ranging from approximately 1/2% to 7%. Free-stream multi-component turbulence intensity, longitudinal integral scale, and spectral distributions were obtained for the various turbulence levels. Mean velocity and temperature		

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profile data for the individual boundary layer traverses are presented in
this report.

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~~DATA~~ Data Report - Vol. I
Velocity and Temperature Profile Data for
Zero Pressure Gradient, Fully Turbulent Boundary Layers

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FOREWORD

This report was prepared for the Air Force Office of Scientific Research, United States Air Force by the United Technologies Corporation Research Center, East Hartford, Connecticut, under Contract F49620-78-C-0064, Project Task No. 2307/A4 61102 F. The performance period covered by this report was from 1 June 1978 to 31 January 1981. The project monitors were Dr. D. G. Samaras and Dr. James Wilson.

INTRODUCTION

Experimental research has been conducted to determine the influence of a free-stream turbulence on zero pressure gradient, fully turbulent boundary layer flow. Convective heat transfer coefficients, boundary layer mean velocity and temperature profile data and wall static pressure distribution data were obtained for five flow conditions of constant free-stream velocity and free-stream turbulence intensities ranging from approximately $\frac{1}{2}\%$ to 7%. Free-stream multi-component turbulence intensity, longitudinal integral scale, and spectral distributions were obtained for the various turbulence levels. A comprehensive report containing a description of the experimental equipment, a presentation of the reduced data and an analysis of the results is available in Ref. 1. In Ref. 1 it has been shown that the test results with $\frac{1}{2}\%$ free-stream turbulence are in excellent agreement with classic two-dimensional, low free-stream turbulence, turbulent boundary layer correlations, thus establishing the absolute accuracy of the experiment. The data obtained for the test cases with higher free-stream turbulence indicate that the turbulence has a significant effect on turbulent boundary layer skin friction and heat transfer. It has also been shown in Ref. 1 that these effects are a function of the free-stream turbulence intensity, the turbulence length scale, and the boundary layer momentum thickness Reynolds number. Suggested correlations for the influence of free-stream turbulence on skin friction, heat transfer, and the Reynolds analogy factor are given.

Mean velocity and temperature profile data for the individual boundary layer traverses are presented in this report.

DESCRIPTION OF BOUNDARY LAYER DATA REDUCTION SYSTEM

A computer program has been written which reduces, plots, and tabulates the velocity and temperature boundary layer profile data obtained by the UTRC Boundary Layer Wind Tunnel Data Acquisition System. Following is a brief description of this reduction program.

(a) Mean velocities (U) are measured with miniature flattened pitot probes. These velocities are corrected for probe Reynolds number and wall blockage effects using the results of Refs. 2, 3, and 4. Except for those measurements extremely close to the wall ($y \sim < 0.010$ in.) the corrections were less than 1% of the measured velocity. The maximum velocity correction (5%) resulted for the case of the probe touching the wall.

(b) Friction velocities (U_τ) for each profile are determined by a least squares fit of the velocity profile data from $50 < y^+ < 500$ to the "law-of-the wall".

$$\frac{U}{U_\tau} = \frac{1}{\kappa} \ln \frac{y U_\tau}{\nu} + C \quad (1)$$

where $\kappa = 0.41$

$C = 5.0$

as recommended by Coles (Ref. 5).

Using this value of U_τ the velocity and temperature data are plotted in universal coordinates $u^+ = \frac{U}{U_\tau}$ and $t^+ = \frac{(1 - t) \rho_w c_p \sqrt{\tau_w / \rho}}{q_w}$ vs. $y^+ = \frac{y U_\tau}{\nu}$. The velocity profile data are compared with Eq. (1) and the temperature data with Eq. (2).

$$t^+ = Pr_t \left(\frac{1}{\kappa} \ln y^+ + C + P_s \right) \quad (2)$$

where $Pr_t = 0.9$

$\kappa = 0.41$

$C = 5.0$

$P_s = -2.0$

(c) The following integral properties are determined

(i) displacement thickness $\delta^* = \int_0^\delta \left(1 - \frac{\rho U}{\rho_e U_e} \right) dy$

(ii) momentum thickness $\theta = \int_0^\delta \frac{\rho U}{\rho_e U_e} \left(1 - \frac{U}{U_e} \right) dy$

(iii) energy-dissipation thickness $\delta^{**} = \int_0^\delta \frac{\rho U}{\rho_e U_e} \left(1 - \frac{U^2}{U_e^2} \right) dy$

(iv) enthalpy thickness $\delta_H = \int_0^{\delta_t} \frac{\rho U}{\rho_e U_e} \left(\frac{T - T_e}{T_e} \right) dy$

(v)	kinematic displacement thickness	$\delta_k^* = \int_0^\delta \left(1 - \frac{U}{U_e}\right) dy$
(vi)	kinematic momentum thickness	$\theta_k = \int_0^\delta \frac{U}{U_e} \left(1 - \frac{U}{U_e}\right) dy$
(vii)	Clauser delta	$\Delta = \int_0^\delta \left(\frac{U_e - U}{U_\tau}\right) dy$
(viii)	Clauser shape parameter	$G = \frac{1}{\Delta} \int_0^\delta \left(\frac{U_e - U}{U_\tau}\right)^2 dy$

Measurement of velocity profile data very close ($y^+ < 30$) to a wall is difficult because of the extremely large local velocity gradients and the finite probe tip size. For the velocity profiles measured in this program a flattened impact probe with a probe tip height of approximately 0.007 in. is employed. This tip height corresponds to $\Delta y^+ \approx 10$ for most of the profiles (depending on the individual profile U_τ). Because the true distance from the wall to the effective center of the probe tip is uncertain (uncertainty of approximately ± 0.001 in.) the recommendation of Coles (Ref. 6) has been followed and the integral thicknesses are evaluated using standard sublayer functions very close to the wall. For values of $y^+ < 35$ (approximately three probe tip heights) the integral thicknesses are evaluated using the standard velocity sublayer and buffer zone function of Burton (Ref. 7).

$$y^+ = U^+ + \left(\frac{U^+}{8.74}\right)^7 \quad (3)$$

The thermocouple boundary layer probes are constructed with 0.001-in.-dia sensing elements. Because of this design, accurate temperature data can be obtained very close to the wall (for some profiles even within the viscous sublayer). For this reason it has been possible to use measured temperature data for evaluation of the integral thicknesses from $y^+ = 5$ to the edge of the boundary layer. For $y^+ < 5$ (viscous sublayer) the integral thicknesses are evaluated using Eq. (4).

$$y^+ = Pr U^+ \quad (4)$$

(d) The profile "wake strength" (Π) is determined from an iterative solution of two "local friction law" formulations from Coles (Ref. 6).

$$(i) \quad \frac{U_e}{U_\tau} = \frac{1}{\kappa} \ln \frac{\delta U_\tau}{\nu} + C + \frac{2\Pi}{\kappa}$$

$$(ii) \quad \left(\frac{\frac{\delta^* U_e}{\nu} - 6.5}{\frac{\delta U_\tau}{\nu}} \right) = 1 + \Pi$$

Since the term $\frac{U_T \delta}{\nu}$ can be eliminated from Eqs. (i) and (ii) all that is required to solve for Π are values of U_e , U_T , and δ^* .

The wake component

$$w = \frac{\kappa}{\Pi} \left[\frac{U}{U_T} - \left(\frac{1}{\kappa} \ln y^+ + C \right) \right] \quad (5)$$

is plotted vs. $\frac{y}{\delta}$ and compared to Coles (Ref. 6) zero pressure gradient wake function

$$w = 2 \sin^2 \left(\frac{\pi}{2} \frac{y}{\delta} \right) \quad (6)$$

(e) Defect velocities are calculated using the value of U_T determined in (b).

$$\text{Velocity defect} = \frac{U - U_e}{U_T}$$

The velocity defect distribution is plotted vs. $\frac{y}{\delta}$ and compared with inner and outer region defect correlations.

(i) In the inner region ($\frac{y}{\delta} < 0.2$) with the correlation of Schubauer and Tchen (Ref. 8).

$$\frac{U - U_e}{U_T} = \frac{1}{\kappa} \ln \left(\frac{y}{\delta} \right) - 2.35 \quad (7)$$

(ii) in the outer region ($\frac{y}{\delta} > 0.2$) with the correlation of Hama (Ref. 9)

$$\frac{U - U_e}{U_T} = -9.6 \left(1 - \frac{y}{\delta} \right)^2 \quad (8)$$

(f) The following is a list of all plots constructed, including those discussed in parts (b), (d), and (e):

i) $\frac{U}{U_e}$ vs $\frac{y}{\delta}$

ii) $\frac{T_w - T}{T_w - T_e}$ vs $\frac{y}{\delta}$

iii) $U^+ \text{ vs } Y^+$ (see b)

iv) $T^+ \text{ vs } Y^+$ (see b)

$$v) \quad \frac{U-U_e}{U_\tau} \quad \text{vs} \quad \frac{Y}{\delta} \quad (\text{see d})$$

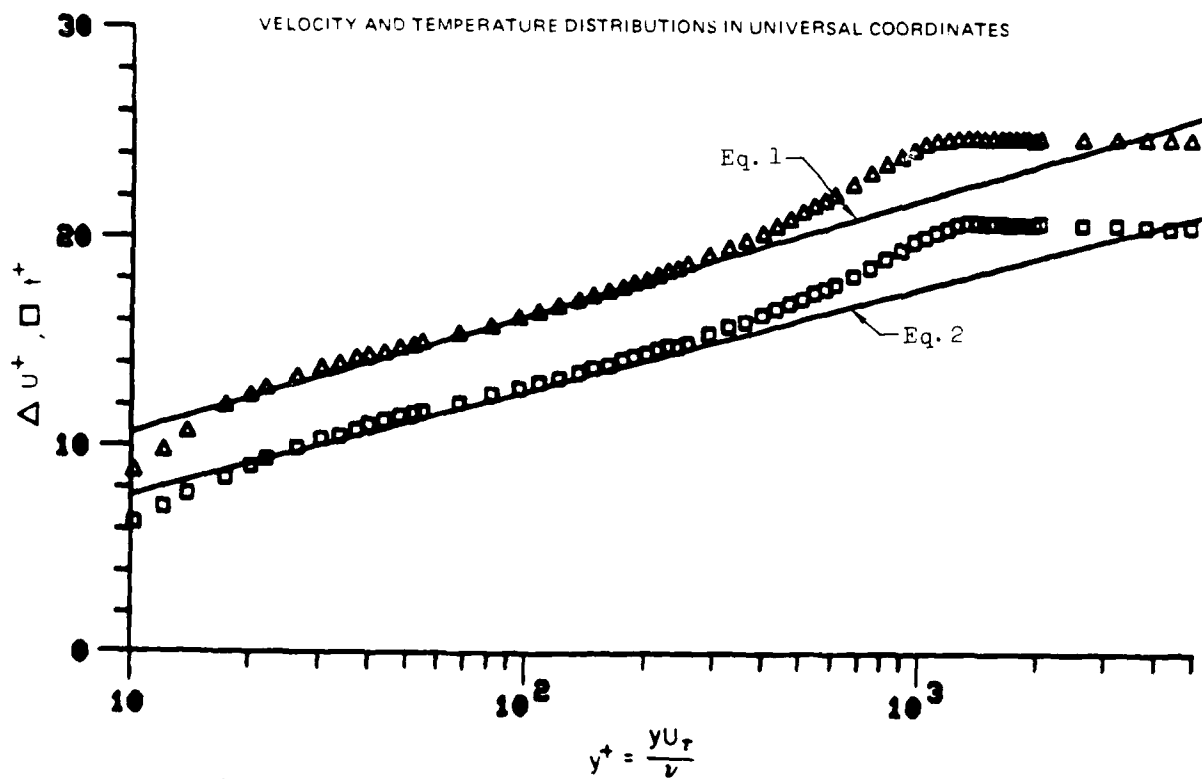
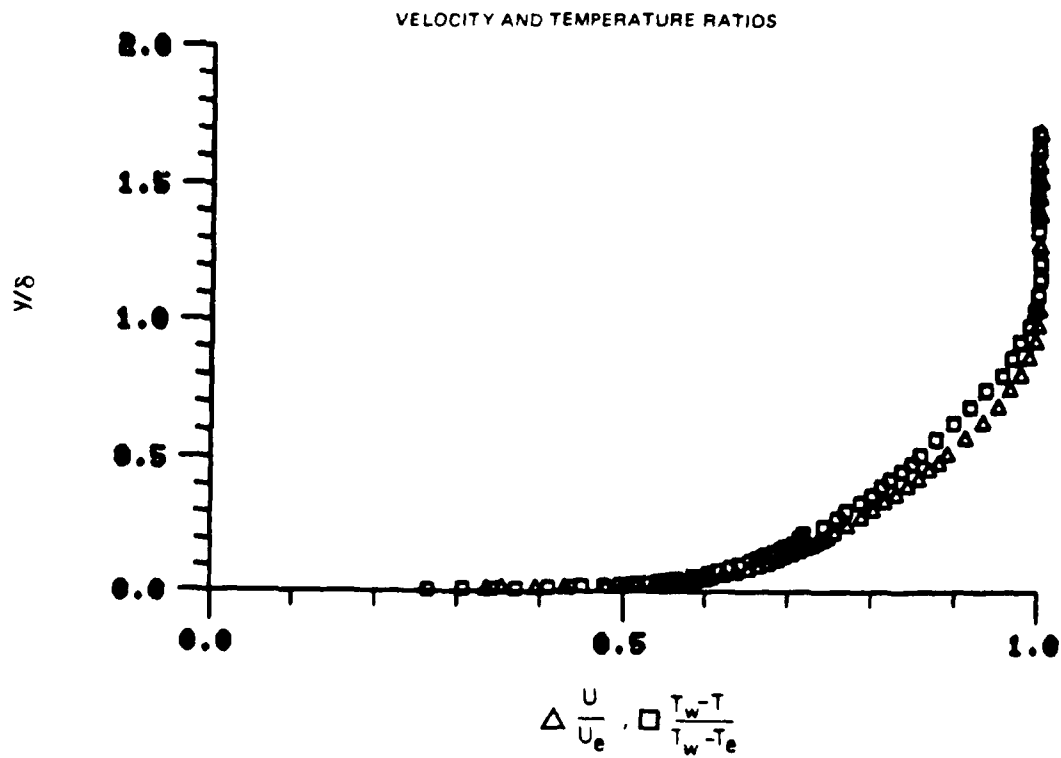
$$vi) \quad w \quad \text{vs} \quad \frac{y}{\delta} \quad (\text{see e})$$

(g) The following boundary layer values are tabulated

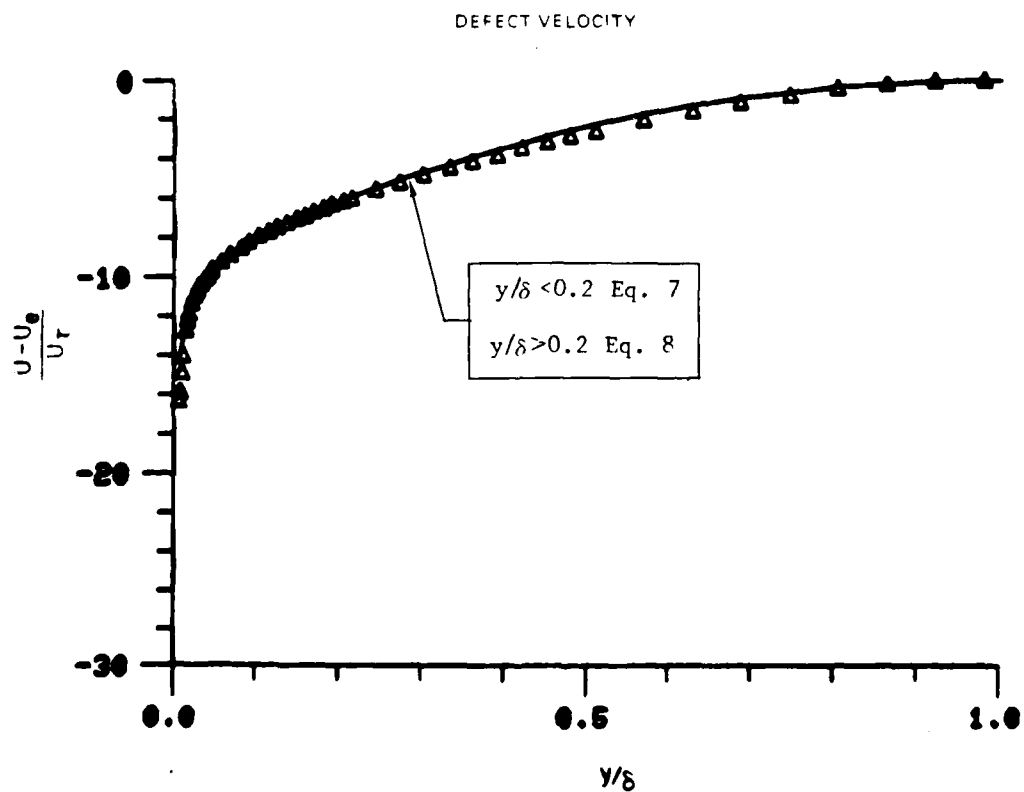
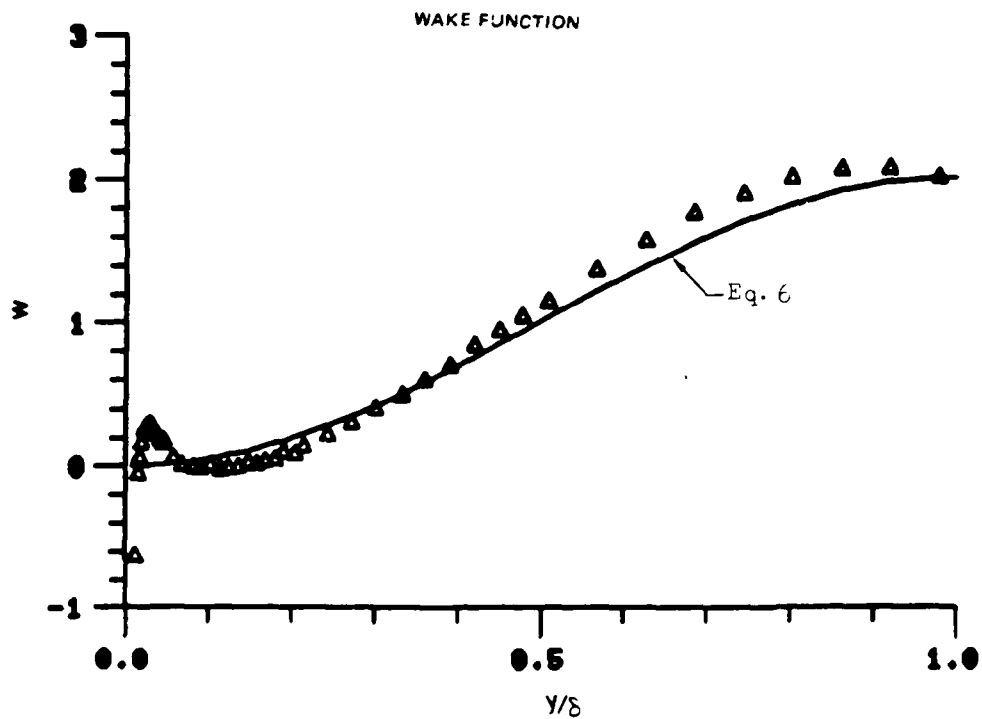
$$y, \frac{y}{\delta}, U, \tau, \frac{U}{U_e}, \frac{T_w - T}{T_w - T_e}, \frac{U - U_e}{U_\tau}, U^+, y^+, T^+$$

Sample reduced boundary layer profile data

Typical mean velocity and temperature boundary layer profile data obtained in the UTRC Boundary Layer Wind Tunnel with the test section adjusted for zero pressure gradient flow are presented in the following example figures. For these example figures the various analytical curves are labeled with their respective equation numbers.



Example Profile Plot A - Typical Boundary Layer Velocity and Temperature Profiles



Example Profile Plot B - Typical Boundary Layer Velocity Profiles

LIST OF TABLES AND FIGURES

Table & Figure No.	Grid No.	Run No.	Point No.	X (inches)	Reg
1	No Grid (minimum T)	5	1	12.3	490
2		5	2	12.3	500
3		5	3	12.2	480
4		5	4	36.2	2648
5			5	36.2	2691
6			7	40.3	2968
7			8	40.3	3020
8			11	44.2	3333
9			13	52.2	3893
10			14	60.3	4399
11			16	60.3	3827
12			17	68.2	5017
13			18	76.2	5576
14			19	76.2	5574
15			20	76.2	5042
16			21	84.1	6072
17	1	8	3	20.2	1385
18			4	20.2	1530
19			5	20.2	1370
20			7	28.2	2332
21			9	36.2	2812
22			10	44.3	3402
23			13	52.2	4084
24			14	60.3	4608
25			15	60.3	5020
26			16	60.3	4900
27			17	68.4	5162
28			18	76.2	5791
29			20	76.2	6121
30			21	84.1	6402
31	2	7	3	12.2	1069
32			4	12.2	1069
33			5	12.2	1108
34			6	12.2	1035
35			8	28.2	2638
36			9	28.2	2701
37			10	28.2	2603
38			11	36.1	3336
39			12	44.3	3950
40			13	44.3	4022
41			14	44.3	4049
42			15	52.2	4657
43			17	60.2	5313
44			18	60.2	5294
45			20	68.2	5850
46			22	76.2	6409
47			23	76.2	6487
48			24	84.1	7033
49	3	10	1	12.0	1411
50		10	2	12.1	1482
51		10	3	12.1	1446
52		6	7	28.3	3059
53		10	4	28.2	3226
54		6	11	36.3	3731
55		6	12	44.4	4269
56		10	6	44.2	4629
57		6	15	52.2	4962
58		10	7	60.1	5890
59		6	18	60.3	5916
60		6	19	68.3	6247
61		10	9	76.2	7386
62		10	10	76.2	7159
63		6	24	84.2	7567
64	4	9	3	12.2	1313
65			4	12.2	1496
66			5	12.2	1444
67			6	20.2	2056
68			7	28.2	2814
69			8	28.2	3092
70			10	36.1	3535
71			12	44.2	4542
72			14	52.3	4919
73			16	60.2	5732
74			17	60.2	5796
75			18	68.2	6226
76			19	76.2	6731
77			20	76.2	7049
78			21	76.2	6836
79			22	84.0	6988

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JOB KL002 TAPE 3166R- FILES 01-21, RUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 1. NO GRID

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYED FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY ==	99.325	99.325
FREE STREAM TEMPERATURE ==	68.384	
WALL TEMPERATURE ==	103.130	
WALL HEAT FLUX ==	.04603	
FREE STREAM DENSITY ==	.07613	
FREE STREAM KINEMATIC VISCOSITY ==	.0001602	
DENSITY OF FLUID AT WALL ==	.07143	
KINEMATIC VISCOSITY OF FLUID AT WALL ==	.0001793	
WALL/FREE STREAM DENSITY RATIO ==	.93826	
LOCATION REYNOLDS NUMBER (REX) ==	634473.96	
INPUT VALUE OF VELOCITY DELTA ==	.09300	
INPUT VALUE OF TEMPERATURE DELTA ==	.10000	
CALCULATED DELTA ==		.08530
DELTA 69.5% INPUT ==	.00000	
DISPLACEMENT THICKNESS (DELSTAR) ==	.02631	.02261
MOMENTUM THICKNESS (THETA) ==	.00954	.01090
ENERGY-DISSIPATION THICKNESS ==	.01519	.01752
ENTHALPY THICKNESS ==	.00057	.00075
SHAPE FACTOR 12 (OFLSTAR/THETA) ==	2.75564	2.09277
SHAPE FACTOR 32 (ENERGY/THETA) ==	1.59122	1.60775
MOMENTUM THICKNESS REYNOLDS NUMBER ==	493.14	563.13
DISPLACEMENT THICKNESS REYNOLDS NUMBER ==	1359.41	1178.51
SKIN FRICTION COEFFICIENT ==	.003000	
FRICTION VELOCITY ==	3.97120	
LAW OF THE WALL CONSTANT (K) ==	.41000	
LAW OF THE WALL CONSTANT (C) ==	5.00000	
WAKE STRENGTH ==		1.57280
CLAUSERS *DELTA* INTEGRAL ==	-.49291	-.55170
CLAUSERS *C* INTEGRAL ==	9.97876	6.78282
DISPLACEMENT THICKNESS - CONSTANT DENSITY ==	.02272	.02206
MOMENTUM THICKNESS - CONSTANT DENSITY ==	.00979	.01122
SHAPE FACTOR 12 - CONSTANT DENSITY ==	2.32194	1.96677

LOCATION -X- 12.28000

Z = CENTERLINE

Table 1.

JOB KLD02 TAPE 3166R- FILES C1-21, RUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 1. NO GRID

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/U*	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
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2	1.0000	0.0000	0.0000	95.26	0.0000	0.0000	0.0000	2.215	7.203	11.130
3	1.0000	0.0000	0.0000	95.26	0.0000	0.0000	0.0000	2.215	7.203	11.130
4	1.0000	0.0000	0.0000	95.26	0.0000	0.0000	0.0000	2.215	7.203	11.130
5	1.0000	0.0000	0.0000	95.26	0.0000	0.0000	0.0000	2.215	7.203	11.130
6	1.0000	0.0000	0.0000	95.26	0.0000	0.0000	0.0000	2.215	7.203	11.130
7	1.0000	0.0000	0.0000	95.26	0.0000	0.0000	0.0000	2.215	7.203	11.130
8	1.0000	0.0000	0.0000	95.26	0.0000	0.0000	0.0000	2.215	7.203	11.130
9	1.0000	0.0000	0.0000	95.26	0.0000	0.0000	0.0000	2.215	7.203	11.130
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24	1.0000	0.0000	0.0000	95.26	0.0000	0.0000	0.0000	2.215	7.203	11.130
25	1.0000	0.0000	0.0000	95.26	0.0000	0.0000	0.0000	2.215	7.203	11.130
26	1.0000	0.0000	0.0000	95.26	0.0000	0.0000	0.0000	2.215	7.203	11.130
27	1.0000	0.0000	0.0000	95.26	0.0000	0.0000	0.0000	2.215	7.203	11.130
28	1.0000	0.0000	0.0000	95.26	0.0000	0.0000	0.0000	2.215	7.203	11.130
29	1.0000	0.0000	0.0000	95.26	0.0000	0.0000	0.0000	2.215	7.203	11.130
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33	1.0000	0.0000	0.0000	95.26	0.0000	0.0000	0.0000	2.215	7.203	11.130
34	1.0000	0.0000	0.0000	95.26	0.0000	0.0000	0.0000	2.215	7.203	11.130
35	1.0000	0.0000	0.0000	95.26	0.0000	0.0000	0.0000	2.215	7.203	11.130
36	1.0000	0.0000	0.0000	95.26	0.0000	0.0000	0.0000	2.215	7.203	11.130
37	1.0000	0.0000	0.0000	95.26	0.0000	0.0000	0.0000	2.215	7.203	11.130
38	1.0000	0.0000	0.0000	95.26	0.0000	0.0000	0.0000	2.215	7.203	11.130
39	1.0000	0.0000	0.0000	95.26	0.0000	0.0000	0.0000	2.215	7.203	11.130
40	1.0000	0.0000	0.0000	95.26	0.0000	0.0000	0.0000	2.215	7.203	11.130
41	1.0000	0.0000	0.0000	95.26	0.0000	0.0000	0.0000	2.215	7.203	11.130
42	1.0000	0.0000	0.0000	95.26	0.0000	0.0000	0.0000	2.215	7.203	11.130
43	1.0000	0.0000	0.0000	95.26	0.0000	0.0000	0.0000	2.215	7.203	11.130
44	1.0000	0.0000	0.0000	95.26	0.0000	0.0000	0.0000	2.215	7.203	11.130
45	1.0000	0.0000	0.0000	95.26	0.0000	0.0000	0.0000	2.215	7.203	11.130
46	1.0000	0.0000	0.0000	95.26	0.0000	0.0000	0.0000	2.215	7.203	11.130

Table 1.

JOB KLDC2 TAPE 3166R- FILES 01-21, RUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 2. NO GRID

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y^+=35$
FREE STREAM VELOCITY =	99.196	99.196
FREE STREAM TEMPERATURE =	68.609	
WALL TEMPERATURE =	102.920	
WALL HEAT FLUX =	.04665	
FREE STREAM DENSITY =	.07610	
FREE STREAM KINEMATIC VISCOSITY =	.0001603	
DENSITY OF FLUID AT WALL =	.07146	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001792	
WALL/FREE STREAM DENSITY RATIO =	.93901	
LOCATION PEYNOLDS NUMBER (REX) =	633166.30	
INPUT VALUE OF VELOCITY DELTA =	.09200	
INPUT VALUE OF TEMPERATURE DELTA =	.09500	
CALCULATED DELTA =		.09485
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.02631	.02236
MOMENTUM THICKNESS (THETA) =	.00975	.01103
ENERGY-DISSIPATION THICKNESS =	.01544	.01783
ENTHALPY THICKNESS =	.00058	.00077
SHAPE FACTOR 12 (DELSTAR/THETA) =	2.69874	2.72599
SHAPE FACTOR 22 (ENERGY/THETA) =	1.59341	1.61633
MOMENTUM THICKNESS PEYNOLDS NUMBER =	502.66	568.93
DISPLACEMENT THICKNESS PEYNOLDS NUMBER =	1356.56	1152.65
SKIN FRICTION COEFFICIENT =	.003513	
FRICTION VELOCITY =	4.29000	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		1.09360
CLAUSERS *DELTA* INTEGRAL =	-.46714	-.49902
CLAUSERS *G* INTEGRAL =	5.41368	5.46998
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.02297	.02158
MOMENTUM THICKNESS - CONSTANT DENSITY =	.01000	.01135
SHAPE FACTOR 12 - CONSTANT DENSITY =	2.29770	1.90134

LOCATION -X- 12.28000

Z = +6 INCHES

Table 2.

JOB KL002 TAPE 3166R- FILES 01-21, RUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 2. NO GRID

REDUCED PROFILE DATA

N	Y INCHES	DELTA Y/DELTA	U FT/SEC	T DEG.F	U/U _F	THETA	U-U _F UTAU	U(+)	T(+)	Y(+)
1	.00000	.00000	17.11	97.81	.132	.149	-20.067	3.055	8.051	11.034
2	.00000	.00000	13.01	96.64	.140	.183	-19.879	3.243	9.910	14.426
3	.00000	.00000	17.50	95.16	.177	.226	-19.030	4.092	12.233	17.817
4	.00000	.00000	20.97	94.41	.210	.243	-18.257	4.665	13.415	19.913
5	.01119	.1335	25.01	92.02	.261	.292	-17.082	6.040	15.776	23.604
6	.01134	.142	37.18	91.65	.324	.278	-16.087	7.030	17.767	26.796
7	.01155	.164	38.25	90.01	.385	.376	-14.907	8.216	20.362	30.986
8	.01171	.181	39.78	88.76	.391	.413	-14.083	9.040	22.327	34.178
9	.01186	.185	41.56	87.65	.419	.444	-13.436	9.687	24.038	36.972
10	.01199	.215	48.67	86.23	.460	.485	-12.477	10.646	26.242	40.763
11	.01214	.216	49.60	84.00	.500	.525	-11.562	11.561	28.418	44.753
12	.01227	.216	57.03	83.28	.544	.573	-10.554	12.569	30.991	49.342
13	.01236	.217	56.99	82.71	.575	.501	-9.836	13.295	32.510	52.136
14	.01246	.217	67.62	78.37	.682	.718	-7.361	15.761	38.671	65.304
15	.01255	.217	76.64	75.24	.776	.777	-5.188	17.975	43.655	78.473
16	.01262	.217	88.11	72.65	.858	.882	-3.283	19.840	47.739	93.038
17	.01269	.217	90.00	71.33	.908	.924	-2.129	20.994	49.980	108.811
18	.01273	.217	94.30	70.71	.951	.959	-1.140	21.992	51.881	118.577
19	.01277	.217	96.82	69.32	.976	.979	-.554	22.569	52.996	133.142
20	.01277	.217	98.77	68.00	.989	.988	-.263	22.866	53.888	148.114
21	.01277	.217	99.77	66.79	.990	.995	-.100	23.000	53.888	163.087
22	.01277	.217	99.77	66.79	.990	.995	-.100	23.000	53.888	178.059
23	.01277	.217	99.77	66.79	.990	.995	-.100	23.000	53.888	193.031
24	.01277	.217	99.77	66.79	.990	.995	-.100	23.000	53.888	208.003
25	.01277	.217	99.77	66.79	.990	.995	-.100	23.000	53.888	223.000
26	.01277	.217	99.77	66.79	.990	.995	-.100	23.000	53.888	238.000
27	.01277	.217	99.77	66.79	.990	.995	-.100	23.000	53.888	253.000
28	.01277	.217	99.77	66.79	.990	.995	-.100	23.000	53.888	268.000
29	.01277	.217	99.77	66.79	.990	.995	-.100	23.000	53.888	283.000
30	.01277	.217	99.77	66.79	.990	.995	-.100	23.000	53.888	298.000
31	.01277	.217	99.77	66.79	.990	.995	-.100	23.000	53.888	313.000
32	.01277	.217	99.77	66.79	.990	.995	-.100	23.000	53.888	328.000
33	.01277	.217	99.77	66.79	.990	.995	-.100	23.000	53.888	343.000
34	.01277	.217	99.77	66.79	.990	.995	-.100	23.000	53.888	358.000
35	.01277	.217	99.77	66.79	.990	.995	-.100	23.000	53.888	373.000
36	.01277	.217	99.77	66.79	.990	.995	-.100	23.000	53.888	388.000
37	.01277	.217	99.77	66.79	.990	.995	-.100	23.000	53.888	403.000
38	.01277	.217	99.77	66.79	.990	.995	-.100	23.000	53.888	418.000
39	.01277	.217	99.77	66.79	.990	.995	-.100	23.000	53.888	433.000
40	.01277	.217	99.77	66.79	.990	.995	-.100	23.000	53.888	448.000
41	.01277	.217	99.77	66.79	.990	.995	-.100	23.000	53.888	463.000
42	.01277	.217	99.77	66.79	.990	.995	-.100	23.000	53.888	478.000
43	.01277	.217	99.77	66.79	.990	.995	-.100	23.000	53.888	493.000
44	.01277	.217	99.77	66.79	.990	.995	-.100	23.000	53.888	508.000

Table 2.

JOB ALD02 TAPL 3166R- FILES C1-21, PUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 3. NO GRID

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY	99.148	99.148
FREE STREAM TEMPERATURE	67.830	
WALL TEMPERATURE	101.710	
WALL HEAT FLUX	.04653	
FREE STREAM DENSITY	.07671	
FREE STREAM KINEMATIC VISCOSITY	.0001589	
DENSITY OF FLUID AT WALL	.07209	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001773	
WALL/FREE STREAM DENSITY RATIO	.93965	
LOCATION REYNOLDS NUMBER (REX)	634545.71	
INPUT VALUE OF VELOCITY DELTA	.09700	
INPUT VALUE OF TEMPERATURE DELTA	.09700	
CALCULATED DELTA		.07976
DELTA 99.5% INPUT	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	.02503	.02207
MOMENTUM THICKNESS (THETA)	.00937	.01049
ENERGY-DISSIPATION THICKNESS	.01492	.01688
ENTHALPY THICKNESS	.00056	.00073
SHAPE FACTOR 12 (DELSTAR/THETA)	2.67107	2.10407
SHAPE FACTOR 72 (ENERGY/THETA)	1.59228	1.60945
MOMENTUM THICKNESS REYNOLDS NUMBER	467.39	545.56
DISPLACEMENT THICKNESS REYNOLDS NUMBER	1301.84	1147.89
SKIN FRICTION COEFFICIENT	.002893	
FRICTION VELOCITY	3.89020	
LAW OF THE WALL CONSTANT (K)	.41000	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		1.70859
CLAUSERS 'DELTA' INTEGRAL	7.48284	7.54461
CLAUSERS 'C' INTEGRAL	9.65820	6.87522
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.02171	.02137
MOMENTUM THICKNESS - CONSTANT DENSITY	.00961	.01078
SHAPE FACTOR 12 - CONSTANT DENSITY	2.26000	1.98145

LOCATION -X- 12.20000

Z = -6 INCHES

Table 3.

JOB KLD02 TAPE 3166R- FILES 01-21, PUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 3. NO GRID

REDUCED PROFILE DATA

N	Y	Y/	U	T	U/UE	THFTA	U-UE	U(4)	T(4)	Y(4)
INCHES	DELTA	FT/SEC	DEG.F							
1	11.1	11.1	96.9	11.1	.120	.141	-22.435	3.052	6.913	10.110
2	11.1	11.1	96.9	11.1	.133	.154	-22.087	3.399	7.550	11.038
3	11.1	11.1	96.9	11.1	.162	.183	-21.352	4.134	8.984	13.766
4	11.1	11.1	96.9	11.1	.194	.212	-20.581	4.946	10.381	15.777
5	11.1	11.1	96.9	11.1	.224	.272	-19.771	5.715	11.364	17.422
6	11.1	11.1	96.9	11.1	.279	.320	-19.332	6.512	12.124	19.004
7	11.1	11.1	96.9	11.1	.319	.359	-17.867	7.240	12.620	20.546
8	11.1	11.1	96.9	11.1	.338	.389	-16.649	8.038	13.087	22.066
9	11.1	11.1	96.9	11.1	.386	.447	-15.645	9.011	13.394	23.526
10	11.1	11.1	96.9	11.1	.473	.548	-14.429	10.000	13.608	25.022
11	11.1	11.1	96.9	11.1	.577	.664	-13.354	11.119	13.802	26.544
12	11.1	11.1	96.9	11.1	.613	.705	-12.578	12.470	13.954	28.094
13	11.1	11.1	96.9	11.1	.772	.878	-11.778	13.618	14.082	29.666
14	11.1	11.1	96.9	11.1	.855	.970	-11.000	14.700	14.199	31.262
15	11.1	11.1	96.9	11.1	.999	1.134	-10.248	15.634	14.299	32.883
16	11.1	11.1	96.9	11.1	1.000	1.134	-9.515	16.515	14.384	34.523
17	11.1	11.1	96.9	11.1	1.000	1.134	-8.821	17.239	14.454	36.173
18	11.1	11.1	96.9	11.1	1.000	1.134	-8.166	17.900	14.511	37.833
19	11.1	11.1	96.9	11.1	1.000	1.134	-7.549	18.500	14.554	39.503
20	11.1	11.1	96.9	11.1	1.000	1.134	-6.966	19.040	14.584	41.183
21	11.1	11.1	96.9	11.1	1.000	1.134	-6.411	19.520	14.600	42.873
22	11.1	11.1	96.9	11.1	1.000	1.134	-5.884	20.000	14.600	44.573
23	11.1	11.1	96.9	11.1	1.000	1.134	-5.384	20.480	14.594	46.283
24	11.1	11.1	96.9	11.1	1.000	1.134	-4.900	20.960	14.574	48.003
25	11.1	11.1	96.9	11.1	1.000	1.134	-4.434	21.440	14.544	49.733
26	11.1	11.1	96.9	11.1	1.000	1.134	-4.000	21.920	14.504	51.473
27	11.1	11.1	96.9	11.1	1.000	1.134	-3.584	22.400	14.454	53.223
28	11.1	11.1	96.9	11.1	1.000	1.134	-3.184	22.880	14.394	54.983
29	11.1	11.1	96.9	11.1	1.000	1.134	-2.800	23.360	14.324	56.753
30	11.1	11.1	96.9	11.1	1.000	1.134	-2.434	23.840	14.244	58.533
31	11.1	11.1	96.9	11.1	1.000	1.134	-2.084	24.320	14.154	60.323
32	11.1	11.1	96.9	11.1	1.000	1.134	-1.744	24.800	14.054	62.123
33	11.1	11.1	96.9	11.1	1.000	1.134	-1.414	25.280	13.944	63.933
34	11.1	11.1	96.9	11.1	1.000	1.134	-1.100	25.760	13.824	65.753
35	11.1	11.1	96.9	11.1	1.000	1.134	-.800	26.240	13.694	67.583
36	11.1	11.1	96.9	11.1	1.000	1.134	-.514	26.720	13.554	69.423
37	11.1	11.1	96.9	11.1	1.000	1.134	-.244	27.200	13.404	71.273
38	11.1	11.1	96.9	11.1	1.000	1.134	-.000	27.680	13.244	73.133
39	11.1	11.1	96.9	11.1	1.000	1.134	.244	28.160	13.074	75.003
40	11.1	11.1	96.9	11.1	1.000	1.134	.514	28.640	12.894	76.883
41	11.1	11.1	96.9	11.1	1.000	1.134	.800	29.120	12.704	78.773
42	11.1	11.1	96.9	11.1	1.000	1.134	1.100	29.600	12.504	80.673
43	11.1	11.1	96.9	11.1	1.000	1.134	1.414	30.080	12.294	82.583
44	11.1	11.1	96.9	11.1	1.000	1.134	1.744	30.560	12.074	84.503
45	11.1	11.1	96.9	11.1	1.000	1.134	2.084	31.040	11.844	86.433

Table 3.

JOB KLDC2 TAPE 3166R- FILES 01-21, RUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 4. NO GRID

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY ==	99.094	99.094
FREE STREAM TEMPERATURE ==	68.013	
WALL TEMPERATURE ==	82.460	
WALL HEAT FLUX ==	.05137	
FREE STREAM DENSITY ==	.07669	
FREE STREAM KINEMATIC VISCOSITY ==	.0001590	
DENSITY OF FLUID AT WALL ==	.07464	
KINEMATIC VISCOSITY OF FLUID AT WALL ==	.0001667	
WALL/FREE STREAM DENSITY RATIO ==	.97335	
LOCATION* PEYNOLODS NUMBER (REX) ==	1880639.66	
INPUT VALUE OF VELOCITY DELTA ==	.52000	
INPUT VALUE OF TEMPERATURE DELTA ==	.56000	
CALCULATED DELTA ==		.48318
DELTA 99.5% INPUT ==	.00000	
DISPLACEMENT THICKNESS (DELSTAR) ==	.07355	.07358
MOMENTUM THICKNESS (THETA) ==	.05077	.05097
ENERGY-DISSIPATION THICKNESS ==	.08966	.08981
ENTHALPY THICKNESS ==	.00178	.00178
SHAPE FACTOR 12 (DELSTAR/THETA) ==	1.44885	1.44356
SHAPE FACTOR 32 (ENERGY/THETA) ==	1.76604	1.76201
MOMENTUM THICKNESS REYNOLDS NUMBER ==	2637.40	2647.98
DISPLACEMENT THICKNESS REYNOLDS NUMBER ==	3821.20	3822.51
SKIN FRICTION COEFFICIENT ==	.007330	
FRICTION VELOCITY ==	4.09868	
LAW OF THE WALL CONSTANT (K) ==	.41000	
LAW OF THE WALL CONSTANT (C) ==	5.00000	
WAKE STRENGTH ==		.48255
CLAUSERS *DELTA* INTEGRAL ==	-1.60637	-1.73577
CLAUSERS *G* INTEGRAL ==	12.05149	11.94194
DISPLACEMENT THICKNESS - CONSTANT DENSITY ==	.06911	.07170
MOMENTUM THICKNESS - CONSTANT DENSITY ==	.05115	.05136
SHAPE FACTOR 12 - CONSTANT DENSITY ==	1.35095	1.39775

LOCATION -X- 36.20000

Z = CENTERLINE

Table 4.

JOE KLD02 TAPE 3166R- FILFS C1-21, RUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 4. NO GRID

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UF	THETA	U-UF UTAU	U(4)	T(4)	Y(4)
1	.0000	.0011	37.65	77.73	.379	.324	-15.014	9.173	6.623	10.918
2	.0000	.0013	40.40	77.29	.408	.352	-14.320	9.857	7.394	12.967
3	.0000	.0019	44.12	76.93	.445	.383	-13.913	10.764	7.909	15.715
4	.0000	.0017	46.36	76.62	.474	.404	-12.720	11.457	8.352	17.064
5	.0000	.0020	50.30	76.21	.503	.432	-11.894	12.283	8.930	20.136
6	.0011	.0024	52.76	75.83	.532	.460	-11.205	12.672	9.490	23.823
7	.0011	.0026	53.81	75.59	.543	.476	-11.247	13.120	9.819	25.872
8	.0011	.0030	55.48	75.28	.560	.497	-10.641	13.536	10.269	29.969
9	.0011	.0034	56.49	75.13	.570	.508	-10.794	13.753	10.482	33.656
10	.0011	.0036	57.66	74.95	.582	.520	-10.110	14.067	10.733	37.548
11	.0011	.0041	58.95	74.84	.589	.528	-9.947	14.230	10.855	40.621
12	.0011	.0043	59.95	74.74	.595	.534	-9.768	14.389	11.032	43.284
13	.0011	.0043	59.70	74.59	.602	.545	-9.612	14.565	11.256	47.585
14	.0011	.0052	60.30	74.47	.609	.553	-9.464	14.713	11.422	51.682
15	.0011	.0057	61.13	74.35	.617	.561	-9.262	14.915	11.594	56.129
16	.0011	.0060	61.45	74.27	.620	.567	-9.184	14.993	11.705	59.261
17	.0011	.0074	63.24	73.95	.638	.589	-8.748	15.429	12.170	72.986
18	.0011	.0088	64.05	73.69	.655	.610	-8.330	15.647	12.593	86.915
19	.0011	.0102	66.43	73.45	.670	.624	-7.969	16.208	12.884	101.750
20	.0011	.0115	67.42	73.26	.680	.637	-7.729	16.448	13.155	113.340
21	.0011	.0139	68.66	73.06	.693	.651	-7.421	16.756	13.436	127.884
22	.0011	.0143	69.74	72.97	.704	.664	-7.163	17.014	13.704	141.814
23	.0011	.0156	70.74	72.84	.713	.670	-6.938	17.239	13.841	154.104
24	.0011	.0170	71.78	72.64	.724	.679	-6.665	17.512	14.031	166.034
25	.0011	.0184	72.78	72.50	.733	.684	-6.445	17.732	14.230	177.373
26	.0011	.0196	73.49	72.39	.742	.697	-6.247	17.930	14.430	189.893
27	.0011	.0212	74.41	72.20	.751	.710	-6.072	18.155	14.630	210.232
28	.0011	.0227	75.25	72.11	.759	.716	-5.818	18.359	14.765	224.571
29	.0011	.0239	75.90	72.04	.766	.721	-5.659	18.518	14.803	236.247
30	.0011	.0253	76.74	71.92	.774	.730	-5.455	18.722	15.033	250.381
31	.0011	.0267	77.50	71.83	.782	.738	-5.269	18.906	15.241	264.311
32	.0011	.0303	79.37	71.55	.801	.755	-4.811	19.366	15.505	299.953
33	.0011	.0339	81.11	71.28	.819	.774	-4.388	19.789	15.975	335.596
34	.0011	.0375	82.75	71.11	.835	.789	-3.989	20.186	16.302	370.833
35	.0011	.0412	84.54	70.95	.853	.807	-3.552	20.625	16.599	407.702
36	.0011	.0447	85.80	70.77	.866	.823	-3.222	20.948	17.000	442.525
37	.0011	.0485	88.71	70.51	.883	.847	-2.821	21.346	17.281	479.821
38	.0011	.0520	90.50	70.28	.896	.865	-2.504	21.673	17.595	514.221
39	.0011	.0559	92.26	70.00	.921	.883	-2.199	21.978	17.944	551.912
40	.0011	.0597	94.46	69.74	.933	.899	-1.911	22.266	18.233	585.916
41	.0011	.0634	96.47	69.51	.953	.922	-1.620	22.537	18.483	623.198
42	.0011	.0674	98.49	69.29	.973	.944	-1.379	22.808	19.045	665.703
43	.0011	.0717	98.69	68.99	.986	.966	-1.153	23.074	19.589	706.179
44	.0011	.0762	98.42	68.72	.993	.983	-1.065	23.343	19.989	837.875
45	.0011	.0802	98.30	68.44	.998	.993	-1.165	24.012	20.286	910.594
46	.0011	.0844	98.30	68.14	.998	.993	-1.259	24.118	20.475	981.675
47	.0011	.0887	98.30	67.84	.998	.993	-1.343	24.167	20.614	1053.780
48	.0011	.0931	98.30	67.54	.998	.993	-1.400	24.177	20.684	1125.271
49	.0011	.0974	98.30	67.24	.998	.993	-1.447	24.176	20.689	1197.581
50	.0011	.1017	98.30	66.94	.998	.993	-1.485	24.178	20.639	1268.457
51	.0011	.1059	98.30	66.64	.998	.993	-1.514	24.167	20.662	1340.564
52	.0011	.1102	98.30	66.34	.998	.993	-1.543	24.163	20.661	1411.884
53	.0011	.1144	98.30	66.04	.998	.993	-1.562	24.167	20.655	1483.749
54	.0011	.1187	98.30	65.74	.998	.993	-1.581	24.161	20.637	1555.649
55	.0011	.1229	98.30	65.44	.998	.993	-1.600	24.163	20.701	1627.345
56	.0011	.1272	98.30	65.14	.998	.993	-1.619	24.141	20.661	1699.040
57	.0011	.1314	98.30	64.84	.998	.993	-1.638	24.144	20.627	1770.736
58	.0011	.1357	98.30	64.54	.998	.993	-1.657	24.149	20.635	1842.431
59	.0011	.1399	98.30	64.24	.998	.993	-1.676	24.142	20.659	1913.512
60	.0011	.1442	98.30	63.94	.998	.993	-1.695	24.146	20.629	1985.003
61	.0011	.1484	98.30	63.64	.998	.993	-1.714	24.146	20.655	2056.903
62	.0011	.1527	98.30	63.34	.998	.993	-1.733	24.142	20.665	2128.110
63	.0011	.1569	98.30	63.04	.998	.993	-1.752	24.130	20.630	2200.760
64	.0011	.1612	98.30	62.74	.998	.993	-1.771	24.131	20.660	2273.033
65	.0011	.1654	98.30	62.44	.998	.993	-1.790	24.122	20.678	2345.659
66	.0011	.1697	98.30	62.14	.998	.993	-1.809	24.186	20.579	2418.288
67	.0011	.1739	98.30	61.84	.998	.993	-1.828	24.135	20.508	2490.729
68	.0011	.1782	98.30	61.54	.998	.993	-1.847	24.102	20.533	2563.584

Table 4.

JOB KLDD2 TAPE 3166R- FILES 01-21, RUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 5. NO GRID

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y^+=35$
FREE STREAM VELOCITY	98.420	98.420
FREE STREAM TEMPERATURE	68.158	
WALL TEMPERATURE	82.600	
WALL HEAT FLUX	.05116	
FREE STREAM DENSITY	.07667	
FREE STREAM KINEMATIC VISCOSITY	.0001593	
DENSITY OF FLUID AT WALL	.07463	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001668	
WALL/FREE STREAM DENSITY RATIO	.97337	
LOCATION: REYNOLDS NUMBER (REX)	1966947.52	
INPUT VALUE OF VELOCITY DELTA	.52000	
INPUT VALUE OF TEMPERATURE DELTA	.56000	
CALCULATED DELTA		.49236
DELTA 99.5% INPUT	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	.07511	.07530
MOMENTUM THICKNESS (THETA)	.05208	.05217
ENERGY-DISSIPATION THICKNESS	.09190	.09191
ENTHALPY THICKNESS	.00181	.00181
SHAPE FACTOR 12 (DELSTAR/THETA)	1.44222	1.44329
SHAPE FACTOR 32 (ENEPGY/THETA)	1.76467	1.76165
MOMENTUM THICKNESS REYNOLDS NUMBER	2685.65	2690.71
DISPLACEMENT THICKNESS REYNOLDS NUMBER	3873.60	3883.48
SKIN FRICTION COEFFICIENT	.003309	
FRICTION VELOCITY	4.05792	
LAW OF THE WALL CONSTANT (K)	.41000	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		.49413
CLAUSEPS *DELTA* INTEGRAL	-1.67282	-1.78252
CLAUSEPS *C* INTEGRAL	12.25304	12.30926
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.07114	.07349
MOMENTUM THICKNESS - CONSTANT DENSITY	.05247	.05257
SHAPE FACTOR 12 - CONSTANT DENSITY	1.35571	1.39805

LOCATION -X- 36.20000

Z = +6 INCHES

Table 5.

JOE KLD02 TAPE 3166R- FILES C1-21, RUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 5. NO GRID

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/U ²	THETA	U-UF UTAU	U(4)	Y(4)	V(4)
1	0.0044	0.009	35.68	79.57	.363	.279	-15.460	8.793	5.719	8.778
2	0.0055	0.011	37.02	77.93	.376	.223	-15.125	9.124	6.635	11.210
3	0.0066	0.013	40.86	77.43	.415	.358	-14.165	10.068	7.742	13.237
4	0.0075	0.015	44.81	77.73	.452	.386	-13.266	10.968	7.918	15.264
5	0.0086	0.018	47.26	76.73	.481	.445	-12.583	11.671	8.346	17.494
6	0.0100	0.024	50.74	76.17	.514	.467	-11.790	12.464	9.139	20.738
7	0.0118	0.030	53.74	75.56	.532	.467	-11.357	12.897	9.576	23.881
8	0.0126	0.030	53.74	75.56	.532	.474	-11.119	13.135	9.724	25.603
9	0.0149	0.034	54.91	75.43	.558	.496	-10.723	13.530	10.193	30.265
10	0.0165	0.037	56.91	75.22	.569	.511	-10.452	13.802	10.487	33.560
11	0.0184	0.041	57.86	74.89	.578	.527	-10.237	14.017	10.802	37.560
12	0.0200	0.043	59.12	74.79	.588	.541	-9.989	14.265	11.001	41.109
13	0.0213	0.044	59.12	74.79	.588	.541	-9.989	14.375	11.100	43.230
14	0.0235	0.048	59.69	74.63	.600	.562	-9.700	14.554	11.326	47.699
15	0.0255	0.050	59.69	74.47	.600	.562	-9.543	14.711	11.556	51.554
16	0.0275	0.056	60.23	74.35	.612	.570	-9.412	14.841	11.732	55.807
17	0.0291	0.059	60.23	74.35	.612	.574	-9.278	14.976	11.775	59.751
18	0.0307	0.073	62.47	74.07	.635	.591	-8.860	15.394	12.114	72.430
19	0.0327	0.077	62.47	73.75	.652	.611	-8.438	15.616	12.534	86.220
20	0.0497	0.101	66.92	72.79	.667	.627	-8.082	16.172	12.856	100.910
21	0.0556	0.113	66.92	72.79	.679	.636	-7.766	16.468	13.079	112.770
22	0.0626	0.126	69.16	72.10	.703	.654	-7.476	16.778	13.409	127.660
23	0.0697	0.142	69.16	72.10	.703	.664	-7.205	17.047	13.631	141.153
24	0.0756	0.154	70.56	72.90	.712	.672	-6.963	17.271	13.777	153.113
25	0.0825	0.166	71.74	72.74	.722	.683	-6.747	17.507	14.006	167.300
26	0.0897	0.182	72.69	72.60	.732	.692	-6.469	17.765	14.201	181.896
27	0.0957	0.194	72.69	72.46	.739	.702	-6.323	17.931	14.308	194.059
28	0.1023	0.208	73.67	72.31	.746	.713	-6.100	18.154	14.621	207.433
29	0.1094	0.222	74.46	72.21	.757	.719	-5.905	18.349	14.754	221.331
30	0.1153	0.234	75.26	72.14	.765	.724	-5.700	18.553	14.857	233.791
31	0.1225	0.249	75.03	72.00	.771	.734	-5.543	18.711	15.063	248.186
32	0.1294	0.263	76.73	71.96	.780	.743	-5.345	18.909	15.253	262.374
33	0.1467	0.298	79.52	71.63	.796	.760	-4.903	19.351	15.589	297.443
34	0.1642	0.334	80.22	71.37	.815	.778	-4.466	19.766	15.959	332.918
35	0.1813	0.368	81.86	71.15	.832	.793	-4.075	20.179	16.271	367.582
36	0.1994	0.405	83.44	70.90	.848	.810	-3.653	20.561	16.616	404.374
37	0.2167	0.440	84.94	70.72	.863	.824	-3.321	20.932	16.972	439.347
38	0.2346	0.477	86.62	70.49	.875	.839	-3.009	21.296	17.217	475.629
39	0.2517	0.510	88.65	70.23	.891	.853	-2.688	21.611	17.495	505.683
40	0.2686	0.546	89.65	70.11	.905	.865	-2.309	21.945	17.750	546.782
41	0.2866	0.582	90.14	69.90	.916	.880	-2.009	22.214	18.044	581.341
42	0.3043	0.616	91.45	69.72	.929	.892	-1.731	22.523	18.296	616.921
43	0.3393	0.689	93.45	69.40	.950	.914	-1.222	22.802	18.754	687.872
44	0.3744	0.760	95.29	69.75	.968	.938	-1.772	23.452	19.250	759.224
45	0.4093	0.831	96.74	69.79	.983	.950	-1.414	23.840	19.617	829.772
46	0.4444	0.903	97.71	69.51	.993	.976	-1.175	24.079	20.013	900.925
47	0.4795	0.974	98.31	69.23	.998	.988	-1.055	24.199	20.274	972.777
48	0.5145	1.045	99.35	69.21	.996	.996	-1.010	24.244	20.440	1043.028
49	0.5493	1.116	98.46	68.16	1.000	.998	-1.011	24.265	20.483	1113.572
50	0.5843	1.187	98.36	68.16	1.000	1.000	-1.016	24.238	20.520	1184.522
51	0.6195	1.258	98.44	68.15	1.000	1.000	-1.005	24.259	20.523	1255.878
52	0.6545	1.329	98.51	68.17	1.000	1.000	-1.002	24.276	20.533	1326.828
53	0.6895	1.400	98.47	68.15	1.000	1.000	-1.011	24.265	20.527	1397.778
54	0.7245	1.472	98.58	68.15	1.000	1.000	-1.039	24.293	20.533	1468.728
55	0.7595	1.543	98.41	68.14	1.000	1.000	-1.014	24.252	20.536	1539.678
56	0.7944	1.614	98.13	68.13	1.000	1.000	-1.006	24.268	20.536	1610.626
57	0.8294	1.685	98.36	68.15	1.000	1.000	-1.009	24.245	20.533	1681.376
58	0.8644	1.756	98.40	68.14	1.000	1.000	-1.006	24.248	20.543	1752.034
59	0.8994	1.827	98.39	68.13	1.000	1.000	-1.008	24.246	20.550	1822.682
60	0.9344	1.898	98.37	68.12	1.000	1.000	-1.012	24.242	20.567	1894.834
61	0.9694	1.969	98.32	68.11	1.000	1.000	-1.026	24.228	20.584	1965.176
62	1.0045	2.040	98.29	68.12	1.000	1.000	-1.033	24.231	20.600	2036.329
63	1.0395	2.119	98.26	68.12	1.000	1.000	-1.034	24.220	20.573	2107.663
64	1.0745	2.200	98.25	68.12	1.000	1.000	-1.041	24.213	20.565	2178.930
65	1.1095	2.271	98.27	68.13	1.000	1.000	-1.037	24.217	20.558	2250.199
66	1.1445	2.341	98.26	68.12	1.000	1.000	-1.039	24.215	20.573	2321.467
67	1.1795	2.412	98.35	68.16	1.000	1.000	-1.024	24.229	20.519	2392.735
68	1.2145	2.481	98.35	68.19	1.000	1.000	-1.017	24.237	20.615	2464.003
69	1.2495	2.551	98.19	68.08	1.000	1.000	-1.056	24.198	20.621	2535.271

Table 5.

JOB KLD02 TAPE 3166R- FILES C1-21, RUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 7. NO GRID

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUE LAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY	98.761	98.761
FREE STREAM TEMPERATURE	68.530	
WALL TEMPERATURE	83.510	
WALL HEAT FLUX	.05145	
FREE STREAM DENSITY	.07661	
FREE STREAM KINEMATIC VISCOSITY	.0001592	
DENSITY OF FLUID AT WALL	.07450	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001673	
WALL/FREE STREAM DENSITY RATIO	.97242	
LOCATION REYNOLDS NUMBER (REX)	2053001.98	
INPUT VALUE OF VELOCITY DELTA	.59000	
INPUT VALUE OF TEMPERATURE DELTA	.59000	
CALCULATED DELTA		.54325
DELTA 99.5% INPUT	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	.08240	.08254
MOMENTUM THICKNESS (THETA)	.05725	.05743
ENERGY-DISSIPATION THICKNESS	.10114	.10124
ENTHALPY THICKNESS	.00202	.00202
SHAPE FACTOR 12 (DELSTAR/THETA)	1.43940	1.43740
SHAPE FACTOR 32 (ENERGY/THETA)	1.76681	1.76297
MOMENTUM THICKNESS REYNOLDS NUMBER	2958.93	2968.18
DISPLACEMENT THICKNESS REYNOLDS NUMBER	4259.09	4266.46
SKIN FRICTION COEFFICIENT	.003237	
FRICTION VELOCITY	4.02944	
LAW OF THE WALL CONSTANT (K)	.41000	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		.50245
CLAUSEPS * DELTA * INTEGRAL	-1.83953	-1.97363
CLAUSEPS * C * INTEGRAL	13.63422	13.60837
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.07772	.08052
MOMENTUM THICKNESS - CONSTANT DENSITY	.05769	.05787
SHAPE FACTOR 12 - CONSTANT DENSITY	1.34724	1.39143

LOCATION -X- 40.30000

Z = CENTERLINE

Table 6.

RUN NO.	5.	POINT	7.	NO GRID
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[illegible]

Table 6.

JOB KLD02 TAPE 3166R- FILES 01-21, PUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 8. NO GRID

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUPPLIED FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY ==	98.660	98.660
FREE STREAM TEMPERATURE ==	68.638	
WALL TEMPERATURE ==	83.640	
WALL HEAT FLUX ==	.05097	
FREE STREAM DENSITY ==	.07660	
FREE STREAM KINEMATIC VISCOSITY ==	.0001593	
DENSITY OF FLUID AT WALL ==	.07448	
KINEMATIC VISCOSITY OF FLUID AT WALL ==	.0001674	
WALL/FREE STREAM DENSITY RATIO ==	.97239	
LOCATION REYNOLDS NUMBER (REF) ==	2080113.22	
INPUT VALUE OF VELOCITY DELTA ==	.59000	
INPUT VALUE OF TEMPERATURE DELTA ==	.63000	
CALCULATED DELTA ==		.55111
DELTA 99.5% INPUT ==	.00000	
DISPLACEMENT THICKNESS (DELSTAR) ==	.08371	.08399
MOMENTUM THICKNESS (THETA) ==	.05843	.05851
ENERGY-DISSIPATION THICKNESS ==	.10321	.10317
ENTHALPY THICKNESS ==	.00201	.00201
SHAPE FACTOR 12 (DELSTAR/THETA) ==	1.43257	1.43556
SHAPE FACTOR 32 (ENERGY/THETA) ==	1.76622	1.76333
MOMENTUM THICKNESS REYNOLDS NUMBER ==	3016.09	3019.98
DISPLACEMENT THICKNESS REYNOLDS NUMBER ==	4320.77	4335.37
SKIN FRICTION COEFFICIENT ==	.003219	
FRICTION VELOCITY ==	4.01388	
LAW OF THE WALL CONSTANT (K) ==	.41000	
LAW OF THE WALL CONSTANT (C) ==	5.00000	
WAKE STRENGTH ==		.51173
CLAUSERS *DELTA* INTEGRAL ==	-1.90178	-2.01524
CLAUSERS *C* INTEGRAL ==	13.79419	13.91979
DISPLACEMENT THICKNESS - CONSTANT DENSITY ==	.07954	.08190
MOMENTUM THICKNESS - CONSTANT DENSITY ==	.05867	.05895
SHAPE FACTOR 12 - CONSTANT DENSITY ==	1.35106	1.39085

LOCATION -X- 40.30000

Z = +6 INCHES

Table 7.

JCB KL002 TAPE 3166P- FILES 01-21, PUNS 5.01-5.21 03/09/79

PUN NO. E. POINT S. NO GRID

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UT	THETA	U-UT UTAU	U(+)	T(+)	V(+)
1	.00000	.00000	36.45	70.83	.360	.254	-15.469	9.091	5.362	8.653
2	.00000	.00000	36.77	70.83	.373	.306	-15.418	9.162	6.499	10.851
3	.00000	.00000	40.12	78.42	.407	.348	-14.565	9.905	7.350	12.049
4	.00000	.00000	43.73	77.89	.443	.384	-13.664	10.806	8.100	13.048
5	.00000	.00000	46.71	77.51	.469	.409	-13.742	11.537	8.632	13.846
6	.00000	.00000	50.76	76.92	.507	.449	-12.706	12.472	9.459	15.048
7	.00000	.00000	51.80	76.64	.525	.467	-11.674	12.906	9.860	15.841
8	.00000	.00000	52.51	76.41	.532	.482	-11.467	13.043	10.177	16.443
9	.00000	.00000	54.39	76.06	.551	.505	-11.024	13.551	10.675	17.043
10	.00000	.00000	55.61	75.79	.564	.523	-10.725	13.855	11.004	17.643
11	.00000	.00000	56.81	75.59	.576	.536	-10.526	14.134	11.252	18.243
12	.00000	.00000	57.43	75.48	.582	.544	-10.371	14.306	11.437	18.843
13	.00000	.00000	58.06	75.34	.588	.554	-10.211	14.464	11.589	19.443
14	.00000	.00000	58.62	75.11	.594	.564	-9.975	14.534	11.711	20.043
15	.00000	.00000	59.10	74.91	.599	.576	-9.853	14.592	11.811	20.643
16	.00000	.00000	59.51	74.66	.603	.582	-9.653	14.927	12.266	21.243
17	.00000	.00000	60.43	74.49	.613	.596	-9.524	15.056	12.364	21.843
18	.00000	.00000	62.72	74.32	.646	.621	-9.133	15.462	12.847	22.443
19	.00000	.00000	64.73	74.09	.656	.637	-8.400	16.180	13.443	23.043
20	.00000	.00000	66.73	73.85	.669	.653	-8.125	16.455	13.743	23.643
21	.00000	.00000	67.21	73.74	.681	.666	-7.835	16.784	13.931	24.243
22	.00000	.00000	68.13	73.56	.691	.672	-7.602	16.974	14.131	24.843
23	.00000	.00000	69.19	73.44	.701	.680	-7.342	17.238	14.362	25.443
24	.00000	.00000	70.01	73.30	.710	.689	-7.138	17.442	14.557	26.043
25	.00000	.00000	70.91	73.18	.719	.697	-6.917	17.663	14.724	26.643
26	.00000	.00000	71.88	73.14	.727	.705	-6.722	17.857	14.881	27.243
27	.00000	.00000	72.85	72.95	.734	.712	-6.529	18.051	15.041	27.843
28	.00000	.00000	73.71	72.84	.743	.720	-6.315	18.265	15.197	28.443
29	.00000	.00000	74.56	72.77	.750	.724	-6.155	18.422	15.299	29.043
30	.00000	.00000	75.39	72.65	.758	.732	-5.954	18.625	15.456	29.643
31	.00000	.00000	76.21	72.53	.764	.739	-5.797	18.783	15.612	30.243
32	.00000	.00000	77.16	72.33	.772	.754	-5.558	19.222	15.926	30.843
33	.00000	.00000	78.06	72.12	.779	.768	-5.490	19.590	16.215	31.443
34	.00000	.00000	80.06	71.88	.814	.784	-4.566	20.013	16.555	32.043
35	.00000	.00000	81.14	71.65	.830	.799	-4.190	20.389	16.776	32.643
36	.00000	.00000	83.23	71.46	.844	.812	-3.843	20.737	17.151	33.243
37	.00000	.00000	84.77	71.23	.856	.827	-3.536	21.044	17.469	33.843
38	.00000	.00000	85.73	71.04	.869	.840	-3.222	21.366	17.733	34.443
39	.00000	.00000	86.65	70.90	.881	.849	-2.922	21.656	17.938	35.043
40	.00000	.00000	88.26	70.73	.895	.861	-2.567	21.993	18.179	35.643
41	.00000	.00000	89.31	70.51	.905	.875	-2.330	22.250	18.482	36.243
42	.00000	.00000	91.47	70.21	.927	.895	-1.792	22.788	18.900	36.843
43	.00000	.00000	93.42	69.89	.947	.916	-1.303	23.277	19.353	37.443
44	.00000	.00000	95.02	69.61	.963	.935	-1.006	23.674	19.747	38.043
45	.00000	.00000	96.51	69.34	.976	.953	-1.537	24.043	20.126	38.643
46	.00000	.00000	97.45	69.08	.988	.971	-1.301	24.279	20.499	39.243
47	.00000	.00000	98.11	68.90	.994	.983	-1.138	24.442	20.754	39.843
48	.00000	.00000	98.54	68.79	.999	.990	-1.030	24.550	20.909	40.443
49	.00000	.00000	98.84	68.71	1.000	.995	-1.007	24.573	21.022	41.043
50	.00000	.00000	98.83	68.66	1.000	.998	-1.008	24.572	21.044	41.643
51	.00000	.00000	98.65	68.63	1.000	1.001	-1.002	24.577	21.135	42.243
52	.00000	.00000	98.70	68.64	1.000	1.000	.010	24.560	21.120	42.843
53	.00000	.00000	98.74	68.65	1.000	.999	.019	24.569	21.100	43.443
54	.00000	.00000	98.77	68.66	1.000	.999	.016	24.567	21.087	44.043
55	.00000	.00000	98.73	68.68	1.000	.997	.010	24.553	21.062	44.643
56	.00000	.00000	98.73	68.66	1.000	.998	.018	24.568	21.085	45.243
57	.00000	.00000	98.65	68.65	1.000	.999	.012	24.570	21.104	45.843
58	.00000	.00000	98.68	68.68	1.000	.997	.011	24.569	21.078	46.443
59	.00000	.00000	98.62	68.67	1.000	.998	.011	24.570	21.068	47.043
60	.00000	.00000	98.67	68.72	1.000	.995	.027	24.553	21.007	47.643
61	.00000	.00000	98.59	68.69	.999	.996	.021	24.549	21.039	48.243
62	.00000	.00000	98.51	68.66	.998	.998	.038	24.541	21.086	48.843
63	.00000	.00000	98.51	68.67	.999	.998	.037	24.543	21.070	49.443
64	.00000	.00000	98.50	68.66	.999	.998	.025	24.545	21.085	50.043
65	.00000	.00000	98.68	68.68	.997	.997	.014	24.560	21.061	50.643
66	.00000	.00000	98.68	68.68	.998	.997	.045	24.535	21.054	51.243

Table 7.

JOE KLOC2 TAPE 3166R- FILES C1-21, PUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 11. NO GRID

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY =	99.059	99.059
FREE STREAM TEMPERATURE =	68.872	
WALL TEMPERATURE =	84.430	
WALL HEAT FLUX =	.05134	
FREE STREAM DENSITY =	.07591	
FREE STREAM KINEMATIC VISCOSITY =	.0001608	
DENSITY OF FLUID AT WALL =	.07374	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001693	
WALL/FREE STREAM DENSITY RATIO =	.97141	
LOCATION REYNOLDS NUMBER (REX) =	2270367.69	
INPUT VALUE OF VELOCITY DELTA =	.70000	
INPUT VALUE OF TEMPERATURE DELTA =	.67000	
CALCULATED DELTA =		.61240
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.09256	.09281
MOMENTUM THICKNESS (THETA) =	.06485	.06492
ENERGY-DISSIPATION THICKNESS =	.11458	.11456
ENTHALPY THICKNESS =	.00216	.00216
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.42734	1.42946
SHAPE FACTOR 32 (ENERGY/THETA) =	1.76686	1.76443
MOMENTUM THICKNESS REYNOLDS NUMBER =	3329.59	3333.40
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	4752.47	4764.96
SKIN FRICTION COEFFICIENT =	.033149	
FRICTION VELOCITY =	3.98780	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.52128
CLAUSERS *DELTA* INTEGRAL =	-2.13805	-2.25171
CLAUSERS *C* INTEGRAL =	15.46966	15.57364
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.08824	.09065
MOMENTUM THICKNESS - CONSTANT DENSITY =	.06533	.06541
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.35060	1.38587

LOCATION -X- 44.22000

Z = +6 INCHES

Table 8.

JOE KLUJ2 TAPE 3166R- FILES C1-21, RUNS 5.01-5.21 03/09/79

RUN NO. 1. POINT 11. NO GRID

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
1	.0000	.0000	34.59	80.50	.3459	.253	-16.166	8.675	5.403	8.502
2	.0000	.0000	34.13	79.52	.3413	.217	-15.781	9.059	6.774	10.858
3	.0000	.0000	36.36	79.54	.3636	.347	-14.971	9.870	7.418	12.422
4	.0000	.0000	45.73	78.16	.4573	.403	-13.550	11.291	8.618	15.766
5	.0000	.0000	47.74	77.66	.4774	.435	-12.868	11.973	9.300	18.122
6	.0000	.0000	49.60	77.40	.4960	.452	-12.404	12.437	9.669	20.287
7	.0000	.0000	51.73	77.01	.5173	.477	-11.869	12.972	10.204	22.013
8	.0000	.0000	53.82	76.51	.5382	.509	-11.345	13.496	10.882	23.528
9	.0000	.0000	55.86	76.33	.5586	.521	-11.030	13.811	11.145	25.052
10	.0000	.0000	56.91	76.23	.5691	.527	-10.820	14.021	11.274	26.208
11	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
12	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
13	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
14	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
15	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
16	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
17	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
18	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
19	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
20	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
21	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
22	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
23	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
24	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
25	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
26	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
27	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
28	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
29	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
30	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
31	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
32	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
33	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
34	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
35	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
36	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
37	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
38	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
39	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
40	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
41	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
42	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
43	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
44	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
45	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
46	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
47	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
48	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
49	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
50	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
51	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
52	.0000	.0000	57.10	75.87	.5710	.536	-10.714	14.127	11.459	27.560
53	.7571	1.236	99.06	68.26	.9906	1.000	-1.000	24.842	21.398	1486.563
54	.7925	1.294	99.06	68.26	.9906	1.000	-1.000	24.842	21.398	1556.769
55	.8275	1.351	99.06	68.26	.9906	1.000	-1.000	24.842	21.398	1624.788
56	.8625	1.408	99.06	68.26	.9906	1.000	-1.000	24.842	21.398	1693.588
57	.8975	1.465	99.06	68.26	.9906	1.000	-1.000	24.842	21.398	1761.442
58	.9325	1.522	99.06	68.26	.9906	1.000	-1.000	24.842	21.398	1830.358
59	.9675	1.579	99.06	68.26	.9906	1.000	-1.000	24.842	21.398	1900.000
60	1.0025	1.636	99.06	68.26	.9906	1.000	-1.000	24.842	21.398	1970.000
61	1.0375	1.693	99.06	68.26	.9906	1.000	-1.000	24.842	21.398	2040.000
62	1.0725	1.750	99.06	68.26	.9906	1.000	-1.000	24.842	21.398	2110.000
63	1.1075	1.807	99.06	68.26	.9906	1.000	-1.000	24.842	21.398	2180.000
64	1.1425	1.864	99.06	68.26	.9906	1.000	-1.000	24.842	21.398	2250.000
65	1.1775	1.921	99.06	68.26	.9906	1.000	-1.000	24.842	21.398	2320.000
66	1.2125	1.978	99.06	68.26	.9906	1.000	-1.000	24.842	21.398	2390.000
67	1.2475	2.035	99.06	68.26	.9906	1.000	-1.000	24.842	21.398	2460.000

Table 8.

JOB KLDC2 TAPE 3166R- FILES C1-21, RUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 13. NO GRID

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SURFAYED FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY =	99.444	99.444
FREE STREAM TEMPERATURE =	68.745	
WALL TEMPERATURE =	84.120	
WALL HEAT FLUX =	.05151	
FREE STREAM DENSITY =	.07593	
FREE STREAM KINEMATIC VISCOSITY =	.0001607	
DENSITY OF FLUID AT WALL =	.07378	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001691	
WALL/FREE STREAM DENSITY RATIO =	.97173	
LOCATION REYNOLDS NUMBER (REX) =	2692679.78	
INPUT VALUE OF VELOCITY DELTA =	.77000	
INPUT VALUE OF TEMPERATURE DELTA =	.84000	
CALCULATED DELTA =		.70870
DELTA 09.52 INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.10768	.10762
MOMENTUM THICKNESS (THETA) =	.07533	.07549
ENERGY-DISSIPATION THICKNESS =	.13310	.13317
ENTHALPY THICKNESS =	.00265	.00265
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.42940	1.42913
SHAPE FACTOR 32 (ENERGY/THETA) =	1.76673	1.76404
MOMENTUM THICKNESS REYNOLDS NUMBER =	3864.57	3892.79
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	5552.60	5559.41
SKIN FRICTION COEFFICIENT =	.003022	
FRICTION VELOCITY =	7.92160	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.56222
CLAUSERS *DELTA* INTEGRAL =	-2.52846	-2.66697
CLAUSERS *C* INTEGRAL =	18.72867	18.70714
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.10238	.10517
MOMENTUM THICKNESS - CONSTANT DENSITY =	.07592	.07609
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.34855	1.38238

LOCATION -X- 52.22000

Z = CENTERLINE

Table 9.

JOB KLDC2 TAPE 3166R- FILES 01-21, PUNS 5.01-5.21 03/09/79

PUN NO. 5. POINT 13. NO GRID

REDUCED PROFILE DATA

N	Y INCHES	DELTA	U/F	SEC	DELTA	U/F	THETA	U-UE	U(1)	T(1)	Y(1)
1	0.0000	0.0000	35.50	79.45	0.357	0.304	-16.301	9.057	6.294	10.302	10.302
2	0.0000	0.0000	37.00	76.94	0.337	0.337	-15.694	9.665	6.688	12.234	12.234
3	0.0000	0.0000	42.00	78.44	0.426	0.349	-14.566	10.792	7.656	14.554	14.554
4	0.0000	0.0000	45.00	78.10	0.454	0.392	-13.849	11.510	8.122	16.487	16.487
5	0.0000	0.0000	48.00	77.63	0.488	0.422	-12.996	12.363	8.750	19.772	19.772
6	0.0000	0.0000	50.00	77.34	0.505	0.441	-12.560	12.708	9.139	22.285	22.285
7	0.0000	0.0000	51.00	77.17	0.514	0.452	-12.329	13.029	9.375	24.218	24.218
8	0.0000	0.0000	52.00	77.02	0.530	0.462	-11.913	13.445	9.570	27.697	27.697
9	0.0000	0.0000	54.00	76.65	0.543	0.486	-11.566	13.773	10.000	31.562	31.562
10	0.0000	0.0000	55.00	76.42	0.554	0.501	-11.321	14.077	10.375	35.428	35.428
11	0.0000	0.0000	55.00	76.35	0.562	0.513	-11.118	14.240	10.638	38.786	38.786
12	0.0000	0.0000	56.00	75.04	0.573	0.519	-10.922	14.476	10.749	42.092	42.092
13	0.0000	0.0000	56.00	75.04	0.573	0.519	-10.922	14.476	10.749	45.097	45.097
14	0.0000	0.0000	57.00	75.55	0.574	0.522	-10.604	14.675	11.006	48.823	48.823
15	0.0000	0.0000	58.00	75.53	0.586	0.522	-10.454	14.664	11.447	52.823	52.823
16	0.0000	0.0000	58.00	75.53	0.586	0.522	-10.454	14.664	11.447	56.495	56.495
17	0.0000	0.0000	60.00	75.14	0.605	0.560	-10.723	15.335	11.785	60.865	60.865
18	0.0000	0.0000	61.00	75.73	0.621	0.597	-9.618	15.741	12.175	65.201	65.201
19	0.0000	0.0000	63.00	74.33	0.637	0.624	-9.201	16.157	12.588	69.344	69.344
20	0.0000	0.0000	64.00	74.65	0.646	0.610	-8.962	16.376	12.761	106.940	106.940
21	0.0000	0.0000	65.00	74.49	0.659	0.625	-8.658	16.770	13.294	121.836	121.836
22	0.0000	0.0000	66.00	74.34	0.667	0.617	-8.441	16.917	13.204	134.386	134.386
23	0.0000	0.0000	67.00	74.17	0.676	0.647	-8.223	17.135	13.458	146.175	146.175
24	0.0000	0.0000	68.00	74.11	0.685	0.654	-7.991	17.367	13.552	155.125	155.125
25	0.0000	0.0000	68.00	74.11	0.685	0.657	-7.807	17.551	13.676	165.654	165.654
26	0.0000	0.0000	69.00	73.45	0.698	0.667	-7.648	17.710	13.800	181.251	181.251
27	0.0000	0.0000	70.00	73.74	0.706	0.675	-7.446	17.910	14.000	199.747	199.747
28	0.0000	0.0000	71.00	73.17	0.713	0.683	-7.210	18.146	14.149	221.276	221.276
29	0.0000	0.0000	71.00	73.17	0.713	0.683	-7.210	18.146	14.149	242.293	242.293
30	0.0000	0.0000	72.00	72.52	0.715	0.697	-6.962	18.237	14.239	265.436	265.436
31	0.0000	0.0000	73.00	72.13	0.723	0.692	-6.756	18.303	14.344	291.965	291.965
32	0.0000	0.0000	74.00	72.00	0.732	0.690	-6.504	18.366	14.459	320.909	320.909
33	0.0000	0.0000	74.00	72.00	0.732	0.690	-6.504	18.366	14.459	347.419	347.419
34	0.0000	0.0000	75.00	72.88	0.743	0.712	-6.349	19.349	15.151	380.663	380.663
35	0.0000	0.0000	77.00	72.13	0.778	0.746	-6.690	19.666	15.461	418.889	418.889
36	0.0000	0.0000	78.00	72.56	0.790	0.761	-6.325	20.033	15.767	461.199	461.199
37	0.0000	0.0000	79.00	72.23	0.801	0.773	-6.050	20.309	16.023	508.666	508.666
38	0.0000	0.0000	80.00	72.06	0.813	0.784	-5.749	20.609	16.256	561.923	561.923
39	0.0000	0.0000	82.00	71.85	0.825	0.798	-5.446	20.913	16.542	621.040	621.040
40	0.0000	0.0000	83.00	71.69	0.836	0.799	-5.159	21.200	16.768	686.587	686.587
41	0.0000	0.0000	84.00	71.53	0.846	0.819	-4.900	21.476	16.973	758.141	758.141
42	0.0000	0.0000	85.00	71.33	0.855	0.829	-4.609	21.749	17.179	836.620	836.620
43	0.0000	0.0000	87.00	71.08	0.873	0.848	-4.091	22.267	17.579	921.141	921.141
44	0.0000	0.0000	88.00	70.90	0.886	0.866	-3.631	22.727	17.960	1011.461	1011.461
45	0.0000	0.0000	90.00	70.57	0.914	0.882	-3.182	23.176	18.273	1117.141	1117.141
46	0.0000	0.0000	92.00	70.37	0.931	0.901	-2.746	23.612	18.660	1238.368	1238.368
47	0.0000	0.0000	94.00	70.33	0.945	0.917	-2.365	23.973	18.997	1376.835	1376.835
48	0.0000	0.0000	95.00	69.76	0.959	0.934	-2.033	24.326	19.364	1533.742	1533.742
49	0.0000	0.0000	97.00	69.57	0.971	0.949	-1.734	24.624	19.665	1710.116	1710.116
50	0.0000	0.0000	97.00	69.31	0.981	0.964	-1.484	24.874	19.972	1913.140	1913.140
51	0.0000	0.0000	98.00	69.11	0.989	0.976	-1.290	25.066	20.034	2147.796	2147.796
52	0.0000	0.0000	98.00	69.70	0.993	0.983	-1.181	25.178	20.184	2415.843	2415.843
53	0.0000	0.0000	99.00	69.01	0.997	0.989	-1.077	25.281	20.266	2717.510	2717.510
54	0.0000	0.0000	99.00	68.80	0.999	0.997	-1.014	25.344	20.265	3054.350	3054.350
55	0.0000	0.0000	99.00	68.81	0.999	0.996	-1.002	25.356	20.264	3427.997	3427.997
56	0.0000	0.0000	99.00	68.79	0.999	0.997	-1.000	25.355	20.263	3838.644	3838.644
57	0.0000	0.0000	99.00	68.74	0.999	0.997	-1.000	25.355	20.263	4286.885	4286.885
58	0.0000	0.0000	99.00	68.71	0.999	0.997	-1.000	25.355	20.263	4773.748	4773.748
59	0.0000	0.0000	99.00	68.77	0.999	0.997	-1.000	25.355	20.263	5299.196	5299.196
60	0.0000	0.0000	99.00	68.75	0.999	0.997	-1.000	25.355	20.263	5863.493	5863.493
61	0.0000	0.0000	99.00	68.81	0.999	0.997	-1.000	25.355	20.263	6467.715	6467.715
62	0.0000	0.0000	99.00	68.82	0.999	0.997	-1.000	25.355	20.263	7113.913	7113.913
63	0.0000	0.0000	99.00	68.91	0.999	0.997	-1.000	25.355	20.263	7801.979	7801.979
64	0.0000	0.0000	99.00	68.93	0.999	0.997	-1.000	25.355	20.263	8532.134	8532.134
65	0.0000	0.0000	99.00	68.93	0.999	0.997	-1.000	25.355	20.263	9308.491	9308.491
66	0.0000	0.0000	99.00	68.92	0.999	0.997	-1.000	25.355	20.263	10131.104	10131.104
67	0.0000	0.0000	99.00	68.92	0.999	0.997	-1.000	25.355	20.263	11001.523	11001.523
68	0.0000	0.0000	99.00	68.91	0.999	0.997	-1.000	25.355	20.263	11920.682	11920.682

Table 9.

JOB WLD02 TAPE 3166R- FILES 01-21, PUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 14. NO GRID

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SURFACED FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY ==	98.693	98.693
FREE STREAM TEMPERATURE ==	67.661	
WALL TEMPERATURE ==	83.710	
WALL HEAT FLUX ==	.04986	
FREE STREAM DENSITY ==	.07571	
FREE STREAM KINEMATIC VISCOSITY ==	.0001609	
DENSITY OF FLUID AT WALL ==	.07347	
KINEMATIC VISCOSITY OF FLUID AT WALL ==	.0001697	
WALL/FREE STREAM DENSITY RATIO ==	.97047	
LOCATION REYNOLDS NUMBER (REX) ==	3079180.37	
INPUT VALUE OF VELOCITY DELTA ==	.88000	
INPUT VALUE OF TEMPERATURE DELTA ==	.92000	
CALCULATED DELTA ==		.81138
DELTA 99.5% INPUT ==	.00000	
DISPLACEMENT THICKNESS (DELSTAR) ==	.12218	.12228
MOMENTUM THICKNESS (THETA) ==	.08589	.08608
ENERGY-DISSIPATION THICKNESS ==	.15198	.15199
ENTHALPY THICKNESS ==	.00297	.00298
SHAPE FACTOR 12 (DELSTAR/THETA) ==	1.42244	1.42057
SHAPE FACTOR 32 (ENERGY/THETA) ==	1.76823	1.76573
MOMENTUM THICKNESS REYNOLDS NUMBER ==	4389.67	4399.09
DISPLACEMENT THICKNESS REYNOLDS NUMBER ==	6244.03	6249.21
SKIN FRICTION COEFFICIENT ==	.002948	
FRICTION VELOCITY ==	3.84608	
LAW OF THE WALL CONSTANT (K) ==	.41000	
LAW OF THE WALL CONSTANT (C) ==	5.00000	
WAKE STRENGTH ==		.56814
CLAUSERS *DELTA* INTEGRAL ==	-2.91444	-3.06146
CLAUSERS *G* INTEGRAL ==	21.50986	21.44969
DISPLACEMENT THICKNESS - CONSTANT DENSITY ==	.11639	.11931
MOMENTUM THICKNESS - CONSTANT DENSITY ==	.08654	.08673
SHAPE FACTOR 12 - CONSTANT DENSITY ==	1.34494	1.37559

LOCATION -X- 60.25000

Z = CENTERLINE

Table 10.

RUN NO.	5.	POINT	14.	NO GRID
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NO GRID

Table 10.

JOB KL002 TAPE 3166R- FILES 01-21, RUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 16. NO GRID

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUPPLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY =	96.710	98.710
FREE STREAM TEMPERATURE =	68.031	
WALL TEMPERATURE =	85.120	
WALL HEAT FLUX =	.05122	
FREE STREAM DENSITY =	.07566	
FREE STREAM KINEMATIC VISCOSITY =	.0001611	
DENSITY OF FLUID AT WALL =	.07328	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001705	
WALL/FREE STREAM DENSITY RATIO =	.96863	
LOCATION REYNOLDS NUMBER (REX) =	3075860.25	
INPUT VALUE OF VELOCITY DELTA =	.85000	
INPUT VALUE OF TEMPERATURE DELTA =	.85000	
CALCULATED DELTA =		.70604
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.10755	.10780
MOMENTUM THICKNESS (THETA) =	.07486	.07497
ENERGY-DISSIPATION THICKNESS =	.13224	.13222
ENTHALPY THICKNESS =	.00311	.00311
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.43636	1.43799
SHAPE FACTOR 32 (ENEPGY/THETA) =	1.76599	1.76370
MOMENTUM THICKNESS REYNOLDS NUMBER =	3822.71	3827.19
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	5490.80	5503.44
SKIN FRICTION COEFFICIENT =	.003019	
FRICTION VELOCITY =	3.89672	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.56596
CLAUSERS *DELTA* INTEGRAL =	-2.52846	-2.65211
CLAUSERS *C* INTEGRAL =	18.54361	18.64576
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.10213	.10470
MOMENTUM THICKNESS - CONSTANT DENSITY =	.07555	.07564
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.35187	1.38416

LOCATION -X- 60.25000

Z = -6 INCHES

Table 11.

JOB KL002 TAPE 3166R- FILES C1-21, RUNS 5.01-5.21 03/00/79

RUN NO. 5. POINT 16. NO GRID

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UF	THETA	U-UF UTAU	U(+)	T(+)	Y(+)
1	.0000	.0007	33.54	81.26	.340	.226	-16.725	8.677	5.159	8.819
2	.0000	.0006	36.49	80.13	.370	.252	-15.965	9.363	6.676	11.295
3	.0000	.0010	40.79	79.51	.406	.328	-15.043	10.268	7.500	13.200
4	.0000	.0011	43.32	79.25	.439	.355	-14.215	11.117	8.117	14.915
5	.0000	.0013	45.43	78.50	.460	.394	-13.673	11.654	8.774	17.010
6	.0000	.0015	47.16	77.13	.488	.410	-12.973	12.359	9.365	19.867
7	.0000	.0017	51.42	77.65	.511	.437	-12.393	12.939	9.993	22.915
8	.0000	.0016	51.19	77.41	.519	.451	-12.194	13.130	10.316	24.629
9	.0000	.0021	52.79	77.73	.535	.474	-11.785	13.547	10.831	26.248
10	.0000	.0024	53.83	76.74	.545	.490	-11.517	13.814	11.217	32.348
11	.0000	.0027	54.88	76.51	.556	.504	-11.253	14.078	11.520	36.520
12	.0000	.0029	55.61	76.41	.563	.529	-11.058	14.273	11.648	39.105
13	.0000	.0031	56.14	76.37	.569	.538	-10.925	14.406	11.845	42.344
14	.0000	.0034	56.60	76.36	.574	.530	-10.791	14.541	12.123	45.582
15	.0000	.0035	57.33	75.98	.580	.541	-10.648	14.654	12.369	49.010
16	.0000	.0040	57.75	75.73	.586	.550	-10.476	14.755	12.569	53.391
17	.0000	.0042	58.40	75.66	.592	.554	-10.344	14.977	12.658	56.749
18	.0000	.0045	59.09	75.34	.598	.572	-9.935	15.306	13.088	67.863
19	.0000	.0051	61.62	75.14	.624	.600	-9.519	15.812	13.401	81.063
20	.0000	.0071	62.06	74.79	.635	.604	-9.182	16.150	13.820	95.106
21	.0000	.0075	62.90	74.61	.646	.615	-8.959	16.374	14.058	106.535
22	.0000	.0084	64.94	74.47	.657	.623	-8.692	16.639	14.329	119.297
23	.0000	.0096	65.73	74.35	.667	.630	-8.442	16.846	14.415	132.821
24	.0000	.0106	66.73	74.25	.678	.638	-8.207	17.124	14.540	144.631
25	.0000	.0116	66.60	74.21	.685	.646	-7.988	17.363	14.769	158.536
26	.0000	.0126	67.74	73.87	.695	.658	-7.793	17.558	15.056	171.870
27	.0000	.0145	69.91	73.76	.698	.665	-7.648	17.684	15.284	183.298
28	.0000	.0156	69.66	73.70	.706	.668	-7.555	17.677	15.394	195.889
29	.0000	.0164	70.05	73.54	.719	.675	-7.207	18.124	15.529	209.585
30	.0000	.0174	71.67	73.42	.726	.679	-6.799	18.267	15.631	223.253
31	.0000	.0184	72.34	73.30	.733	.692	-6.438	18.393	15.655	235.889
32	.0000	.0194	73.74	73.50	.747	.709	-6.409	18.599	15.913	248.726
33	.0000	.0203	75.15	72.72	.761	.720	-6.047	19.025	16.474	313.205
34	.0000	.0213	76.55	72.55	.775	.736	-5.695	19.636	16.818	346.344
35	.0000	.0223	77.90	72.39	.790	.745	-5.326	20.006	17.030	380.614
36	.0000	.0237	79.10	72.15	.801	.759	-5.033	20.288	17.355	412.326
37	.0000	.0252	80.27	71.71	.813	.771	-4.732	20.570	17.621	447.112
38	.0000	.0267	81.59	71.22	.827	.784	-4.393	20.853	17.931	485.000
39	.0000	.0282	82.63	71.50	.837	.797	-4.126	21.206	18.229	513.560
40	.0000	.0296	84.85	71.34	.849	.827	-3.834	21.898	18.841	545.971
41	.0000	.0310	84.85	71.23	.860	.813	-3.556	21.776	18.581	581.020
42	.0000	.0324	86.63	71.09	.869	.837	-3.036	22.206	19.132	647.106
43	.0000	.0338	86.72	70.53	.880	.854	-2.564	22.768	19.527	713.593
44	.0000	.0351	90.57	70.21	.918	.872	-2.089	23.243	19.648	780.642
45	.0000	.0365	92.10	69.86	.933	.903	-1.666	23.630	20.423	846.629
46	.0000	.0379	93.54	69.57	.948	.910	-1.326	24.075	20.805	913.547
47	.0000	.0392	94.90	69.29	.961	.926	-1.077	24.355	21.182	980.264
48	.0000	.0406	96.01	69.01	.973	.943	-1.694	24.677	21.553	1047.313
49	.0000	.0420	96.66	68.72	.982	.960	-1.446	24.883	21.942	1113.791
50	.0000	.0434	97.55	68.52	.989	.972	-1.288	25.044	22.218	1181.220
51	.0000	.0448	97.96	68.36	.993	.980	-1.185	25.146	22.420	1246.436
52	.0000	.0462	98.39	68.28	.997	.988	-1.082	25.250	22.590	1313.604
53	.0000	.0476	98.41	68.17	.998	.992	-1.051	25.340	22.780	1380.271
54	.0000	.0490	98.59	68.00	.999	.997	-1.020	25.420	22.839	1447.327
55	.0000	.0504	98.71	67.85	1.000	.999	-1.000	25.500	22.867	1513.798
56	.0000	.0518	98.70	67.70	1.000	1.000	-1.000	25.580	22.867	1580.656
57	.0000	.0532	98.71	67.55	1.000	1.000	-1.000	25.660	22.844	1647.712
58	.0000	.0546	98.71	67.40	1.000	1.000	-1.000	25.740	22.844	1713.991
59	.0000	.0560	98.72	67.25	1.000	1.000	-1.000	25.820	22.868	1781.421
60	.0000	.0574	98.70	67.10	1.000	1.000	-1.000	25.900	22.854	1847.137
61	.0000	.0588	98.63	66.95	1.000	1.000	-1.000	25.980	22.854	1913.854
62	.0000	.0602	98.63	66.80	1.000	1.000	-1.000	26.060	22.749	1980.572
63	.0000	.0616	98.63	66.65	1.000	1.000	-1.000	26.140	22.758	2046.289
64	.0000	.0630	98.66	66.50	1.000	1.000	-1.000	26.220	22.780	2113.006
65	.0000	.0644	98.66	66.35	1.000	1.000	-1.000	26.300	22.757	2180.723
66	.0000	.0658	98.58	66.20	1.000	1.000	-1.000	26.380	22.772	2248.440
67	.0000	.0672	98.51	66.05	1.000	1.000	-1.000	26.460	22.742	2316.157
68	.0000	.0686	98.42	65.90	1.000	1.000	-1.000	26.540	22.689	2383.874
69	.0000	.0700	98.42	65.75	1.000	1.000	-1.000	26.620	22.689	2451.591

Table 11.

JOB KL002 TAPE 3148R- FILES 01-21, RUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 17. NO GRID

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY ==	99.470	99.470
FREE STREAM TEMPERATURE ==	68.758	
WALL TEMPERATURE ==	85.450	
WALL HEAT FLUX ==	.05012	
FREE STREAM DENSITY ==	.07555	
FREE STREAM KINEMATIC VISCOSITY ==	.0001615	
DENSITY OF FLUID AT WALL ==	.07324	
KINEMATIC VISCOSITY OF FLUID AT WALL ==	.0001707	
WALL/FREE STREAM DENSITY RATIO ==	.96938	
LOCATION REYNOLDS NUMBER (REX) ==	3500001.19	
INPUT VALUE OF VELOCITY DELTA ==	.98000	
INPUT VALUE OF TEMPERATURE DELTA ==	.98000	
CALCULATED DELTA ==		.91669
DELTA 99.5% INPUT ==	.00000	
DISPLACEMENT THICKNESS (DELSTAR) ==	.13832	.13846
MOMENTUM THICKNESS (THETA) ==	.09764	.09777
ENERGY-DISSIPATION THICKNESS ==	.17257	.17262
ENTHALPY THICKNESS ==	.00320	.00321
SHAPE FACTOR 12 (DELSTAR/THETA) ==	1.41664	1.41621
SHAPE FACTOR 32 (ENFPGY/THETA) ==	1.76741	1.76569
MOMENTUM THICKNESS REYNOLDS NUMBER ==	5010.87	5017.25
DISPLACEMENT THICKNESS REYNOLDS NUMBER ==	7098.62	7105.52
SKIN FRICTION COEFFICIENT ==	.002851	
FRICTION VELOCITY ==	3.81464	
LAW OF THE WALL CONSTANT (K) ==	.41000	
LAW OF THE WALL CONSTANT (C) ==	5.00000	
WAKE STRENGTH ==		.59918
CLAUSERS *DELTA* INTEGRAL ==	-3.39474	-3.52679
CLAUSERS *C* INTEGRAL ==	24.99203	24.99519
DISPLACEMENT THICKNESS - CONSTANT DENSITY ==	.13265	.13525
MOMENTUM THICKNESS - CONSTANT DENSITY ==	.09836	.09849
SHAPE FACTOR 12 - CONSTANT DENSITY ==	1.34862	1.37323

LOCATION -X- 68.20000

Z = CENTERLINE

Table 12.

RUN NO. 5. POINT 17. NO GRID

REDUCED PROFILE DATA

[illegible]

Table 12.

JOB KLDD2 TAPE 3166R- FILES 01-21, RUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 18. NO GRID

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY =	99.313	99.313
FREE STREAM TEMPERATURE =	68.674	
WALL TEMPERATURE =	85.360	
WALL HEAT FLUX =	.04966	
FREE STREAM DENSITY =	.07556	
FREE STREAM KINEMATIC VISCOSITY =	.0001615	
DENSITY OF FLUID AT WALL =	.07325	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001706	
WALL/FREE STREAM DENSITY RATIO =	.96939	
LOCATION REYNOLDS NUMBER (REX) =	3901397.53	
INPUT VALUE OF VELOCITY DELTA =	1.15000	
INPUT VALUE OF TEMPERATURE DELTA =	1.15000	
CALCULATED DELTA =		1.03442
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.15330	.15355
MOMENTUM THICKNESS (THETA) =	.10874	.10880
ENERGY-DISSIPATION THICKNESS =	.19236	.19231
ENTHALPY THICKNESS =	.00375	.00375
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.40987	1.41132
SHAPE FACTOR 32 (ENERGY/THETA) =	1.76904	1.76756
MOMENTUM THICKNESS REYNOLDS NUMBER =	5573.07	5576.46
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	7557.31	7870.19
SKIN FRICTION COEFFICIENT =	.002807	
FRICTION VELOCITY =	3.77872	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.58565
CLAUSERS *DELTA* INTEGRAL =	-3.80619	-3.93718
CLAUSERS *G* INTEGRAL =	27.62262	27.75020
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.14718	.14980
MOMENTUM THICKNESS - CONSTANT DENSITY =	.10956	.10963
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.34341	1.36645

LOCATION -X- 76.12000

Z = CENTERLINE

Table 13.

RUN NO.	S.	POINT	18.	NO GRID
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9
10	10	10	10	10
11	11	11	11	11
12	12	12	12	12
13	13	13	13	13
14	14	14	14	14
15	15	15	15	15
16	16	16	16	16
17	17	17	17	17
18	18	18	18	18
19	19	19	19	19
20	20	20	20	20
21	21	21	21	21
22	22	22	22	22
23	23	23	23	23
24	24	24	24	24
25	25	25	25	25
26	26	26	26	26
27	27	27	27	27
28	28	28	28	28
29	29	29	29	29
30	30	30	30	30
31	31	31	31	31
32	32	32	32	32
33	33	33	33	33
34	34	34	34	34
35	35	35	35	35
36	36	36	36	36
37	37	37	37	37
38	38	38	38	38
39	39	39	39	39
40	40	40	40	40
41	41	41	41	41
42	42	42	42	42
43	43	43	43	43
44	44	44	44	44
45	45	45	45	45
46	46	46	46	46
47	47	47	47	47
48	48	48	48	48
49	49	49	49	49
50	50	50	50	50
51	51	51	51	51
52	52	52	52	52
53	53	53	53	53
54	54	54	54	54
55	55	55	55	55
56	56	56	56	56
57	57	57	57	57
58	58	58	58	58
59	59	59	59	59
60	60	60	60	60
61	61	61	61	61
62	62	62	62	62
63	63	63	63	63
64	64	64	64	64
65	65	65	65	65
66	66	66	66	66
67	67	67	67	67
68	68	68	68	68
69	69	69	69	69
70	70	70	70	70
71	71	71	71	71
72	72	72	72	72
73	73	73	73	73
74	74	74	74	74
75	75	75	75	75
76	76	76	76	76
77	77	77	77	77
78	78	78	78	78
79	79	79	79	79
80	80	80	80	80
81	81	81	81	81
82	82	82	82	82
83	83	83	83	83
84	84	84	84	84
85	85	85	85	85
86	86	86	86	86
87	87	87	87	87

REDUCED PROFILE DATA

[illegible]

Table 13.

JOB KLDD2 TAPE 3166R- FILES C1-21, PUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 19. NO GRID

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SURFACED FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY	99.216	99.216
FREE STREAM TEMPERATURE	68.650	
WALL TEMPERATURE	85.320	
WALL HEAT FLUX	.05023	
FREE STREAM DENSITY	.07597	
FREE STREAM KINEMATIC VISCOSITY	.0001615	
DENSITY OF FLUID AT WALL	.07326	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001706	
WALL/FREE STREAM DENSITY RATIO	.96941	
LOCATION REYNOLDS NUMBER (REX)	3897869.16	
INPUT VALUE OF VELOCITY DELTA	1.00000	
INPUT VALUE OF TEMPERATURE DELTA	1.20000	
CALCULATED DELTA		1.02303
DELTA 99.5% INPUT	.00000	
DISPLACEMENT THICKNESS (DELTA*)	.15391	.15404
MOMENTUM THICKNESS (THETA)	.10875	.10885
ENERGY-DISSIPATION THICKNESS	.19235	.19238
ENTHALPY THICKNESS	.00397	.00397
SHAPE FACTOR 12 (DELTA*/THETA)	1.41530	1.41512
SHAPE FACTOR 32 (ENERGY/THETA)	1.76880	1.76731
MOMENTUM THICKNESS REYNOLDS NUMBER	5568.62	5574.14
DISPLACEMENT THICKNESS REYNOLDS NUMBER	7881.25	7888.09
SKIN FRICTION COEFFICIENT	.002785	
FRICTION VELOCITY	3.76024	
LAW OF THE WALL CONSTANT (K)	.41000	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		.61476
CLAUSERS *DELTA* INTEGRAL	-3.82406	-3.96030
CLAUSERS *C* INTEGRAL	28.09329	28.10847
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.14744	.15009
MOMENTUM THICKNESS - CONSTANT DENSITY	.10961	.10972
SHAPE FACTOR 12 - CONSTANT DENSITY	1.34521	1.36798

LOCATION -X- 76.12000

Z = +6 INCHES

Table 14.

RUN NO.	F.	POINT	19.	NO GRID
REDUCED PROFILE DATA				

[illegible]

Table 14.

JOB KL002 TAPE 3166R- FILES 01-21, RUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 20. NO GRID

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY	99.452	99.452
FREE STREAM TEMPERATURE	68.400	
WALL TEMPERATURE	84.850	
WALL HEAT FLUX	.34965	
FREE STREAM DENSITY	.07538	
FREE STREAM KINEMATIC VISCOSITY	.0001618	
DENSITY OF FLUID AT WALL	.07310	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001708	
WALL/FREE STREAM DENSITY RATIO	.96979	
LOCATION REYNOLDS NUMBER (REY)	3898767.47	
INPUT VALUE OF VELOCITY DELTA	1.00000	
INPUT VALUE OF TEMPERATURE DELTA	1.05000	
CALCULATED DELTA		.92057
DELTA 9.5% INPUT	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	.14019	.14035
MOMENTUM THICKNESS (THETA)	.09830	.09844
ENERGY-DISSIPATION THICKNESS	.17360	.17365
ENTHALPY THICKNESS	.00371	.00371
SHAPE FACTOR 12 (DELSTAR/THETA)	1.42610	1.42572
SHAPE FACTOR 32 (ENERGY/THETA)	1.76603	1.76397
MOMENTUM THICKNESS REYNOLDS NUMBER	5034.87	5042.06
DISPLACEMENT THICKNESS REYNOLDS NUMBER	7180.24	7188.56
SKIN FRICTION COEFFICIENT	.002830	
FRICTION VELOCITY	3.79888	
LAW OF THE WALL CONSTANT (K)	.41000	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		.62089
CLAUSERS *DELTA* INTEGRAL	-3.42801	-3.57703
CLAUSERS *G* INTEGRAL	25.60153	25.61305
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.13371	.13664
MOMENTUM THICKNESS - CONSTANT DENSITY	.09912	.09926
SHAPE FACTOR 12 - CONSTANT DENSITY	1.34898	1.37649

LOCATION -X- 76.12000

Z = -6 INCHES

Table 15.

JOB KL002 TAPE 3166R- FILFS C1-21, PUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 20. NO GRID

REDUCED PROFILE DATA

N	Y	Y/	U	T	U-UE	THFTA	U-UE	U+1	T(+)	Y(+)
INCHES	DELTA	FT/SEC	DEG F	U/UE	UTAU					
1	.0000	.0000	35.06	.3533	.262	-16.951	9.229	6.198	10.247	10.247
2	.0000	.0000	35.06	.3533	.335	-16.155	10.025	7.154	12.656	12.656
3	.0000	.0000	35.06	.3533	.374	-15.439	10.740	7.707	14.609	14.609
4	.0000	.0000	43.38	.4336	.374	-14.761	11.418	8.232	16.362	16.362
5	.0000	.0000	43.38	.4336	.397	-14.237	11.942	8.722	18.215	18.215
6	.0000	.0000	45.77	.4579	.421	-13.511	12.589	9.269	20.095	20.095
7	.0000	.0000	45.77	.4579	.426	-13.242	13.138	9.503	22.375	22.375
8	.0000	.0000	51.05	.5103	.446	-13.005	13.611	9.799	25.628	25.628
9	.0000	.0000	51.05	.5103	.462	-12.568	14.174	10.282	28.704	28.704
10	.0000	.0000	51.71	.5177	.462	-12.568	14.611	10.735	31.810	31.810
11	.0000	.0000	51.71	.5177	.488	-12.009	15.112	11.266	34.746	34.746
12	.0000	.0000	54.32	.5432	.501	-11.981	15.589	11.735	37.711	37.711
13	.0000	.0000	54.32	.5432	.511	-11.727	16.033	12.232	40.934	40.934
14	.0000	.0000	54.32	.5432	.522	-11.555	16.444	12.654	44.347	44.347
15	.0000	.0000	56.16	.5616	.517	-11.331	16.866	13.094	47.953	47.953
16	.0000	.0000	56.16	.5616	.521	-11.331	17.288	13.457	51.747	51.747
17	.0000	.0000	56.16	.5616	.521	-11.331	17.678	13.779	55.711	55.711
18	.0000	.0000	56.16	.5616	.555	-11.000	18.033	14.047	59.839	59.839
19	.0000	.0000	56.16	.5616	.573	-10.433	18.333	14.261	64.128	64.128
20	.0000	.0000	61.15	.6115	.584	-10.000	18.589	14.433	68.561	68.561
21	.0000	.0000	61.15	.6115	.584	-9.822	18.866	14.589	73.130	73.130
22	.0000	.0000	61.15	.6115	.606	-9.527	19.112	14.727	77.836	77.836
23	.0000	.0000	61.15	.6115	.615	-9.266	19.333	14.844	82.661	82.661
24	.0000	.0000	64.92	.6492	.623	-8.885	19.522	14.944	87.609	87.609
25	.0000	.0000	64.92	.6492	.627	-8.885	19.678	15.022	92.671	92.671
26	.0000	.0000	64.92	.6492	.639	-8.672	19.800	15.089	97.936	97.936
27	.0000	.0000	67.16	.6716	.644	-8.501	19.889	15.144	103.399	103.399
28	.0000	.0000	67.16	.6716	.652	-8.351	19.944	15.189	108.953	108.953
29	.0000	.0000	67.16	.6716	.658	-8.183	20.000	15.222	114.609	114.609
30	.0000	.0000	67.16	.6716	.658	-8.056	20.056	15.244	120.362	120.362
31	.0000	.0000	67.16	.6716	.662	-7.885	20.112	15.266	126.215	126.215
32	.0000	.0000	67.16	.6716	.668	-7.755	20.168	15.288	132.168	132.168
33	.0000	.0000	71.23	.7123	.683	-7.422	20.222	15.311	138.215	138.215
34	.0000	.0000	71.23	.7123	.695	-7.266	20.278	15.333	144.359	144.359
35	.0000	.0000	71.23	.7123	.712	-6.764	20.333	15.355	150.609	150.609
36	.0000	.0000	71.23	.7123	.725	-6.455	20.389	15.377	156.953	156.953
37	.0000	.0000	71.23	.7123	.734	-6.169	20.444	15.399	163.399	163.399
38	.0000	.0000	71.23	.7123	.742	-5.885	20.499	15.422	169.936	169.936
39	.0000	.0000	71.23	.7123	.753	-5.689	20.555	15.444	176.561	176.561
40	.0000	.0000	71.23	.7123	.762	-5.422	20.611	15.466	183.271	183.271
41	.0000	.0000	71.23	.7123	.775	-5.165	20.668	15.488	190.069	190.069
42	.0000	.0000	71.23	.7123	.781	-4.900	20.722	15.511	196.953	196.953
43	.0000	.0000	71.23	.7123	.781	-4.722	20.778	15.533	203.936	203.936
44	.0000	.0000	71.23	.7123	.781	-4.544	20.833	15.555	210.999	210.999
45	.0000	.0000	71.23	.7123	.781	-4.366	20.889	15.577	218.130	218.130
46	.0000	.0000	71.23	.7123	.781	-4.188	20.944	15.599	225.327	225.327
47	.0000	.0000	71.23	.7123	.781	-4.011	21.000	15.622	232.589	232.589
48	.0000	.0000	71.23	.7123	.781	-3.833	21.056	15.644	239.909	239.909
49	.0000	.0000	71.23	.7123	.781	-3.655	21.112	15.666	247.271	247.271
50	.0000	.0000	71.23	.7123	.781	-3.477	21.168	15.688	254.671	254.671
51	.0000	.0000	71.23	.7123	.781	-3.300	21.222	15.711	262.109	262.109
52	.0000	.0000	71.23	.7123	.781	-3.122	21.278	15.733	269.589	269.589
53	.0000	.0000	71.23	.7123	.781	-2.944	21.333	15.755	277.109	277.109
54	.0000	.0000	71.23	.7123	.781	-2.766	21.389	15.777	284.661	284.661
55	.0000	.0000	71.23	.7123	.781	-2.588	21.444	15.800	292.244	292.244
56	.0000	.0000	71.23	.7123	.781	-2.411	21.499	15.822	299.861	299.861
57	.0000	.0000	71.23	.7123	.781	-2.233	21.555	15.844	307.509	307.509
58	.0000	.0000	71.23	.7123	.781	-2.055	21.611	15.866	315.189	315.189
59	.0000	.0000	71.23	.7123	.781	-1.877	21.668	15.888	322.909	322.909
60	.0000	.0000	71.23	.7123	.781	-1.700	21.722	15.911	330.661	330.661
61	.0000	.0000	71.23	.7123	.781	-1.522	21.778	15.933	338.444	338.444
62	.0000	.0000	71.23	.7123	.781	-1.344	21.833	15.955	346.261	346.261
63	.0000	.0000	71.23	.7123	.781	-1.166	21.889	15.977	354.109	354.109
64	.0000	.0000	71.23	.7123	.781	-0.988	21.944	16.000	362.000	362.000
65	.0000	.0000	71.23	.7123	.781	-0.811	22.000	16.022	369.936	369.936
66	.0000	.0000	71.23	.7123	.781	-0.633	22.056	16.044	377.909	377.909
67	.0000	.0000	71.23	.7123	.781	-0.455	22.112	16.066	385.911	385.911
68	.0000	.0000	71.23	.7123	.781	-0.277	22.168	16.088	393.936	393.936
69	.0000	.0000	71.23	.7123	.781	-0.100	22.222	16.111	401.989	401.989
70	.0000	.0000	71.23	.7123	.781	0.077	22.278	16.133	409.999	409.999
71	.0000	.0000	71.23	.7123	.781	0.255	22.333	16.155	417.999	417.999
72	.0000	.0000	71.23	.7123	.781	0.433	22.389	16.177	425.999	425.999

Table 15.

JOB KLDD2 TAPE 3166R- FILES G1-21, PUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 21. NO GRID

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUELAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY	99.386	99.386
FREE STREAM TEMPERATURE	68.761	
WALL TEMPERATURE	85.150	
WALL HEAT FLUX	.05040	
FREE STREAM DENSITY	.07533	
FREE STREAM KINEMATIC VISCOSITY	.0001620	
DENSITY OF FLUID AT WALL	.07306	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001710	
WALL/FREE STREAM DENSITY RATIO	.96981	
LOCATION REYNOLDS NUMBER (REX)	4300270.75	
INPUT VALUE OF VELOCITY DELTA	1.16000	
INPUT VALUE OF TEMPERATURE DELTA	1.20000	
CALCULATED DELTA		1.12000
DELTA 99.5% INPUT	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	.16717	.16724
MOMENTUM THICKNESS (THETA)	.11853	.11873
ENERGY-DISSIPATION THICKNESS	.20985	.20997
ENTHALPY THICKNESS	.00411	.70412
SHAPE FACTOR 12 (DELSTAR/THETA)	1.41039	1.40859
SHAPE FACTOR 32 (ENERGY/THETA)	1.77047	1.76849
MOMENTUM THICKNESS REYNOLDS NUMBER	6060.58	6070.91
DISPLACEMENT THICKNESS REYNOLDS NUMBER	8547.72	8551.42
SKIN FRICTION COEFFICIENT	.002744	
FRICTION VELOCITY	3.73840	
LAW OF THE WALL CONSTANT (K)	.41000	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		.61452
CLAUSERS 'DELTA' INTEGRAL	-4.16670	-4.33686
CLAUSERS 'G' INTEGRAL	30.84027	30.74177
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.15990	.16313
MOMENTUM THICKNESS - CONSTANT DENSITY	.11943	.11963
SHAPE FACTOR 12 - CONSTANT DENSITY	1.33867	1.36357

LOCATION -X- 84.10001

Z = CENTERLINE

Table 16.

RUN NO. 5. POINT 21. NO GRID

REDUCED PROFILE DATA

[illegible]**Table 16.**

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 3. GRID NO. 1

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY ==	98.579	98.579
FREE STREAM TEMPERATURE ==	69.040	
WALL TEMPERATURE ==	88.500	
WALL HEAT FLUX ==	.07848	
FREE STREAM DENSITY ==	.07656	
FREE STREAM KINEMATIC VISCOSITY ==	.0001594	
DENSITY OF FLUID AT WALL ==	.07385	
KINEMATIC VISCOSITY OF FLUID AT WALL ==	.0001700	
WALL/FREE STREAM DENSITY RATIO ==	.96450	
LOCATION REYNOLDS NUMBER (REX) ==	1042257.25	
INPUT VALUE OF VELOCITY DELTA ==	.38000	
INPUT VALUE OF TEMPERATURE DELTA ==	.38000	
CALCULATED DELTA ==		.28346
DELTA 99.5% INPUT ==	.00000	
DISPLACEMENT THICKNESS (DELSTAR) ==	.03973	.03962
MOMENTUM THICKNESS (THETA) ==	.02650	.02688
ENERGY-DISSIPATION THICKNESS ==	.04728	.04765
ENTHALPY THICKNESS ==	.00144	.00145
SHAPE FACTOR 12 (DELSTAR/THETA) ==	1.49920	1.47388
SHAPE FACTOR 32 (ENERGY/THETA) ==	1.78418	1.77255
MOMENTUM THICKNESS REYNOLDS NUMBER ==	1365.21	1385.10
DISPLACEMENT THICKNESS REYNOLDS NUMBER ==	2046.73	2041.47
SKIN FRICTION COEFFICIENT ==	.004092	
FRICTION VELOCITY ==	4.54052	
LAW OF THE WALL CONSTANT (K) ==	.41000	
LAW OF THE WALL CONSTANT (C) ==	5.00000	
WAKE STRENGTH ==		.20209
CLAUSERS 'DELTA' INTEGRAL ==	-.69385	-.82885
CLAUSERS 'G' INTEGRAL ==	5.42495	5.18405
DISPLACEMENT THICKNESS - CONSTANT DENSITY ==	.03512	.03818
MOMENTUM THICKNESS - CONSTANT DENSITY ==	.02678	.02718
SHAPE FACTOR 12 - CONSTANT DENSITY ==	1.31159	1.40465

LOCATION -X- 20.23000

Z = CENTERLINE

Table 17.

JOB KLD46 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 3. GRID NO. 1

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	U-UE UTAU	U(+)	Y(+)	Y(+)
1	.00063	.022	48.11	80.88	.488	.392	-11.115	10.596	7.813	14.091
2	.00078	.028	52.24	80.13	.530	.430	-10.205	11.506	8.579	17.430
3	.00087	.031	54.96	79.72	.558	.451	-9.606	12.104	9.003	19.433
4	.00097	.034	56.72	79.29	.575	.473	-9.218	12.493	9.448	21.659
5	.00107	.038	58.28	78.96	.591	.490	-8.875	12.836	9.781	23.885
6	.00121	.043	60.36	78.66	.612	.506	-8.418	13.293	10.093	27.001
7	.00135	.048	61.40	78.39	.623	.520	-8.187	13.523	10.367	30.118
8	.00143	.051	62.00	78.25	.629	.527	-8.055	13.656	10.512	31.899
9	.00165	.058	63.52	77.87	.644	.546	-7.721	13.990	10.900	36.796
10	.00187	.066	64.71	77.43	.656	.569	-7.459	14.252	11.349	41.693
11	.00207	.073	65.52	77.27	.665	.577	-7.280	14.431	11.512	46.145
12	.00221	.078	66.30	77.11	.673	.585	-7.108	14.603	11.674	49.261
13	.00236	.083	66.68	76.93	.676	.595	-7.025	14.686	11.868	52.600
14	.00257	.091	67.26	76.73	.682	.605	-6.894	14.817	12.066	57.275
15	.00273	.096	67.99	76.64	.687	.610	-6.736	14.974	12.163	60.837
16	.00295	.104	68.50	76.59	.695	.618	-6.625	15.086	12.213	65.734
17	.00311	.110	69.15	76.51	.701	.616	-6.482	15.228	12.291	69.295
18	.00375	.132	70.75	76.10	.718	.637	-6.129	15.581	12.718	83.542
19	.00445	.157	72.63	75.63	.737	.661	-5.715	15.996	13.195	96.124
20	.00515	.182	74.34	75.23	.754	.682	-5.338	16.373	13.608	114.706
21	.00578	.207	75.66	74.95	.768	.696	-5.043	16.668	13.889	128.062
22	.00594	.217	77.19	74.68	.777	.710	-4.710	17.001	14.173	143.421
23	.00714	.244	78.61	74.35	.797	.724	-4.397	17.314	14.437	159.449
24	.00775	.274	79.77	74.15	.809	.737	-4.142	17.569	14.715	172.582
25	.00844	.298	80.99	73.91	.822	.750	-3.874	17.837	14.961	187.719
26	.00917	.324	82.34	73.67	.835	.762	-3.576	18.111	15.255	204.191
27	.00979	.345	83.47	73.40	.847	.776	-3.327	18.383	15.483	232.907
28	.01046	.369	84.53	73.15	.858	.789	-3.093	18.618	15.739	262.711
29	.01117	.394	85.62	72.91	.869	.801	-2.854	18.857	15.988	297.649
30	.01177	.415	86.58	72.67	.878	.813	-2.642	19.069	16.231	332.067
31	.01247	.440	87.53	72.44	.888	.825	-2.433	19.278	16.467	372.649
32	.01314	.464	88.52	72.35	.898	.830	-2.215	19.496	16.558	417.563
33	.01483	.523	90.73	71.74	.920	.861	-1.729	19.982	17.185	530.183
34	.01661	.586	92.67	71.21	.940	.888	-1.302	20.409	17.724	669.806
35	.01837	.648	94.32	70.66	.957	.917	-.939	20.772	18.288	808.983
36	.02016	.712	95.56	70.42	.970	.929	-.660	21.051	18.540	949.274
37	.02185	.771	96.50	70.03	.979	.949	-.458	21.253	18.943	1086.448
38	.02368	.836	97.15	69.72	.985	.965	-.316	21.395	19.258	1227.184
39	.02535	.894	97.66	69.50	.991	.977	-.203	21.508	19.486	1364.358
40	.02715	.958	98.05	69.35	.995	.984	-.117	21.594	19.633	1504.426
41	.02885	1.018	98.25	69.24	.997	.989	-.072	21.639	19.745	1642.268
42	.03064	1.081	98.41	69.17	.998	.993	-.037	21.674	19.817	1782.114
43	.03361	1.186	98.50	69.08	.999	.998	-.017	21.694	19.916	1924.226
44	.03667	1.294	98.59	69.04	1.000	1.000	.000	21.713	19.951	2068.342
45	.03968	1.400	98.59	69.01	1.000	1.001	.004	21.714	19.982	2214.444
46	.04265	1.505	98.58	69.07	1.000	.999	-.000	21.711	19.928	2362.457
47	.04564	1.610	98.56	69.04	1.000	1.000	.000	21.707	19.953	2512.014
48	.04869	1.718	98.60	69.03	1.000	1.001	.006	21.717	19.968	2663.907
49	.05167	1.823	98.62	69.04	1.000	1.000	.010	21.721	19.955	2817.242
50	.05465	1.928	98.58	69.05	1.000	.999	-.001	21.710	19.940	2972.577
51	.05763	2.033	98.51	69.04	.999	1.000	-.015	21.696	19.953	3129.912
52	.06067	2.140	98.47	69.01	.999	1.001	-.023	21.688	19.982	3289.582
53	.06245	2.209	98.50	69.03	.999	1.000	-.016	21.695	19.963	3451.405
54	.06425	3.676	98.40	69.04	.998	1.000	-.040	21.671	19.951	3615.674
55	.06607	4.448	98.43	69.06	.999	.999	-.032	21.679	19.934	3782.387
56	.06785	5.216	98.39	69.05	.998	1.000	-.041	21.670	19.924	3951.210
57	.06971	5.987	98.30	69.07	.997	.998	-.061	21.650	19.923	4122.515
58	.07153	6.757	98.28	69.07	.997	.998	-.065	21.646	19.924	4296.328
59	.07334	7.526	98.21	69.08	.996	.998	-.081	21.630	19.917	4472.797
60	.07515	8.295	98.15	69.07	.996	.998	-.094	21.617	19.923	4651.979
61	.07695	9.065	98.14	69.07	.996	.998	-.096	21.613	19.922	4833.883
62	.07871	9.836	98.04	69.10	.995	.997	-.111	21.592	19.888	5018.583
63	.08065	10.607	98.10	69.10	.995	.997	-.106	21.605	19.894	5206.041

Table 17.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 4. GRID NO. 1

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY =	98.669	98.669
FREE STREAM TEMPERATURE =	69.213	
WALL TEMPERATURE =	88.710	
WALL HEAT FLUX =	.07774	
FREE STREAM DENSITY =	.07654	
FREE STREAM KINEMATIC VISCOSITY =	.0001595	
DENSITY OF FLUID AT WALL =	.07382	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001701	
WALL/FREE STREAM DENSITY RATIO =	.96445	
LOCATION REYNOLDS NUMBER (REX) =	1042609.78	
INPUT VALUE OF VELOCITY DELTA =	.38000	
INPUT VALUE OF TEMPERATURE DELTA =	.41000	
CALCULATED DELTA =		.30691
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.04407	.04376
MOMENTUM THICKNESS (THETA) =	.02918	.02969
ENERGY-DISSIPATION THICKNESS =	.05197	.05252
ENTHALPY THICKNESS =	.00153	.00154
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.51034	1.47391
SHAPE FACTOR 32 (ENERGY/THETA) =	1.78130	1.76873
MOMENTUM THICKNESS REYNOLDS NUMBER =	1503.68	1530.32
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	2271.08	2255.55
SKIN FRICTION COEFFICIENT =	.003946	
FRICTION VELOCITY =	4.46288	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.25291
CLAUSERS 'DELTA' INTEGRAL =	-.77189	-.93355
CLAUSERS 'G' INTEGRAL =	6.38686	5.97025
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.03873	.04223
MOMENTUM THICKNESS - CONSTANT DENSITY =	.02948	.03001
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.31385	1.40698

LOCATION -X- 20.23000

Z = +6 INCHES

Table 18.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 D4/05/79

RUN NO. 8. POINT 4. GRID NO. 1

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
1	.0076	.025	50.76	80.54	.514	.419	-10.734	11.375	8.311	16.683
2	.0090	.029	53.58	79.90	.543	.452	-10.102	12.007	8.965	19.744
3	.0098	.032	55.24	79.60	.560	.467	-9.732	12.377	9.260	21.493
4	.0107	.035	56.59	79.31	.574	.482	-9.428	12.681	9.562	23.461
5	.0119	.039	57.99	78.93	.588	.503	-9.115	12.994	9.972	26.084
6	.0135	.044	59.69	78.58	.605	.520	-8.734	13.374	10.307	29.583
7	.0148	.048	60.62	78.30	.614	.534	-8.526	13.583	10.586	32.425
8	.0157	.051	61.29	78.12	.621	.543	-8.376	13.733	10.772	35.393
9	.0178	.056	62.62	77.85	.635	.557	-8.077	14.031	11.045	38.985
10	.0198	.065	63.46	77.56	.643	.572	-7.885	14.224	11.340	43.357
11	.0216	.070	64.38	77.38	.652	.581	-7.664	14.425	11.523	47.293
12	.0234	.076	65.14	77.22	.660	.589	-7.513	14.596	11.689	51.229
13	.0248	.081	65.58	77.06	.665	.597	-7.415	14.694	11.846	55.290
14	.0266	.087	66.37	76.87	.673	.607	-7.238	14.871	12.039	59.663
15	.0286	.094	67.01	76.77	.679	.613	-7.093	15.015	12.146	63.817
16	.0307	.100	67.62	76.65	.685	.619	-6.957	15.152	12.268	67.190
17	.0325	.106	68.12	76.53	.690	.625	-6.846	15.263	12.387	71.126
18	.0339	.127	69.66	76.11	.709	.646	-6.429	15.680	12.819	85.556
19	.0437	.149	71.59	75.74	.726	.665	-6.068	16.041	13.591	99.987
20	.0526	.171	73.30	75.37	.743	.684	-5.685	16.424	13.564	115.073
21	.0587	.191	74.49	75.12	.755	.697	-5.417	16.692	13.821	128.411
22	.0637	.214	75.94	74.87	.770	.710	-5.092	17.017	14.080	141.716
23	.0727	.237	77.24	74.61	.783	.723	-4.802	17.307	14.342	154.921
24	.0787	.257	78.36	74.38	.794	.735	-4.547	17.562	14.571	172.140
25	.0860	.280	79.67	74.12	.807	.748	-4.257	17.852	14.821	198.802
26	.0927	.302	80.67	73.89	.816	.760	-4.034	18.075	15.072	228.101
27	.0989	.322	81.77	73.72	.829	.769	-3.787	18.322	15.249	259.750
28	.1062	.346	82.93	73.53	.840	.779	-3.527	18.582	15.437	293.606
29	.1127	.367	83.86	73.26	.850	.793	-3.318	18.791	15.616	329.808
30	.1187	.387	84.93	73.03	.861	.804	-3.078	19.031	15.791	368.480
31	.1260	.411	85.83	72.81	.870	.815	-2.877	19.232	15.952	409.598
32	.1329	.433	86.67	72.62	.878	.825	-2.689	19.420	16.170	453.559
33	.1456	.489	89.11	72.18	.903	.848	-2.142	19.965	16.808	500.646
34	.1675	.546	91.11	71.73	.923	.871	-1.694	20.415	17.272	550.816
35	.1847	.602	92.97	71.30	.942	.893	-1.278	20.831	17.705	603.905
36	.2027	.661	94.42	70.84	.957	.916	-.952	21.157	18.173	643.261
37	.2198	.716	95.55	70.54	.969	.932	-.690	21.419	18.475	680.649
38	.2377	.775	96.61	70.20	.979	.950	-.463	21.646	18.829	719.787
39	.2549	.831	97.30	69.91	.986	.964	-.307	21.802	19.117	757.394
40	.2727	.889	97.75	69.72	.991	.974	-.207	21.902	19.314	796.313
41	.2897	.944	98.18	69.59	.995	.981	-.109	22.000	19.446	833.483
42	.3077	1.003	98.42	69.49	.997	.986	-.055	22.053	19.552	872.839
43	.3375	1.100	98.63	69.35	.999	.993	-.019	22.090	19.692	913.996
44	.3676	1.198	98.63	69.28	1.000	.997	-.008	22.101	19.764	956.808
45	.3977	1.296	98.65	69.24	1.000	.999	-.004	22.105	19.802	989.621
46	.4277	1.394	98.69	69.21	1.000	1.000	-.005	22.114	19.829	1000.808
47	.4577	1.491	98.66	69.20	1.000	1.001	-.001	22.108	19.841	1066.402
48	.4877	1.589	98.68	69.22	1.000	.999	.003	22.112	19.818	1132.214
49	.5178	1.687	98.71	69.24	1.000	.999	.010	22.119	19.801	1197.808
50	.5478	1.785	98.67	69.25	1.000	.998	.000	22.109	19.793	1263.402
51	.5778	1.883	98.68	69.24	1.000	.999	.003	22.112	19.803	1329.214
52	.6079	1.981	98.63	69.25	1.000	.998	-.008	22.101	19.797	1805.425
53	.6379	2.079	98.68	69.23	1.000	.999	.003	22.112	19.814	2282.292
54	.6679	2.177	98.72	69.23	1.001	.999	.012	22.121	19.810	2758.940
55	.6979	2.275	98.70	69.18	1.000	1.002	.010	22.119	19.866	3235.151
56	.7279	2.373	98.70	69.16	1.000	1.003	.007	22.116	19.883	3711.548
57	.7579	2.471	98.75	69.14	1.001	1.004	.018	22.127	19.906	4190.283
58	.7879	2.569	98.65	69.13	1.000	1.004	-.004	22.105	19.911	4667.285
59	.8179	2.667	98.69	69.13	1.000	1.004	-.004	22.113	19.912	5144.280
60	.8479	2.765	98.57	69.10	.999	1.006	-.022	22.087	19.940	5621.234
61	.8779	2.863	98.55	69.13	.999	1.004	-.027	22.082	19.918	6099.194
62	.9079	2.961	98.55	69.08	.999	1.007	-.026	22.083	19.964	6576.936
63	.9379	3.059	98.46	69.04	.998	1.009	-.046	22.062	20.009	

Table 18.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 5. GRID NO. 1

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY =	98.803	98.803
FREE STREAM TEMPERATURE =	69.372	
WALL TEMPERATURE =	88.840	
WALL HEAT FLUX =	.07878	
FREE STREAM DENSITY =	.07652	
FREE STREAM KINEMATIC VISCOSITY =	.0001596	
DENSITY OF FLUID AT WALL =	.07380	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001702	
WALL/FREE STREAM DENSITY RATIO =	.96451	
LOCATION REYNOLDS NUMBER (REX) =	1043460.77	
INPUT VALUE OF VELOCITY DELTA =	.38000	
INPUT VALUE OF TEMPERATURE DELTA =	.38000	
CALCULATED DELTA =		.28313
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.03925	.03914
MOMENTUM THICKNESS (THETA) =	.02617	.02656
ENERGY-DISSIPATION THICKNESS =	.04673	.04711
ENTHALPY THICKNESS =	.00145	.00146
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.49998	1.47374
SHAPE FACTOR 32 (ENERGY/THETA) =	1.78570	1.77396
MOMENTUM THICKNESS REYNOLDS NUMBER =	1349.79	1369.72
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	2024.65	2018.61
SKIN FRICTION COEFFICIENT =	.004123	
FRICTION VELOCITY =	4.56772	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.18378
CLAUSERS 'DELTA' INTEGRAL =	-.68077	-.81496
CLAUSERS 'G' INTEGRAL =	5.31071	5.06469
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.03464	.03768
MOMENTUM THICKNESS - CONSTANT DENSITY =	.02645	.02685
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.30945	1.40313

LOCATION -X- 20.23000

Z = -6 INCHES

Table 19.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 5. GRID NO. 1

REDUCED PROFILE DATA

N	Y INCHES	DELTA Y/	U FT/SEC	T DEG.F	U/UE	THETA	U-UE UTAU	U(+)	Y(+)	Y(+)
1	.00063	.022	48.52	81.35	.491	.385	-11.009	10.622	7.689	14.159
2	.00073	.026	51.73	80.97	.524	.404	-10.305	11.326	8.078	16.396
3	.00084	.030	54.69	80.37	.554	.435	-9.656	11.973	8.701	18.857
4	.00093	.033	56.67	80.03	.574	.452	-9.223	12.407	9.043	20.870
5	.0104	.037	58.20	79.78	.589	.466	-8.889	12.742	9.308	23.331
6	.0121	.043	60.25	79.27	.610	.492	-8.441	13.190	9.829	27.133
7	.0139	.049	61.73	78.96	.625	.507	-8.117	13.514	10.146	31.160
8	.0146	.052	62.39	78.78	.631	.517	-7.971	13.659	10.327	32.726
9	.0166	.059	63.48	78.43	.642	.535	-7.733	13.897	10.690	37.199
10	.0186	.066	64.53	78.14	.653	.549	-7.504	14.127	10.983	41.673
11	.0209	.074	65.49	77.88	.663	.563	-7.293	14.338	11.258	46.818
12	.0222	.079	66.17	77.71	.670	.571	-7.144	14.487	11.425	49.726
13	.0236	.083	66.63	77.62	.676	.577	-7.000	14.630	11.527	52.858
14	.0260	.092	67.56	77.48	.684	.584	-6.839	14.791	11.668	58.226
15	.0277	.098	68.14	77.26	.690	.595	-6.712	14.918	11.889	62.029
16	.0294	.104	68.68	77.08	.695	.604	-6.594	15.037	12.072	65.832
17	.0312	.110	69.24	76.95	.701	.611	-6.472	15.158	12.214	69.856
18	.0374	.132	71.07	76.57	.719	.630	-6.071	15.560	12.598	83.727
19	.0444	.157	72.59	76.15	.739	.652	-5.651	15.979	13.028	99.355
20	.0516	.182	74.05	75.75	.758	.673	-5.244	16.387	13.446	115.490
21	.0576	.204	76.16	75.41	.771	.690	-4.957	16.674	13.787	128.912
22	.0644	.228	77.76	75.11	.785	.705	-4.646	16.985	14.105	144.131
23	.0716	.253	79.19	74.81	.801	.721	-4.294	17.336	14.408	160.238
24	.0774	.273	80.29	74.51	.813	.736	-4.053	17.577	14.720	173.202
25	.0844	.298	81.75	74.21	.827	.751	-3.733	17.897	15.022	188.860
26	.0915	.323	82.94	74.06	.839	.759	-3.473	18.158	15.276	208.742
27	.0973	.344	83.90	73.85	.849	.770	-3.262	18.369	15.498	231.084
28	.1043	.366	85.12	73.50	.861	.788	-2.997	18.634	15.756	255.666
29	.1114	.394	86.32	73.28	.874	.799	-2.733	18.897	15.981	282.333
30	.1176	.415	87.16	73.12	.882	.808	-2.550	19.081	16.147	311.236
31	.1244	.439	88.26	72.81	.893	.824	-2.308	19.323	16.467	342.394
32	.1314	.464	89.16	72.48	.902	.840	-2.111	19.520	16.802	375.788
33	.1485	.525	91.25	71.99	.924	.865	-1.653	19.978	17.302	429.455
34	.1662	.585	93.19	71.47	.943	.892	-1.229	20.309	17.842	483.338
35	.1836	.649	94.62	71.07	.958	.915	-0.917	20.600	18.252	537.459
36	.2014	.711	95.79	70.70	.970	.932	-0.656	20.972	18.632	591.576
37	.2186	.772	96.75	70.38	.979	.948	-0.450	21.181	18.959	645.050
38	.2363	.835	97.31	70.03	.985	.966	-0.326	21.304	19.321	698.643
39	.2533	.895	97.89	69.75	.991	.981	-0.200	21.431	19.608	752.670
40	.2714	.959	98.27	69.64	.995	.986	-0.088	21.533	19.713	807.158
41	.2864	1.019	98.40	69.56	.996	.990	-0.068	21.581	19.800	862.185
42	.3067	1.083	98.58	69.52	.998	.992	-0.046	21.605	19.839	917.680
43	.3362	1.188	98.68	69.44	.999	.996	-0.026	21.618	19.921	973.653
44	.3666	1.295	98.75	69.37	.999	1.000	-0.012	21.619	19.994	1029.653
45	.3964	1.400	98.79	69.38	1.000	1.000	-0.005	21.618	19.998	1085.536
46	.4267	1.507	98.83	69.37	1.000	1.000	-0.003	21.627	19.994	1141.536
47	.4567	1.613	98.79	69.37	1.000	1.000	-0.003	21.636	19.998	1197.536
48	.4866	1.719	98.70	69.40	1.000	1.000	-0.003	21.627	19.994	1253.536
49	.5164	1.824	98.76	69.38	1.000	1.000	-0.002	21.609	19.968	1309.536
50	.5465	1.930	98.83	69.37	1.000	1.000	-0.002	21.622	19.982	1365.536
51	.5769	2.038	98.78	69.39	1.000	1.000	-0.005	21.636	19.995	1421.536
52	.6067	2.143	98.74	69.38	1.000	1.000	-0.005	21.625	19.974	1477.527
53	.8244	2.912	98.80	69.41	1.000	1.000	-0.014	21.616	19.986	1533.186
54	1.0424	3.682	98.81	69.40	1.000	1.000	-0.011	21.630	19.951	1588.156
55	1.2607	4.453	98.72	69.38	1.000	1.000	-0.016	21.613	19.969	1643.110
56	1.4783	5.221	98.78	69.39	1.000	1.000	-0.006	21.625	19.974	1698.056
57	1.6972	5.995	98.76	69.43	1.000	1.000	-0.009	21.621	19.933	1753.010
58	1.9154	6.765	98.64	69.49	1.000	1.000	-0.036	21.594	19.871	1808.059
59	2.1334	7.535	98.62	69.43	1.000	1.000	-0.040	21.590	19.874	1863.059
60	2.3515	8.305	98.56	69.44	1.000	1.000	-0.053	21.578	19.922	1918.105
61	2.5696	9.076	98.43	69.44	1.000	1.000	-0.082	21.549	19.922	1973.105
62	2.7882	9.848	98.36	69.45	1.000	1.000	-0.096	21.535	19.917	2028.105
63	3.0066	10.619	98.35	69.40	1.000	1.000	-0.099	21.531	19.969	2083.105

Table 19.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 7. GRID NO. 1

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY =	98.850	98.850
FREE STREAM TEMPERATURE =	69.539	
WALL TEMPERATURE =	90.360	
WALL HEAT FLUX =	.07816	
FREE STREAM DENSITY =	.07649	
FREE STREAM KINEMATIC VISCOSITY =	.0001597	
DENSITY OF FLUID AT WALL =	.07360	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001710	
WALL/FREE STREAM DENSITY RATIO =	.96215	
LOCATION REYNOLDS NUMBER (REX) =	1457019.69	
INPUT VALUE OF VELOCITY DELTA =	.50000	
INPUT VALUE OF TEMPERATURE DELTA =	.50000	
CALCULATED DELTA =		.43856
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.06620	.06600
MOMENTUM THICKNESS (THETA) =	.04476	.04521
ENERGY-DISSIPATION THICKNESS =	.07934	.07979
ENTHALPY THICKNESS =	.00209	.00211
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.47895	1.45970
SHAPE FACTOR 32 (ENERGY/THETA) =	1.77261	1.76468
MOMENTUM THICKNESS REYNOLDS NUMBER =	2308.60	2331.95
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	3414.30	3403.94
SKIN FRICTION COEFFICIENT =	.003434	
FRICTION VELOCITY =	4.17588	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.43069
CLAUSERS 'DELTA' INTEGRAL =	-1.33449	-1.51240
CLAUSERS 'G' INTEGRAL =	10.58810	10.20506
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.06024	.06389
MOMENTUM THICKNESS - CONSTANT DENSITY =	.04521	.04568
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.33246	1.39870

LOCATION -X- 28.25000

Z = +6 INCHES

Table 20.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 D4/D5/79

RUN NO. 8. POINT 7. GRID NO. 1

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
1	.0077	.018	46.46	81.60	.470	.421	-12.546	11.125	8.267	15.731
2	.0093	.021	49.83	80.84	.504	.457	-11.738	11.934	8.982	18.967
3	.0101	.023	51.42	80.55	.520	.471	-11.356	12.313	9.258	20.615
4	.0107	.024	52.46	80.38	.531	.480	-11.105	12.567	9.422	21.836
5	.0119	.027	53.85	80.09	.545	.493	-10.776	12.896	9.690	24.278
6	.0135	.031	55.66	79.72	.563	.511	-10.344	13.328	10.042	27.534
7	.0153	.035	56.75	79.37	.574	.528	-10.062	13.590	10.373	31.197
8	.0159	.036	57.12	79.26	.578	.533	-9.993	13.678	10.473	32.418
9	.0179	.041	58.39	78.86	.591	.552	-9.688	13.983	10.850	36.488
10	.0220	.046	59.50	78.60	.602	.565	-9.424	14.248	11.100	40.762
11	.0221	.050	60.40	78.40	.611	.574	-9.208	14.463	11.284	45.035
12	.0236	.054	61.01	78.23	.617	.583	-9.061	14.611	11.446	48.088
13	.0249	.057	61.39	78.08	.621	.590	-8.971	14.701	11.586	50.733
14	.0269	.061	62.01	77.88	.627	.599	-8.822	14.850	11.774	54.803
15	.0291	.066	62.64	77.70	.634	.608	-8.671	15.001	11.949	59.280
16	.0311	.071	63.18	77.56	.639	.615	-8.542	15.130	12.082	63.350
17	.0333	.074	63.63	77.48	.644	.619	-8.434	15.238	12.157	66.199
18	.0393	.080	65.30	77.16	.661	.634	-8.035	15.637	12.452	80.038
19	.0457	.104	66.74	76.79	.675	.652	-7.690	15.982	12.780	93.062
20	.0517	.120	68.21	76.37	.690	.672	-7.336	16.335	13.045	107.307
21	.0568	.123	69.27	76.15	.701	.683	-7.084	16.588	13.153	111.721
22	.0611	.131	70.57	75.95	.714	.692	-6.771	16.900	13.356	114.576
23	.0730	.167	71.49	75.64	.725	.707	-6.515	17.157	13.589	114.618
24	.0792	.180	72.49	75.49	.733	.714	-6.313	17.358	14.036	115.032
25	.0866	.197	73.56	75.27	.744	.725	-6.055	17.616	14.242	117.568
26	.0933	.222	74.61	75.08	.755	.734	-5.805	17.867	14.423	119.522
27	.1060	.228	75.37	74.85	.762	.745	-5.624	18.048	14.640	121.325
28	.1190	.257	76.46	74.80	.773	.747	-5.362	18.310	14.884	121.774
29	.1190	.257	77.26	74.60	.782	.757	-5.169	18.502	14.871	122.612
30	.1190	.257	78.01	74.48	.789	.763	-4.989	18.688	15.143	122.230
31	.1256	.287	78.86	74.31	.796	.771	-4.787	18.885	15.143	122.566
32	.1322	.303	79.66	74.16	.806	.778	-4.595	19.077	15.292	127.010
33	.1499	.332	81.71	73.80	.827	.796	-4.105	19.567	15.632	130.511
34	.1675	.382	83.54	73.41	.845	.814	-3.666	20.006	15.997	134.092
35	.1847	.421	85.26	73.01	.863	.833	-3.254	20.418	16.376	137.593
36	.2033	.464	87.07	72.66	.881	.850	-2.821	20.850	16.700	141.378
37	.2199	.501	88.40	72.39	.894	.863	-2.503	21.168	16.956	147.564
38	.2379	.543	89.96	71.98	.910	.883	-2.130	21.542	17.341	151.194
39	.2547	.581	91.23	71.65	.923	.899	-1.824	21.847	17.660	158.383
40	.2729	.622	92.61	71.44	.937	.909	-1.494	22.177	17.857	155.420
41	.2902	.662	93.67	71.18	.948	.921	-1.241	22.430	18.100	150.626
42	.3061	.703	94.67	70.88	.958	.935	-1.002	22.670	18.380	162.054
43	.3376	.775	96.09	70.49	.972	.954	-.661	23.011	18.753	168.087
44	.3679	.839	97.24	70.17	.984	.970	-.385	23.286	19.055	174.748
45	.3979	.907	98.07	69.91	.992	.982	-.168	23.484	19.299	180.799
46	.4279	.976	98.45	69.79	.996	.988	-.095	23.577	19.416	187.850
47	.4578	1.044	98.66	69.62	.998	.996	-.047	23.625	19.577	191.697
48	.4883	1.113	98.80	69.57	1.000	.999	-.012	23.660	19.624	193.766
49	.5179	1.181	98.89	69.56	1.000	.999	-.009	23.681	19.629	1054.003
50	.5477	1.249	98.83	69.54	1.000	1.000	-.004	23.666	19.650	1117.646
51	.5780	1.318	98.83	69.52	1.000	1.001	-.005	23.667	19.666	1176.308
52	.6077	1.386	98.89	69.51	1.000	1.002	-.009	23.681	19.680	1236.748
53	.8258	1.883	98.82	69.61	1.000	.997	-.006	23.665	19.582	1680.588
54	1.0443	2.281	98.88	69.58	1.000	.998	-.006	23.678	19.610	2125.242
55	1.2622	2.878	98.84	69.54	1.000	1.000	-.002	23.669	19.647	2568.471
56	1.4799	3.375	98.93	69.53	1.001	1.001	.018	23.690	19.660	3011.701
57	1.6985	3.873	98.89	69.60	1.000	.997	.009	23.680	19.594	3456.558
58	1.9167	4.370	98.90	69.50	1.000	1.000	.012	23.683	19.653	3900.601
59	2.1348	4.868	98.87	69.53	1.000	1.002	.004	23.676	19.684	4344.441
60	2.3527	5.365	98.80	69.49	1.000	1.003	-.012	23.660	19.699	4787.874
61	2.5700	5.862	98.77	69.48	1.000	1.003	-.019	23.653	19.704	5231.917
62	2.7879	6.359	98.70	69.47	1.000	1.003	-.036	23.636	19.710	5676.775
63	3.0060	6.859	98.67	69.46	1.000	1.004	-.044	23.627	19.721	6121.428

Table 20.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 9. GRID NO. 1

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY ==	98.791	98.791
FREE STREAM TEMPERATURE ==	69.330	
WALL TEMPERATURE ==	91.450	
WALL HEAT FLUX ==	.07785	
FREE STREAM DENSITY ==	.07652	
FREE STREAM KINEMATIC VISCOSITY ==	.0001596	
DENSITY OF FLUID AT WALL ==	.07345	
KINEMATIC VISCOSITY OF FLUID AT WALL ==	.0001716	
WALL/FREE STREAM DENSITY RATIO ==	.95986	
LOCATION REYNOLDS NUMBER (REX) ==	1867237.73	
INPUT VALUE OF VELOCITY DELTA ==	.60000	
INPUT VALUE OF TEMPERATURE DELTA ==	.69000	
CALCULATED DELTA ==		.52824
DELTA 99.5% INPUT ==	.00000	
DISPLACEMENT THICKNESS (DELSTAR) ==	.07941	.07936
MOMENTUM THICKNESS (THETA) ==	.05419	.05452
ENERGY-DISSIPATION THICKNESS ==	.09599	.09627
ENTHALPY THICKNESS ==	.00274	.00275
SHAPE FACTOR 12 (DELSTAR/THETA) ==	1.46538	1.45582
SHAPE FACTOR 32 (ENERGY/THETA) ==	1.77135	1.76588
MOMENTUM THICKNESS REYNOLDS NUMBER ==	2795.22	2811.98
DISPLACEMENT THICKNESS REYNOLDS NUMBER ==	4096.05	4093.73
SKIN FRICTION COEFFICIENT ==	.003268	
FRICTION VELOCITY ==	4.07592	
LAW OF THE WALL CONSTANT (K) ==	.41000	
LAW OF THE WALL CONSTANT (C) ==	5.00000	
WAKE STRENGTH ==		.46756
CLAUSERS 'DELTA' INTEGRAL ==	-1.69290	-1.85714
CLAUSERS 'G' INTEGRAL ==	12.86577	12.63537
DISPLACEMENT THICKNESS - CONSTANT DENSITY ==	.07326	.07662
MOMENTUM THICKNESS - CONSTANT DENSITY ==	.05478	.05511
SHAPE FACTOR 12 - CONSTANT DENSITY ==	1.33748	1.39025

LOCATION -X- 36.20000

Z = CENTERLINE

Table 21.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 9. GRID NO. 1

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG. F	U/UE	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
1	.00068	.013	42.95	83.39	.4352	.364	-13.699	10.538	7.440	13.519
2	.00078	.015	44.68	82.80	.4522	.391	-13.275	10.563	7.981	15.499
3	.00084	.018	48.37	81.89	.4900	.432	-12.372	11.866	8.823	18.666
4	.00099	.019	49.16	81.68	.4998	.442	-12.170	12.067	9.020	19.656
5	.0108	.021	50.58	81.74	.5127	.457	-11.827	12.491	9.329	21.437
6	.0126	.024	53.05	80.85	.5381	.479	-11.223	13.015	9.786	23.000
7	.0142	.029	54.43	80.20	.5599	.498	-10.866	13.549	10.163	24.488
8	.0151	.032	55.21	80.97	.5770	.509	-10.699	13.819	10.385	25.948
9	.0169	.036	56.32	79.93	.5881	.519	-10.411	14.092	10.599	27.311
10	.0192	.040	57.44	79.42	.5966	.539	-10.141	14.287	10.799	28.664
11	.0209	.043	58.88	79.21	.6000	.544	-9.955	14.447	10.904	29.941
12	.0242	.049	59.27	78.93	.609	.553	-9.799	14.551	11.044	31.161
13	.0266	.054	60.12	78.84	.614	.566	-9.699	14.684	11.155	32.324
14	.0284	.057	60.67	78.59	.619	.570	-9.467	14.884	11.295	33.511
15	.0302	.057	61.18	78.44	.624	.581	-9.354	15.010	11.447	34.794
16	.0316	.060	61.60	78.34	.624	.588	-9.227	15.113	11.553	35.961
17	.0361	.072	63.36	78.01	.641	.593	-9.124	15.544	11.642	37.161
18	.0448	.085	64.81	77.53	.656	.607	-8.694	15.900	11.866	38.474
19	.0522	.098	66.11	77.12	.669	.629	-8.337	16.219	12.099	39.808
20	.0588	.110	67.37	76.94	.682	.648	-8.019	16.528	12.843	41.161
21	.0650	.123	68.45	76.73	.693	.654	-7.710	16.795	13.583	42.511
22	.0721	.137	69.60	76.44	.705	.665	-7.443	17.076	14.273	43.864
23	.0781	.148	70.49	76.27	.714	.678	-7.162	17.295	14.851	45.160
24	.0850	.161	71.38	76.06	.723	.686	-6.943	17.512	15.407	46.407
25	.0918	.174	72.32	75.78	.732	.696	-6.725	17.744	16.008	47.607
26	.0979	.185	73.18	75.57	.741	.709	-6.494	17.954	16.655	48.767
27	.1048	.198	73.83	75.48	.747	.718	-6.284	18.114	17.342	49.899
28	.1118	.212	74.64	75.28	.756	.722	-6.124	18.312	17.954	51.011
29	.1180	.223	75.40	75.07	.763	.731	-5.925	18.500	18.492	52.111
30	.1248	.236	76.15	74.92	.771	.740	-5.738	18.682	19.000	53.200
31	.1320	.250	76.96	74.75	.779	.747	-5.556	18.868	19.544	54.288
32	.1400	.262	78.58	74.45	.795	.755	-5.356	19.078	20.113	55.376
33	.1666	.315	80.45	74.03	.814	.769	-4.960	19.278	20.700	56.464
34	.1840	.348	81.94	73.71	.829	.787	-4.499	19.738	21.312	57.552
35	.2022	.383	83.44	73.35	.845	.802	-4.134	20.103	21.868	58.640
36	.2190	.415	84.85	73.07	.859	.818	-3.767	20.470	22.444	59.728
37	.2370	.449	86.25	72.79	.873	.831	-3.420	20.818	23.044	60.816
38	.2544	.482	87.64	72.51	.887	.844	-3.077	21.160	23.668	61.904
39	.2720	.515	88.90	72.21	.900	.856	-2.737	21.501	24.312	63.000
40	.2894	.548	89.89	71.87	.910	.870	-2.427	21.810	24.976	64.100
41	.3072	.582	91.06	71.71	.922	.885	-2.185	22.053	25.668	65.200
42	.3218	.617	93.14	71.21	.943	.893	-1.896	22.342	26.388	66.300
43	.3376	.647	94.83	70.76	.960	.915	-1.386	22.652	27.132	67.400
44	.3424	.714	96.34	70.39	.975	.935	-.971	23.066	27.900	68.500
45	.4468	.781	97.28	70.07	.985	.952	-.600	23.537	28.688	69.600
46	.4820	.846	97.95	69.75	.991	.967	-.371	23.866	29.500	70.700
47	.5171	.913	98.44	69.59	.996	.981	-.207	24.031	30.344	71.800
48	.5520	.979	98.67	69.49	.999	.988	-.086	24.151	31.212	72.900
49	.5870	1.045	98.74	69.41	.999	.993	-.031	24.228	32.112	74.000
50	.6222	1.111	98.75	69.38	.999	.996	-.014	24.252	33.044	75.100
51	.6571	1.178	98.85	69.36	.999	.998	-.010	24.288	34.000	76.200
52	.6918	1.244	98.88	69.33	.999	.999	-.004	24.324	35.000	77.300
53	.7269	1.310	98.85	69.31	.999	.999	-.001	24.360	36.000	78.400
54	.7620	1.376	98.88	69.33	.999	.999	-.001	24.396	37.000	79.500
55	.7968	1.443	98.80	69.34	.999	.999	-.000	24.432	38.000	80.600
56	.8320	1.508	98.84	69.35	.999	.999	-.000	24.468	39.000	81.700
57	.8668	1.575	98.84	69.36	.999	.999	-.000	24.504	40.000	82.800
58	.9018	1.641	98.81	69.36	.999	.999	-.000	24.540	41.000	83.900
59	.9375	1.707	98.81	69.36	.999	.999	-.000	24.576	42.000	85.000
60	.9719	1.775	98.80	69.36	.999	.999	-.000	24.612	43.000	86.100
61	1.0068	1.840	98.81	69.37	.999	.999	-.000	24.648	44.000	87.200
62	1.3067	1.906	98.81	69.37	.999	.999	-.000	24.684	45.000	88.300
63	1.6066	2.474	98.72	69.36	.999	.999	-.000	24.720	46.000	89.400
64	1.9066	3.041	98.69	69.35	.999	.999	-.000	24.756	47.000	90.500
65	2.2068	3.609	98.68	69.35	.999	.999	-.000	24.792	48.000	91.600
66	2.5072	4.178	98.56	69.39	.998	.997	-.002	24.828	49.000	92.700
67	2.8072	4.746	98.54	69.37	.997	.998	-.001	24.864	50.000	93.800
68	3.1071	5.314	98.46	69.38	.997	.998	-.001	24.900	51.000	94.900
69	3.4066	5.882	98.48	69.36	.997	.999	-.001	24.936	52.000	96.000
70	3.7068	6.449	98.38	69.42	.996	.996	-.001	24.972	53.000	97.100
71	4.0068	7.017	98.44	69.43	.996	.995	-.001	25.008	54.000	98.200
72	4.3074	7.586	98.45	69.40	.997	.997	-.001	25.044	55.000	99.300

Table 21.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 10. GRID NO. 1

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY =	98.962	98.962
FREE STREAM TEMPERATURE =	69.539	
WALL TEMPERATURE =	92.960	
WALL HEAT FLUX =	.07784	
FREE STREAM DENSITY =	.07602	
FREE STREAM KINEMATIC VISCOSITY =	.0001607	
DENSITY OF FLUID AT WALL =	.07279	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001735	
WALL/FREE STREAM DENSITY RATIO =	.95762	
LOCATION REYNOLDS NUMBER (REX) =	2269045.59	
INPUT VALUE OF VELOCITY DELTA =	.77000	
INPUT VALUE OF TEMPERATURE DELTA =	.81000	
CALCULATED DELTA =		.44971
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.09585	.595
MOMENTUM THICKNESS (THETA) =	.06631	.5651
ENERGY-DISSIPATION THICKNESS =	.11758	.771
ENTHALPY THICKNESS =	.00339	.03340
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.44553	1.44268
SHAPE FACTOR 32 (ENERGY/THETA) =	1.77328	1.76976
MOMENTUM THICKNESS REYNOLDS NUMBER =	3402.33	3412.88
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	4918.17	4923.70
SKIN FRICTION COEFFICIENT =	.003137	
FRICTION VELOCITY =	4.00520	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.47483
CLAUSERS 'DELTA' INTEGRAL =	-2.14283	-2.28698
CLAUSERS 'G' INTEGRAL =	15.52449	15.45673
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.08959	.09256
MOMENTUM THICKNESS - CONSTANT DENSITY =	.06703	.06724
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.33665	1.37653

LOCATION -X- 44.22000

Z = CENTERLINE

Table 22.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 10. GRID NO. 1

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
1	.0057	.0009	37.16	85.56	.376	.316	-15.426	9.283	6.648	11.022
2	.0067	.0010	40.72	84.81	.411	.348	-14.542	10.167	7.330	11.946
3	.0077	.0012	43.63	84.05	.441	.380	-13.816	10.892	8.007	12.870
4	.0093	.0014	47.52	83.01	.480	.425	-12.844	11.864	8.940	13.797
5	.0100	.0015	48.94	82.69	.494	.439	-12.490	12.218	9.236	14.294
6	.0116	.0018	51.19	82.06	.517	.466	-11.927	12.781	9.802	14.972
7	.0129	.0020	53.55	81.59	.531	.485	-11.587	13.121	10.217	15.373
8	.0143	.0022	55.80	81.19	.544	.503	-11.275	13.433	10.583	15.733
9	.0161	.0025	58.04	80.83	.556	.518	-10.967	13.741	10.908	16.066
10	.0178	.0027	59.90	80.47	.565	.533	-10.752	14.057	11.231	16.388
11	.0198	.0031	62.63	80.10	.572	.549	-10.570	14.333	11.559	16.704
12	.0215	.0033	65.41	79.98	.580	.554	-10.375	14.533	11.870	17.014
13	.0229	.0035	68.05	79.78	.587	.563	-10.216	14.707	12.177	17.314
14	.0251	.0039	70.91	79.55	.595	.573	-10.001	14.933	12.477	17.607
15	.0271	.0042	73.25	79.46	.599	.576	-9.916	15.133	12.777	17.894
16	.0289	.0045	75.93	79.35	.606	.581	-9.744	15.333	13.077	18.177
17	.0306	.0047	78.36	79.19	.610	.588	-9.633	15.533	13.377	18.457
18	.0331	.0057	81.89	78.61	.625	.613	-9.255	15.733	13.677	18.737
19	.0441	.0068	83.36	78.20	.640	.630	-8.889	15.933	13.977	19.017
20	.0507	.0078	84.77	77.82	.654	.646	-8.538	16.133	14.277	19.297
21	.0568	.0087	85.80	77.62	.665	.655	-8.280	16.333	14.577	19.577
22	.0639	.0098	86.93	77.31	.676	.668	-7.996	16.533	14.877	19.857
23	.0711	.0109	87.94	77.07	.687	.678	-7.745	16.733	15.177	20.137
24	.0766	.0118	88.77	76.95	.695	.684	-7.539	16.933	15.477	20.417
25	.0840	.0129	89.51	76.76	.702	.692	-7.353	17.133	15.777	20.697
26	.0919	.0140	90.61	76.51	.713	.702	-7.080	17.333	16.077	20.977
27	.0967	.0149	91.30	76.33	.721	.710	-6.905	17.533	16.377	21.257
28	.1039	.0160	92.13	76.20	.729	.716	-6.699	17.733	16.677	21.537
29	.1111	.0171	92.79	75.99	.736	.725	-6.534	17.933	16.977	21.817
30	.1167	.0180	93.32	75.86	.741	.730	-6.401	18.133	17.277	22.097
31	.1238	.0191	94.04	75.73	.748	.736	-6.222	18.333	17.577	22.377
32	.1310	.0202	94.81	75.65	.756	.739	-6.030	18.533	17.877	22.657
33	.1433	.0228	96.22	75.22	.770	.757	-5.677	18.733	18.177	22.937
34	.1656	.0255	97.74	74.92	.786	.770	-5.298	18.933	18.477	23.217
35	.1831	.0282	99.08	74.68	.799	.781	-4.965	19.133	18.777	23.497
36	.2007	.0309	80.47	74.38	.813	.793	-4.617	19.333	19.077	23.777
37	.2177	.0335	81.53	74.05	.824	.807	-4.353	19.533	19.377	24.057
38	.2333	.0364	82.90	73.82	.838	.817	-4.011	19.733	19.677	24.337
39	.2507	.0389	84.15	73.47	.850	.832	-3.698	19.933	19.977	24.617
40	.2713	.0418	85.08	73.22	.860	.843	-3.465	20.133	20.277	24.897
41	.2879	.0443	86.33	72.98	.872	.853	-3.154	20.333	20.577	25.177
42	.3057	.0471	87.34	72.73	.883	.864	-2.902	20.533	20.877	25.457
43	.3309	.0525	89.46	72.39	.904	.878	-2.373	20.733	21.177	25.737
44	.3577	.0578	91.39	71.95	.923	.897	-1.890	20.933	21.477	26.017
45	.4007	.0632	93.02	71.52	.940	.915	-1.484	21.133	21.777	26.297
46	.4459	.0686	94.40	71.15	.954	.931	-1.139	21.333	22.077	26.577
47	.4807	.0740	95.70	70.81	.967	.946	-.814	21.533	22.377	26.857
48	.5161	.0794	96.85	70.54	.979	.957	-.527	21.733	22.677	27.137
49	.5507	.0848	97.43	70.22	.985	.971	-.382	21.933	22.977	27.417
50	.5863	.0902	98.01	70.02	.990	.979	-.238	22.133	23.277	27.697
51	.6207	.0955	98.47	69.84	.995	.987	-.124	22.333	23.577	27.977
52	.6560	1.0010	98.69	69.76	.997	.991	-.067	22.533	23.877	28.257
53	.6909	1.0063	98.77	69.71	.998	.993	-.048	22.733	24.177	28.537
54	.7259	1.0117	98.83	69.58	.999	.998	-.032	22.933	24.477	28.817
55	.7608	1.0171	98.92	69.56	1.000	.999	-.010	23.133	24.777	29.097
56	.7963	1.0226	98.95	69.54	1.000	1.000	-.002	23.333	25.077	29.377
57	.8309	1.0279	98.95	69.56	1.000	1.000	-.003	23.533	25.377	29.657
58	.8657	1.0332	98.98	69.54	1.000	1.000	-.005	23.733	25.677	29.937
59	.9007	1.0386	98.93	69.52	1.000	1.000	-.007	23.933	25.977	30.217
60	.9357	1.0440	98.88	69.53	1.000	1.000	-.020	24.133	26.277	30.497
61	.9711	1.0495	98.91	69.56	1.000	1.000	-.014	24.333	26.577	30.777
62	1.0061	1.0549	98.90	69.51	1.000	1.001	-.016	24.533	26.877	31.057
63	1.0405	1.0603	98.87	69.56	1.000	1.000	-.022	24.733	27.177	31.337
64	1.0755	1.0657	98.89	69.60	1.000	1.000	-.017	24.933	27.477	31.617
65	1.1105	1.0711	98.84	69.59	1.000	1.000	-.031	25.133	27.777	31.897
66	1.1455	1.0765	98.76	69.58	1.000	1.000	-.051	25.333	28.077	32.177
67	1.1805	1.0819	98.68	69.61	1.000	1.000	-.071	25.533	28.377	32.457
68	1.2155	1.0873	98.64	69.60	1.000	1.000	-.079	25.733	28.677	32.737
69	1.2505	1.0927	98.68	69.64	1.000	1.000	-.071	25.933	28.977	33.017
70	1.2855	1.0981	98.74	69.67	1.000	1.000	-.055	26.133	29.277	33.297
71	1.3205	1.1035	98.66	69.66	1.000	1.000	-.070	26.333	29.577	33.577
72	1.3555	1.1089	98.72	69.70	1.000	1.000	-.061	26.533	29.877	33.857

Table 22.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 13. GRID NO. 1

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY ==	99.525	99.525
FREE STREAM TEMPERATURE ==	70.160	
WALL TEMPERATURE ==	93.590	
WALL HEAT FLUX ==	.07784	
FREE STREAM DENSITY ==	.07593	
FREE STREAM KINEMATIC VISCOSITY ==	.0001611	
DENSITY OF FLUID AT WALL ==	.07271	
KINEMATIC VISCOSITY OF FLUID AT WALL ==	.0001739	
WALL/FREE STREAM DENSITY RATIO ==	.95765	
LOCATION REYNOLDS NUMBER (REX) ==	2687161.94	
INPUT VALUE OF VELOCITY DELTA ==	.89000	
INPUT VALUE OF TEMPERATURE DELTA ==	.94000	
CALCULATED DELTA ==		.76456
DELTA 99.5% INPUT ==	.00000	
DISPLACEMENT THICKNESS (DELSTAR) ==	.11381	.11397
MOMENTUM THICKNESS (THETA) ==	.07917	.07930
ENERGY-DISSIPATION THICKNESS ==	.14027	.14031
ENTHALPY THICKNESS ==	.00393	.00393
SHAPE FACTOR 12 (DELSTAR/THETA) ==	1.43756	1.43722
SHAPE FACTOR 32 (ENERGY/THETA) ==	1.77185	1.76951
MOMENTUM THICKNESS REYNOLDS NUMBER ==	4076.92	4083.57
DISPLACEMENT THICKNESS REYNOLDS NUMBER ==	5860.80	5869.00
SKIN FRICTION COEFFICIENT ==	.002988	
FRICTION VELOCITY ==	3.93100	
LAW OF THE WALL CONSTANT (K) ==	.41000	
LAW OF THE WALL CONSTANT (C) ==	5.00000	
WAKE STRENGTH ==		.52880
CLAUSERS 'DELTA' INTEGRAL ==	-2.65190	-2.78562
CLAUSERS 'G' INTEGRAL ==	19.13555	19.15068
DISPLACEMENT THICKNESS - CONSTANT DENSITY ==	.10731	.11003
MOMENTUM THICKNESS - CONSTANT DENSITY ==	.08002	.08016
SHAPE FACTOR 12 - CONSTANT DENSITY ==	1.34100	1.37272

LOCATION -X- 52.18001

Z = CENTERLINE

Table 23.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 13. GRID NO. 1

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
1	.0051	.007	35.05	87.05	.352	.279	-16.406	8.912	5.764	9.666
2	.0061	.008	36.97	85.89	.371	.329	-15.913	9.405	5.784	11.550
3	.0071	.009	40.36	85.02	.406	.366	-15.046	10.272	7.554	13.434
4	.0084	.011	44.27	84.40	.445	.392	-14.056	11.262	8.102	15.884
5	.0091	.012	45.76	84.16	.460	.405	-13.676	11.642	8.314	17.203
6	.0110	.014	48.86	83.28	.491	.440	-12.890	12.428	9.085	20.783
7	.0122	.016	50.49	82.91	.507	.456	-12.474	12.844	9.413	23.044
8	.0131	.017	51.35	82.66	.516	.467	-12.254	13.064	9.635	24.740
9	.0153	.020	53.07	82.16	.533	.488	-11.817	13.501	10.076	28.885
10	.0173	.023	54.43	81.78	.547	.504	-11.473	13.845	10.405	32.653
11	.0193	.025	55.10	81.42	.554	.519	-11.301	14.017	10.723	36.422
12	.0210	.028	56.00	81.11	.563	.533	-11.072	14.246	10.998	39.625
13	.0223	.029	56.43	80.96	.567	.539	-10.963	14.355	11.132	42.074
14	.0244	.032	57.17	80.79	.574	.546	-10.774	14.544	11.283	46.031
15	.0265	.035	57.94	80.59	.581	.555	-10.604	14.714	11.452	49.988
16	.0281	.037	58.29	80.44	.586	.561	-10.490	14.828	11.593	53.003
17	.0299	.039	58.89	80.25	.592	.569	-10.336	14.982	11.756	56.394
18	.0307	.046	60.32	79.72	.606	.592	-9.974	15.344	12.220	69.207
19	.0337	.057	61.91	79.37	.622	.607	-9.569	15.750	12.531	82.396
20	.0503	.066	63.24	79.05	.636	.620	-9.219	16.100	12.812	94.832
21	.0563	.074	64.20	78.75	.645	.634	-8.987	16.331	13.082	106.137
22	.0637	.083	65.45	78.45	.658	.646	-8.667	16.651	13.339	120.080
23	.0704	.092	66.51	78.28	.668	.654	-8.399	16.919	13.496	132.704
24	.0763	.100	67.29	78.03	.676	.664	-8.201	17.118	13.716	143.821
25	.0835	.109	68.11	77.79	.684	.674	-7.991	17.326	13.922	157.387
26	.0904	.118	68.94	77.74	.693	.677	-7.780	17.538	13.972	170.388
27	.0963	.126	69.77	77.57	.701	.684	-7.570	17.748	14.118	181.505
28	.1033	.135	70.39	77.28	.707	.696	-7.411	17.907	14.375	194.694
29	.1107	.145	71.09	77.11	.714	.703	-7.234	18.084	14.525	208.637
30	.1161	.152	71.71	77.00	.720	.708	-7.077	18.242	14.624	218.812
31	.1232	.161	72.33	76.85	.727	.714	-6.918	18.400	14.750	232.190
32	.1303	.170	72.95	76.67	.733	.722	-6.760	18.559	14.910	245.568
33	.1471	.192	74.32	76.28	.747	.739	-6.411	18.907	15.256	277.222
34	.1650	.216	75.71	76.02	.761	.750	-6.057	19.261	15.488	310.949
35	.1825	.239	77.12	75.73	.775	.762	-5.699	19.619	15.742	343.923
36	.2003	.262	78.43	75.32	.788	.780	-5.368	19.950	16.100	377.462
37	.2171	.284	79.49	75.16	.799	.787	-5.097	20.221	16.243	409.116
38	.2351	.308	80.75	74.91	.811	.797	-4.778	20.541	16.462	443.032
39	.2525	.330	81.61	74.64	.820	.809	-4.556	20.762	16.704	475.817
40	.2703	.354	82.87	74.42	.833	.818	-4.236	21.082	16.891	509.356
41	.2871	.376	83.76	74.26	.842	.825	-4.011	21.307	17.035	541.010
42	.3053	.399	84.81	74.00	.852	.836	-3.744	21.574	17.263	575.303
43	.3237	.423	87.32	73.29	.877	.866	-3.105	21.890	17.890	666.498
44	.4012	.525	89.76	72.82	.902	.887	-2.479	22.214	18.306	755.997
45	.4495	.588	91.85	72.39	.923	.905	-1.952	22.366	18.685	847.004
46	.4973	.650	93.79	71.99	.942	.922	-1.436	22.860	19.044	937.069
47	.5453	.713	95.49	71.61	.959	.938	-1.026	22.922	19.368	1027.511
48	.5935	.776	96.82	71.25	.973	.953	-0.688	23.630	19.687	1118.329
49	.6415	.839	97.78	70.83	.983	.971	-0.443	23.875	20.057	1208.771
50	.6895	.902	98.56	70.60	.990	.981	-0.247	24.071	20.263	1299.212
51	.7373	.964	99.01	70.39	.995	.990	-0.132	24.186	20.444	1389.977
52	.7854	1.027	99.24	70.35	.997	.992	-0.072	25.247	20.478	1479.207
53	.8333	1.090	99.38	70.26	.999	.996	-0.037	25.281	20.561	1570.160
54	.8812	1.153	99.84	70.20	.999	.998	-0.022	25.296	20.615	1660.413
55	.9295	1.216	99.54	70.14	1.000	1.000	-0.004	25.322	20.666	1751.420
56	.9771	1.278	99.52	70.15	1.000	1.000	-0.001	25.317	20.656	1841.108
57	1.0253	1.341	99.52	70.15	1.000	1.000	-0.002	25.316	20.659	1931.927
58	1.0731	1.404	99.48	70.18	1.000	1.000	-0.011	25.307	20.632	2021.991
59	1.1215	1.467	99.50	70.15	1.000	1.001	-0.006	25.312	20.662	2113.187
60	1.1693	1.529	99.45	70.14	.999	1.001	-0.019	25.299	20.664	2203.251
61	1.2177	1.593	99.42	70.17	.999	.999	-0.026	25.292	20.637	2294.447
62	1.2651	1.655	99.47	70.15	.999	1.001	-0.013	25.305	20.660	2383.758
63	1.3129	1.717	99.48	70.18	1.000	.999	-0.012	25.306	20.630	2473.822
64	1.3613	1.781	99.44	70.19	.999	.999	-0.021	25.297	20.622	2565.018
65	1.4091	1.843	99.47	70.16	.999	1.000	-0.013	25.305	20.651	2655.082
66	1.4569	1.906	99.42	70.16	.999	1.000	-0.027	25.291	20.650	2745.147
67	1.5052	1.969	99.48	70.18	1.000	.999	-0.011	25.307	20.635	2836.154
68	1.5621	2.436	99.16	70.16	.999	1.000	-0.027	25.291	20.650	3508.625
69	2.2193	2.903	99.32	70.20	.998	.998	-0.051	25.267	20.616	4181.661
70	2.5763	3.370	99.25	70.21	.997	.998	-0.069	25.249	20.606	4854.320
71	2.9332	3.836	99.35	70.22	.998	.997	-0.045	25.273	20.597	5526.791
72	3.2905	4.304	99.25	70.21	.997	.998	-0.070	25.248	20.606	6200.016
73	3.6479	4.771	99.21	70.20	.997	.998	-0.080	25.238	20.611	6873.429
74	4.0055	5.239	99.34	70.21	.998	.998	-0.047	25.271	20.601	7547.219

Table 23.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 14. GRID NO. 1

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY ==	99.429	99.429
FREE STREAM TEMPERATURE ==	70.635	
WALL TEMPERATURE ==	94.510	
WALL HEAT FLUX ==	.07720	
FREE STREAM DENSITY ==	.07586	
FREE STREAM KINEMATIC VISCOSITY ==	.0001613	
DENSITY OF FLUID AT WALL ==	.07259	
KINEMATIC VISCOSITY OF FLUID AT WALL ==	.0001744	
WALL/FREE STREAM DENSITY RATIO ==	.95692	
LOCATION REYNOLDS NUMBER (REX) ==	3099954.62	
INPUT VALUE OF VELOCITY DELTA ==	.94000	
INPUT VALUE OF TEMPERATURE DELTA ==	.99000	
CALCULATED DELTA ==		.88012
DELTA 99.5% INPUT ==	.00000	
DISPLACEMENT THICKNESS (DELSTAR) ==	.12815	.12817
MOMENTUM THICKNESS (THETA) ==	.08944	.08970
ENERGY-DISSIPATION THICKNESS ==	.15874	.15893
ENTHALPY THICKNESS ==	.00448	.00449
SHAPE FACTOR 12 (DELSTAR/THETA) ==	1.43283	1.42892
SHAPE FACTOR 32 (ENERGY/THETA) ==	1.77483	1.77180
MOMENTUM THICKNESS REYNOLDS NUMBER ==	4594.11	4607.53
DISPLACEMENT THICKNESS REYNOLDS NUMBER ==	6582.58	6583.79
SKIN FRICTION COEFFICIENT ==	.002936	
FRICTION VELOCITY ==	3.89448	
LAW OF THE WALL CONSTANT (K) ==	.41000	
LAW OF THE WALL CONSTANT (C) ==	5.00000	
WAKE STRENGTH ==		.50814
CLAUSERS 'DELTA' INTEGRAL ==	-2.98559	-3.15784
CLAUSERS 'G' INTEGRAL ==	21.68469	21.51733
DISPLACEMENT THICKNESS - CONSTANT DENSITY ==	.12031	.12369
MOMENTUM THICKNESS - CONSTANT DENSITY ==	.09040	.09068
SHAPE FACTOR 12 - CONSTANT DENSITY ==	1.33078	1.36405

LOCATION -X- 60.35001

Z = CENTERLINE

Table 24.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 14. GRID NO. 1

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
1	.0067	.008	39.25	86.43	.395	.338	-15.453	10.078	7.098	12.526
2	.0079	.009	42.25	85.45	.425	.379	-14.661	10.849	7.959	14.760
3	.0088	.010	44.50	85.05	.448	.396	-14.105	11.425	8.311	16.435
4	.0102	.012	46.93	84.45	.472	.421	-13.461	12.050	8.842	19.040
5	.0111	.013	48.38	84.07	.487	.437	-13.107	12.423	9.174	20.716
6	.0126	.014	50.22	83.61	.505	.457	-12.636	12.895	9.581	23.507
7	.0143	.016	51.67	83.24	.520	.472	-12.263	13.267	9.903	26.671
8	.0150	.017	52.27	83.04	.526	.480	-12.109	13.422	10.080	27.974
9	.0170	.019	53.37	82.62	.537	.498	-11.827	13.704	10.446	31.697
10	.0190	.022	54.70	82.29	.550	.512	-11.486	14.045	10.744	35.419
11	.0210	.024	55.44	82.10	.556	.520	-11.294	14.237	10.907	39.142
12	.0226	.026	56.11	81.65	.564	.539	-11.124	14.407	11.306	42.120
13	.0243	.028	56.59	81.62	.569	.540	-11.001	14.530	11.325	45.284
14	.0260	.030	57.18	81.47	.575	.546	-10.848	14.682	11.461	48.448
15	.0280	.032	57.71	81.16	.580	.559	-10.711	14.819	11.732	52.170
16	.0299	.034	58.32	80.99	.587	.566	-10.556	14.975	11.882	55.707
17	.0316	.036	58.82	80.89	.592	.571	-10.426	15.104	11.973	58.871
18	.0337	.043	60.21	80.49	.606	.587	-10.070	15.461	12.323	70.597
19	.0450	.051	61.63	80.07	.620	.605	-9.706	15.825	12.688	83.811
20	.0518	.059	62.97	79.74	.633	.619	-9.361	16.169	12.984	96.468
21	.0579	.066	63.88	79.44	.643	.631	-9.127	16.404	13.244	107.821
22	.0650	.074	65.03	79.19	.654	.642	-8.832	16.699	13.466	121.036
23	.0724	.082	65.86	78.96	.663	.651	-8.615	16.916	13.662	134.809
24	.0778	.088	66.83	78.87	.672	.655	-8.371	17.160	13.749	144.860
25	.0852	.097	67.56	78.70	.679	.662	-8.184	17.347	13.899	158.633
26	.0922	.105	68.31	78.44	.687	.673	-7.989	17.541	14.126	171.661
27	.0982	.112	68.97	78.27	.694	.680	-7.820	17.710	14.275	182.829
28	.1054	.120	69.64	78.02	.700	.691	-7.649	17.882	14.494	196.230
29	.1124	.128	70.28	77.93	.707	.694	-7.486	18.045	14.570	209.258
30	.1177	.134	70.82	77.88	.712	.696	-7.347	18.184	14.613	219.123
31	.1250	.142	71.36	77.66	.718	.706	-7.203	18.328	14.610	232.710
32	.1318	.150	71.93	77.42	.723	.716	-7.060	18.471	15.021	245.366
33	.1491	.169	73.27	77.08	.737	.730	-6.717	18.814	15.322	277.566
34	.1666	.189	74.63	76.90	.751	.738	-6.368	19.163	15.476	310.137
35	.1838	.209	75.68	76.57	.761	.752	-6.099	19.452	15.577	342.150
36	.2020	.230	76.83	76.29	.773	.762	-5.803	19.728	16.011	376.025
37	.2192	.249	77.68	76.09	.783	.772	-5.533	19.998	16.192	408.038
38	.2373	.270	78.99	75.77	.794	.785	-5.248	20.260	16.474	441.726
39	.2538	.288	79.87	75.60	.803	.792	-5.021	20.509	16.615	472.437
40	.2720	.309	80.81	75.35	.813	.803	-4.781	20.750	16.841	506.312
41	.2890	.328	81.79	75.09	.823	.813	-4.530	21.001	17.066	537.942
42	.3068	.349	82.61	74.82	.831	.825	-4.318	21.212	17.301	571.082
43	.3354	.404	85.10	74.37	.856	.844	-3.679	21.855	17.700	661.538
44	.4030	.458	87.42	73.89	.879	.864	-3.084	22.447	18.126	750.132
45	.4608	.512	89.41	73.42	.899	.883	-2.572	22.958	18.535	839.099
46	.4993	.567	91.29	72.94	.918	.903	-2.089	23.442	18.958	929.369
47	.5471	.622	93.11	72.52	.936	.921	-1.622	23.909	19.323	1018.336
48	.5954	.677	94.62	72.20	.952	.935	-1.235	24.296	19.610	1108.234
49	.6428	.730	95.97	71.79	.965	.952	-.888	24.642	19.967	1196.456
50	.6912	.785	97.01	71.54	.976	.962	-.620	24.910	20.190	1286.540
51	.7393	.840	97.94	71.35	.985	.970	-.383	25.147	20.354	1376.065
52	.7874	.895	98.54	71.15	.991	.979	-.229	25.302	20.535	1465.590
53	.8348	.949	98.89	70.96	.995	.986	-.139	25.392	20.694	1553.813
54	.8830	1.003	99.18	70.79	.998	.994	-.063	25.468	20.848	1643.524
55	.9310	1.058	99.36	70.68	1.000	.998	-.012	25.516	20.940	1732.863
56	.9790	1.112	99.39	70.67	1.000	.999	-.011	25.520	20.955	1822.202
57	1.0267	1.167	99.46	70.63	1.000	1.000	.007	25.537	20.991	1910.983
58	1.0752	1.222	99.45	70.63	1.000	1.000	.004	25.535	20.985	2001.253
59	1.1237	1.276	99.41	70.65	1.000	1.000	.004	25.526	20.973	2090.592
60	1.1707	1.330	99.43	70.66	1.000	1.000	.001	25.530	20.958	2179.000
61	1.2190	1.385	99.42	70.64	1.000	1.000	.003	25.527	20.981	2268.898
62	1.2670	1.440	99.51	70.64	1.001	1.000	.020	25.550	20.977	2358.237
63	1.3146	1.494	99.51	70.62	1.001	1.000	.022	25.552	20.993	2446.832
64	1.3632	1.549	99.34	70.60	1.000	1.001	.023	25.508	21.011	2537.288
65	1.4114	1.604	99.36	70.61	1.000	1.001	.011	25.519	21.003	2626.999
66	1.4596	1.657	99.44	70.64	1.000	1.000	.002	25.533	20.979	2714.849
67	1.5074	1.713	99.38	70.65	1.000	1.000	.013	25.517	20.970	2805.677
68	1.5554	1.768	99.35	70.67	1.000	1.000	.020	25.511	20.956	2899.579
69	1.6030	1.824	99.32	70.69	1.000	1.000	.028	25.502	20.937	2993.333
70	1.6507	1.880	99.27	70.68	1.000	1.000	.042	25.489	20.942	3086.655
71	1.6982	1.935	99.23	70.69	1.000	1.000	.050	25.481	20.936	3182.959
72	1.7458	1.990	99.15	70.72	1.000	1.000	.072	25.459	20.907	3276.860
73	1.7933	2.047	99.22	70.71	1.000	1.000	.054	25.477	20.917	3372.809
74	1.8407	2.103	99.23	70.69	1.000	1.000	.051	25.479	20.932	3468.386

Table 24.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 15. GRID NO. 1

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY ==	98.651	98.651
FREE STREAM TEMPERATURE ==	69.252	
WALL TEMPERATURE ==	93.150	
WALL HEAT FLUX ==	.07592	
FREE STREAM DENSITY ==	.07646	
FREE STREAM KINEMATIC VISCOSITY ==	.0001597	
DENSITY OF FLUID AT WALL ==	.07315	
KINEMATIC VISCOSITY OF FLUID AT WALL ==	.0001727	
WALL/FREE STREAM DENSITY RATIO ==	.95677	
LOCATION REYNOLDS NUMBER (REX) ==	3106267.22	
INPUT VALUE OF VELOCITY DELTA ==	.99000	
INPUT VALUE OF TEMPERATURE DELTA ==	1.04000	
CALCULATED DELTA ==		.92813
DELTA 99.5% INPUT ==	.00000	
DISPLACEMENT THICKNESS (DELSTAR) ==	.13942	.13957
MOMENTUM THICKNESS (THETA) ==	.09737	.09752
ENERGY-DISSIPATION THICKNESS ==	.17233	.17238
ENTHALPY THICKNESS ==	.00446	.00446
SHAPE FACTOR 12 (DELSTAR/THETA) ==	1.43175	1.43113
SHAPE FACTOR 32 (ENERGY/THETA) ==	1.76974	1.76763
MOMENTUM THICKNESS REYNOLDS NUMBER ==	5011.94	5019.59
DISPLACEMENT THICKNESS REYNOLDS NUMBER ==	7175.86	7183.68
SKIN FRICTION COEFFICIENT ==	.002829	
FRICTION VELOCITY ==	3.79312	
LAW OF THE WALL CONSTANT (K) ==	.41000	
LAW OF THE WALL CONSTANT (C) ==	5.00000	
WAKE STRENGTH ==		.58780
CLAUSERS 'DELTA' INTEGRAL ==	-3.36358	-3.51392
CLAUSERS 'G' INTEGRAL ==	24.74486	24.74065
DISPLACEMENT THICKNESS - CONSTANT DENSITY ==	.13214	.13511
MOMENTUM THICKNESS - CONSTANT DENSITY ==	.09838	.09853
SHAPE FACTOR 12 - CONSTANT DENSITY ==	1.34325	1.37121

LOCATION -X- 60.35001

Z = +6 INCHES

Table 25.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 15. GRID NO. 1

REDUCED PROFILE DATA

N	Y	Y/	U	T	U/UE	THETA	U-UE	U(+)	T(+)	Y(+)
INCHES	DELTA	FT/SEC	DEG.F			UTAU				
1	.0056	.006	34.70	85.91	.352	.303	-16.861	9.147	6.352	10.304
2	.0072	.008	38.79	84.58	.393	.358	-15.762	10.226	7.514	13.233
3	.0082	.009	41.90	83.92	.425	.386	-14.962	11.046	8.897	15.063
4	.0092	.010	44.12	83.36	.447	.410	-14.377	11.630	8.585	16.893
5	.0100	.011	45.45	82.98	.461	.425	-14.025	11.983	8.919	18.358
6	.0115	.012	47.55	82.40	.482	.450	-13.472	12.535	9.426	21.103
7	.0132	.014	49.41	82.07	.501	.464	-12.981	13.027	9.719	24.214
8	.0142	.015	50.19	81.77	.509	.476	-12.777	13.231	9.984	26.045
9	.0158	.017	51.37	81.18	.521	.501	-12.465	13.543	10.496	28.973
10	.0182	.020	52.72	80.82	.534	.516	-12.108	13.900	10.816	33.366
11	.0199	.021	53.29	80.51	.540	.529	-11.959	14.048	11.088	36.477
12	.0214	.023	53.99	80.39	.547	.534	-11.773	14.234	11.193	39.223
13	.0232	.025	54.65	80.24	.554	.540	-11.599	14.408	11.328	42.517
14	.0250	.027	55.14	79.99	.559	.551	-11.47	14.536	11.443	45.812
15	.0270	.029	55.59	79.69	.563	.563	-11.353	14.655	11.604	49.472
16	.0287	.031	56.36	79.52	.571	.570	-11.149	14.859	11.559	52.584
17	.0305	.033	56.62	79.37	.574	.576	-11.080	14.928	11.883	55.878
18	.0329	.035	56.24	78.92	.590	.595	-11.065	15.355	12.480	67.592
19	.0342	.036	56.74	78.52	.606	.612	-11.258	15.750	12.832	80.953
20	.0358	.038	60.90	78.14	.617	.628	-9.952	16.056	13.170	93.032
21	.0370	.040	62.02	77.83	.629	.641	-9.657	16.351	13.442	104.380
22	.0384	.042	62.99	77.67	.639	.659	-9.401	16.607	13.578	117.192
23	.0397	.044	64.11	77.39	.650	.659	-9.105	16.902	13.821	130.004
24	.0410	.046	64.60	77.15	.655	.670	-8.976	17.032	14.038	143.436
25	.0424	.048	65.77	77.01	.663	.675	-8.775	17.233	14.148	156.609
26	.0438	.050	66.33	76.82	.672	.683	-8.521	17.487	14.478	177.957
27	.0452	.052	66.83	76.64	.677	.691	-8.388	17.620	14.531	189.954
28	.0467	.054	67.60	76.47	.685	.698	-8.185	17.822	14.631	202.843
29	.0481	.056	67.95	76.35	.689	.703	-8.094	17.914	14.686	226.459
30	.0496	.058	68.78	76.17	.697	.711	-7.874	18.134	14.896	239.454
31	.0510	.060	69.28	76.03	.702	.717	-7.744	18.264	15.098	250.202
32	.0524	.062	71.14	75.94	.707	.720	-7.613	18.395	15.402	302.781
33	.0538	.064	71.41	75.59	.721	.735	-7.252	18.756	15.695	334.262
34	.0552	.066	73.33	75.07	.734	.749	-6.918	19.090	15.856	368.305
35	.0566	.068	74.69	74.88	.757	.765	-6.316	19.691	16.027	398.870
36	.0580	.070	75.72	74.58	.768	.777	-6.045	19.963	16.289	431.998
37	.0594	.072	76.87	74.41	.779	.784	-5.742	20.266	16.437	462.929
38	.0608	.074	77.78	74.17	.788	.794	-5.502	20.506	16.651	496.057
39	.0622	.076	78.63	73.92	.797	.805	-5.279	20.729	16.869	527.172
40	.0636	.078	79.87	73.80	.810	.810	-4.951	21.057	16.977	560.117
41	.0650	.080	80.61	73.63	.817	.817	-4.757	21.251	17.124	647.603
42	.0664	.082	82.95	73.09	.841	.839	-4.139	21.869	17.593	736.188
43	.0678	.084	85.15	72.51	.863	.864	-3.560	22.448	18.108	822.943
44	.0692	.086	87.15	72.08	.883	.882	-3.032	22.976	18.483	911.894
45	.0706	.088	89.16	71.69	.904	.898	-2.496	23.512	19.188	999.747
46	.0720	.090	90.92	71.28	.922	.915	-2.039	23.969	19.520	1086.867
47	.0734	.092	92.48	70.90	.937	.931	-1.628	24.380	19.762	1175.269
48	.0748	.094	93.97	70.62	.953	.943	-1.233	24.775	20.040	1262.939
49	.0762	.096	95.23	70.30	.965	.956	-1.902	25.106	20.273	1351.158
50	.0776	.098	96.07	70.04	.974	.967	-1.680	25.328	20.552	1437.913
51	.0790	.100	96.98	69.72	.983	.980	-1.440	25.568	20.693	1522.864
52	.0804	.102	97.59	69.56	.989	.987	-1.280	25.728	20.753	1614.350
53	.0818	.104	98.03	69.49	.994	.990	-1.164	25.844	20.808	1702.203
54	.0832	.106	98.36	69.43	.997	.993	-1.077	25.931	20.886	1790.056
55	.0846	.108	98.60	69.34	.999	.996	-1.014	25.994	20.976	1877.909
56	.0860	.110	98.56	69.24	.999	.999	-1.025	25.983	20.957	1965.030
57	.0874	.112	98.67	69.23	.999	.999	-1.005	25.983	20.948	2052.882
58	.0888	.114	98.73	69.27	.999	.999	-1.006	25.983	20.948	2140.735
59	.0902	.116	98.63	69.23	.999	.999	-1.006	25.983	20.948	2228.588
60	.0916	.118	98.70	69.27	.999	.999	-1.006	25.983	20.948	2316.441
61	.0930	.120	98.67	69.24	.999	.999	-1.006	25.983	20.948	2404.294
62	.0944	.122	98.56	69.21	.999	.999	-1.006	25.983	20.948	2492.147
63	.0958	.124	98.68	69.20	.999	.999	-1.006	25.983	20.948	2580.000
64	.0972	.126	98.70	69.21	.999	.999	-1.006	25.983	20.948	2667.853
65	.0986	.128	98.66	69.17	.999	.999	-1.006	25.983	20.948	2755.706
66	.0999	.130	98.69	69.16	.999	.999	-1.006	25.983	20.948	2843.559
67	.1013	.132	98.65	69.26	.999	.999	-1.006	25.983	20.948	2931.412
68	.1027	.134	98.66	69.25	.999	.999	-1.006	25.983	20.948	3019.265
69	.1041	.136	98.66	69.21	.999	.999	-1.006	25.983	20.948	3107.118
70	.1055	.138	98.66	69.21	.999	.999	-1.006	25.983	20.948	3194.971
71	.1069	.140	98.66	69.21	.999	.999	-1.006	25.983	20.948	3282.824
72	.1083	.142	98.66	69.21	.999	.999	-1.006	25.983	20.948	3370.677
73	.1097	.144	98.66	69.21	.999	.999	-1.006	25.983	20.948	3458.530
74	.1111	.146	98.66	69.21	.999	.999	-1.006	25.983	20.948	3546.383

Table 25.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 16. GRID NO. 1

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY ==	98.476	98.476
FREE STREAM TEMPERATURE ==	69.477	
WALL TEMPERATURE ==	93.780	
WALL HEAT FLUX ==	.07641	
FREE STREAM DENSITY ==	.07643	
FREE STREAM KINEMATIC VISCOSITY ==	.0001598	
DENSITY OF FLUID AT WALL ==	.07307	
KINEMATIC VISCOSITY OF FLUID AT WALL ==	.0001731	
WALL/FREE STREAM DENSITY RATIO ==	.95609	
LOCATION REYNOLDS NUMBER (REX) ==	3098418.12	
INPUT VALUE OF VELOCITY DELTA ==	.99000	
INPUT VALUE OF TEMPERATURE DELTA ==	1.04000	
CALCULATED DELTA ==		.91030
DELTA 99.5% INPUT ==	.00000	
DISPLACEMENT THICKNESS (DELSTAR) ==	.13722	.13709
MOMENTUM THICKNESS (THETA) ==	.09504	.09542
ENERGY-DISSIPATION THICKNESS ==	.16831	.16864
ENTHALPY THICKNESS ==	.00469	.00471
SHAPE FACTOR 12 (DELSTAR/THETA) ==	1.44375	1.43668
SHAPE FACTOR 32 (ENERGY/THETA) ==	1.77083	1.76736
MOMENTUM THICKNESS REYNOLDS NUMBER ==	4879.66	4899.00
DISPLACEMENT THICKNESS REYNOLDS NUMBER ==	7045.04	7038.29
SKIN FRICTION COEFFICIENT ==	.002840	
FRICTION VELOCITY ==	3.79496	
LAW OF THE WALL CONSTANT (K) ==	.41000	
LAW OF THE WALL CONSTANT (C) ==	5.00000	
WAKE STRENGTH ==		.58622
CLAUSERS 'DELTA' INTEGRAL ==	-3.23069	-3.43530
CLAUSERS 'G' INTEGRAL ==	24.54730	24.18402
DISPLACEMENT THICKNESS - CONSTANT DENSITY ==	.12852	.13239
MOMENTUM THICKNESS - CONSTANT DENSITY ==	.09608	.09647
SHAPE FACTOR 12 - CONSTANT DENSITY ==	1.33765	1.37230

LOCATION -X- 60.35001

Z = -6 INCHES

Table 26.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 16. GRID NO. 1

REDUCED PROFILE DATA

N	Y	DELTA	U	T	U/UE	THETA	U-UE	U(+)	T(+)	Y(+)
INCHES			FT/SEC	DEG.F			UTAU			
1	.00800	.009	40.87	84.77	.415	.371	-15.180	10.770	7.847	14.675
2	.00922	.010	42.85	84.22	.435	.393	-14.658	11.291	8.325	16.868
3	.0103	.011	44.87	83.48	.456	.424	-14.125	11.825	8.971	18.878
4	.0112	.012	46.43	83.03	.472	.442	-13.714	12.235	9.361	20.523
5	.0124	.014	48.42	82.63	.492	.459	-13.191	12.758	9.716	22.716
6	.0139	.015	49.46	82.31	.502	.472	-12.916	13.033	9.987	25.457
7	.0156	.017	51.05	81.96	.518	.485	-12.496	13.453	10.274	28.564
8	.0165	.018	51.84	81.84	.526	.491	-12.290	13.659	10.403	30.208
9	.0184	.020	52.57	81.54	.534	.504	-12.096	13.853	10.659	33.680
10	.0204	.022	53.33	81.14	.542	.520	-11.897	14.052	11.011	37.335
11	.0222	.024	54.11	80.76	.549	.528	-11.690	14.259	11.168	40.625
12	.0239	.026	54.93	80.58	.558	.543	-11.475	14.474	11.500	43.732
13	.0256	.028	55.22	80.22	.561	.558	-11.400	14.550	11.808	46.838
14	.0274	.030	56.06	80.26	.569	.556	-11.176	14.773	11.779	50.128
15	.0290	.032	56.45	80.18	.573	.560	-11.075	14.874	11.847	53.052
16	.0316	.035	57.13	79.98	.580	.566	-10.894	15.055	12.023	57.803
17	.0328	.036	57.38	79.86	.583	.573	-10.830	15.119	12.120	59.966
18	.0352	.043	58.80	79.36	.597	.593	-10.456	15.493	12.559	71.682
19	.0366	.051	60.22	79.00	.611	.608	-10.082	15.868	12.870	85.215
20	.0380	.058	61.38	78.56	.623	.626	-9.776	16.173	13.255	96.911
21	.0390	.065	62.21	78.28	.632	.638	-9.555	16.394	13.503	107.876
22	.0405	.073	63.38	78.06	.644	.647	-9.248	16.701	13.692	121.582
23	.042	.080	64.26	77.84	.653	.652	-9.017	16.933	13.792	133.826
24	.0432	.087	64.91	77.75	.659	.660	-8.844	17.105	13.960	144.791
25	.0445	.095	65.76	77.53	.668	.669	-8.616	17.334	14.155	158.132
26	.0456	.103	65.50	77.53	.675	.669	-8.425	17.524	14.156	171.107
27	.0469	.109	67.24	77.30	.683	.678	-8.232	17.717	14.355	180.975
28	.0480	.116	67.26	77.07	.689	.688	-8.067	17.882	14.553	193.768
29	.0490	.124	68.56	76.84	.696	.697	-7.883	18.067	14.759	206.560
30	.0500	.131	69.06	76.70	.701	.703	-7.752	18.197	14.878	218.621
31	.051	.138	69.51	76.53	.706	.710	-7.633	18.316	15.021	230.317
32	.052	.146	70.06	76.38	.711	.716	-7.489	18.460	15.152	243.292
33	.053	.155	71.46	76.18	.726	.724	-7.119	18.830	15.331	274.542
34	.054	.164	72.74	75.95	.739	.734	-6.783	19.167	15.528	306.706
35	.055	.204	73.79	75.62	.749	.747	-6.505	19.444	15.820	339.235
36	.056	.223	74.92	75.34	.761	.759	-6.208	19.741	16.058	371.399
37	.057	.242	76.07	75.03	.773	.771	-5.903	20.046	16.329	402.466
38	.058	.262	77.03	74.84	.782	.779	-5.650	20.299	16.492	435.360
39	.059	.280	78.17	74.63	.794	.788	-5.352	20.597	16.680	466.428
40	.060	.300	79.06	74.38	.803	.798	-5.116	20.833	16.898	499.322
41	.061	.319	79.98	74.19	.812	.806	-4.874	21.075	17.062	530.572
42	.062	.338	80.81	73.97	.821	.815	-4.654	21.295	17.254	563.467
43	.063	.357	83.18	73.42	.845	.838	-4.031	21.918	17.735	651.003
44	.064	.441	85.42	72.97	.867	.856	-3.441	22.508	18.129	738.539
45	.065	.497	87.47	72.57	.888	.873	-2.900	23.049	18.475	826.075
46	.066	.549	89.49	72.02	.909	.895	-2.367	23.582	18.953	913.794
47	.067	.603	91.20	71.58	.926	.914	-1.917	24.032	19.337	1002.610
48	.068	.655	92.80	71.25	.942	.927	-1.495	24.455	19.622	1090.146
49	.069	.708	94.24	70.86	.957	.943	-1.115	24.834	19.967	1177.500
50	.070	.760	95.41	70.56	.969	.955	-.807	25.142	20.224	1264.671
51	.071	.813	96.35	70.27	.978	.967	-.561	25.388	20.474	1352.572
52	.072	.866	97.17	69.97	.987	.980	-.345	25.604	20.735	1440.109
53	.073	.919	97.61	69.93	.991	.982	-.228	25.722	20.976	1528.193
54	.074	.972	98.04	69.70	.996	.991	-.116	25.834	20.972	1616.460
55	.075	1.024	98.29	69.57	.998	.996	-.050	25.899	21.087	1703.266
56	.076	1.077	98.45	69.55	1.000	.997	-.006	25.943	21.106	1790.985
57	.077	1.130	98.40	69.51	.999	.999	-.019	25.930	21.139	1879.069
58	.078	1.182	98.54	69.51	1.001	.999	.017	25.966	21.137	1966.971
59	.079	1.235	98.48	69.45	1.000	1.001	.002	25.951	21.189	2054.507
60	.080	1.288	98.46	69.47	1.000	1.000	-.003	25.946	21.175	2142.957
61	.081	1.341	98.50	69.46	1.000	1.001	.006	25.955	21.183	2230.676
62	.082	1.393	98.49	69.48	1.000	1.000	.004	25.953	21.167	2317.664
63	.083	1.445	98.52	69.49	1.000	1.000	.011	25.960	21.157	2404.652
64	.084	1.499	98.51	69.47	1.000	1.000	.010	25.959	21.173	2493.102
65	.085	1.551	98.53	69.49	1.001	.999	.015	25.964	21.154	2580.821
66	.086	1.604	98.42	69.50	1.000	.999	.014	25.935	21.148	2667.809
67	.087	1.657	98.46	69.52	1.000	.998	-.004	25.945	21.128	2755.625
68	.088	1.710	98.50	69.54	1.000	.998	.006	25.955	21.116	2843.404
69	.089	1.764	98.49	69.51	1.000	.998	.003	25.952	21.135	2931.197
70	.090	1.817	98.42	69.56	1.000	.997	.006	25.934	21.096	3019.003
71	.091	1.870	98.48	69.56	1.000	.996	.001	25.950	21.094	3106.802
72	.092	1.923	98.38	69.62	.999	.994	-.025	25.924	21.047	3194.601
73	.093	1.976	98.36	69.63	.999	.993	-.030	25.919	21.013	3282.401
74	.094	2.029	98.40	69.67	.999	.992	-.021	25.928	20.998	3370.201

Table 26.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 17. GRID NO. 1

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY	98.14	98.614
FREE STREAM TEMPERATURE	70.040	
WALL TEMPERATURE	95.010	
WALL HEAT FLUX	.07759	
FREE STREAM DENSITY	.07634	
FREE STREAM KINEMATIC VISCOSITY	.0001601	
DENSITY OF FLUID AT WALL	.07291	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001737	
WALL/FREE STREAM DENSITY RATIO	.95498	
LOCATION REYNOLDS NUMBER (REX)	3510027.12	
INPUT VALUE OF VELOCITY DELTA	1.12000	
INPUT VALUE OF TEMPERATURE DELTA	1.17000	
CALCULATED DELTA		.98175
DELTA 99.5% INPUT	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	.14349	.14353
MOMENTUM THICKNESS (THETA)	.10037	.10059
ENERGY-DISSIPATION THICKNESS	.17814	.17829
ENTHALPY THICKNESS	.00512	.00513
SHAPE FACTOR 12 (DELSTAR/THETA)	1.42968	1.42692
SHAPE FACTOR 32 (ENERGY/THETA)	1.77486	1.77245
MOMENTUM THICKNESS REYNOLDS NUMBER	5150.40	5161.75
DISPLACEMENT THICKNESS REYNOLDS NUMBER	7363.42	7365.42
SKIN FRICTION COEFFICIENT	.002849	
FRICTION VELOCITY	3.80844	
LAW OF THE WALL CONSTANT (K)	.41000	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		.53724
CLAUSERS 'DELTA' INTEGRAL	-3.41653	-3.58388
CLAUSERS 'G' INTEGRAL	24.74967	24.61548
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.13516	.13841
MOMENTUM THICKNESS - CONSTANT DENSITY	.10146	.10169
SHAPE FACTOR 12 - CONSTANT DENSITY	1.33213	1.36101

LOCATION -X- 68.39999

Z = CENTERLINE

Table 27.

JOB KLU48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 17. GRID NO. 1

REDUCED PROFILE DATA

N	Y	Y/	U	T	U/UE	THETA	U-UE	U(+)	T(+)	Y(+)
	INCHES	DELTA	FT/SEC	DEG.F			UTAU			
1	.0064	.007	36.92	87.01	.374	.320	-16.200	9.693	6.871	11.746
2	.0076	.008	39.97	86.02	.405	.360	-15.398	10.495	7.721	11.939
3	.0086	.009	42.51	85.39	.431	.385	-14.733	11.161	8.265	12.765
4	.0095	.010	44.53	84.92	.452	.404	-14.202	11.692	8.667	13.409
5	.0106	.011	46.30	84.36	.470	.426	-13.736	12.156	9.146	14.149
6	.0123	.013	48.41	83.64	.491	.453	-13.181	12.713	9.765	15.244
7	.0137	.014	49.73	83.20	.504	.473	-12.835	13.059	10.144	16.082
8	.0147	.015	50.49	82.95	.512	.483	-12.637	13.257	10.359	16.909
9	.0166	.017	51.90	82.58	.526	.498	-12.267	13.626	10.674	17.380
10	.0190	.019	52.90	82.10	.536	.517	-12.005	13.889	11.089	17.764
11	.0210	.021	53.93	81.85	.547	.527	-11.733	14.161	11.303	18.418
12	.0223	.023	54.42	81.64	.552	.535	-11.603	14.290	11.481	18.793
13	.0239	.024	55.07	81.37	.556	.546	-11.435	14.459	11.718	19.715
14	.0260	.027	55.68	81.17	.563	.554	-11.273	14.621	11.886	20.552
15	.0276	.028	56.14	80.94	.569	.564	-11.152	14.742	12.088	21.475
16	.0300	.031	56.87	80.69	.577	.573	-10.960	14.933	12.297	22.859
17	.0313	.032	57.13	80.59	.579	.577	-10.892	15.001	12.383	23.234
18	.0377	.038	58.61	80.24	.594	.592	-10.503	15.390	12.686	24.925
19	.0445	.045	60.05	79.88	.609	.606	-10.126	15.767	12.992	26.348
20	.0516	.053	61.36	79.42	.622	.624	-9.781	16.113	13.391	27.318
21	.0577	.059	62.25	79.13	.631	.636	-9.547	16.346	13.641	28.461
22	.0647	.066	63.20	78.88	.641	.646	-9.299	16.595	13.856	29.249
23	.0717	.073	64.16	78.66	.651	.655	-9.046	16.848	14.040	30.037
24	.0775	.079	65.13	78.47	.660	.663	-8.793	17.101	14.210	31.432
25	.0849	.087	65.93	78.32	.669	.668	-8.582	17.312	14.334	32.150
26	.0917	.093	66.65	78.13	.676	.676	-8.394	17.500	14.496	33.573
27	.0975	.099	67.11	78.07	.681	.678	-8.272	17.622	14.549	34.168
28	.1046	.107	67.97	77.85	.689	.687	-8.046	17.846	14.740	35.138
29	.1114	.114	68.44	77.60	.694	.697	-7.924	17.970	14.954	36.561
30	.1179	.120	69.21	77.40	.702	.705	-7.720	18.174	15.121	37.435
31	.1249	.127	69.65	77.32	.706	.708	-7.606	18.288	15.193	38.223
32	.1319	.134	70.22	77.29	.712	.710	-7.456	18.438	15.223	39.010
33	.1469	.152	71.46	76.95	.725	.723	-7.131	18.762	15.509	40.066
34	.1663	.169	72.56	76.52	.736	.741	-6.835	19.056	15.884	41.852
35	.1836	.187	73.81	76.29	.749	.750	-6.512	19.382	16.078	43.456
36	.2017	.205	74.70	76.10	.757	.757	-6.280	19.614	16.243	44.521
37	.2167	.223	75.88	75.92	.769	.764	-5.969	19.924	16.392	45.577
38	.2369	.241	76.69	75.60	.778	.777	-5.758	20.136	16.672	47.825
39	.2536	.258	77.77	75.32	.789	.789	-5.472	20.421	16.912	49.332
40	.2717	.277	78.75	75.25	.799	.791	-5.216	20.677	16.974	50.397
41	.2867	.294	79.37	74.90	.805	.805	-5.053	20.841	17.273	52.453
42	.3070	.313	80.50	74.67	.816	.815	-4.756	21.138	17.471	54.884
43	.3547	.361	82.55	74.24	.837	.832	-4.219	21.675	17.843	60.022
44	.4025	.410	84.81	73.81	.860	.849	-3.625	22.269	18.208	73.343
45	.4505	.459	86.71	73.27	.879	.871	-3.126	22.768	18.659	82.030
46	.4990	.506	88.45	72.96	.897	.883	-2.670	23.224	18.957	91.630
47	.5471	.555	90.19	72.53	.915	.900	-2.211	23.683	19.201	99.429
48	.5949	.603	91.73	72.30	.930	.910	-1.800	24.087	19.507	108.820
49	.6426	.655	93.05	71.96	.944	.923	-1.460	24.434	19.799	117.959
50	.6909	.704	94.41	71.44	.957	.944	-1.103	24.790	20.240	126.219
51	.7388	.753	95.44	71.24	.968	.952	-.834	25.059	20.415	134.697
52	.7869	.802	96.48	70.92	.978	.965	-.562	25.332	20.689	143.567
53	.8345	.850	97.11	70.65	.985	.976	-.395	25.498	20.921	152.522
54	.8826	.899	97.72	70.51	.991	.981	-.235	25.659	21.041	161.392
55	.9305	.948	98.04	70.31	.994	.989	-.151	25.743	21.214	169.896
56	.9791	.997	98.31	70.24	.997	.992	-.060	25.814	21.272	178.678
57	1.0267	1.046	98.46	70.15	.999	.995	-.035	25.859	21.348	187.634
58	1.0748	1.095	98.57	70.13	1.000	.996	-.011	25.882	21.368	196.503
59	1.1227	1.144	98.60	70.07	1.000	.999	-.003	25.891	21.417	205.107
60	1.1707	1.192	98.62	70.03	1.000	1.000	.002	25.895	21.456	213.694
61	1.2189	1.242	98.62	70.04	1.000	1.000	.001	25.894	21.448	222.674
62	1.2669	1.290	98.64	70.05	1.000	1.000	.007	25.900	21.433	231.432
63	1.3143	1.339	98.60	70.02	1.000	1.001	-.004	25.890	21.466	240.102
64	1.3629	1.388	98.57	70.02	1.001	1.001	.035	25.928	21.463	248.806
65	1.4108	1.437	98.57	70.03	1.000	1.000	-.011	25.882	21.453	257.739
66	1.4583	1.485	98.60	70.00	1.000	1.002	-.005	25.889	21.483	266.408
67	1.5067	1.535	98.61	70.04	1.000	1.000	-.000	25.893	21.443	275.200
68	1.5636	1.589	98.57	70.03	1.000	1.000	-.013	25.881	21.451	284.486
69	1.6209	1.626	98.53	70.02	.999	1.001	-.021	25.672	21.466	293.203
70	1.6781	1.662	98.47	69.97	.998	1.003	-.049	25.844	21.503	301.737
71	1.7349	1.733	98.43	70.03	.999	1.000	-.038	25.856	21.456	310.541
72	1.7919	1.733	98.38	69.94	.998	1.004	-.062	25.632	21.533	319.710
73	1.8493	1.717	98.41	69.89	.998	1.006	-.052	25.841	21.571	328.610
74	1.9066	1.681	98.46	69.91	.998	1.005	-.041	25.852	21.556	337.326

Table 27.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 18. GRID NO. 1

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY =	96.671	98.671
FREE STREAM TEMPERATURE =	69.947	
WALL TEMPERATURE =	95.560	
WALL HEAT FLUX =	.07697	
FREE STREAM DENSITY =	.07636	
FREE STREAM KINEMATIC VISCOSITY =	.0001601	
DENSITY OF FLUID AT WALL =	.07284	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001740	
WALL/FREE STREAM DENSITY RATIO =	.95387	
LOCATION REYNOLDS NUMBER (REX) =	3918913.37	
INPUT VALUE OF VELOCITY DELTA =	1.20000	
INPUT VALUE OF TEMPERATURE DELTA =	1.30000	
CALCULATED DELTA =		1.10966
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.16027	.16044
MOMENTUM THICKNESS (THETA) =	.11264	.11274
ENERGY-DISSIPATION THICKNESS =	.19996	.19998
ENTHALPY THICKNESS =	.00589	.00589
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.42280	1.42310
SHAPE FACTOR 32 (ENERGY/THETA) =	1.77521	1.77379
MOMENTUM THICKNESS REYNOLDS NUMBER =	5785.48	5790.51
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	8231.60	8240.50
SKIN FRICTION COEFFICIENT =	.002786	
FRICTION VELOCITY =	3.77084	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.53787
CLAUSERS 'DELTA' INTEGRAL =	-3.91339	-4.04434
CLAUSERS 'G' INTEGRAL =	27.71205	27.76016
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.15197	.15456
MOMENTUM THICKNESS - CONSTANT DENSITY =	.11391	.11402
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.33410	1.35559

LOCATION -X- 76.30000

Z = CENTERLINE

Table 28.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79
 RUN NO. 8. POINT 18. GRID NO. 1

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
1	.0048	.0004	30.26	88.89	.307	.260	-18.143	8.023	5.710	8.721
2	.0058	.0005	33.35	87.92	.338	.298	-17.324	8.843	6.544	10.527
3	.0068	.0006	36.75	86.83	.372	.341	-16.521	9.746	7.477	12.332
4	.0078	.0007	40.22	86.11	.408	.369	-15.502	10.665	8.089	14.138
5	.0088	.0008	42.95	85.72	.435	.384	-14.777	11.390	8.429	15.944
6	.0100	.0010	46.26	84.96	.469	.414	-13.894	12.273	9.079	17.374
7	.0112	.0011	48.20	84.24	.489	.442	-13.384	12.783	9.693	19.083
8	.0122	.0012	48.89	84.07	.495	.449	-13.384	12.964	9.842	20.374
9	.0132	.0013	50.44	83.64	.511	.465	-12.489	13.378	10.209	22.166
10	.0142	.0014	51.79	83.13	.525	.485	-12.432	13.735	10.641	23.777
11	.0152	.0015	52.93	82.53	.536	.497	-12.430	14.037	11.001	25.930
12	.0162	.0016	53.26	82.59	.540	.507	-12.042	14.125	11.110	27.541
13	.0172	.0017	54.13	82.34	.549	.516	-11.811	14.355	11.324	29.430
14	.0182	.0018	54.77	82.23	.555	.520	-11.642	14.525	11.415	30.500
15	.0192	.0019	55.16	81.74	.559	.539	-11.538	14.629	11.833	31.389
16	.0202	.0020	55.90	81.46	.567	.550	-11.343	14.824	12.075	32.181
17	.0212	.0021	56.21	81.35	.570	.555	-11.261	14.905	12.173	33.500
18	.0222	.0022	56.64	80.98	.584	.569	-11.088	15.285	12.482	34.655
19	.0232	.0023	59.24	80.48	.600	.599	-10.455	15.709	12.918	36.344
20	.0242	.0024	60.46	80.21	.613	.609	-10.134	16.033	13.147	37.057
21	.0252	.0025	61.45	79.96	.623	.627	-9.871	16.296	13.359	38.627
22	.0262	.0026	62.40	79.51	.632	.638	-9.620	16.547	13.747	39.627
23	.0272	.0027	63.31	79.22	.642	.646	-9.377	16.790	14.167	40.642
24	.0282	.0028	64.07	79.32	.649	.654	-9.176	16.991	14.350	41.281
25	.0292	.0029	64.88	78.80	.656	.659	-8.961	17.206	14.457	42.198
26	.0302	.0030	65.54	78.49	.664	.667	-8.787	17.380	14.620	43.573
27	.0312	.0031	66.12	78.34	.676	.672	-8.632	17.535	14.751	44.032
28	.0322	.0032	66.72	78.18	.688	.678	-8.474	17.693	14.880	44.032
29	.0332	.0033	67.93	78.03	.693	.684	-8.254	17.913	15.009	44.783
30	.0342	.0034	68.36	77.04	.693	.688	-8.152	18.015	15.089	45.783
31	.0352	.0035	69.19	77.80	.701	.693	-8.039	18.128	15.207	46.783
32	.0362	.0036	70.38	77.33	.713	.712	-7.817	18.350	15.615	47.783
33	.0372	.0037	71.44	77.10	.724	.721	-7.504	18.663	16.165	48.783
34	.0382	.0038	72.58	76.66	.736	.738	-7.221	18.946	16.808	49.783
35	.0392	.0039	73.80	76.30	.748	.748	-6.918	19.249	17.182	50.783
36	.0402	.0040	74.32	76.20	.753	.756	-6.596	19.570	17.408	51.783
37	.0412	.0041	75.38	76.11	.764	.759	-6.457	19.710	17.653	52.783
38	.0422	.0042	76.38	75.99	.774	.770	-6.178	19.989	17.838	53.783
39	.0432	.0043	77.36	75.85	.784	.780	-5.912	20.255	18.086	54.783
40	.0442	.0044	78.32	75.57	.791	.790	-5.653	20.514	18.322	55.783
41	.0452	.0045	78.85	75.08	.799	.800	-5.476	20.691	18.532	56.783
42	.0462	.0046	80.95	74.65	.820	.817	-5.255	20.912	18.710	57.783
43	.0472	.0047	83.05	74.10	.842	.817	-4.700	21.466	19.100	58.783
44	.0482	.0048	84.98	73.84	.861	.838	-4.144	22.023	19.510	59.783
45	.0492	.0049	86.84	73.56	.881	.848	-3.630	22.577	19.938	60.783
46	.0502	.0050	88.52	73.32	.897	.866	-3.115	23.133	20.385	61.783
47	.0512	.0051	90.27	72.48	.915	.884	-2.687	23.687	20.847	62.783
48	.0522	.0052	91.92	72.02	.932	.901	-2.227	24.227	21.325	63.783
49	.0532	.0053	93.13	71.74	.944	.919	-1.790	24.790	21.768	64.783
50	.0542	.0054	94.26	71.37	.955	.930	-1.469	25.377	22.163	65.783
51	.0552	.0055	95.49	71.15	.968	.944	-1.170	25.998	22.533	66.783
52	.0562	.0056	96.33	70.85	.976	.953	-.844	26.621	22.877	67.783
53	.0572	.0057	97.09	70.61	.984	.965	-.621	27.244	23.199	68.783
54	.0582	.0058	97.59	70.48	.989	.974	-.419	27.867	23.504	69.783
55	.0592	.0059	98.09	70.28	.994	.979	-.287	28.489	23.797	70.783
56	.0602	.0060	98.31	70.18	.996	.981	-.164	29.112	24.077	71.783
57	.0612	.0061	98.47	70.06	.998	.987	-.096	29.734	24.344	72.783
58	.0622	.0062	98.60	70.05	.999	.991	-.034	30.356	24.597	73.783
59	.0632	.0063	98.68	70.00	1.000	.996	-.000	30.978	24.844	74.783
60	.0642	.0064	98.67	69.95	1.000	.998	-.000	31.600	25.086	75.783
61	.0652	.0065	98.67	69.92	1.000	.999	-.000	32.222	25.322	76.783
62	.0662	.0066	98.67	69.92	1.000	1.000	-.000	32.844	25.555	77.783
63	.0672	.0067	98.67	69.96	1.000	1.000	-.000	33.466	25.788	78.783
64	.0682	.0068	98.67	69.96	1.000	1.000	-.000	34.088	26.022	79.783
65	.0692	.0069	98.67	69.91	1.000	1.000	-.000	34.710	26.255	80.783
66	.0702	.0070	98.67	69.87	1.000	1.000	-.000	35.332	26.488	81.783
67	.0712	.0071	98.67	69.87	1.000	1.000	-.000	35.954	26.722	82.783
68	.0722	.0072	98.67	69.87	1.000	1.000	-.000	36.576	26.955	83.783
69	.0732	.0073	98.67	69.87	1.000	1.000	-.000	37.198	27.188	84.783
70	.0742	.0074	98.67	69.87	1.000	1.000	-.000	37.820	27.422	85.783
71	.0752	.0075	98.67	69.87	1.000	1.000	-.000	38.442	27.655	86.783
72	.0762	.0076	98.67	69.87	1.000	1.000	-.000	39.064	27.888	87.783
73	.0772	.0077	98.67	69.87	1.000	1.000	-.000	39.686	28.122	88.783
74	.0782	.0078	98.67	69.87	1.000	1.000	-.000	40.308	28.355	89.783
75	.0792	.0079	98.67	69.87	1.000	1.000	-.000	40.930	28.588	90.783
76	.0802	.0080	98.67	69.87	1.000	1.000	-.000	41.552	28.822	91.783

Table 28.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 20. GRID NO. 1

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY ==	98.533	98.533
FREE STREAM TEMPERATURE ==	69.564	
WALL TEMPERATURE ==	95.170	
WALL HEAT FLUX ==	.C7723	
FREE STREAM DENSITY ==	.07641	
FREE STREAM KINEMATIC VISCOSITY ==	.0001599	
DENSITY OF FLUID AT WALL ==	.07289	
KINEMATIC VISCOSITY OF FLUID AT WALL ==	.0001738	
WALL/FREE STREAM DENSITY RATIO ==	.95385	
LOCATION REYNOLDS NUMBER (REX) ==	3918444.26	
INPUT VALUE OF VELOCITY DELTA ==	1.29000	
INPUT VALUE OF TEMPERATURE DELTA ==	1.29000	
CALCULATED DELTA ==		1.15058
DELTA 99.5% INPUT ==	.00000	
DISPLACEMENT THICKNESS (DELSTAR) ==	.16980	.17000
MOMENTUM THICKNESS (THETA) ==	.11912	.11919
ENERGY-DISSIPATION THICKNESS ==	.21112	.21110
ENTHALPY THICKNESS ==	.00605	.00605
SHAPE FACTOR 12 (DELSTAR/THETA) ==	1.42545	1.42622
SHAPE FACTOR 32 (ENERGY/THETA) ==	1.77237	1.77110
MOMENTUM THICKNESS REYNOLDS NUMBER ==	6117.51	6121.30
DISPLACEMENT THICKNESS REYNOLDS NUMBER ==	8720.19	8730.34
SKIN FRICTION COEFFICIENT ==	.002719	
FRICTION VELOCITY ==	3.72008	
LAW OF THE WALL CONSTANT (K) ==	.41000	
LAW OF THE WALL CONSTANT (C) ==	5.00000	
WAKE STRENGTH ==		.59151
CLAUSERS 'DELTA' INTEGRAL ==	-4.20931	-4.34254
CLAUSERS 'G' INTEGRAL ==	30.37478	30.45977
DISPLACEMENT THICKNESS - CONSTANT DENSITY ==	.16134	.16395
MOMENTUM THICKNESS - CONSTANT DENSITY ==	.12045	.12053
SHAPE FACTOR 12 - CONSTANT DENSITY ==	1.33939	1.36021

LOCATION -X- 76.30000

Z = -6 INCHES

Table 29.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 20. GRID NO. 1

REDUCED PROFILE DATA

N	Y	Y/	U	T	U/UE	THETA	U-UE	U(+)	T(+)	Y(+)
INCHES	DELTA	FT/SEC	DEG.F			UTAU				
1	.0048	.004	30.93	88.44	.314	.263	-18.172	8.315	5.674	8.614
2	.0058	.005	33.45	87.55	.339	.298	-17.496	8.991	6.424	10.398
3	.0068	.006	36.49	86.80	.370	.327	-16.679	9.808	7.057	12.181
4	.0078	.007	39.42	86.06	.400	.356	-15.892	10.595	7.678	13.965
5	.0092	.008	42.78	85.11	.434	.393	-14.987	11.500	8.476	16.462
6	.0107	.009	45.06	84.63	.458	.411	-14.368	12.119	8.878	19.137
7	.0118	.010	46.44	84.17	.471	.430	-14.004	12.483	9.270	21.099
8	.0128	.011	47.52	83.62	.482	.451	-13.713	12.774	9.735	22.882
9	.0148	.013	49.25	83.11	.500	.471	-13.247	13.240	10.158	26.449
10	.0168	.015	50.57	82.66	.513	.488	-12.893	13.594	10.527	30.017
11	.0192	.017	51.66	82.46	.524	.496	-12.595	13.892	10.708	34.297
12	.0207	.018	52.53	82.07	.533	.512	-12.367	14.120	11.037	36.972
13	.0216	.019	52.79	81.84	.536	.521	-12.296	14.191	11.232	38.934
14	.0244	.021	53.83	81.58	.546	.531	-12.018	14.469	11.452	43.571
15	.0262	.023	54.38	81.55	.552	.532	-11.866	14.619	11.474	46.782
16	.0283	.025	54.89	81.26	.557	.543	-11.731	14.756	11.722	50.527
17	.0297	.026	55.21	81.12	.560	.549	-11.645	14.841	11.843	53.024
18	.0360	.031	56.93	80.58	.578	.570	-11.183	15.304	12.293	64.260
19	.0433	.038	58.30	79.98	.592	.593	-10.816	15.671	12.795	77.280
20	.0500	.043	59.42	79.68	.603	.605	-10.515	15.972	13.053	84.229
21	.0565	.049	60.51	79.41	.614	.615	-10.220	16.266	13.279	100.822
22	.0632	.055	61.37	79.28	.623	.621	-9.991	16.496	13.390	112.771
23	.0702	.061	62.44	79.07	.634	.629	-9.701	16.786	13.565	125.256
24	.0762	.066	63.03	78.80	.640	.639	-9.545	16.942	13.791	135.957
25	.0831	.072	63.89	78.58	.648	.648	-9.313	17.174	13.982	148.263
26	.0899	.078	64.66	78.45	.656	.653	-9.105	17.382	14.088	160.391
27	.0959	.083	65.15	78.15	.661	.665	-8.975	17.512	14.343	171.092
28	.1035	.090	66.02	77.94	.670	.673	-8.740	17.746	14.515	184.647
29	.1102	.096	66.59	77.83	.676	.677	-8.587	17.900	14.614	196.597
30	.1160	.101	67.06	77.74	.681	.681	-8.462	18.025	14.687	206.941
31	.1228	.107	67.74	77.68	.687	.683	-8.279	18.208	14.739	219.069
32	.1298	.113	68.22	77.77	.692	.695	-8.149	18.338	14.997	231.553
33	.1473	.128	69.47	76.97	.704	.711	-7.838	18.648	15.339	262.765
34	.1646	.143	70.46	76.88	.715	.714	-7.537	18.950	15.413	293.620
35	.1818	.158	71.54	76.46	.726	.731	-7.256	19.231	15.706	325.296
36	.2002	.174	72.72	76.13	.738	.744	-6.939	19.547	15.042	357.113
37	.2169	.189	73.30	75.99	.744	.749	-6.783	19.704	16.164	386.897
38	.2350	.204	74.42	75.80	.755	.756	-6.482	20.005	16.319	419.179
39	.2522	.219	75.22	75.49	.763	.769	-6.268	20.219	16.582	449.855
40	.2698	.235	76.16	75.28	.773	.777	-6.015	20.472	16.762	481.245
41	.2869	.249	77.00	75.01	.781	.787	-5.788	20.698	16.986	511.743
42	.3052	.265	77.73	74.98	.789	.788	-5.593	20.894	17.009	544.382
43	.3566	.310	79.99	74.40	.812	.811	-4.985	21.502	17.497	636.054
44	.4078	.354	81.96	73.98	.832	.828	-4.455	22.032	17.857	727.370
45	.4604	.400	83.94	73.51	.852	.846	-3.923	22.564	18.251	821.183
46	.5122	.445	85.76	73.02	.870	.865	-3.433	23.054	18.660	913.569
47	.5639	.490	87.47	72.69	.888	.878	-2.974	23.513	18.942	1008.776
48	.6158	.535	89.07	72.39	.904	.890	-2.544	23.943	19.196	1098.340
49	.6677	.580	90.63	71.91	.920	.909	-2.125	24.362	19.603	1190.905
50	.7197	.626	92.05	71.38	.934	.929	-1.742	24.745	20.047	1283.647
51	.7710	.670	93.36	71.19	.947	.937	-1.391	25.096	20.208	1375.142
52	.8231	.715	94.55	70.87	.960	.949	-1.070	25.417	20.479	1468.063
53	.8751	.761	95.29	70.57	.967	.961	-0.873	25.614	20.725	1560.805
54	.9272	.806	96.46	70.42	.979	.967	-0.559	25.926	20.858	1653.726
55	.9790	.851	97.02	70.14	.985	.978	-0.408	26.079	21.094	1746.112
56	1.0306	.896	97.56	69.95	.990	.985	-0.263	26.224	21.252	1838.141
57	1.0823	.941	98.02	69.92	.995	.986	-0.137	26.350	21.276	1930.349
58	1.1341	.986	98.22	69.73	.997	.994	-0.063	26.404	21.438	2022.735
59	1.1863	1.031	98.42	69.67	.999	.996	-0.032	26.455	21.486	2115.834
60	1.2381	1.076	98.41	69.59	.999	.999	-0.032	26.455	21.558	2208.220
61	1.2900	1.121	98.56	69.58	1.000	1.000	.0008	26.495	21.566	2300.785
62	1.3422	1.167	98.55	69.57	1.000	1.000	.0005	26.492	21.572	2393.884
63	1.3936	1.211	98.49	69.55	1.000	1.001	-0.013	26.474	21.589	2486.557
64	1.4448	1.256	98.44	69.60	1.000	.999	.0003	26.490	21.547	2578.872
65	1.4974	1.301	98.57	69.60	1.000	.999	.0010	26.497	21.549	2670.685
66	1.5492	1.346	98.50	69.54	1.000	1.001	-0.009	26.478	21.593	2763.071
67	1.6008	1.391	98.60	69.47	1.001	1.004	-0.017	26.504	21.652	2855.100
68	1.6529	1.437	98.48	69.48	1.001	1.003	-0.014	26.473	21.645	2948.021
69	1.7052	1.482	98.59	69.54	1.001	1.001	-0.016	26.503	21.593	3041.299
70	1.7573	1.527	98.47	69.56	1.000	1.000	-0.017	26.470	21.580	3134.669
71	1.8099	1.573	98.51	69.60	1.000	.998	.0008	26.479	21.543	3228.532
72	1.8619	1.618	98.43	69.61	1.000	.998	.0008	26.459	21.538	3322.145
73	1.9139	1.664	98.55	69.60	1.000	.998	.0008	26.473	21.533	3415.999
74	1.9677	1.710	98.48	69.62	1.000	.999	-0.004	26.484	21.533	3510.424
75	2.0215	1.755	98.52	69.67	1.000	.996	-0.003	26.510	21.491	3605.424
76	2.0752	1.801	98.62	69.64	1.001	.997	.023	26.510	21.510	3701.378

Table 29.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 21. GRID NO. 1

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY	98.700	98.700
FREE STREAM TEMPERATURE	69.610	
WALL TEMPERATURE	95.040	
WALL HEAT FLUX	.07749	
FREE STREAM DENSITY	.07641	
FREE STREAM KINEMATIC VISCOSITY	.0001599	
DENSITY OF FLUID AT WALL	.07290	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001737	
WALL/FREE STREAM DENSITY RATIO	.95416	
LOCATION REYNOLDS NUMBER (REX)	4325652.75	
INPUT VALUE OF VELOCITY DELTA	1.35000	
INPUT VALUE OF TEMPERATURE DELTA	1.35000	
CALCULATED DELTA		1.21086
DELTA 99.5% INPUT	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	.17647	.17649
MOMENTUM THICKNESS (THETA)	.12424	.12446
ENERGY-DISSIPATION THICKNESS	.22074	.22089
ENTHALPY THICKNESS	.00629	.00629
SHAPE FACTOR 12 (DELSTAR/THETA)	1.42043	1.41801
SHAPE FACTOR 32 (ENERGY/THETA)	1.77672	1.77482
MOMENTUM THICKNESS REYNOLDS NUMBER	6390.26	6401.58
DISPLACEMENT THICKNESS REYNOLDS NUMBER	9076.89	9077.50
SKIN FRICTION COEFFICIENT	.002713	
FRICTION VELOCITY	3.72160	
LAW OF THE WALL CONSTANT (K)	.41000	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		.57251
CLAUSERS 'DELTA' INTEGRAL	-4.33770	-4.51368
CLAUSERS 'G' INTEGRAL	31.36304	31.20395
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.16687	.17019
MOMENTUM THICKNESS - CONSTANT DENSITY	.12560	.12583
SHAPE FACTOR 12 - CONSTANT DENSITY	1.32864	1.35258

LOCATION -X- 84.10001

Z = CENTERLINE

Table 30.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 21. GRID NO. 1

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG. F	U/UE	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
1	.0066	.0005	36.54	86.84	.370	.322	-16.701	9.819	6.887	11.834
2	.0076	.0006	38.40	86.17	.389	.349	-16.204	10.317	7.451	13.619
3	.0088	.0007	41.11	85.44	.417	.378	-15.474	11.047	8.070	15.761
4	.0099	.0008	42.93	84.74	.435	.405	-14.986	11.535	8.655	17.725
5	.0109	.0009	44.57	84.22	.452	.426	-14.545	11.975	9.094	19.510
6	.0122	.0010	46.73	83.90	.473	.438	-13.963	12.557	9.363	22.366
7	.0144	.0012	48.47	83.37	.491	.459	-13.497	13.024	9.807	25.400
8	.0151	.0012	49.05	83.09	.497	.470	-13.340	13.181	10.040	27.007
9	.0172	.0014	50.72	82.72	.514	.485	-12.892	13.629	10.356	30.755
10	.0190	.0016	51.44	82.41	.521	.497	-12.699	13.822	10.615	33.968
11	.0211	.0017	52.60	82.06	.533	.510	-12.387	14.133	10.908	37.538
12	.0224	.0019	53.07	81.84	.538	.519	-12.259	14.261	11.092	40.037
13	.0242	.0020	53.76	81.72	.545	.524	-12.069	14.452	11.195	43.250
14	.0256	.0021	54.04	81.68	.547	.525	-12.001	14.519	11.223	45.749
15	.0280	.0023	54.78	81.24	.555	.543	-11.803	14.718	11.598	50.033
16	.0297	.0025	55.23	80.81	.560	.560	-11.681	14.840	11.958	53.067
17	.0314	.0026	55.72	80.66	.565	.565	-11.548	14.973	12.081	56.102
18	.0377	.0031	57.14	80.56	.579	.569	-11.167	15.354	12.727	67.347
19	.0447	.0037	58.31	80.06	.591	.589	-10.853	15.668	12.992	79.842
20	.0517	.0043	59.56	79.57	.604	.608	-10.512	16.009	13.296	92.337
21	.0577	.0048	60.75	79.31	.615	.619	-10.198	16.323	13.531	103.047
22	.0645	.0054	61.73	79.24	.625	.621	-9.933	16.588	13.728	113.899
23	.0719	.0059	62.65	78.91	.635	.634	-9.688	16.833	13.955	124.815
24	.0779	.0064	63.26	78.63	.641	.645	-9.523	16.998	14.103	135.803
25	.0846	.0070	64.23	78.36	.651	.656	-9.261	17.260	14.314	146.853
26	.0916	.0076	64.96	78.22	.658	.661	-9.067	17.454	14.513	157.968
27	.0982	.0081	65.69	78.08	.666	.667	-8.870	17.651	14.714	169.148
28	.1052	.0087	66.11	77.93	.670	.673	-8.756	17.765	14.844	180.393
29	.1121	.0093	66.86	77.83	.677	.677	-8.554	17.966	14.977	191.703
30	.1178	.0097	67.36	77.67	.682	.683	-8.421	18.100	15.066	203.078
31	.1248	.0103	67.83	77.56	.687	.687	-8.295	18.222	15.177	214.519
32	.1321	.0109	68.54	77.46	.694	.691	-8.104	18.417	15.311	226.026
33	.1407	.0123	69.56	77.09	.705	.706	-7.824	18.597	15.477	237.600
34	.1665	.0138	70.83	76.69	.718	.722	-7.589	19.031	15.588	249.241
35	.1838	.0152	71.94	76.38	.729	.734	-7.192	19.329	15.632	260.950
36	.2020	.0167	72.71	76.20	.737	.741	-6.982	19.538	15.697	272.727
37	.2186	.0181	73.60	76.12	.746	.744	-6.746	19.777	15.790	284.571
38	.2336	.0196	74.72	75.98	.757	.750	-6.444	20.077	15.907	296.483
39	.2508	.0210	75.40	75.61	.764	.764	-6.226	20.366	16.042	308.463
40	.2716	.0224	76.19	75.41	.772	.772	-6.049	20.642	16.198	320.511
41	.2891	.0239	76.82	75.08	.778	.785	-5.878	20.907	16.498	332.636
42	.3072	.0254	77.67	74.93	.787	.791	-5.678	21.155	16.776	344.839
43	.3584	.0296	79.80	74.50	.809	.808	-5.350	21.444	16.901	357.120
44	.4098	.0336	81.73	74.04	.828	.826	-5.078	21.966	17.257	369.483
45	.4622	.0382	83.85	73.62	.850	.847	-4.761	22.533	17.647	381.928
46	.5137	.0424	85.36	73.24	.865	.852	-4.585	22.953	18.001	394.457
47	.5656	.0467	86.79	72.82	.879	.874	-4.201	23.320	18.321	407.071
48	.6181	.0510	88.46	72.42	.896	.890	-3.953	23.768	18.671	419.768
49	.6695	.0553	89.91	72.12	.911	.901	-3.753	24.155	19.011	432.549
50	.7214	.0596	91.39	71.81	.926	.913	-3.561	24.557	19.260	445.407
51	.7732	.0639	92.70	71.54	.939	.924	-3.315	24.908	19.520	458.343
52	.8253	.0682	93.81	71.19	.950	.938	-3.155	25.206	19.750	471.357
53	.8768	.0724	94.90	70.89	.962	.949	-3.020	25.500	20.041	484.443
54	.9287	.0767	95.79	70.60	.971	.961	-2.782	25.739	20.290	497.603
55	.9811	.0810	96.50	70.35	.978	.971	-2.590	25.931	20.539	510.836
56	1.0324	.0853	97.12	70.23	.984	.976	-2.423	26.097	20.748	524.143
57	1.0836	.0895	97.59	70.04	.989	.983	-2.299	26.222	20.852	537.526
58	1.1360	.0936	98.00	69.89	.993	.989	-2.187	26.334	21.011	550.989
59	1.1882	.0981	98.31	69.83	.996	.991	-2.106	26.415	21.134	564.532
60	1.2401	.1024	98.44	69.75	.997	.995	-2.069	26.452	21.253	578.155
61	1.2918	.1067	98.59	69.66	.999	.998	-2.029	26.491	21.326	591.858
62	1.3436	.1110	98.73	69.64	1.000	.999	-2.007	26.514	21.348	605.641
63	1.3954	.1152	98.67	69.62	1.000	1.000	-2.000	26.514	21.360	619.493
64	1.4471	.1195	98.72	69.63	1.000	1.000	-2.005	26.525	21.349	633.316
65	1.4992	.1238	98.71	69.57	1.000	1.001	-2.003	26.523	21.399	647.119
66	1.5509	.1281	98.76	69.59	1.001	1.001	-2.017	26.538	21.388	660.902
67	1.6029	.1324	98.66	69.62	1.000	.999	-2.010	26.510	21.358	674.665
68	1.6552	.1367	98.73	69.65	1.000	.998	-2.008	26.529	21.333	688.410
69	1.7070	.1410	98.77	69.60	1.001	1.000	-2.020	26.540	21.377	702.132
70	1.7593	.1453	98.65	69.57	1.000	1.002	-2.012	26.509	21.403	715.837
71	1.8118	.1495	98.50	69.64	.999	.999	-2.027	26.494	21.342	729.529
72	1.8643	.1538	98.57	69.66	.999	.998	-2.034	26.486	21.323	743.208
73	1.9168	.1581	98.49	69.62	.998	1.000	-2.057	26.464	21.361	756.873
74	1.9693	.1624	98.56	69.64	.999	.999	-2.037	26.484	21.342	770.524
75	2.0218	.1667	98.55	69.65	.998	.998	-2.040	26.481	21.337	784.161
76	2.0743	.1710	98.61	69.67	.999	.998	-2.025	26.496	21.318	797.783

Table 30.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 3. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $y^+=35$
FREE STREAM VELOCITY	99.054	99.054
FREE STREAM TEMPERATURE	68.469	
WALL TEMPERATURE	85.720	
WALL HEAT FLUX	.07878	
FREE STREAM DENSITY	.07612	
FREE STREAM KINEMATIC VISCOSITY	.0001602	
DENSITY OF FLUID AT WALL	.07371	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001696	
WALL/FREE STREAM DENSITY RATIO	.96837	
LOCATION REYNOLDS NUMBER (REX)	630497.87	
INPUT VALUE OF VELOCITY DELTA	.27500	
INPUT VALUE OF TEMPERATURE DELTA	.27500	
CALCULATED DELTA		.22989
DELTA 99.5% INPUT	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	.03039	.03036
MOMENTUM THICKNESS (THETA)	.02047	.02075
ENERGY-DISSIPATION THICKNESS	.03663	.03689
ENTHALPY THICKNESS	.00089	.00089
SHAPE FACTOR 12 (DELSTAR/THETA)	1.48439	1.46321
SHAPE FACTOR 32 (ENERGY/THETA)	1.78905	1.77759
MOMENTUM THICKNESS REYNOLDS NUMBER	1054.57	1068.95
DISPLACEMENT THICKNESS REYNOLDS NUMBER	1565.39	1564.10
SKIN FRICTION COEFFICIENT	.004522	
FRICTION VELOCITY	4.78608	
LAW OF THE WALL CONSTANT (K)	.41000	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		.07145
CLAUSERS 'DELTA' INTEGRAL	-.50645	-.60990
CLAUSERS 'G' INTEGRAL	3.79134	3.65445
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.02699	.02947
MOMENTUM THICKNESS - CONSTANT DENSITY	.02065	.02094
SHAPE FACTOR 12 - CONSTANT DENSITY	1.30685	1.40748

LOCATION -X- 12.24000

Z = CENTERLINE

Table 31.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 3. GRID NO. 2

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
1	.00050	.0022	46.20	79.26	.466	.374	-11.042	9.654	6.940	11.827
2	.00063	.0028	51.13	78.42	.516	.423	-10.014	10.682	7.847	14.884
3	.00071	.0031	54.07	78.07	.546	.444	-9.399	11.292	8.227	16.765
4	.00080	.0035	56.75	77.67	.573	.467	-8.840	11.857	8.651	18.881
5	.00083	.0043	61.17	76.88	.618	.512	-7.915	12.782	9.498	23.113
6	.00111	.0048	62.46	76.56	.631	.531	-7.646	13.050	9.841	25.935
7	.00123	.0054	63.80	76.23	.644	.550	-7.365	13.331	10.197	28.991
8	.00140	.0061	65.44	75.86	.661	.572	-7.024	13.672	10.600	32.988
9	.00164	.0071	66.96	75.48	.676	.593	-6.706	13.990	11.003	38.671
10	.00180	.0078	67.70	75.24	.684	.607	-6.550	14.146	11.262	42.393
11	.00199	.0087	68.74	74.99	.694	.622	-6.333	14.363	11.529	46.861
12	.00213	.0093	69.28	74.85	.699	.630	-6.221	14.476	11.683	50.153
13	.00233	.0101	70.05	74.70	.707	.639	-6.061	14.636	11.847	54.855
14	.00252	.0110	71.01	74.53	.717	.648	-5.860	14.837	12.022	59.323
15	.00270	.0118	71.54	74.36	.722	.659	-5.749	14.947	12.213	63.555
16	.00289	.0126	71.96	74.16	.727	.670	-5.656	15.040	12.420	68.022
17	.00353	.0154	74.01	73.77	.747	.692	-5.232	15.464	12.839	83.070
18	.00422	.0184	76.10	73.34	.768	.718	-4.795	15.901	13.309	99.294
19	.00491	.0214	78.13	72.96	.789	.740	-4.372	16.324	13.719	115.518
20	.00553	.0241	79.44	72.69	.802	.755	-4.098	16.598	14.003	130.096
21	.00624	.0272	81.50	72.31	.823	.777	-3.666	17.026	14.410	146.790
22	.00691	.0301	82.74	72.05	.835	.792	-3.408	17.288	14.689	162.543
23	.00751	.0327	84.05	71.77	.849	.809	-3.135	17.562	14.994	176.651
24	.00821	.0357	85.54	71.59	.864	.819	-2.824	17.873	15.182	193.110
25	.00895	.0389	86.94	71.22	.878	.841	-2.531	18.166	15.588	210.509
26	.00953	.0415	88.01	71.05	.888	.850	-2.308	18.386	15.768	224.147
27	.01026	.0446	89.26	70.80	.901	.865	-2.046	18.650	16.031	241.311
28	.01094	.0476	90.27	70.60	.911	.876	-1.836	18.861	16.250	257.300
29	.01152	.0501	91.19	70.37	.921	.890	-1.642	19.054	16.498	270.937
30	.01221	.0531	92.08	70.25	.930	.897	-1.458	19.239	16.632	287.161
31	.01293	.0563	93.05	70.15	.939	.903	-1.255	19.442	16.739	304.090
32	.01462	.0636	94.87	69.66	.956	.931	-1.873	19.823	17.266	343.826
33	.01638	.0713	96.30	69.32	.972	.951	-1.575	20.121	17.627	385.209
34	.01810	.0787	97.31	69.04	.982	.967	-1.364	20.333	17.928	425.651
35	.01992	.0867	98.07	68.82	.990	.980	-1.205	20.491	18.165	468.444
36	.02162	.0941	98.59	68.71	.995	.986	-1.098	20.598	18.282	508.415
37	.02341	.1018	98.75	68.63	.997	.991	-1.065	20.632	18.368	550.503
38	.02512	.1093	98.91	68.54	.999	.996	-1.031	20.666	18.461	590.710
39	.02694	.1172	99.05	68.48	1.000	1.000	-1.002	20.695	18.532	633.503
40	.02862	.1245	99.03	68.47	1.000	1.000	-1.006	20.691	18.536	673.004
41	.03040	.1322	99.04	68.47	1.000	1.000	-1.003	20.694	18.545	714.857
42	.03339	.1453	99.09	68.47	1.000	1.000	-1.008	20.705	18.540	785.160
43	.03642	.1584	99.14	68.46	1.001	1.001	-1.018	20.714	18.552	856.403
44	.03941	.1714	99.02	68.45	1.000	1.001	-1.008	20.688	18.558	926.706
45	.04243	.1846	99.03	68.45	1.000	1.001	-1.006	20.690	18.560	997.715
46	.04541	.1975	99.00	68.45	1.000	1.001	-1.012	20.684	18.563	1067.783
47	.04841	.2106	99.00	68.42	.999	1.003	-1.012	20.684	18.568	1138.321
48	.05140	.2236	98.97	68.45	.999	1.001	-1.017	20.680	18.563	1208.624
49	.05444	.2366	98.99	68.40	.999	1.004	-1.013	20.684	18.561	1279.162
50	.05744	.2499	98.96	68.42	.999	1.003	-1.019	20.677	18.559	1349.500
51	.06042	.2628	98.97	68.43	.999	1.002	-1.017	20.679	18.579	1419.708
52	.06040	.3497	98.90	68.44	.998	1.002	-1.032	20.664	18.590	1489.992
53	1.00042	4.368	98.90	68.44	.998	1.002	-1.032	20.665	18.590	1559.992
54	1.20040	5.237	98.82	68.46	.998	1.000	-1.049	20.647	18.595	1629.990
55	1.40040	6.107	98.83	68.44	.998	1.002	-1.047	20.649	18.596	1699.991
56	1.60040	6.977	98.80	68.44	.997	1.002	-1.053	20.643	18.598	1769.993
57	1.80043	7.849	98.78	68.45	.997	1.001	-1.057	20.639	18.598	1839.994
58	2.00043	8.717	98.62	68.39	.996	1.004	-1.091	20.606	18.562	1909.997
59	2.20043	9.588	98.67	68.45	.996	1.001	-1.080	20.616	18.563	1979.997
60	2.40042	10.458	98.61	68.44	.995	1.002	-1.093	20.603	18.575	2049.995
61	2.60040	11.327	98.63	68.44	.996	1.002	-1.089	20.608	18.575	2119.995

Table 31.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 4. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY	98.341	98.341
FREE STREAM TEMPERATURE	68.480	
WALL TEMPERATURE	85.320	
WALL HEAT FLUX	.07820	
FREE STREAM DENSITY	.07710	
FREE STREAM KINEMATIC VISCOSITY	.0001582	
DENSITY OF FLUID AT WALL	.07472	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001673	
WALL/FREE STREAM DENSITY RATIO	.96910	
LOCATION REYNOLDS NUMBER (REX)	633986.73	
INPUT VALUE OF VELOCITY DELTA	.27500	
INPUT VALUE OF TEMPERATURE DELTA	.31000	
CALCULATED DELTA		.22893
DELTA 99.5% INPUT	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	.03026	.03019
MOMENTUM THICKNESS (THETA)	.02030	.02064
ENERGY-DISSIPATION THICKNESS	.03637	.03670
ENTHALPY THICKNESS	.00068	.00069
SHAPE FACTOR 12 (DELSTAR/THETA)	1.49041	1.46229
SHAPE FACTOR 32 (ENERGY/THETA)	1.79116	1.77780
MOMENTUM THICKNESS REYNOLDS NUMBER	1051.65	1069.30
DISPLACEMENT THICKNESS REYNOLDS NUMBER	1567.39	1563.63
SKIN FRICTION COEFFICIENT	.004526	
FRICTION VELOCITY	4.75208	
LAW OF THE WALL CONSTANT (K)	.41000	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		.06966
CLAUSERS 'DELTA' INTEGRAL	- .49354	- .62633
CLAUSERS 'G' INTEGRAL	3.81335	3.67873
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.02661	.02730
MOMENTUM THICKNESS - CONSTANT DENSITY	.02047	.02093
SHAPE FACTOR 12 - CONSTANT DENSITY	1.29985	1.40687
LOCATION -X-	12.24000	
Z = CENTER 'E		

Table 32.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 4. GRID NO. 2

REDUCED PROFILE DATA

N	Y	DELTA	U	T	U/UE	THETA	U-UE	U(+)	T(+)	Y(+)
	INCHES		FT/SEC	DEG.F			UTAU			
1	.0055	.024	48.53	78.61	.493	.398	-10.483	10.212	7.311	13.093
2	.0071	.031	53.84	77.68	.547	.454	-9.365	11.330	7.324	16.881
3	.0077	.034	55.62	77.43	.566	.469	-8.990	11.704	8.603	18.302
4	.0087	.038	58.13	77.07	.591	.490	-8.462	12.233	8.994	20.670
5	.0103	.045	61.40	76.56	.624	.520	-7.773	12.921	9.543	24.458
6	.0119	.052	63.30	76.14	.644	.545	-7.164	13.321	10.004	28.246
7	.0129	.056	64.30	75.95	.654	.557	-6.737	13.530	10.513	30.614
8	.0145	.063	65.20	75.67	.663	.573	-6.469	13.721	11.018	34.402
9	.0169	.074	66.85	75.21	.680	.600	-6.199	14.073	11.532	40.085
10	.0185	.081	67.62	74.92	.688	.618	-6.046	14.299	12.047	43.873
11	.0204	.089	68.62	74.87	.698	.622	-6.233	14.571	12.561	48.371
12	.0221	.097	69.24	74.67	.704	.644	-6.963	14.732	13.076	52.396
13	.0241	.105	70.01	74.48	.712	.652	-6.826	14.858	13.591	57.132
14	.0259	.113	70.61	74.34	.718	.652	-6.552	15.043	14.108	61.393
15	.0281	.123	71.48	74.17	.727	.666	-6.587	15.108	14.613	66.602
16	.0294	.129	71.79	74.07	.730	.668	-6.176	15.518	15.110	69.680
17	.0355	.155	73.74	73.66	.750	.693	-4.731	15.963	15.615	84.123
18	.0429	.188	75.86	73.19	.771	.720	-4.314	16.380	16.110	101.644
19	.0501	.219	77.84	72.83	.792	.742	-3.990	16.705	16.615	118.691
20	.0560	.245	79.58	72.62	.807	.754	-3.671	17.023	17.110	132.660
21	.0628	.274	80.90	72.23	.823	.777	-3.349	17.345	17.571	148.760
22	.0697	.305	82.43	71.95	.851	.794	-3.090	17.605	18.004	165.097
23	.0759	.332	83.66	71.76	.855	.805	-2.786	17.908	18.405	179.777
24	.0829	.362	85.10	71.53	.869	.818	-2.509	18.185	18.859	196.350
25	.0901	.394	86.42	71.19	.889	.839	-2.290	18.405	19.278	213.397
26	.0955	.417	87.46	71.07	.889	.846	-2.047	18.647	19.454	226.183
27	.1025	.448	88.88	70.88	.901	.858	-1.798	18.896	19.851	242.756
28	.1099	.480	89.80	70.59	.913	.875	-1.618	19.077	20.140	260.277
29	.1157	.500	90.65	70.46	.922	.883	-1.416	19.278	20.351	274.009
30	.1225	.533	91.61	70.27	.932	.894	-1.241	19.454	20.501	290.110
31	.1293	.566	92.45	70.06	.940	.906	-.844	19.851	20.665	306.683
32	.1463	.646	94.33	69.63	.959	.932	-.555	20.140	20.833	346.933
33	.1643	.718	95.71	69.29	.973	.952	-.344	20.351	20.999	389.078
34	.1818	.794	96.71	69.07	.983	.965	-.193	20.501	21.172	430.512
35	.1993	.872	97.42	68.93	.991	.973	-.099	20.595	21.357	472.419
36	.2165	.946	97.87	68.74	.995	.985	-.052	20.642	21.532	512.670
37	.2346	1.025	98.05	68.64	.997	.990	-.030	20.665	21.704	555.524
38	.2521	1.101	98.20	68.57	.999	.995	-.008	20.686	21.859	596.958
39	.2699	1.179	98.30	68.54	1.000	.997	-.014	20.680	22.004	639.103
40	.2865	1.252	98.27	68.50	1.000	.999	-.002	20.696	22.147	678.406
41	.3049	1.333	98.35	68.50	1.000	.999	-.013	20.707	22.288	721.971
42	.3343	1.460	98.40	68.50	1.001	.999	-.015	20.689	22.429	791.580
43	.3645	1.592	98.31	68.48	1.000	1.000	-.015	20.680	22.571	863.084
44	.3947	1.724	98.27	68.46	1.001	1.001	-.015	20.709	22.714	934.587
45	.4247	1.855	98.41	68.50	1.001	1.000	-.011	20.691	22.857	1005.617
46	.4551	1.988	98.32	68.48	1.000	1.000	-.011	20.705	22.999	1077.594
47	.4845	2.116	98.39	68.47	1.001	1.000	-.014	20.681	23.142	1147.203
48	.5146	2.246	98.26	68.49	1.000	1.000	-.002	20.693	23.285	1218.469
49	.5452	2.382	98.33	68.49	1.000	1.000	-.021	20.674	23.428	1290.920
50	.5745	2.510	98.33	68.48	1.000	1.000	-.019	20.675	23.571	1360.292
51	.6045	2.641	98.24	68.48	.999	1.000	-.019	20.655	23.714	1431.522
52	.6050	3.516	98.25	68.53	.999	.997	-.019	20.655	23.857	1500.038
53	1.0045	4.388	98.16	68.52	.998	.998	-.019	20.652	23.999	1565.187
54	1.2045	5.262	98.14	68.52	.998	.998	-.019	20.652	24.142	1628.919
55	1.4045	6.135	98.09	68.54	.997	.996	-.019	20.648	24.285	1691.451
56	1.6045	7.009	98.12	68.54	.998	.997	-.019	20.648	24.428	1753.984
57	1.8045	7.882	98.09	68.53	.997	.997	-.019	20.648	24.571	1816.516
58	2.0045	8.756	98.03	68.54	.997	.996	-.019	20.648	24.714	1879.048
59	2.2045	9.630	97.94	68.54	.996	.996	-.019	20.648	24.857	1941.580
60	2.4045	10.503	97.90	68.56	.996	.995	-.019	20.648	25.000	1999.112
61	2.6045	11.377	97.88	68.54	.995	.997	-.019	20.648	25.142	2061.645

Table 32.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 5. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY ==	98.151	98.151
FREE STREAM TEMPERATURE ==	68.480	
WALL TEMPERATURE ==	85.340	
WALL HEAT FLUX ==	.07806	
FREE STREAM DENSITY ==	.07710	
FREE STREAM KINEMATIC VISCOSITY ==	.0001582	
DENSITY OF FLUID AT WALL ==	.07471	
KINEMATIC VISCOSITY OF FLUID AT WALL ==	.0001673	
WALL/FREE STREAM DENSITY RATIO ==	.96907	
LOCATION REYNOLDS NUMBER (REX) ==	632760.20	
INPUT VALUE OF VELOCITY DELTA ==	.27500	
INPUT VALUE OF TEMPERATURE DELTA ==	.27500	
CALCULATED DELTA ==		.23153
DELTA 99.5% INPUT ==	.00000	
DISPLACEMENT THICKNESS (DELSTAR) ==	.03150	.03139
MOMENTUM THICKNESS (THETA) ==	.02108	.02144
ENERGY-DISSIPATION THICKNESS ==	.03769	.03805
ENTHALPY THICKNESS ==	.00088	.00088
SHAPE FACTOR 12 (DELSTAR/THETA) ==	1.49415	1.46438
SHAPE FACTOR 32 (ENERGY/THETA) ==	1.78825	1.77474
MOMENTUM THICKNESS REYNOLDS NUMBER ==	1089.70	1108.23
DISPLACEMENT THICKNESS REYNOLDS NUMBER ==	1628.17	1622.86
SKIN FRICTION COEFFICIENT ==	.004436	
FRICTION VELOCITY ==	4.69556	
LAW OF THE WALL CONSTANT (K) ==	.41000	
LAW OF THE WALL CONSTANT (C) ==	5.00000	
WAKE STRENGTH ==		.11278
CLAUSERS 'DELTA' INTEGRAL ==	-.51815	-.63770
CLAUSERS 'G' INTEGRAL ==	4.09256	3.88274
DISPLACEMENT THICKNESS - CONSTANT DENSITY ==	.02770	.03051
MOMENTUM THICKNESS - CONSTANT DENSITY ==	.02125	.02162
SHAPE FACTOR 12 - CONSTANT DENSITY ==	1.30358	1.41100
LOCATION -X-	12.24000	
Z = +6 INCHES		

Table 33.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 5. GRID NO. 2

REDUCED PPGFILE DATA

N	Y	Y/	U	T	U/UE	THETA	U-UE	U(+)	T(+)	Y(+)
	INCHES	DELTA	FT/SEC	DEG.F			UTAU			
1	.0058	.025	49.86	78.30	.508	.417	-10.284	10.619	7.592	13.638
2	.0069	.030	52.11	77.75	.531	.450	-9.804	11.099	8.187	16.212
3	.0078	.034	54.49	77.31	.555	.477	-9.298	11.605	8.666	18.317
4	.0090	.039	57.55	76.89	.586	.501	-8.648	12.255	9.118	21.124
5	.0099	.043	59.40	76.57	.605	.520	-8.252	12.651	9.458	23.230
6	.0117	.051	61.80	76.02	.630	.553	-7.741	13.161	10.049	27.441
7	.0129	.056	62.83	75.77	.640	.568	-7.522	13.381	10.327	30.248
8	.0139	.060	63.87	75.62	.651	.576	-7.300	13.603	10.483	32.587
9	.0159	.069	65.29	75.29	.665	.596	-6.998	13.905	10.838	37.266
10	.0179	.077	66.41	75.06	.677	.610	-6.759	14.143	11.089	41.945
11	.0199	.086	67.31	74.78	.686	.627	-6.569	14.334	11.394	46.623
12	.0217	.094	68.22	74.57	.695	.639	-6.373	14.530	11.618	50.834
13	.0235	.102	68.72	74.48	.700	.644	-6.268	14.634	11.709	55.045
14	.0251	.109	69.41	74.34	.707	.652	-6.121	14.782	11.861	58.788
15	.0266	.116	70.12	74.18	.714	.662	-5.969	14.934	12.036	62.765
16	.0291	.126	70.77	74.02	.721	.671	-5.832	15.071	12.209	66.145
17	.0307	.133	71.41	73.93	.728	.677	-5.694	15.208	12.307	71.868
18	.0343	.161	73.36	73.54	.748	.700	-5.276	15.627	12.724	87.328
19	.0373	.191	75.40	73.09	.768	.727	-4.846	16.057	13.217	103.703
20	.0511	.221	77.01	72.71	.785	.749	-4.503	16.400	13.627	119.611
21	.0569	.246	78.59	72.44	.801	.765	-4.165	16.738	13.917	133.179
22	.0645	.279	80.34	72.09	.819	.786	-3.793	17.110	14.287	150.958
23	.0715	.309	81.94	71.91	.835	.796	-3.452	17.451	14.482	167.334
24	.0773	.334	83.06	71.73	.846	.807	-3.213	17.690	14.683	180.902
25	.0839	.362	84.50	71.44	.861	.824	-2.907	17.996	14.991	196.342
26	.0911	.394	85.84	71.15	.875	.842	-2.623	18.280	15.308	213.185
27	.0971	.420	86.97	70.97	.886	.852	-2.381	18.522	15.495	227.221
28	.1044	.451	88.06	70.82	.897	.861	-2.144	18.759	15.658	244.298
29	.1111	.480	89.24	70.65	.909	.871	-1.898	19.005	15.843	259.972
30	.1171	.506	90.02	70.37	.917	.888	-1.733	19.170	16.145	274.008
31	.1243	.537	90.88	70.19	.926	.898	-1.549	19.354	16.337	290.851
32	.1309	.565	91.81	70.09	.935	.905	-1.351	19.552	16.453	306.291
33	.1485	.642	93.85	69.71	.956	.927	-1.915	19.988	16.859	347.464
34	.1657	.716	95.36	69.40	.972	.945	-1.595	20.308	17.193	387.700
35	.1830	.791	96.42	69.16	.982	.960	-1.369	20.534	17.451	428.171
36	.2009	.866	97.18	68.86	.990	.976	-1.206	20.697	17.751	470.045
37	.2178	.941	97.67	68.71	.995	.986	-1.101	20.801	17.939	509.580
38	.2361	1.020	97.84	68.65	.997	.990	-1.067	20.836	18.002	555.391
39	.2528	1.092	97.97	68.57	.998	.995	-1.038	20.865	18.092	593.458
40	.2712	1.171	98.13	68.50	1.000	.999	-1.005	20.896	18.164	634.502
41	.2879	1.244	98.20	68.49	1.000	.999	-1.010	20.913	18.172	673.569
42	.3061	1.322	98.13	68.43	1.000	.999	-1.004	20.899	18.172	716.145
43	.3356	1.450	98.12	68.44	1.000	1.002	-1.006	20.897	18.226	755.156
44	.3659	1.580	98.13	68.43	1.000	1.003	-1.005	20.898	18.241	856.038
45	.3961	1.711	98.12	68.44	1.000	1.002	-1.008	20.895	18.227	926.686
46	.4261	1.840	98.13	68.43	1.000	1.003	-1.004	20.899	18.236	996.867
47	.4559	1.969	98.09	68.44	.999	1.002	-1.012	20.891	18.225	1066.579
48	.4859	2.099	98.05	68.44	.999	1.002	-1.022	20.881	18.226	1136.760
49	.5162	2.230	98.15	68.43	1.000	1.003	-1.000	20.903	18.235	1207.642
50	.5465	2.360	98.07	68.42	.999	1.004	-1.016	20.887	18.250	1278.524
51	.5759	2.487	98.06	68.43	.999	1.003	-1.019	20.883	18.242	1347.301
52	.6062	2.618	98.03	68.44	.999	1.002	-1.026	20.877	18.230	1416.184
53	.6059	3.481	98.12	68.43	1.000	1.003	-1.007	20.896	18.238	1885.352
54	.0059	4.345	97.97	68.40	.998	1.005	-1.039	20.864	18.268	2353.221
55	.2065	5.211	97.94	68.41	.998	1.004	-1.045	20.857	18.256	2822.495
56	.4059	6.072	97.87	68.40	.997	1.005	-1.060	20.843	18.268	3288.961
57	.6061	6.937	97.83	68.39	.997	1.006	-1.067	20.836	18.286	3757.299
58	.8065	7.802	97.86	68.39	.997	1.006	-1.058	20.845	18.287	4226.104
59	.0063	8.665	97.85	68.34	.997	1.008	-1.065	20.838	18.334	4693.506
60	.2059	9.528	97.71	68.36	.995	1.007	-1.094	20.809	18.310	5160.440
61	.4059	10.391	97.83	68.36	.997	1.007	-1.068	20.835	18.317	5628.310
62	.6063	11.257	97.81	68.32	.997	1.009	-1.073	20.830	18.353	6097.116

Table 33.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79
 RUN NO. 7. POINT 6. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY =	96.114	98.114
FREE STREAM TEMPERATURE =	68.668	
WALL TEMPERATURE =	85.470	
WALL HEAT FLUX =	.07836	
FREE STREAM DENSITY =	.07707	
FREE STREAM KINEMATIC VISCOSITY =	.0001583	
DENSITY OF FLUID AT WALL =	.07469	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001673	
WALL/FREE STREAM DENSITY RATIO =	.96918	
LOCATION REYNOLDS NUMBER (REX) =	632128.13	
INPUT VALUE OF VELOCITY DELTA =	.29000	
INPUT VALUE OF TEMPERATURE DELTA =	.29000	
CALCULATED DELTA =		.22176
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.03000	.02940
MOMENTUM THICKNESS (THETA) =	.01937	.02005
ENERGY-DISSIPATION THICKNESS =	.03481	.03562
ENTHALPY THICKNESS =	.00083	.00085
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.54932	1.46648
SHAPE FACTOR 32 (ENERGY/THETA) =	1.79746	1.77636
MOMENTUM THICKNESS REYNOLDS NUMBER =	1000.12	1035.49
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	1549.50	1518.52
SKIN FRICTION COEFFICIENT =	.004558	
FRICTION VELOCITY =	4.75784	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.07033
CLAUSERS 'DELTA' INTEGRAL =	-.42982	-.58883
CLAUSERS 'G' INTEGRAL =	4.10347	3.54145
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.02501	.02855
MOMENTUM THICKNESS - CONSTANT DENSITY =	.01952	.02023
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.28092	1.41174
LOCATION -X-	12.24000	
Z = -6 INCHES		

Table 34.

RUN NO. 7. POINT 6. GRID NO. 2

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
1	.0083	.038	57.21	77.21	.583	.492	-8.597	12.025	8.995	19.737
2	.0098	.044	59.17	76.79	.603	.516	-8.184	12.437	9.443	23.291
3	.0107	.048	60.47	76.58	.616	.529	-7.912	12.710	9.671	25.423
4	.0118	.053	61.95	76.31	.631	.545	-7.601	13.021	9.971	28.030
5	.0126	.057	62.83	76.14	.640	.555	-7.415	13.206	10.158	29.925
6	.0142	.064	64.36	75.89	.656	.570	-7.094	13.528	10.423	33.716
7	.0157	.071	65.48	75.66	.667	.584	-6.858	13.763	10.678	37.270
8	.0165	.075	65.94	75.54	.672	.591	-6.762	13.860	10.807	39.166
9	.0185	.084	67.14	75.28	.684	.606	-6.509	14.112	11.088	43.905
10	.0207	.093	68.26	75.06	.696	.620	-6.276	14.346	11.332	48.117
11	.0226	.102	69.11	74.85	.704	.632	-6.095	14.526	11.556	53.619
12	.0241	.109	69.66	74.71	.710	.641	-5.980	14.642	11.717	57.173
13	.0253	.114	70.27	74.64	.716	.645	-5.852	14.770	11.793	60.016
14	.0277	.125	71.15	74.47	.725	.655	-5.668	14.953	11.978	65.703
15	.0293	.132	71.72	74.34	.731	.662	-5.548	15.074	12.112	69.494
16	.0313	.141	72.38	74.19	.738	.672	-5.410	15.212	12.283	74.233
17	.0331	.149	72.93	74.06	.743	.679	-5.294	15.328	12.417	78.498
18	.0395	.178	75.07	73.65	.765	.703	-4.845	15.777	12.866	93.662
19	.0464	.209	77.08	73.23	.786	.729	-4.420	16.202	13.326	110.010
20	.0538	.243	78.94	72.77	.805	.756	-4.031	16.591	13.827	127.544
21	.0595	.268	80.40	72.47	.819	.773	-3.723	16.898	14.146	141.049
22	.0669	.302	82.08	72.23	.837	.788	-3.371	17.251	14.417	156.583
23	.0734	.331	83.39	71.89	.850	.808	-3.095	17.527	14.777	173.747
24	.0794	.358	84.63	71.70	.863	.820	-2.834	17.787	14.989	188.200
25	.0864	.390	86.10	71.35	.878	.840	-2.526	18.096	15.365	204.785
26	.0935	.422	87.34	71.18	.890	.851	-2.265	18.357	15.555	221.608
27	.0993	.448	88.41	71.02	.901	.860	-2.039	18.583	15.734	235.350
28	.1067	.481	89.54	70.80	.913	.873	-1.803	18.819	15.968	252.884
29	.1136	.512	90.78	70.48	.925	.892	-1.541	19.081	16.313	269.232
30	.1197	.540	91.40	70.30	.932	.903	-1.410	19.211	16.514	283.686
31	.1265	.571	92.33	70.16	.941	.911	-1.216	19.405	16.660	299.797
32	.1333	.601	93.24	69.98	.950	.922	-1.025	19.596	16.860	315.909
33	.1506	.679	94.93	69.58	.967	.946	-.670	19.951	17.297	356.899
34	.1682	.759	96.09	69.34	.979	.960	-.425	20.196	17.556	396.601
35	.1853	.836	96.92	69.12	.988	.973	-.250	20.371	17.793	435.117
36	.2033	.917	97.45	68.94	.993	.984	-.140	20.482	17.987	481.766
37	.2207	.995	97.73	68.83	.996	.987	-.080	20.541	18.108	522.993
38	.2365	1.076	97.92	68.77	.998	.988	-.041	20.581	18.181	565.168
39	.2555	1.152	98.08	68.73	1.000	.996	-.007	20.615	18.224	605.447
40	.2736	1.234	98.12	68.70	1.000	.998	.002	20.624	18.251	648.333
41	.2904	1.310	98.16	68.69	1.000	.999	.001	20.631	18.262	688.139
42	.3083	1.390	98.09	68.66	1.000	1.001	-.006	20.635	18.299	730.550
43	.3381	1.525	98.10	68.65	1.000	1.001	-.003	20.618	18.305	801.158
44	.3685	1.662	98.15	68.66	1.000	1.001	.008	20.629	18.300	873.187
45	.3966	1.796	98.17	68.63	1.000	1.002	.011	20.633	18.328	944.505
46	.4267	1.933	98.05	68.62	1.000	1.003	-.014	20.608	18.341	1015.824
47	.4587	2.069	98.15	68.64	1.000	1.002	.007	20.629	18.324	1086.905
48	.4887	2.204	98.13	68.64	1.000	1.002	-.003	20.625	18.320	1157.986
49	.5185	2.338	98.10	68.64	1.000	1.001	-.004	20.618	18.316	1228.594
50	.5484	2.473	98.04	68.65	.999	1.001	-.016	20.605	18.312	1299.438
51	.5788	2.610	98.18	68.64	1.001	1.002	.014	20.636	18.324	1371.467
52	.6085	2.744	98.04	68.65	.999	1.001	-.015	20.607	18.304	1441.838
53	.8084	3.646	98.01	68.69	.999	.999	-.022	20.599	18.266	1915.477
54	1.0083	4.547	98.00	68.65	.999	1.001	-.023	20.598	18.308	2389.116
55	1.2087	5.451	97.99	68.67	.999	1.000	-.026	20.596	18.288	2863.939
56	1.4087	6.353	98.03	68.68	.999	.999	-.018	20.604	18.272	3337.815
57	1.6087	7.254	97.85	68.66	.997	1.000	-.056	20.566	18.296	3811.690
58	1.8087	8.156	97.80	68.67	.997	1.000	-.066	20.555	18.282	4285.566
59	2.0087	9.058	97.82	68.70	.997	.998	-.061	20.560	18.259	4759.442
60	2.2087	9.960	97.87	68.71	.997	.998	-.052	20.569	18.245	5233.318
61	2.4084	10.861	97.79	68.75	.997	.995	-.069	20.553	18.203	5706.483
62	2.6087	11.764	97.72	68.73	.996	.996	-.084	20.538	18.217	6181.069

Table 34.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 8. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY =	98.588	98.588
FREE STREAM TEMPERATURE =	69.310	
WALL TEMPERATURE =	89.660	
WALL HEAT FLUX =	.07841	
FREE STREAM DENSITY =	.07698	
FREE STREAM KINEMATIC VISCOSITY =	.0001587	
DENSITY OF FLUID AT WALL =	.07412	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001696	
WALL/FREE STREAM DENSITY RATIO =	.96296	
LOCATION REYNOLDS NUMBER (REX) =	1459216.05	
INPUT VALUE OF VELOCITY DELTA =	.62000	
INPUT VALUE OF TEMPERATURE DELTA =	.90000	
CALCULATED DELTA =		.49689
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.07321	.07316
MOMENTUM THICKNESS (THETA) =	.05062	.05095
ENERGY-DISSIPATION THICKNESS =	.09002	.09030
ENTHALPY THICKNESS =	.00218	.00219
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.44617	1.43597
SHAPE FACTOR 32 (ENERGY/THETA) =	1.77822	1.77246
MOMENTUM THICKNESS REYNOLDS NUMBER =	2621.46	2638.17
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	3791.08	3788.34
SKIN FRICTION COEFFICIENT =	.003373	
FRICTION VELOCITY =	4.12588	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.41599
CLAUSERS 'DELTA' INTEGRAL =	-1.53912	-1.69607
CLAUSERS 'G' INTEGRAL =	11.39228	11.16593
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.06773	.07098
MOMENTUM THICKNESS - CONSTANT DENSITY =	.05109	.05142
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.32566	1.38029

LOCATION -X- 28.18001

Z = CENTERLINE

Table 35.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 8. GRID NO. 2

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
1	.00066	.013	43.17	81.73	.438	.390	-13.432	10.463	7.427	13.439
2	.00077	.016	45.32	81.02	.460	.425	-12.910	10.985	8.088	15.669
3	.00089	.018	48.17	80.48	.489	.451	-12.220	11.675	8.589	18.102
4	.00100	.020	50.26	80.28	.510	.461	-11.713	12.182	9.078	20.129
5	.01007	.022	51.76	80.02	.525	.474	-11.349	12.546	9.528	21.750
6	.01257	.025	54.02	79.43	.548	.503	-10.802	13.093	9.976	23.399
7	.01500	.028	55.16	79.31	.560	.509	-10.526	13.369	9.693	25.832
8	.01733	.030	55.98	79.00	.568	.524	-10.326	13.569	9.978	30.467
9	.01888	.035	57.66	78.56	.585	.546	-9.919	13.976	10.395	35.129
10	.02111	.038	58.45	78.28	.593	.559	-9.727	14.168	10.651	38.170
11	.02255	.043	59.42	78.10	.603	.568	-9.494	14.401	10.817	42.832
12	.02403	.045	60.06	77.99	.609	.573	-9.338	14.557	10.924	45.670
13	.02541	.049	60.63	77.81	.615	.582	-9.199	14.696	11.091	48.913
14	.02680	.053	61.13	77.57	.620	.594	-9.079	14.816	11.318	53.373
15	.02819	.056	61.74	77.42	.626	.601	-8.930	14.964	11.458	56.616
16	.02957	.060	62.20	77.27	.631	.609	-8.819	15.075	11.597	60.265
17	.03095	.063	62.80	77.14	.637	.615	-8.673	15.222	11.722	63.913
18	.03230	.077	64.37	76.74	.653	.635	-8.293	15.602	12.091	77.089
19	.03477	.090	65.91	76.41	.669	.651	-7.921	15.974	12.400	90.671
20	.03717	.104	67.22	76.07	.682	.668	-7.602	16.293	12.721	104.860
21	.03954	.117	68.38	75.76	.694	.683	-7.322	16.573	13.016	117.428
22	.04191	.131	69.33	75.52	.703	.695	-7.091	16.804	13.232	132.023
23	.04428	.145	70.67	75.38	.717	.702	-6.767	17.128	13.366	145.604
24	.04661	.157	71.50	75.12	.725	.714	-6.565	17.330	13.607	158.375
25	.04891	.171	72.46	74.89	.735	.726	-6.333	17.562	13.827	172.564
26	.05119	.185	73.46	74.78	.745	.731	-6.091	17.804	13.927	186.348
27	.05341	.197	74.43	74.57	.755	.742	-5.855	18.040	14.130	198.916
28	.05563	.212	75.09	74.36	.762	.752	-5.696	18.199	14.324	213.511
29	.05781	.226	75.82	74.21	.769	.759	-5.519	18.376	14.464	227.295
30	.05991	.238	76.78	74.10	.779	.764	-5.286	18.609	14.563	239.457
31	.06202	.252	77.46	73.96	.786	.772	-5.120	18.775	14.698	253.850
32	.06412	.266	78.21	73.82	.793	.778	-4.940	18.955	14.829	267.431
33	.06622	.300	80.08	73.45	.812	.796	-4.487	19.408	15.170	302.499
34	.06835	.335	81.79	73.10	.830	.814	-4.072	19.823	15.500	337.567
35	.07041	.371	83.47	72.76	.847	.830	-3.663	20.232	15.819	373.244
36	.07247	.406	84.98	72.45	.862	.846	-3.298	20.597	16.108	408.920
37	.07451	.441	86.31	72.12	.875	.862	-2.977	20.918	16.415	443.988
38	.07657	.477	87.81	71.81	.891	.877	-2.613	21.282	16.712	480.479
39	.07861	.511	88.97	71.58	.902	.889	-2.333	21.584	16.928	515.133
40	.08067	.548	90.14	71.29	.914	.903	-2.047	21.848	17.194	551.626
41	.08271	.582	91.51	71.03	.928	.916	-1.714	22.180	17.442	586.086
42	.08477	.618	92.26	70.77	.936	.928	-1.535	22.360	17.684	622.573
43	.08681	.657	93.84	70.53	.952	.940	-1.150	22.745	17.910	682.169
44	.08885	.739	95.06	70.23	.964	.955	-.851	23.044	18.192	743.994
45	.09089	.799	96.15	70.03	.975	.965	-.592	23.303	18.377	804.401
46	.09293	.859	96.94	69.82	.983	.975	-.398	23.497	18.572	865.416
47	.09497	.919	97.45	69.73	.989	.979	-.275	23.620	18.654	925.822
48	.09699	.980	97.86	69.59	.993	.986	-.176	23.719	18.791	987.040
49	.09897	1.041	98.12	69.48	.995	.991	-.113	23.782	18.887	1048.054
50	.10091	1.100	98.35	69.47	.998	.992	-.057	23.838	18.896	1108.258
51	.10285	1.161	98.43	69.43	.998	.994	-.039	23.856	18.938	1169.070
52	.10477	1.222	98.50	69.37	.999	.997	-.022	23.873	18.995	1230.693
53	.10670	1.284	98.59	69.30	1.000	1.000	.000	23.896	19.037	1293.044
54	.10867	1.347	98.59	69.31	1.000	1.000	.000	23.895	19.053	1341.520
55	.11067	2.429	98.58	69.32	1.000	1.000	.000	23.894	19.043	1386.123
56	.11267	2.631	98.45	69.31	.999	1.000	-.033	23.862	19.053	1451.536
57	.11467	3.234	98.46	69.30	.999	1.000	-.026	23.869	19.058	1527.760
58	.11667	3.637	98.41	69.31	.998	1.000	-.043	23.852	19.053	1662.971
59	.11867	4.039	98.40	69.32	.998	.999	-.046	23.849	19.036	1806.776
60	.12067	4.442	98.39	69.36	.998	.998	-.047	23.848	19.006	1947.000
61	.12267	4.845	98.36	69.36	.998	.998	-.055	23.840	19.006	2087.819
62	.12467	5.246	98.35	69.39	.998	.996	-.057	23.838	18.973	2284.016

Table 35.

JCB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 9. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y^+=35$
FREE STREAM VELOCITY =	98.385	98.385
FREE STREAM TEMPERATURE =	69.540	
WALL TEMPERATURE =	89.900	
WALL HEAT FLUX =	.07775	
FREE STREAM DENSITY =	.07694	
FREE STREAM KINEMATIC VISCOSITY =	.0001568	
DENSITY OF FLUID AT WALL =	.07409	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001697	
WALL/FREE STREAM DENSITY RATIO =	.96295	
LOCATION REYNOLDS NUMBER (REX) =	1455089.11	
INPUT VALUE OF VELOCITY DELTA =	.70000	
INPUT VALUE OF TEMPERATURE DELTA =	.90000	
CALCULATED DELTA =		.50677
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.07513	.07505
MOMENTUM THICKNESS (THETA) =	.05192	.05230
ENERGY-DISSIPATION THICKNESS =	.09231	.09265
ENTHALPY THICKNESS =	.00215	.00216
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.44690	1.43501
SHAPE FACTOR 32 (ENERGY/THETA) =	1.77762	1.77136
MOMENTUM THICKNESS REYNOLDS NUMBER =	2681.04	2700.64
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	3879.19	3875.46
SKIN FRICTION COEFFICIENT =	.003344	
FRICTION VELOCITY =	4.09944	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.43118
CLAUSERS 'DELTA' INTEGRAL =	-1.57831	-1.74985
CLAUSEPS 'G' INTEGRAL =	11.87387	11.59972
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.06938	.07291
MOMENTUM THICKNESS - CONSTANT DENSITY =	.05238	.05277
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.32456	1.38162

LOCATION -X- 28.18001

Z = +6 INCHES

Table 36.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 9. GRID NO. 2

REDUCED PROFILE DATA

	Y	DELTA	U	T	U/UE	THETA	U-UE	U(+)	T(+)	Y(+)
	INCHES		FT/SEC	DEG.F			UTAU			
1	.0072	.014	45.24	81.53	.460	.411	-12.964	11.035	7.851	14.551
2	.0065	.017	47.06	80.83	.478	.445	-12.520	11.479	8.503	17.167
3	.0093	.018	48.65	80.52	.494	.461	-12.133	11.867	8.798	18.777
4	.0107	.021	51.04	80.06	.519	.483	-11.548	12.452	9.228	21.594
5	.0114	.023	52.24	79.81	.531	.496	-11.256	12.744	9.459	23.003
6	.0130	.026	54.11	79.21	.550	.525	-10.800	13.200	10.020	26.223
7	.0144	.028	55.46	78.95	.563	.538	-10.487	13.512	10.263	29.041
8	.0152	.030	55.89	78.85	.568	.543	-10.366	13.633	10.360	30.651
9	.0176	.035	57.39	78.57	.583	.556	-10.001	13.998	10.619	35.481
10	.0198	.039	58.41	78.08	.594	.580	-9.751	14.248	11.081	39.908
11	.0215	.042	59.18	77.99	.602	.585	-9.564	14.436	11.169	43.330
12	.0231	.046	59.80	77.92	.606	.588	-9.413	14.586	11.231	46.550
13	.0244	.048	60.23	77.76	.612	.596	-9.307	14.693	11.378	49.166
14	.0267	.053	60.98	77.38	.620	.615	-9.125	14.875	11.740	53.795
15	.0282	.056	61.27	77.24	.623	.622	-9.053	14.947	11.866	56.814
16	.0306	.060	62.07	77.14	.631	.627	-8.858	15.142	11.962	61.644
17	.0320	.063	62.36	77.12	.634	.628	-8.787	15.213	11.986	64.461
18	.0364	.076	63.94	76.74	.650	.646	-8.401	15.598	12.339	77.341
19	.0456	.090	65.52	76.36	.666	.665	-8.017	15.982	12.698	91.831
20	.0524	.103	66.73	76.20	.678	.673	-7.721	16.279	12.841	105.517
21	.0556	.116	67.82	75.81	.689	.692	-7.557	16.543	13.207	117.994
22	.0552	.129	69.03	75.67	.701	.700	-7.361	16.833	13.361	131.277
23	.0623	.143	70.23	75.27	.714	.719	-6.867	17.132	13.720	145.566
24	.0866	.155	71.06	75.55	.722	.724	-6.662	17.336	13.829	158.245
25	.0856	.169	72.11	74.94	.733	.735	-6.408	17.591	14.022	172.332
26	.0922	.182	73.03	74.74	.742	.744	-6.184	17.810	14.410	185.613
27	.0962	.194	73.67	74.60	.749	.751	-6.030	17.970	14.570	197.690
28	.1052	.208	74.71	74.32	.759	.765	-5.774	18.225	14.600	211.778
29	.1124	.222	75.36	74.34	.766	.764	-5.617	18.383	14.599	226.868
30	.1184	.234	76.13	74.08	.774	.777	-5.429	18.570	14.831	238.343
31	.1256	.248	76.99	73.97	.783	.782	-5.218	18.781	14.932	252.833
32	.1324	.261	77.49	73.87	.788	.787	-5.096	18.903	15.027	266.732
33	.1494	.295	79.32	73.49	.806	.806	-4.651	19.349	15.387	300.739
34	.1670	.330	81.20	73.11	.825	.824	-4.192	19.808	15.738	336.152
35	.1846	.364	82.80	72.89	.842	.836	-3.801	20.199	15.950	371.572
36	.2024	.399	84.49	72.60	.859	.850	-3.388	20.611	16.219	407.395
37	.2194	.433	85.82	72.32	.872	.863	-3.066	20.934	16.484	441.608
38	.2376	.469	87.11	72.02	.885	.878	-2.750	21.249	16.763	478.236
39	.2542	.502	88.27	71.83	.897	.888	-2.467	21.533	16.947	511.644
40	.2726	.538	89.54	71.61	.910	.898	-2.156	21.843	17.150	548.675
41	.2893	.571	90.68	71.36	.922	.911	-1.879	22.121	17.384	582.284
42	.3074	.607	91.77	71.22	.933	.918	-1.614	22.385	17.516	618.710
43	.3370	.665	93.37	70.82	.949	.937	-1.224	22.775	17.894	678.281
44	.3674	.725	94.44	70.56	.960	.950	-1.063	23.036	18.135	739.462
45	.3973	.784	95.74	70.24	.973	.966	-1.646	23.354	18.434	799.636
46	.4274	.843	96.53	70.09	.981	.973	-1.451	23.548	18.574	860.213
47	.4573	.902	97.12	69.97	.987	.979	-1.308	23.691	18.690	920.388
48	.4876	.962	97.54	69.80	.991	.987	-1.206	23.794	18.843	981.367
49	.5176	1.021	97.85	69.77	.995	.989	-1.130	23.870	18.875	1041.743
50	.5472	1.080	98.12	69.69	.997	.992	-1.065	23.935	18.945	1101.314
51	.5773	1.139	98.20	69.63	.998	.996	-1.046	23.954	19.007	1161.891
52	.6074	1.199	98.27	69.60	.999	.997	-1.027	23.973	19.029	1222.468
53	.6375	1.258	98.48	69.55	1.001	1.000	-1.000	24.023	19.083	1285.174
54	.6676	1.318	98.38	69.55	1.000	1.000	-1.000	24.071	19.082	1347.880
55	.6977	1.383	98.39	69.55	1.000	1.000	-1.000	24.077	19.078	1410.582
56	.7278	1.448	98.25	69.52	1.001	1.001	-1.001	24.032	19.109	1473.287
57	.7579	1.513	98.27	69.51	1.002	1.002	-1.002	24.029	19.119	1535.995
58	.7880	1.578	98.22	69.52	1.001	1.001	-1.001	24.040	19.109	1598.702
59	.8181	1.643	98.26	69.49	1.002	1.002	-1.002	24.030	19.135	1661.409
60	.8482	1.708	98.19	69.49	1.003	1.003	-1.003	24.047	19.139	1724.116
61	.8783	1.773	98.22	69.51	1.001	1.001	-1.001	24.041	19.113	1786.823
62	.9084	1.838	98.14	69.50	1.002	1.002	-1.002	24.061	19.125	1849.530

Table 36.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 10. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY ==	98.438	98.438
FREE STREAM TEMPERATURE ==	69.598	
WALL TEMPERATURE ==	90.390	
WALL HEAT FLUX ==	.07823	
FREE STREAM DENSITY ==	.07693	
FREE STREAM KINEMATIC VISCOSITY ==	.0001568	
DENSITY OF FLUID AT WALL ==	.07403	
KINEMATIC VISCOSITY OF FLUID AT WALL ==	.0001700	
WALL/FREE STREAM DENSITY RATIO ==	.96220	
LOCATION REYNOLDS NUMBER (REX) ==	1455592.22	
INPUT VALUE OF VELOCITY DELTA ==	.70000	
INPUT VALUE OF TEMPERATURE DELTA ==	.90000	
CALCULATED DELTA ==		.49373
DELTA 99.5% INPUT ==	.00000	
DISPLACEMENT THICKNESS (DELSTAR) ==	.07254	.07237
MOMENTUM THICKNESS (THETA) ==	.04995	.05039
ENERGY-DISSIPATION THICKNESS ==	.08890	.08932
ENTHALPY THICKNESS ==	.00214	.00215
SHAPE FACTOR 12 (DELSTAR/THETA) ==	1.45213	1.43613
SHAPE FACTOR 32 (ENERGY/THETA) ==	1.77960	1.77253
MOMENTUM THICKNESS REYNOLDS NUMBER ==	2580.33	2602.88
DISPLACEMENT THICKNESS REYNOLDS NUMBER ==	3746.97	3738.08
SKIN FRICTION COEFFICIENT ==	.003391	
FRICTION VELOCITY ==	4.13188	
LAW OF THE WALL CONSTANT (K) ==	.41000	
LAW OF THE WALL CONSTANT (C) ==	5.00000	
WAKE STRENGTH ==		.40508
CLAUSERS 'DELTA' INTEGRAL ==	-1.49559	-1.67295
CLAUSERS 'G' INTEGRAL ==	11.34975	10.98743
DISPLACEMENT THICKNESS - CONSTANT DENSITY ==	.06659	.07022
MOMENTUM THICKNESS - CONSTANT DENSITY ==	.05041	.05086
SHAPE FACTOR 12 - CONSTANT DENSITY ==	1.32100	1.38060

LOCATION -X- 28.18001

Z = -6 INCHES

Table 37.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 10. GRID NO. 2

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
1	.0076	.015	45.46	81.85	.462	.411	-12.821	11.003	8.017	15.453
2	.0087	.018	48.11	81.23	.489	.440	-12.181	11.643	8.594	17.681
3	.0102	.021	51.16	80.67	.520	.468	-11.442	12.338	9.124	20.718
4	.0111	.023	52.41	80.38	.543	.481	-11.139	12.685	9.394	22.541
5	.0111	.024	53.41	80.12	.561	.494	-10.897	12.927	9.634	23.959
6	.0135	.027	55.23	79.56	.578	.521	-10.458	13.366	10.162	27.402
7	.0146	.030	56.04	79.27	.599	.535	-10.262	13.562	10.437	30.237
8	.0158	.032	56.85	79.17	.598	.540	-10.064	13.760	10.526	32.060
9	.0177	.036	57.64	78.78	.586	.558	-9.873	13.951	10.892	35.908
10	.0196	.040	58.63	78.47	.598	.573	-9.587	14.237	11.183	39.756
11	.0219	.044	59.64	78.31	.606	.581	-9.390	14.434	11.332	44.414
12	.0234	.047	60.14	78.09	.611	.591	-9.269	14.555	11.537	47.452
13	.0249	.050	60.73	77.96	.617	.598	-9.127	14.697	11.667	50.490
14	.0271	.055	61.26	77.70	.623	.610	-8.992	14.832	11.905	54.945
15	.0269	.059	61.80	77.51	.628	.619	-8.868	14.956	12.085	58.591
16	.0339	.063	62.53	77.35	.635	.627	-8.691	15.133	12.234	62.641
17	.0325	.066	62.98	77.25	.640	.632	-8.582	15.242	12.328	65.882
18	.0387	.076	64.45	76.80	.655	.654	-8.226	15.598	12.750	78.438
19	.0459	.093	66.17	76.57	.672	.665	-7.810	16.014	12.973	93.020
20	.0528	.107	67.41	76.25	.685	.680	-7.509	16.315	13.270	106.995
21	.0599	.119	68.36	76.04	.695	.690	-7.273	16.551	13.467	119.349
22	.0659	.134	69.64	75.73	.707	.705	-6.971	16.853	13.754	133.525
23	.0727	.147	70.90	75.49	.720	.717	-6.664	17.160	13.986	147.297
24	.0769	.160	71.81	75.37	.730	.722	-6.444	17.380	14.090	159.854
25	.0857	.174	72.79	75.14	.739	.733	-6.206	17.618	14.308	173.626
26	.0929	.188	73.79	74.94	.750	.743	-5.965	17.859	14.499	188.208
27	.0991	.201	74.49	74.77	.757	.751	-5.795	18.029	14.655	200.764
28	.1057	.214	75.36	74.68	.766	.755	-5.586	18.238	14.739	214.131
29	.1127	.228	76.04	74.50	.772	.764	-5.421	18.403	14.912	228.308
30	.1187	.240	76.80	74.33	.780	.772	-5.237	18.587	15.068	240.459
31	.1261	.255	77.63	74.16	.789	.781	-5.036	18.788	15.233	255.446
32	.1327	.269	78.35	73.97	.796	.790	-4.862	18.962	15.406	268.813
33	.1497	.303	80.20	73.51	.815	.812	-4.413	19.411	15.839	303.242
34	.1675	.339	82.06	73.27	.834	.824	-3.963	19.861	16.067	339.292
35	.1849	.375	85.62	73.02	.849	.835	-3.587	20.237	16.297	374.532
36	.2029	.411	85.10	72.67	.864	.852	-3.229	20.555	16.530	410.986
37	.2199	.445	86.45	72.41	.876	.865	-2.902	20.922	16.869	445.416
38	.2383	.483	87.78	72.16	.892	.877	-2.580	21.244	17.105	482.688
39	.2547	.516	89.08	71.86	.905	.891	-2.265	21.559	17.388	515.350
40	.2727	.552	90.22	71.63	.917	.902	-1.988	21.836	17.606	552.357
41	.2900	.587	91.33	71.43	.928	.912	-1.719	22.105	17.791	587.387
42	.3078	.623	92.31	71.09	.938	.928	-1.483	22.341	18.109	623.436
43	.3335	.684	93.93	70.75	.954	.944	-1.091	22.733	18.426	683.586
44	.3679	.745	95.22	70.45	.967	.959	-.779	23.045	18.707	745.154
45	.3976	.806	96.15	70.32	.977	.965	-.554	23.270	18.833	805.710
46	.4279	.867	96.87	70.01	.984	.980	-.380	23.444	19.124	866.670
47	.4561	.926	97.46	69.92	.990	.984	-.236	23.588	19.206	927.833
48	.4880	.986	97.78	69.79	.993	.991	-.159	23.665	19.328	988.388
49	.5177	1.049	98.08	69.78	.996	.991	-.087	23.737	19.339	1048.539
50	.5477	1.109	98.21	69.71	.998	.995	-.056	23.768	19.406	1109.298
51	.5780	1.171	98.30	69.63	.999	.999	-.034	23.790	19.483	1170.662
52	.6079	1.231	98.37	69.64	.999	.998	-.016	23.808	19.467	1231.217
53	.8077	1.636	98.50	69.59	1.001	1.001	.015	23.839	19.521	1635.864
54	1.0077	2.041	98.41	69.60	1.000	1.000	-.008	23.816	19.506	2040.917
55	1.2077	2.446	98.41	69.59	1.000	1.001	-.007	23.817	19.521	2445.969
56	1.4077	2.851	98.40	69.60	1.000	1.000	-.010	23.814	19.504	2851.021
57	1.6076	3.257	98.39	69.64	1.000	1.000	-.012	23.812	19.469	3256.276
58	1.8077	3.661	98.41	69.61	1.000	1.000	-.006	23.818	19.500	3661.126
59	2.0079	4.067	98.40	69.64	1.000	1.000	-.008	23.816	19.473	4066.583
60	2.2077	4.472	98.29	69.64	1.000	1.000	-.036	23.788	19.469	4471.230
61	2.4080	4.877	98.29	69.63	1.000	1.000	-.035	23.789	19.479	4876.890
62	2.6079	5.282	98.22	69.67	1.000	1.000	-.053	23.771	19.447	5281.740

Table 37.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 11. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y^+=35$
FREE STREAM VELOCITY ==	98.483	98.483
FREE STREAM TEMPERATURE ==	70.230	
WALL TEMPERATURE ==	91.450	
WALL HEAT FLUX ==	.07769	
FREE STREAM DENSITY ==	.07684	
FREE STREAM KINEMATIC VISCOSITY ==	.0001591	
DENSITY OF FLUID AT WALL ==	.07388	
KINEMATIC VISCOSITY OF FLUID AT WALL ==	.0001706	
WALL/FREE STREAM DENSITY RATIO ==	.96150	
LOCATION REYNOLDS NUMBER (REX) ==	1862625.37	
INPUT VALUE OF VELOCITY DELTA ==	.73000	
INPUT VALUE OF TEMPERATURE DELTA ==	.83000	
CALCULATED DELTA ==		.62409
DELTA 99.5% INPUT ==	.00000	
DISPLACEMENT THICKNESS (DELSTAR) ==	.09265	.09248
MOMENTUM THICKNESS (THETA) ==	.06426	.06469
ENERGY-DISSIPATION THICKNESS ==	.11425	.11466
ENTHALPY THICKNESS ==	.00279	.00280
SHAPE FACTOR 12 (DELSTAR/THETA) ==	1.44172	1.42950
SHAPE FACTOR 32 (ENERGY/THETA) ==	1.77790	1.77236
MOMENTUM THICKNESS REYNOLDS NUMBER ==	3313.84	3336.01
DISPLACEMENT THICKNESS REYNOLDS NUMBER ==	4777.64	4768.82
SKIN FRICTION COEFFICIENT ==	.003165	
FRICTION VELOCITY ==	3.99532	
LAW OF THE WALL CONSTANT (K) ==	.41000	
LAW OF THE WALL CONSTANT (C) ==	5.00000	
WAKE STRENGTH ==		.47565
CLAUSERS 'DELTA' INTEGRAL ==	-2.01982	-2.21076
CLAUSERS 'G' INTEGRAL ==	15.20041	14.81751
DISPLACEMENT THICKNESS - CONSTANT DENSITY ==	.08591	.08969
MOMENTUM THICKNESS - CONSTANT DENSITY ==	.06485	.06530
SHAPE FACTOR 12 - CONSTANT DENSITY ==	1.32461	1.37346
LOCATION -X- ==	36.12000	
Z = CENTERLINE		

Table 38.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 11. GRID NO. 2

REDUCED PROFILE DATA

N	Y	Y/	U	T	U/UE	THETA	U-UE	U(+)	T(+)	Y(+)
	IACHES	DELTA	FT/SEC	DEG.F			UTAU			
1	.0079	.013	44.06	82.68	.447	.413	-13.620	11.029	7.995	15.477
2	.0095	.015	47.50	81.92	.482	.449	-12.760	11.890	8.692	18.600
3	.0103	.017	49.22	81.81	.500	.454	-12.331	12.319	8.791	20.161
4	.0114	.018	50.46	81.58	.512	.465	-12.019	12.630	9.002	22.308
5	.0123	.020	51.72	81.23	.525	.482	-11.705	12.945	9.319	24.064
6	.0138	.022	53.10	80.86	.539	.499	-11.360	13.289	9.653	26.992
7	.0149	.024	53.72	80.68	.545	.508	-11.205	13.445	9.821	29.139
8	.0163	.026	54.91	80.40	.558	.521	-10.967	13.743	10.080	31.871
9	.0184	.030	55.92	79.97	.568	.541	-10.653	13.997	10.464	35.970
10	.0203	.033	56.86	79.87	.577	.546	-10.417	14.232	10.562	39.678
11	.0221	.035	57.47	79.63	.584	.557	-10.264	14.385	10.775	43.191
12	.0237	.038	58.13	79.46	.590	.565	-10.100	14.550	10.929	46.313
13	.0251	.040	58.49	79.30	.594	.573	-10.011	14.638	11.082	49.046
14	.0275	.044	59.37	78.97	.603	.588	-9.789	14.661	11.377	53.730
15	.0289	.046	59.67	78.83	.606	.594	-9.714	14.935	11.504	56.462
16	.0309	.050	60.26	78.69	.612	.601	-9.567	15.082	11.632	60.366
17	.0327	.052	60.74	78.61	.617	.605	-9.446	15.203	11.712	63.879
18	.0365	.062	62.27	78.28	.632	.621	-9.063	15.587	12.012	75.979
19	.0464	.074	63.86	77.81	.648	.643	-8.666	15.983	12.440	90.617
20	.0529	.085	65.05	77.58	.661	.654	-8.368	16.282	12.650	103.303
21	.0593	.095	66.08	77.32	.671	.666	-8.110	16.539	12.882	115.793
22	.0660	.106	67.13	77.10	.682	.676	-7.847	16.802	13.089	128.670
23	.0729	.117	68.19	76.74	.692	.693	-7.561	17.069	13.415	142.336
24	.0789	.126	69.07	76.64	.701	.698	-7.362	17.288	13.504	154.046
25	.0863	.138	69.91	76.43	.710	.708	-7.151	17.499	13.700	168.489
26	.0933	.150	70.83	76.25	.719	.716	-6.921	17.728	13.865	182.151
27	.0994	.159	71.47	76.08	.726	.724	-6.761	17.886	14.016	194.056
28	.1059	.170	72.39	75.94	.735	.731	-6.531	18.118	14.143	206.742
29	.1130	.181	73.13	75.69	.743	.742	-6.345	18.304	14.367	220.599
30	.1196	.191	73.82	75.54	.750	.750	-6.173	18.476	14.511	232.509
31	.1263	.202	74.40	75.1	.755	.756	-6.027	18.622	14.623	246.556
32	.1333	.214	75.21	75.5	.764	.764	-5.824	18.826	14.776	260.218
33	.1499	.240	76.58	74.86	.778	.782	-5.463	19.167	15.132	292.616
34	.1678	.269	78.28	74.66	.795	.791	-5.056	19.593	15.314	327.551
35	.1849	.296	79.39	74.39	.806	.804	-4.779	19.871	15.560	360.925
36	.2035	.326	81.02	74.19	.823	.814	-4.370	20.280	15.743	397.226
37	.2205	.353	82.35	73.86	.836	.829	-4.038	20.612	16.039	430.405
38	.2363	.382	83.45	73.53	.847	.844	-3.764	20.886	16.341	465.144
39	.2533	.409	84.74	73.32	.860	.854	-3.439	21.210	16.529	498.323
40	.2732	.438	85.92	73.15	.872	.863	-3.144	21.505	16.691	533.258
41	.2901	.465	87.06	72.91	.884	.874	-2.859	21.791	16.907	566.242
42	.3079	.493	88.00	72.63	.894	.886	-2.621	22.029	17.145	600.982
43	.3249	.549	90.00	72.27	.914	.904	-2.122	22.528	17.486	669.290
44	.3781	.606	91.71	72.04	.931	.915	-1.696	23.954	17.704	737.990
45	.4134	.662	93.06	71.58	.945	.936	-1.358	23.292	18.121	806.884
46	.4483	.718	94.61	71.37	.961	.946	-1.099	23.680	18.312	874.998
47	.4829	.774	95.33	71.09	.968	.959	-0.789	23.860	18.562	942.526
48	.5179	.830	96.33	70.95	.978	.966	-0.538	24.112	18.698	1010.835
49	.5531	.886	97.00	70.76	.985	.975	-0.372	24.278	18.867	1079.534
50	.5879	.942	97.53	70.58	.990	.983	-0.237	24.412	19.030	1147.453
51	.6231	.998	97.83	70.50	.993	.987	-0.163	24.487	19.104	1216.152
52	.6583	1.055	98.14	70.40	.997	.992	-0.085	24.565	19.193	1284.851
53	.6931	1.111	98.35	70.34	.999	.995	-0.034	24.615	19.253	1352.770
54	.7279	1.166	98.43	70.36	1.000	.994	-0.012	24.637	19.234	1420.688
55	.7629	1.222	98.42	70.33	.999	.995	-0.015	24.635	19.261	1488.997
56	.7981	1.279	98.51	70.28	1.000	.998	.008	24.658	19.309	1557.696
57	.8333	1.335	98.51	70.24	1.000	.999	.007	24.656	19.339	1626.396
58	.8661	1.391	98.63	70.21	1.001	1.002	.037	24.687	19.372	1694.314
59	.9035	1.448	98.61	70.24	1.001	1.000	.031	24.680	19.343	1763.404
60	.9384	1.504	98.59	70.20	1.001	1.001	.028	24.677	19.377	1831.517
61	.9733	1.560	98.63	70.17	1.002	1.003	.038	24.687	19.403	1899.631
62	1.0085	1.616	98.58	70.18	1.001	1.002	.025	24.675	19.396	1968.330
63	1.0293	2.072	98.50	70.17	1.000	1.003	-0.055	24.645	19.401	2523.779
64	1.0594	2.531	98.46	70.20	1.000	1.001	-0.005	24.654	19.376	3082.546
65	1.0855	2.989	98.36	70.19	.999	1.002	-0.032	24.618	19.386	3640.922
66	2.1507	3.446	98.36	70.19	.999	1.002	-0.030	24.619	19.386	4197.542
67	2.4465	3.904	98.31	70.21	.998	1.001	-0.043	24.606	19.371	4755.333
68	2.7220	4.362	98.36	70.21	.999	1.001	-0.030	24.619	19.371	5312.538
69	3.0080	4.820	98.38	70.22	.999	1.000	-0.025	24.624	19.360	5870.719

Table 38.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 12. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY ==	98.743	98.743
FREE STREAM TEMPERATURE ==	68.365	
WALL TEMPERATURE ==	90.950	
WALL HEAT FLUX ==	.07688	
FREE STREAM DENSITY ==	.07669	
FREE STREAM KINEMATIC VISCOSITY ==	.0001590	
DENSITY OF FLUID AT WALL ==	.07354	
KINEMATIC VISCOSITY OF FLUID AT WALL ==	.0001713	
WALL/FREE STREAM DENSITY RATIO ==	.95898	
LOCATION REYNOLDS NUMBER (REX) ==	2289495.50	
INPUT VALUE OF VELOCITY DELTA ==	.88000	
INPUT VALUE OF TEMPERATURE DELTA ==	.98000	
CALCULATED DELTA ==		.75613
DELTA 99.5% INPUT ==	.00000	
DISPLACEMENT THICKNESS (DELSTAR) ==	.10810	.10819
MOMENTUM THICKNESS (THETA) ==	.07614	.07633
ENERGY-DISSIPATION THICKNESS ==	.13557	.13569
ENTHALPY THICKNESS ==	.00352	.00352
SHAPE FACTOR 12 (DELSTAR/THETA) ==	1.41970	1.41733
SHAPE FACTOR 32 (ENERGY/THETA) ==	1.78051	1.77755
MOMENTUM THICKNESS REYNOLDS NUMBER ==	3939.50	3949.52
DISPLACEMENT THICKNESS REYNOLDS NUMBER ==	5592.92	5597.76
SKIN FRICTION COEFFICIENT ==	.003085	
FRICTION VELOCITY ==	3.96012	
LAW OF THE WALL CONSTANT (K) ==	.41000	
LAW OF THE WALL CONSTANT (C) ==	5.00000	
WAKE STRENGTH ==		.44447
CLAUSERS 'DELTA' INTEGRAL ==	-2.46493	-2.61005
CLAUSERS 'G' INTEGRAL ==	17.22683	17.15648
DISPLACEMENT THICKNESS - CONSTANT DENSITY ==	.10172	.10468
MOMENTUM THICKNESS - CONSTANT DENSITY ==	.07688	.07708
SHAPE FACTOR 12 - CONSTANT DENSITY ==	1.32315	1.35800

LOCATION -X- 44.25000

Z = CENTERLINE

Table 39.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 12. GRID NO. 2

REDUCED PPOFILE DATA

N	Y	DELTA	U	T	U/UE	THETA	U-UE	U(+)	T(+)	Y(+)
	INCHES		FT/SEC	DEG.F			UTAU			
1	.0057	.008	37.55	83.72	.380	.320	-15.452	9.482	6.570	11.041
2	.0070	.009	40.94	82.73	.415	.364	-14.596	10.336	7.474	13.546
3	.0082	.011	44.30	81.97	.449	.398	-13.747	11.188	8.163	15.858
4	.0086	.012	45.61	81.64	.462	.412	-13.416	11.518	8.463	17.014
5	.0100	.013	48.23	81.09	.488	.436	-12.756	12.178	8.961	19.326
6	.0116	.015	50.45	80.50	.511	.463	-12.196	12.739	9.498	22.409
7	.0130	.017	51.87	80.05	.525	.483	-11.835	13.099	9.911	25.107
8	.0136	.018	52.56	79.82	.532	.493	-11.663	13.271	10.121	26.649
9	.0160	.021	54.18	79.32	.549	.515	-11.253	13.682	10.576	30.888
10	.0161	.024	55.45	78.88	.562	.534	-10.932	14.003	10.971	34.934
11	.0192	.026	56.12	78.70	.566	.542	-10.762	14.172	11.136	38.210
12	.0215	.028	56.82	78.54	.575	.549	-10.587	14.347	11.279	41.485
13	.0230	.030	57.39	78.25	.581	.562	-10.442	14.492	11.548	44.376
14	.0250	.033	57.96	78.05	.587	.571	-10.298	14.636	11.731	48.229
15	.0270	.036	58.66	78.08	.594	.570	-10.121	14.813	11.703	52.083
16	.0290	.038	59.29	77.97	.600	.575	-9.962	14.973	11.805	55.937
17	.0306	.041	59.80	77.81	.606	.582	-9.835	15.100	11.949	59.020
18	.0369	.049	61.33	77.18	.621	.610	-9.447	15.487	12.521	71.159
19	.0440	.058	62.75	76.75	.636	.629	-9.088	15.847	12.906	84.840
20	.0510	.067	64.09	76.50	.649	.649	-8.751	16.183	13.318	98.328
21	.0569	.075	65.06	76.02	.659	.661	-8.499	16.435	13.570	109.696
22	.0638	.084	66.38	75.76	.672	.672	-8.173	16.762	13.808	122.992
23	.0709	.094	67.34	75.65	.682	.677	-7.929	17.005	13.911	136.673
24	.0772	.102	68.10	75.45	.690	.686	-7.738	17.197	14.095	148.812
25	.0838	.111	68.93	75.22	.698	.696	-7.528	17.406	14.299	161.529
26	.0912	.121	69.66	74.92	.705	.710	-7.344	17.590	14.572	175.788
27	.0970	.128	70.39	74.88	.713	.711	-7.158	17.776	14.609	186.994
28	.1040	.138	70.95	74.66	.719	.721	-7.017	17.917	14.813	200.452
29	.1112	.147	71.77	74.59	.727	.724	-6.811	18.123	14.833	214.325
30	.1172	.155	72.52	74.52	.734	.728	-6.621	18.313	14.938	228.686
31	.1242	.164	72.86	74.25	.738	.740	-6.535	18.399	15.185	243.374
32	.1314	.174	73.68	74.04	.746	.749	-6.329	18.605	15.376	253.248
33	.1479	.196	74.94	73.85	.759	.759	-6.011	18.924	15.548	285.047
34	.1659	.219	76.64	73.46	.776	.774	-5.582	19.352	15.899	319.481
35	.1829	.242	77.54	73.24	.785	.784	-5.354	19.580	16.102	352.481
36	.2012	.266	78.66	72.98	.799	.795	-5.017	19.917	16.333	387.743
37	.2178	.288	80.04	72.67	.811	.809	-4.723	20.211	16.616	419.729
38	.2358	.312	81.22	72.38	.823	.822	-4.424	20.511	16.887	454.413
39	.2531	.335	82.33	72.19	.834	.831	-4.144	20.790	17.057	487.747
40	.2708	.358	83.23	72.07	.843	.836	-3.916	21.016	17.168	521.853
41	.2880	.381	84.15	71.71	.852	.852	-3.685	21.250	17.488	554.995
42	.3062	.405	85.34	71.55	.864	.859	-3.364	21.550	17.634	590.064
43	.3410	.451	87.04	71.21	.881	.874	-2.956	21.978	17.944	657.119
44	.3761	.497	88.69	70.82	.898	.891	-2.548	22.395	18.304	724.752
45	.4106	.543	90.24	70.39	.914	.910	-2.148	22.787	18.692	791.614
46	.4460	.590	91.68	70.23	.926	.917	-1.784	23.151	18.834	859.439
47	.4811	.636	93.02	70.06	.942	.925	-1.445	23.490	18.988	927.072
48	.5159	.682	94.10	69.66	.953	.943	-1.173	23.761	19.356	994.127
49	.5510	.729	95.23	69.52	.964	.949	-0.887	24.047	19.482	1061.760
50	.5862	.775	95.96	69.36	.972	.956	-0.697	24.238	19.626	1129.586
51	.6208	.821	96.64	69.13	.979	.966	-0.532	24.402	19.838	1196.255
52	.6557	.867	97.28	68.93	.985	.975	-0.369	24.566	20.023	1263.503
53	.6907	.914	97.70	68.86	.989	.978	-0.262	24.672	20.074	1330.943
54	.7260	.960	98.09	68.70	.993	.985	-0.164	24.770	20.229	1398.962
55	.7612	1.007	98.20	68.59	.994	.990	-0.138	24.796	20.333	1466.787
56	.7962	1.053	98.40	68.54	.997	.992	-0.085	24.849	20.378	1534.227
57	.8310	1.099	98.53	68.49	.998	.994	-0.053	24.882	20.416	1600.897
58	.8660	1.145	98.66	68.42	.999	.997	-0.020	24.914	20.418	1668.723
59	.9010	1.191	98.77	68.41	1.000	.998	-0.006	24.940	20.480	1735.778
60	.9357	1.238	98.73	68.36	1.000	.998	-0.004	24.930	20.494	1803.025
61	.9710	1.284	98.74	68.36	1.000	1.000	-0.002	24.933	20.540	1871.443
62	1.0058	1.330	98.81	68.38	1.001	.999	.0018	24.952	20.522	1938.998
63	1.0407	1.377	98.81	68.38	1.001	1.001	.0017	24.952	20.554	2006.544
64	1.0752	1.422	98.81	68.38	1.001	1.001	.0018	24.952	20.524	2074.061
65	1.1097	1.465	98.80	68.38	1.001	1.001	.0014	24.948	20.554	2141.534
66	1.1442	1.509	98.75	68.35	1.000	1.000	.0007	24.936	20.529	2209.087
67	1.1787	1.553	98.77	68.35	1.000	1.001	.0009	24.941	20.545	2276.548
68	1.2132	1.597	98.71	68.35	1.000	1.002	.0014	24.920	20.545	2344.066
69	1.2477	1.641	98.69	68.35	1.000	1.001	.0014	24.920	20.544	2411.559
70	1.2822	1.685	98.69	68.34	1.000	1.001	.0014	24.920	20.544	2479.120
71	1.3167	1.729	98.76	68.34	1.000	1.001	.0014	24.920	20.560	2546.663

Table 39.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 13. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y^+=35$
FREE STREAM VELOCITY =	98.605	98.605
FREE STREAM TEMPERATURE =	68.719	
WALL TEMPERATURE =	91.260	
WALL HEAT FLUX =	.07820	
FREE STREAM DENSITY =	.07664	
FREE STREAM KINEMATIC VISCOSITY =	.0001592	
DENSITY OF FLUID AT WALL =	.07350	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001714	
WALL/FREE STREAM DENSITY RATIO =	.95909	
LOCATION REYNOLDS NUMBER (REX) =	2283583.87	
INPUT VALUE OF VELOCITY DELTA =	.92000	
INPUT VALUE OF TEMPERATURE DELTA =	.97000	
CALCULATED DELTA =		.76072
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.11020	.11044
MOMENTUM THICKNESS (THETA) =	.07783	.07793
ENERGY-DISSIPATION THICKNESS =	.13844	.13844
ENTHALPY THICKNESS =	.00342	.00342
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.41595	1.41707
SHAPE FACTOR 32 (ENERGY/THETA) =	1.77879	1.77643
MOMENTUM THICKNESS REYNOLDS NUMBER =	4016.53	4021.85
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	5687.19	5699.24
SKIN FRICTION COEFFICIENT =	.003051	
FRICTION VELOCITY =	3.93252	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.47413
CLAUSERS 'DELTA' INTEGRAL =	-2.55659	-2.68361
CLAUSERS 'G' INTEGRAL =	17.74484	17.82472
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.10438	.10703
MOMENTUM THICKNESS - CONSTANT DENSITY =	.07857	.07868
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.32850	1.36035

LOCATION -X- 44.25000

Z = +6 INCHES

Table 40.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 13.

GRID NO. 2

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG. F	U/UE	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
1	.0048	.0006	34.99	84.60	.355	.296	-16.176	8.898	5.912	9.233
2	.0063	.0008	38.56	83.63	.391	.352	-15.268	9.806	7.031	12.100
3	.0072	.0010	41.36	82.69	.419	.380	-14.557	10.517	7.606	13.820
4	.0080	.0011	44.08	82.31	.447	.397	-13.666	11.209	7.940	15.350
5	.0092	.0012	46.43	81.59	.471	.429	-13.266	11.806	8.577	17.643
6	.0107	.0014	48.19	80.84	.499	.462	-12.565	12.509	9.248	20.511
7	.0116	.0016	50.72	80.05	.523	.474	-12.175	12.899	9.472	23.167
8	.0130	.0017	51.59	79.58	.533	.487	-11.957	13.118	9.735	25.907
9	.0153	.0020	53.30	79.13	.541	.514	-11.521	13.553	10.363	29.364
10	.0170	.0022	54.51	79.19	.553	.527	-11.212	13.862	10.529	32.553
11	.0190	.0025	55.23	79.39	.560	.543	-11.030	14.045	10.855	36.377
12	.0207	.0027	56.27	78.82	.574	.552	-10.764	14.331	11.034	39.626
13	.0218	.0029	56.69	78.56	.581	.559	-10.683	14.391	11.178	41.729
14	.0239	.0031	57.26	78.33	.587	.563	-10.514	14.560	11.448	45.743
15	.0256	.0034	57.88	78.16	.593	.581	-10.356	14.718	11.622	49.375
16	.0276	.0037	58.49	77.98	.599	.589	-10.201	14.873	11.780	53.198
17	.0296	.0039	59.06	77.81	.606	.597	-10.055	15.019	11.928	56.639
18	.0365	.0046	60.78	77.40	.616	.615	-9.619	15.455	12.299	69.828
19	.0434	.0057	62.17	77.15	.631	.627	-9.264	15.810	12.531	83.018
20	.0502	.0066	63.50	76.80	.644	.642	-8.927	16.147	12.827	96.016
21	.0564	.0074	64.44	76.44	.655	.657	-8.657	16.418	13.142	107.868
22	.0630	.0083	65.43	76.05	.673	.673	-8.437	16.637	13.458	120.484
23	.0701	.0092	66.55	75.63	.679	.679	-8.152	16.923	13.584	134.056
24	.0761	.0100	67.22	75.79	.682	.686	-7.962	17.112	13.724	145.525
25	.0830	.0109	68.22	75.48	.692	.700	-7.726	17.348	14.000	158.715
26	.0906	.0119	69.33	75.24	.700	.711	-7.520	17.554	14.209	172.478
27	.0966	.0126	69.88	75.17	.708	.714	-7.320	17.754	14.274	183.565
28	.1029	.0135	70.35	74.97	.715	.723	-7.138	17.936	14.454	196.754
29	.1096	.0144	71.04	74.73	.720	.734	-7.009	18.065	14.667	209.944
30	.1162	.0153	71.78	74.62	.728	.738	-6.832	18.242	14.761	222.178
31	.1231	.0162	72.40	74.53	.734	.742	-6.664	18.411	14.881	235.367
32	.1298	.0171	72.97	74.51	.740	.743	-6.519	18.555	14.856	248.175
33	.1470	.0193	74.66	74.09	.757	.762	-6.089	18.985	15.234	281.053
34	.1647	.0217	75.84	73.82	.769	.774	-5.788	19.286	15.472	314.887
35	.1822	.0240	77.51	73.45	.781	.790	-5.492	19.582	15.800	348.339
36	.2000	.0263	78.78	73.13	.794	.804	-5.156	19.918	16.086	381.364
37	.2170	.0288	79.53	72.92	.808	.814	-4.826	20.248	16.271	414.861
38	.2348	.0311	80.56	72.78	.817	.820	-4.588	20.486	16.396	448.866
39	.2521	.0335	81.82	72.61	.830	.827	-4.268	20.806	16.545	481.955
40	.2671	.0357	82.78	72.26	.840	.843	-4.033	21.051	16.853	515.172
41	.2871	.0377	83.64	72.06	.848	.852	-3.806	21.268	17.033	548.859
42	.3048	.0401	84.75	72.02	.859	.854	-3.574	21.550	17.068	582.693
43	.3198	.0427	86.65	71.47	.879	.878	-3.041	22.033	17.552	616.597
44	.3352	.0449	88.23	71.12	.895	.893	-2.638	22.436	17.866	650.717
45	.4100	.0533	90.01	70.78	.913	.909	-2.184	22.860	18.189	683.787
46	.4852	.0565	91.44	70.53	.927	.920	-1.821	23.253	18.389	717.787
47	.5602	.0631	92.46	70.19	.938	.935	-1.562	23.512	18.688	751.077
48	.6348	.0678	93.70	70.13	.950	.938	-1.247	23.827	18.748	785.477
49	.7098	.0723	94.63	69.79	.962	.953	-1.061	24.114	19.046	819.263
50	.7850	.0769	95.38	69.51	.969	.965	-1.069	24.305	19.294	853.294
51	.8601	.0815	96.26	69.35	.976	.972	-1.056	24.479	19.434	887.306
52	.9354	.0861	96.83	69.31	.982	.974	-1.052	24.622	19.474	921.322
53	.0000	.0907	97.28	69.12	.987	.982	-1.038	24.736	19.542	955.341
54	.0000	.0953	97.69	69.04	.991	.986	-1.033	24.828	19.578	989.361
55	.0000	.0999	98.03	68.96	.994	.989	-1.046	24.971	19.709	1023.381
56	.0000	1.0045	98.20	68.86	.996	.994	-1.030	25.071	19.781	1057.401
57	.0000	1.0091	98.37	68.80	.998	.996	-1.059	25.166	19.867	1091.421
58	.0000	1.0137	98.49	68.83	.999	.995	-1.029	25.259	19.922	1125.441
59	.0000	1.0183	98.53	68.79	.999	.997	-1.020	25.344	19.900	1159.461
60	.0000	1.0229	98.55	68.78	.999	.997	-1.013	25.413	19.934	1193.481
61	.0000	1.0275	98.61	68.76	1.000	.998	-1.002	25.476	19.944	1227.501
62	.0000	1.0321	98.65	68.74	1.000	.999	-1.001	25.535	19.964	1261.521
63	.0000	1.0369	98.61	68.71	1.000	1.001	-1.000	25.590	19.973	1295.541
64	.0000	1.0416	98.62	68.71	1.000	1.001	-1.000	25.645	19.977	1329.561
65	.0000	2.0463	98.57	68.72	1.000	1.000	-1.000	25.699	20.000	1363.581
66	.0000	3.0510	98.54	68.70	1.000	1.001	-1.000	25.754	20.000	1397.601
67	.0000	3.0557	98.52	68.72	1.000	1.000	-1.000	25.809	20.000	1431.621
68	.0000	3.0604	98.53	68.74	1.000	1.000	-1.000	25.864	20.000	1465.641
69	.0000	4.0651	98.60	68.83	1.000	1.000	-1.000	25.919	20.000	1499.661
70	.0000	4.0698	98.55	68.76	1.000	1.000	-1.000	25.974	20.000	1533.681
71	.0000	5.0745	98.59	68.75	1.000	1.000	-1.000	26.029	20.000	1567.701

Table 40.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 14. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY	98.785	98.785
FREE STREAM TEMPERATURE	68.964	
WALL TEMPERATURE	91.310	
WALL HEAT FLUX	.07699	
FREE STREAM DENSITY	.07660	
FREE STREAM KINEMATIC VISCOSITY	.0001594	
DENSITY OF FLUID AT WALL	.07349	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001715	
WALL/FREE STREAM DENSITY RATIO	.95944	
LOCATION REYNOLDS NUMBER (REX)	2285884.03	
INPUT VALUE OF VELOCITY DELTA	.95000	
INPUT VALUE OF TEMPERATURE DELTA	1.10000	
CALCULATED DELTA		.75746
DELTA 99.5% INPUT	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	.11130	.11131
MOMENTUM THICKNESS (THETA)	.07812	.07837
ENERGY-DISSIPATION THICKNESS	.13898	.13918
ENTHALPY THICKNESS	.00351	.00352
SHAPE FACTOR 12 (DELSTAR/THETA)	1.42476	1.42034
SHAPE FACTOR 32 (ENERGY/THETA)	1.77908	1.77586
MOMENTUM THICKNESS REYNOLDS NUMBER	4035.62	4048.52
DISPLACEMENT THICKNESS REYNOLDS NUMBER	5749.79	5750.27
SKIN FRICTION COEFFICIENT	.003027	
FRICTION VELOCITY	3.92368	
LAW OF THE WALL CONSTANT (K)	.41000	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		.49849
CLAUSERS 'DELTA' INTEGRAL	-2.55457	-2.71401
CLAUSERS 'G' INTEGRAL	18.33572	18.17202
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.10463	.10780
MOMENTUM THICKNESS - CONSTANT DENSITY	.07887	.07913
SHAPE FACTOR 12 - CONSTANT DENSITY	1.32664	1.36230

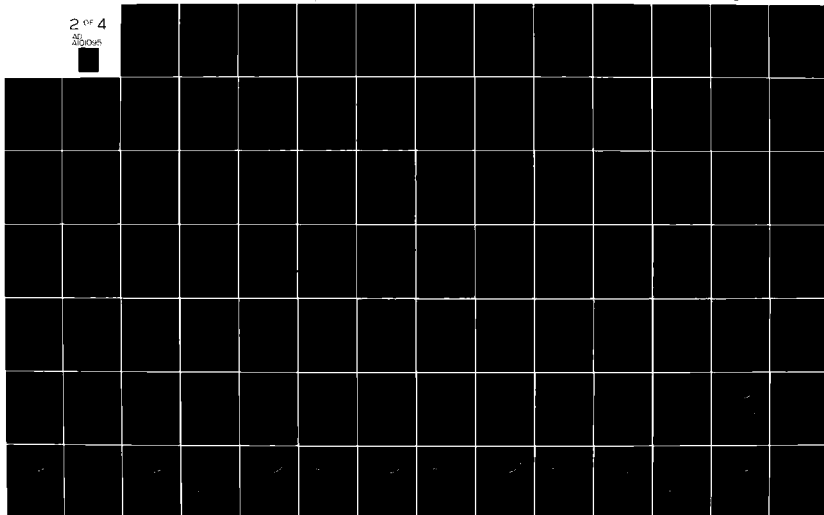
LOCATION -X- 44.25000

Z = -6 INCHES

Table 41.

AD-A101 095 UNITED TECHNOLOGIES RESEARCH CENTER EAST HARTFORD CONN F/G 20/40
DATA REPORT. VOLUME I. VELOCITY AND TEMPERATURE PROFILE DATA FO--ETC(11)
JAN 81 M F BLAIR F49620-78-C-0064
UNCLASSIFIED UTRC/R81-914388-15 AFOSR-TR-81-0516 NL

2 of 4
AD
200008



JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 14. GRID NO. 2

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
1	.00063	.008	37.85	83.60	.384	.345	-15.520	9.657	6.926	12.071
2	.00076	.010	41.68	82.65	.422	.388	-14.552	10.625	7.787	14.550
3	.00085	.011	44.48	82.16	.450	.410	-13.841	11.335	8.226	16.266
4	.00097	.013	46.97	81.60	.475	.434	-13.206	11.970	8.726	18.054
5	.00105	.014	48.37	81.33	.490	.447	-12.848	12.329	9.072	20.080
6	.00121	.016	50.12	80.45	.507	.466	-12.403	12.774	9.758	22.131
7	.00133	.018	51.74	80.27	.524	.494	-11.990	13.187	9.928	24.419
8	.00143	.019	53.59	80.22	.532	.496	-11.774	13.403	9.968	26.326
9	.00164	.022	55.74	79.89	.557	.511	-11.480	13.696	10.266	28.331
10	.00189	.025	58.97	79.40	.582	.538	-11.166	14.011	10.810	30.098
11	.00203	.027	55.55	79.33	.572	.546	-11.019	14.157	10.976	31.768
12	.00221	.029	56.31	78.59	.578	.558	-10.775	14.402	11.217	32.200
13	.00239	.032	57.05	78.43	.581	.569	-10.637	14.540	11.431	33.333
14	.00254	.034	57.38	78.30	.587	.576	-10.552	14.625	11.578	34.498
15	.00275	.036	58.02	78.30	.595	.582	-10.390	14.787	11.698	35.705
16	.00299	.040	58.81	78.30	.600	.586	-10.187	14.990	11.698	36.954
17	.00312	.041	59.31	78.22	.613	.611	-9.733	15.116	12.270	37.377
18	.00374	.049	60.60	77.66	.629	.628	-9.342	15.834	12.616	38.916
19	.00445	.059	62.13	77.28	.643	.641	-8.985	16.192	12.881	39.883
20	.00513	.068	63.53	76.98	.652	.653	-8.759	16.418	13.110	40.324
21	.00573	.076	64.42	76.73	.664	.667	-8.450	16.727	13.391	41.226
22	.00648	.086	65.63	76.41	.676	.674	-8.162	17.015	13.544	42.356
23	.00720	.095	66.76	76.24	.682	.683	-7.995	17.181	13.710	43.463
24	.00773	.102	67.41	76.06	.693	.697	-7.741	17.435	13.997	44.574
25	.00847	.112	68.41	75.74	.698	.700	-7.604	17.573	14.067	45.351
26	.00914	.121	68.95	75.66	.705	.703	-7.440	17.737	14.130	46.602
27	.00973	.128	69.59	75.59	.713	.712	-7.235	17.942	14.316	47.141
28	.01044	.138	70.40	75.38	.719	.713	-7.079	18.098	14.571	48.299
29	.01113	.147	71.01	75.10	.727	.725	-6.861	18.315	14.721	49.740
30	.01173	.155	71.86	74.93	.735	.733	-6.661	18.515	14.769	50.852
31	.01247	.165	72.65	74.88	.742	.741	-6.503	18.674	14.878	51.819
32	.01315	.174	73.27	74.76	.756	.755	-6.353	18.833	15.171	52.800
33	.01489	.197	74.66	74.43	.768	.767	-6.143	19.342	15.412	53.799
34	.01661	.219	75.89	74.17	.782	.781	-5.835	19.694	15.688	54.998
35	.01833	.242	77.27	73.86	.794	.793	-5.483	19.984	15.934	56.304
36	.02015	.266	78.41	73.58	.806	.805	-5.193	20.304	16.170	57.531
37	.02184	.288	79.67	73.32	.818	.815	-4.872	20.606	16.362	58.666
38	.02363	.312	80.77	73.11	.830	.837	-4.591	20.904	16.528	59.883
39	.02533	.334	82.02	73.03	.841	.844	-4.005	21.171	16.806	61.408
40	.02713	.358	83.07	72.61	.850	.852	-3.767	21.409	16.957	62.826
41	.02883	.381	84.00	72.45	.859	.875	-3.528	21.648	16.951	64.151
42	.03063	.405	84.94	72.27	.869	.887	-3.037	22.140	17.581	65.561
43	.03247	.429	86.87	71.75	.879	.887	-2.562	22.615	18.199	67.018
44	.03417	.453	88.73	71.49	.898	.903	-2.212	22.964	18.440	68.419
45	.03655	.497	90.10	71.13	.912	.914	-1.860	23.317	18.647	69.503
46	.03814	.543	91.49	70.88	.926	.928	-1.538	23.638	18.647	70.555
47	.04014	.590	92.75	70.57	.939	.947	-1.233	23.944	18.647	71.731
48	.04214	.636	93.95	70.14	.951	.949	-1.070	24.206	18.647	72.731
49	.04414	.682	94.98	70.00	.961	.963	-1.785	24.433	18.647	73.731
50	.04614	.728	95.71	69.68	.969	.968	-1.582	24.595	18.647	74.731
51	.04814	.775	96.50	69.61	.977	.971	-1.426	24.751	18.647	75.731
52	.05014	.821	97.11	69.49	.983	.977	-1.358	24.819	18.647	76.731
53	.05214	.867	97.38	69.29	.986	.985	-1.253	24.924	18.647	77.731
54	.05414	.913	97.79	69.20	.990	.989	-1.188	24.993	18.647	78.731
55	.05614	.959	98.06	69.16	.993	.995	-1.113	25.063	18.647	79.731
56	.05814	1.005	98.34	69.12	.997	.993	-1.087	25.089	18.647	80.731
57	.06014	1.052	98.44	69.08	.998	.995	-1.061	25.116	18.647	81.731
58	.06214	1.100	98.55	69.04	.999	.997	-1.057	25.120	18.647	82.731
59	.06414	1.148	98.56	69.03	1.000	.997	-1.015	25.162	18.647	83.731
60	.06614	1.196	98.73	68.99	1.000	.997	-1.012	25.173	18.647	84.731
61	.06814	1.244	98.77	68.95	1.000	.997	-1.015	25.192	18.647	85.731
62	.07014	1.292	98.85	68.97	1.000	.999	-1.015	25.162	18.647	86.731
63	.07214	1.340	98.81	68.98	1.000	.999	-1.015	25.184	18.647	87.731
64	.07414	1.388	98.72	68.98	1.000	.998	-1.000	25.176	18.647	88.731
65	.07614	1.436	98.82	69.00	1.000	.998	-1.008	25.185	18.647	89.731
66	.07814	1.484	98.71	69.01	1.000	.997	-1.018	25.158	18.647	90.731
67	.08014	1.532	98.83	69.03	1.000	.997	-1.010	25.187	18.647	91.731
68	.08214	1.580	98.88	69.10	1.001	.994	-1.025	25.202	18.647	92.731
69	.08414	1.628								
70	.08614									
71	.08814									

Table 41.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 15. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY ==	98.898	98.898
FREE STREAM TEMPERATURE ==	68.802	
WALL TEMPERATURE ==	91.800	
WALL HEAT FLUX ==	.07737	
FREE STREAM DENSITY ==	.07662	
FREE STREAM KINEMATIC VISCOSITY ==	.0001593	
DENSITY OF FLUID AT WALL ==	.07343	
KINEMATIC VISCOSITY OF FLUID AT WALL ==	.0001717	
WALL/FREE STREAM DENSITY RATIO ==	.95830	
LOCATION REYNOLDS NUMBER (REX) ==	2701638.62	
INPUT VALUE OF VELOCITY DELTA ==	1.08000	
INPUT VALUE OF TEMPERATURE DELTA ==	1.18000	
CALCULATED DELTA ==		.88723
DELTA 99.5% INPUT ==	.00000	
DISPLACEMENT THICKNESS (DELSTAR) ==	.12680	.12699
MOMENTUM THICKNESS (THETA) ==	.08985	.09000
ENERGY-DISSIPATION THICKNESS ==	.16008	.16012
ENTHALPY THICKNESS ==	.00416	.00416
SHAPE FACTOR 12 (DELSTAR/THETA) ==	1.41118	1.41105
SHAPE FACTOR 32 (ENERGY/THETA) ==	1.78152	1.77919
MOMENTUM THICKNESS REYNOLDS NUMBER ==	4649.58	4657.01
DISPLACEMENT THICKNESS REYNOLDS NUMBER ==	6561.37	6571.27
SKIN FRICTION COEFFICIENT ==	.002964	
FRICTION VELOCITY ==	3.88916	
LAW OF THE WALL CONSTANT (K) ==	.41000	
LAW OF THE WALL CONSTANT (C) ==	5.00000	
WAKE STRENGTH ==		.47639
CLAUSERS 'DELTA' INTEGRAL ==	-2.98334	-3.12375
CLAUSERS 'G' INTEGRAL ==	20.63955	20.66568
DISPLACEMENT THICKNESS - CONSTANT DENSITY ==	.11998	.12284
MOMENTUM THICKNESS - CONSTANT DENSITY ==	.09073	.09088
SHAPE FACTOR 12 - CONSTANT DENSITY ==	1.32241	1.35164

LOCATION -X- 52.21001

Z = CENTERLINE

Table 42.

RUN NO. 7. POINT 15. GRID NO. 2

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
1	.0053	.006	35.09	84.82	.355	.304	-16.408	9.022	6.184	10.184
2	.0066	.007	38.77	83.61	.392	.356	-15.460	9.969	7.252	12.512
3	.0078	.009	42.87	82.84	.434	.389	-14.405	11.024	7.933	14.777
4	.0086	.010	44.55	82.45	.450	.406	-13.974	11.455	8.271	16.286
5	.0095	.011	46.91	82.11	.474	.421	-13.368	12.061	8.585	17.985
6	.0111	.013	49.12	81.51	.497	.447	-12.800	12.630	9.112	21.004
7	.0125	.014	50.60	80.98	.512	.470	-12.419	13.011	9.581	23.647
8	.0135	.015	51.43	80.66	.520	.484	-12.206	13.223	9.868	25.534
9	.0157	.018	52.95	80.04	.535	.511	-11.813	13.616	10.416	29.686
10	.0173	.020	54.01	79.97	.546	.514	-11.541	13.888	10.478	31.705
11	.0197	.022	54.94	79.50	.556	.535	-11.303	14.126	10.895	33.234
12	.0212	.024	55.66	79.34	.563	.542	-11.117	14.312	11.038	40.065
13	.0223	.025	56.05	79.16	.567	.550	-11.016	14.413	11.196	42.141
14	.0249	.028	56.90	78.99	.575	.557	-10.798	14.631	11.346	47.048
15	.0267	.030	57.53	78.61	.582	.574	-10.637	14.792	11.685	50.445
16	.0287	.032	58.05	78.38	.587	.583	-10.503	14.927	11.885	55.219
17	.0302	.034	58.28	78.31	.589	.587	-10.444	14.985	11.988	59.030
18	.0336	.037	59.69	78.07	.604	.597	-10.060	15.333	12.511	68.939
19	.0439	.053	61.38	77.65	.623	.615	-9.396	15.833	12.851	86.150
20	.0503	.055	62.72	77.22	.634	.634	-9.302	16.129	13.187	94.982
21	.0563	.063	63.66	76.91	.644	.647	-8.060	16.369	13.387	110.306
22	.0633	.072	64.82	76.68	.655	.657	-8.763	16.666	13.593	119.893
23	.0705	.079	65.69	76.47	.664	.667	-8.538	16.891	13.781	133.104
24	.0763	.086	66.69	76.31	.674	.674	-8.283	17.146	13.724	144.049
25	.0835	.094	67.24	76.06	.680	.684	-8.141	17.288	13.943	157.637
26	.0904	.102	68.11	75.91	.689	.691	-7.917	17.512	14.079	170.659
27	.0963	.109	68.78	75.78	.695	.697	-7.766	17.663	14.195	181.793
28	.1037	.117	69.68	75.54	.705	.707	-7.513	17.916	14.407	195.759
29	.1103	.124	70.27	75.52	.711	.708	-7.360	18.069	14.424	208.214
30	.1165	.131	70.94	75.43	.717	.712	-7.190	18.239	14.498	220.915
31	.1235	.139	71.50	75.23	.723	.721	-6.045	18.384	14.680	233.125
32	.1305	.147	71.86	75.09	.727	.726	-6.952	18.478	14.800	246.335
33	.1473	.166	73.26	74.74	.741	.742	-6.592	18.837	15.113	278.040
34	.1651	.186	74.63	74.46	.755	.754	-6.239	19.190	15.363	311.632
35	.1826	.206	75.93	74.17	.768	.767	-5.905	19.525	15.620	344.658
36	.2003	.226	77.14	73.93	.780	.777	-5.595	19.834	15.826	378.061
37	.2173	.245	78.12	73.72	.790	.786	-5.342	20.087	16.016	410.144
38	.2353	.265	78.95	73.50	.798	.796	-5.128	20.301	16.214	444.113
39	.2524	.285	80.00	73.28	.809	.805	-4.860	20.570	16.401	476.384
40	.2706	.305	81.10	72.90	.820	.822	-4.576	20.853	16.744	507.731
41	.2874	.324	82.11	72.79	.830	.827	-4.317	21.112	16.840	542.436
42	.3053	.344	82.59	72.73	.835	.829	-4.193	21.237	16.892	576.217
43	.3535	.398	85.24	72.08	.862	.857	-3.513	21.916	17.467	667.179
44	.4013	.452	87.33	71.71	.883	.874	-2.974	22.455	17.797	757.387
45	.4495	.507	89.20	71.22	.902	.895	-2.048	22.934	18.495	848.350
46	.4973	.561	90.93	70.92	.919	.908	-2.048	23.381	18.495	938.558
47	.5453	.615	92.53	70.58	.936	.923	-1.636	23.793	18.801	1029.143
48	.5937	.669	93.93	70.15	.950	.941	-1.278	24.152	19.175	1120.483
49	.6414	.723	95.23	69.92	.963	.951	-1.943	24.486	19.382	1210.502
50	.6894	.777	95.94	69.65	.970	.963	-1.759	24.670	19.619	1301.088
51	.7375	.831	96.86	69.44	.979	.972	-1.524	24.905	19.804	1391.862
52	.7855	.885	97.52	69.26	.986	.980	-1.353	25.076	19.964	1482.447
53	.8338	.940	97.82	69.04	.989	.990	-1.278	25.152	20.059	1573.598
54	.8815	.994	98.24	69.11	.993	.987	-1.170	25.259	20.000	1663.617
55	.9293	1.047	98.43	69.00	.995	.991	-1.119	25.310	20.000	1753.825
56	.9775	1.102	98.66	68.95	.998	.994	-1.061	25.368	20.000	1844.788
57	1.0253	1.156	98.79	68.90	.999	.995	-1.029	25.416	20.000	1934.996
58	1.0735	1.210	98.85	68.87	.999	.997	-1.014	25.451	20.000	2025.959
59	1.1215	1.264	98.88	68.84	1.000	.998	-1.005	25.486	20.000	2116.544
60	1.1694	1.318	98.91	68.78	1.000	1.001	-1.004	25.520	20.000	2206.940
61	1.2175	1.372	98.90	68.80	1.000	1.000	-1.000	25.554	20.000	2297.714
62	1.2654	1.426	98.90	68.81	1.000	1.000	-1.001	25.588	20.000	2388.111
63	1.3131	1.480	98.93	68.80	1.000	1.000	-1.007	25.622	20.000	2478.488
64	1.3613	1.534	98.97	68.79	1.001	1.000	-1.018	25.656	20.000	2568.903
65	1.4097	1.589	98.95	68.79	1.001	1.001	-1.014	25.690	20.000	2659.433
66	1.4571	1.642	98.94	68.82	1.000	1.000	-1.011	25.724	20.000	2749.886
67	1.5057	1.697	98.89	68.79	1.000	1.001	-1.003	25.758	20.000	2841.603
68	1.5545	1.751	98.89	68.78	1.000	1.001	-1.001	25.792	20.000	2932.298
69	1.6036	1.806	98.95	68.80	1.001	1.000	-1.013	25.826	20.000	3023.258
70	1.6525	1.861	98.86	68.79	1.000	1.000	-1.010	25.860	20.000	3114.218
71	1.7015	1.915	98.82	68.84	.999	.999	-1.020	25.894	20.000	3205.290
72	1.7508	1.969	98.89	68.82	1.000	.999	-1.001	25.928	20.000	3296.816
73	1.8006	2.023	98.87	68.82	1.000	.999	-1.008	25.962	20.000	3388.398

Table 42.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 17. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY	98.487	98.487
FREE STREAM TEMPERATURE	69.224	
WALL TEMPERATURE	93.320	
WALL HEAT FLUX	.C7701	
FREE STREAM DENSITY	.07656	
FREE STREAM KINEMATIC VISCOSITY	.0001595	
DENSITY OF FLUID AT WALL	.07323	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001726	
WALL/FREE STREAM DENSITY RATIO	.95643	
LOCATION REYNOLDS NUMBER (REX)	3097732.19	
INPUT VALUE OF VELOCITY DELTA	1.28000	
INPUT VALUE OF TEMPERATURE DELTA	1.37000	
CALCULATED DELTA		1.01568
DELTA 99.5% INPUT	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	.14522	.14522
MOMENTUM THICKNESS (THETA)	.10297	.10324
ENERGY-DISSIPATION THICKNESS	.18365	.18386
ENTHALPY THICKNESS	.00486	.00486
SHAPE FACTOR 12 (DELSTAR/THETA)	1.41034	1.40660
SHAPE FACTOR 32 (ENERGY/THETA)	1.76353	1.78083
MOMENTUM THICKNESS REYNOLDS NUMBER	5298.57	5312.58
DISPLACEMENT THICKNESS REYNOLDS NUMBER	7472.80	7472.70
SKIN FRICTION COEFFICIENT	.002871	
FRICTION VELOCITY	3.81584	
LAW OF THE WALL CONSTANT (K)	.41000	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		.49878
CLAUSERS 'DELTA' INTEGRAL	-3.44412	-3.62274
CLAUSERS 'G' INTEGRAL	24.23917	24.04294
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.13691	.14036
MOMENTUM THICKNESS - CONSTANT DENSITY	.10398	.10427
SHAPE FACTOR 12 - CONSTANT DENSITY	1.31660	1.34614

LOCATION -X- 60.20000

Z = +6 INCHES

Table 43.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 17. GRID NO. 2

REDUCED PROFILE DATA

N	Y INCHES	DELTA Y/	U FT/SEC	T DEG.F	U/UE	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
1	.0069	.007	38.62	85.02	.392	.384	-15.688	10.122	7.227	12.770
2	.0081	.008	41.43	84.11	.421	.382	-14.952	10.858	8.020	12.981
3	.0091	.009	44.05	83.52	.447	.407	-14.266	11.544	8.536	16.823
4	.0100	.010	45.76	83.26	.465	.417	-13.817	11.993	8.758	18.482
5	.0111	.011	47.04	82.79	.478	.437	-13.482	12.328	9.171	20.509
6	.0127	.013	49.20	82.11	.500	.465	-12.916	12.894	9.766	23.457
7	.0139	.014	50.19	81.81	.510	.478	-12.657	13.153	10.026	25.668
8	.0149	.015	50.84	81.54	.516	.489	-12.487	13.323	10.257	27.511
9	.0173	.017	52.50	81.05	.533	.509	-12.052	13.758	10.685	31.933
10	.0191	.019	53.33	80.57	.541	.529	-11.835	13.975	11.104	35.250
11	.0214	.021	54.30	80.30	.551	.541	-11.579	14.230	11.342	39.488
12	.0227	.022	54.77	80.12	.556	.548	-11.457	14.353	11.496	41.883
13	.0244	.024	55.38	79.85	.562	.559	-11.296	14.514	11.730	45.016
14	.0261	.026	55.94	79.84	.568	.559	-11.149	14.661	11.739	48.148
15	.0284	.028	56.54	79.60	.574	.569	-10.993	14.817	11.944	52.186
16	.0305	.030	57.13	79.40	.580	.578	-10.838	14.972	12.118	56.256
17	.0317	.031	57.36	79.32	.582	.581	-10.777	15.033	12.192	58.467
18	.0333	.033	59.14	78.98	.600	.599	-10.512	15.498	12.577	70.629
19	.0452	.045	60.24	78.34	.612	.622	-10.024	15.786	13.046	83.343
20	.0523	.052	61.57	78.07	.625	.633	-9.676	16.134	13.278	96.426
21	.0563	.057	62.57	77.87	.635	.641	-9.412	16.398	13.453	107.481
22	.0653	.064	63.79	77.55	.648	.654	-9.092	16.718	13.732	120.380
23	.0722	.071	64.66	77.31	.657	.664	-8.865	16.945	13.939	133.094
24	.0785	.077	65.29	77.14	.663	.672	-8.701	17.109	14.092	144.703
25	.0852	.084	66.05	76.93	.671	.680	-8.501	17.308	14.269	157.049
26	.0922	.091	66.87	76.78	.679	.687	-8.285	17.525	14.406	169.947
27	.0981	.097	67.60	76.65	.686	.692	-8.095	17.715	14.517	180.819
28	.1055	.104	68.11	76.43	.692	.701	-7.960	17.849	14.706	194.454
29	.1122	.110	68.81	76.35	.699	.703	-7.778	18.032	14.753	206.800
30	.1182	.116	69.47	76.32	.705	.706	-7.604	18.206	14.803	217.856
31	.1249	.123	70.01	76.04	.711	.717	-7.453	18.347	15.050	227.302
32	.1322	.130	70.52	75.76	.716	.729	-7.329	18.481	15.293	235.435
33	.1491	.147	71.12	75.60	.730	.736	-6.963	18.847	15.437	247.794
34	.1668	.164	72.42	75.01	.741	.760	-6.683	19.127	15.945	270.408
35	.1843	.181	74.99	75.00	.753	.760	-6.386	19.424	15.955	302.655
36	.2023	.199	75.23	74.66	.764	.774	-6.078	19.731	16.244	332.822
37	.2194	.216	76.23	74.28	.774	.790	-5.833	19.977	16.576	372.331
38	.2372	.234	77.33	74.24	.785	.792	-5.545	20.265	16.617	407.131
39	.2543	.250	78.32	74.06	.795	.799	-5.285	20.525	16.775	436.640
40	.2721	.268	79.04	73.95	.803	.804	-5.096	20.713	16.869	468.439
41	.2893	.285	79.88	73.81	.811	.810	-4.876	20.933	16.989	503.132
42	.3073	.303	80.77	73.44	.820	.825	-4.642	21.168	17.314	536.300
43	.3251	.320	82.72	73.14	.840	.838	-4.131	21.679	17.576	566.378
44	.3433	.339	84.71	72.65	.860	.858	-3.611	22.199	17.996	594.194
45	.3613	.358	86.66	72.34	.880	.871	-3.099	22.711	18.272	621.641
46	.3793	.376	88.24	71.85	.896	.891	-2.685	23.125	18.697	648.088
47	.3969	.393	89.78	71.46	.912	.907	-2.282	23.528	19.040	673.798
48	.4145	.411	91.45	71.20	.929	.918	-1.845	23.965	19.260	697.350
49	.4321	.428	92.50	70.83	.939	.933	-1.569	24.241	19.581	718.060
50	.4499	.446	93.71	70.63	.952	.941	-1.251	24.559	19.755	737.138
51	.4673	.464	94.71	70.28	.962	.956	-1.091	24.819	20.066	754.322
52	.4849	.481	95.56	70.14	.970	.962	-1.766	25.044	20.182	769.216
53	.5023	.499	96.33	69.88	.978	.973	-1.565	25.245	20.412	782.479
54	.5197	.516	96.79	69.80	.983	.976	-1.444	25.405	20.479	794.295
55	.5371	.534	97.27	69.68	.988	.981	-1.319	25.535	20.588	804.742
56	.5545	.551	97.63	69.56	.991	.986	-1.225	25.638	20.686	813.820
57	.5719	.568	97.95	69.51	.995	.988	-1.139	25.713	20.773	821.004
58	.5893	.586	98.07	69.45	.996	.991	-1.109	25.770	20.787	826.714
59	.6067	.603	98.18	69.32	.997	.996	-1.080	25.800	20.800	830.345
60	.6241	.621	98.27	69.31	.998	.996	-1.057	25.813	20.809	832.976
61	.6415	.638	98.33	69.33	.999	.996	-1.036	25.813	20.809	834.792
62	.6589	.656	98.44	69.25	1.000	.999	-1.012	25.813	20.809	835.501
63	.6763	.673	98.51	69.26	1.000	.999	-1.005	25.813	20.809	835.764
64	.6937	.690	98.55	69.21	1.000	1.000	-1.009	25.801	20.800	835.132
65	.7111	.708	98.50	69.23	1.000	1.000	-1.004	25.814	20.800	834.211
66	.7285	.725	98.45	69.22	1.000	1.000	-1.010	25.800	20.800	832.105
67	.7459	.743	98.43	69.22	1.000	1.000	-1.010	25.820	20.800	829.920
68	.7633	.760	98.47	69.19	1.000	1.000	-1.009	25.801	20.800	827.829
69	.7807	.778	98.47	69.17	1.000	1.000	-1.005	25.805	20.800	825.396
70	.7981	.795	98.44	69.20	1.000	1.000	-1.001	25.811	20.800	822.779
71	.8155	.812	98.51	69.21	1.000	1.000	-1.007	25.811	20.800	819.766
72	.8329	.830	98.51	69.21	1.000	1.000	-1.007	25.811	20.800	816.701
73	.8503	.847	98.49	69.27	1.000	1.000	-1.002	25.812	20.800	813.531

Table 43.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 18. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY ==	98.488	98.488
FREE STREAM TEMPERATURE ==	69.395	
WALL TEMPERATURE ==	93.500	
WALL HEAT FLUX ==	.07709	
FREE STREAM DENSITY ==	.07654	
FREE STREAM KINEMATIC VISCOSITY ==	.0001596	
DENSITY OF FLUID AT WALL ==	.07320	
KINEMATIC VISCOSITY OF FLUID AT WALL ==	.0001727	
WALL/FREE STREAM DENSITY RATIO ==	.95642	
LOCATION REYNOLDS NUMBER (REX) ==	3096018.69	
INPUT VALUE OF VELOCITY DELTA ==	1.25000	
INPUT VALUE OF TEMPERATURE DELTA ==	1.25000	
CALCULATED DELTA ==		1.01017
DELTA 99.5% INPUT ==	.00000	
DISPLACEMENT THICKNESS (DELSTAR) ==	.14473	.14459
MOMENTUM THICKNESS (THETA) ==	.10257	.10294
ENERGY-DISSIPATION THICKNESS ==	.18290	.18323
ENTHALPY THICKNESS ==	.00449	.00451
SHAPE FACTOR 12 (DELSTAR/THETA) ==	1.41101	1.40455
SHAPE FACTOR 32 (ENERGY/THETA) ==	1.78314	1.77993
MOMENTUM THICKNESS REYNOLDS NUMBER ==	5275.08	5294.28
DISPLACEMENT THICKNESS REYNOLDS NUMBER ==	7443.21	7436.09
SKIN FRICTION COEFFICIENT ==	.002873	
FRICTION VELOCITY ==	3.81720	
LAW OF THE WALL CONSTANT (K) ==	.41000	
LAW OF THE WALL CONSTANT (C) ==	5.00000	
WAKE STRENGTH ==		.49982
CLAUSERS 'DELTA' INTEGRAL ==	-3.41363	-3.61429
CLAUSERS 'G' INTEGRAL ==	24.42372	24.06157
DISPLACEMENT THICKNESS - CONSTANT DENSITY ==	.13627	.14008
MOMENTUM THICKNESS - CONSTANT DENSITY ==	.10355	.10394
SHAPE FACTOR 12 - CONSTANT DENSITY ==	1.31603	1.34775

LOCATION -X- 60.20000

Z = -6 INCHES

Table 44.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 18. GRID NO. 2

REDUCED PPROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
1	.0079	.008	40.96	84.11	.416	.390	-15.071	10.730	8.168	14.609
2	.0089	.009	42.75	83.47	.434	.416	-14.601	11.200	8.729	16.451
3	.0103	.010	45.53	82.86	.462	.441	-13.874	11.927	9.256	19.030
4	.0110	.011	46.52	82.63	.472	.451	-13.613	12.188	9.457	20.320
5	.0119	.012	47.80	82.31	.485	.464	-13.279	12.522	9.736	21.978
6	.0138	.014	49.90	81.83	.507	.484	-12.729	13.072	10.150	25.478
7	.0153	.015	51.02	81.46	.518	.499	-12.436	13.366	10.473	28.242
8	.0160	.016	51.45	81.31	.522	.506	-12.323	13.478	10.602	29.531
9	.0179	.018	52.77	80.99	.536	.519	-11.976	13.826	10.881	33.031
10	.0201	.020	55.63	80.49	.544	.540	-11.753	14.048	11.314	37.084
11	.0223	.022	54.57	80.44	.544	.542	-11.505	14.296	11.365	41.137
12	.0237	.023	55.01	80.26	.549	.549	-11.390	14.412	11.519	43.716
13	.0251	.025	55.49	79.94	.553	.563	-11.265	14.536	11.800	46.296
14	.0266	.026	55.57	79.75	.568	.570	-11.138	14.663	11.958	49.612
15	.0293	.029	56.81	79.56	.577	.578	-10.919	14.883	12.129	54.033
16	.0312	.031	57.37	79.42	.583	.584	-10.772	15.029	12.246	57.533
17	.0326	.032	57.60	79.32	.585	.588	-10.711	15.090	12.339	60.488
18	.0349	.034	59.06	78.81	.600	.610	-10.323	15.478	12.783	72.087
19	.0366	.036	60.44	78.28	.614	.631	-9.967	15.834	13.147	84.983
20	.0380	.038	61.81	78.02	.628	.642	-9.609	16.193	13.463	97.694
21	.0399	.039	62.23	77.89	.638	.648	-9.343	16.459	13.733	108.748
22	.0415	.041	63.64	77.71	.646	.655	-9.129	16.672	13.973	121.459
23	.0431	.043	64.74	77.39	.657	.669	-8.841	16.961	14.201	134.723
24	.0449	.044	65.42	77.15	.664	.678	-8.664	17.137	14.422	145.777
25	.0468	.046	66.46	76.94	.675	.687	-8.391	17.410	14.640	158.304
26	.0483	.048	66.92	76.75	.679	.695	-8.269	17.532	14.570	171.937
27	.0499	.049	67.59	76.64	.686	.699	-8.095	17.706	14.666	182.622
28	.0516	.051	68.14	76.39	.692	.710	-7.951	17.850	14.888	195.886
29	.0531	.053	69.09	76.25	.701	.716	-7.702	18.099	15.008	208.413
30	.0546	.054	69.46	76.18	.705	.719	-7.603	18.198	15.072	221.282
31	.0561	.056	69.96	76.00	.710	.726	-7.474	18.327	15.224	232.362
32	.0577	.057	70.57	75.82	.717	.733	-7.313	18.489	15.379	245.258
33	.0591	.059	71.71	75.60	.728	.742	-7.016	18.785	15.568	276.576
34	.0607	.060	73.33	75.43	.745	.750	-6.591	19.211	15.723	308.999
35	.0624	.062	74.04	75.05	.752	.765	-6.406	19.395	16.047	340.686
36	.0641	.064	75.34	74.67	.765	.781	-6.065	19.736	16.378	374.215
37	.0659	.065	76.24	74.33	.774	.795	-5.828	19.973	16.677	405.165
38	.0678	.067	77.13	74.35	.783	.794	-5.595	20.206	16.656	438.693
39	.0697	.069	78.14	74.24	.793	.799	-5.331	20.470	16.752	470.011
40	.0716	.071	78.94	73.83	.802	.816	-5.120	20.681	17.109	502.803
41	.0735	.073	79.96	73.71	.812	.821	-4.854	20.947	17.218	534.674
42	.0754	.075	80.51	73.33	.817	.837	-4.711	21.091	17.550	567.650
43	.0773	.077	82.91	72.98	.842	.851	-4.081	21.720	17.849	656.262
44	.0792	.079	84.83	72.61	.861	.867	-3.578	22.223	18.175	744.137
45	.0811	.081	86.74	72.08	.881	.889	-3.078	22.723	18.635	832.933
46	.0830	.083	88.35	71.73	.897	.903	-2.656	23.145	18.936	921.730
47	.0849	.084	89.85	71.43	.912	.916	-2.263	23.539	19.199	1009.420
48	.0868	.086	91.33	71.01	.927	.933	-1.875	23.926	19.563	1098.585
49	.0887	.088	92.74	70.90	.942	.937	-1.505	24.296	19.657	1186.276
50	.0906	.090	93.78	70.62	.952	.949	-1.234	24.567	19.902	1274.888
51	.0925	.092	94.82	70.38	.963	.959	-.962	24.839	20.114	1363.315
52	.0944	.094	95.59	70.04	.971	.973	-.760	25.041	20.405	1451.743
53	.0963	.096	96.35	69.98	.978	.976	-.560	25.242	20.459	1539.986
54	.0982	.098	96.92	69.87	.984	.980	-.410	25.391	20.559	1628.782
55	.0999	.099	97.33	69.73	.988	.986	-.302	25.499	20.677	1717.026
56	.1016	.101	97.63	69.60	.991	.991	-.224	25.577	20.789	1805.269
57	.1033	.103	97.95	69.47	.995	.997	-.141	25.660	20.901	1894.065
58	.1050	.105	98.09	69.44	.996	.998	-.105	25.696	20.932	1982.125
59	.1067	.106	98.25	69.42	.998	.999	-.063	25.738	20.945	2070.552
60	.1084	.108	98.39	69.40	.999	1.000	-.025	25.776	20.962	2159.533
61	.1101	.110	98.43	69.36	.999	1.002	-.016	25.785	21.002	2247.776
62	.1118	.111	98.43	69.34	.999	1.002	-.015	25.786	21.014	2336.572
63	.1135	.113	98.46	69.45	1.000	.998	-.007	25.795	20.926	2424.079
64	.1152	.115	98.57	69.39	1.001	1.000	.021	25.823	20.971	2512.691
65	.1169	.116	98.55	69.39	1.001	1.000	.017	25.818	20.973	2601.303
66	.1186	.118	98.56	69.41	1.001	.999	.019	25.820	20.959	2689.178
67	.1203	.120	98.55	69.40	1.001	1.000	.016	25.817	20.970	2777.974
68	.1220	.122	98.57	69.38	1.001	1.000	.020	25.822	20.979	2866.715
69	.1237	.123	98.52	69.37	1.000	1.001	.009	25.811	20.993	2955.562
70	.1254	.125	98.63	69.39	1.001	1.000	.038	25.839	20.974	3044.478
71	.1271	.127	98.61	69.39	1.001	1.000	.033	25.834	20.974	3133.404
72	.1288	.128	98.68	69.43	1.002	.999	.050	25.851	20.939	3222.355
73	.1305	.130	98.64	69.44	1.002	.998	.039	25.840	20.935	3311.366

Table 44.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 20. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY =	98.701	98.701
FREE STREAM TEMPERATURE =	69.924	
WALL TEMPERATURE =	94.910	
WALL HEAT FLUX =	.07621	
FREE STREAM DENSITY =	.07626	
FREE STREAM KINEMATIC VISCOSITY =	.0001603	
DENSITY OF FLUID AT WALL =	.07283	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001739	
WALL/FREE STREAM DENSITY RATIO =	.95495	
LOCATION REYNOLDS NUMBER (REX) =	3906010.28	
INPUT VALUE OF VELOCITY DELTA =	1.46000	
INPUT VALUE OF TEMPERATURE DELTA =	1.61000	
CALCULATED DELTA =		1.26107
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.17474	.17468
MOMENTUM THICKNESS (THETA) =	.12459	.12491
ENERGY-DISSIPATION THICKNESS =	.22258	.22284
ENTHALPY THICKNESS =	.00617	.00618
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.40254	1.39846
SHAPE FACTOR 32 (ENERGY/THETA) =	1.78655	1.78405
MOMENTUM THICKNESS REYNOLDS NUMBER =	6392.96	6409.56
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	8966.38	8963.54
SKIN FRICTION COEFFICIENT =	.002788	
FRICTION VELOCITY =	3.77112	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.47472
CLAUSERS 'DELTA' INTEGRAL =	-4.21251	-4.41046
CLAUSERS 'G' INTEGRAL =	29.27316	28.99472
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.16476	.16851
MOMENTUM THICKNESS - CONSTANT DENSITY =	.12585	.12619
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.30925	1.33543
LOCATION -X-	76.12000	
Z = CENTERLINE		

Table 45.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 20. GRID NO. 2

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
1	.0076	.006	39.57	85.97	.401	.358	-15.680	10.493	7.729	13.788
2	.0087	.007	41.67	85.31	.424	.384	-15.071	11.102	8.302	15.776
3	.0096	.008	44.02	84.77	.446	.406	-14.499	11.674	8.771	17.402
4	.0108	.009	45.81	84.23	.464	.427	-14.026	12.147	9.238	19.571
5	.0116	.009	46.97	83.95	.476	.439	-13.717	12.456	9.479	21.017
6	.0134	.011	48.92	83.39	.496	.461	-13.201	12.972	9.961	24.269
7	.0146	.012	48.73	83.05	.504	.475	-12.966	13.187	10.261	26.438
8	.0156	.012	50.98	82.76	.517	.486	-12.654	13.519	10.511	28.245
9	.0180	.014	51.91	82.17	.527	.510	-12.408	13.765	11.020	32.582
10	.0200	.016	53.01	82.05	.537	.515	-12.113	14.058	11.123	36.196
11	.0216	.017	53.41	81.70	.549	.529	-12.010	14.163	11.428	39.088
12	.0234	.019	54.15	81.34	.554	.543	-11.814	14.359	11.737	42.340
13	.0248	.020	54.75	81.30	.555	.545	-11.655	14.518	11.771	44.870
14	.0268	.021	55.25	81.23	.556	.548	-11.523	14.650	11.834	48.485
15	.0286	.023	55.66	81.00	.556	.553	-11.294	14.879	11.956	51.737
16	.0310	.025	56.60	80.83	.557	.564	-11.163	15.010	12.178	56.074
17	.0332	.026	57.04	80.65	.557	.571	-11.047	15.126	12.337	58.785
18	.0349	.027	58.42	79.92	.559	.600	-10.681	15.491	12.964	70.531
19	.0362	.028	59.61	79.92	.604	.607	-10.367	15.806	13.114	83.542
20	.0529	.042	60.98	79.38	.618	.622	-10.002	16.171	13.432	95.650
21	.0590	.047	61.78	79.26	.626	.626	-9.790	16.383	13.531	106.673
22	.0657	.052	62.33	78.83	.638	.644	-9.486	16.686	13.908	118.781
23	.0728	.056	63.52	78.65	.644	.649	-9.329	16.844	14.028	131.611
24	.0798	.063	64.65	78.55	.655	.655	-9.030	17.142	14.148	142.815
25	.0858	.068	65.28	78.23	.661	.668	-8.863	17.310	14.426	155.104
26	.0911	.074	65.99	78.02	.669	.676	-8.675	17.498	14.606	168.296
27	.0986	.078	66.29	77.98	.672	.678	-8.595	17.578	14.641	178.235
28	.1060	.084	67.15	77.83	.680	.684	-8.367	17.806	14.770	190.884
29	.1133	.090	67.65	77.59	.685	.693	-8.233	17.940	14.978	204.257
30	.1199	.094	68.15	77.45	.690	.699	-8.102	18.071	15.100	215.100
31	.1260	.100	68.78	77.37	.697	.702	-7.934	18.239	15.168	227.749
32	.1322	.106	69.28	77.26	.702	.706	-7.802	18.371	15.261	240.760
33	.1384	.111	70.51	76.96	.714	.719	-7.476	18.697	15.528	270.758
34	.1447	.113	71.74	76.69	.727	.729	-7.149	19.024	15.160	302.563
35	.1510	.116	72.47	76.43	.734	.740	-6.957	19.216	15.985	333.826
36	.1573	.119	73.80	76.04	.748	.755	-6.602	19.571	16.222	367.077
37	.1636	.123	74.52	75.83	.755	.764	-6.412	19.761	16.502	397.075
38	.1699	.129	75.14	75.53	.761	.767	-6.246	19.926	16.857	430.145
39	.1762	.133	76.15	75.31	.772	.776	-5.979	20.194	16.763	461.408
40	.1825	.137	77.01	75.08	.780	.784	-5.752	20.421	16.952	493.755
41	.1888	.141	77.71	74.99	.787	.794	-5.565	20.608	17.154	523.753
42	.1951	.145	78.57	74.42	.796	.797	-5.338	20.835	17.229	556.100
43	.2014	.149	80.42	74.20	.815	.820	-4.848	21.325	17.718	649.708
44	.2077	.153	82.45	73.54	.835	.829	-4.309	21.864	17.911	742.412
45	.2140	.157	84.06	73.17	.852	.855	-3.883	22.290	18.484	837.104
46	.2203	.161	85.89	73.17	.870	.870	-3.398	22.775	18.799	930.712
47	.2266	.165	87.36	72.96	.885	.879	-3.001	23.172	18.988	1025.043
48	.2329	.169	88.70	72.52	.899	.896	-2.653	23.520	19.363	1119.193
49	.2392	.173	90.12	72.26	.913	.907	-2.276	23.696	19.590	1211.717
50	.2455	.177	91.49	71.98	.927	.918	-1.913	23.834	19.834	1305.686
51	.2518	.181	92.47	71.75	.937	.927	-1.653	24.520	20.030	1398.210
52	.2581	.185	93.70	71.54	.949	.935	-1.325	24.848	20.210	1491.999
53	.2644	.189	94.57	71.17	.958	.950	-1.095	25.078	20.529	1585.968
54	.2707	.193	95.44	71.00	.967	.957	-.864	25.309	20.680	1680.841
55	.2770	.197	96.60	70.81	.972	.964	-.721	25.452	20.842	1773.907
56	.2833	.201	97.13	70.77	.979	.966	-.557	25.616	20.880	1867.515
57	.2896	.205	97.55	70.52	.984	.976	-.417	25.756	21.097	1960.400
58	.2959	.209	97.99	70.41	.988	.981	-.306	25.867	21.192	2055.092
59	.3022	.213	98.26	70.21	.993	.985	-.251	25.922	21.251	2148.700
60	.3085	.217	98.38	70.22	.996	.989	-.188	25.985	21.365	2242.489
61	.3148	.221	98.54	70.13	.997	.993	-.116	26.057	21.357	2335.916
62	.3211	.225	98.66	70.11	.998	.992	-.086	26.087	21.430	2429.885
63	.3274	.229	98.71	70.00	1.000	.996	-.042	26.131	21.450	2523.674
64	.3337	.233	98.83	70.00	1.000	.997	-.010	26.163	21.519	2616.920
65	.3400	.237	98.79	69.97	1.000	.998	-.027	26.146	21.542	2710.709
66	.3463	.241	98.75	69.90	1.000	.998	.003	26.176	21.572	2804.678
67	.3526	.245	98.82	69.97	1.000	.998	.024	26.197	21.612	2898.286
68	.3589	.249	98.83	69.97	1.000	.998	.013	26.186	21.632	2991.894
69	.3652	.253	98.80	69.90	1.000	.998	.031	26.205	21.571	3086.225
70	.3715	.257	98.77	69.89	1.000	.998	.035	26.208	21.626	3177.346
71	.3778	.261	98.72	69.89	1.000	.998	.025	26.198	21.640	3268.471
72	.3841	.265	98.79	69.86	1.000	.998	.019	26.191	21.630	3359.592
73	.3904	.269	98.79	69.86	1.000	.998	.005	26.178	21.640	3450.713
74	.3967	.273	98.85	69.86	1.000	.998	.023	26.195	21.664	3541.834
75	.4030	.277	98.85	69.86	1.000	.998	.039	26.212	21.644	3632.955

Table 45.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 22. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY ==	99.029	99.029
FREE STREAM TEMPERATURE ==	70.362	
WALL TEMPERATURE ==	95.150	
WALL HEAT FLUX ==	.07618	
FREE STREAM DENSITY ==	.07620	
FREE STREAM KINEMATIC VISCOSITY ==	.0001605	
DENSITY OF FLUID AT WALL ==	.07279	
KINEMATIC VISCOSITY OF FLUID AT WALL ==	.0001740	
WALL/FREE STREAM DENSITY RATIO ==	.95532	
LOCATION REYNOLDS NUMBER (REX) ==	3916335.69	
INPUT VALUE OF VELOCITY DELTA ==	1.46000	
INPUT VALUE OF TEMPERATURE DELTA ==	1.46000	
CALCULATED DELTA ==		1.25258
DELTA 99.5% INPUT ==	.00000	
DISPLACEMENT THICKNESS (DELSTAR) ==	.17622	.17616
MOMENTUM THICKNESS (THETA) ==	.12591	.12618
ENERGY-DISSIPATION THICKNESS ==	.22485	.22507
ENTHALPY THICKNESS ==	.00581	.00582
SHAPE FACTOR 12 (DELSTAR/THETA) ==	1.39963	1.39603
SHAPE FACTOR 32 (ENERGY/THETA) ==	1.78580	1.78369
MOMENTUM THICKNESS REYNOLDS NUMBER ==	6472.77	6486.96
DISPLACEMENT THICKNESS REYNOLDS NUMBER ==	9059.48	9055.97
SKIN FRICTION COEFFICIENT ==	.002763	
FRICTION VELOCITY ==	3.76592	
LAW OF THE WALL CONSTANT (K) ==	.41000	
LAW OF THE WALL CONSTANT (C) ==	5.00000	
WAKE STRENGTH ==		.50443
CLAUSERS 'DELTA' INTEGRAL ==	-4.29370	-4.47914
CLAUSERS 'G' INTEGRAL ==	29.92349	29.66955
DISPLACEMENT THICKNESS - CONSTANT DENSITY ==	.16685	.17033
MOMENTUM THICKNESS - CONSTANT DENSITY ==	.12714	.12743
SHAPE FACTOR 12 - CONSTANT DENSITY ==	1.31233	1.33672

LOCATION -X- 76.18001

Z = -6 INCHES

Table 46.

RUN NO. 7. POINT 22. GRID NO. 2

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
1	.0071	.006	38.71	86.56	.387	.386	-16.123	10.173	7.416	12.857
2	.0083	.007	40.31	85.64	.407	.384	-15.591	10.705	8.215	15.021
3	.0097	.008	42.91	85.13	.433	.404	-14.903	11.393	8.657	17.545
4	.0106	.008	44.64	84.61	.451	.425	-14.441	11.855	9.107	19.168
5	.0116	.009	46.41	84.25	.469	.440	-13.972	12.324	9.417	20.972
6	.0130	.010	47.91	83.99	.484	.450	-13.574	12.722	9.637	23.496
7	.0143	.011	49.15	83.73	.496	.461	-13.244	13.052	9.859	25.840
8	.0156	.012	50.16	83.32	.507	.477	-12.976	13.320	10.213	28.185
9	.0173	.014	51.26	82.77	.518	.499	-12.685	13.612	10.693	31.250
10	.0195	.016	52.37	82.38	.529	.515	-12.389	13.907	11.026	35.217
11	.0214	.017	53.45	81.93	.540	.533	-12.102	14.194	11.415	38.643
12	.0230	.018	54.46	81.78	.546	.539	-11.942	14.354	11.545	41.529
13	.0245	.020	54.22	81.69	.548	.543	-11.899	14.397	11.621	44.233
14	.0267	.021	54.97	81.41	.555	.554	-11.700	14.597	11.864	48.200
15	.0285	.023	55.65	81.09	.562	.567	-11.519	14.777	12.144	51.446
16	.0303	.024	56.18	80.64	.567	.585	-11.379	14.917	12.534	54.692
17	.0320	.026	56.61	80.47	.572	.592	-11.264	15.032	12.679	57.758
18	.0336	.031	57.85	80.49	.584	.592	-10.933	15.363	12.663	69.298
19	.0455	.036	59.46	80.08	.601	.608	-10.502	15.794	13.015	82.101
20	.0523	.042	60.45	79.65	.610	.625	-10.243	16.053	13.389	94.363
21	.0565	.047	61.48	79.26	.621	.640	-9.970	16.326	13.710	105.543
22	.0655	.052	62.77	79.13	.634	.646	-9.628	16.668	13.834	118.166
23	.0724	.056	63.55	78.98	.642	.652	-9.420	16.876	13.965	130.608
24	.0762	.062	64.26	78.85	.649	.658	-9.233	17.064	14.077	141.067
25	.0851	.068	65.16	78.51	.658	.671	-8.988	17.306	14.372	153.509
26	.0922	.074	65.91	78.29	.666	.680	-8.795	17.501	14.557	166.312
27	.0983	.079	66.38	78.18	.670	.684	-8.670	17.626	14.652	177.312
28	.1053	.084	66.00	78.09	.676	.688	-8.530	17.766	14.735	189.935
29	.1123	.090	67.00	77.83	.683	.699	-8.346	17.950	14.961	202.557
30	.1184	.095	68.32	77.72	.690	.703	-8.161	18.135	15.054	215.557
31	.1252	.105	68.36	77.60	.696	.705	-7.991	18.305	15.093	228.819
32	.1321	.119	70.41	77.10	.701	.708	-7.816	18.424	15.160	242.261
33	.1493	.133	71.73	76.94	.711	.728	-7.592	18.697	15.589	267.277
34	.1669	.147	72.70	76.72	.724	.733	-7.250	19.046	15.725	301.014
35	.1844	.162	73.45	76.43	.734	.743	-6.991	19.305	15.914	332.571
36	.2023	.175	74.45	76.07	.746	.755	-6.687	19.610	16.171	364.849
37	.2196	.189	75.32	76.10	.752	.760	-6.526	19.771	16.482	396.045
38	.2373	.203	76.00	75.96	.761	.769	-6.297	19.999	16.455	427.962
39	.2546	.217	76.00	75.71	.767	.774	-6.116	20.180	16.577	459.158
40	.2721	.231	77.93	75.33	.776	.784	-5.903	20.393	16.791	490.714
41	.2895	.245	78.75	75.19	.787	.799	-5.603	20.693	17.114	522.091
42	.3071	.267	80.84	74.82	.795	.805	-5.385	20.911	17.240	553.828
43	.3569	.287	82.47	74.26	.816	.820	-4.830	21.466	17.556	647.235
44	.4105	.326	84.36	73.79	.833	.843	-4.398	21.898	18.038	740.282
45	.4625	.369	86.06	73.64	.852	.862	-3.890	22.407	18.444	834.050
46	.5141	.410	87.65	73.26	.869	.868	-3.445	22.851	18.573	927.097
47	.5664	.452	88.82	72.92	.885	.883	-3.021	23.275	18.906	1021.406
48	.6186	.494	90.39	72.52	.897	.897	-2.710	23.586	19.202	1115.535
49	.6699	.535	91.54	72.27	.913	.913	-2.293	24.003	19.545	1208.041
50	.7219	.576	92.60	72.10	.924	.923	-1.990	24.307	19.760	1301.809
51	.7737	.618	93.80	71.75	.935	.930	-1.707	24.590	19.908	1395.217
52	.8255	.659	94.74	71.61	.947	.944	-1.388	24.908	20.205	1488.625
53	.8775	.701	95.47	71.32	.957	.949	-1.138	25.158	20.327	1582.393
54	.9293	.742	96.20	71.10	.964	.961	-944	25.352	20.577	1675.800
55	.9811	.783	96.69	71.01	.971	.970	-751	25.545	20.770	1765.208
56	1.0329	.825	97.23	70.83	.976	.974	-621	25.675	20.845	1862.615
57	1.0845	.866	97.71	70.77	.982	.981	-478	25.818	21.005	1955.662
58	1.1363	.907	98.02	70.60	.987	.984	-350	25.946	21.060	2049.070
59	1.1887	.949	98.32	70.52	.990	.990	-268	26.028	21.120	2143.559
60	1.2403	.990	98.55	70.42	.993	.994	-188	26.108	21.175	2236.606
61	1.2923	1.032	98.75	70.36	.995	.992	-123	26.173	21.241	2330.375
62	1.3443	1.073	98.80	70.41	.997	.998	-073	26.223	21.355	2424.143
63	1.3959	1.114	99.00	70.37	.998	.998	-062	26.234	21.365	2517.190
64	1.4472	1.155	99.00	70.34	1.000	1.000	-008	26.288	21.412	2609.696
65	1.4993	1.197	99.00	70.37	1.000	1.000	-008	26.288	21.405	2703.644
66	1.5513	1.239	99.01	70.38	1.000	1.000	-005	26.291	21.393	2797.413
67	1.6035	1.280	99.08	70.34	1.000	1.001	-013	26.309	21.426	2891.541
68	1.6555	1.322	99.12	70.33	1.001	1.001	-023	26.319	21.435	2985.310
69	1.7073	1.363	99.15	70.35	1.001	1.001	-033	26.329	21.420	3078.717
70	1.7590	1.405	99.18	70.32	1.002	1.001	-040	26.336	21.459	3169.717
71	1.8105	1.447	99.16	70.30	1.001	1.002	-039	26.336	21.459	3260.634
72	1.8623	1.489	99.19	70.35	1.002	1.000	-042	26.338	21.471	3351.437
73	1.9140	1.531	99.12	70.40	1.001	.998	-023	26.331	21.372	3442.437
74	1.9655	1.573	99.09	70.41	1.001	.998	-016	26.331	21.363	3533.076
75	2.0176	1.615	99.16	70.46	1.001	.996	-035	26.331	21.324	3624.698

Table 46.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 23. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY ==	99.035	99.035
FREE STREAM TEMPERATURE ==	70.193	
WALL TEMPERATURE ==	95.200	
WALL HEAT FLUX ==	.07713	
FREE STREAM DENSITY ==	.07622	
FREE STREAM KINEMATIC VISCOSITY ==	.0001604	
DENSITY OF FLUID AT WALL ==	.07279	
KINEMATIC VISCOSITY OF FLUID AT WALL ==	.0001741	
WALL/FREE STREAM DENSITY RATIO ==	.95493	
LOCATION REYNOLDS NUMBER (REX) ==	4326174.37	
INPUT VALUE OF VELOCITY DELTA ==	1.62000	
INPUT VALUE OF TEMPERATURE DELTA ==	1.62000	
CALCULATED DELTA ==		1.37953
DELTA 99.5% INPUT ==	.00000	
DISPLACEMENT THICKNESS (DELSTAR) ==	.19050	.19030
MOMENTUM THICKNESS (THETA) ==	.13632	.13674
ENERGY-DISSIPATION THICKNESS ==	.24394	.24432
ENTHALPY THICKNESS ==	.00665	.00667
SHAPE FACTOR 12 (DELSTAR/THETA) ==	1.39740	1.39174
SHAPE FACTOR 32 (ENERGY/THETA) ==	1.78940	1.78677
MOMENTUM THICKNESS REYNOLDS NUMBER ==	7012.60	7033.93
DISPLACEMENT THICKNESS REYNOLDS NUMBER ==	9799.43	9789.39
SKIN FRICTION COEFFICIENT ==	.002737	
FRICTION VELOCITY ==	3.74884	
LAW OF THE WALL CONSTANT (K) ==	.41000	
LAW OF THE WALL CONSTANT (C) ==	5.00000	
WAKE STRENGTH ==		.48337
CLAUSERS 'DELTA' INTEGRAL ==	-4.62878	-4.85118
CLAUSERS 'G' INTEGRAL ==	32.20997	31.75946
DISPLACEMENT THICKNESS - CONSTANT DENSITY ==	.17953	.18364
MOMENTUM THICKNESS - CONSTANT DENSITY ==	.13769	.13813
SHAPE FACTOR 12 - CONSTANT DENSITY ==	1.30386	1.32947

LOCATION -X- 84.10001

Z = CENTERLINE

Table 47.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 23. GRID NO. 2

REDUCED PROFILE DATA

N	INCHES	Y	DELTA	U	T	U/UE	THETA	U-UE	U(+)	Y(+)	Y(+)
				FT/SEC	DEG.F			UTAU			
1	.00886	.0056	.0056	41.82	85.72	.4222	.379	-15.262	11.155	8.050	15.489
2	.01024	.007	.007	43.60	85.06	.440	.405	-14.766	11.632	8.609	15.361
3	.01166	.008	.008	44.40	84.90	.448	.412	-14.574	11.844	8.745	15.437
4	.0129	.008	.008	45.73	84.55	.462	.426	-14.218	12.200	9.040	15.873
5	.0144	.009	.009	47.25	83.93	.477	.451	-13.814	12.603	9.572	16.206
6	.0161	.010	.010	49.07	83.51	.495	.467	-13.328	13.089	9.926	16.599
7	.0177	.011	.011	50.14	83.21	.506	.479	-13.043	13.375	10.177	16.950
8	.0187	.012	.012	50.73	83.08	.512	.485	-12.865	13.532	10.222	17.179
9	.0197	.013	.013	51.65	82.70	.521	.500	-12.641	13.777	10.611	17.616
10	.0207	.014	.014	52.63	82.38	.531	.513	-12.378	14.039	10.893	18.072
11	.0217	.015	.015	53.46	82.29	.540	.516	-12.156	14.261	10.963	18.476
12	.0227	.016	.016	53.89	82.06	.544	.525	-12.042	14.375	11.133	18.846
13	.0237	.017	.017	54.40	81.74	.549	.538	-11.906	14.512	11.153	19.077
14	.0247	.018	.018	54.92	81.49	.555	.548	-11.767	14.651	11.167	19.338
15	.0257	.019	.019	55.71	81.33	.562	.554	-11.558	14.859	11.191	19.666
16	.0267	.020	.020	56.09	81.14	.566	.562	-11.455	14.962	11.205	19.845
17	.0277	.021	.021	56.72	81.06	.573	.566	-11.288	15.129	11.229	20.077
18	.0287	.022	.022	57.73	80.82	.583	.575	-11.017	15.401	11.253	20.306
19	.0297	.023	.023	59.39	80.39	.600	.592	-10.575	15.842	11.277	20.535
20	.0307	.024	.024	60.57	79.89	.612	.612	-10.261	16.157	11.291	20.764
21	.0317	.025	.025	61.35	79.66	.620	.621	-10.051	16.366	11.305	20.993
22	.0327	.026	.026	62.39	79.44	.630	.630	-9.744	16.644	11.319	21.222
23	.0337	.027	.027	63.41	79.26	.640	.638	-9.503	16.914	11.333	21.451
24	.0347	.028	.028	63.94	79.00	.646	.648	-9.362	17.055	11.347	21.680
25	.0357	.029	.029	64.85	78.82	.655	.655	-9.120	17.249	11.361	21.909
26	.0367	.030	.030	65.87	78.60	.665	.664	-8.847	17.570	11.375	22.138
27	.0377	.031	.031	66.47	78.57	.671	.665	-8.687	17.730	11.389	22.367
28	.0387	.032	.032	66.75	78.27	.674	.677	-8.611	17.806	11.403	22.596
29	.0397	.033	.033	67.24	78.15	.679	.682	-8.480	17.937	11.417	22.825
30	.0407	.034	.034	67.85	78.10	.685	.684	-8.317	18.100	11.431	23.054
31	.0417	.035	.035	69.44	77.98	.692	.689	-8.148	18.269	11.445	23.283
32	.0427	.036	.036	69.06	77.81	.698	.696	-7.951	18.427	11.459	23.512
33	.0437	.037	.037	70.53	77.29	.712	.710	-7.604	18.813	11.473	23.741
34	.0447	.038	.038	71.40	77.22	.721	.716	-7.371	19.046	11.487	23.970
35	.0457	.039	.039	72.23	76.86	.729	.733	-7.149	19.269	11.501	24.199
36	.0467	.040	.040	73.33	76.47	.740	.749	-6.858	19.560	11.515	24.428
37	.0477	.041	.041	74.23	76.35	.750	.754	-6.618	19.800	11.529	24.657
38	.0487	.042	.042	74.58	76.31	.757	.755	-6.424	19.994	11.543	24.886
39	.0497	.043	.043	76.08	75.92	.768	.771	-6.123	20.295	11.557	25.115
40	.0507	.044	.044	76.40	75.53	.771	.786	-6.039	20.379	11.571	25.344
41	.0517	.045	.045	77.84	75.64	.780	.790	-5.818	20.600	11.585	25.573
42	.0527	.046	.046	79.51	74.72	.807	.782	-5.653	20.764	11.599	25.802
43	.0537	.047	.047	81.55	74.51	.823	.819	-5.090	21.328	11.613	26.031
44	.0547	.048	.048	83.29	74.48	.841	.827	-4.663	21.754	11.627	26.260
45	.0557	.049	.049	84.45	73.73	.857	.829	-4.200	22.217	11.641	26.489
46	.0567	.050	.050	86.40	73.51	.872	.859	-3.783	22.634	11.655	26.718
47	.0577	.051	.051	87.66	73.51	.872	.867	-3.370	23.047	11.669	26.947
48	.0587	.052	.052	88.94	73.14	.885	.882	-3.029	23.388	11.683	27.176
49	.0597	.053	.053	90.27	72.98	.898	.889	-2.694	23.724	11.697	27.405
50	.0607	.054	.054	91.49	72.46	.912	.909	-2.338	24.079	11.711	27.634
51	.0617	.055	.055	92.30	72.30	.924	.916	-2.014	24.404	11.725	27.863
52	.0627	.056	.056	92.39	71.98	.933	.928	-1.772	24.645	11.739	28.092
53	.0637	.057	.057	93.42	71.81	.943	.935	-1.497	24.921	11.753	28.321
54	.0647	.058	.058	94.22	71.55	.951	.946	-1.284	25.133	11.767	28.550
55	.0657	.059	.059	95.00	71.37	.959	.953	-1.077	25.340	11.781	28.779
56	.0667	.060	.060	95.56	71.33	.965	.955	-.920	25.497	11.795	29.008
57	.0677	.061	.061	96.28	71.01	.972	.967	-.734	25.683	11.809	29.237
58	.0687	.062	.062	96.93	71.01	.979	.967	-.561	25.857	11.823	29.466
59	.0697	.063	.063	97.24	70.76	.982	.977	-.480	25.938	11.837	29.695
60	.0707	.064	.064	97.68	70.51	.986	.987	-.360	26.057	11.851	29.924
61	.0717	.065	.065	98.01	70.58	.990	.985	-.272	26.145	11.865	30.153
62	.0727	.066	.066	98.53	70.45	.993	.990	-.186	26.229	11.879	30.382
63	.0737	.067	.067	98.54	70.33	.995	.995	-.132	26.308	11.893	30.611
64	.0747	.068	.068	98.63	70.36	.996	.993	-.107	26.376	11.907	30.840
65	.0757	.069	.069	98.68	70.31	.997	.995	-.068	26.439	11.921	31.069
66	.0767	.070	.070	98.89	70.26	.999	.997	-.028	26.496	11.935	31.298
67	.0777	.071	.071	98.93	70.22	.999	.999	-.000	26.549	11.949	31.527
68	.0787	.072	.072	99.02	70.23	1.000	.999	-.000	26.596	11.963	31.756
69	.0797	.073	.073	99.09	70.19	1.000	.999	-.000	26.638	11.977	31.985
70	.0807	.074	.074	99.10	70.16	1.000	.999	-.000	26.675	11.991	32.214
71	.0817	.075	.075	99.06	70.15	1.000	.999	-.000	26.707	12.005	32.443
72	.0827	.076	.076	99.00	70.15	1.000	.999	-.000	26.734	12.019	32.672
73	.0837	.077	.077	99.06	70.19	1.000	.998	-.000	26.756	12.033	32.901
74	.0847	.078	.078	99.06	70.24	1.000	.998	-.000	26.772	12.047	33.130
75	.0857	.079	.079	99.06	70.21	1.000	.999	-.000	26.783	12.061	33.359

Table 47.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. . POINT 24. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY ==	99.030	99.030
FREE STREAM TEMPERATURE ==	69.615	
WALL TEMPERATURE ==	93.940	
WALL HEAT FLUX ==	.07689	
FREE STREAM DENSITY ==	.07631	
FREE STREAM KINEMATIC VISCOSITY ==	.0001601	
DENSITY OF FLUID AT WALL ==	.07295	
KINEMATIC VISCOSITY OF FLUID AT WALL ==	.0001734	
WALL/FREE STREAM DENSITY RATIO ==	.95606	
LOCATION REYNOLDS NUMBER (REX) ==	3520047.47	
INPUT VALUE OF VELOCITY DELTA ==	1.37000	
INPUT VALUE OF TEMPERATURE DELTA ==	1.40000	
CALCULATED DELTA ==		1.13831
DELTA 99.5% INPUT ==	.00000	
DISPLACEMENT THICKNESS (DELSTAR) ==	.15888	.15897
MOMENTUM THICKNESS (THETA) ==	.11329	.11350
ENERGY-DISSIPATION THICKNESS ==	.20224	.20236
ENTHALPY THICKNESS ==	.00540	.00541
SHAPE FACTOR 12 (DELSTAR/THETA) ==	1.40241	1.40060
SHAPE FACTOR 32 (ENERGY/THETA) ==	1.78514	1.78296
MOMENTUM THICKNESS REYNOLDS NUMBER ==	5838.69	5849.46
DISPLACEMENT THICKNESS REYNOLDS NUMBER ==	8188.25	8192.76
SKIN FRICTION COEFFICIENT ==	.002839	
FRICTION VELOCITY ==	3.81592	
LAW OF THE WALL CONSTANT (K) ==	.41000	
LAW OF THE WALL CONSTANT (C) ==	5.00000	
WAKE STRENGTH ==		.47315
CLAUSERS 'DELTA' INTEGRAL ==	-3.81864	-3.98508
CLAUSERS 'G' INTEGRAL ==	26.30336	26.21169
DISPLACEMENT THICKNESS - CONSTANT DENSITY ==	.15031	.15356
MOMENTUM THICKNESS - CONSTANT DENSITY ==	.11442	.11464
SHAPE FACTOR 12 - CONSTANT DENSITY ==	1.31367	1.33949

LOCATION -X- 68.30000

Table 48.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 24. GRID NO. 2

REDUCED PROFILE DATA

N	Y	DELTA	U	T	U/UE	THETA	U-UE	U(+)	Y(+)	Y(+)
INCHES			FT/SEC	DEG.F			UTAU			
1	.0000	.0006	37.29	85.93	.377	.329	-16.179	9.773	6.958	11.611
2	.0007	.0007	40.51	84.99	.409	.368	-15.335	10.616	7.779	14.179
3	.0008	.0008	42.77	84.32	.432	.396	-14.742	11.210	8.360	15.829
4	.0009	.0009	44.98	83.65	.454	.423	-14.164	11.788	8.942	17.847
5	.0106	.0009	46.54	83.40	.470	.433	-13.755	12.197	9.162	19.498
6	.0121	.0111	48.39	82.88	.489	.455	-13.272	12.680	9.608	22.249
7	.0136	.012	49.92	82.39	.504	.475	-12.871	13.081	10.035	25.000
8	.0145	.013	50.76	82.21	.513	.482	-12.651	13.301	10.192	26.651
9	.0168	.015	52.09	81.82	.526	.498	-12.302	13.650	10.534	30.870
10	.0185	.016	52.93	81.38	.534	.516	-12.081	13.870	10.910	33.988
11	.0208	.018	54.06	81.02	.546	.531	-11.785	14.167	11.224	38.207
12	.0222	.020	54.43	80.66	.550	.538	-11.688	14.263	11.362	40.775
13	.0239	.021	55.19	80.80	.557	.540	-11.490	14.462	11.420	43.893
14	.0259	.023	55.76	80.49	.563	.553	-11.339	14.613	11.687	47.561
15	.0277	.024	56.19	80.20	.567	.565	-11.225	14.726	11.942	50.863
16	.0295	.026	56.60	80.01	.572	.573	-11.119	14.833	12.108	54.165
17	.0311	.027	57.13	79.90	.577	.577	-10.979	14.973	12.201	57.099
18	.0373	.033	58.58	79.58	.591	.590	-10.602	15.350	12.480	68.472
19	.0443	.039	59.86	79.06	.605	.612	-10.264	15.686	12.932	81.311
20	.0513	.045	61.34	78.64	.619	.629	-9.878	16.074	13.295	94.151
21	.0573	.050	62.45	78.58	.631	.631	-9.587	16.365	13.346	105.156
22	.0645	.057	63.64	78.35	.643	.641	-9.273	16.678	13.550	118.363
23	.0713	.063	64.37	78.07	.650	.652	-9.084	16.868	13.788	130.835
24	.0776	.068	65.23	77.97	.659	.656	-8.857	17.095	13.875	142.391
25	.0847	.074	66.07	77.87	.667	.661	-8.637	17.314	13.963	155.444
26	.0915	.080	66.80	77.56	.675	.673	-8.446	17.505	14.233	167.887
27	.0975	.086	67.29	77.46	.679	.678	-8.319	17.633	14.324	178.892
28	.1046	.092	68.15	77.39	.688	.680	-8.093	17.858	14.378	191.915
29	.1115	.098	68.54	77.08	.692	.693	-7.990	17.962	14.654	204.571
30	.1177	.103	69.25	76.89	.699	.701	-7.804	18.148	14.812	215.943
31	.1243	.109	69.80	76.76	.705	.706	-7.660	18.292	14.929	228.049
32	.1315	.116	70.41	76.62	.712	.712	-7.501	18.451	15.051	241.256
33	.1383	.130	71.47	76.36	.723	.723	-7.223	18.728	15.279	272.071
34	.1461	.146	72.55	76.00	.733	.738	-6.939	19.012	15.589	304.720
35	.1533	.161	73.86	75.83	.746	.745	-6.596	19.356	15.739	336.269
36	.1617	.177	74.94	75.36	.757	.756	-6.314	19.638	15.974	370.018
37	.1705	.192	75.54	75.24	.769	.769	-6.156	19.971	16.251	400.833
38	.1785	.208	76.59	74.93	.773	.782	-5.873	20.072	16.518	433.849
39	.1865	.223	77.27	74.82	.773	.786	-5.701	20.000	16.674	464.664
40	.1955	.239	78.37	74.56	.791	.798	-5.414	20.338	16.837	498.047
41	.2045	.254	79.24	74.56	.800	.797	-5.166	20.000	16.839	529.413
42	.2135	.269	80.00	74.29	.808	.808	-4.987	20.000	17.072	561.878
43	.2225	.311	81.64	73.72	.824	.831	-4.558	21.111	17.394	592.121
44	.2315	.354	83.73	73.39	.845	.845	-4.010	21.942	17.854	738.331
45	.2405	.396	85.44	73.06	.863	.858	-3.561	22.391	18.140	827.108
46	.2495	.438	86.96	72.61	.878	.877	-3.162	22.790	18.530	914.600
47	.2585	.480	88.59	72.37	.895	.887	-2.735	23.217	18.740	1002.459
48	.2675	.522	90.19	71.94	.911	.904	-2.317	23.635	19.115	1090.686
49	.2765	.565	91.60	71.70	.925	.914	-1.947	24.005	19.321	1178.912
50	.2855	.607	92.68	71.30	.936	.931	-1.665	24.287	19.672	1266.588
51	.2945	.649	93.73	71.04	.946	.941	-1.390	24.562	19.898	1354.631
52	.3035	.691	94.82	70.87	.957	.949	-1.103	24.849	20.051	1442.674
53	.3125	.733	95.45	70.61	.964	.959	-.937	25.015	20.268	1530.533
54	.3215	.775	96.25	70.52	.972	.963	-.729	25.222	20.388	1618.759
55	.3305	.817	96.78	70.25	.977	.974	-.589	25.363	20.589	1706.802
56	.3395	.860	97.38	70.18	.983	.977	-.433	25.520	20.641	1794.662
57	.3485	.902	97.68	70.01	.986	.984	-.355	25.597	20.794	1882.888
58	.3575	.944	98.11	69.94	.991	.987	-.242	25.710	20.658	1971.114
59	.3665	.986	98.39	69.87	.994	.989	-.167	25.785	20.913	2058.607
60	.3755	1.028	98.56	69.80	.995	.992	-.123	25.829	20.977	2147.016
61	.3845	1.070	98.76	69.81	.997	.992	-.070	25.882	20.999	2235.059
62	.3935	1.113	98.79	69.75	.996	.995	-.062	25.889	20.022	2322.919
63	.4025	1.154	98.99	69.72	.996	.996	-.010	25.942	20.047	2410.411
64	.4115	1.197	99.01	69.63	.998	.998	-.005	25.947	20.092	2497.999
65	.4205	1.239	99.04	69.60	.999	.999	-.004	25.948	20.123	2585.731
66	.4295	1.281	99.04	69.60	.999	.999	-.002	25.954	20.133	2673.723
67	.4385	1.324	99.07	69.56	.999	.999	-.001	25.963	20.180	2761.857
68	.4475	1.367	99.10	69.61	.999	.999	-.001	25.971	20.143	2849.511
69	.4565	1.410	99.05	69.61	.999	.999	-.001	25.956	20.142	2937.333
70	.4655	1.453	99.07	69.61	.999	.999	-.001	25.963	20.142	3025.111
71	.4745	1.496	99.09	69.59	.999	.999	-.001	25.969	20.142	3112.888
72	.4835	1.539	99.10	69.59	.999	.999	-.001	25.969	20.142	3200.665
73	.4925	1.582	99.05	69.61	.999	.999	-.001	25.969	20.142	3288.442
74	.5015	1.625	99.05	69.61	.999	.999	-.001	25.969	20.142	3376.219

Table 48.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 1. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY ==	99.114	99.114
FREE STREAM TEMPERATURE ==	68.471	
WALL TEMPERATURE ==	84.850	
WALL HEAT FLUX ==	.07843	
FREE STREAM DENSITY ==	.07652	
FREE STREAM KINEMATIC VISCOSITY ==	.0001594	
DENSITY OF FLUID AT WALL ==	.07422	
KINEMATIC VISCOSITY OF FLUID AT WALL ==	.0001683	
WALL/FREE STREAM DENSITY RATIO ==	.96992	
LOCATION REYNOLDS NUMBER (REX) ==	621769.25	
INPUT VALUE OF VELOCITY DELTA ==	.41000	
INPUT VALUE OF TEMPERATURE DELTA ==	.43000	
CALCULATED DELTA ==		.30842
DISPLACEMENT THICKNESS (DELSTAR) ==	.00000	
MOMENTUM THICKNESS (THETA) ==	.03839	.03850
ENERGY-DISSIPATION THICKNESS ==	.02723	.02744
ENTHALPY THICKNESS ==	.04908	.04925
SHAPE FACTOR 12 (DELSTAR/THETA) ==	.00089	.00089
SHAPE FACTOR 32 (ENERGY/THETA) ==	1.40996	1.40289
MOMENTUM THICKNESS REYNOLDS NUMBER ==	1.80242	1.79471
DISPLACEMENT THICKNESS REYNOLDS NUMBER ==	1410.95	1421.84
SKIN FRICTION COEFFICIENT ==	1989.39	1994.68
FRICTION VELOCITY ==	.004289	
LAW OF THE WALL CONSTANT (K) ==	4.66028	
LAW OF THE WALL CONSTANT (C) ==	.41000	
WAKE STRENGTH ==	5.00000	.05097
CLAUSERS 'DELTA' INTEGRAL ==	-.70358	-.79993
CLAUSERS 'G' INTEGRAL ==	4.57104	4.51860
DISPLACEMENT THICKNESS - CONSTANT DENSITY ==	.03530	.03761
MOMENTUM THICKNESS - CONSTANT DENSITY ==	.02741	.02762
SHAPE FACTOR 12 - CONSTANT DENSITY ==	1.28792	1.36166

LOCATION -X- 12.00000

Z = CENTERLINE

Table 49.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 1. GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
1	.0044	.014	41.22	78.86	.416	.366	-12.422	8.845	6.337	10.225
2	.0061	.020	51.54	77.70	.520	.437	-10.208	11.059	7.572	14.148
3	.0074	.024	53.60	76.92	.541	.484	-9.767	11.501	8.395	17.149
4	.0084	.027	56.11	76.34	.566	.519	-9.229	12.039	9.005	19.457
5	.0104	.034	60.07	75.64	.606	.562	-8.378	12.889	9.748	22.073
6	.0124	.040	62.80	75.36	.634	.580	-7.792	13.476	10.050	24.689
7	.0145	.047	64.56	74.86	.651	.610	-7.415	13.853	10.573	27.305
8	.0162	.053	65.99	74.62	.666	.624	-7.107	14.161	10.856	29.921
9	.0174	.057	66.45	74.50	.670	.632	-7.009	14.259	10.950	32.537
10	.0195	.063	67.27	74.20	.679	.650	-6.833	14.435	11.276	35.153
11	.0215	.070	68.47	73.98	.691	.664	-6.575	14.693	11.503	37.769
12	.0235	.076	69.17	73.87	.698	.670	-6.425	14.843	11.622	40.385
13	.0251	.081	69.55	73.74	.702	.678	-6.344	14.924	11.622	42.999
14	.0316	.103	71.73	73.18	.724	.713	-5.875	15.392	12.357	45.615
15	.0365	.125	73.68	72.79	.743	.736	-5.458	15.800	12.766	48.231
16	.0454	.147	75.71	72.42	.764	.759	-5.023	16.245	13.144	50.847
17	.0514	.167	77.07	72.24	.778	.770	-4.730	16.533	13.444	53.463
18	.0555	.190	78.56	71.98	.793	.785	-4.411	16.657	13.617	56.079
19	.0655	.212	79.91	71.70	.806	.803	-4.120	17.147	13.913	58.695
20	.0716	.232	81.07	71.51	.818	.814	-3.872	17.396	14.115	61.311
21	.0785	.255	81.84	71.29	.826	.828	-3.707	17.561	14.355	63.927
22	.0855	.277	83.07	71.03	.838	.844	-3.442	17.826	14.597	66.543
23	.0914	.296	83.92	70.87	.847	.854	-3.260	18.008	14.915	69.159
24	.0984	.319	85.05	70.76	.858	.860	-3.010	18.257	15.081	71.775
25	.1055	.342	85.90	70.60	.867	.870	-2.836	18.432	15.222	74.391
26	.1116	.362	86.72	70.47	.878	.878	-2.660	18.608	15.462	77.007
27	.1185	.384	87.67	70.24	.889	.892	-2.456	18.812	15.532	79.623
28	.1253	.406	88.52	70.18	.893	.896	-2.274	18.994	15.918	82.239
29	.1424	.462	90.44	69.81	.912	.918	-1.862	19.406	16.118	84.855
30	.1602	.520	92.34	69.62	.932	.930	-1.454	19.813	16.376	87.471
31	.1773	.575	93.68	69.38	.945	.945	-1.167	20.101	16.582	90.087
32	.1955	.634	94.56	69.18	.954	.956	-.977	20.290	16.743	92.703
33	.2124	.689	95.61	68.94	.965	.966	-.752	20.516	16.839	95.319
34	.2307	.748	96.61	68.97	.975	.971	-.536	20.731	16.807	97.935
35	.2474	.802	97.00	68.83	.979	.969	-.454	20.814	16.957	100.551
36	.2655	.861	97.57	68.70	.985	.978	-.328	20.940	17.089	103.167
37	.2825	.916	98.07	68.64	.989	.986	-.224	21.044	17.157	105.783
38	.3002	.974	98.36	68.61	.992	.990	-.161	21.106	17.191	108.399
39	.3102	1.071	98.50	68.57	.994	.992	-.132	21.116	17.232	111.015
40	.3205	1.169	98.77	68.54	.997	.994	-.073	21.165	17.268	113.631
41	.3305	1.266	99.26	68.50	1.002	.996	-.036	21.304	17.309	116.247
42	.3405	1.364	99.24	68.47	1.001	.998	-.028	21.295	17.337	118.863
43	.3504	1.460	99.97	68.47	1.000	1.000	-.032	21.236	17.336	121.479
44	.3606	1.558	99.13	68.47	1.000	1.000	.004	21.272	17.336	124.095
45	.3707	1.656	99.20	68.47	1.001	1.000	.018	21.265	17.336	126.711
46	.3803	1.752	99.16	68.48	1.001	1.000	.019	21.267	17.331	129.327
47	.3903	1.849	99.18	68.47	1.000	1.000	.009	21.277	17.342	131.943
48	.4004	1.947	99.18	68.48	1.001	1.000	.013	21.281	17.323	134.559
49	.4104	2.044	99.12	68.45	1.000	1.001	.000	21.268	17.360	137.175
50	.4204	2.141	99.18	68.47	1.001	1.000	.013	21.281	17.336	139.791
51	.4304	2.238	99.30	68.49	1.002	.999	.041	21.309	17.318	142.407
52	.4404	2.335	99.24	68.50	1.001	.998	.027	21.295	17.306	145.023
53	.4504	2.432	99.00	68.52	.999	.997	-.025	21.243	17.288	147.639
54	.4604	2.529	99.05	68.56	.999	.995	-.014	21.254	17.242	150.255
55	.4704	2.626	99.12	68.51	1.000	.998	.002	21.270	17.300	152.871
56	.4804	2.723	99.16	68.59	1.000	.993	.010	21.278	17.212	155.487
57	.4904	2.820	99.22	68.52	1.001	.997	.023	21.291	17.283	158.103
58	.5004	2.917	99.06	68.53	1.000	.996	-.011	21.257	17.271	160.719
59	.5104	3.014	99.03	68.54	.999	.996	-.018	21.250	17.259	163.335
60	.5204	3.111	99.26	68.47	1.001	1.000	.031	21.299	17.337	165.951

Table 49.

JOB KLD66 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 2. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY ==	99.606	99.606
FREE STREAM TEMPERATURE ==	68.803	
WALL TEMPERATURE ==	85.180	
WALL HEAT FLUX ==	.07827	
FREE STREAM DENSITY ==	.07647	
FREE STREAM KINEMATIC VISCOSITY ==	.0001596	
DENSITY OF FLUID AT WALL ==	.07417	
KINEMATIC VISCOSITY OF FLUID AT WALL ==	.0001684	
WALL/FREE STREAM DENSITY RATIO ==	.96994	
LOCATION REYNOLDS NUMBER (REX) ==	624159.74	
INPUT VALUE OF VELOCITY DELTA ==	.43000	
INPUT VALUE OF TEMPERATURE DELTA ==	.49000	
CALCULATED DELTA ==		.32220
DELTA 99.5% INPUT ==	.00000	
DISPLACEMENT THICKNESS (DELSTAR) ==	.04005	.04002
MOMENTUM THICKNESS (THETA) ==	.02825	.02849
ENERGY-DISSIPATION THICKNESS ==	.05086	.05108
ENTHALPY THICKNESS ==	.00092	.00093
SHAPE FACTOR 12 (DELSTAR/THETA) ==	1.41783	1.40464
SHAPE FACTOR 32 (ENERGY/THETA) ==	1.80038	1.79271
MOMENTUM THICKNESS REYNOLDS NUMBER ==	1469.41	1482.03
DISPLACEMENT THICKNESS REYNOLDS NUMBER ==	2083.38	2081.71
SKIN FRICTION COEFFICIENT ==	.004243	
FRICTION VELOCITY ==	4.65864	
LAW OF THE WALL CONSTANT (K) ==	.41000	
LAW OF THE WALL CONSTANT (C) ==	5.00000	
WAKE STRENGTH ==		.05301
CLAUSERS 'DELTA' INTEGRAL ==	-.73139	-.83601
CLAUSEPS 'G' INTEGRAL ==	4.89388	4.76306
DISPLACEMENT THICKNESS - CONSTANT DENSITY ==	.03667	.03910
MOMENTUM THICKNESS - CONSTANT DENSITY ==	.02843	.02868
SHAPE FACTOR 12 - CONSTANT DENSITY ==	1.28983	1.36327

LOCATION -X- 12.00000

Z = +6 INCHES

Table 50.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 2. GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
1	.0049	.015	43.88	78.69	.441	.396	-11.962	9.419	6.875	11.363
2	.0067	.021	52.09	77.97	.523	.440	-10.199	11.182	7.639	15.511
3	.0079	.025	53.96	77.38	.542	.476	-9.798	11.583	8.267	18.277
4	.0089	.028	56.11	76.91	.563	.505	-9.336	12.045	8.761	20.582
5	.0109	.034	60.10	76.22	.603	.547	-8.481	12.900	9.494	25.191
6	.0129	.040	62.32	75.75	.626	.576	-8.004	13.377	9.989	29.801
7	.0149	.046	64.00	75.16	.643	.612	-7.644	13.737	10.617	34.410
8	.0166	.052	65.59	74.99	.658	.622	-7.302	14.079	10.798	38.328
9	.0178	.055	66.01	74.87	.663	.629	-7.213	14.168	10.920	41.094
10	.0199	.062	67.10	74.57	.674	.648	-6.977	14.404	11.246	45.934
11	.0220	.068	67.91	74.36	.682	.661	-6.804	14.577	11.465	50.774
12	.0240	.075	68.72	74.21	.690	.670	-6.629	14.752	11.659	55.384
13	.0256	.080	69.49	74.08	.698	.678	-6.465	14.916	11.759	59.071
14	.0320	.099	71.18	73.54	.715	.711	-6.101	15.280	12.330	73.822
15	.0391	.121	73.29	73.12	.736	.737	-5.648	15.733	12.780	90.186
16	.0460	.143	75.02	72.81	.753	.756	-5.278	16.103	13.111	106.089
17	.0519	.161	76.86	72.56	.772	.771	-4.882	16.499	13.374	119.687
18	.0589	.183	78.04	72.26	.783	.789	-4.630	16.751	13.690	135.820
19	.0659	.205	79.63	72.00	.799	.805	-4.289	17.092	13.961	151.954
20	.0719	.223	80.69	71.90	.810	.811	-4.061	17.320	14.070	165.782
21	.0792	.246	81.91	71.64	.821	.827	-3.819	17.562	14.347	182.607
22	.0861	.267	83.24	71.49	.836	.836	-3.513	17.868	14.509	198.510
23	.0919	.285	84.21	71.30	.845	.848	-3.304	18.077	14.708	211.878
24	.0988	.307	85.82	71.11	.854	.859	-3.131	18.250	14.907	227.780
25	.1058	.326	85.81	70.93	.862	.870	-2.961	18.420	15.101	243.914
26	.1120	.346	86.68	70.76	.870	.881	-2.775	18.606	15.284	258.203
27	.1189	.369	88.18	70.67	.885	.886	-2.454	18.927	15.375	274.106
28	.1261	.391	88.61	70.67	.890	.886	-2.360	19.021	15.433	290.701
29	.1429	.444	90.72	70.25	.911	.912	-1.907	19.474	15.822	329.421
30	.1606	.499	92.46	70.02	.928	.926	-1.530	19.851	16.065	370.215
31	.1779	.552	93.47	69.81	.938	.939	-1.316	20.065	16.288	410.068
32	.1960	.608	94.61	69.61	.950	.951	-1.072	20.309	16.494	451.804
33	.2129	.661	95.61	69.54	.960	.955	-1.857	20.524	16.575	490.755
34	.2311	.717	96.75	69.32	.971	.968	-1.613	20.768	16.803	532.702
35	.2480	.770	97.31	69.26	.977	.972	-1.492	20.889	16.872	571.652
36	.2661	.826	97.85	69.15	.982	.979	-1.378	21.003	16.982	611.369
37	.2832	.879	98.22	69.06	.986	.979	-1.297	21.084	16.987	652.780
38	.3009	.934	98.62	68.94	.990	.984	-1.211	21.170	17.078	693.575
39	.3307	1.026	99.22	68.92	.996	.992	-1.083	21.298	17.209	734.257
40	.3610	1.121	99.51	68.89	.999	.993	-1.021	21.360	17.231	774.091
41	.3909	1.213	99.26	68.89	.997	.995	-1.074	21.307	17.259	813.251
42	.4208	1.306	99.40	68.85	.998	.995	-1.045	21.336	17.260	852.004
43	.4509	1.400	99.57	68.81	1.000	.997	-1.007	21.374	17.298	890.917
44	.4811	1.493	99.63	68.80	1.000	1.000	-1.005	21.386	17.344	929.290
45	.5110	1.586	99.62	68.80	1.000	1.000	-1.002	21.383	17.354	967.894
46	.5410	1.679	99.70	68.80	1.001	1.000	-1.020	21.401	17.354	1006.894
47	.5709	1.772	99.50	68.81	1.999	1.000	-1.022	21.359	17.349	1045.290
48	.6009	1.865	99.73	68.78	1.001	1.001	-1.026	21.407	17.373	1083.894
49	.6309	2.486	99.61	68.78	1.000	1.004	-1.000	21.381	17.378	1122.500
50	.6609	3.107	99.56	68.74	1.000	1.007	-1.005	21.376	17.420	1161.106
51	.6909	3.727	99.55	68.69	1.999	1.007	-1.013	21.368	17.472	1200.004
52	.7209	4.348	99.58	68.76	1.000	1.003	-1.006	21.375	17.402	1238.822
53	.7509	4.968	99.72	68.69	1.001	1.007	-1.025	21.406	17.473	1277.640
54	.7809	5.590	99.61	68.73	1.000	1.005	-1.002	21.383	17.431	1316.458
55	.8109	6.210	99.75	68.72	1.001	1.005	-1.030	21.411	17.443	1355.276
56	.8409	6.831	99.46	68.73	1.999	1.005	-1.031	21.350	17.431	1394.094
57	.8709	7.451	99.56	68.75	1.000	1.004	-1.009	21.372	17.413	1432.912
58	.9009	8.071	99.35	68.75	1.997	1.003	-1.054	21.327	17.408	1471.730
59	.9309	8.693	99.39	68.76	1.998	1.003	-1.046	21.335	17.402	1510.548
60	.9609	9.314	99.39	68.77	1.998	1.002	-1.046	21.335	17.390	1549.366

Table 50.

JOB KLD86 TAPE 3166R~ FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 3. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY =	99.576	99.576
FREE STREAM TEMPERATURE =	69.320	
WALL TEMPERATURE =	85.670	
WALL HEAT FLUX =	.07945	
FREE STREAM DENSITY =	.07640	
FREE STREAM KINEMATIC VISCOSITY =	.0001599	
DENSITY OF FLUID AT WALL =	.07411	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001687	
WALL/FREE STREAM DENSITY RATIO =	.97002	
LOCATION REYNOLDS NUMBER (REX) =	622893.96	
INPUT VALUE OF VELOCITY DELTA =	.43000	
INPUT VALUE OF TEMPERATURE DELTA =	.46000	
CALCULATED DELTA =		.30385
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.03919	.03913
MOMENTUM THICKNESS (THETA) =	.02744	.02785
ENERGY-DISSIPATION THICKNESS =	.04954	.04994
ENTHALPY THICKNESS =	.00086	.00086
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.42855	1.40498
SHAPE FACTOR 32 (ENERGY/THETA) =	1.80550	1.79303
MOMENTUM THICKNESS REYNOLDS NUMBER =	1424.16	1445.81
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	2034.49	2031.34
SKIN FRICTION COEFFICIENT =	.004227	
FRICTION VELOCITY =	4.64792	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.09308
CLAUSERS 'DELTA' INTEGRAL =	-.68576	-.81993
CLAUSERS 'G' INTEGRAL =	4.92636	4.69910
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.03517	.03827
MOMENTUM THICKNESS - CONSTANT DENSITY =	.02761	.02803
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.27415	1.36521

LOCATION -X- 12.00000

Z = -6 INCHES

Table 51.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 3. GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
1	.0063	.021	50.99	78.12	.512	.462	-10.454	10.969	7.853	14.533
2	.0073	.024	52.86	77.66	.531	.490	-10.050	11.374	8.336	16.828
3	.0063	.027	55.72	77.20	.560	.518	-9.437	11.987	8.818	19.124
4	.0093	.031	58.25	76.82	.585	.541	-8.892	12.532	9.206	21.420
5	.0103	.034	59.95	76.54	.602	.558	-8.525	12.899	9.500	23.716
6	.0121	.040	62.58	76.16	.628	.582	-7.961	13.463	9.894	27.848
7	.0137	.045	63.76	75.92	.640	.596	-7.705	13.719	10.145	31.522
8	.0143	.047	64.20	75.83	.645	.602	-7.610	13.813	10.237	32.899
9	.0163	.054	65.59	75.45	.659	.625	-7.311	14.113	10.632	37.491
10	.0163	.060	66.55	75.15	.668	.643	-7.106	14.317	10.945	42.082
11	.0206	.068	67.70	75.03	.680	.651	-6.858	14.566	11.072	47.363
12	.0222	.073	68.46	74.89	.688	.660	-6.690	14.734	11.221	51.036
13	.0236	.078	68.94	74.73	.692	.669	-6.591	14.833	11.380	54.250
14	.0256	.084	69.72	74.56	.700	.679	-6.423	15.001	11.556	58.842
15	.0276	.091	70.23	74.43	.705	.688	-6.315	15.109	11.699	63.433
16	.0296	.098	70.80	74.31	.711	.695	-6.191	15.233	11.822	68.025
17	.0312	.103	71.41	74.20	.717	.702	-6.060	15.364	11.936	71.698
18	.0373	.123	73.16	73.78	.735	.727	-5.684	15.740	12.368	85.703
19	.0443	.146	74.84	73.36	.752	.753	-5.322	16.102	12.813	101.774
20	.0513	.169	76.93	73.06	.773	.772	-4.868	16.556	13.125	117.844
21	.0573	.189	78.13	72.81	.785	.787	-4.614	16.810	13.383	131.619
22	.0645	.213	79.56	72.55	.799	.802	-4.306	17.117	13.647	148.608
23	.0715	.235	80.92	72.31	.813	.817	-4.006	17.418	13.900	164.220
24	.0775	.255	82.22	72.16	.826	.827	-3.735	17.689	14.061	177.995
25	.0843	.278	83.39	71.96	.837	.839	-3.496	17.928	14.266	193.606
26	.0913	.301	84.19	71.72	.845	.853	-3.311	18.112	14.518	209.677
27	.0976	.321	85.13	71.56	.855	.863	-3.109	18.315	14.685	224.141
28	.1046	.344	86.14	71.38	.865	.874	-2.891	18.533	14.870	240.211
29	.1117	.367	87.06	71.18	.874	.886	-2.692	18.732	15.072	256.282
30	.1175	.387	88.10	71.00	.885	.897	-2.469	18.955	15.265	269.827
31	.1247	.410	88.81	70.94	.892	.901	-2.316	19.108	15.327	286.357
32	.1316	.433	89.64	70.86	.900	.906	-2.138	19.286	15.412	302.198
33	.1485	.489	91.36	70.61	.918	.921	-1.767	19.657	15.667	340.998
34	.1662	.547	92.89	70.32	.933	.939	-1.439	19.985	15.977	381.634
35	.1835	.604	94.49	70.10	.949	.952	-1.095	20.329	16.203	421.351
36	.2016	.664	95.55	69.94	.960	.962	-.866	20.558	16.362	462.906
37	.2185	.719	96.44	69.78	.968	.972	-.675	20.748	16.530	501.705
38	.2366	.779	97.21	69.74	.976	.974	-.510	20.914	16.570	543.259
39	.2533	.834	97.68	69.69	.981	.978	-.409	21.015	16.630	581.599
40	.2716	.894	98.05	69.56	.985	.985	-.328	21.096	16.758	621.613
41	.2883	.949	98.52	69.56	.989	.985	-.227	21.196	16.764	661.953
42	.3065	1.009	98.81	69.50	.992	.989	-.165	21.259	16.822	703.737
43	.3362	1.107	99.12	69.42	.995	.994	-.098	21.326	16.912	771.923
44	.3668	1.207	99.18	69.38	.996	.996	-.085	21.339	16.952	842.175
45	.3966	1.305	99.37	69.40	.998	.995	-.045	21.378	16.929	910.590
46	.4266	1.404	99.44	69.35	.999	.998	-.029	21.395	16.985	979.465
47	.4567	1.503	99.50	69.35	.999	.998	-.016	21.408	16.982	1048.569
48	.4863	1.601	99.59	69.35	1.000	.998	.002	21.426	16.980	1116.525
49	.5165	1.700	99.64	69.31	1.001	1.001	.014	21.438	17.021	1185.859
50	.5466	1.799	99.47	69.30	.999	1.001	-.023	21.400	17.036	1254.963
51	.5766	1.898	99.59	69.32	1.000	1.000	.002	21.426	17.013	1323.837
52	.6063	1.995	99.50	69.28	.999	1.002	-.016	21.408	17.050	1392.023
53	.8063	2.654	99.47	69.32	.999	1.000	-.024	21.400	17.008	1851.187
54	1.0063	3.312	99.44	69.33	.999	.999	-.029	21.395	16.997	2310.350
55	1.2063	3.970	99.65	69.35	1.001	.998	.016	21.440	16.985	2768.514
56	1.4063	4.628	99.02	69.36	.994	.998	-.120	21.304	16.975	3228.677
57	1.6061	5.286	99.09	69.32	.995	1.000	-.104	21.320	17.014	3688.382
58	1.8063	5.945	99.32	69.36	.997	.998	-.056	21.368	16.975	4147.004
59	2.0066	6.604	99.30	69.32	.997	1.000	-.060	21.363	17.009	4606.857
60	2.2063	7.261	99.53	69.34	1.000	.999	-.009	21.415	16.991	5065.331
61	2.4062	7.919	99.46	69.36	.999	.998	-.024	21.400	16.972	5524.265
62	2.6061	8.577	99.24	69.39	.997	.996	-.073	21.351	16.939	5983.199
63	2.8063	9.236	99.32	69.37	.997	.997	-.055	21.369	16.963	6442.822
64	3.0063	9.894	99.35	69.35	.998	.998	-.049	21.375	16.980	6901.986

Table 51.

JOB KLD70 TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 7. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY ==	99.379	99.379
FREE STREAM TEMPERATURE ==	71.677	
WALL TEMPERATURE ==	91.600	
WALL HEAT FLUX ==	.07783	
FREE STREAM DENSITY ==	.07569	
FREE STREAM KINEMATIC VISCOSITY ==	.0001619	
DENSITY OF FLUID AT WALL ==	.07295	
KINEMATIC VISCOSITY OF FLUID AT WALL ==	.0001728	
WALL/FREE STREAM DENSITY RATIO ==	.96386	
LOCATION REYNOLDS NUMBER (REX) ==	1447419.62	
INPUT VALUE OF VELOCITY DELTA ==	1.30000	
INPUT VALUE OF TEMPERATURE DELTA ==	1.30000	
CALCULATED DELTA ==		.67210
DELTA 99.5% INPUT ==	.00000	
DISPLACEMENT THICKNESS (DELSTAR) ==	.08106	.08093
MOMENTUM THICKNESS (THETA) ==	.05936	.05979
ENERGY-DISSIPATION THICKNESS ==	.10798	.10839
ENTHALPY THICKNESS ==	.00235	.00236
SHAPE FACTOR 12 (DELSTAR/THETA) ==	1.36548	1.35360
SHAPE FACTOR 32 (ENERGY/THETA) ==	1.81897	1.81278
MOMENTUM THICKNESS REYNOLDS NUMBER ==	3036.21	3058.03
DISPLACEMENT THICKNESS REYNOLDS NUMBER ==	4145.89	4139.36
SKIN FRICTION COEFFICIENT ==	.003559	
FRICTION VELOCITY ==	4.27000	
LAW OF THE WALL CONSTANT (K) ==	.41000	
LAW OF THE WALL CONSTANT (C) ==	5.00000	
WAKE STRENGTH ==		.12980
CLAUSERS 'DELTA' INTEGRAL ==	-1.66128	-1.82861
CLAUSERS 'G' INTEGRAL ==	10.25438	9.93869
DISPLACEMENT THICKNESS - CONSTANT DENSITY ==	.07504	.07857
MOMENTUM THICKNESS - CONSTANT DENSITY ==	.05978	.06022
SHAPE FACTOR 12 - CONSTANT DENSITY ==	1.25538	1.30468

LOCATION -X- 28.30000

Z = CENTERLINE

Table 52.

JOB KLD70 TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 7. GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
1	.0073	.011	46.77	83.53	.471	.405	-12.320	10.954	7.747	15.093
2	.0085	.013	49.46	82.70	.498	.447	-11.691	11.583	8.547	17.564
3	.0093	.014	51.81	82.31	.521	.466	-11.141	12.133	8.923	19.211
4	.0103	.015	53.46	81.91	.538	.487	-10.749	12.525	9.312	21.270
5	.0117	.017	55.09	81.30	.554	.517	-10.372	12.901	9.889	24.153
6	.0132	.020	57.29	81.00	.576	.532	-9.857	13.417	10.178	27.241
7	.0147	.022	58.19	80.57	.586	.554	-9.647	13.627	10.594	30.330
8	.0157	.023	58.83	80.30	.592	.567	-9.503	13.771	10.850	32.389
9	.0175	.026	60.06	80.08	.604	.578	-9.208	14.066	11.065	36.055
10	.0194	.029	60.99	79.75	.614	.595	-8.990	14.284	11.385	40.008
11	.0215	.032	61.79	79.58	.622	.603	-8.803	14.471	11.548	44.332
12	.0231	.034	62.38	79.36	.628	.614	-8.665	14.609	11.758	47.626
13	.0247	.037	62.86	79.03	.633	.631	-8.553	14.721	12.078	50.921
14	.0267	.040	63.62	79.03	.640	.631	-8.375	14.899	12.071	55.039
15	.0287	.043	64.41	78.81	.648	.642	-8.190	15.084	12.282	58.951
16	.0307	.046	64.84	78.63	.652	.651	-8.088	15.186	12.454	63.275
17	.0322	.048	65.17	78.53	.656	.656	-8.002	15.262	12.551	66.364
18	.0337	.050	66.98	78.07	.674	.679	-7.587	15.687	12.997	79.749
19	.0355	.056	68.59	77.75	.690	.695	-7.210	16.064	13.308	93.749
20	.0374	.057	69.91	77.46	.703	.710	-6.902	16.372	13.581	107.957
21	.0386	.058	71.14	77.36	.716	.715	-6.614	16.660	13.677	120.517
22	.0405	.059	72.19	77.10	.726	.728	-6.369	16.905	13.926	135.342
23	.0427	.108	73.25	76.74	.737	.746	-6.119	17.155	14.272	149.756
24	.0487	.117	74.45	76.61	.749	.752	-5.839	17.435	14.397	162.110
25	.0555	.127	75.28	76.50	.758	.758	-5.643	17.631	14.508	176.112
26	.0625	.138	76.26	76.40	.767	.763	-5.415	17.859	14.598	190.525
27	.0683	.146	76.95	76.15	.774	.776	-5.253	18.021	14.845	202.468
28	.0755	.157	77.70	75.91	.782	.788	-5.078	18.196	15.072	217.293
29	.0824	.167	78.53	75.78	.790	.794	-4.883	18.391	15.195	231.501
30	.0886	.177	79.37	75.76	.799	.795	-4.687	18.587	15.214	244.267
31	.0954	.187	79.94	75.72	.804	.797	-4.553	18.721	15.258	258.269
32	.1025	.197	80.82	75.48	.813	.809	-4.347	18.927	15.487	272.888
33	.1096	.223	82.22	74.99	.827	.834	-4.018	19.256	15.958	308.098
34	.1167	.249	83.77	74.97	.843	.835	-3.655	19.619	15.973	344.132
35	.1244	.274	84.89	74.72	.854	.847	-3.392	19.881	16.209	379.553
36	.1326	.301	86.32	74.37	.869	.865	-3.059	20.215	16.554	417.228
37	.1413	.326	87.36	74.25	.879	.871	-2.815	20.459	16.662	451.615
38	.1504	.353	88.22	74.15	.888	.876	-2.614	20.659	16.764	488.884
39	.1599	.378	89.48	73.96	.900	.885	-2.317	20.957	16.944	523.682
40	.1697	.406	90.09	73.74	.907	.896	-2.175	21.098	17.151	561.569
41	.1795	.431	90.36	73.54	.909	.906	-2.112	21.162	17.348	596.161
42	.1894	.457	91.03	73.45	.916	.911	-1.954	21.319	17.434	633.018
43	.1994	.502	92.29	73.11	.929	.928	-1.660	21.614	17.759	694.173
44	.2094	.547	93.40	72.96	.940	.936	-1.401	21.873	17.907	756.768
45	.2194	.592	94.24	72.75	.948	.946	-1.202	22.071	18.102	818.952
46	.2294	.636	94.96	72.57	.956	.955	-1.035	22.239	18.283	880.724
47	.2394	.680	95.35	72.52	.959	.958	-.943	22.331	18.326	941.672
48	.2494	.725	95.84	72.46	.964	.960	-.829	22.445	18.381	1003.444
49	.2594	.770	96.38	72.30	.970	.969	-.702	22.572	18.543	1066.040
50	.2694	.815	96.80	72.23	.974	.972	-.604	22.670	18.606	1127.400
51	.2794	.859	97.20	72.18	.978	.980	-.511	22.763	18.747	1189.172
52	.2894	.904	97.69	72.05	.983	.981	-.395	22.879	18.779	1250.944
53	.2994	1.201	98.92	71.84	.995	.992	-.107	23.167	18.980	1662.345
54	1.0077	1.499	99.24	71.75	.999	.996	-.032	23.242	19.070	2074.982
55	1.2076	1.797	99.42	71.70	1.000	.999	-.008	23.282	19.112	2486.589
56	1.4074	2.094	99.37	71.69	1.000	.999	-.003	23.271	19.128	2897.990
57	1.6071	2.391	99.35	71.70	1.000	.999	-.007	23.267	19.113	3309.186
58	1.8076	2.690	99.42	71.64	1.000	1.002	-.010	23.284	19.172	3722.028
59	2.0079	2.988	99.36	71.64	1.000	1.002	-.005	23.269	19.171	4134.459

Table 52.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 4. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY ==	99.588	99.588
FREE STREAM TEMPERATURE ==	69.822	
WALL TEMPERATURE ==	89.070	
WALL HEAT FLUX ==	.07719	
FREE STREAM DENSITY ==	.07633	
FREE STREAM KINEMATIC VISCOSITY ==	.0001601	
DENSITY OF FLUID AT WALL ==	.07365	
KINEMATIC VISCOSITY OF FLUID AT WALL ==	.0001706	
WALL/FREE STREAM DENSITY RATIO ==	.96492	
LOCATION REYNOLDS NUMBER (REX) ==	1461518.06	
INPUT VALUE OF VELOCITY DELTA ==	1.10000	
INPUT VALUE OF TEMPERATURE DELTA ==	1.30000	
CALCULATED DELTA ==		.67762
DELTA 99.5% INPUT ==	.00000	
DISPLACEMENT THICKNESS (DELSTAR) ==	.08466	.08460
MOMENTUM THICKNESS (THETA) ==	.06199	.06223
ENERGY-DISSIPATION THICKNESS ==	.11212	.11234
ENTHALPY THICKNESS ==	.00215	.00216
SHAPE FACTOR 12 (DELSTAR/THETA) ==	1.36553	1.35935
SHAPE FACTOR 32 (ENERGY/THETA) ==	1.80855	1.80509
MOMENTUM THICKNESS REYNOLDS NUMBER ==	3212.99	3225.35
DISPLACEMENT THICKNESS REYNOLDS NUMBER ==	4387.44	4384.37
SKIN FRICTION COEFFICIENT ==	.003470	
FRICTION VELOCITY ==	4.22296	
LAW OF THE WALL CONSTANT (K) ==	.41000	
LAW OF THE WALL CONSTANT (C) ==	5.00000	
WAKE STRENGTH ==		.18803
CLAUSERS 'DELTA' INTEGRAL ==	-1.81773	-1.94426
CLAUSERS 'G' INTEGRAL ==	11.17843	11.00548
DISPLACEMENT THICKNESS - CONSTANT DENSITY ==	.07979	.08244
MOMENTUM THICKNESS - CONSTANT DENSITY ==	.06241	.06266
SHAPE FACTOR 12 - CONSTANT DENSITY ==	1.27857	1.31584

LOCATION -X- 28.20000

Z = +6 INCHES

Table 53.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 4. GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
1	.0054	.008	37.48	82.07	.376	.364	-14.708	8.874	6.768	11.203
2	.0071	.011	45.22	81.13	.454	.413	-12.874	10.709	7.682	14.710
3	.0083	.012	48.06	80.52	.483	.444	-12.202	11.381	8.265	17.186
4	.0094	.014	50.76	80.04	.510	.469	-11.562	12.021	8.735	19.455
5	.0117	.017	54.38	79.06	.546	.520	-10.706	12.876	9.684	24.201
6	.0137	.020	56.62	78.58	.581	.545	-10.174	13.408	10.145	28.327
7	.0153	.023	57.86	78.47	.593	.551	-9.881	13.702	10.251	31.628
8	.0172	.025	59.06	77.95	.593	.578	-9.596	13.986	10.756	35.548
9	.0163	.027	59.74	77.79	.600	.586	-9.435	14.148	10.906	37.817
10	.0203	.030	61.67	77.57	.609	.598	-9.217	14.366	11.124	41.944
11	.0223	.033	61.37	77.21	.616	.616	-9.051	14.531	11.467	46.070
12	.0243	.036	62.10	76.44	.624	.630	-8.876	14.706	11.727	50.196
13	.0261	.039	62.68	76.85	.629	.635	-8.740	14.843	11.816	53.910
14	.0324	.046	64.48	76.52	.647	.652	-8.333	15.250	12.135	66.908
15	.0395	.058	66.18	76.12	.665	.673	-7.910	15.673	12.523	81.556
16	.0463	.067	67.90	75.77	.682	.691	-7.503	16.080	12.858	95.585
17	.0524	.077	69.03	75.31	.693	.715	-7.237	16.345	13.304	108.170
18	.0568	.088	70.10	75.20	.704	.721	-6.982	16.600	13.414	122.406
19	.0663	.096	71.51	74.98	.718	.732	-6.649	16.934	13.624	136.848
20	.0724	.107	72.48	74.71	.728	.746	-6.420	17.163	13.886	149.433
21	.0793	.117	73.39	74.59	.737	.752	-6.205	17.378	14.001	163.669
22	.0864	.128	74.12	74.28	.744	.768	-6.031	17.552	14.298	176.317
23	.0922	.136	74.93	74.37	.752	.764	-5.836	17.744	14.220	190.489
24	.0997	.147	76.14	74.04	.765	.781	-5.541	18.042	14.532	205.757
25	.1063	.157	76.94	73.95	.773	.785	-5.364	18.218	14.617	219.373
26	.1123	.166	77.46	73.82	.778	.792	-5.235	18.347	14.750	231.752
27	.1194	.176	78.08	73.64	.784	.802	-5.092	18.490	14.925	246.400
28	.1263	.186	78.83	73.60	.792	.804	-4.916	18.667	14.961	260.636
29	.1438	.212	80.47	73.19	.808	.825	-4.526	19.056	15.359	296.741
30	.1611	.238	81.59	72.86	.814	.842	-4.263	19.320	15.673	332.433
31	.1768	.264	83.47	72.73	.838	.849	-3.817	19.766	15.801	368.951
32	.1964	.290	84.96	72.68	.853	.851	-3.464	20.119	15.849	405.262
33	.2137	.315	85.97	72.24	.863	.874	-3.225	20.358	16.271	440.954
34	.2314	.342	87.04	72.02	.874	.886	-2.970	20.612	16.487	477.472
35	.2484	.367	87.96	71.93	.883	.891	-2.754	20.829	16.579	512.545
36	.2663	.393	88.82	71.61	.893	.907	-2.550	21.032	16.865	549.475
37	.2834	.418	89.97	71.53	.903	.911	-2.278	21.304	16.961	584.755
38	.3013	.445	90.57	71.41	.909	.918	-2.135	21.448	17.080	621.685
39	.3311	.489	91.99	71.26	.924	.926	-1.799	21.783	17.227	681.167
40	.3613	.533	92.94	71.01	.933	.938	-1.575	22.008	17.463	745.473
41	.3913	.576	94.06	70.80	.945	.949	-1.308	22.274	17.668	807.367
42	.4219	.623	94.90	70.55	.953	.952	-1.111	22.471	17.719	870.499
43	.4513	.666	95.27	70.55	.957	.962	-1.024	22.559	17.909	931.156
44	.4814	.710	95.78	70.48	.962	.966	-.902	22.680	17.976	993.256
45	.5117	.755	96.32	70.34	.967	.973	-.773	22.809	18.117	1055.769
46	.5416	.799	96.83	70.31	.972	.975	-.654	22.929	18.143	1117.457
47	.5716	.844	96.95	70.21	.974	.980	-.624	22.958	18.235	1179.351
48	.6013	.887	97.89	70.17	.983	.982	-.401	23.182	18.278	1240.626
49	1.0014	1.183	99.12	69.95	.995	.993	-.112	23.471	18.489	1653.460
50	1.2014	1.478	99.51	69.87	.999	.998	-.020	23.563	18.570	2066.087
51	1.4014	1.773	99.63	69.81	1.000	1.001	-.010	23.592	18.624	2478.715
52	1.6014	2.068	99.48	69.82	1.000	1.000	-.025	23.558	18.613	2891.342
53	1.8012	2.363	99.65	69.83	1.001	1.001	.015	23.558	18.604	3303.257
54	2.0014	2.658	99.66	69.81	1.001	1.001	.018	23.597	18.624	3716.597
55	2.2013	2.953	99.61	69.78	1.000	1.002	.004	23.597	18.651	4129.018
56	2.4014	3.249	99.65	69.81	1.001	1.001	.014	23.597	18.624	4541.852
57	2.6012	3.544	99.66	69.76	1.001	1.003	.021	23.604	18.673	4954.066
58	2.8014	3.839	99.53	69.79	1.001	1.001	-.013	23.569	18.640	5366.694
59	3.0014	4.134	98.98	69.83	1.001	1.001	-.144	23.438	18.602	5779.734
60	3.2014	4.429	99.11	69.82	1.001	1.000	-.114	23.469	18.619	6192.361

Table 53.

JOB KLD7D TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 11. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY =	99.159	99.159
FREE STREAM TEMPERATURE =	70.710	
WALL TEMPERATURE =	91.960	
WALL HEAT FLUX =	.07763	
FREE STREAM DENSITY =	.07597	
FREE STREAM KINEMATIC VISCOSITY =	.0001611	
DENSITY OF FLUID AT WALL =	.07305	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001727	
WALL/FREE STREAM DENSITY RATIO =	.96148	
LOCATION REYNOLDS NUMBER (REX) =	1862132.25	
INPUT VALUE OF VELOCITY DELTA =	1.30000	
INPUT VALUE OF TEMPERATURE DELTA =	1.60000	
CALCULATED DELTA =		.79721
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.09812	.09842
MOMENTUM THICKNESS (THETA) =	.07265	.07274
ENERGY-DISSIPATION THICKNESS =	.13171	.13169
ENTHALPY THICKNESS =	.00293	.00293
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.35067	1.35297
SHAPE FACTOR 32 (ENERGY/THETA) =	1.81292	1.81040
MOMENTUM THICKNESS REYNOLDS NUMBER =	3726.75	3731.45
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	5033.62	5048.55
SKIN FRICTION COEFFICIENT =	.003357	
FRICTION VELOCITY =	4.14280	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.19475
CLAUSERS 'DELTA' INTEGRAL =	-2.17566	-2.28635
CLAUSERS 'G' INTEGRAL =	12.63266	12.74644
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.09306	.09552
MOMENTUM THICKNESS - CONSTANT DENSITY =	.07318	.07327
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.27175	1.30365

LOCATION -X- 36.30000

Z = CENTERLINE

Table 54.

JOB KLD70 TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 11. GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
1	.0043	.005	36.62	85.76	.369	.292	-15.096	8.839	5.805	8.657
2	.0056	.007	36.78	84.60	.391	.346	-14.574	9.361	6.887	11.256
3	.0063	.008	41.47	83.98	.418	.375	-13.926	10.009	7.464	11.656
4	.0075	.009	45.54	83.17	.459	.414	-12.942	10.993	8.227	11.055
5	.0065	.011	48.73	82.60	.487	.440	-12.268	11.667	8.557	11.055
6	.0101	.013	52.01	81.74	.524	.481	-11.382	12.553	9.551	12.054
7	.0114	.014	53.59	81.32	.544	.501	-11.001	12.933	9.951	12.853
8	.0128	.016	55.07	80.93	.555	.519	-10.643	13.292	10.322	12.652
9	.0147	.018	56.46	80.41	.569	.544	-10.306	13.629	10.809	12.451
10	.0163	.020	57.26	80.08	.577	.559	-10.113	13.822	11.119	12.650
11	.0183	.022	58.41	79.73	.589	.575	-9.835	14.100	11.439	12.649
12	.0201	.025	59.27	79.45	.598	.589	-9.629	14.306	11.707	12.247
13	.0215	.027	59.65	79.18	.602	.602	-9.538	14.398	11.960	12.047
14	.0237	.030	60.61	79.01	.611	.609	-9.305	14.630	12.115	12.445
15	.0253	.032	60.97	78.88	.615	.616	-9.219	14.716	12.237	12.644
16	.0277	.035	61.93	78.56	.625	.631	-8.966	14.950	12.539	12.443
17	.0292	.037	62.19	78.57	.627	.630	-8.925	15.010	12.529	12.442
18	.0356	.045	63.96	78.05	.645	.655	-8.497	15.439	13.014	12.238
19	.0424	.053	65.72	77.53	.663	.679	-8.071	15.865	13.498	12.833
20	.0494	.062	66.96	77.23	.675	.693	-7.768	16.167	13.784	12.829
21	.0555	.070	68.29	76.97	.689	.706	-7.451	16.484	14.029	11.025
22	.0623	.078	69.39	76.78	.700	.714	-7.186	16.750	14.201	12.502
23	.0693	.087	70.26	76.51	.709	.727	-6.976	16.959	14.453	12.617
24	.0755	.095	71.46	76.20	.721	.742	-6.680	17.255	14.747	12.013
25	.0824	.103	72.36	75.98	.730	.752	-6.470	17.466	14.951	12.808
26	.0893	.112	73.11	75.90	.737	.756	-6.289	17.647	15.025	12.604
27	.0953	.120	73.80	75.71	.744	.765	-6.122	17.813	15.203	12.600
28	.1025	.129	74.80	75.51	.754	.774	-5.879	18.056	15.393	12.996
29	.1097	.136	75.45	75.26	.761	.786	-5.722	18.213	15.624	12.391
30	.1155	.145	76.06	75.21	.767	.788	-5.575	18.361	15.673	12.988
31	.1224	.154	76.83	75.20	.775	.789	-5.391	18.544	15.679	12.783
32	.1293	.162	77.66	75.11	.783	.793	-5.189	18.746	15.763	12.579
33	.1466	.184	79.07	74.74	.797	.810	-4.848	19.087	16.111	12.368
34	.1642	.206	80.20	74.34	.809	.829	-4.576	19.359	16.489	12.357
35	.1817	.228	81.66	74.23	.824	.834	-4.224	19.712	16.589	12.346
36	.1995	.250	82.85	74.04	.836	.843	-3.936	19.999	16.766	12.935
37	.2166	.272	83.98	73.80	.847	.855	-3.664	20.271	16.989	12.124
38	.2343	.294	84.95	73.74	.857	.858	-3.430	20.505	17.049	12.513
39	.2517	.316	86.19	73.46	.869	.871	-3.131	20.805	17.308	12.302
40	.2696	.336	86.61	73.23	.873	.881	-3.028	20.907	17.523	12.091
41	.2869	.360	88.71	73.10	.885	.887	-2.763	21.172	17.641	12.680
42	.3045	.382	88.37	72.86	.891	.899	-2.604	21.331	17.866	12.869
43	.3394	.426	89.95	72.61	.907	.911	-2.224	21.712	18.102	12.647
44	.3743	.470	91.13	72.47	.919	.917	-1.938	21.998	18.238	12.425
45	.4093	.514	92.14	72.11	.929	.934	-1.694	22.241	18.572	12.803
46	.4444	.558	93.05	71.98	.938	.940	-1.475	22.460	18.693	12.781
47	.4795	.602	94.01	71.75	.948	.951	-1.242	22.693	18.911	12.760
48	.5144	.645	94.51	71.61	.953	.958	-1.123	22.813	19.040	12.538
49	.5494	.689	95.33	71.61	.961	.958	-1.925	23.010	19.036	12.516
50	.5845	.733	95.82	71.47	.966	.964	-1.806	23.129	19.173	12.668
51	.6195	.777	96.44	71.37	.973	.969	-1.657	23.279	19.266	12.672
52	.6545	.821	96.73	71.29	.975	.973	-1.586	23.349	19.339	12.650
53	.6894	.865	97.22	71.18	.980	.978	-1.469	23.466	19.437	12.428
54	.7243	.909	97.46	71.21	.983	.977	-1.409	23.526	19.417	12.406
55	.7593	.952	97.82	71.07	.987	.983	-1.323	23.612	19.542	12.184
56	.7943	.996	97.92	71.01	.988	.986	-1.298	23.637	19.605	12.162
57	.8293	1.040	97.96	70.99	.986	.987	-1.289	23.646	19.620	12.140
58	.8643	1.084	98.29	70.94	.991	.989	-1.210	23.725	19.667	12.118
59	.8995	1.128	98.42	70.92	.993	.990	-1.179	23.756	19.682	12.496
60	.9347	1.173	98.59	70.95	.994	.989	-1.138	23.797	19.657	12.874
61	.9694	1.216	98.65	70.92	.995	.990	-1.122	23.813	19.688	12.253
62	1.0046	1.260	98.65	70.91	.995	.991	-1.122	23.813	19.698	12.630
63	1.0393	1.304	99.00	70.79	.998	.996	-1.039	23.897	19.803	12.852
64	1.0753	1.348	99.16	70.75	1.000	.998	-1.001	23.937	19.839	12.673
65	1.1115	1.392	99.16	70.73	1.000	.999	-1.003	23.933	19.865	12.893
66	1.1471	1.436	99.15	70.73	1.000	.999	-1.001	23.937	19.865	12.915
67	1.1825	1.480	99.05	70.68	.999	1.002	-1.027	23.908	19.912	12.536
68	1.2184	1.524	99.08	70.70	.999	1.000	-1.020	23.915	19.886	12.157
69	1.2545	1.568	99.01	70.69	.998	1.001	-1.037	23.899	19.896	12.177

Table 54.

JOB KLD70 TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 12. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY	99.283	99.283
FREE STREAM TEMPERATURE	71.407	
WALL TEMPERATURE	92.650	
WALL HEAT FLUX	.07772	
FREE STREAM DENSITY	.07587	
FREE STREAM KINEMATIC VISCOSITY	.0001615	
DENSITY OF FLUID AT WALL	.07296	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001731	
WALL/FREE STREAM DENSITY RATIO	.96154	
LOCATION REYNOLDS NUMBER (REX)	2274682.56	
INPUT VALUE OF VELOCITY DELTA	1.30000	
INPUT VALUE OF TEMPERATURE DELTA	1.60000	
CALCULATED DELTA		.94764
DELTA 99.5% INPUT	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	.11196	.11205
MOMENTUM THICKNESS (THETA)	.08313	.08331
ENERGY-DISSIPATION THICKNESS	.15090	.15102
ENTHALPY THICKNESS	.00344	.00344
SHAPE FACTOR 12 (DELSTAR/THETA)	1.34687	1.34491
SHAPE FACTOR 32 (ENERGY/THETA)	1.81532	1.81272
MOMENTUM THICKNESS REYNOLDS NUMBER	4259.70	4269.14
DISPLACEMENT THICKNESS REYNOLDS NUMBER	5737.26	5741.59
SKIN FRICTION COEFFICIENT	.003299	
FRICTION VELOCITY	4.11184	
LAW OF THE WALL CONSTANT (K)	.41000	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		.15631
CLAUSERS 'DELTA' INTEGRAL	-2.49264	-2.62331
CLAUSERS 'G' INTEGRAL	14.47585	14.41140
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.10590	.10865
MOMENTUM THICKNESS - CONSTANT DENSITY	.08373	.08393
SHAPE FACTOR 12 - CONSTANT DENSITY	1.26470	1.29453

LOCATION -X- 44.38998

Z = CENTERLINE

Table 55.

JOB KLD70 TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 12. GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
1	.0053	.006	37.87	85.66	.381	.329	-14.936	9.210	6.477	10.554
2	.0065	.007	41.09	84.49	.414	.384	-14.152	9.993	7.558	12.930
3	.0073	.008	43.95	83.89	.443	.412	-13.458	10.688	8.112	14.514
4	.0085	.009	47.21	83.32	.476	.439	-12.663	11.483	8.641	16.890
5	.0095	.010	49.26	83.00	.496	.454	-12.165	11.981	8.941	18.870
6	.0111	.012	51.81	82.32	.522	.486	-11.545	12.601	9.568	22.038
7	.0127	.013	53.66	81.77	.540	.512	-11.096	13.050	10.077	25.206
8	.0137	.014	54.61	81.52	.550	.524	-10.864	13.281	10.308	27.186
9	.0155	.016	56.10	81.18	.565	.540	-10.502	13.644	10.628	30.750
10	.0178	.019	57.65	80.64	.581	.565	-10.124	14.021	11.121	35.304
11	.0194	.021	58.20	80.61	.586	.567	-9.991	14.155	11.157	38.473
12	.0212	.022	58.97	80.33	.594	.580	-9.804	14.342	11.409	42.037
13	.0226	.024	59.52	80.26	.599	.583	-9.671	14.475	11.473	44.809
14	.0243	.026	60.35	80.00	.608	.596	-9.469	14.677	11.722	48.571
15	.0263	.028	60.77	79.69	.612	.610	-9.367	14.779	12.003	52.135
16	.0283	.030	61.48	79.74	.619	.608	-9.195	14.951	12.059	56.095
17	.0301	.032	61.99	79.66	.624	.612	-9.070	15.075	12.037	59.659
18	.0333	.036	63.45	79.09	.639	.638	-8.713	15.432	12.558	71.936
19	.0437	.046	65.25	78.60	.657	.662	-8.278	15.868	13.018	86.568
20	.0504	.053	66.70	78.25	.672	.678	-7.924	16.221	13.338	99.854
21	.0567	.059	67.89	77.94	.684	.693	-7.635	16.511	13.630	112.329
22	.0637	.067	69.05	77.82	.696	.698	-7.352	16.794	13.739	126.189
23	.0705	.074	69.97	77.60	.705	.708	-7.128	17.017	13.939	139.654
24	.0763	.081	70.96	77.47	.715	.715	-6.887	17.258	14.061	151.138
25	.0835	.088	71.84	77.27	.724	.724	-6.675	17.471	14.251	165.394
26	.0904	.095	72.54	76.95	.731	.739	-6.503	17.642	14.455	179.057
27	.0964	.102	73.26	76.86	.738	.743	-6.328	17.817	14.627	190.937
28	.1035	.109	74.13	76.65	.747	.753	-6.117	18.029	14.817	204.996
29	.1105	.117	74.49	76.54	.750	.759	-6.030	18.116	14.916	218.856
30	.1165	.123	75.49	76.46	.760	.762	-5.787	18.359	14.997	230.736
31	.1233	.130	75.86	76.15	.764	.777	-5.696	18.449	15.284	244.201
32	.1304	.138	76.56	75.97	.771	.785	-5.527	18.619	15.488	258.259
33	.1476	.156	77.86	75.77	.784	.795	-5.210	18.935	15.638	272.316
34	.1651	.174	79.19	75.50	.798	.807	-4.887	19.259	15.886	286.967
35	.1828	.193	80.56	75.07	.811	.828	-4.555	19.591	16.287	302.014
36	.2003	.211	81.30	74.95	.819	.833	-4.372	19.773	16.394	316.665
37	.2177	.230	82.47	74.87	.831	.837	-4.090	20.056	16.470	331.118
38	.2354	.248	83.36	74.49	.840	.855	-3.873	20.272	16.820	345.165
39	.2526	.267	84.26	74.43	.849	.858	-3.654	20.492	16.881	359.022
40	.2707	.286	85.16	74.22	.858	.868	-3.435	20.711	17.179	372.661
41	.2873	.303	86.02	74.10	.866	.873	-3.227	20.919	17.179	386.930
42	.3055	.322	86.55	74.02	.872	.877	-3.096	21.050	17.259	400.967
43	.3240	.339	88.11	73.84	.887	.885	-2.717	21.425	17.423	414.270
44	.3458	.357	89.33	73.37	.900	.908	-2.420	21.725	17.862	427.166
45	.3705	.383	90.39	73.27	.910	.912	-2.163	21.982	17.955	440.874
46	.4003	.417	91.13	73.02	.918	.924	-1.983	22.163	18.181	454.572
47	.4403	.457	92.42	72.90	.931	.930	-1.669	22.477	18.294	468.082
48	.4803	.507	93.08	72.72	.938	.938	-1.508	22.634	18.464	481.780
49	.5203	.541	93.90	72.64	.946	.942	-1.309	22.836	18.533	495.020
50	.5655	.581	94.60	72.47	.953	.950	-1.140	23.006	18.694	508.780
51	.6206	.635	95.06	72.41	.957	.953	-1.028	23.118	18.754	522.884
52	.6555	.672	95.55	72.32	.962	.957	-1.907	23.239	18.836	536.988
53	.6905	.709	96.01	72.23	.967	.961	-1.795	23.350	18.915	551.290
54	.7253	.745	96.41	72.17	.971	.964	-1.699	23.447	18.968	565.196
55	.7603	.780	96.99	71.98	.977	.973	-1.557	23.588	19.146	579.498
56	.7953	.839	97.20	72.01	.979	.972	-1.506	23.639	19.117	593.800
57	.8303	.876	97.50	71.87	.982	.978	-1.434	23.711	19.249	608.103
58	.8655	.913	97.58	71.84	.983	.980	-1.415	23.731	19.277	622.401
59	.9005	.950	97.93	71.81	.986	.981	-1.329	23.816	19.308	636.703
60	.9353	.987	98.09	71.78	.988	.983	-1.289	23.856	19.335	651.009
61	.9706	1.024	98.12	71.72	.988	.985	-1.282	23.863	19.391	665.312
62	1.0057	1.061	98.51	71.71	.992	.986	-1.188	23.958	19.400	679.615
63	1.0407	1.106	99.23	71.53	1.000	.994	-1.012	24.134	19.561	693.918
64	1.0757	1.164	99.26	71.43	1.000	.999	-1.006	24.140	19.658	708.221
65	1.1107	1.222	99.24	71.41	1.000	1.000	-1.011	24.135	19.673	722.524
66	1.1481	1.267	99.35	71.39	1.001	1.001	-1.016	24.162	19.693	736.827
67	1.1834	1.312	99.44	71.42	1.002	.999	-1.038	24.184	19.668	751.130
68	1.2194	1.357	99.42	71.40	1.001	1.001	-1.034	24.179	19.688	765.433
69	1.2556	1.402	99.46	71.45	1.002	.998	-1.042	24.188	19.636	779.736

Table 55.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 6. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY =	99.381	99.381
FREE STREAM TEMPERATURE =	70.545	
WALL TEMPERATURE =	92.000	
WALL HEAT FLUX =	.07751	
FREE STREAM DENSITY =	.07622	
FREE STREAM KINEMATIC VISCOSITY =	.0001605	
DENSITY OF FLUID AT WALL =	.07326	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001722	
WALL/FREE STREAM DENSITY RATIO =	.96111	
LOCATION REYNOLDS NUMBER (REX) =	2280449.41	
INPUT VALUE OF VELOCITY DELTA =	1.30000	
INPUT VALUE OF TEMPERATURE DELTA =	1.30000	
CALCULATED DELTA =		.98546
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.12054	.12052
MOMENTUM THICKNESS (THETA) =	.08946	.08973
ENERGY-DISSIPATION THICKNESS =	.16234	.16256
ENTHALPY THICKNESS =	.00339	.00340
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.34742	1.34317
SHAPE FACTOR 32 (ENERGY/THETA) =	1.81469	1.81163
MOMENTUM THICKNESS REYNOLDS NUMBER =	4615.56	4629.45
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	6219.12	6218.12
SKIN FRICTION COEFFICIENT =	.003201	
FRICTION VELOCITY =	4.05536	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.21501
CLAUSERS 'DELTA' INTEGRAL =	-2.71332	-2.87025
CLAUSERS 'G' INTEGRAL =	16.24339	16.05896
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.11394	.11712
MOMENTUM THICKNESS - CONSTANT DENSITY =	.09010	.09038
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.26451	1.29586

LOCATION -X- 44.20000

Z = -6 INCHES

Table 56.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 6. GRID NO. 3

REDUCED PROFILE DATA

N	Y	INCHES	DELTA	U	FT/SEC	T	DEG.F	U/UE	THETA	U-UE	UTAU	U(+)	T(+)	Y(+)
1	.0064	.007	42.05	85.03	.423	.325	-14.138	10.368	6.410	12.620				
2	.0074	.006	43.29	84.12	.436	.367	-13.830	10.676	7.246	14.583				
3	.0086	.009	45.49	82.50	.458	.443	-13.288	11.218	8.737	16.938				
4	.0101	.010	48.52	81.98	.488	.467	-12.542	11.964	9.213	19.882				
5	.0115	.012	51.00	81.92	.513	.470	-11.930	12.576	9.271	22.630				
6	.0126	.013	52.42	81.52	.527	.489	-11.580	12.926	9.644	24.789				
7	.0144	.015	53.98	81.00	.543	.512	-11.195	13.311	10.115	28.322				
8	.0164	.017	55.46	80.65	.558	.529	-10.830	13.676	10.437	32.247				
9	.0184	.019	56.33	80.11	.567	.554	-10.617	13.889	10.935	36.173				
10	.0201	.020	57.69	79.79	.580	.569	-10.281	14.225	11.235	39.510				
11	.0214	.022	58.17	79.74	.585	.571	-10.162	14.344	11.275	42.506				
12	.0233	.024	58.55	79.52	.589	.582	-10.068	14.438	11.478	45.790				
13	.0254	.026	59.46	79.23	.598	.595	-9.845	14.661	11.750	49.912				
14	.0274	.028	59.99	78.94	.604	.609	-9.713	14.793	12.012	53.837				
15	.0292	.030	61.10	78.71	.615	.620	-9.440	14.866	12.227	57.370				
16	.0314	.033	62.35	78.21	.627	.643	-9.130	14.976	12.686	61.939				
17	.0335	.036	64.12	77.78	.645	.663	-8.696	15.081	13.082	66.043				
18	.0355	.038	65.35	77.57	.660	.672	-8.343	15.163	13.271	70.174				
19	.0374	.040	66.54	77.51	.670	.675	-8.099	15.407	13.322	74.294				
20	.0394	.043	67.62	76.99	.680	.699	-7.833	15.673	13.805	78.414				
21	.0414	.047	68.95	76.80	.694	.709	-7.503	15.985	13.985	82.534				
22	.0434	.050	69.64	76.52	.701	.721	-7.335	16.171	14.239	86.654				
23	.0454	.054	70.62	76.50	.711	.723	-7.093	16.413	14.263	90.774				
24	.0474	.059	71.04	76.35	.715	.729	-6.989	16.517	14.398	94.894				
25	.0494	.067	72.16	76.16	.726	.738	-6.712	16.794	14.573	99.014				
26	.0514	.074	73.67	75.95	.733	.743	-6.555	16.951	14.655	103.134				
27	.0534	.083	74.15	75.63	.741	.748	-6.339	17.167	14.768	107.254				
28	.0554	.094	74.80	75.40	.746	.763	-6.223	17.283	15.062	111.374				
29	.0574	.107	75.57	75.43	.753	.774	-6.062	17.444	15.271	115.494				
30	.0594	.123	76.86	75.10	.760	.772	-5.872	17.634	15.239	119.614				
31	.0614	.141	77.39	74.76	.773	.788	-5.554	17.952	15.543	123.734				
32	.0634	.167	78.39	74.46	.789	.804	-5.177	18.329	15.861	127.854				
33	.0654	.184	79.08	74.46	.796	.818	-5.006	18.500	16.135	131.974				
34	.0674	.202	80.51	74.23	.810	.828	-4.653	18.853	16.348	136.094				
35	.0694	.216	81.71	74.19	.822	.830	-4.358	19.148	16.385	140.214				
36	.0714	.238	82.49	73.86	.830	.846	-4.166	19.340	16.691	144.334				
37	.0734	.255	83.05	73.65	.836	.855	-4.026	19.480	16.881	148.454				
38	.0754	.273	84.12	73.65	.846	.855	-3.762	19.744	16.879	152.574				
39	.0774	.291	85.17	73.26	.857	.874	-3.503	20.003	17.243	156.694				
40	.0794	.309	86.02	73.18	.866	.877	-3.294	20.212	17.511	160.814				
41	.0814	.344	87.25	72.93	.878	.889	-2.991	20.515	17.539	164.934				
42	.0834	.380	88.49	72.71	.890	.899	-2.686	20.820	17.749	169.054				
43	.0854	.416	89.77	72.53	.903	.907	-2.370	21.136	17.910	173.174				
44	.0874	.451	90.77	72.28	.913	.919	-2.124	21.382	18.139	177.294				
45	.0894	.487	91.76	71.97	.923	.934	-1.879	21.627	18.425	181.414				
46	.0914	.522	92.52	72.01	.931	.932	-1.691	21.815	18.385	185.534				
47	.0934	.558	93.06	71.82	.936	.941	-1.558	22.048	18.564	189.654				
48	.0954	.593	93.80	71.72	.944	.945	-1.375	22.131	18.652	193.774				
49	.0974	.629	94.61	71.57	.952	.952	-1.177	22.329	18.791	197.894				
50	.0994	.664	95.15	71.34	.957	.963	-1.044	22.462	19.002	202.014				
51	.1014	.700	95.48	71.23	.961	.968	-0.862	22.544	19.103	206.134				
52	.1034	.735	95.79	71.22	.964	.969	-0.886	22.620	19.118	210.254				
53	.1054	.771	96.42	71.11	.970	.974	-0.730	22.776	19.215	214.374				
54	.1074	.806	96.89	71.12	.975	.973	-0.614	22.892	19.206	218.494				
55	.1094	.842	97.22	71.03	.978	.977	-0.532	22.974	19.292	222.614				
56	.1114	.877	97.14	71.05	.977	.976	-0.553	23.053	19.273	226.734				
57	.1134	.913	97.42	70.89	.980	.984	-0.483	23.023	19.421	230.854				
58	.1154	.948	97.80	70.84	.984	.986	-0.390	23.116	19.460	234.974				
59	.1174	.984	97.94	70.93	.985	.982	-0.356	23.150	19.380	239.094				
60	.1204	1.019	97.93	70.77	.985	.990	-0.358	23.148	19.534	243.214				
61	.1234	1.054	99.16	70.58	.998	.998	-0.054	23.452	19.703	247.334				
62	.1264	1.089	99.37	70.54	1.000	1.000	-0.002	23.504	19.744	251.454				
63	.1294	1.124	99.40	70.55	1.000	1.000	-0.004	23.510	19.733	255.574				
64	.1324	1.159	99.48	70.55	1.000	1.000	-0.002	23.504	19.733	259.694				
65	.1354	1.194	99.50	70.52	1.001	1.001	-0.025	23.531	19.759	263.814				
66	.1384	1.229	99.51	70.52	1.001	1.001	-0.031	23.537	19.759	267.934				
67	.1414	1.264	99.50	70.49	1.001	1.001	-0.028	23.534	19.785	272.054				
68	.1444	1.299	99.50	70.51	1.001	1.001	-0.029	23.535	19.769	276.174				
69	.1474	1.334	99.56	70.54	1.002	1.000	-0.044	23.550	19.743	280.294				
70	.1504	1.369	99.41	70.55	1.000	1.000	-0.007	23.513	19.718	284.414				
71	.1534	1.404	99.57	70.55	1.002	1.000	-0.048	23.554	19.733	288.534				

Table 56.

JOB KLD7D TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 15. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY =	99.370	99.370
FREE STREAM TEMPERATURE =	71.969	
WALL TEMPERATURE =	93.760	
WALL HEAT FLUX =	.07696	
FREE STREAM DENSITY =	.07579	
FREE STREAM KINEMATIC VISCOSITY =	.0001618	
DENSITY OF FLUID AT WALL =	.07281	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001737	
WALL/FREE STREAM DENSITY RATIO =	.96063	
LOCATION REYNOLDS NUMBER (REX) =	2673238.91	
INPUT VALUE OF VELOCITY DELTA =	1.42000	
INPUT VALUE OF TEMPERATURE DELTA =	1.42000	
CALCULATED DELTA =		1.09253
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.12853	.12859
MOMENTUM THICKNESS (THETA) =	.09632	.09653
ENERGY-DISSIPATION THICKNESS =	.17524	.17539
ENTHALPY THICKNESS =	.00364	.00364
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.33446	1.33216
SHAPE FACTOR 32 (ENERGY/THETA) =	1.81938	1.81692
MOMENTUM THICKNESS REYNOLDS NUMBER =	4930.75	4941.60
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	6579.88	6583.01
SKIN FRICTION COEFFICIENT =	.003196	
FRICTION VELOCITY =	4.05276	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.17071
CLAUSERS 'DELTA' INTEGRAL =	-2.92181	-3.06369
CLAUSERS 'G' INTEGRAL =	16.76415	16.66496
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.12203	.12495
MOMENTUM THICKNESS - CONSTANT DENSITY =	.09701	.09723
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.25792	1.28510

LOCATION -X- 52.22000

Z = CENTERLINE

Table 57.

JOB KLD70 TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 15. GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
1	.0057	.005	37.63	86.42	.379	.337	-15.234	9.285	6.750	11.143
2	.0067	.006	41.10	85.47	.414	.380	-14.377	10.142	7.630	13.088
3	.0077	.007	44.44	84.59	.447	.421	-13.554	10.965	8.438	15.033
4	.0091	.008	47.85	83.83	.482	.456	-12.712	11.807	9.135	17.755
5	.0100	.009	49.56	83.60	.499	.466	-12.292	12.227	9.351	19.505
6	.0116	.011	52.30	83.02	.526	.493	-11.615	12.904	9.883	22.617
7	.0131	.012	53.20	82.42	.535	.520	-11.393	13.126	10.435	25.534
8	.0140	.013	53.92	82.20	.543	.530	-11.214	13.305	10.637	27.284
9	.0161	.015	55.26	81.92	.556	.543	-10.879	13.640	10.897	31.368
10	.0181	.017	56.65	81.76	.570	.551	-10.541	13.977	11.045	35.258
11	.0199	.016	57.57	81.50	.579	.562	-10.314	14.205	11.279	38.758
12	.0216	.020	58.21	81.34	.586	.570	-10.157	14.362	11.429	42.064
13	.0226	.021	58.46	81.15	.589	.579	-10.068	14.431	11.604	44.592
14	.0235	.022	59.34	80.82	.598	.594	-9.866	14.553	11.908	48.676
15	.0246	.025	60.01	80.60	.604	.604	-9.711	14.808	12.114	52.371
16	.0266	.026	60.73	80.41	.611	.613	-9.534	14.985	12.289	56.260
17	.0288	.028	61.02	80.28	.614	.619	-9.463	15.056	12.403	59.772
18	.0305	.034	62.66	79.85	.631	.638	-9.059	15.460	12.801	73.207
19	.0337	.040	64.44	79.50	.648	.654	-8.619	15.900	13.120	85.042
20	.0371	.046	65.72	79.20	.661	.668	-8.302	16.216	13.399	95.655
21	.0437	.052	66.82	78.93	.672	.682	-8.032	16.487	13.675	110.907
22	.0509	.059	67.78	78.72	.682	.690	-7.794	16.725	13.841	124.325
23	.0579	.065	68.83	78.48	.693	.701	-7.536	16.983	14.063	137.958
24	.0637	.070	69.79	78.25	.702	.712	-7.298	17.221	14.277	149.830
25	.0687	.077	70.35	78.08	.708	.719	-7.161	17.358	14.475	162.830
26	.0737	.083	71.43	77.83	.719	.731	-6.895	17.624	14.655	176.843
27	.0799	.089	72.19	77.71	.726	.736	-6.707	17.812	14.812	191.866
28	.0869	.095	72.79	77.50	.733	.746	-6.558	17.961	14.951	207.891
29	.0939	.102	73.52	77.43	.740	.749	-6.378	18.140	15.084	224.914
30	.1009	.107	74.10	77.45	.746	.748	-6.235	18.284	15.209	242.937
31	.1079	.113	74.53	77.23	.750	.759	-6.129	18.390	15.324	261.960
32	.1149	.120	75.30	77.05	.758	.767	-5.940	18.579	15.579	281.983
33	.1219	.135	76.72	76.82	.772	.777	-5.588	18.931	15.880	301.989
34	.1289	.152	78.02	76.46	.785	.794	-5.269	19.250	16.316	321.995
35	.1359	.167	78.97	76.10	.795	.810	-5.033	19.486	16.547	341.999
36	.1429	.184	80.22	75.99	.807	.815	-4.725	19.794	16.824	361.999
37	.1499	.199	81.26	75.83	.818	.823	-4.469	19.984	16.949	381.999
38	.1569	.216	82.43	75.65	.830	.831	-4.180	20.050	16.995	401.999
39	.1639	.231	83.15	75.42	.837	.841	-3.894	20.050	16.874	421.999
40	.1709	.248	83.59	75.15	.841	.854	-3.694	20.050	16.874	441.999
41	.1779	.264	84.54	75.02	.851	.860	-3.469	20.050	16.874	461.999
42	.1849	.280	85.34	74.86	.859	.867	-3.235	20.050	16.874	481.999
43	.1919	.324	87.05	74.54	.876	.882	-3.040	20.050	16.874	501.999
44	.1989	.368	88.61	74.16	.892	.899	-2.865	20.050	16.874	521.999
45	.2059	.412	90.12	73.88	.907	.912	-2.682	20.050	16.874	541.999
46	.2129	.456	91.47	73.57	.920	.926	-2.499	20.050	16.874	561.999
47	.2199	.500	92.35	73.40	.929	.934	-2.316	20.050	16.874	581.999
48	.2269	.544	93.13	73.12	.937	.947	-2.133	20.050	16.874	601.999
49	.2339	.588	94.19	73.03	.948	.951	-1.950	20.050	16.874	621.999
50	.2409	.632	94.86	72.78	.955	.963	-1.767	20.050	16.874	641.999
51	.2479	.676	95.46	72.75	.961	.964	-1.584	20.050	16.874	661.999
52	.2549	.719	95.97	72.64	.966	.969	-1.401	20.050	16.874	681.999
53	.2619	.763	96.16	72.47	.968	.977	-1.218	20.050	16.874	701.999
54	.2689	.807	96.90	72.41	.975	.980	-1.035	20.050	16.874	721.999
55	.2759	.851	96.97	72.33	.976	.984	-.852	20.050	16.874	741.999
56	.2829	.895	97.20	72.25	.978	.987	-.669	20.050	16.874	761.999
57	.2899	.939	97.58	72.27	.982	.986	-.486	20.050	16.874	781.999
58	.2969	.983	97.69	72.16	.983	.991	-.303	20.050	16.874	801.999
59	.3039	1.027	98.02	72.11	.986	.993	-.120	20.050	16.874	821.999
60	.3109	1.071	98.06	72.12	.987	.993	.063	20.050	16.874	841.999
61	.3179	1.115	98.57	72.08	.992	.995	.246	20.050	16.874	861.999
62	.3249	1.159	98.37	72.05	.990	.996	.429	20.050	16.874	881.999
63	.3319	1.202	99.09	72.02	.997	.998	.612	20.050	16.874	901.999
64	.3389	1.246	99.09	71.98	.997	1.000	.795	20.050	16.874	921.999
65	.3459	1.291	99.15	71.95	.998	1.001	.978	20.050	16.874	941.999
66	.3529	1.334	99.19	71.99	.998	1.000	1.161	20.050	16.874	961.999
67	.3599	1.378	99.37	72.03	1.000	1.000	1.344	20.050	16.874	981.999
68	.3669	1.422	99.54	71.88	1.002	1.004	1.527	20.050	16.874	1001.999
69	.3739	1.465	99.61	71.82	1.002	1.007	1.710	20.050	16.874	1021.999
70	.3809	1.509	99.66	71.80	1.003	1.008	1.893	20.050	16.874	1041.999
71	.3879	1.552	99.61	71.86	1.002	1.005	2.076	20.050	16.874	1061.999

Table 57.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 7. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY ==	98.738	98.738
FREE STREAM TEMPERATURE ==	70.580	
WALL TEMPERATURE ==	93.140	
WALL HEAT FLUX ==	.07684	
FREE STREAM DENSITY ==	.07622	
FREE STREAM KINEMATIC VISCOSITY ==	.0001605	
DENSITY OF FLUID AT WALL ==	.07311	
KINEMATIC VISCOSITY OF FLUID AT WALL ==	.0001728	
WALL/FREE STREAM DENSITY RATIO ==	.95919	
LOCATION REYNOLDS NUMBER (REX) ==	3080367.06	
INPUT VALUE OF VELOCITY DELTA ==	1.90000	
INPUT VALUE OF TEMPERATURE DELTA ==	1.90000	
CALCULATED DELTA ==		1.36442
DELTA 99.5% INPUT ==	.00000	
DISPLACEMENT THICKNESS (DELSTAR) ==	.15169	.15163
MOMENTUM THICKNESS (THETA) ==	.11463	.11490
ENERGY-DISSIPATION THICKNESS ==	.20951	.20974
ENTHALPY THICKNESS ==	.00489	.00490
SHAPE FACTOR 12 (DELSTAR/THETA) ==	1.32332	1.31964
SHAPE FACTOR 32 (ENERGY/THETA) ==	1.82776	1.82540
MOMENTUM THICKNESS REYNOLDS NUMBER ==	5875.08	5889.18
DISPLACEMENT THICKNESS REYNOLDS NUMBER ==	7774.63	7771.62
SKIN FRICTION COEFFICIENT ==	.003124	
FRICTION VELOCITY ==	3.98476	
LAW OF THE WALL CONSTANT (K) ==	.41000	
LAW OF THE WALL CONSTANT (C) ==	5.00000	
WAKE STRENGTH ==		.11885
CLAUSERS 'DELTA' INTEGRAL ==	-3.47557	-3.63574
CLAUSERS 'G' INTEGRAL ==	19.23045	19.01403
DISPLACEMENT THICKNESS - CONSTANT DENSITY ==	.14353	.14673
MOMENTUM THICKNESS - CONSTANT DENSITY ==	.11547	.11576
SHAPE FACTOR 12 - CONSTANT DENSITY ==	1.24296	1.26752

LOCATION -X- 60.10001

Z = CENTERLINE

Table 58.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 7. GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
1	.0065	.005	40.01	85.17	.405	.353	-14.739	10.040	7.253	12.548
2	.0076	.006	41.89	84.27	.424	.393	-14.266	10.513	8.072	14.661
3	.0091	.007	45.56	83.42	.461	.431	-13.344	11.434	8.847	17.544
4	.0106	.008	48.53	82.90	.492	.454	-12.600	12.179	9.321	20.426
5	.0115	.008	49.85	82.50	.505	.472	-12.269	12.510	9.684	22.155
6	.0137	.010	52.38	81.75	.530	.505	-11.635	13.144	10.366	26.383
7	.0155	.011	53.43	81.36	.541	.522	-11.371	13.407	10.720	29.841
8	.0175	.013	55.00	81.13	.557	.532	-10.977	13.602	11.892	33.685
9	.0192	.014	55.96	80.66	.567	.553	-10.736	14.043	11.354	36.951
10	.0208	.015	56.80	80.45	.575	.563	-10.524	14.255	11.548	40.026
11	.0230	.017	57.70	80.24	.584	.572	-10.298	14.481	11.736	44.253
12	.0243	.018	58.00	80.07	.587	.579	-10.223	14.556	11.893	46.351
13	.0266	.020	59.00	79.92	.598	.586	-9.972	14.807	12.026	51.171
14	.0281	.021	59.30	79.76	.601	.593	-9.898	14.881	12.171	54.053
15	.0345	.025	61.04	79.20	.618	.618	-9.400	15.108	12.682	66.351
16	.0416	.031	62.59	78.78	.634	.636	-9.071	15.708	13.064	79.994
17	.0485	.036	63.95	78.35	.648	.656	-8.731	16.047	13.457	93.252
18	.0546	.040	65.18	78.13	.660	.665	-8.422	16.357	13.641	104.874
19	.0617	.045	66.27	77.83	.671	.679	-8.148	16.631	13.933	118.617
20	.0666	.050	67.18	77.58	.680	.690	-7.919	16.860	14.154	131.875
21	.0746	.055	67.93	77.46	.688	.695	-7.731	17.047	14.266	143.404
22	.0815	.060	68.87	77.38	.697	.698	-7.496	17.283	14.336	156.663
23	.0884	.065	69.75	77.04	.706	.713	-7.273	17.505	14.646	169.922
24	.0944	.069	70.31	76.87	.712	.721	-7.134	17.645	14.808	181.451
25	.1015	.074	71.31	76.84	.722	.723	-6.883	17.896	14.833	195.094
26	.1085	.080	72.16	76.79	.731	.725	-6.670	18.109	14.877	208.545
27	.1145	.084	72.62	76.60	.735	.733	-6.554	18.225	15.052	220.074
28	.1215	.089	73.20	76.46	.741	.739	-6.408	18.371	15.179	233.525
29	.1285	.094	73.80	76.38	.747	.743	-6.259	18.520	15.250	246.975
30	.1456	.107	74.94	75.96	.759	.761	-5.971	18.808	15.627	279.834
31	.1631	.120	76.20	75.68	.772	.774	-5.657	19.122	15.882	313.461
32	.1806	.132	77.42	75.49	.784	.782	-5.350	19.429	16.058	347.087
33	.1985	.146	78.58	75.23	.796	.794	-5.059	19.720	16.296	381.483
34	.2156	.158	79.43	74.87	.804	.810	-4.846	19.933	16.622	414.341
35	.2335	.171	80.34	74.73	.814	.816	-4.616	20.163	16.749	448.737
36	.2505	.184	80.80	74.75	.818	.815	-4.502	20.277	16.733	481.403
37	.2687	.197	82.20	74.53	.833	.825	-4.150	20.628	16.931	516.375
38	.2854	.209	82.78	74.31	.838	.835	-4.004	20.775	17.133	548.465
39	.3035	.222	83.47	74.39	.845	.831	-3.831	20.948	17.062	583.244
40	.3514	.258	84.90	73.85	.860	.855	-3.472	21.306	17.553	675.286
41	.3994	.293	86.67	73.17	.878	.885	-3.029	21.749	18.168	767.520
42	.4474	.328	88.38	73.01	.895	.892	-2.600	22.179	18.318	859.754
43	.4956	.363	89.28	72.80	.904	.902	-2.372	22.407	18.508	952.372
44	.5437	.399	90.07	72.74	.916	.904	-2.075	22.703	18.561	1044.798
45	.5915	.434	90.03	72.48	.912	.916	-2.186	22.593	18.796	1136.647
46	.6396	.469	90.86	72.20	.920	.928	-1.978	22.801	19.052	1229.073
47	.6876	.504	92.07	72.05	.932	.935	-1.674	23.105	19.193	1321.307
48	.7355	.539	92.48	71.91	.937	.941	-1.569	23.209	19.321	1413.349
49	.7837	.574	93.48	71.75	.947	.948	-1.319	23.460	19.464	1505.967
50	.8316	.610	93.97	71.67	.952	.952	-1.196	23.583	19.537	1598.009
51	.8795	.645	94.44	71.51	.957	.959	-1.078	23.701	19.682	1690.050
52	.9274	.680	95.09	71.28	.963	.969	-1.915	23.864	19.892	1782.092
53	.9755	.715	95.43	71.39	.967	.964	-1.829	23.949	19.787	1874.518
54	1.0237	.750	95.66	71.19	.973	.973	-1.772	24.007	19.971	1967.136
55	1.0715	.785	96.02	71.26	.972	.970	-1.681	24.097	19.911	2058.986
56	1.1194	.820	96.42	71.12	.977	.976	-1.581	24.197	20.034	2151.027
57	1.1675	.856	96.84	71.12	.981	.976	-1.475	24.303	20.035	2243.453
58	1.2158	.891	96.88	70.98	.981	.982	-1.466	24.313	20.163	2336.264
59	1.2636	.926	97.03	71.04	.983	.979	-1.429	24.350	20.106	2428.113
60	1.3112	.961	97.40	70.95	.986	.984	-1.336	24.443	20.188	2519.578
61	1.3595	.996	97.39	70.81	.986	.990	-1.338	24.441	20.315	2612.389
62	1.4074	1.032	97.68	70.80	.989	.990	-1.264	24.515	20.323	2704.430
63	1.4551	1.066	97.77	70.78	.990	.991	-1.242	24.537	20.384	2796.088
64	1.5035	1.102	97.97	70.76	.992	.992	-1.194	24.585	20.364	2889.090
65	1.5606	1.364	98.46	70.65	.997	.997	-1.069	24.710	20.460	3575.271
66	2.2177	1.625	98.70	70.57	1.000	1.000	-1.009	24.770	20.536	4261.453
67	2.5745	1.887	98.74	70.58	1.000	1.000	.000	24.780	20.530	4947.057
68	2.9316	2.149	98.77	70.59	1.000	.999	.007	24.786	20.515	5633.239
69	3.2885	2.410	98.77	70.57	1.000	1.000	.008	24.787	20.536	6319.036
70	3.6461	2.672	98.74	70.56	1.000	1.001	.000	24.779	20.546	7006.178
71	4.0034	2.934	98.77	70.57	1.000	1.001	.008	24.787	20.540	7692.743

Table 58.

JOB KLD70 TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 18. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY ==	99.159	99.159
FREE STREAM TEMPERATURE ==	72.069	
WALL TEMPERATURE ==	94.630	
WALL HEAT FLUX ==	.07715	
FREE STREAM DENSITY ==	.07553	
FREE STREAM KINEMATIC VISCOSITY ==	.0001623	
DENSITY OF FLUID AT WALL ==	.07246	
KINEMATIC VISCOSITY OF FLUID AT WALL ==	.0001747	
WALL/FREE STREAM DENSITY RATIO ==	.95930	
LOCATION REYNOLDS NUMBER (REX) ==	3069175.94	
INPUT VALUE OF VELOCITY DELTA ==	1.90000	
INPUT VALUE OF TEMPERATURE DELTA ==	1.90000	
CALCULATED DELTA ==		1.32203
DELTA 99.5% INPUT ==	.00000	
DISPLACEMENT THICKNESS (DELSTAR) ==	.15495	.13471
MOMENTUM THICKNESS (THETA) ==	.11579	.11624
ENERGY-DISSIPATION THICKNESS ==	.21087	.21131
ENTHALPY THICKNESS ==	.00480	.00482
SHAPE FACTOR 12 (DELSTAR/THETA) ==	1.33824	1.33099
SHAPE FACTOR 32 (ENERGY/THETA) ==	1.82114	1.81787
MOMENTUM THICKNESS REYNOLDS NUMBER ==	5893.54	5916.42
DISPLACEMENT THICKNESS REYNOLDS NUMBER ==	7886.97	7874.73
SKIN FRICTION COEFFICIENT ==	.003068	
FRICTION VELOCITY ==	3.96540	
LAW OF THE WALL CONSTANT (K) ==	.41000	
LAW OF THE WALL CONSTANT (C) ==	5.00000	
WAKE STRENGTH ==		.18917
CLAUSERS 'DELTA' INTEGRAL ==	-3.54638	-3.74826
CLAUSERS 'G' INTEGRAL ==	20.95349	20.50044
DISPLACEMENT THICKNESS - CONSTANT DENSITY ==	.14599	.14989
MOMENTUM THICKNESS - CONSTANT DENSITY ==	.11664	.11711
SHAPE FACTOR 12 - CONSTANT DENSITY ==	1.25158	1.27995
LOCATION -X-	60.30000	
Z = -6 INCHES		

Table 59.

JOB KLD7D TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 18. GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	U-UE UYAU	U(+)	T(+)	Y(+)
1	.0000	.0000	43.74	85.61	.441	.400	-13.976	11.0330	8.064	15.754
2	.0000	.0007	46.30	85.02	.467	.426	-13.331	11.675	8.588	18.402
3	.0000	.0008	47.96	84.30	.484	.458	-12.912	12.094	9.229	20.104
4	.0015	.0009	49.32	84.06	.497	.468	-12.569	12.437	9.446	21.806
5	.0023	.0009	50.41	83.94	.508	.474	-12.293	12.713	9.558	23.320
6	.0041	.0011	52.45	83.27	.529	.504	-11.780	13.226	10.153	26.724
7	.0059	.0012	53.49	83.15	.539	.509	-11.517	13.489	10.261	30.128
8	.0165	.0013	54.43	82.96	.549	.517	-11.280	13.726	10.433	31.263
9	.0165	.0014	55.05	82.47	.555	.539	-11.125	13.881	10.872	34.856
10	.0225	.0016	56.12	82.16	.566	.553	-10.854	14.152	11.144	38.828
11	.0225	.0017	56.75	81.82	.572	.568	-10.696	14.310	11.452	42.611
12	.0241	.0018	57.51	81.64	.580	.576	-10.503	14.503	11.609	45.637
13	.0225	.0019	57.84	81.57	.583	.579	-10.421	14.585	11.677	48.284
14	.0225	.0021	58.65	81.39	.591	.587	-10.216	14.790	11.832	52.067
15	.0225	.0022	59.27	81.13	.598	.598	-10.059	14.948	12.005	55.660
16	.0331	.0024	59.76	80.98	.603	.605	-9.935	15.071	12.202	60.010
17	.0331	.0025	60.34	80.92	.609	.608	-9.789	15.217	12.250	62.658
18	.0331	.0030	61.95	80.48	.625	.627	-9.364	15.622	12.649	74.762
19	.0466	.0035	63.25	80.01	.638	.648	-9.055	15.951	13.065	88.190
20	.0533	.0040	64.34	79.93	.649	.652	-8.782	16.224	13.141	100.862
21	.0533	.0045	65.44	79.63	.660	.665	-8.503	16.503	13.409	112.777
22	.0677	.0050	66.64	79.30	.672	.679	-8.200	16.806	13.699	126.205
23	.0733	.0055	67.59	79.06	.682	.690	-7.962	17.044	13.913	138.688
24	.0795	.0060	68.01	78.85	.686	.700	-7.856	17.150	14.107	150.414
25	.0865	.0065	69.29	78.76	.699	.704	-7.533	17.474	14.187	163.653
26	.0934	.0071	70.01	78.59	.706	.711	-7.352	17.654	14.339	176.702
27	.0993	.0075	70.43	78.43	.710	.718	-7.244	17.762	14.476	187.861
28	.1067	.0081	71.27	78.21	.719	.728	-7.033	17.973	14.672	201.856
29	.1135	.0086	71.99	78.12	.726	.732	-6.851	18.155	14.752	214.717
30	.1195	.0090	72.39	77.82	.730	.745	-6.750	18.256	15.027	229.065
31	.1266	.0096	72.87	77.54	.735	.758	-6.630	18.376	15.275	239.304
32	.1336	.0101	73.54	77.43	.742	.762	-6.460	18.546	15.370	252.732
33	.1406	.0127	74.10	77.25	.752	.766	-6.211	18.795	15.442	284.316
34	.1469	.0141	74.14	77.25	.767	.770	-5.815	19.191	15.536	317.981
35	.1859	.0154	77.14	76.87	.776	.787	-5.552	19.454	15.878	351.646
36	.2003	.0154	78.16	76.45	.787	.806	-5.320	19.686	16.236	384.554
37	.2203	.0167	78.81	76.29	.795	.813	-5.311	19.876	16.395	416.706
38	.2334	.0180	79.71	76.19	.804	.817	-4.906	20.101	16.482	450.938
39	.2555	.0193	80.61	75.95	.813	.828	-4.679	20.328	16.700	483.279
40	.2736	.0207	81.21	75.72	.819	.835	-4.527	20.479	16.904	517.511
41	.3006	.0220	82.14	75.63	.828	.842	-4.292	20.714	16.981	549.663
42	.3287	.0234	82.77	75.68	.835	.840	-4.133	20.867	16.935	583.895
43	.3565	.0270	84.72	75.32	.854	.856	-3.642	21.365	17.263	674.299
44	.4045	.0306	86.25	74.63	.870	.887	-3.255	21.751	17.819	765.080
45	.4525	.0342	88.09	74.45	.888	.894	-2.791	22.215	18.035	855.862
46	.5007	.0379	89.06	74.34	.896	.899	-2.548	22.458	18.132	947.021
47	.5483	.0415	89.92	74.09	.907	.911	-2.331	22.675	18.362	1037.046
48	.5964	.0451	90.76	73.78	.915	.924	-2.118	22.888	18.637	1126.017
49	.6445	.0488	91.91	73.66	.927	.930	-1.828	23.178	18.745	1218.988
50	.6924	.0524	92.96	73.40	.937	.941	-1.563	23.443	18.972	1309.551
51	.7405	.0560	93.44	73.31	.942	.945	-1.441	23.565	19.055	1400.551
52	.7885	.0596	94.08	73.29	.949	.946	-1.282	23.724	19.070	1491.332
53	.8365	.0633	94.66	72.94	.955	.961	-1.130	23.876	19.385	1582.114
54	.8845	.0669	95.03	72.91	.958	.963	-1.041	23.965	19.417	1672.895
55	.9325	.0705	95.66	72.95	.965	.961	-.883	24.123	19.373	1763.677
56	.9807	.0742	95.94	72.74	.968	.970	-.811	24.196	19.569	1854.836
57	1.0263	.0778	96.09	72.65	.969	.974	-.773	24.233	19.649	1944.861
58	1.0763	.0814	96.84	72.68	.977	.973	-.584	24.422	19.614	2035.643
59	1.1244	.0851	96.99	72.69	.978	.973	-.546	24.460	19.610	2126.614
60	1.1725	.0887	97.23	72.53	.981	.980	-.487	24.520	19.751	2217.584
61	1.2207	.0923	97.37	72.49	.982	.981	-.452	24.555	19.790	2308.744
62	1.2687	.0960	97.60	72.48	.984	.982	-.392	24.614	19.800	2399.526
63	1.3161	.0996	97.92	72.45	.986	.983	-.332	24.694	19.827	2489.172
64	1.3645	1.0032	97.99	72.40	.988	.985	-.294	24.712	19.865	2580.710
65	1.4123	1.0068	98.22	72.38	.990	.986	-.238	24.768	19.885	2671.114
66	1.4601	1.104	98.51	72.30	.993	.990	-.164	24.842	19.956	2761.517
67	1.5087	1.141	98.44	72.31	.993	.989	-.161	24.825	19.948	2853.433
68	1.5583	1.425	99.03	72.14	.999	.997	-.034	24.973	20.104	3562.664
69	1.6086	1.708	99.07	72.08	.999	1.000	-.021	24.985	20.158	4271.705
70	1.6535	1.992	99.19	72.05	1.000	1.001	.007	25.013	20.178	4980.747
71	1.7003	2.276	99.22	72.08	1.001	1.000	.014	25.021	20.157	5689.599

Table 59.

JOB KLD70 TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 19. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY	99.283	99.283
FREE STREAM TEMPERATURE	70.154	
WALL TEMPERATURE	94.020	
WALL HEAT FLUX	.07837	
FREE STREAM DENSITY	.07580	
FREE STREAM KINEMATIC VISCOSITY	.0001613	
DENSITY OF FLUID AT WALL	.07254	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001744	
WALL/FREE STREAM DENSITY RATIO	.95690	
LOCATION REYNOLDS NUMBER (REX)	3500468.16	
INPUT VALUE OF VELOCITY DELTA	1.90000	
INPUT VALUE OF TEMPERATURE DELTA	1.90000	
CALCULATED DELTA		1.44051
DELTA 99.5% INPUT	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	.16285	.16280
MOMENTUM THICKNESS (THETA)	.12147	.12179
ENERGY-DISSIPATION THICKNESS	.22103	.22130
ENTHALPY THICKNESS	.00577	.00578
SHAPE FACTOR 12 (DELSTAR/THETA)	1.34069	1.33679
SHAPE FACTOR 32 (ENERGY/THETA)	1.81970	1.81711
MOMENTUM THICKNESS REYNOLDS NUMBER	6229.94	6246.37
DISPLACEMENT THICKNESS REYNOLDS NUMBER	8352.39	8350.08
SKIN FRICTION COEFFICIENT	.003055	
FRICTION VELOCITY	3.96652	
LAW OF THE WALL CONSTANT (K)	.41000	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		.15009
CLAUSERS 'DELTA' INTEGRAL	-3.75329	-3.93035
CLAUSERS 'G' INTEGRAL	21.69048	21.44473
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.15352	.15702
MOMENTUM THICKNESS - CONSTANT DENSITY	.12246	.12280
SHAPE FACTOR 12 - CONSTANT DENSITY	1.25360	1.27875

LOCATION -X- 68.25000
Z = CENTERLINE

Table 60.

JOB KLD70 TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 19. GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
1	.0071	.005	41.22	85.75	.415	.347	-14.639	10.391	7.286	15.515
2	.0082	.006	43.69	84.82	.440	.385	-14.017	11.014	8.106	15.600
3	.0092	.006	46.23	84.30	.466	.407	-13.374	11.656	8.567	17.495
4	.0101	.007	48.06	83.80	.484	.428	-12.908	12.122	9.002	19.201
5	.0111	.006	49.41	83.28	.498	.450	-12.573	12.457	9.464	21.097
6	.0130	.009	51.66	82.56	.520	.480	-12.006	13.025	10.100	22.698
7	.0142	.010	52.58	82.19	.530	.496	-11.774	13.256	10.423	22.973
8	.0153	.011	53.60	81.85	.540	.510	-11.517	13.513	10.719	23.058
9	.0174	.012	54.74	81.40	.551	.529	-11.229	13.801	11.123	33.038
10	.0194	.013	55.78	81.13	.562	.540	-10.967	14.063	11.356	36.829
11	.0214	.015	56.65	80.94	.571	.548	-10.749	14.282	11.529	40.620
12	.0230	.016	57.41	80.79	.578	.554	-10.558	14.472	11.657	43.653
13	.0245	.017	57.64	80.69	.581	.559	-10.499	14.531	11.745	46.496
14	.0264	.018	58.44	80.43	.589	.569	-10.296	14.734	11.974	50.098
15	.0282	.020	58.88	80.20	.593	.579	-10.167	14.843	12.174	53.510
16	.0304	.021	59.70	79.96	.601	.589	-9.980	15.050	12.390	57.680
17	.0320	.022	60.23	79.78	.607	.597	-9.847	15.183	12.545	60.713
18	.0363	.027	61.51	79.29	.620	.617	-9.524	15.507	12.979	72.654
19	.0455	.032	63.07	78.96	.635	.631	-9.129	15.901	13.272	86.302
20	.0523	.036	64.44	78.58	.649	.647	-8.784	16.247	13.605	99.191
21	.0582	.040	65.27	78.36	.657	.656	-8.575	16.456	13.794	110.375
22	.0652	.045	66.56	78.13	.670	.666	-8.251	16.779	14.002	123.643
23	.0722	.050	67.16	77.70	.677	.684	-8.095	16.936	14.381	136.911
24	.0784	.054	68.30	77.52	.688	.691	-7.811	17.219	14.537	148.664
25	.0852	.059	69.01	77.35	.695	.698	-7.632	17.398	14.687	161.553
26	.0922	.064	69.69	77.28	.702	.701	-7.461	17.569	14.751	174.821
27	.0983	.068	70.49	77.10	.710	.709	-7.259	17.771	14.905	186.384
28	.1055	.073	71.02	76.93	.715	.716	-7.125	17.905	15.057	200.031
29	.1126	.078	71.94	76.71	.725	.725	-6.894	18.136	15.252	213.489
30	.1185	.082	72.76	76.49	.733	.734	-6.688	18.343	15.445	225.673
31	.1252	.087	72.78	76.60	.733	.730	-6.680	18.350	15.347	237.373
32	.1323	.092	73.50	76.67	.740	.727	-6.499	18.531	15.291	250.831
33	.1496	.104	74.32	75.83	.749	.762	-6.294	18.736	16.025	283.623
34	.1670	.116	75.18	75.60	.757	.772	-6.078	18.953	16.234	316.604
35	.1844	.128	75.31	75.44	.769	.779	-5.791	19.239	16.374	349.586
36	.2024	.152	77.35	75.01	.779	.797	-5.529	19.501	16.753	382.705
37	.2378	.176	78.42	74.92	.790	.800	-5.261	19.769	16.832	415.549
38	.2542	.165	79.26	74.76	.798	.807	-5.046	19.982	16.968	448.805
39	.2724	.189	80.61	74.54	.812	.813	-4.854	20.177	17.099	481.891
40	.2893	.201	81.49	74.49	.821	.818	-4.708	20.322	17.163	514.389
41	.3076	.214	82.09	74.09	.827	.818	-4.486	20.544	17.211	546.423
42	.3554	.247	83.82	73.86	.844	.835	-4.333	20.697	17.263	578.111
43	.4035	.280	85.46	73.54	.861	.845	-3.899	21.131	17.764	673.715
44	.4516	.314	86.76	72.95	.874	.858	-3.486	21.545	18.041	764.888
45	.4995	.347	87.99	72.81	.886	.883	-3.157	21.873	18.560	856.062
46	.5472	.380	89.10	72.55	.897	.889	-2.846	22.184	18.689	946.856
47	.5955	.413	90.02	72.25	.907	.900	-2.567	22.463	18.917	1037.271
48	.6433	.447	90.66	72.14	.916	.912	-2.335	22.695	19.179	1128.823
49	.6914	.480	92.45	71.97	.931	.917	-2.099	22.931	19.278	1219.428
50	.7394	.513	93.05	71.80	.937	.924	-1.72	23.306	19.424	1310.601
51	.7872	.546	93.98	71.67	.947	.931	-1.571	23.460	19.574	1401.585
52	.8352	.579	94.38	71.30	.951	.936	-1.338	23.693	19.689	1492.189
53	.8832	.613	94.97	71.37	.957	.944	-1.235	23.798	19.842	1583.173
54	.9312	.646	95.48	71.37	.962	.949	-1.068	23.943	19.954	1674.157
55	.9792	.680	95.94	71.22	.966	.955	-.959	24.072	19.959	1765.140
56	1.0275	.713	96.38	71.05	.971	.962	-.844	24.187	20.092	1856.124
57	1.0756	.747	96.55	70.95	.973	.967	-.732	24.299	20.237	1947.676
58	1.1231	.780	96.95	70.87	.976	.970	-.668	24.342	20.325	2038.850
59	1.1713	.813	96.99	70.87	.977	.970	-.589	24.442	20.401	2128.885
60	1.2194	.847	97.51	70.74	.982	.975	-.579	24.451	20.401	2222.248
61	1.2675	.880	97.84	70.65	.985	.979	-.448	24.583	20.558	2311.421
62	1.3150	.913	97.82	70.69	.985	.978	-.364	24.666	20.592	2402.595
63	1.3636	.947	97.94	70.64	.986	.978	-.370	24.660	20.558	2492.631
64	1.4114	.980	98.17	70.53	.989	.980	-.338	24.692	20.599	2584.752
65	1.4590	1.013	98.25	70.51	.990	.984	-.282	24.748	20.695	2675.356
66	1.5074	1.046	98.40	70.54	.991	.984	-.261	24.769	20.715	2765.582
67	1.5574	1.080	99.05	70.30	.998	.994	-.222	24.809	20.689	2855.324
68	1.6074	1.113	99.27	70.18	1.000	.999	-.060	24.971	20.809	2945.323
69	1.6574	1.146	99.23	70.10	1.000	.999	-.003	25.028	21.002	3035.944
70	1.7074	1.179	99.23	70.10	1.000	1.002	-.013	25.017	21.074	3126.133
71	1.7574	1.212	99.35	70.18	1.001	.999	.016	25.046	21.010	3216.184

Table 60.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 9. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY ==	98.553	98.553
FREE STREAM TEMPERATURE ==	69.650	
WALL TEMPERATURE ==	92.640	
WALL HEAT FLUX ==	.07726	
FREE STREAM DENSITY ==	.07613	
FREE STREAM KINEMATIC VISCOSITY ==	.0001605	
DENSITY OF FLUID AT WALL ==	.07296	
KINEMATIC VISCOSITY OF FLUID AT WALL ==	.0001730	
WALL/FREE STREAM DENSITY RATIO ==	.95838	
LOCATION REYNOLDS NUMBER (REX) ==	3894773.62	
INPUT VALUE OF VELOCITY DELTA ==	2.40000	
INPUT VALUE OF TEMPERATURE DELTA ==	2.40000	
CALCULATED DELTA ==		1.64064
DELTA 99.5% INPUT ==	.00000	
DISPLACEMENT THICKNESS (DELSTAR) ==	.19124	.19131
MOMENTUM THICKNESS (THETA) ==	.14423	.14436
ENERGY-DISSIPATION THICKNESS ==	.26267	.26274
ENTHALPY THICKNESS ==	.00614	.00614
SHAPE FACTOR 12 (DELSTAR/THETA) ==	1.32590	1.32522
SHAPE FACTOR 32 (ENERGY/THETA) ==	1.82115	1.82003
MOMENTUM THICKNESS REYNOLDS NUMBER ==	7379.78	7386.28
DISPLACEMENT THICKNESS REYNOLDS NUMBER ==	9784.82	9788.42
SKIN FRICTION COEFFICIENT ==	.002922	
FRICTION VELOCITY ==	3.84796	
LAW OF THE WALL CONSTANT (K) ==	.41000	
LAW OF THE WALL CONSTANT (C) ==	5.00000	
WAKE STRENGTH ==		.21554
CLAUSERS 'DELTA' INTEGRAL ==	-4.61443	-4.74245
CLAUSERS 'G' INTEGRAL ==	26.08754	26.04504
DISPLACEMENT THICKNESS - CONSTANT DENSITY ==	.18263	.18517
MOMENTUM THICKNESS - CONSTANT DENSITY ==	.14533	.14546
SHAPE FACTOR 12 - CONSTANT DENSITY ==	1.25669	1.27296

LOCATION -X- 76.12000

Z = +6 INCHES

Table 61.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 9. GRID NO. 3

REDUCED PROFILE DATA

	Y	DELTA	U	T	U/UE	THETA	U-UE	U(+)	T(+)	Y(+)
	INCHES		FT/SEC	DEG.F			UTAU			
N	.0049	.003	31.00	85.82	.315	.297	-17.556	8.056	5.951	9.136
1	.0060	.004	35.15	84.92	.357	.336	-16.478	9.134	6.735	11.174
2	.0079	.005	42.29	83.73	.429	.388	-14.622	10.989	7.772	14.695
3	.0100	.006	46.40	82.86	.471	.424	-13.554	12.057	8.510	18.586
4	.0120	.007	48.39	82.04	.491	.461	-13.036	12.576	9.241	22.292
5	.0137	.008	50.18	81.63	.509	.479	-12.572	13.039	9.602	26.442
6	.0150	.009	51.00	81.36	.517	.491	-12.359	13.252	9.841	30.785
7	.0171	.010	52.26	81.06	.530	.504	-12.030	13.582	10.100	35.174
8	.0190	.012	53.15	80.59	.539	.524	-11.800	13.812	10.510	39.526
9	.0211	.013	54.46	80.12	.553	.544	-11.460	14.152	10.915	43.853
10	.0227	.014	55.20	79.99	.560	.550	-11.266	14.346	11.029	48.152
11	.0269	.016	56.89	79.44	.577	.574	-10.827	14.785	11.509	52.519
12	.0359	.022	58.44	78.72	.593	.605	-10.425	15.187	12.136	56.880
13	.0430	.026	60.07	78.40	.609	.619	-10.002	15.610	12.420	61.337
14	.0489	.030	61.51	78.15	.624	.630	-9.628	15.984	12.636	65.700
15	.0560	.034	62.83	77.78	.638	.646	-9.282	16.329	12.957	70.066
16	.0630	.038	63.73	77.42	.647	.662	-9.050	16.562	13.271	74.426
17	.0669	.042	64.41	77.45	.653	.661	-8.899	16.713	13.519	78.788
18	.0759	.046	65.44	77.14	.664	.674	-8.605	17.007	13.951	83.151
19	.0830	.051	66.43	77.14	.674	.674	-8.349	17.243	14.351	87.514
20	.0889	.054	66.90	76.94	.679	.683	-8.227	17.385	14.595	91.878
21	.0961	.059	67.93	76.60	.689	.698	-7.958	17.654	14.987	96.241
22	.1030	.063	68.73	76.47	.697	.703	-7.751	17.860	15.190	100.604
23	.1089	.066	69.03	76.35	.700	.709	-7.674	17.938	15.208	104.967
24	.1159	.071	69.52	76.43	.705	.705	-7.546	18.066	14.136	109.330
25	.1230	.075	70.03	75.99	.711	.724	-7.413	18.199	14.519	113.693
26	.1400	.085	71.76	75.65	.728	.739	-6.962	18.650	14.820	118.056
27	.1578	.096	72.86	75.53	.739	.744	-6.677	18.935	14.925	122.419
28	.1751	.107	74.25	75.14	.753	.761	-6.316	19.296	15.261	126.782
29	.1929	.118	75.34	74.90	.764	.772	-6.033	19.579	15.470	131.145
30	.2101	.128	75.76	74.62	.769	.784	-5.923	19.689	15.711	135.508
31	.2280	.139	76.71	74.42	.778	.793	-5.676	19.936	15.893	139.871
32	.2449	.149	77.43	74.30	.786	.798	-5.491	20.121	15.997	144.234
33	.2630	.160	78.41	74.27	.796	.799	-5.236	20.376	16.022	148.597
34	.2799	.171	78.91	74.09	.801	.807	-5.104	20.508	16.178	152.960
35	.2981	.182	79.56	73.96	.808	.813	-4.930	20.682	16.293	157.323
36	.3497	.213	81.48	73.46	.827	.834	-4.437	21.175	16.730	161.686
37	.4009	.244	83.13	73.00	.844	.854	-4.008	21.604	17.127	166.049
38	.4531	.276	84.62	72.96	.859	.856	-3.622	21.990	17.163	170.412
39	.5049	.308	85.70	72.47	.870	.877	-3.340	22.272	17.592	174.775
40	.5569	.339	86.98	72.22	.883	.888	-3.006	22.605	17.804	179.138
41	.6091	.371	88.39	72.04	.897	.896	-2.642	22.970	17.965	183.501
42	.6607	.403	89.35	71.69	.907	.911	-2.392	23.220	18.272	187.864
43	.7128	.434	89.94	71.74	.913	.920	-2.238	23.374	18.229	192.227
44	.7639	.466	90.90	71.50	.922	.920	-1.987	23.623	18.436	196.590
45	.8161	.497	91.26	71.25	.926	.930	-1.869	23.723	18.652	200.953
46	.8680	.529	92.13	71.16	.935	.934	-1.669	23.943	18.735	205.316
47	.9199	.561	92.94	70.92	.943	.945	-1.458	24.154	18.943	209.679
48	.9721	.592	93.13	70.86	.945	.948	-1.411	24.201	18.998	214.042
49	1.0238	.624	93.90	70.62	.953	.958	-1.209	24.403	19.206	218.405
50	1.0749	.655	94.36	70.69	.958	.955	-1.086	24.526	19.140	222.768
51	1.1269	.687	94.59	70.66	.960	.956	-1.031	24.581	19.167	227.131
52	1.1790	.719	95.35	70.29	.967	.972	-0.834	24.778	19.487	231.494
53	1.2310	.750	95.67	70.32	.971	.971	-0.750	24.862	19.461	235.857
54	1.2831	.782	95.77	70.26	.972	.973	-0.725	24.887	19.513	240.220
55	1.3350	.814	96.16	70.14	.976	.979	-0.621	24.991	19.620	244.583
56	1.3868	.845	96.40	70.12	.978	.980	-0.559	25.053	19.640	248.946
57	1.4379	.876	96.67	70.08	.981	.981	-0.490	25.122	19.674	253.309
58	1.4901	.908	96.80	70.05	.982	.983	-0.457	25.155	19.704	257.672
59	1.5420	.940	97.07	70.07	.985	.982	-0.385	25.227	19.684	262.035
60	1.5939	.971	97.19	69.90	.986	.989	-0.355	25.257	19.630	266.398
61	1.6461	1.003	97.26	69.96	.987	.986	-0.337	25.275	19.777	270.761
62	1.6981	1.035	97.37	69.93	.988	.988	-0.308	25.304	19.806	275.124
63	1.7501	1.067	98.02	69.79	.995	.994	-0.400	25.472	19.928	279.487
64	1.8021	1.099	98.33	69.77	.998	.995	-0.059	25.553	19.948	283.850
65	1.8541	1.131	98.54	69.64	1.000	1.000	-0.004	25.608	20.055	288.213
66	1.9061	1.163	98.53	69.64	1.001	1.001	-0.006	25.606	20.060	292.576
67	1.9581	1.195	98.59	69.67	1.000	1.000	-0.010	25.622	20.063	296.939
68	2.0101	1.227	98.54	69.61	1.001	1.002	-0.021	25.633	20.085	301.302
69	2.0621	1.259	98.54	69.65	1.000	1.000	-0.005	25.607	20.051	305.665
70	2.1141	1.291	98.54	69.65	1.000	1.000	-0.005	25.607	20.051	310.028

Table 61.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 10. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY =	99.281	99.281
FREE STREAM TEMPERATURE =	70.232	
WALL TEMPERATURE =	93.600	
WALL HEAT FLUX =	.07787	
FREE STREAM DENSITY =	.07604	
FREE STREAM KINEMATIC VISCOSITY =	.0001608	
DENSITY OF FLUID AT WALL =	.07262	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001736	
WALL/FREE STREAM DENSITY RATIO =	.95766	
LOCATION REYNOLDS NUMBER (REX) =	3915891.00	
INPUT VALUE OF VELOCITY DELTA =	2.10000	
INPUT VALUE OF TEMPERATURE DELTA =	2.40000	
CALCULATED DELTA =		1.56573
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.18436	.18442
MOMENTUM THICKNESS (THETA) =	.13896	.13917
ENERGY-DISSIPATION THICKNESS =	.25302	.25315
ENTHALPY THICKNESS =	.00584	.00584
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.32666	1.32514
SHAPE FACTOR 32 (ENERGY/THETA) =	1.82073	1.81905
MOMENTUM THICKNESS REYNOLDS NUMBER =	7146.80	7159.29
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	9484.03	9487.07
SKIN FRICTION COEFFICIENT =	.002944	
FRICTION VELOCITY =	3.89212	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.20729
CLAUSERS 'DELTA' INTEGRAL =	-4.40457	-4.55725
CLAUSERS 'G' INTEGRAL =	25.11143	25.00872
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.17564	.17866
MOMENTUM THICKNESS - CONSTANT DENSITY =	.14001	.14022
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.25447	1.27410
LOCATION -X-	76.12000	
Z = -6 INCHES		

Table 62.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 10. GPID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	U-UE UTAU	U1+)	Y1+)	Y1+)
1	.0059	.004	35.63	86.02	.359	.326	-16.353	9.156	6.677	11.079
2	.0073	.005	40.65	84.97	.409	.371	-15.064	10.444	7.590	13.694
3	.0084	.005	43.40	84.34	.441	.398	-14.254	11.254	8.141	15.749
4	.0104	.007	47.49	83.43	.478	.437	-13.307	12.201	8.938	19.486
5	.0124	.008	49.97	82.60	.503	.472	-12.669	12.839	9.662	23.222
6	.0143	.009	51.84	82.03	.522	.496	-12.188	13.320	10.160	26.772
7	.0159	.010	53.04	81.69	.534	.511	-11.881	13.627	10.455	29.761
8	.0172	.011	53.62	81.36	.540	.525	-11.731	13.777	10.747	32.189
9	.0193	.012	54.86	80.98	.553	.541	-11.412	14.096	11.080	35.113
10	.0212	.013	55.56	80.69	.560	.554	-11.234	14.274	11.330	39.662
11	.0233	.015	56.14	80.52	.565	.561	-11.084	14.424	11.475	43.586
12	.0250	.016	57.2	80.51	.574	.561	-10.859	14.649	11.487	46.762
13	.0311	.020	58.75	79.63	.592	.599	-10.414	15.094	12.254	58.158
14	.0364	.024	60.12	79.36	.606	.611	-10.061	15.447	12.495	71.796
15	.0454	.029	61.45	78.84	.619	.632	-9.720	15.789	12.944	84.873
16	.0513	.032	63.07	78.75	.635	.637	-9.304	16.204	13.027	95.896
17	.0583	.037	64.18	78.28	.646	.657	-9.018	16.491	13.439	108.973
18	.0652	.041	64.63	77.96	.653	.670	-8.852	16.656	13.711	121.864
19	.0715	.045	65.80	77.73	.663	.680	-8.663	16.906	13.915	133.634
20	.0781	.049	66.74	77.61	.672	.685	-8.360	17.148	14.022	145.964
21	.0853	.054	67.37	77.50	.679	.690	-8.198	17.310	14.118	159.415
22	.0913	.058	68.19	77.45	.687	.692	-7.968	17.520	14.163	170.625
23	.0983	.062	68.87	77.21	.694	.702	-7.815	17.694	14.370	183.702
24	.1055	.067	69.25	76.86	.704	.717	-7.562	17.946	14.672	197.153
25	.1114	.070	70.02	76.85	.705	.718	-7.518	17.990	14.685	208.176
26	.1184	.075	70.63	76.60	.711	.728	-7.362	18.146	14.907	221.253
27	.1253	.079	71.32	76.45	.718	.735	-7.185	18.323	15.035	234.144
28	.1423	.090	73.00	76.16	.735	.747	-6.753	18.755	15.283	265.904
29	.1599	.101	74.04	75.79	.746	.763	-6.486	19.022	15.607	296.785
30	.1774	.112	74.89	75.62	.754	.770	-6.268	19.240	15.763	331.479
31	.1951	.123	76.10	75.50	.766	.775	-5.956	19.552	15.863	364.546
32	.2123	.134	76.92	75.01	.775	.796	-5.745	19.763	16.295	396.679
33	.2301	.145	77.82	74.99	.784	.797	-5.514	19.994	16.312	429.934
34	.2473	.156	78.71	75.05	.793	.794	-5.265	20.223	16.258	462.067
35	.2653	.167	79.30	74.51	.799	.817	-5.113	20.375	16.726	495.695
36	.2824	.178	80.01	74.35	.806	.824	-4.811	20.557	16.871	527.642
37	.3002	.189	80.78	74.35	.814	.824	-4.754	20.754	16.869	560.896
38	.3199	.222	82.74	73.98	.833	.840	-4.251	20.257	17.190	593.757
39	.3434	.254	83.93	73.43	.843	.863	-3.943	20.565	17.688	627.365
40	.3553	.287	85.71	73.23	.863	.872	-3.486	20.022	17.448	660.657
41	.3744	.320	86.78	72.93	.874	.885	-3.211	20.297	18.111	693.992
42	.3955	.353	87.92	72.49	.886	.904	-2.920	20.588	18.492	727.326
43	.4114	.386	89.13	72.43	.898	.906	-2.609	20.899	18.548	760.287
44	.4299	.418	89.96	72.08	.906	.921	-2.395	21.113	18.852	793.500
45	.4499	.451	90.90	72.00	.916	.924	-2.154	21.354	18.918	826.648
46	.4764	.483	91.84	71.91	.925	.928	-1.912	21.596	18.999	859.861
47	.4883	.516	92.47	71.48	.931	.947	-1.751	21.757	19.376	893.822
48	.4803	.549	92.90	71.34	.936	.953	-1.640	21.869	19.496	927.969
49	.4923	.582	93.67	71.39	.943	.951	-1.442	22.066	19.454	962.117
50	.4974	.614	94.69	71.09	.954	.963	-1.179	22.329	19.714	996.264
51	1.0260	.647	94.72	71.10	.954	.963	-1.171	22.337	19.712	1030.411
52	1.0774	.679	95.44	71.09	.961	.963	-.986	22.522	19.713	1064.558
53	1.1293	.712	95.79	70.98	.965	.968	-.898	22.610	19.815	1098.705
54	1.1814	.745	95.98	70.98	.967	.968	-.848	22.660	19.815	1132.852
55	1.2331	.778	96.48	70.93	.972	.970	-.720	22.788	19.859	1166.999
56	1.2854	.811	96.72	70.77	.974	.977	-.659	22.850	19.995	1201.146
57	1.3374	.843	97.03	70.78	.977	.976	-.578	22.930	19.984	1235.293
58	1.3890	.876	97.36	70.77	.981	.977	-.492	23.016	19.993	1269.440
59	1.4405	.908	97.49	70.55	.982	.986	-.460	23.049	20.135	1303.587
60	1.4922	.941	97.63	70.61	.983	.984	-.424	23.084	20.135	1337.734
61	1.5442	.974	97.95	70.63	.987	.983	-.342	23.166	20.222	1371.881
62	1.5961	1.007	98.03	70.57	.987	.986	-.322	23.186	20.711	1406.028
63	1.6483	1.039	98.22	70.54	.989	.987	-.272	23.236	20.195	1440.175
64	1.7003	1.072	98.45	70.53	.992	.987	-.213	23.295	20.209	1474.322
65	1.7523	1.279	98.81	70.38	.995	.994	-.121	23.388	20.461	1508.469
66	2.0285	1.487	99.23	70.35	1.000	.995	-.013	23.496	20.461	1542.616
67	2.3575	1.693	99.23	70.22	1.000	1.000	-.002	23.496	20.472	1576.763
68	3.0142	1.901	99.36	70.21	1.001	1.001	-.001	23.533	20.472	1610.910
69	3.3430	2.108	99.15	70.26	1.000	1.000	-.003	23.476	20.443	1645.057
70	3.6713	2.315	99.29	70.22	1.000	1.000	-.002	23.510	20.472	1679.204
71	4.0004	2.523	99.24	70.28	1.000	.998	-.009	23.499	20.428	1713.351

Table 62.

JOB KLD7D TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 24. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY =	99.510	99.510
FREE STREAM TEMPERATURE =	69.100	
WALL TEMPERATURE =	92.540	
WALL HEAT FLUX =	.07710	
FREE STREAM DENSITY =	.07488	
FREE STREAM KINEMATIC VISCOSITY =	.0001631	
DENSITY OF FLUID AT WALL =	.07170	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001761	
WALL/FREE STREAM DENSITY RATIO =	.95755	
LOCATION REYNOLDS NUMBER (REX) =	4282038.69	
INPUT VALUE OF VELOCITY DELTA =	2.40000	
INPUT VALUE OF TEMPERATURE DELTA =	2.40000	
CALCULATED DELTA =		1.73979
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.19731	.19717
MOMENTUM THICKNESS (THETA) =	.14844	.14880
ENERGY-DISSIPATION THICKNESS =	.27040	.27073
ENTHALPY THICKNESS =	.00641	.00642
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.32928	1.32504
SHAPE FACTOR 32 (ENERGY/THETA) =	1.82163	1.81936
MOMENTUM THICKNESS REYNOLDS NUMBER =	7548.85	7567.53
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	10034.51	10027.26
SKIN FRICTION COEFFICIENT =	.002930	
FRICTION VELOCITY =	3.89240	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.17959
CLAUSERS 'DELTA' INTEGRAL =	-4.68044	-4.87665
CLAUSERS 'G' INTEGRAL =	27.00375	26.65151
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.18699	.19075
MOMENTUM THICKNESS - CONSTANT DENSITY =	.14959	.14998
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.25003	1.27190
LOCATION -X-	84.20000	
Z = CENTERLINE		

Table 63.

JOB KLD70 TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 24. GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
1	.0078	.005	41.87	83.78	.421	.374	-14.807	10.758	7.607	14.426
2	.0089	.005	43.50	83.16	.437	.400	-14.390	11.176	8.185	16.452
3	.0103	.006	45.80	82.53	.460	.427	-13.798	11.767	8.696	19.031
4	.0111	.006	47.35	82.29	.476	.437	-13.400	12.165	8.905	20.505
5	.0119	.007	48.60	82.12	.488	.444	-13.079	12.487	9.049	21.979
6	.0137	.008	50.57	81.31	.508	.479	-12.574	12.992	9.558	25.295
7	.0149	.009	51.55	81.06	.518	.490	-12.322	13.243	9.976	27.506
8	.0162	.009	52.48	80.90	.527	.497	-12.083	13.482	10.114	29.901
9	.0179	.010	53.46	80.64	.537	.508	-11.830	13.735	10.342	33.033
10	.0199	.011	54.56	80.25	.548	.524	-11.547	14.018	10.677	36.718
11	.0218	.013	55.13	79.95	.554	.537	-11.403	14.162	10.934	40.218
12	.0237	.014	56.37	79.56	.566	.554	-11.083	14.482	11.278	43.719
13	.0253	.015	56.74	79.51	.570	.556	-10.988	14.577	11.321	46.667
14	.0273	.016	57.38	79.34	.577	.563	-10.824	14.741	11.466	50.351
15	.0295	.017	57.99	79.39	.583	.561	-10.666	14.899	11.420	54.405
16	.0321	.018	58.52	79.24	.588	.567	-10.530	15.036	11.550	57.352
17	.0327	.019	59.06	79.02	.594	.577	-10.392	15.173	11.748	60.300
18	.0368	.022	60.25	78.48	.605	.600	-10.087	15.478	12.213	71.538
19	.0460	.026	61.88	78.26	.622	.609	-9.667	15.898	12.405	84.803
20	.0531	.031	63.20	77.72	.635	.632	-9.329	16.237	12.678	97.884
21	.0593	.034	64.00	77.36	.643	.648	-9.123	16.442	13.189	109.306
22	.0659	.038	65.13	77.15	.654	.657	-8.834	16.732	13.369	121.466
23	.0729	.042	65.88	76.97	.662	.664	-8.639	16.926	13.529	134.362
24	.0789	.045	66.86	76.84	.672	.670	-8.368	17.177	13.643	145.416
25	.0860	.049	67.49	76.70	.678	.676	-8.227	17.338	13.764	156.497
26	.0929	.053	68.43	76.46	.688	.686	-7.986	17.579	13.972	171.209
27	.0993	.057	68.82	76.21	.692	.697	-7.886	17.680	14.190	183.000
28	.1060	.061	68.99	76.11	.693	.701	-7.842	17.723	14.272	195.344
29	.1131	.065	70.08	75.97	.704	.707	-7.560	18.005	14.591	208.425
30	.1191	.068	70.54	75.81	.709	.714	-7.444	18.122	14.536	222.479
31	.1259	.072	70.55	75.67	.709	.720	-7.441	18.124	14.655	232.007
32	.1329	.076	71.60	75.55	.720	.725	-7.170	18.396	14.759	244.903
33	.1505	.087	73.11	75.19	.735	.740	-6.783	18.782	15.074	277.329
34	.1677	.096	73.88	74.89	.753	.753	-6.586	18.980	15.335	309.017
35	.1848	.106	75.15	74.71	.755	.761	-6.259	19.306	15.392	340.521
36	.2033	.117	75.70	74.43	.762	.775	-6.117	19.448	15.736	374.236
37	.2200	.126	76.84	74.37	.772	.779	-6.825	19.748	15.785	405.372
38	.2388	.137	78.81	74.05	.784	.789	-6.536	19.989	16.064	438.902
39	.2544	.146	78.36	73.95	.787	.793	-6.434	20.000	16.153	448.959
40	.2729	.157	79.14	73.67	.795	.805	-6.232	20.000	16.396	502.832
41	.2901	.167	79.90	73.52	.803	.811	-6.038	20.000	16.521	554.520
42	.3089	.177	80.54	73.36	.809	.818	-6.874	20.000	16.658	568.051
43	.3357	.207	81.83	72.81	.822	.842	-6.543	21.000	17.143	662.748
44	.4109	.236	83.58	72.74	.840	.845	-6.091	21.474	17.201	757.076
45	.4628	.266	85.27	72.39	.857	.860	-6.658	21.907	17.502	852.694
46	.5149	.296	86.45	72.18	.869	.869	-6.354	22.211	17.686	948.680
47	.5669	.326	87.60	71.94	.880	.879	-6.061	22.505	17.896	1044.482
48	.6193	.356	88.45	71.48	.889	.898	-6.842	22.723	18.295	1141.021
49	.6707	.386	89.61	71.34	.900	.905	-6.544	23.021	18.418	1235.718
50	.7227	.415	90.62	71.39	.911	.902	-6.285	23.280	18.370	1331.520
51	.7741	.445	90.92	70.93	.914	.922	-6.208	23.357	18.772	1426.216
52	.8261	.475	92.06	70.79	.925	.928	-1.914	23.651	18.892	1522.019
53	.8780	.505	92.74	70.52	.932	.939	-1.740	23.825	19.130	1617.636
54	.9299	.535	93.16	70.41	.936	.944	-1.630	23.935	19.222	1713.254
55	.9819	.564	93.92	70.27	.944	.950	-1.437	24.129	19.350	1809.056
56	1.0337	.594	94.28	70.20	.947	.953	-1.343	24.222	19.408	1904.490
57	1.0851	.624	94.97	70.22	.954	.952	-1.166	24.400	19.387	1999.186
58	1.1366	.653	95.49	70.09	.960	.958	-1.032	24.533	19.504	2094.620
59	1.1888	.683	95.79	69.93	.963	.964	-.956	24.610	19.639	2190.238
60	1.2412	.713	96.89	69.87	.964	.967	-.929	24.636	19.697	2286.777
61	1.2928	.743	96.55	69.80	.970	.970	-.760	24.806	19.753	2381.842
62	1.3449	.773	96.83	69.74	.973	.973	-.688	24.877	19.806	2477.828
63	1.3967	.803	97.10	69.56	.976	.978	-.619	24.946	19.908	2573.262
64	1.4479	.833	97.33	69.56	.978	.981	-.559	25.006	19.967	2667.590
65	1.4999	.863	97.55	69.53	.980	.982	-.503	25.062	19.993	2763.392
66	1.5521	.893	97.65	69.48	.981	.984	-.478	25.088	20.029	2859.563
67	1.6041	.923	97.94	69.51	.984	.983	-.403	25.162	20.011	2955.365
68	1.6559	.953	98.13	69.33	.986	.990	-.354	25.211	20.167	3050.798
69	1.7080	.982	98.42	69.40	.989	.987	-.279	25.286	20.102	3146.785
70	1.7600	1.011	99.20	69.19	.997	.996	-.079	25.486	20.382	3242.337
71	1.8120	1.040	99.53	69.11	1.000	1.000	-.006	25.560	20.354	3337.873
72	1.8640	1.069	99.49	69.08	1.000	1.001	-.006	25.560	20.379	3433.836

Table 63.

JOB KLD74 TAPE 3166P- FILES 138-159, RUNS 9.01-9.22 74/12/79

RUN NO. 9. POINT 3. GRID NO. 4

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY	100.573	100.573
FREE STREAM TEMPERATURE	68.762	
WALL TEMPERATURE	94.753	
WALL HEAT FLUX	0.77839	
FREE STREAM DENSITY	0.001617	
FREE STREAM KINEMATIC VISCOSITY	0.0001623	
DENSITY OF FLUID AT WALL	0.0017297	
KINEMATIC VISCOSITY OF FLUID AT WALL	0.0001711	
WALL/FREE STREAM DENSITY RATIO	0.97067	
LOCATION REYNOLDS NUMBER (REFX)	627255.91	
INPUT VALUE OF VELOCITY DELTA	0.41200	
INPUT VALUE OF TEMPERATURE DELTA	0.41200	
CALCULATED DELTA		0.28463
DELTA 99.5% INPUT	0.00200	
DISPLACEMENT THICKNESS (DELSTAR)	0.03557	0.03558
MOMENTUM THICKNESS (THETA)	0.02522	0.02543
ENERGY-DISSIPATION THICKNESS	0.04553	0.04560
ENTHALPY THICKNESS	0.00081	0.00081
SHAPE FACTOR 12 (DELSTAR/THETA)	1.41249	1.40323
SHAPE FACTOR 32 (ENERGY/THETA)	1.80514	1.79693
MOMENTUM THICKNESS REYNOLDS NUMBER	1301.79	1312.61
DISPLACEMENT THICKNESS REYNOLDS NUMBER	1836.16	1841.89
SKIN FRICTION COEFFICIENT	0.004383	
FRICTION VELOCITY	4.77892	
LAW OF THE WALL CONSTANT (K)	0.41200	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		0.24132
CLAUSERS *DELTA* INTEGRAL	0.64742	0.73394
CLAUSERS *G* INTEGRAL	4.15755	0.11235
DISPLACEMENT THICKNESS - CONSTANT DENSITY	0.03260	0.03487
MOMENTUM THICKNESS - CONSTANT DENSITY	0.02537	0.02550
SHAPE FACTOR 12 - CONSTANT DENSITY	1.28464	1.36269

LOCATION -X- 12.15730

Z = CENTERLINE

Table 64.

RUN NO. 9. POINT 3. GRID NO. 4

REDUCED PROFILE DATA

[illegible]

Table 64.

JOB KLD74 TAPE 31669- FILES 138-159, RUNS 9.01-9.22 04/17/79

RUN NO. 0. POINT 4. GRID NO. 4

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY ==	100.698	100.698
FREE STREAM TEMPERATURE ==	69.045	
WALL TEMPERATURE ==	84.092	
WALL HEAT FLUX ==	.07825	
FREE STREAM DENSITY ==	.07517	
FREE STREAM KINEMATIC VISCOSITY ==	.0001625	
DENSITY OF FLUID AT WALL ==	.07293	
KINEMATIC VISCOSITY OF FLUID AT WALL ==	.0001713	
WALL/FREE STREAM DENSITY RATIO ==	.07777	
LOCATION REYNOLDS NUMBER (REX) ==	627481.50	
INPUT VALUE OF VELOCITY DELTA ==	.44200	
INPUT VALUE OF TEMPERATURE DELTA ==	.46000	
CALCULATED DELTA ==		.72279
DELTA 99.5% INPUT ==	.00000	
DISPLACEMENT THICKNESS (DELSTAR) ==	.04019	.04023
MOMENTUM THICKNESS (THETA) ==	.02875	.02898
ENERGY-DISSIPATION THICKNESS ==	.05197	.05216
ENTHALPY THICKNESS ==	.00003	.00004
SHAPE FACTOR 12 (DELSTAR/THETA) ==	1.39791	1.38874
SHAPE FACTOR 32 (ENERGY/THETA) ==	1.80781	1.79993
MOMENTUM THICKNESS REYNOLDS NUMBER ==	1484.53	1496.63
DISPLACEMENT THICKNESS REYNOLDS NUMBER ==	2775.25	2077.87
SKIN FRICTION COEFFICIENT ==	.004243	
FRICTION VELOCITY ==	4.70768	
LAW OF THE WALL CONSTANT (K) ==	.41000	
LAW OF THE WALL CONSTANT (C) ==	5.00000	
WAVE STRENGTH ==		.05775
CLAUSERS 'DELTA' INTEGRAL ==	- .73843	- .84273
CLAUSERS 'C' INTEGRAL ==	4.77699	4.68772
DISPLACEMENT THICKNESS - CONSTANT DENSITY ==	.03694	.03940
MOMENTUM THICKNESS - CONSTANT DENSITY ==	.02891	.02915
SHAPE FACTOR 12 - CONSTANT DENSITY ==	1.27759	1.35144

LOCATION -X- 12.15000

Z = +6 INCHES

Table 65.

RUN NO.	Q.	POINT	4.	GRID NO.
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9
10	10	10	10	10
11	11	11	11	11
12	12	12	12	12
13	13	13	13	13
14	14	14	14	14
15	15	15	15	15
16	16	16	16	16
17	17	17	17	17
18	18	18	18	18
19	19	19	19	19
20	20	20	20	20
21	21	21	21	21
22	22	22	22	22
23	23	23	23	23
24	24	24	24	24
25	25	25	25	25
26	26	26	26	26
27	27	27	27	27
28	28	28	28	28
29	29	29	29	29
30	30	30	30	30
31	31	31	31	31
32	32	32	32	32
33	33	33	33	33
34	34	34	34	34
35	35	35	35	35
36	36	36	36	36
37	37	37	37	37
38	38	38	38	38
39	39	39	39	39
40	40	40	40	40
41	41	41	41	41
42	42	42	42	42
43	43	43	43	43
44	44	44	44	44
45	45	45	45	45
46	46	46	46	46
47	47	47	47	47
48	48	48	48	48
49	49	49	49	49
50	50	50	50	50
51	51	51	51	51
52	52	52	52	52
53	53	53	53	53
54	54	54	54	54
55	55	55	55	55
56	56	56	56	56
57	57	57	57	57
58	58	58	58	58
59	59	59	59	59
60	60	60	60	60
61	61	61	61	61
62	62	62	62	62
63	63	63	63	63
64	64	64	64	64
65	65	65	65	65
66	66	66	66	66
67	67	67	67	67
68	68	68	68	68
69	69	69	69	69
70	70	70	70	70
71	71	71	71	71
72	72	72	72	72
73	73	73	73	73
74	74	74	74	74
75	75	75	75	75
76	76	76	76	76
77	77	77	77	77
78	78	78	78	78
79	79	79	79	79
80	80	80	80	80
81	81	81	81	81
82	82	82	82	82
83	83	83	83	83
84	84	84	84	84
85	85	85	85	85
86	86	86	86	86
87	87	87	87	87

REDUCED PROFILE DATA

[illegible]**Table 65.**

JOB KLD74 TAPE 3166R- FILES 138-159, RUNS 9.01-9.22 04/17/79

RUN NO. 9. POINT 5. GRID NO. 4

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY	100.844	100.844
FREE STREAM TEMPERATURE	69.176	
WALL TEMPERATURE	85.493	
WALL HEAT FLUX	.07903	
FREE STREAM DENSITY	.007513	
FREE STREAM KINEMATIC VISCOSITY	.0001625	
DENSITY OF FLUID AT WALL	.007287	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001715	
WALL/FREE STREAM DENSITY RATIO	.96095	
LOCATION REYNOLDS NUMBER (REX)	628263.06	
INPUT VALUE OF VELOCITY DELTA	.40000	
INPUT VALUE OF TEMPERATURE DELTA	.40000	
CALCULATED DELTA		.71379
DELTA 09.5% INPUT	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	.03898	.03897
MOMENTUM THICKNESS (THETA)	.02762	.02794
ENERGY-DISSIPATION THICKNESS	.04995	.05024
ENTHALPY THICKNESS	.00086	.00087
SHAPE FACTOR 12 (DELSTAR/THETA)	1.41154	1.39515
SHAPE FACTOR 12 (ENERGY/THETA)	1.80851	1.79834
MOMENTUM THICKNESS REYNOLDS NUMBER	1428.05	1444.52
DISPLACEMENT THICKNESS REYNOLDS NUMBER	2015.76	2015.32
SKIN FRICTION COEFFICIENT	.004252	
FRICTION VELOCITY	4.73808	
LAW OF THE WALL CONSTANT (K)	.41000	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		.04696
CLAUSERS *DELTA* INTEGRAL	- .69372	- .01112
CLAUSERS *G* INTEGRAL	4.68346	4.52875
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.03536	.03911
MOMENTUM THICKNESS - CONSTANT DENSITY	.02778	.02911
SHAPE FACTOR 12 - CONSTANT DENSITY	1.27259	1.35562

LOCATION -X- 12.15707

Z = -6 INCHES

Table 66.

RUN NO.	°.	POINT	E.	GRID NO. 4
1	10	10	10	10
2	20	20	20	20
3	30	30	30	30
4	40	40	40	40
5	50	50	50	50
6	60	60	60	60
7	70	70	70	70
8	80	80	80	80
9	90	90	90	90
10	100	100	100	100
11	110	110	110	110
12	120	120	120	120
13	130	130	130	130
14	140	140	140	140
15	150	150	150	150
16	160	160	160	160
17	170	170	170	170
18	180	180	180	180
19	190	190	190	190
20	200	200	200	200
21	210	210	210	210
22	220	220	220	220
23	230	230	230	230
24	240	240	240	240
25	250	250	250	250
26	260	260	260	260
27	270	270	270	270
28	280	280	280	280
29	290	290	290	290
30	300	300	300	300
31	310	310	310	310
32	320	320	320	320
33	330	330	330	330
34	340	340	340	340
35	350	350	350	350
36	360	360	360	360
37	370	370	370	370
38	380	380	380	380
39	390	390	390	390
40	400	400	400	400
41	410	410	410	410
42	420	420	420	420
43	430	430	430	430
44	440	440	440	440
45	450	450	450	450
46	460	460	460	460
47	470	470	470	470
48	480	480	480	480
49	490	490	490	490
50	500	500	500	500
51	510	510	510	510
52	520	520	520	520
53	530	530	530	530
54	540	540	540	540
55	550	550	550	550
56	560	560	560	560
57	570	570	570	570
58	580	580	580	580
59	590	590	590	590
60	600	600	600	600
61	610	610	610	610
62	620	620	620	620
63	630	630	630	630
64	640	640	640	640
65	650	650	650	650
66	660	660	660	660
67	670	670	670	670
68	680	680	680	680
69	690	690	690	690
70	700	700	700	700
71	710	710	710	710
72	720	720	720	720
73	730	730	730	730
74	740	740	740	740
75	750	750	750	750
76	760	760	760	760
77	770	770	770	770
78	780	780	780	780
79	790	790	790	790
80	800	800	800	800

REDUCED PROFILE DATA

[illegible]

Table 66.

JOE KLD74 TAPE 3166R- FILES 138-159, RUNS 9.71-9.72 04/12/79

RUN NO. 5. POINT 6. GRID NO. 4

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUPPLAYER FUNCTION FROM WALL TO Y+=75
FREE STREAM VELOCITY ==	100.355	100.355
FREE STREAM TEMPERATURE ==	68.977	
WALL TEMPERATURE ==	86.130	
WALL HEAT FLUX ==	0.27877	
FREE STREAM DENSITY ==	0.07516	
FREE STREAM KINEMATIC VISCOSITY ==	0.001524	
DENSITY OF FLUID AT WALL ==	0.27278	
KINEMATIC VISCOSITY OF FLUID AT WALL ==	0.001719	
WALL/FREE STREAM DENSITY RATIO ==	0.96879	
LOCATION REYNOLDS NUMBER (REFX) ==	1035617.93	
INPUT VALUE OF VELOCITY DELTA ==	0.50000	
INPUT VALUE OF TEMPERATURE DELTA ==	0.62000	
CALCULATED DELTA ==		0.44668
DELTA 09.51 INPUT ==	0.00000	
DISPLACEMENT THICKNESS (DELSTAR) ==	0.05514	0.05511
MOMENTUM THICKNESS (THETA) ==	0.03967	0.03993
ENERGY-DISSIPATION THICKNESS ==	0.07169	0.07193
ENTHALPY THICKNESS ==	0.00142	0.00142
SHAPE FACTOR 12 (DELSTAR/THETA) ==	1.33999	1.38012
SHAPE FACTOR 72 (ENERGY/THETA) ==	1.00145	1.00133
MOMENTUM THICKNESS REYNOLDS NUMBER ==	2042.71	2056.71
DISPLACEMENT THICKNESS REYNOLDS NUMBER ==	2039.34	2037.06
SKIN FRICTION COEFFICIENT ==	0.003934	
FRICTION VELOCITY ==	4.50576	
LAW OF THE WALL CONSTANT (K) ==	0.41700	
LAW OF THE WALL CONSTANT (C) ==	0.00000	
WAKE STRENGTH ==		0.99937
CLAUSERS *DELTA* INTEGRAL ==	-1.07564	-1.19586
CLAUSERS *C* INTEGRAL ==	6.84279	6.69158
DISPLACEMENT THICKNESS - CONSTANT DENSITY ==	0.05101	0.05360
MOMENTUM THICKNESS - CONSTANT DENSITY ==	0.03993	0.04022
SHAPE FACTOR 12 - CONSTANT DENSITY ==	1.27746	1.73557

LOCATION -X- 20.11000

Z = CENTERLINE

Table 67.

JDE KLD74 TAPE 3165E- FILES 176-159, RUNS 9.01-9.72 04/10/79

RUN NO. 9. POINT 6. GRID NO. 4

REDUCED PROFILE DATA

Y	Y/TA	U	DE	U/UF	TRTA	U-UF	U/TAU	Y/TA	Y/TA
1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9
10	10	10	10	10	10	10	10	10	10
11	11	11	11	11	11	11	11	11	11
12	12	12	12	12	12	12	12	12	12
13	13	13	13	13	13	13	13	13	13
14	14	14	14	14	14	14	14	14	14
15	15	15	15	15	15	15	15	15	15
16	16	16	16	16	16	16	16	16	16
17	17	17	17	17	17	17	17	17	17
18	18	18	18	18	18	18	18	18	18
19	19	19	19	19	19	19	19	19	19
20	20	20	20	20	20	20	20	20	20
21	21	21	21	21	21	21	21	21	21
22	22	22	22	22	22	22	22	22	22
23	23	23	23	23	23	23	23	23	23
24	24	24	24	24	24	24	24	24	24
25	25	25	25	25	25	25	25	25	25
26	26	26	26	26	26	26	26	26	26
27	27	27	27	27	27	27	27	27	27
28	28	28	28	28	28	28	28	28	28
29	29	29	29	29	29	29	29	29	29
30	30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31	31
32	32	32	32	32	32	32	32	32	32
33	33	33	33	33	33	33	33	33	33
34	34	34	34	34	34	34	34	34	34
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36	36	36	36	36	36	36	36	36	36
37	37	37	37	37	37	37	37	37	37
38	38	38	38	38	38	38	38	38	38
39	39	39	39	39	39	39	39	39	39
40	40	40	40	40	40	40	40	40	40
41	41	41	41	41	41	41	41	41	41
42	42	42	42	42	42	42	42	42	42
43	43	43	43	43	43	43	43	43	43
44	44	44	44	44	44	44	44	44	44
45	45	45	45	45	45	45	45	45	45
46	46	46	46	46	46	46	46	46	46
47	47	47	47	47	47	47	47	47	47
48	48	48	48	48	48	48	48	48	48
49	49	49	49	49	49	49	49	49	49
50	50	50	50	50	50	50	50	50	50
51	51	51	51	51	51	51	51	51	51
52	52	52	52	52	52	52	52	52	52
53	53	53	53	53	53	53	53	53	53
54	54	54	54	54	54	54	54	54	54
55	55	55	55	55	55	55	55	55	55
56	56	56	56	56	56	56	56	56	56
57	57	57	57	57	57	57	57	57	57
58	58	58	58	58	58	58	58	58	58
59	59	59	59	59	59	59	59	59	59
60	60	60	60	60	60	60	60	60	60
61	61	61	61	61	61	61	61	61	61
62	62	62	62	62	62	62	62	62	62
63	63	63	63	63	63	63	63	63	63
64	64	64	64	64	64	64	64	64	64
65	65	65	65	65	65	65	65	65	65
66	66	66	66	66	66	66	66	66	66
67	67	67	67	67	67	67	67	67	67
68	68	68	68	68	68	68	68	68	68
69	69	69	69	69	69	69	69	69	69
70	70	70	70	70	70	70	70	70	70
71	71	71	71	71	71	71	71	71	71
72	72	72	72	72	72	72	72	72	72
73	73	73	73	73	73	73	73	73	73
74	74	74	74	74	74	74	74	74	74
75	75	75	75	75	75	75	75	75	75
76	76	76	76	76	76	76	76	76	76
77	77	77	77	77	77	77	77	77	77
78	78	78	78	78	78	78	78	78	78
79	79	79	79	79	79	79	79	79	79
80	80	80	80	80	80	80	80	80	80
81	81	81	81	81	81	81	81	81	81
82	82	82	82	82	82	82	82	82	82
83	83	83	83	83	83	83	83	83	83
84	84	84	84	84	84	84	84	84	84
85	85	85	85	85	85	85	85	85	85
86	86	86	86	86	86	86	86	86	86
87	87	87	87	87	87	87	87	87	87
88	88	88	88	88	88	88	88	88	88
89	89	89	89	89	89	89	89	89	89
90	90	90	90	90	90	90	90	90	90
91	91	91	91	91	91	91	91	91	91
92	92	92	92	92	92	92	92	92	92
93	93	93	93	93	93	93	93	93	93
94	94	94	94	94	94	94	94	94	94
95	95	95	95	95	95	95	95	95	95
96	96	96	96	96	96	96	96	96	96
97	97	97	97	97	97	97	97	97	97
98	98	98	98	98	98	98	98	98	98
99	99	99	99	99	99	99	99	99	99
100	100	100	100	100	100	100	100	100	100

Table 67.

JOB KLD74 TAPE 3166R- FILES 138-159, RUNS 9.01-9.22 04/10/79

RUN NO. 9. POINT 7. GRID NO. 4

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY ==	100.592	100.592
FREE STREAM TEMPERATURE ==	69.193	
WALL TEMPERATURE ==	87.767	
WALL HEAT FLUX ==	.07960	
FREE STREAM DENSITY ==	.007511	
FREE STREAM KINEMATIC VISCOSITY ==	.0001626	
DENSITY OF FLUID AT WALL ==	.007257	
KINEMATIC VISCOSITY OF FLUID AT WALL ==	.0001728	
WALL/FREE STREAM DENSITY RATIO ==	.06638	
LOCATION REYNOLDS NUMBER (REX) ==	1448266.47	
INPUT VALUE OF VELOCITY DELTA ==	.81000	
INPUT VALUE OF TEMPERATURE DELTA ==	.00000	
CALCULATED DELTA ==		.61167
DELTA 99.5% INPUT ==	.00000	
DISPLACEMENT THICKNESS (DELSTAR) ==	.07443	.07426
MOMENTUM THICKNESS (THETA) ==	.05419	.05488
ENERGY-DISSIPATION THICKNESS ==	.09428	.08966
ENTHALPY THICKNESS ==	.00199	.00220
SHAPE FACTOR 12 (DELSTAR/THETA) ==	1.37357	1.36052
SHAPE FACTOR 72 (ENERGY/THETA) ==	1.81355	1.80757
MOMENTUM THICKNESS REYNOLDS NUMBER ==	2794.32	2814.42
DISPLACEMENT THICKNESS REYNOLDS NUMBER ==	3838.12	3829.07
SKIN FRICTION COEFFICIENT ==	.003625	
FRICTION VELOCITY ==	4.35712	
LAW OF THE WALL CONSTANT (K) ==	.41000	
LAW OF THE WALL CONSTANT (C) ==	5.00000	
WAKE STRENGTH ==		.12849
CLAUSERS DELTA INTEGRAL ==	-1.51253	-1.66810
CLAUSERS DELTA INTEGRAL ==	9.53658	9.22217
DISPLACEMENT THICKNESS - CONSTANT DENSITY ==	.06998	.07226
MOMENTUM THICKNESS - CONSTANT DENSITY ==	.05455	.05496
SHAPE FACTOR 12 - CONSTANT DENSITY ==	1.26446	1.21484

LOCATION -X- 28.10001

Z = CENTERLINE

Table 68.

RU# NO. C. POINT 7. GRID NO. 4

REDUCED PROFILE DATA

[illegible]

JOB KLD74 TAPE 316EP- FILES 138-159, RUNS 9.01-9.22 34/17/79

RUN NO. 9. POINT 8. GRID NO. 4

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUELAYER FUNCTION FROM WALL TO Y+=32
FREE STREAM VELOCITY =	170.116	100.116
FREE STREAM TEMPERATURE =	60.136	
WALL TEMPERATURE =	86.192	
WALL HEAT FLUX =	.77977	
FREE STREAM DENSITY =	.07512	
FREE STREAM KINEMATIC VISCOSITY =	.7301435	
DENSITY OF FLUID AT WALL =	.075251	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.7301735	
WALL/FREE STREAM DENSITY RATIO =	.96522	
LOCATION REYNOLDS NUMBER (REX) =	1442797.03	
INPUT VALUE OF VELOCITY DELTA =	1.10000	
INPUT VALUE OF TEMPERATURE DELTA =	1.21000	
CALCULATED DELTA =		.69516
DELTA 29.57 INPUT =	.00700	
DISPLACEMENT THICKNESS (DELSTAR) =	.08117	.08121
MOMENTUM THICKNESS (THETA) =	.06010	.06025
ENERGY-DISSIPATION THICKNESS =	.10920	.10937
ENTHALPY THICKNESS =	.00233	.00234
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.34991	1.34796
SHAPE FACTOR 32 (ENERGY/THETA) =	1.81701	1.81415
MOMENTUM THICKNESS REYNOLDS NUMBER =	3084.97	3092.47
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	4164.43	4168.51
SKIN FRICTION COEFFICIENT =	.003587	
FRICTION VELOCITY =	4.71550	
LAW OF THE WALL CONSTANT (K) =	.41780	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.09265
CLAUSERS *DELTA* INTEGRAL =	-1.72756	-1.83344
CLAUSERS *V* INTEGRAL =	9.86577	9.82520
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.07656	.07891
MOMENTUM THICKNESS - CONSTANT DENSITY =	.06750	.06895
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.26561	1.27025

LOCATION -X- 26.10701

Z = +6 INCHES

Table 69.

RUN NO. 9. POINT B. GRID NO. 4

REDUCED PROFILE DATA

[illegible]

Table 69.

JOE KLD74 TAPE 3166R- FILES 173-159, PUNS 9.01-9.22 04/10/79

BOUNDARY LAYER PROPERTIES	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY	100.772	100.772
FREE STREAM TEMPERATURE	68.155	
WALL TEMPERATURE	86.070	
WALL HEAT FLUX	.07782	
FREE STREAM DENSITY	.0001633	
FREE STREAM KINEMATIC VISCOSITY	.0001633	
DENSITY OF FLUID AT WALL	.0001744	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001744	
WALL/FREE STREAM DENSITY RATIO	.0001744	
LOCATION REYNOLDS NUMBER (REX)	1856334.887	
INPUT VALUE OF VELOCITY DELTA	1.71000	
INPUT VALUE OF TEMPERATURE DELTA	1.65000	
CALCULATED DELTA	.00000	.78313
DISPLACEMENT THICKNESS (DELTA*)	.00276	.09276
MOMENTUM THICKNESS (THETA)	.00882	.06873
ENERGY-DISSIPATION THICKNESS	.01244	.02457
ENTHALPY THICKNESS	.00079	.00287
SHAPE FACTOR 12 (DELTA*/THETA)	1.35377	1.34964
SHAPE FACTOR 12 (ENERGY/THETA)	1.81550	1.81257
MOMENTUM THICKNESS REYNOLDS NUMBER	3523.29	3548.75
DISPLACEMENT THICKNESS REYNOLDS NUMBER	4769.71	4769.71
SKIN FRICTION COEFFICIENT	.003453	
FRICTION VELOCITY	4.26528	
LAW OF THE WALL CONSTANT (K)	5.41000	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		.11763
CLAUSERS 'DELTA' INTEGRAL	-2.00286	-2.12634
CLAUSERS 'Y+' INTEGRAL	11.72400	11.60157
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.008739	.079333
MOMENTUM THICKNESS - CONSTANT DENSITY	.016900	.076933
SHAPE FACTOR 12 - CONSTANT DENSITY	1.26650	1.30025

LOCATION -Y- 36.10701

Z = CENTERLINE

Table 70.

RUN NO. ° POINT 10. GRID NO. 4

REDUCED PROFILE DATA

[illegible]

Table 70.

JOE KLD74 TAPE 3166R- FILES 138-159, PUNS 9.01-9.22 04/12/79

RUN NO. 9. POINT 12. GRID NO. 4

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=75
FREE STREAM VELOCITY	101.363	101.363
FREE STREAM TEMPERATURE	69.769	
WALL TEMPERATURE	89.740	
WALL HEAT FLUX	.37732	
FREE STREAM DENSITY	.07453	
FREE STREAM KINEMATIC VISCOSITY	.0701636	
DENSITY OF FLUID AT WALL	.07172	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0701753	
WALL/FREE STREAM DENSITY RATIO	.96236	
LOCATION REYNOLDS NUMBER (REX)	2270174.87	
INPUT VALUE OF VELOCITY DELTA	1.40000	
INPUT VALUE OF TEMPERATURE DELTA	1.55000	
CALCULATED DELTA		1.03250
DELTA 99.5% INPUT	.00000	
DISPLACEMENT THICKNESS (DELTA*)	.11698	.11698
MOMENTUM THICKNESS (THETA)	.08789	.08806
ENERGY-DISSIPATION THICKNESS	.16726	.16779
ENTHALPY THICKNESS	.00750	.00363
SHAPE FACTOR 12 (DELTA*/THETA)	1.33797	1.52839
SHAPE FACTOR 12 (ENERGY/THETA)	1.62346	1.82138
MOMENTUM THICKNESS REYNOLDS NUMBER	4571.97	8580.76
DISPLACEMENT THICKNESS REYNOLDS NUMBER	6231.94	6071.98
SKIN FRICTION COEFFICIENT	.003333	
FRICTION VELOCITY	4.10984	
LAW OF THE WALL CONSTANT (K)	.41000	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		.10842
CLAUSERS *DELTA* INTEGRAL	-2.61522	-2.73992
CLAUSERS *C* INTEGRAL	14.54830	14.44176
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.11720	.11746
MOMENTUM THICKNESS - CONSTANT DENSITY	.08850	.08869
SHAPE FACTOR 12 - CONSTANT DENSITY	1.25317	1.27045

LOCATION -Y- 44.20000

Z = +6 INCHES

Table 71.

JOB KLD74 TAPE 3156D- FILES 174-159, RUNS 9.01-9.22 04/17/79

RUN NO. 9. POINT 12. GRID NO. 4

REDUCED PROFILE DATA

Y	Y	U	T	U/UF	U-UF	U(1)	T(1)	Y(1)
1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9
10	10	10	10	10	10	10	10	10
11	11	11	11	11	11	11	11	11
12	12	12	12	12	12	12	12	12
13	13	13	13	13	13	13	13	13
14	14	14	14	14	14	14	14	14
15	15	15	15	15	15	15	15	15
16	16	16	16	16	16	16	16	16
17	17	17	17	17	17	17	17	17
18	18	18	18	18	18	18	18	18
19	19	19	19	19	19	19	19	19
20	20	20	20	20	20	20	20	20
21	21	21	21	21	21	21	21	21
22	22	22	22	22	22	22	22	22
23	23	23	23	23	23	23	23	23
24	24	24	24	24	24	24	24	24
25	25	25	25	25	25	25	25	25
26	26	26	26	26	26	26	26	26
27	27	27	27	27	27	27	27	27
28	28	28	28	28	28	28	28	28
29	29	29	29	29	29	29	29	29
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
32	32	32	32	32	32	32	32	32
33	33	33	33	33	33	33	33	33
34	34	34	34	34	34	34	34	34
35	35	35	35	35	35	35	35	35
36	36	36	36	36	36	36	36	36
37	37	37	37	37	37	37	37	37
38	38	38	38	38	38	38	38	38
39	39	39	39	39	39	39	39	39
40	40	40	40	40	40	40	40	40
41	41	41	41	41	41	41	41	41
42	42	42	42	42	42	42	42	42
43	43	43	43	43	43	43	43	43
44	44	44	44	44	44	44	44	44
45	45	45	45	45	45	45	45	45
46	46	46	46	46	46	46	46	46
47	47	47	47	47	47	47	47	47
48	48	48	48	48	48	48	48	48
49	49	49	49	49	49	49	49	49
50	50	50	50	50	50	50	50	50
51	51	51	51	51	51	51	51	51
52	52	52	52	52	52	52	52	52
53	53	53	53	53	53	53	53	53
54	54	54	54	54	54	54	54	54
55	55	55	55	55	55	55	55	55
56	56	56	56	56	56	56	56	56
57	57	57	57	57	57	57	57	57
58	58	58	58	58	58	58	58	58
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64	64	64	64	64	64	64	64	64
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66	66	66	66	66	66	66	66	66
67	67	67	67	67	67	67	67	67
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71	71	71	71	71	71	71	71	71
72	72	72	72	72	72	72	72	72
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74	74	74	74	74	74	74	74	74
75	75	75	75	75	75	75	75	75
76	76	76	76	76	76	76	76	76
77	77	77	77	77	77	77	77	77
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98	98	98	98	98	98	98	98	98
99	99	99	99	99	99	99	99	99
100	100	100	100	100	100	100	100	100

Table 71.

JOB WLD74 TAPE 3166R- FILES 138-159, RUNS 9.01-9.72 04/10/79

RUN NO. 2. POINT 14. GRID NO. 4

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUPPLAYER FUNCTION FROM WALL TO Y+25
FREE STREAM VELOCITY ==	101.288	101.288
FREE STREAM TEMPERATURE ==	68.579	
WALL TEMPERATURE ==	80.820	
WALL HEAT FLUX ==	.07728	
FREE STREAM DENSITY ==	.07467	
FREE STREAM KINEMATIC VISCOSITY ==	.0001635	
DENSITY OF FLUID AT WALL ==	.07171	
KINEMATIC VISCOSITY OF FLUID AT WALL ==	.0001754	
WALL/FREE STREAM DENSITY RATIO ==	.06135	
LOCATION REYNOLDS NUMBER (REX) ==	2696717.36	
INPUT VALUE OF VELOCITY DELTA ==	1.55000	
INPUT VALUE OF TEMPERATURE DELTA ==	1.70000	
CALCULATED DELTA ==		1.12855
DISPLACEMENT THICKNESS (DELTA*) ==	.00000	
MOMENTUM THICKNESS (THETA*) ==	.12879	.12688
ENERGY-DISSIPATION THICKNESS ==	.09518	.09530
ENTHALPY THICKNESS ==	.17344	.17351
SHAPE FACTOR 12 (DELTA*/THETA*) ==	.00411	.00412
SHAPE FACTOR 32 (ENERGY/THETA*) ==	1.33216	1.73132
MOMENTUM THICKNESS REYNOLDS NUMBER ==	1.82227	1.82760
DISPLACEMENT THICKNESS REYNOLDS NUMBER ==	4012.16	4018.73
SKIN FRICTION COEFFICIENT ==	6543.82	6548.40
FRICTION VELOCITY ==	.003745	
LAW OF THE WALL CONSTANT (K) ==	4.16784	
LAW OF THE WALL CONSTANT (C) ==	.41000	
WAKE STRENGTH ==	5.00000	.11010
CLAUSERS 'DELTA' INTEGRAL ==	-2.87622	-2.98541
CLAUSERS 'G' INTEGRAL ==	15.87627	15.84890
DISPLACEMENT THICKNESS - CONSTANT DENSITY ==	.12741	.12276
MOMENTUM THICKNESS - CONSTANT DENSITY ==	.09588	.09600
SHAPE FACTOR 12 - CONSTANT DENSITY ==	1.25579	1.27855

LOCATION -X- 52.25000

Z = CENTERLINE

Table 72.

RUN NO. 9. POINT 14. GRID NO. 4
 REDUCED PROFILE DATA

[illegible]

Table 72.

JOB KLD74 TAPE 3166P- FILES 138-159, PUNS 9.21-9.22 04/10/79

RUN NO. 9. POINT 16. GRID NO. 4

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY ==	99.904	99.904
FREE STREAM TEMPERATURE ==	69.175	
WALL TEMPERATURE ==	91.070	
WALL HEAT FLUX ==	.07795	
FREE STREAM DENSITY ==	.07497	
FREE STREAM KINEMATIC VISCOSITY ==	.0001629	
DENSITY OF FLUID AT WALL ==	.07192	
KINEMATIC VISCOSITY OF FLUID AT WALL ==	.0001752	
WALL/FREE STREAM DENSITY RATIO ==	.96725	
LOCATION REYNOLDS NUMBER (REF) ==	376972.25	
INPUT VALUE OF VELOCITY DELTA ==	1.50000	
INPUT VALUE OF TEMPERATURE DELTA ==	2.15000	
CALCULATED DELTA ==		1.72157
DELTA 99.5% INPUT ==	.00000	
DISPLACEMENT THICKNESS (DELTA*) ==	.14749	.14761
MOMENTUM THICKNESS (THETA*) ==	.11197	.11213
ENERGY-DISSIPATION THICKNESS ==	.20458	.20466
ENTHALPY THICKNESS ==	.00440	.00441
SHAPE FACTOR 12 (DELTA*/THETA*) ==	1.31720	1.31640
SHAPE FACTOR 72 (ENERGY/THETA*) ==	1.82699	1.82527
MOMENTUM THICKNESS REYNOLDS NUMBER ==	5723.31	5731.14
DISPLACEMENT THICKNESS REYNOLDS NUMBER ==	7538.74	7544.47
SKIN FRICTION COEFFICIENT ==	.003143	
FRICTION VELOCITY ==	4.04184	
LAW OF THE WALL CONSTANT (K) ==	.41000	
LAW OF THE WALL CONSTANT (C) ==	5.00000	
WAKE STRENGTH ==		.12143
CLAUSERS *DELTA* INTEGRAL ==	-7.40000	-3.54001
CLAUSERS *C* INTEGRAL ==	18.54834	10.51707
DISPLACEMENT THICKNESS - CONSTANT DENSITY ==	.14749	.14722
MOMENTUM THICKNESS - CONSTANT DENSITY ==	.11275	.11201
SHAPE FACTOR 12 - CONSTANT DENSITY ==	1.24617	1.26843

LOCATION -X- 60.20000

Z = +6 INCHES

Table 73.

Table 73.

JOB KLD74 TAPE 3166R- FILES 132-159, RUNS 9.01-9.22 04/10/79

RUN NO. 9. POINT 17. GRID NO. 4

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SURFACED FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY	100.503	100.503
FREE STREAM TEMPERATURE	69.198	
WALL TEMPERATURE	91.717	
WALL HEAT FLUX	.07880	
FREE STREAM DENSITY	.07496	
FREE STREAM KINEMATIC VISCOSITY	.0001629	
DENSITY OF FLUID AT WALL	.07190	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001754	
WALL/FREE STREAM DENSITY RATIO	.95917	
LOCATION REYNOLDS NUMBER (REX)	3795198.34	
INPUT VALUE OF VELOCITY DELTA	1.92700	
INPUT VALUE OF TEMPERATURE DELTA	2.15000	
CALCULATED DELTA		1.35254
DELTA 89.52 INPUT	.00700	
DISPLACEMENT THICKNESS (DELTA*)	.14836	.14852
MOMENTUM THICKNESS (THETA*)	.11267	.11273
ENERGY-DISSIPATION THICKNESS	.20577	.20581
ENTHALPY THICKNESS	.00471	.00471
SHAPE FACTOR 12 (DELTA*/THETA*)	1.31762	1.31752
SHAPE FACTOR 32 (ENERGY/THETA*)	1.82746	1.82580
MOMENTUM THICKNESS REYNOLDS NUMBER	5789.71	5795.84
DISPLACEMENT THICKNESS REYNOLDS NUMBER	7628.12	7636.14
SKIN FRICTION COEFFICIENT	.003147	
FRICTION VELOCITY	4.07788	
LAW OF THE WALL CONSTANT (K)	.41700	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		.10171
CLAUSERS *DELTA* INTEGRAL	-3.42565	-3.55121
CLAUSERS *C* INTEGRAL	18.45580	18.47028
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.14122	.14384
MOMENTUM THICKNESS - CONSTANT DENSITY	.11340	.11354
SHAPE FACTOR 12 - CONSTANT DENSITY	1.24528	1.26690

LOCATION -X- 60.20000

Z = -6 INCHES

Table 74.

REDUCED PROFILE DATA

[illegible]

Table 74.

JOB KLD74 TAPE 3166R- FILTS 138-159, RUNS 9.01-9.22 74/17/79

RUN NO. 9. POINT 18. GRID NO. 4

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SURFACED FUNCTION FROM WALL TO Y=35
FREE STREAM VELOCITY	100.386	100.386
FREE STREAM TEMPERATURE	69.209	
WALL TEMPERATURE	91.760	
WALL HEAT FLUX	.37813	
FREE STREAM DENSITY	.0001629	
FREE STREAM KINEMATIC VISCOSITY	.0001629	
DENSITY OF FLUID AT WALL	.0001754	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001754	
WALL/FREE STREAM DENSITY RATIO	349.178	
LOCATION REYNOLDS NUMBER (REX)	2.20000	
INPUT VALUE OF VELOCITY DELTA	2.50000	
INPUT VALUE OF TEMPERATURE DELTA		1.42646
CALCULATED DELTA		
DELTA 99.5% INPUT	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	.15988	.15994
MOMENTUM THICKNESS (THETA)	.12104	.12124
ENERGY-DISSIPATION THICKNESS	.22118	.22131
ENTHALPY THICKNESS	.00524	.00524
SHAPE FACTOR 12 (DELSTAR/THETA)	1.32086	1.71916
SHAPE FACTOR 72 (ENERGY/THETA)	1.82732	1.82547
MOMENTUM THICKNESS REYNOLDS NUMBER	6216.01	6276.12
DISPLACEMENT THICKNESS REYNOLDS NUMBER	8210.49	8213.26
SKIN FRICTION COEFFICIENT	.003777	
FRICTION VELOCITY	4.02088	
LAW OF THE WALL CONSTANT (K)	.41000	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		.13791
CLAUSERS 'DELTA' INTEGRAL	-3.71652	-3.86331
CLAUSERS 'G' INTEGRAL	20.42429	20.32668
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.15178	.15474
MOMENTUM THICKNESS - CONSTANT DENSITY	.12192	.12213
SHAPE FACTOR 12 - CONSTANT DENSITY	1.24484	1.26702

LOCATION -Y- 68.12000

Z = CENTERLINE

Table 75.

Table 75.

JOB WLD74 TAPE 3166P- FILES 139-159, RUNS 9.21-9.22 04/17/79

RUN NO. 9. POINT 19. GRID NO. 4

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUPPLIED FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY	100.237	100.237
FREE STREAM TEMPERATURE	67.964	
WALL TEMPERATURE	92.537	
WALL HEAT FLUX	0.7804	
FREE STREAM DENSITY	0.07494	
FREE STREAM KINEMATIC VISCOSITY	0.001627	
DENSITY OF FLUID AT WALL	0.07137	
KINEMATIC VISCOSITY OF FLUID AT WALL	0.001751	
WALL/FREE STREAM DENSITY RATIO	0.9594	
LOCATION REYNOLDS NUMBER (REX)	3011884.56	
INPUT VALUE OF VELOCITY DELTA	2.45073	
INPUT VALUE OF TEMPERATURE DELTA	2.50737	
CALCULATED DELTA		1.56099
DELTA 09.5% INPUT	0.00000	
DISPLACEMENT THICKNESS (DELSTAR)	0.17361	0.17361
MOMENTUM THICKNESS (THETA)	0.13122	0.13146
ENERGY-DISSIPATION THICKNESS	0.23970	0.23009
ENTHALPY THICKNESS	0.05490	0.05591
SHAPE FACTOR 12 (DELSTAR/THETA)	1.32105	1.32059
SHAPE FACTOR 32 (ENERGY/THETA)	1.82672	1.82472
MOMENTUM THICKNESS REYNOLDS NUMBER	6738.23	6752.87
DISPLACEMENT THICKNESS REYNOLDS NUMBER	8915.02	8915.01
SKIN FRICTION COEFFICIENT	0.00120	
FRICTION VELOCITY	3.98220	
LAW OF THE WALL CONSTANT (K)	0.41700	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		0.13971
CLAUSERS 'DELTA' INTEGRAL	-4.05934	-4.22104
CLAUSERS 'C' INTEGRAL	22.48870	22.32777
DISPLACEMENT THICKNESS - CONSTANT DENSITY	0.16449	0.16770
MOMENTUM THICKNESS - CONSTANT DENSITY	0.13221	0.13247
SHAPE FACTOR 12 - CONSTANT DENSITY	1.24418	1.26602

LOCATION -X- 76.18701

Z = CENTERLINE

Table 76.

REP. NO. 9. POINT 19. GRID NO. 4

DEBUCE PROFILE DATA

[illegible]

Table 76.

JOB KLD74 TAPE 316AF- FILES 139-159, RUNS 9.01-9.02 04/10/79

RUN NO. 9. POINT 20. GRID NO. 4

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SPLAYER FUNCTION FROM WALL TO Y+=75
FREE STREAM VELOCITY ==	100.286	100.286
FREE STREAM TEMPERATURE ==	68.769	
WALL TEMPERATURE ==	90.840	
WALL HEAT FLUX ==	0.07934	
FREE STREAM DENSITY ==	0.07468	
FREE STREAM KINEMATIC VISCOSITY ==	0.001429	
DENSITY OF FLUID AT WALL ==	0.07182	
KINEMATIC VISCOSITY OF FLUID AT WALL ==	0.001753	
WALL/FREE STREAM DENSITY RATIO ==	0.95918	
LOCATION REYNOLDS NUMBER (REX) ==	3008723.59	
INPUT VALUE OF VELOCITY DELTA ==	2.42000	
INPUT VALUE OF TEMPERATURE DELTA ==	2.07000	
CALCULATED DELTA ==		1.63574
DELTA 90.5% INPUT ==	0.00000	
DISPLACEMENT THICKNESS (DELSTAR) ==	0.18088	0.16086
MOMENTUM THICKNESS (THETA) ==	0.13714	0.13738
ENERGY-DISSIPATION THICKNESS ==	0.25090	0.25099
ENTHALPY THICKNESS ==	0.06629	0.06637
SHAPE FACTOR 12 (DELSTAR/THETA) ==	1.31999	1.31648
SHAPE FACTOR 72 (ENERGY/THETA) ==	1.82887	1.82699
MOMENTUM THICKNESS REYNOLDS NUMBER ==	7036.46	7048.74
DISPLACEMENT THICKNESS REYNOLDS NUMBER ==	9280.99	9279.54
SKIN FRICTION COEFFICIENT ==	0.003036	
FRICTION VELOCITY ==	3.96068	
LAW OF THE WALL CONSTANT (K) ==	0.41700	
LAW OF THE WALL CONSTANT (C) ==	5.00000	
WAVE STRENGTH ==		0.13657
CLAUSERS *DELTA* INTEGRAL ==	-4.25325	-4.41228
CLAUSERS *C* INTEGRAL ==	23.32972	23.14583
DISPLACEMENT THICKNESS - CONSTANT DENSITY ==	0.17102	0.17465
MOMENTUM THICKNESS - CONSTANT DENSITY ==	0.13814	0.13839
SHAPE FACTOR 12 - CONSTANT DENSITY ==	1.24172	1.26208

LOCATION -X- 76.19001

Z = +6 INCHES

Table 77.

RUN NO.	Q.	POINT	20.	GRID NO. 4
REDUCED PROFILE DATA				

[illegible]

Table 77.

JOE KLD74 TAPE 3166R- FILES 178-159, RUNS 9.21-9.22 74/17/79

RUN NO. 9. POINT 21. GRID NO. 4

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUPPLIED FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY =	99.739	99.739
FREE STREAM TEMPERATURE =	68.762	
WALL TEMPERATURE =	91.370	
WALL HEAT FLUX =	0.37264	
FREE STREAM DENSITY =	0.007462	
FREE STREAM KINEMATIC VISCOSITY =	0.001631	
DENSITY OF FLUID AT WALL =	0.007176	
KINEMATIC VISCOSITY OF FLUID AT WALL =	0.001755	
WALL/FREE STREAM DENSITY RATIO =	0.98917	
LOCATION REYNOLDS NUMBER (REF) =	3982019.72	
INPUT VALUE OF VELOCITY DELTA =	2.40000	
INPUT VALUE OF TEMPERATURE DELTA =	2.70000	
CALCULATED DELTA =		1.62362
DELTA 99.5% INPUT =	0.00707	
DISPLACEMENT THICKNESS (DELSTAF) =	0.17694	0.17694
MOMENTUM THICKNESS (THETA) =	0.13427	0.13453
ENERGY-DISSIPATION THICKNESS =	0.24565	0.24587
ENTHALPY THICKNESS =	0.00618	0.00609
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.31784	1.31527
SHAPE FACTOR 32 (ENERGY/THETA) =	1.82964	1.82767
MOMENTUM THICKNESS REYNOLDS NUMBER =	6942.15	6955.55
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	9015.64	9016.43
SKIN FRICTION COEFFICIENT =	0.003040	
FRICTION VELOCITY =	3.97035	
LAW OF THE WALL CONSTANT (K) =	0.41007	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		0.11029
CLAUSERS *DELTA* INTEGRAL =	-4.12947	-4.29377
CLAUSERS *G* INTEGRAL =	22.49639	22.31402
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	0.16765	0.17097
MOMENTUM THICKNESS - CONSTANT DENSITY =	0.13526	0.13554
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.23941	1.26789

LOCATION -X- 76.18001

Z = -6 INCHES

Table 78.

JOB KLD74 TAPE 3156R- FILES 138-159, RUNS 9.01-9.72 04/17/79

RUN NO. 9. POINT 21. GRID NO. 4

REDUCED PROFILE DATA

N	Y	DY	U	Y	U/U	TAU	U-DE	U(1)	Y(1)	Y(1)
1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6
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77	77	77	77	77	77	77	77	77	77	77
78	78	78	78	78	78	78	78	78	78	78

Table 78.

JOB KLD74 TAPE 31662- FILES 138-159, PUNS 9.01-9.22 04/17/79

RUN NO. 9. POINT 22. GRID NO. 4

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY	100.636	100.636
FREE STREAM TEMPERATURE	69.316	
WALL TEMPERATURE	91.877	
WALL HEAT FLUX	.07764	
FREE STREAM DENSITY	.07474	
FREE STREAM KINEMATIC VISCOSITY	.07163	
DENSITY OF FLUID AT WALL	.07163	
KINEMATIC VISCOSITY OF FLUID AT WALL	.07163	
WALL/FREE STREAM DENSITY RATIO	.95011	
LOCATION REYNOLDS NUMBER (REFX)	4711322.50	
INPUT VALUE OF VELOCITY DELTA	2.67322	
INPUT VALUE OF TEMPERATURE DELTA	3.00000	
CALCULATED DELTA		1.40511
DELTA 99.5% INPUT	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	.17947	.17947
MOMENTUM THICKNESS (THETA)	.13601	.13615
ENERGY-DISSIPATION THICKNESS	.24854	.24867
ENTHALPY THICKNESS	.00617	.00614
SHAPE FACTOR 12 (DELSTAR/THETA)	1.31049	1.31810
SHAPE FACTOR 32 (ENERGY/THETA)	1.82731	1.82622
MOMENTUM THICKNESS REYNOLDS NUMBER	6087.63	6087.74
DISPLACEMENT THICKNESS REYNOLDS NUMBER	9211.22	9211.14
SKIN FRICTION COEFFICIENT	.003301	
FRICTION VELOCITY	3.98367	
LAW OF THE WALL CONSTANT (K)	.41700	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAVE STRENGTH		.15014
CLAUSERS 'DELTA' INTEGRAL	-4.25906	-4.38257
CLAUSERS 'C' INTEGRAL	27.25957	27.11617
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.17769	.17336
MOMENTUM THICKNESS - CONSTANT DENSITY	.17704	.13719
SHAPE FACTOR 12 - CONSTANT DENSITY	1.24697	1.26367

LOCATION -X- 84.00000

Z = CENTERLINE

Table 79.

RUN NO. 0. POINT 22. GRID NO. 4

REDUCED PROFILE DATA

[illegible]**Table 79.**

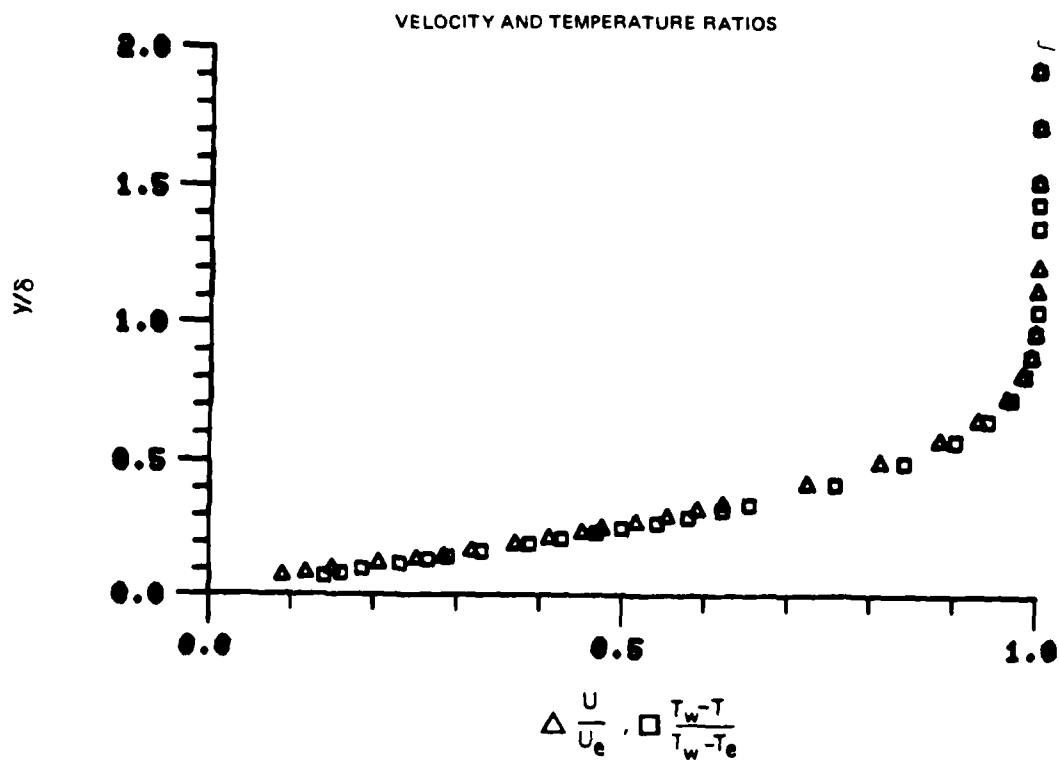


Figure 1. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 1

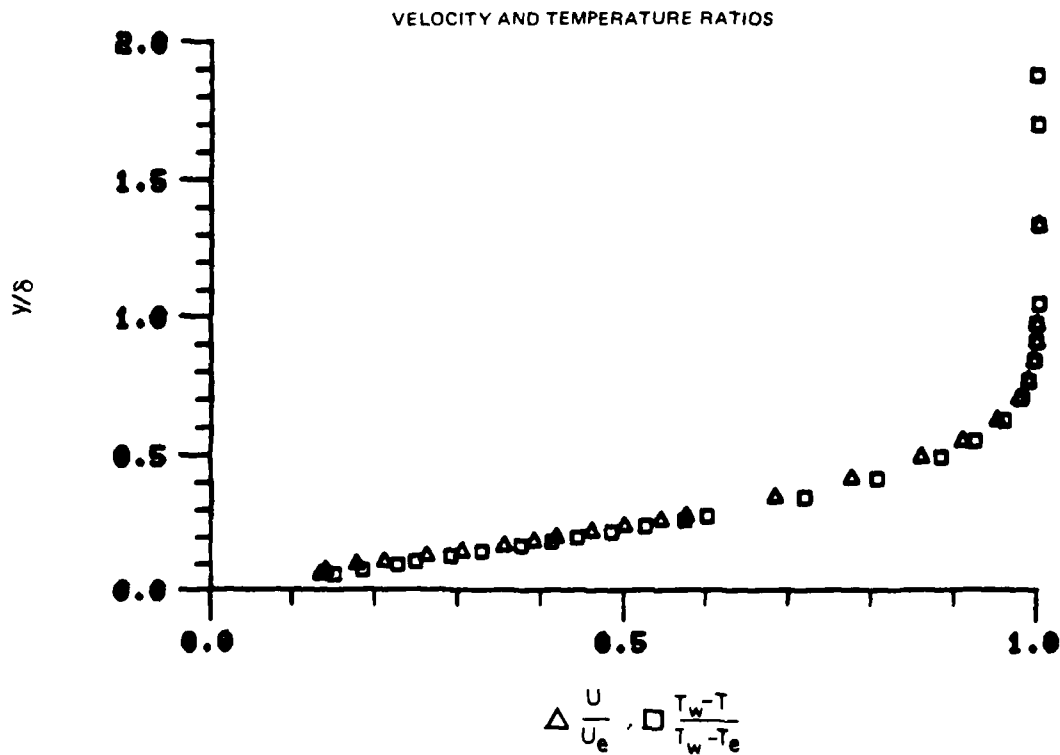


Figure 2. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 2

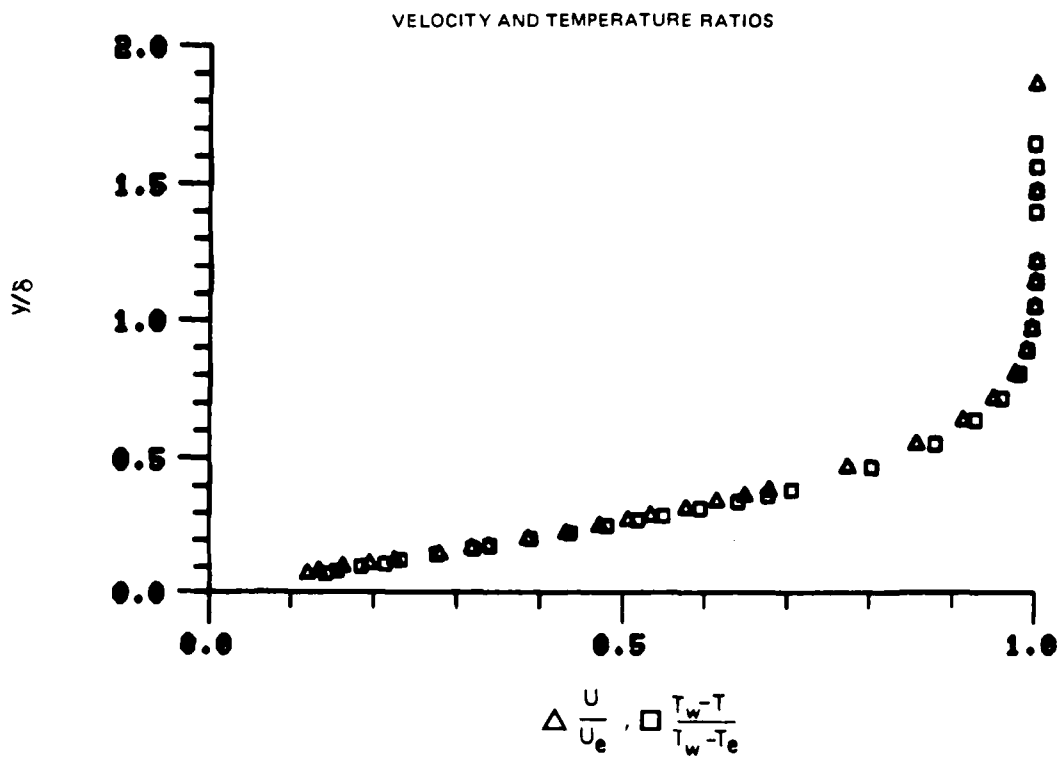


Figure 3. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 3

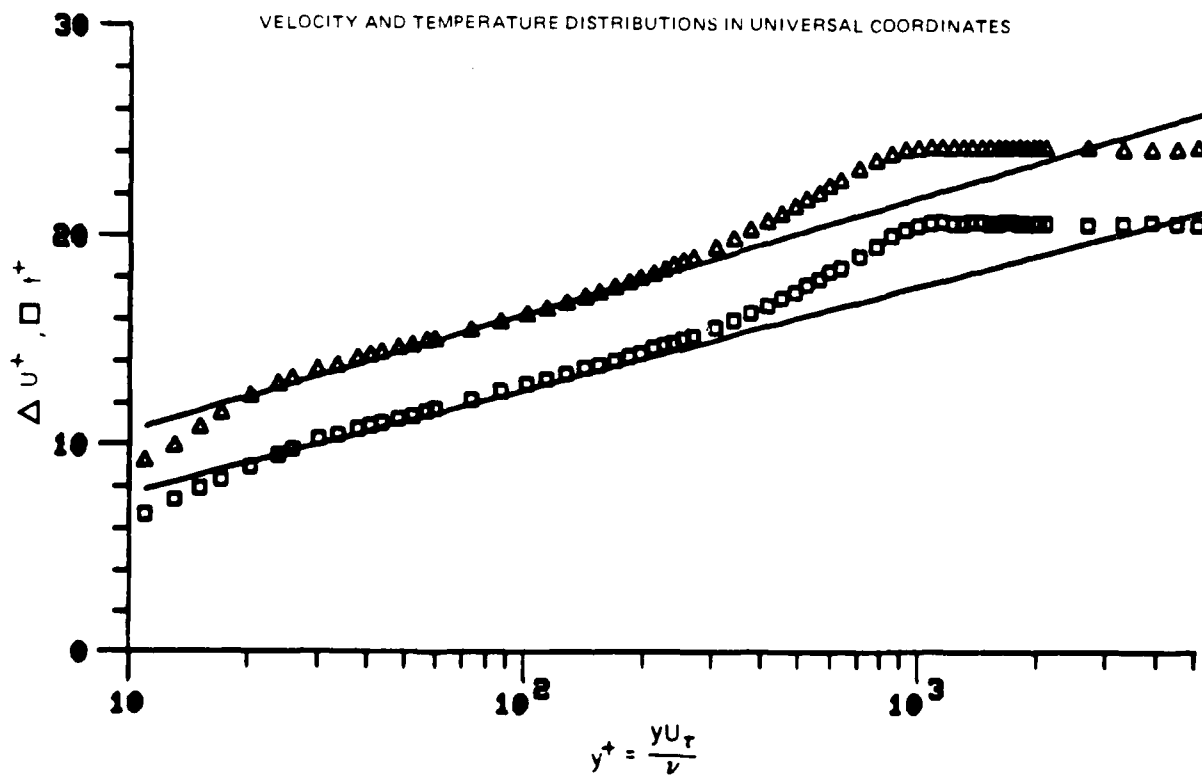
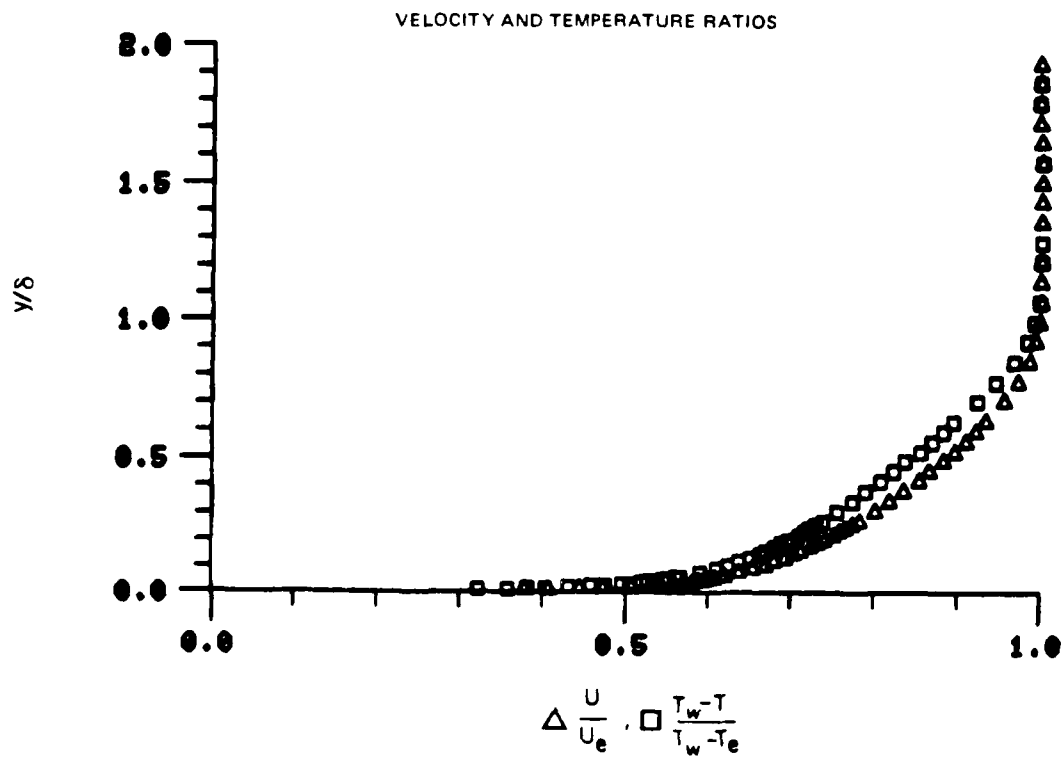


Figure 4. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 4

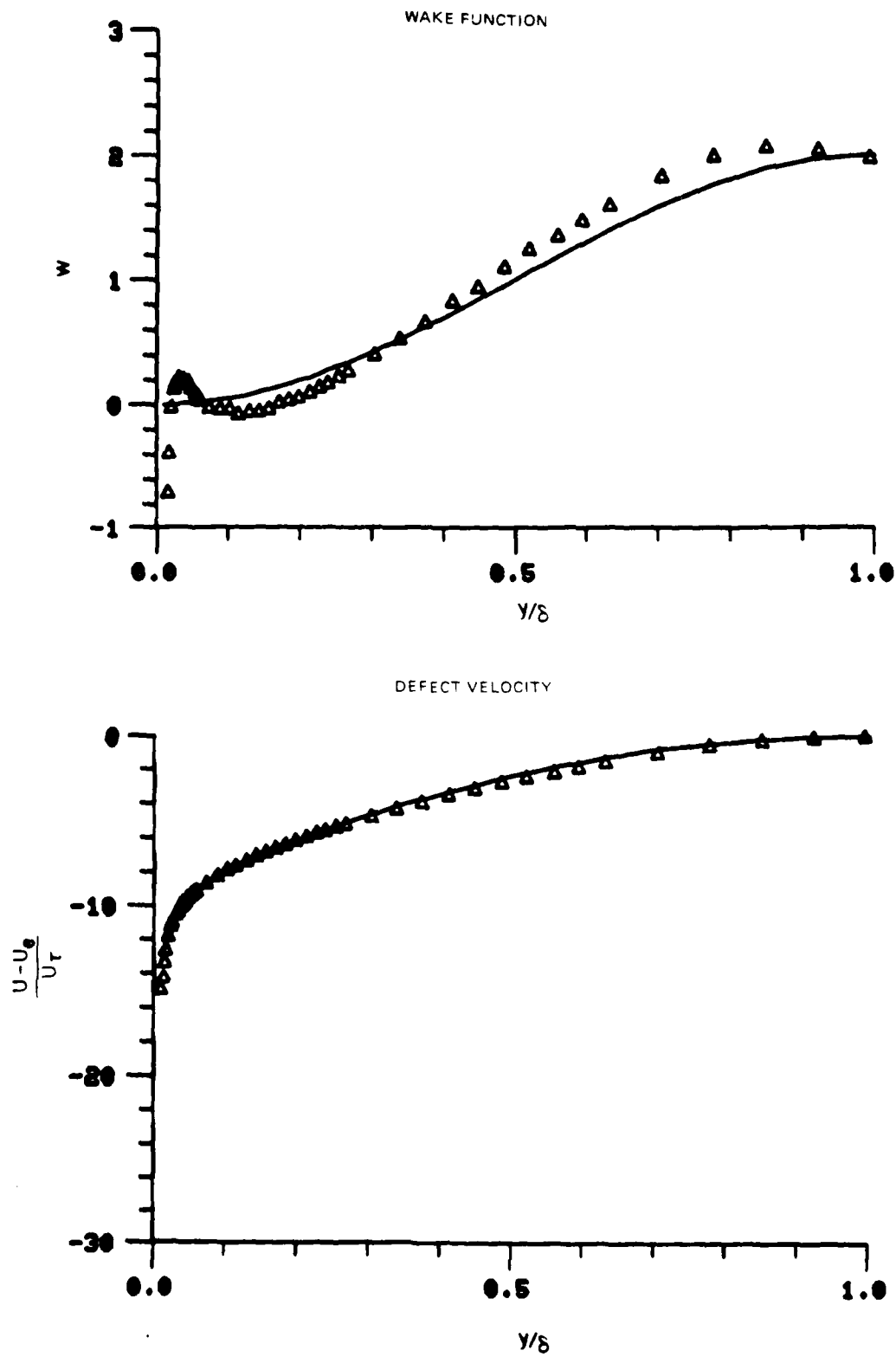


Figure 4. Boundary Layer Velocity Profiles
Run No. 5 Point No. 4

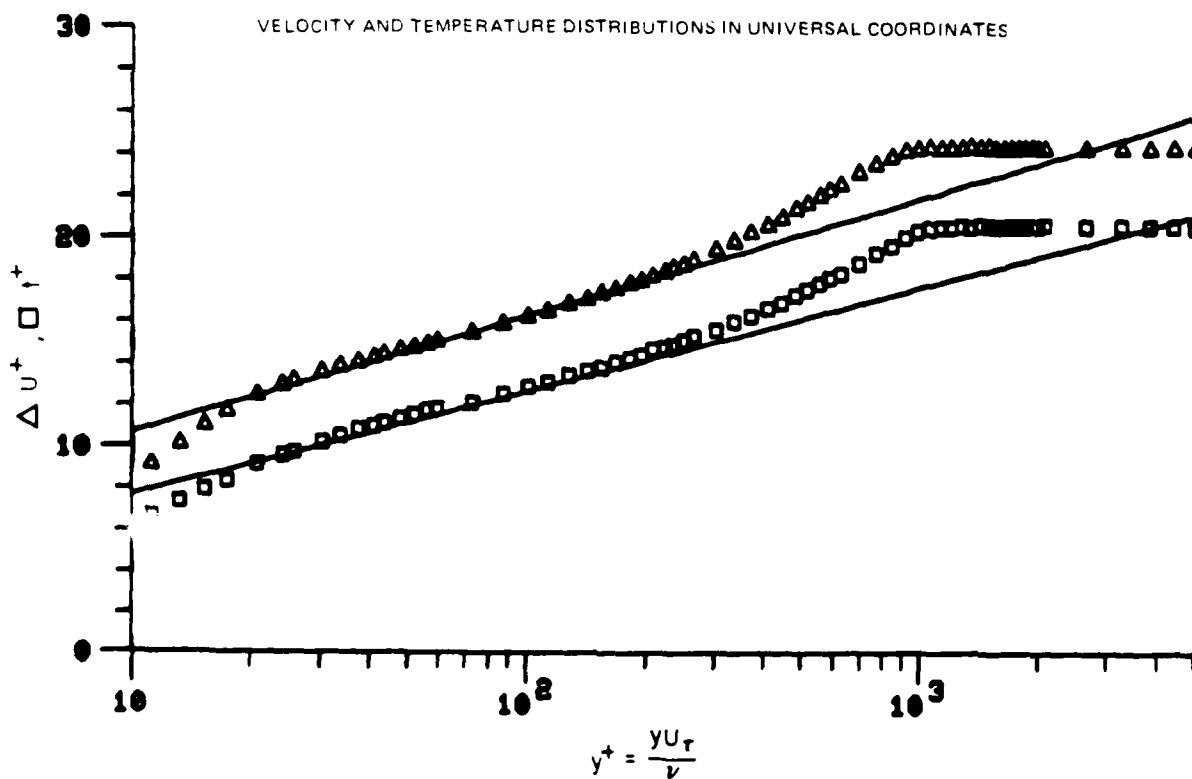
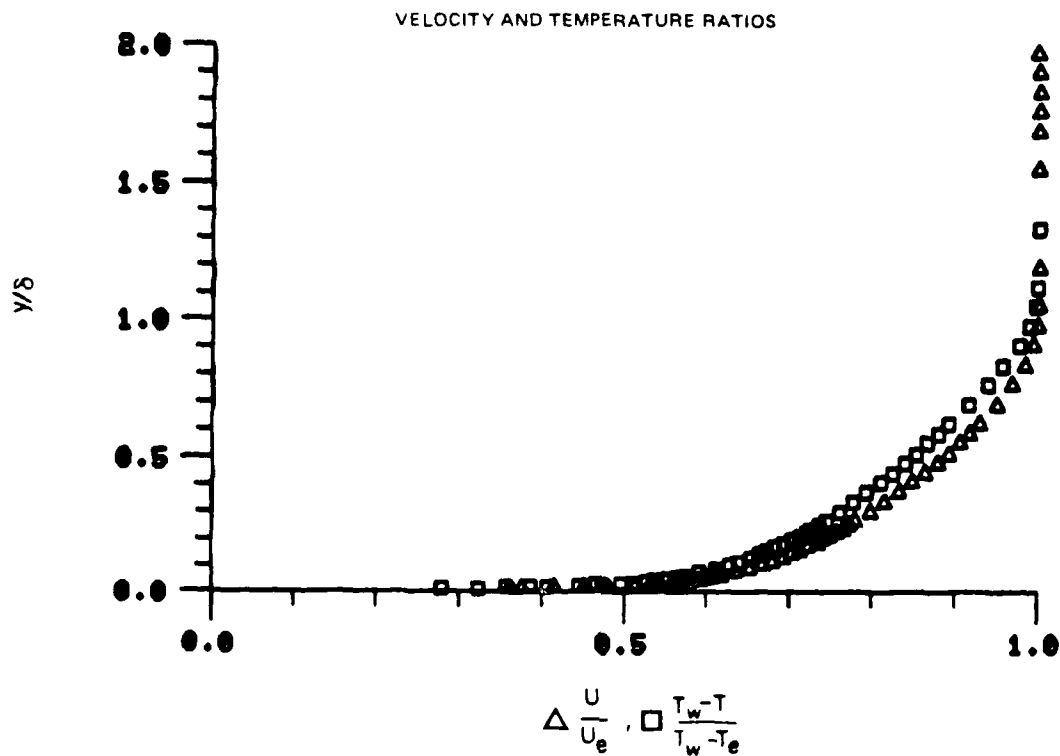


Figure 5. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 5

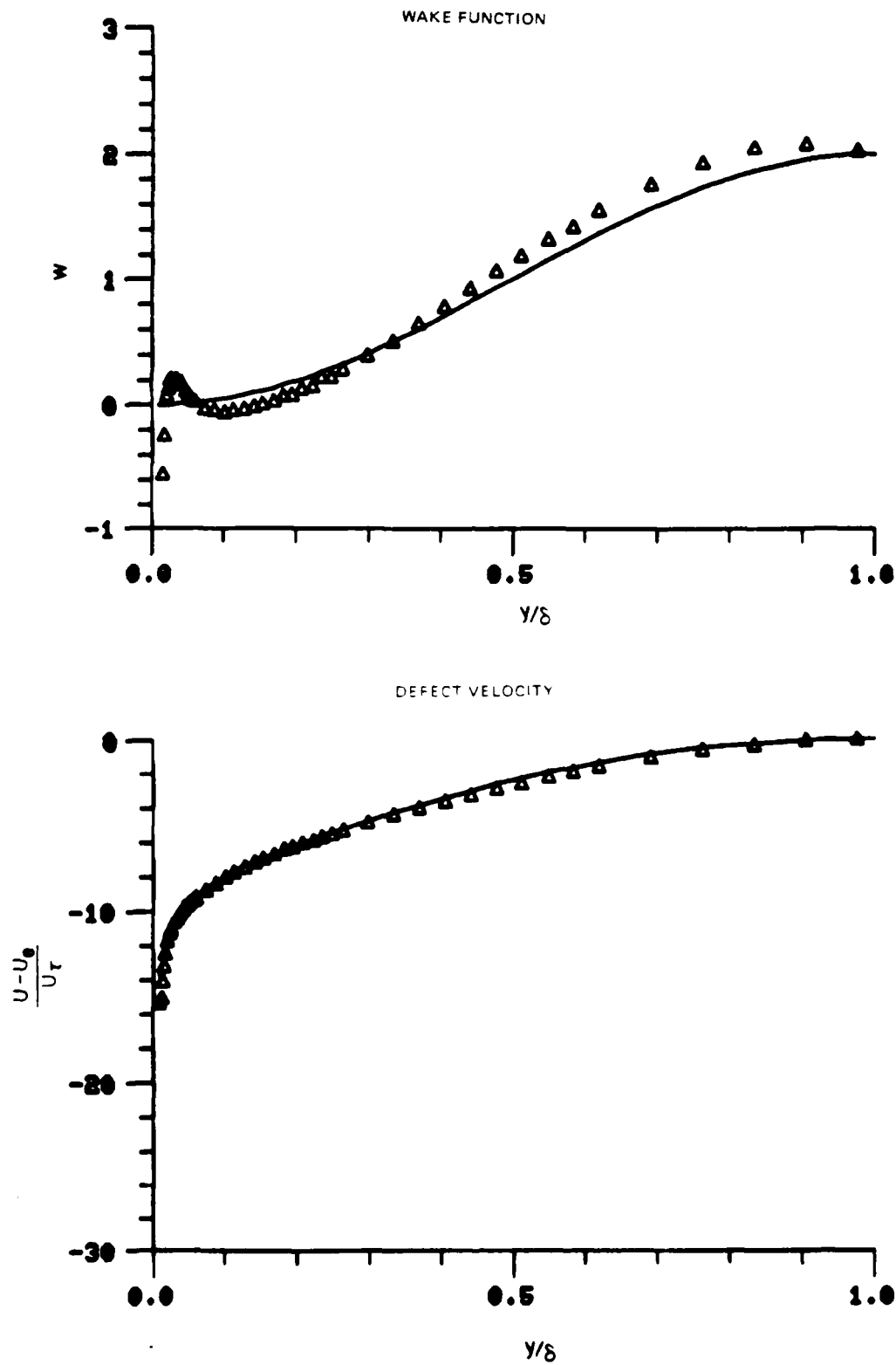


Figure 5. Boundary Layer Velocity Profiles
Run No. 5 Point No. 5

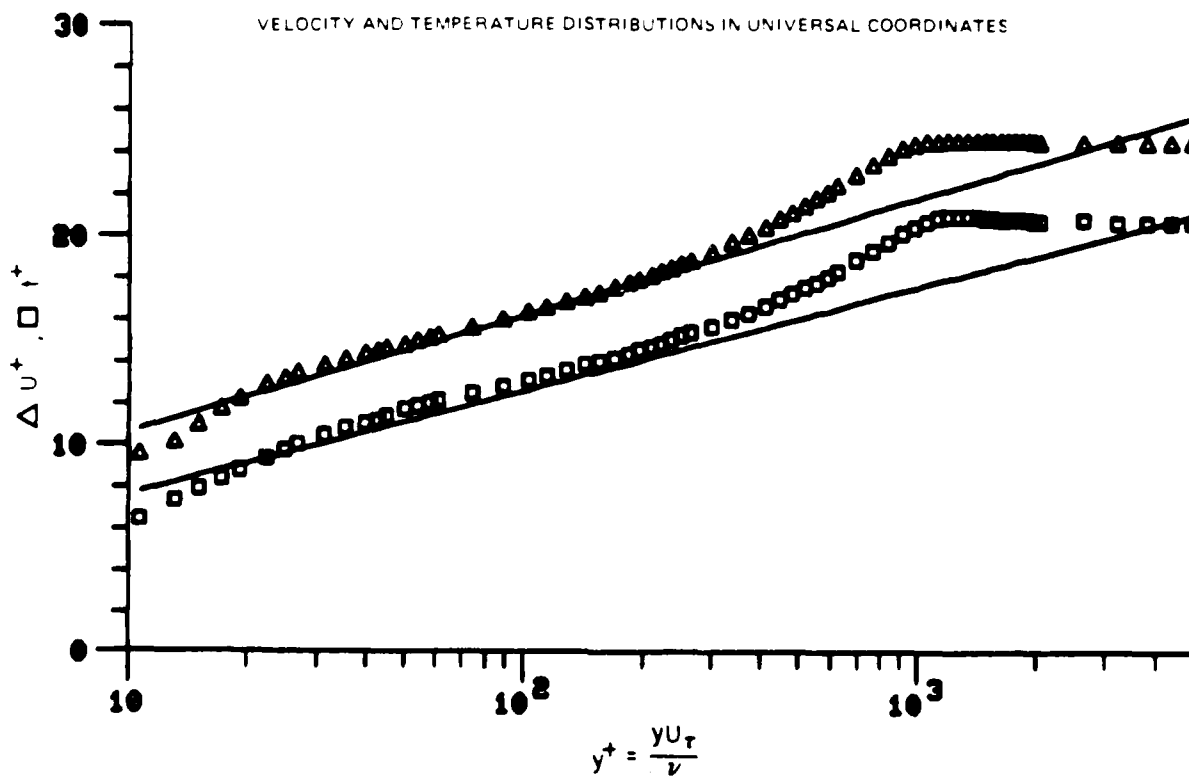
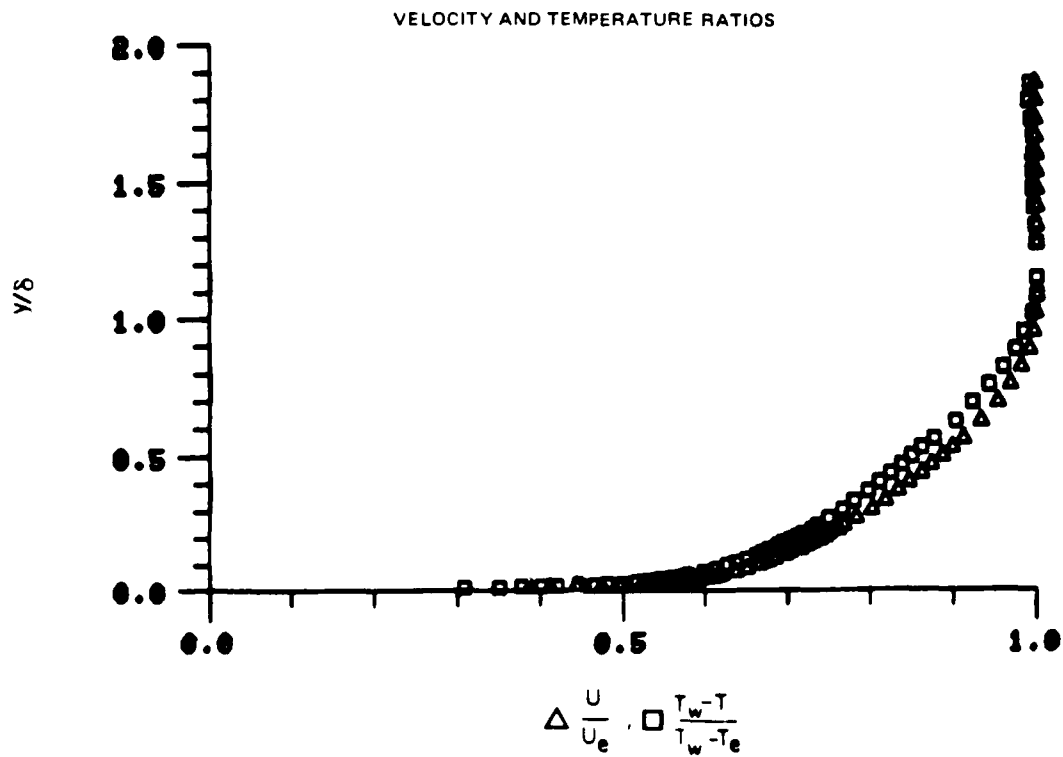


Figure 6. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 7

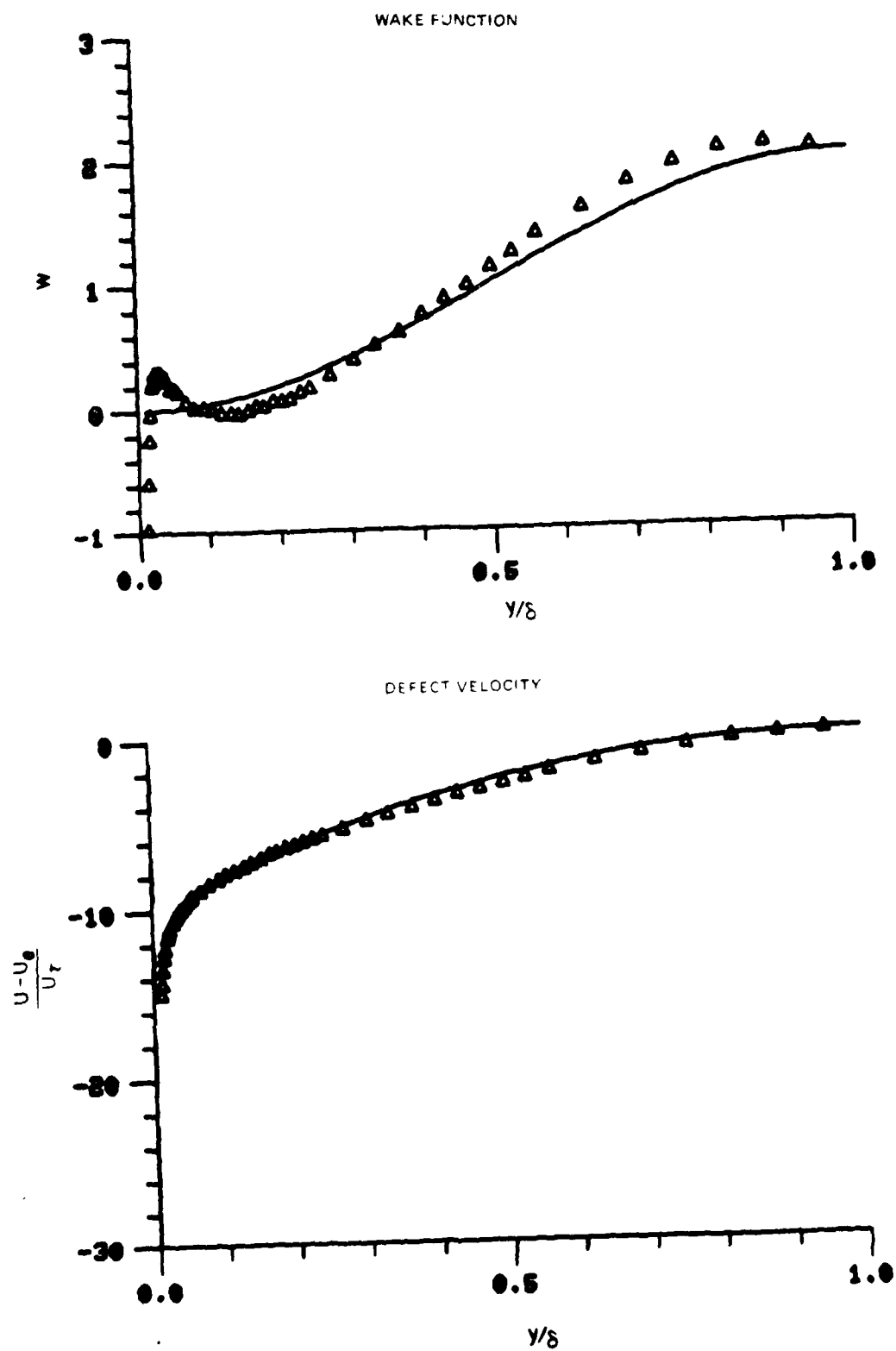


Figure 6. Boundary Layer Velocity Profiles
Run No. 5 Point No. 7

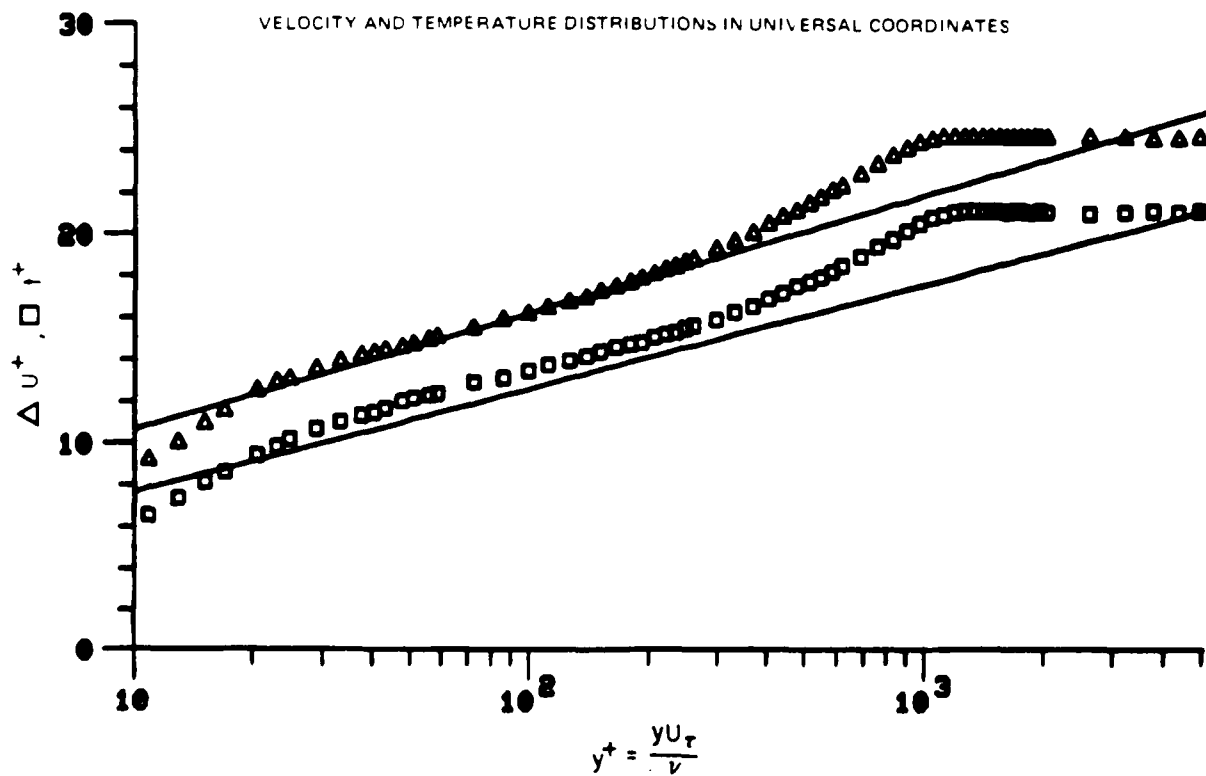
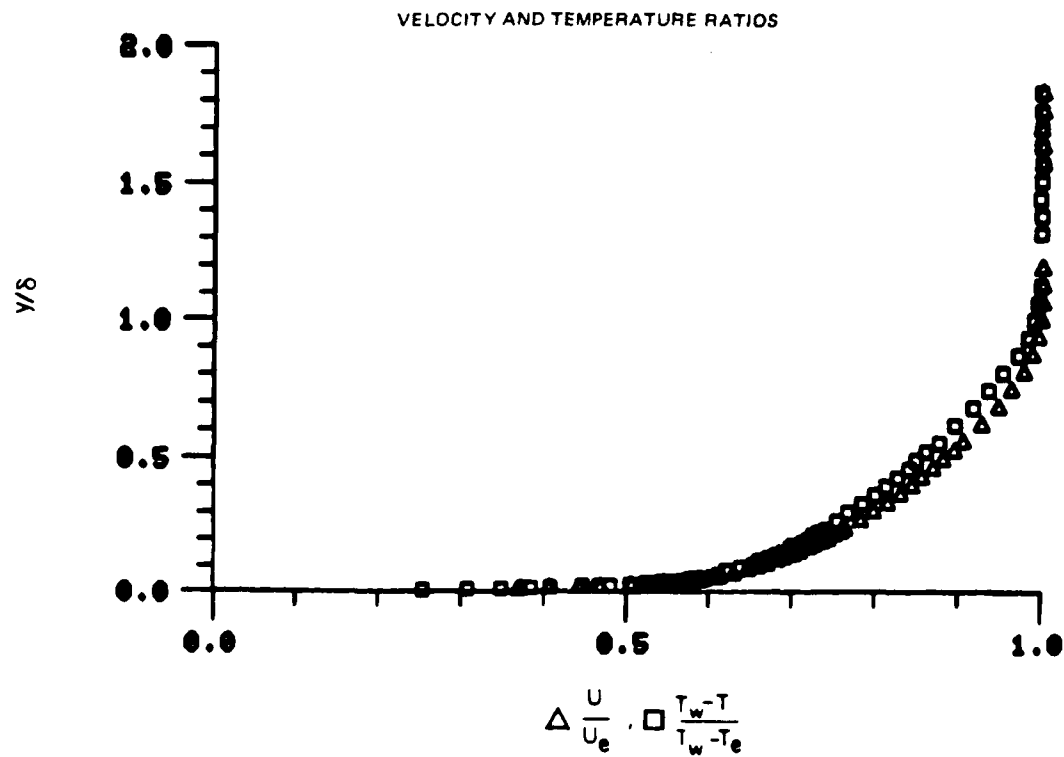


Figure 7. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 8

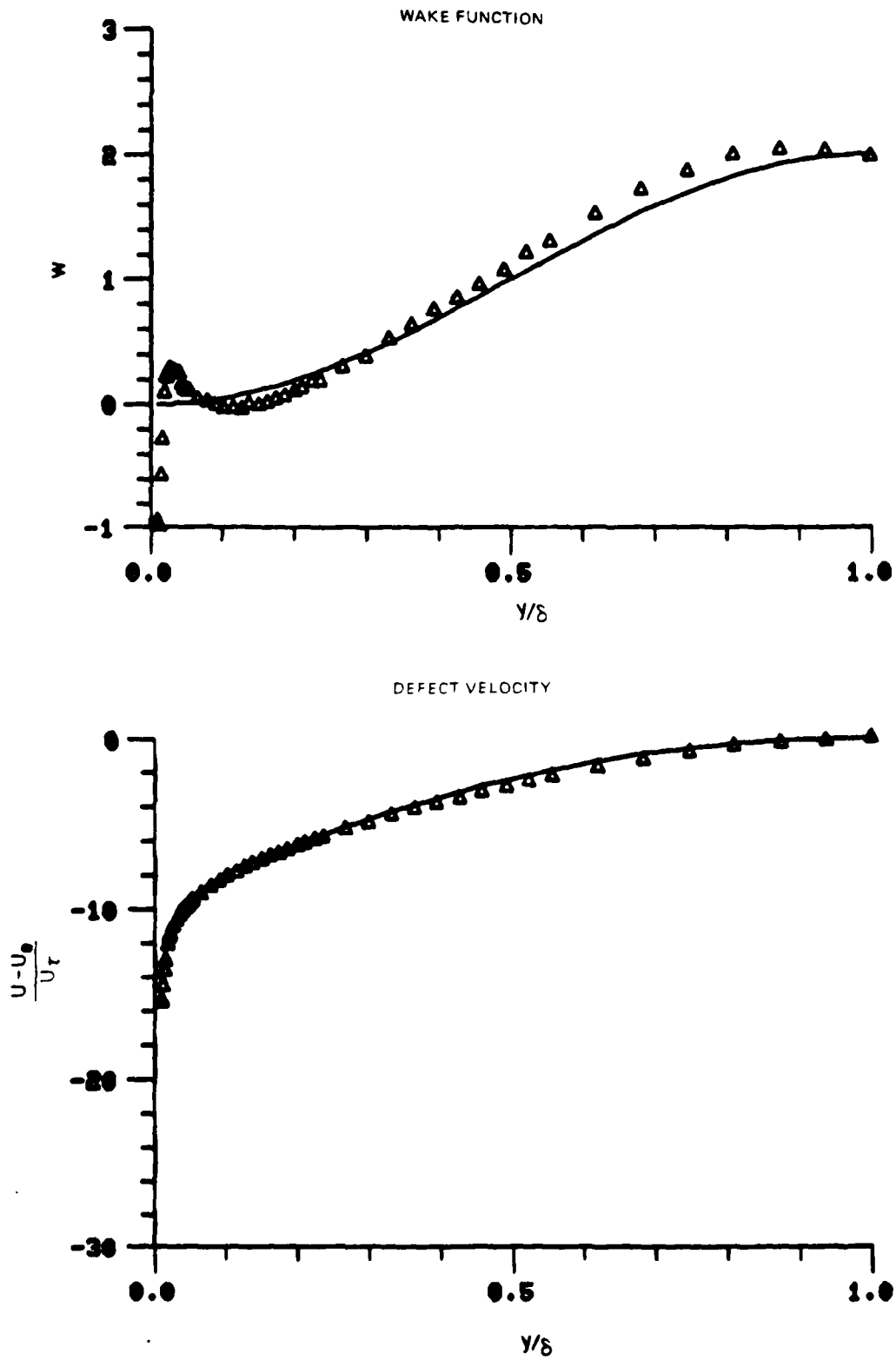


Figure 7. Boundary Layer Velocity Profiles
Run No. 5 Point No. 8

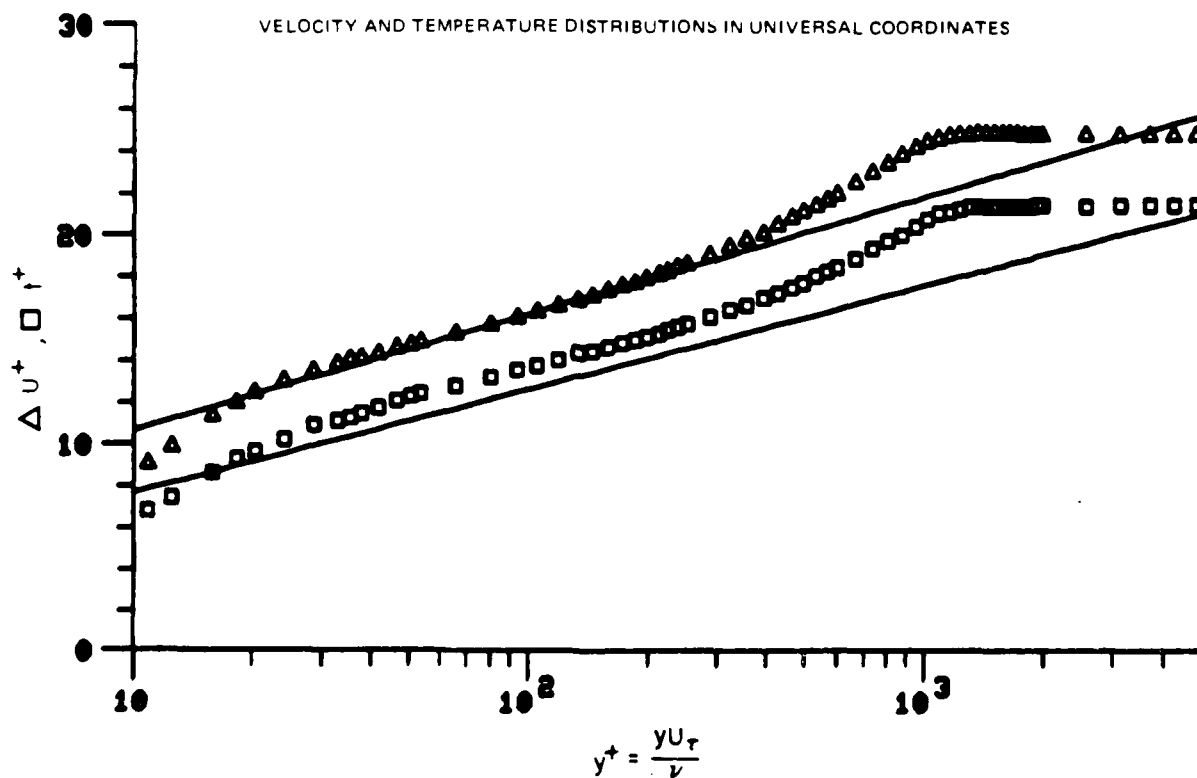
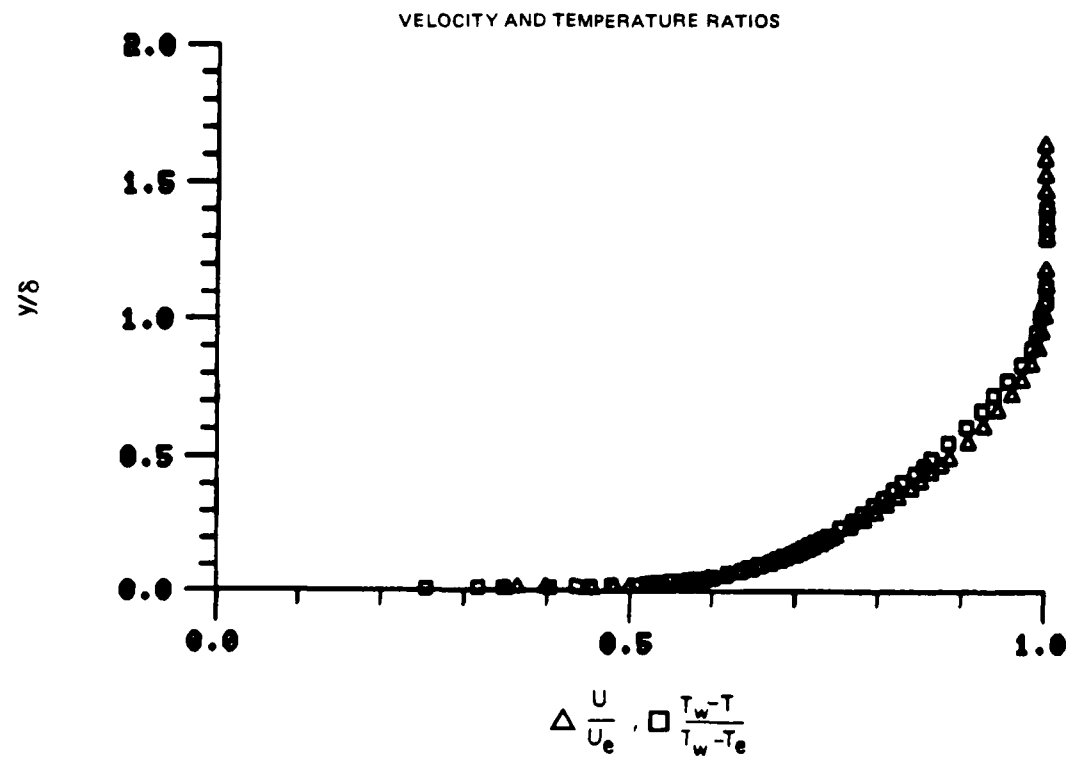


Figure 8. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 11

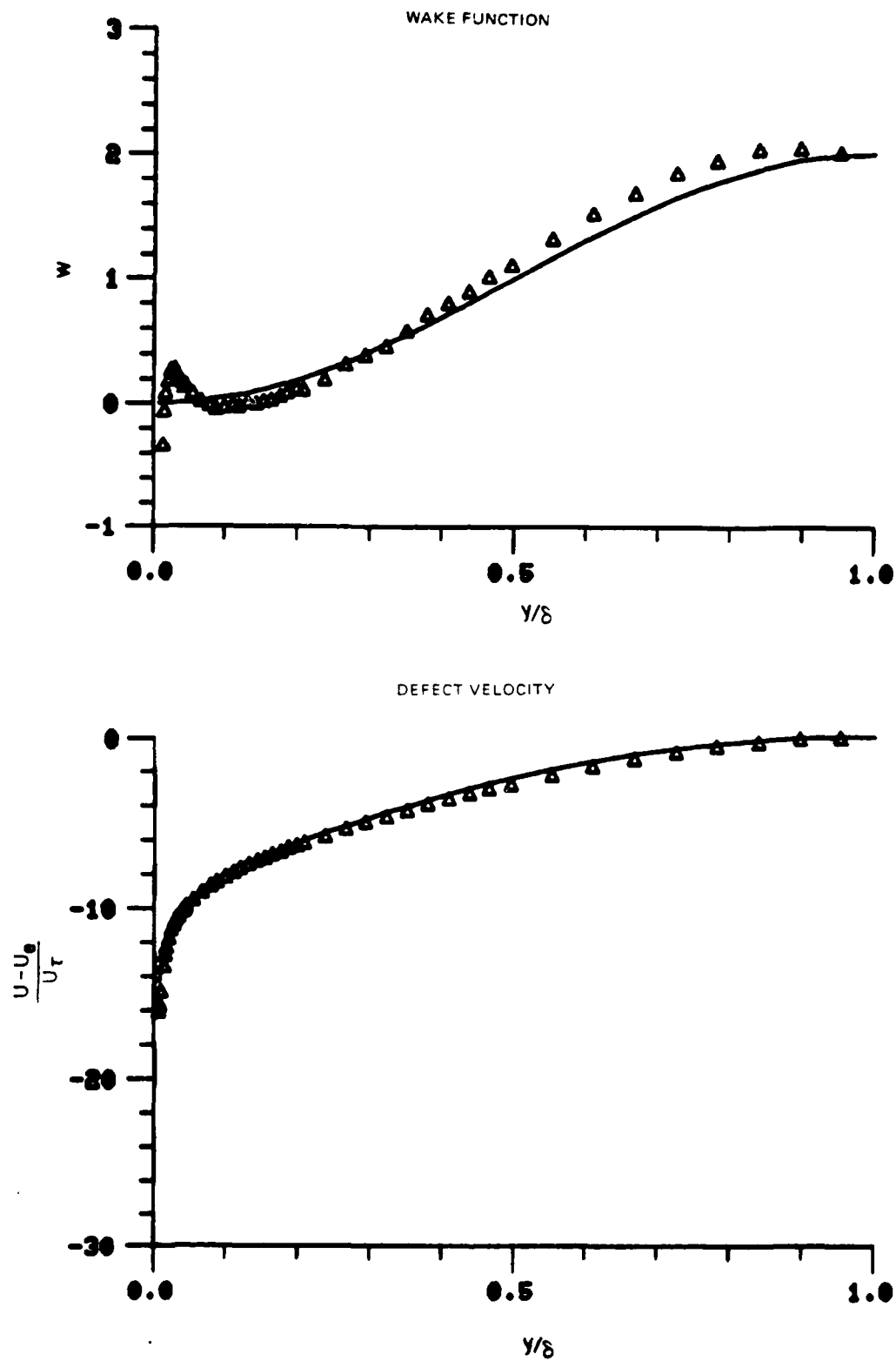


Figure 8. Boundary Layer Velocity Profiles
Run No. 5 Point No. 11

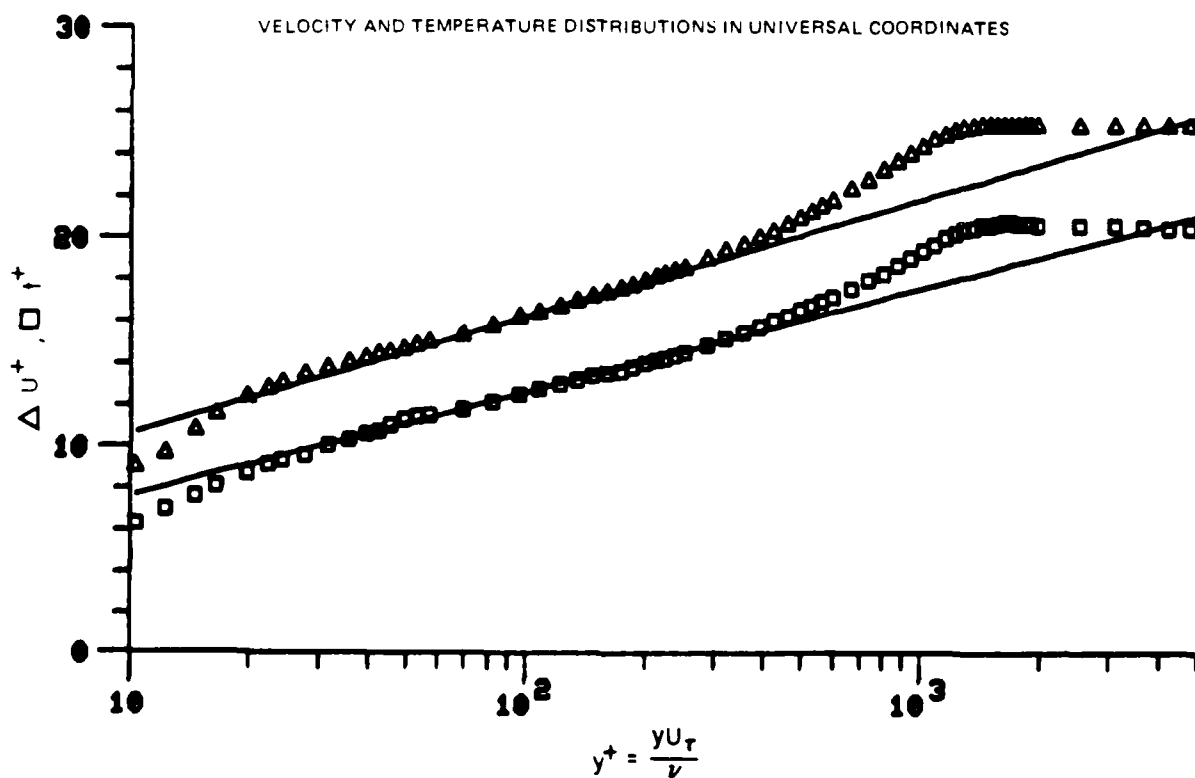
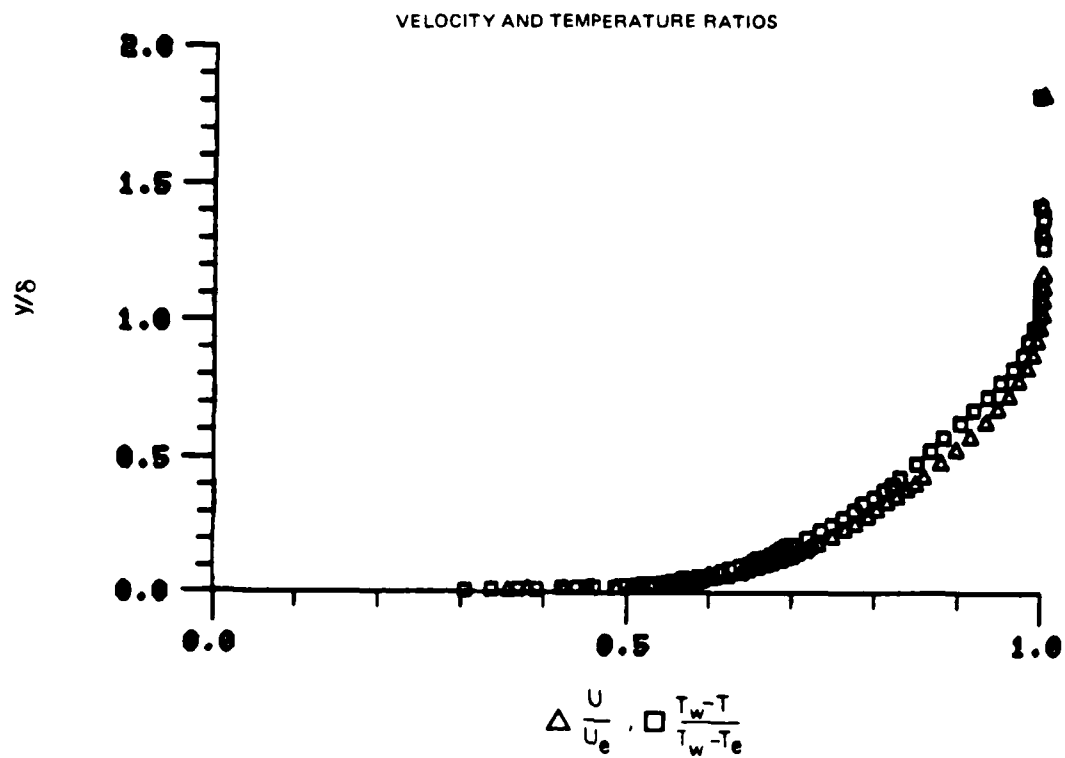


Figure 9. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 13

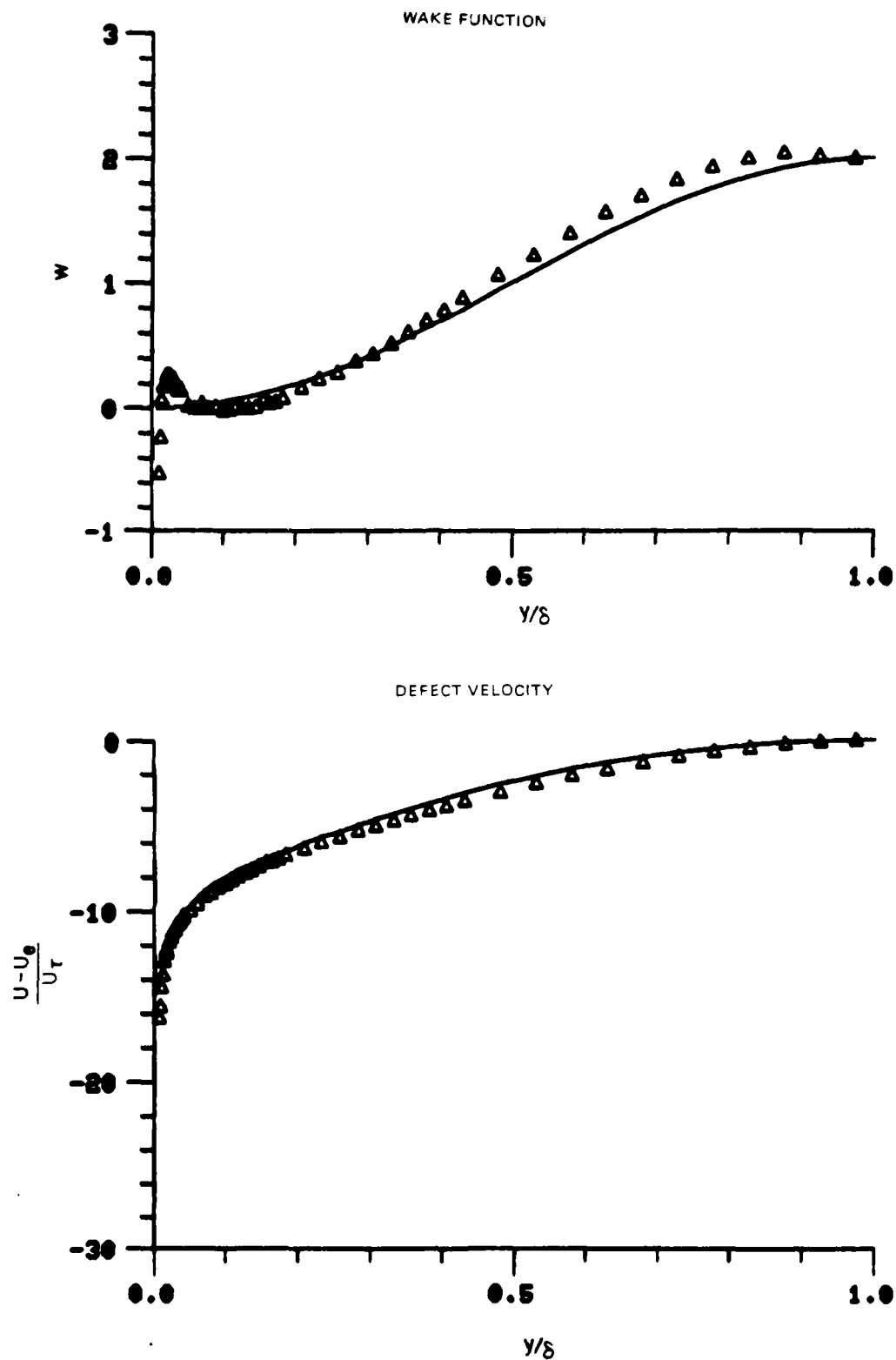


Figure 9. Boundary Layer Velocity Profiles
Run No. 5 Point No. 13

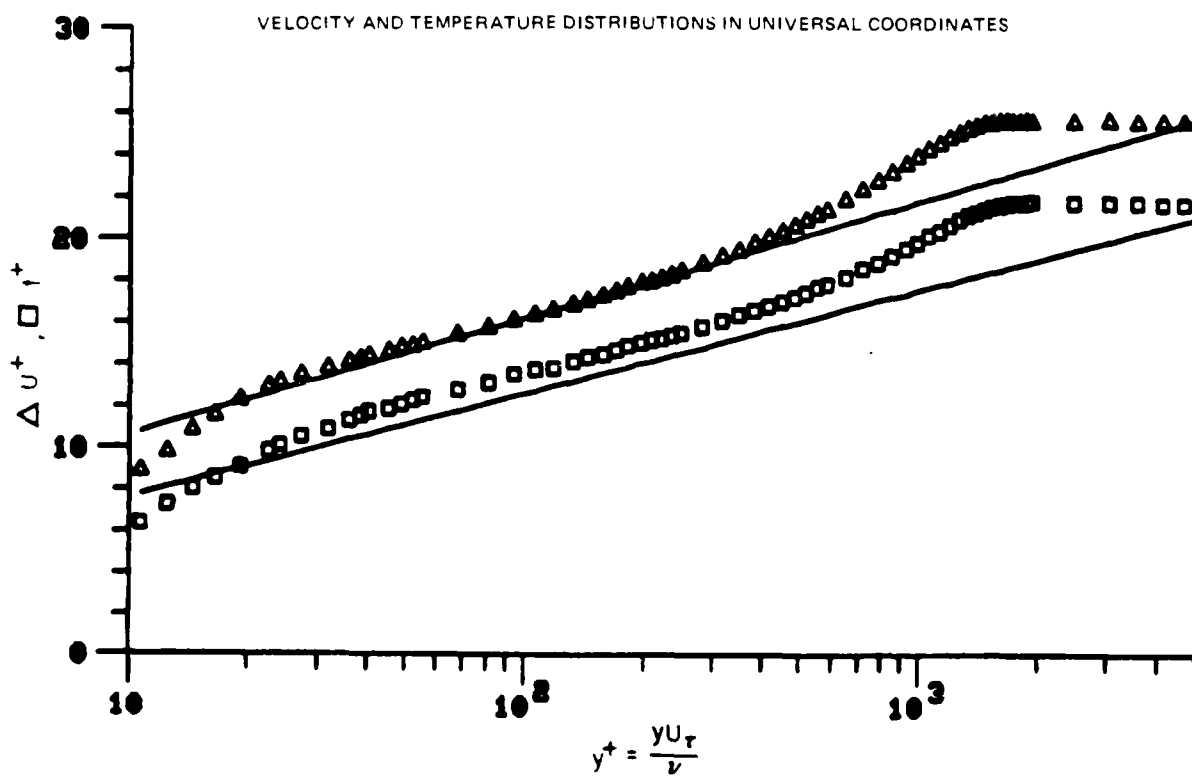
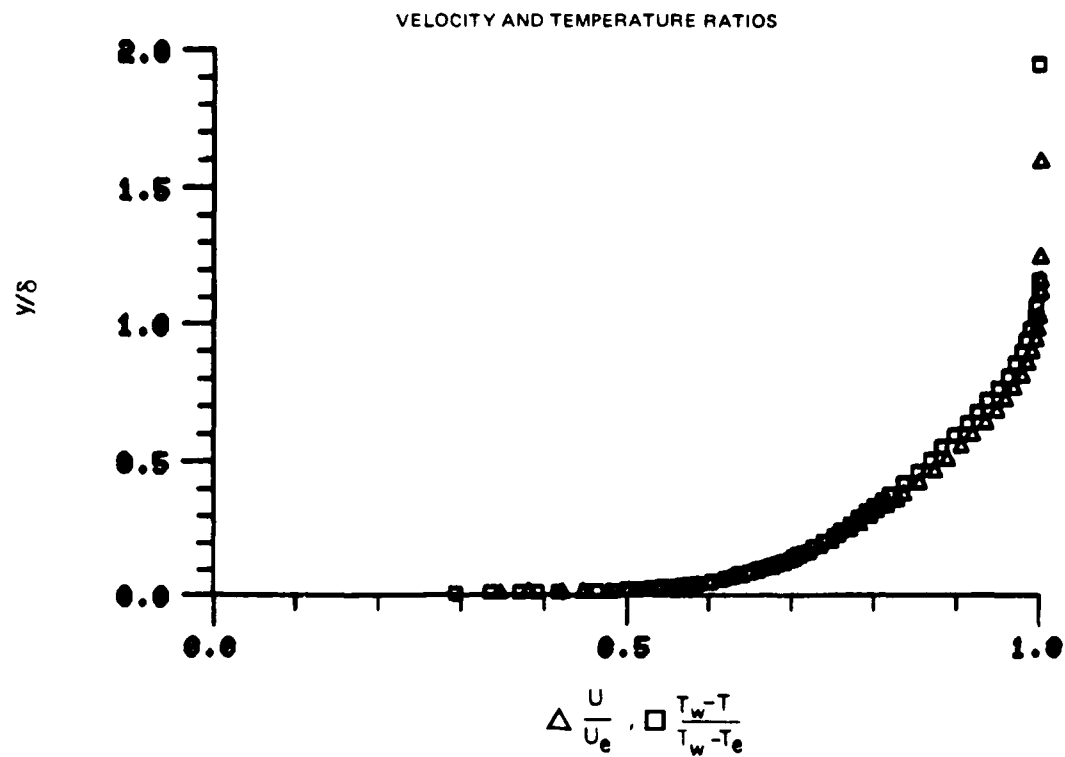


Figure 10. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 14

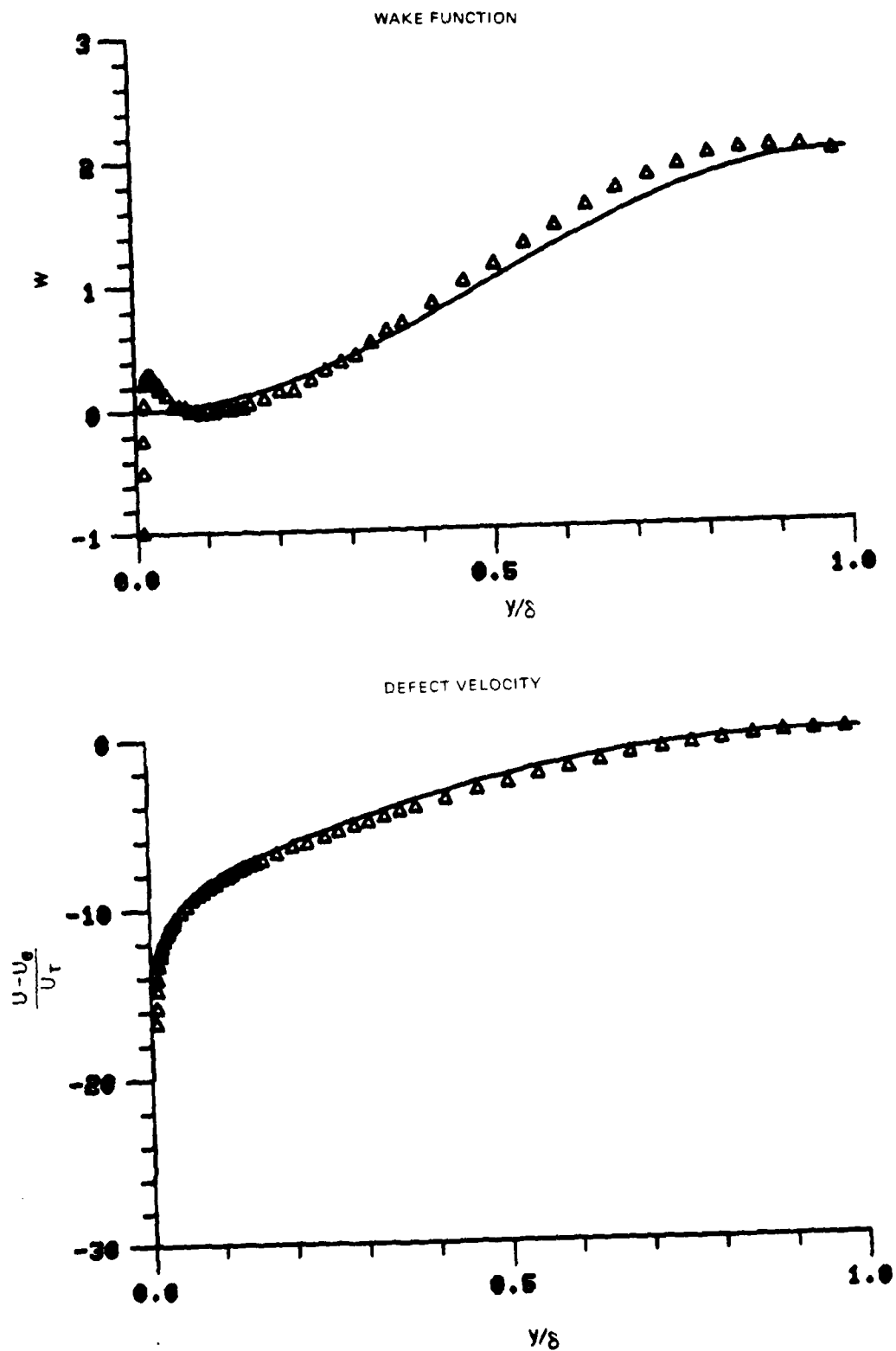


Figure 10. Boundary Layer Velocity Profiles
Run No. 5 Point No. 14

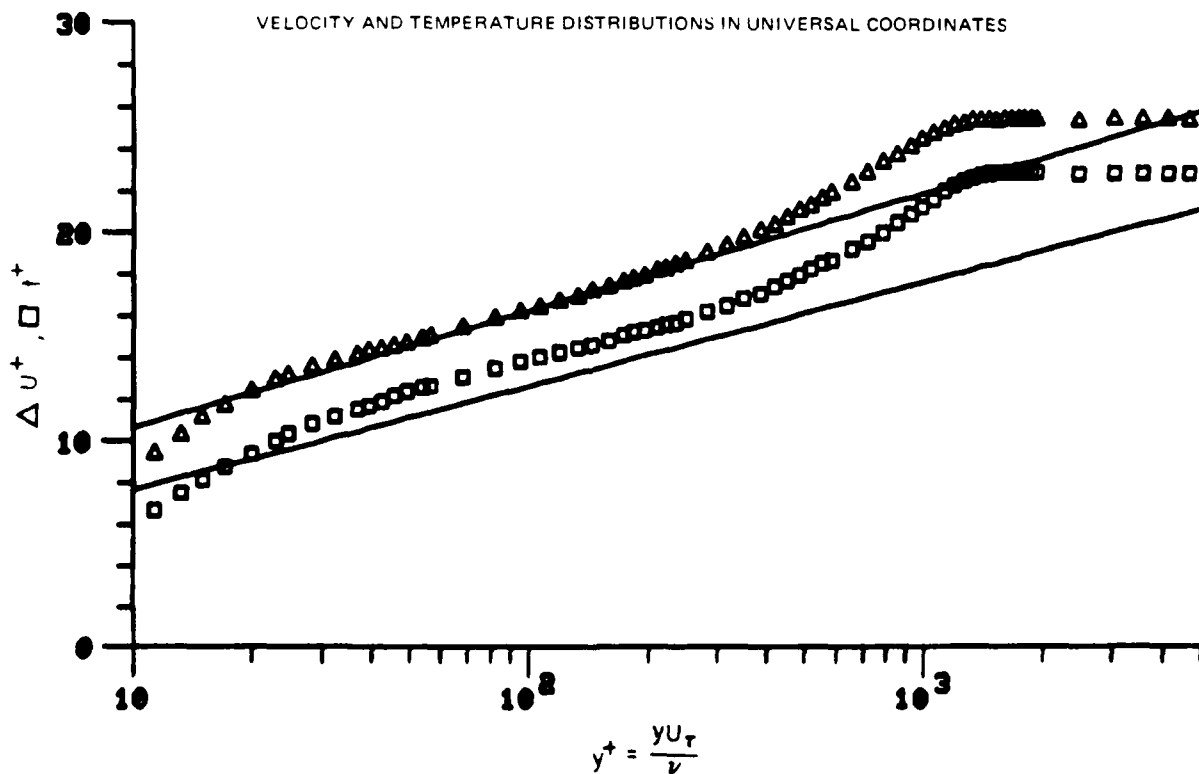
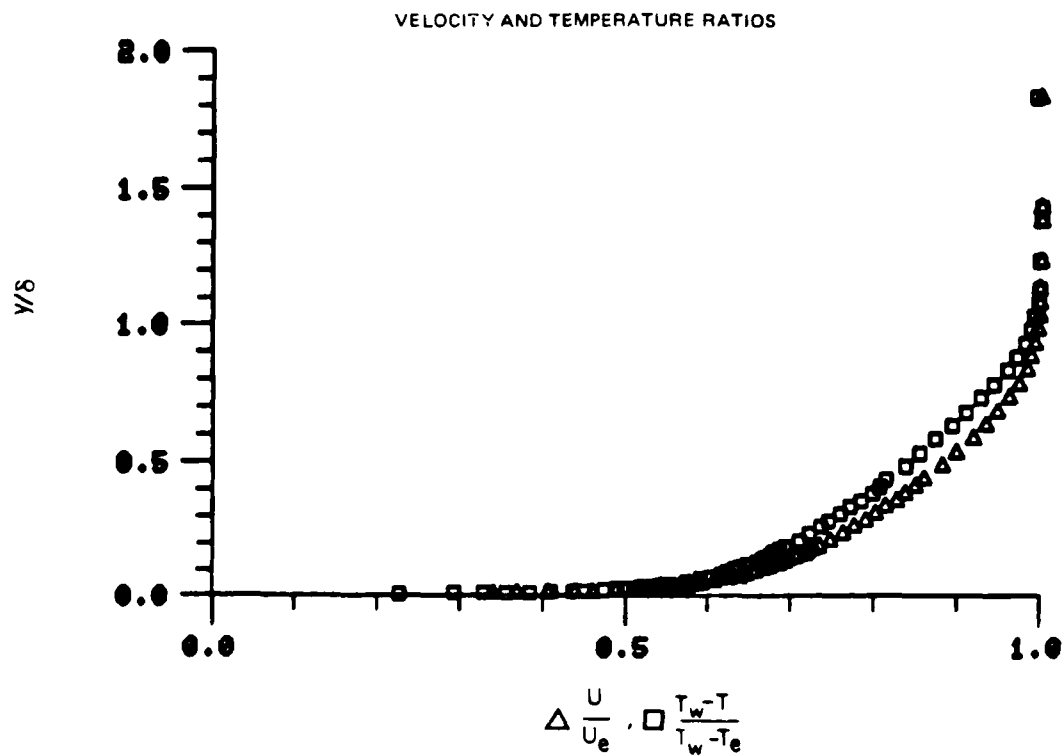


Figure 11. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 16

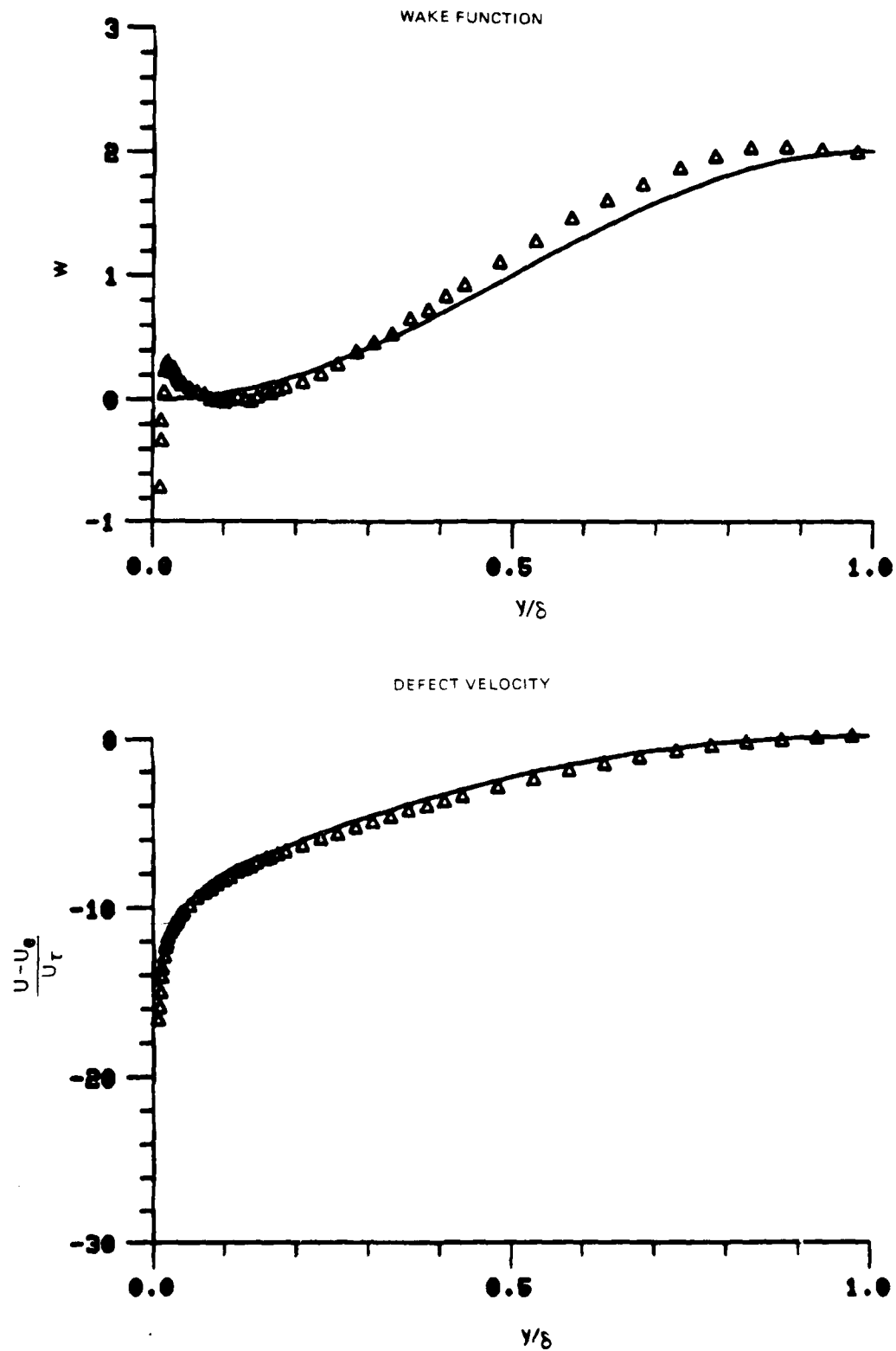
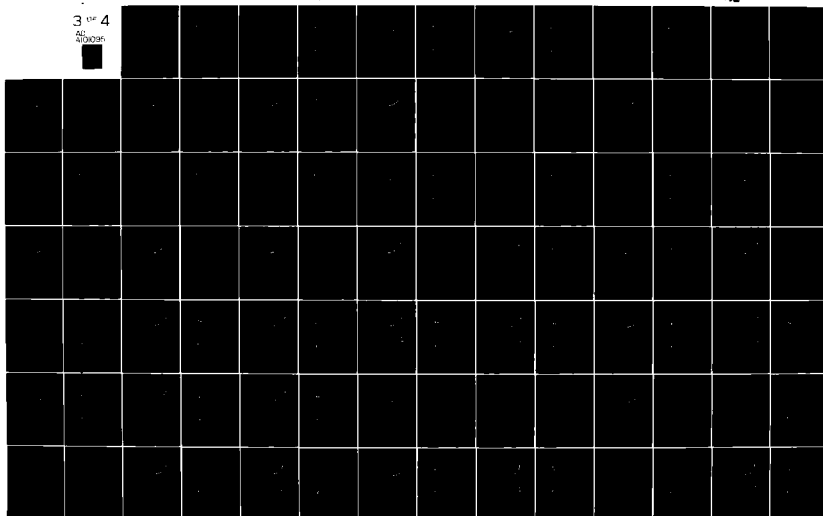


Figure 11. Boundary Layer Velocity Defect
 Page 11 of 11

AD-A101 095 UNITED TECHNOLOGIES RESEARCH CENTER EAST HARTFORD CONN F/G 20/4
DATA REPORT. VOLUME I. VELOCITY AND TEMPERATURE PROFILE DATA FO--ETC(11)
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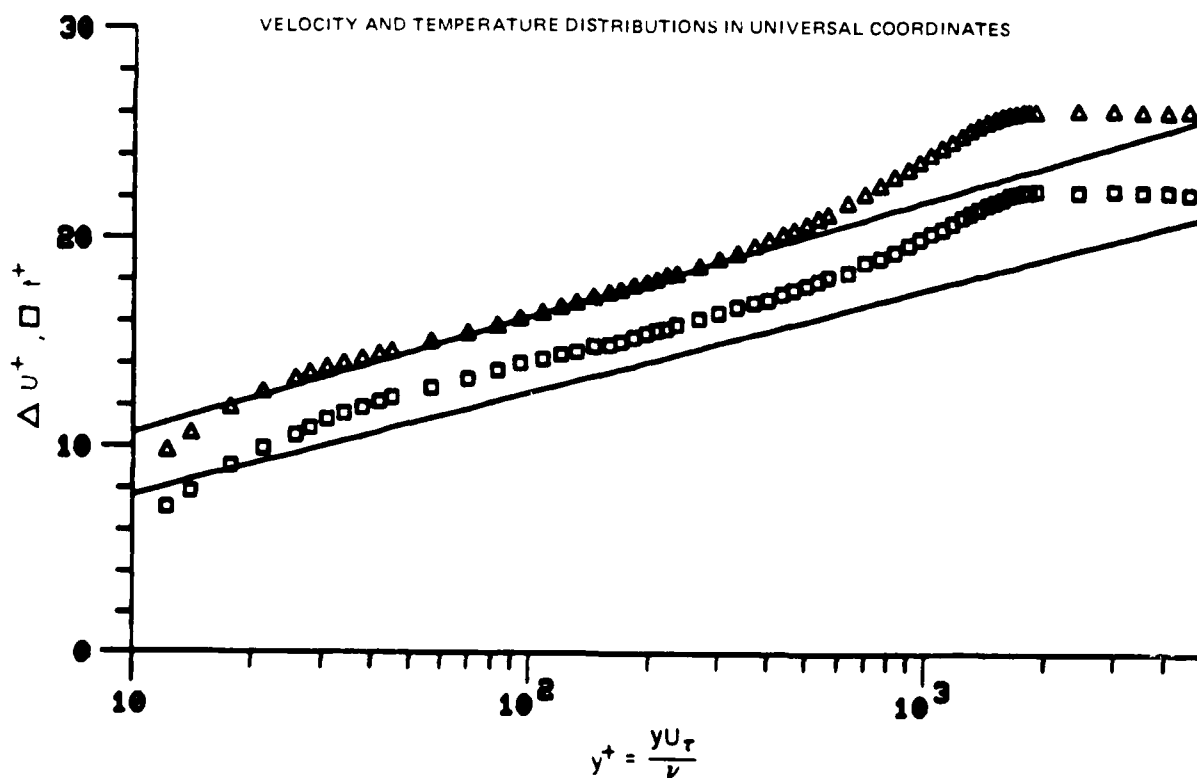
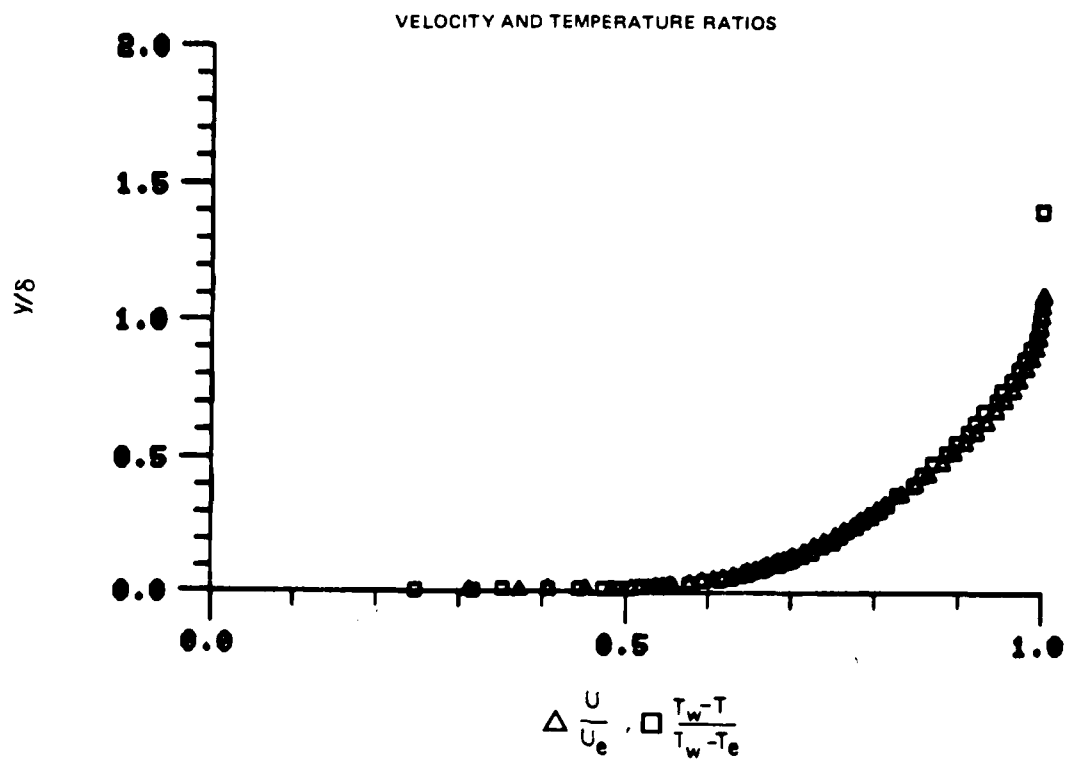


Figure 12. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 17

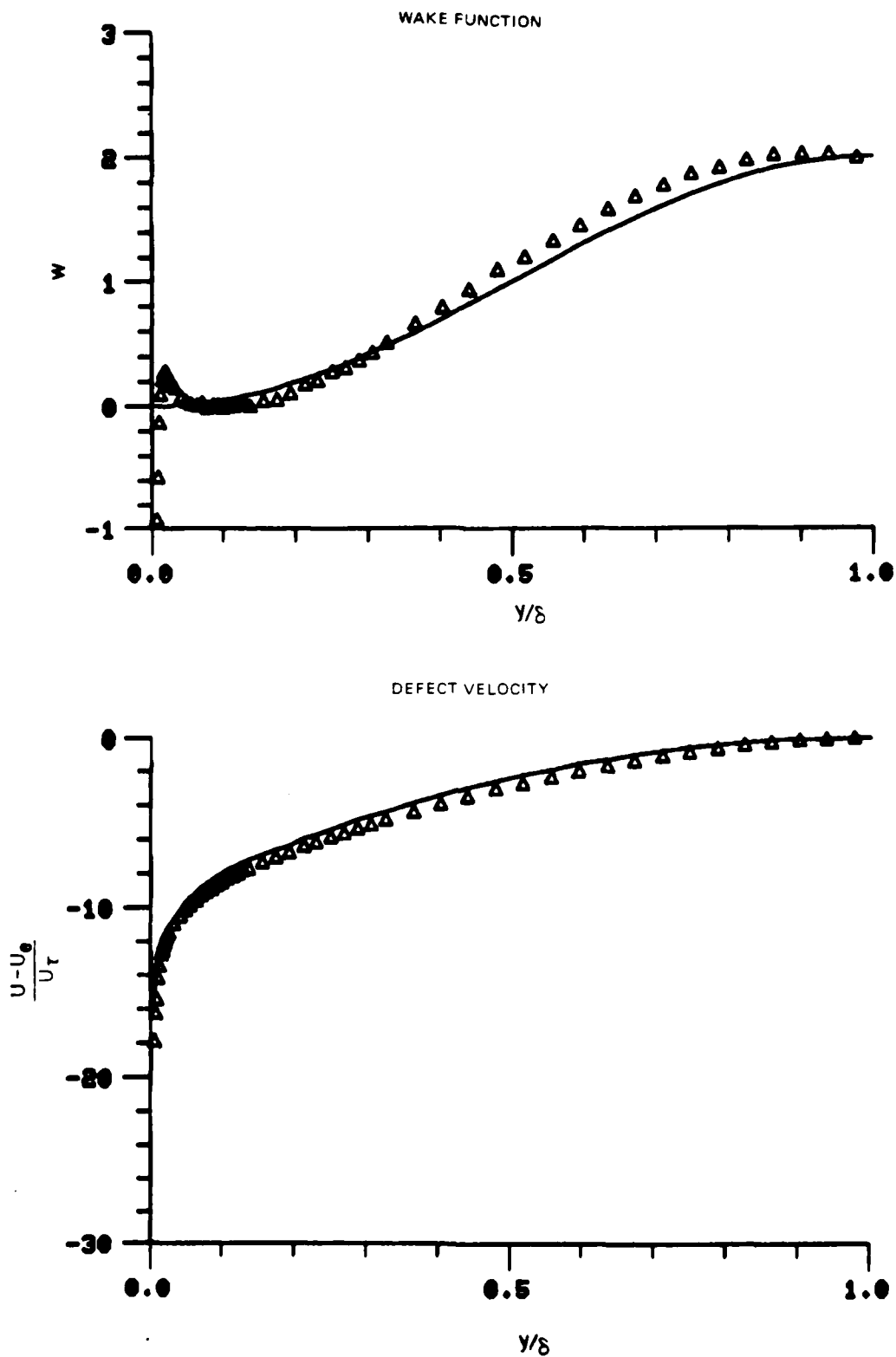


Figure 12. Boundary Layer Velocity Profiles
Run No. 5 Point No. 17

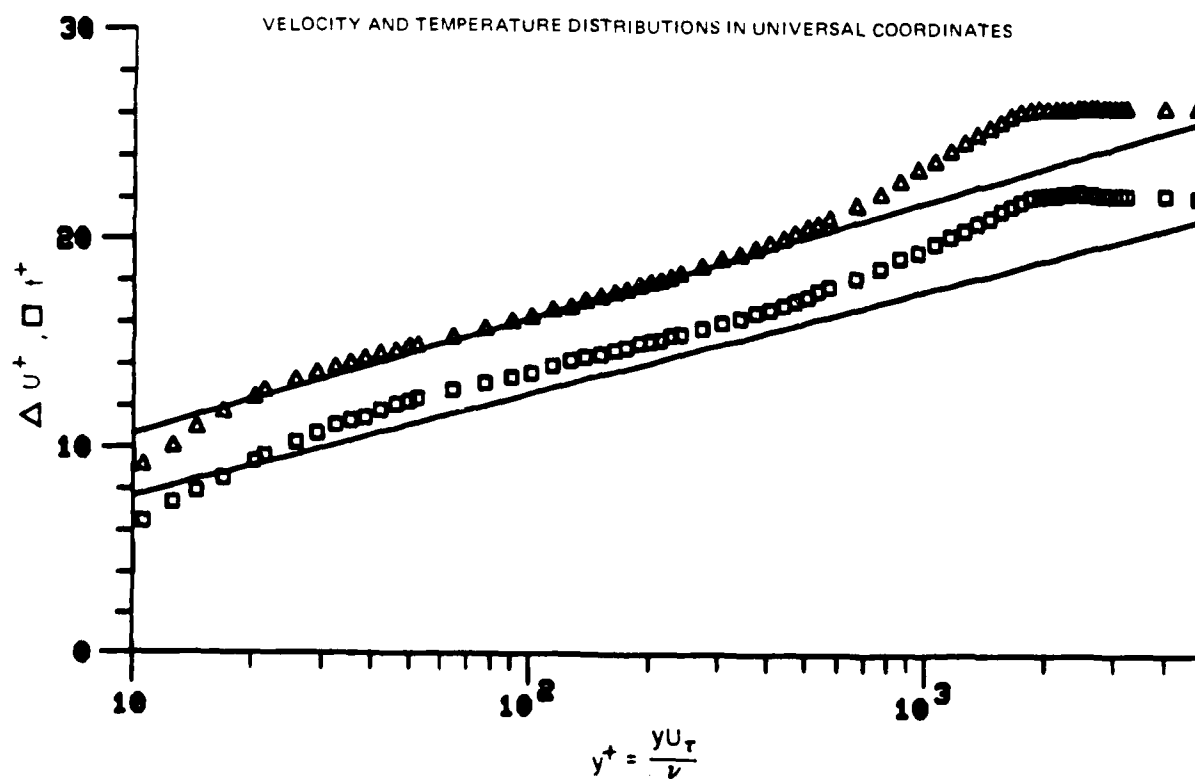
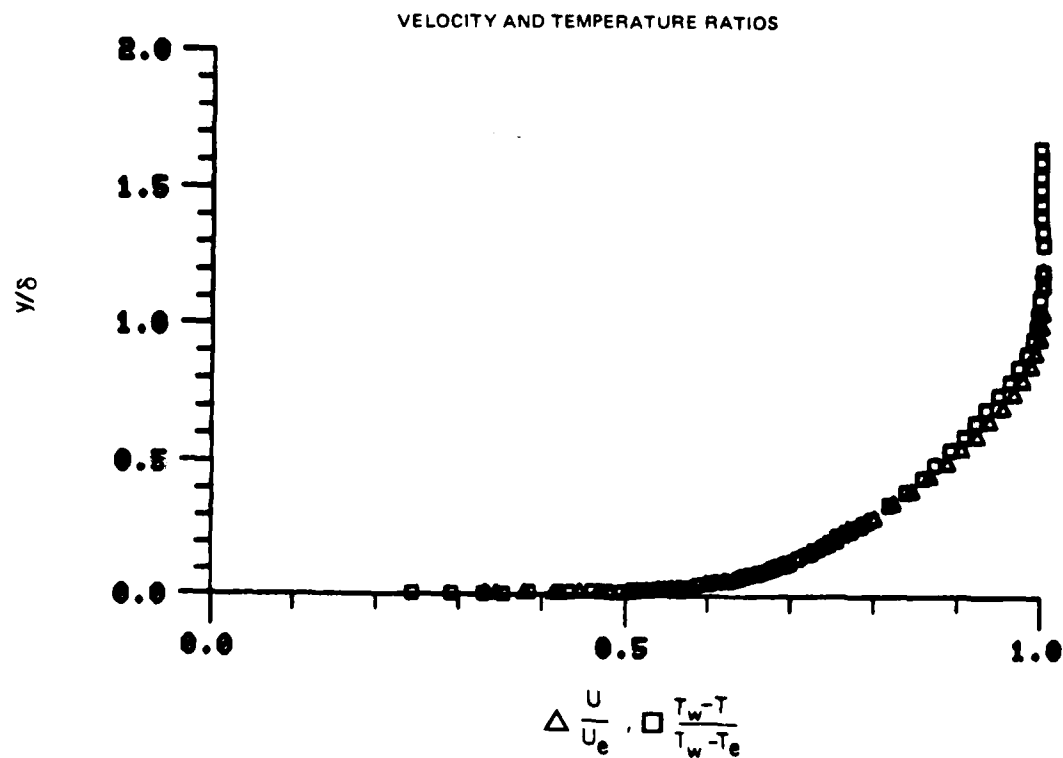


Figure 13. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 18

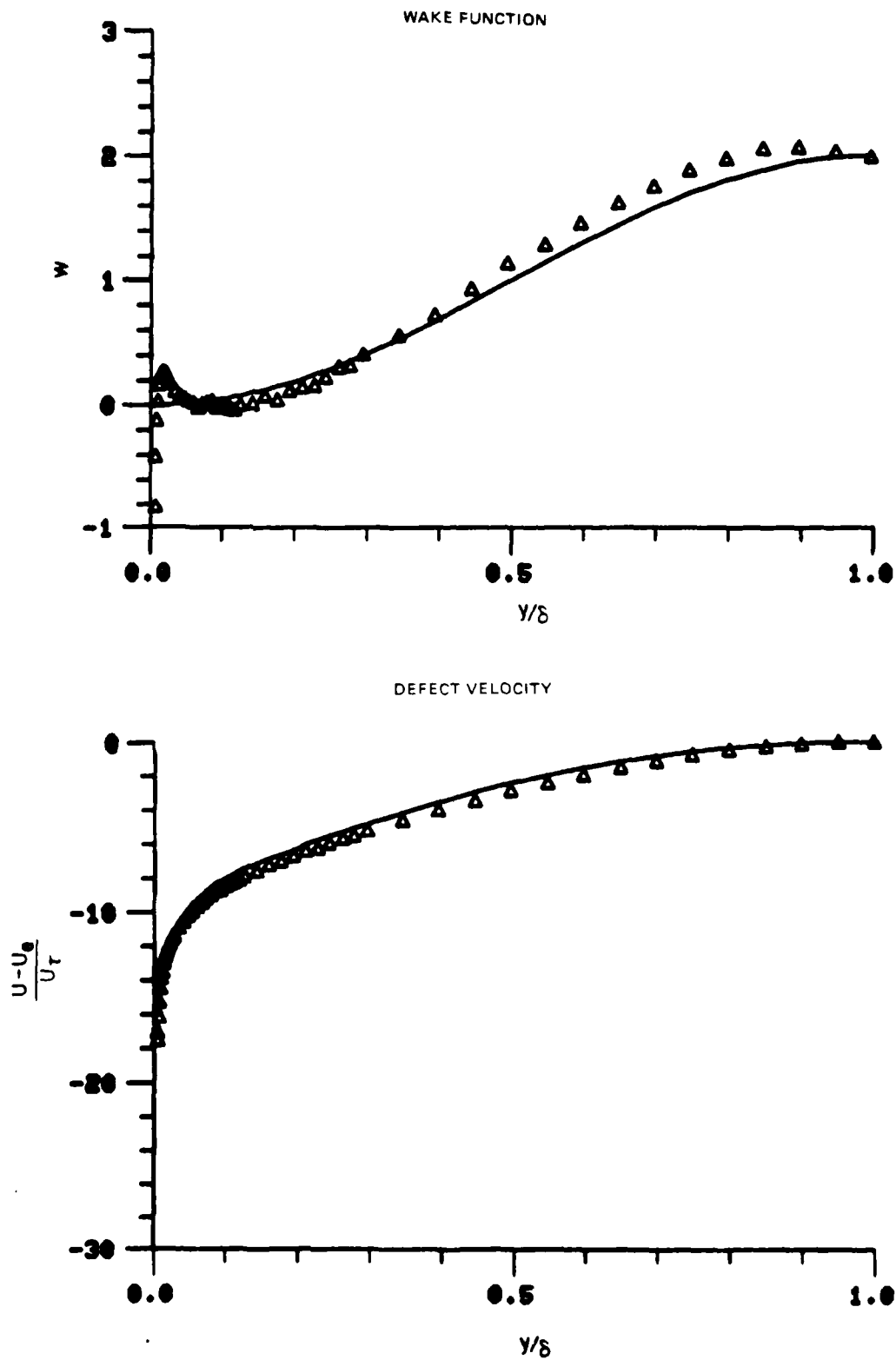


Figure 13. Boundary Layer Velocity Profiles
Run No. 5 Point No. 18

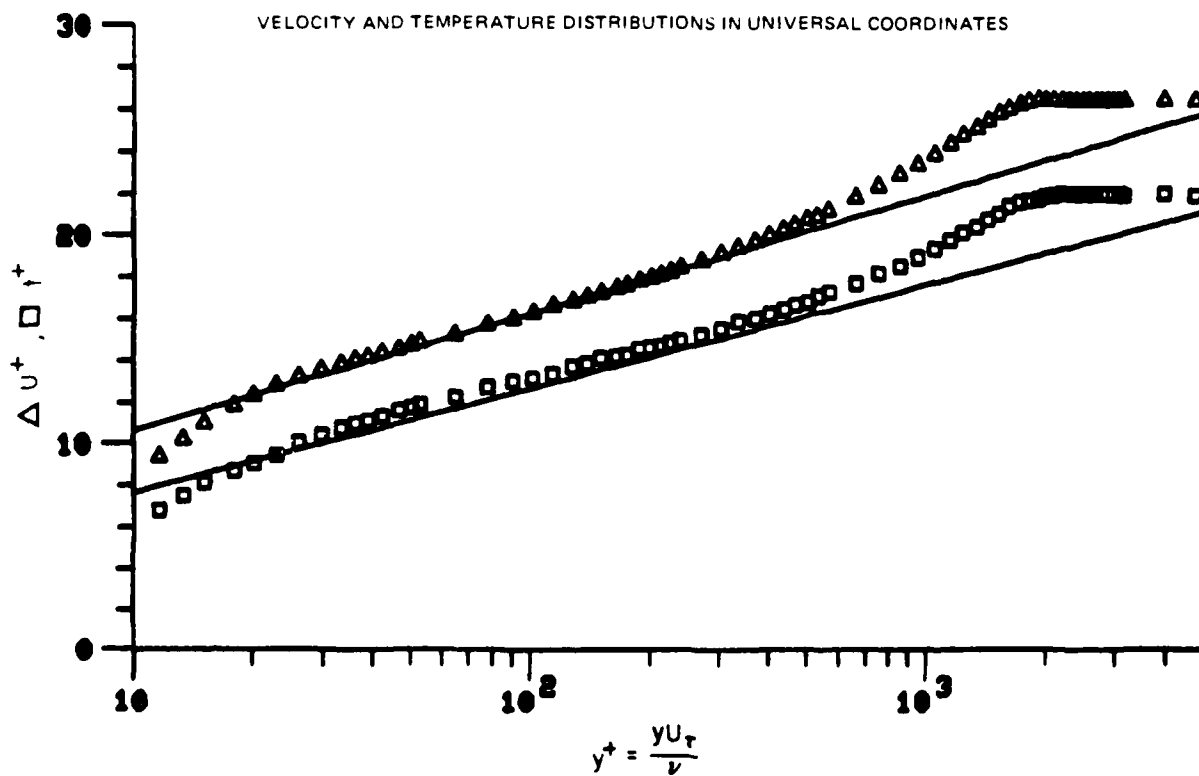
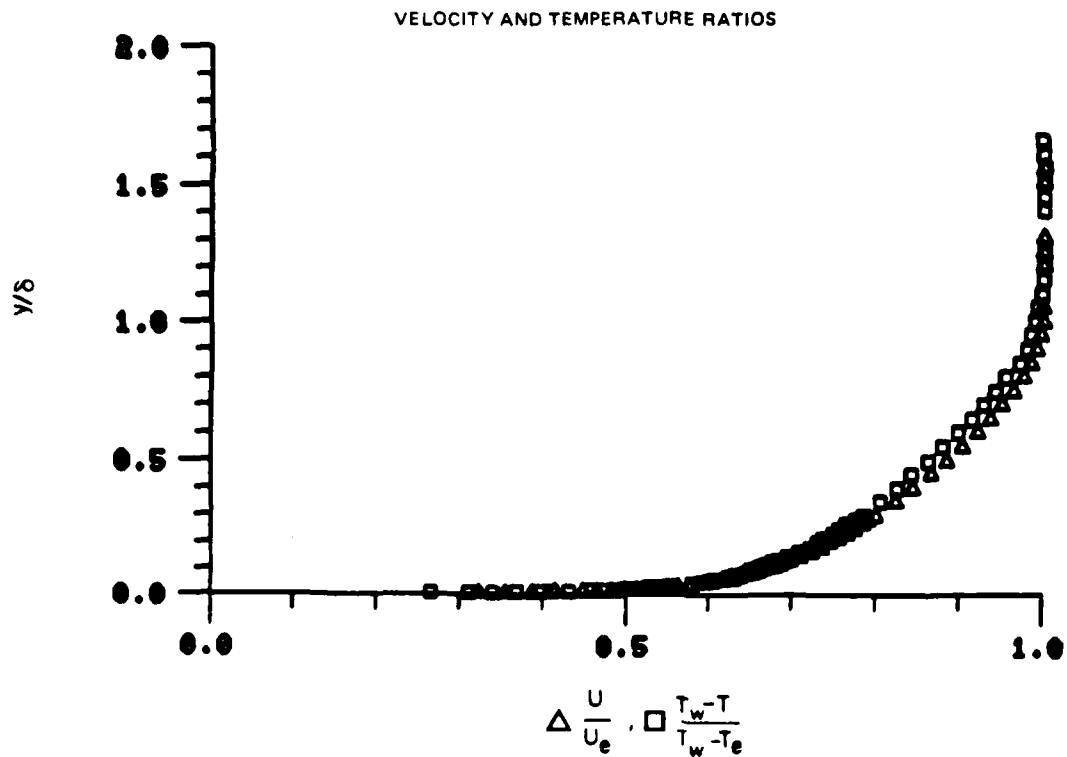


Figure 14. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 19

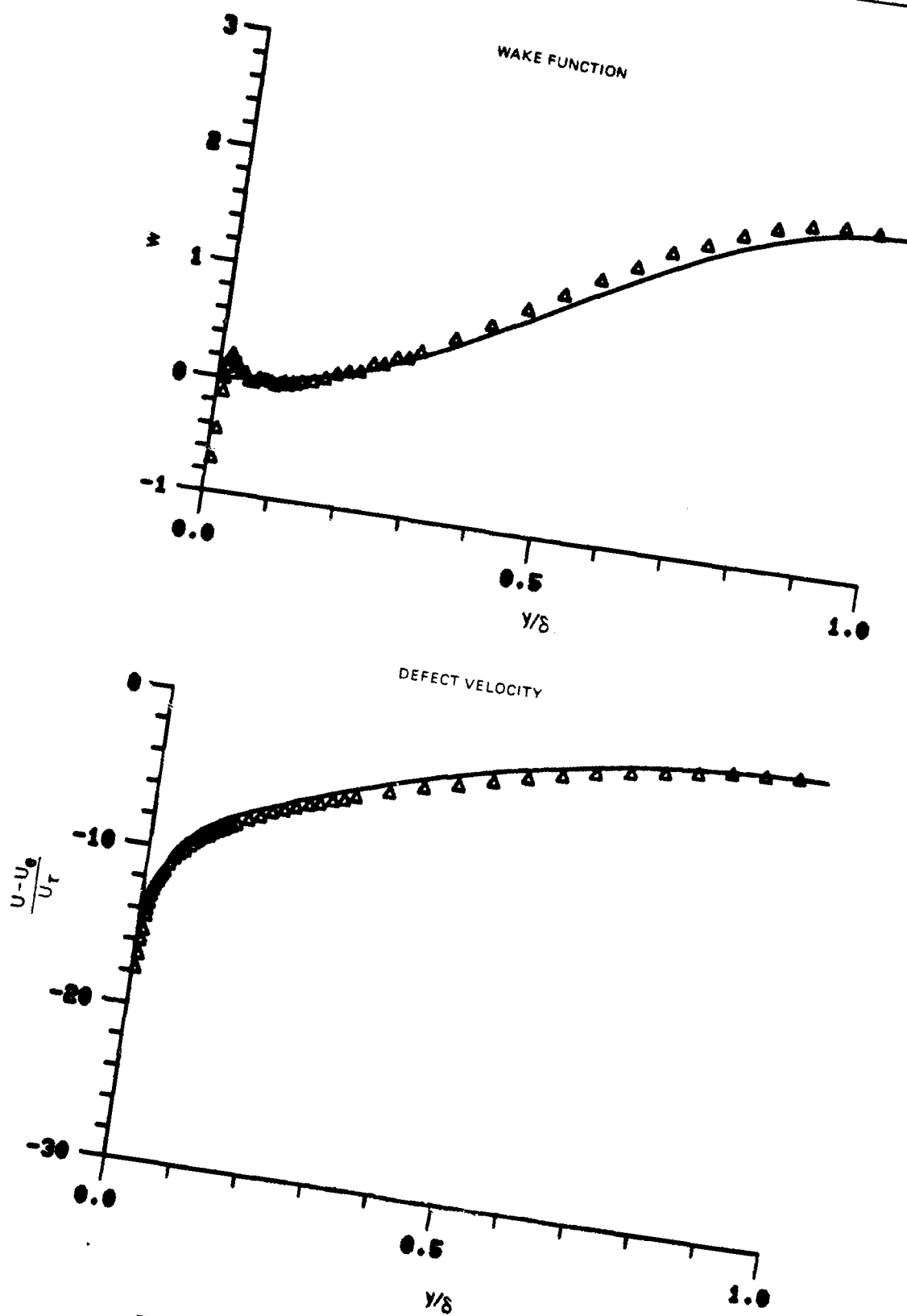


Figure 14. Boundary Layer Velocity Profiles
Run No. 5 Point No. 19

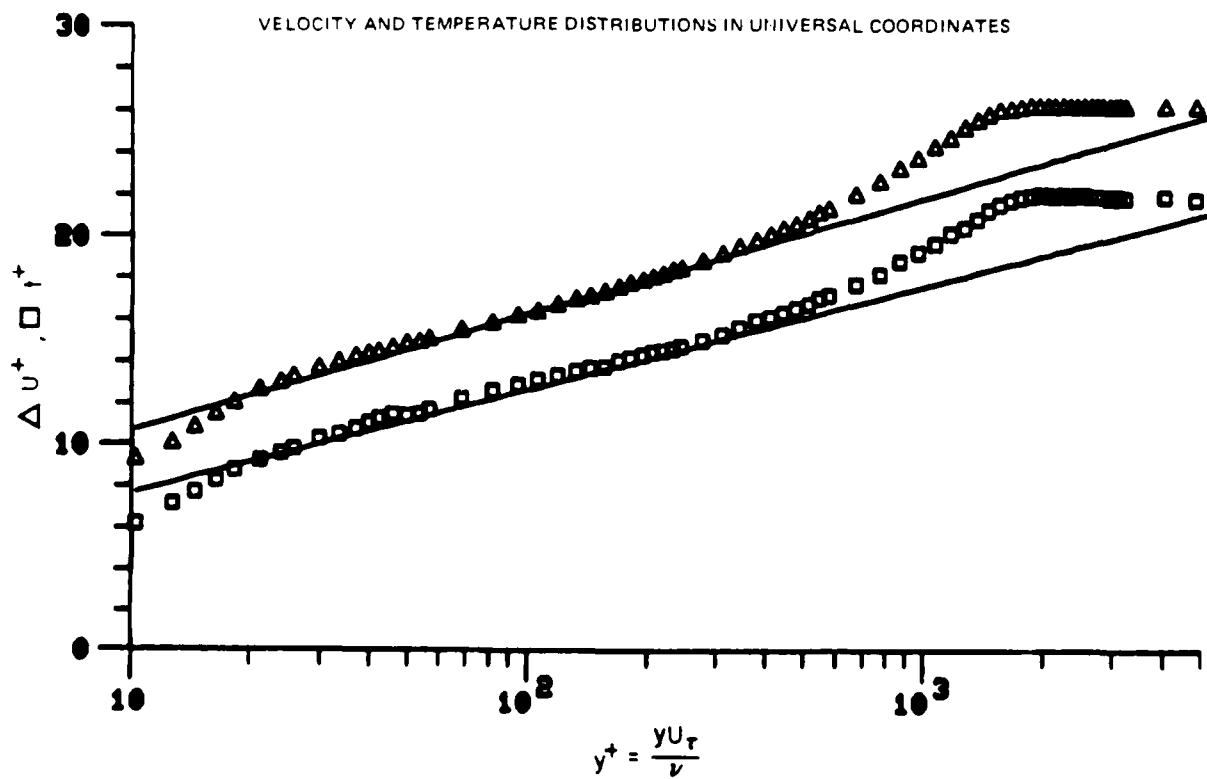
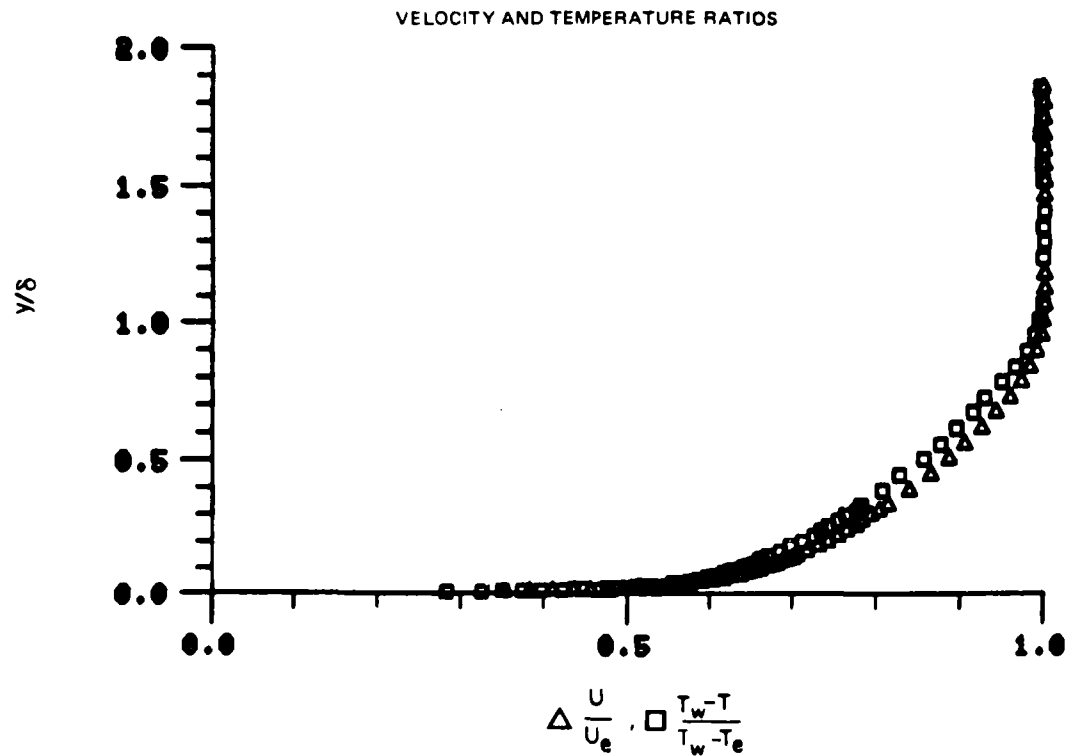


Figure 15. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 20

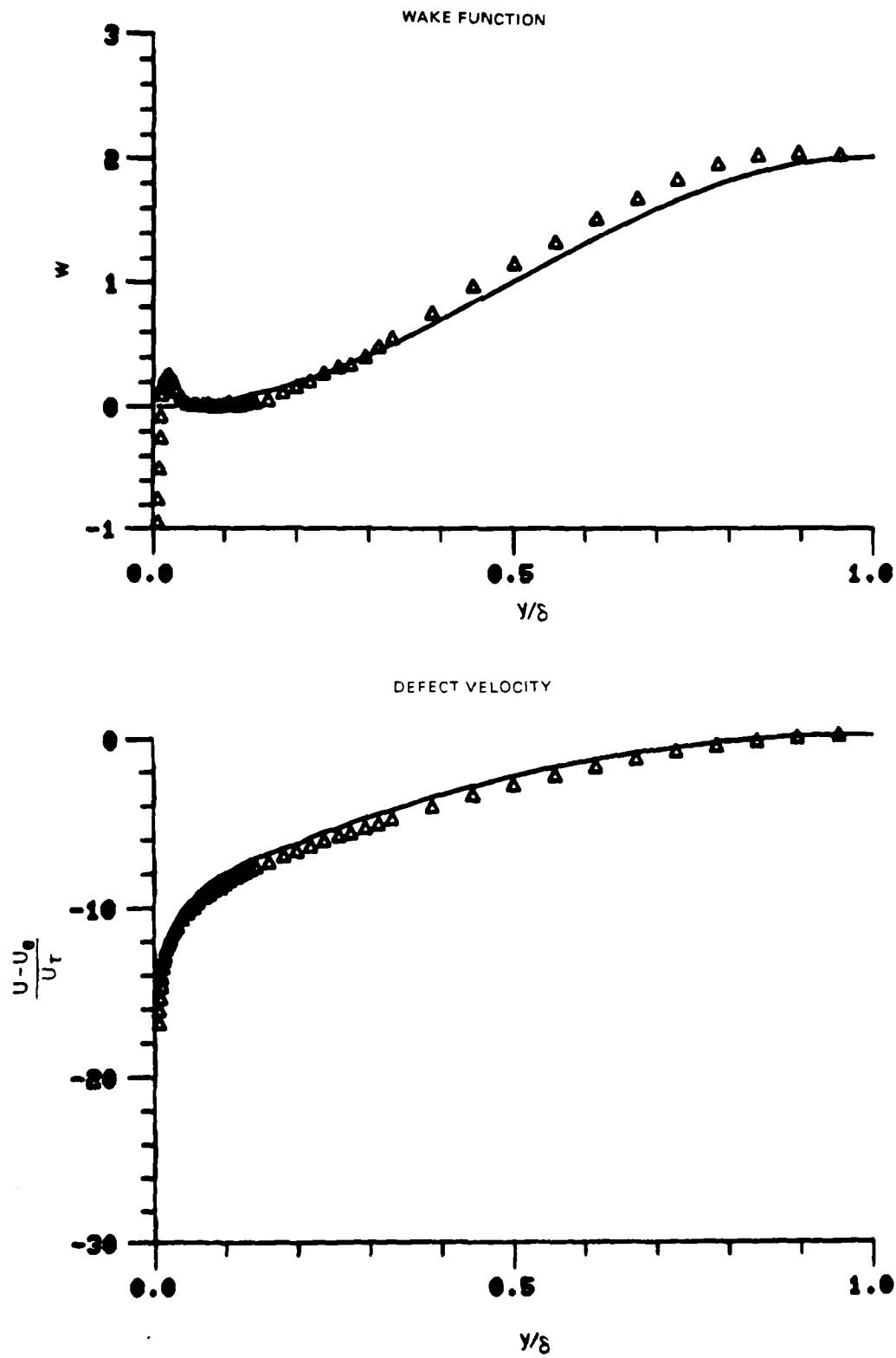


Figure 15. Boundary Layer Velocity Profiles
Run No. 5 Point No. 20

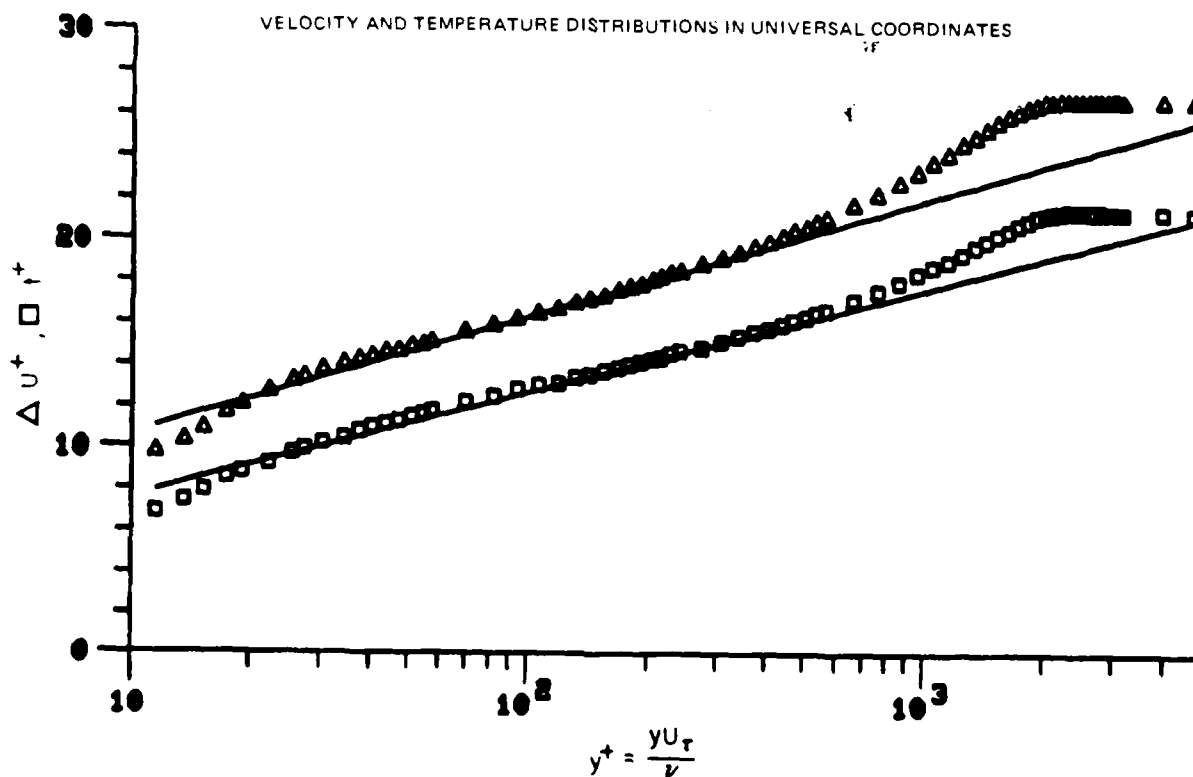
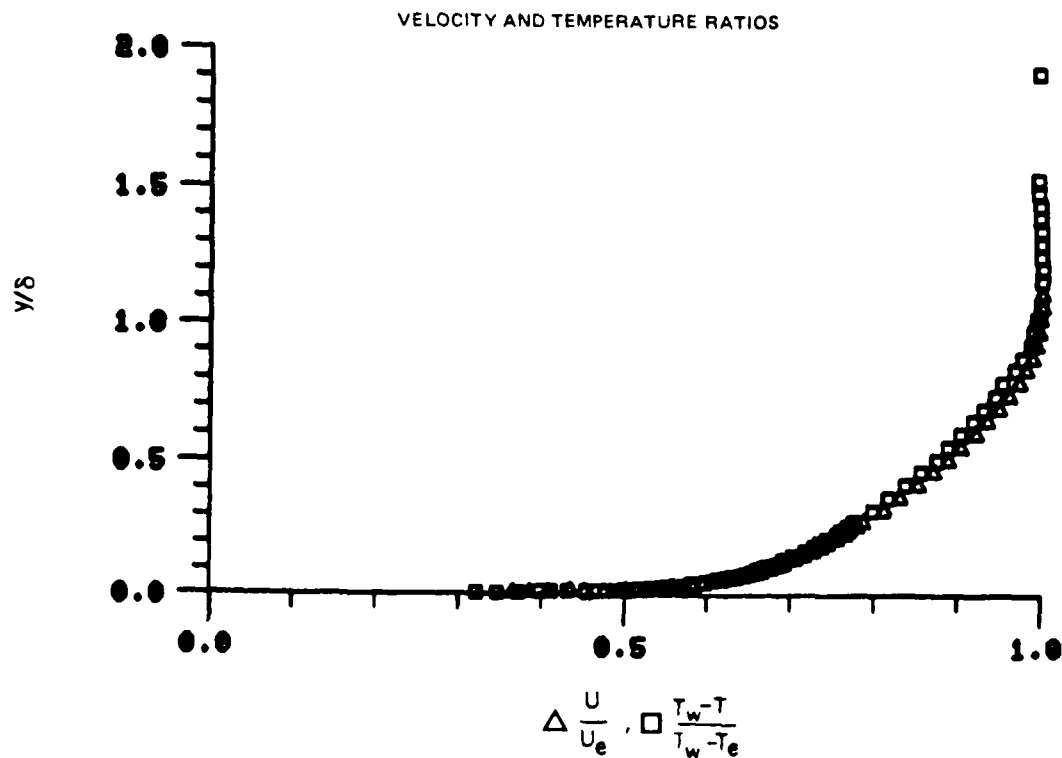


Figure 16. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 21

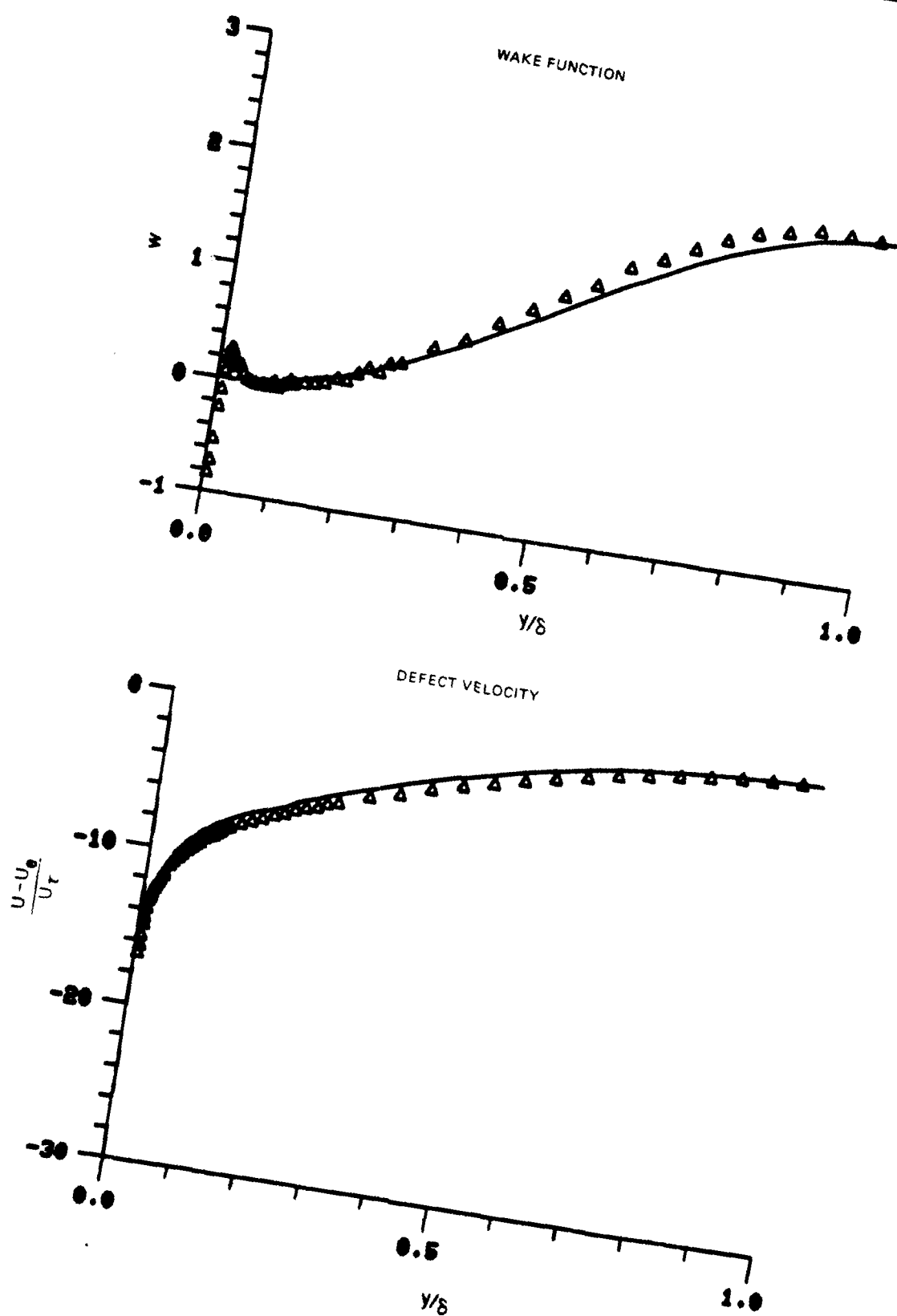


Figure 16. Boundary Layer Velocity Profiles
Run No. 5 Point No. 21

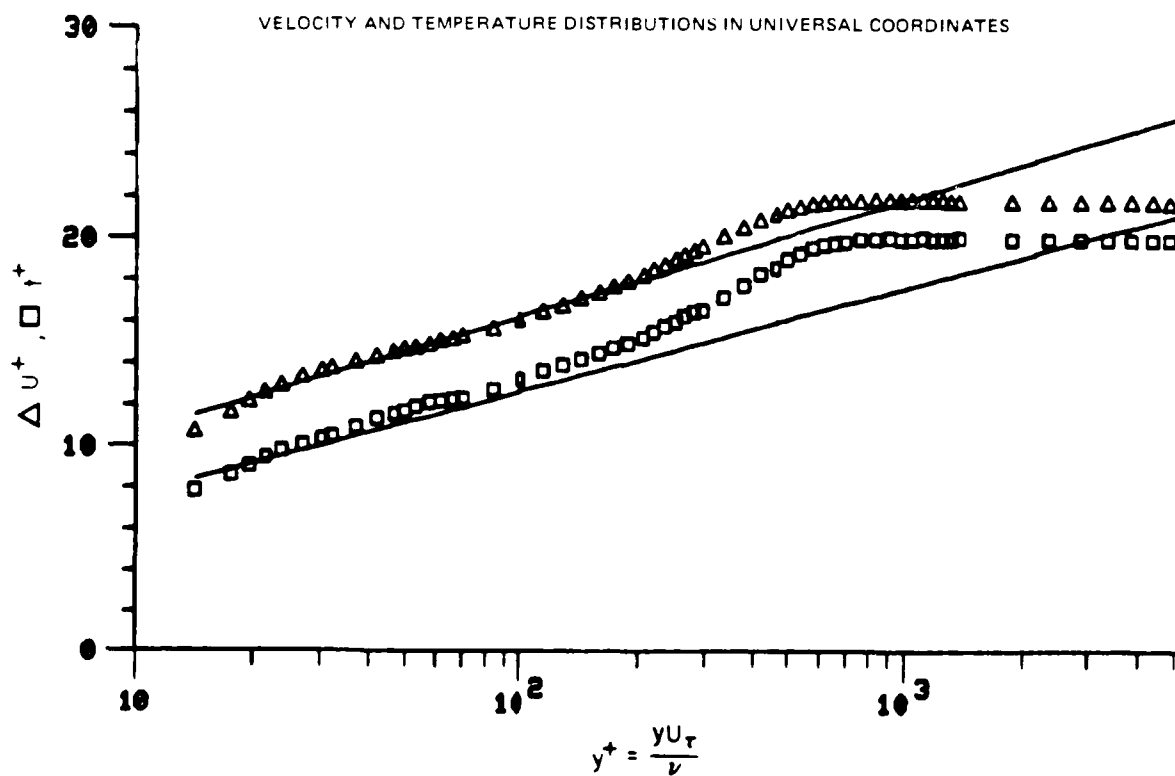
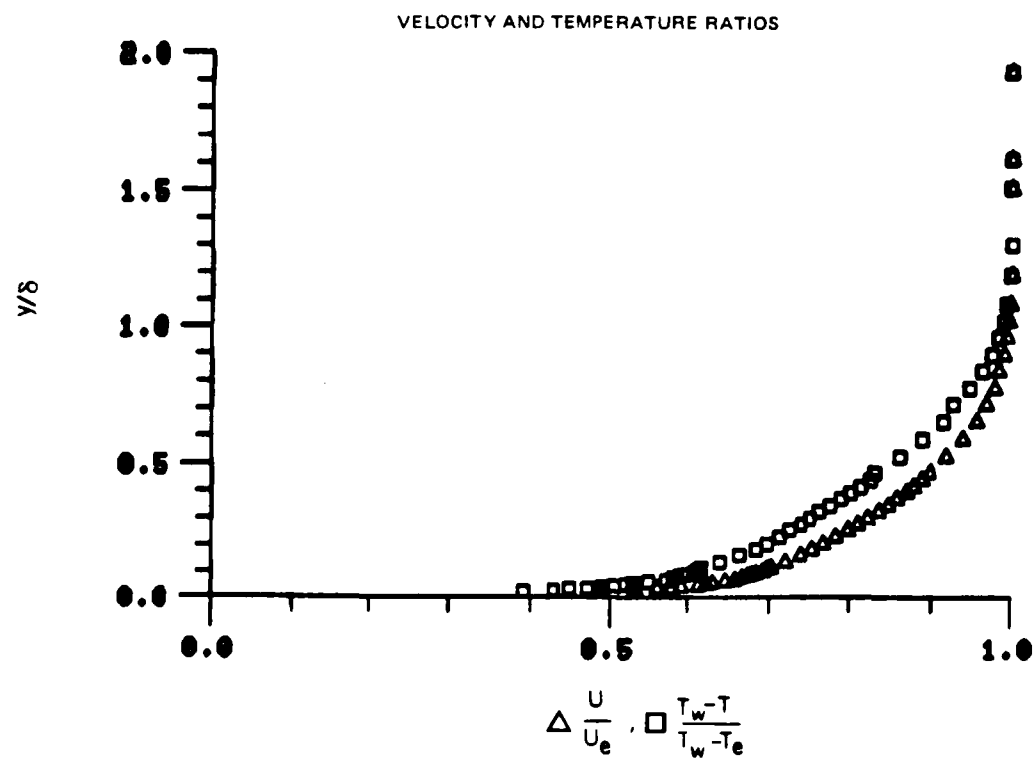


Figure 17. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 3

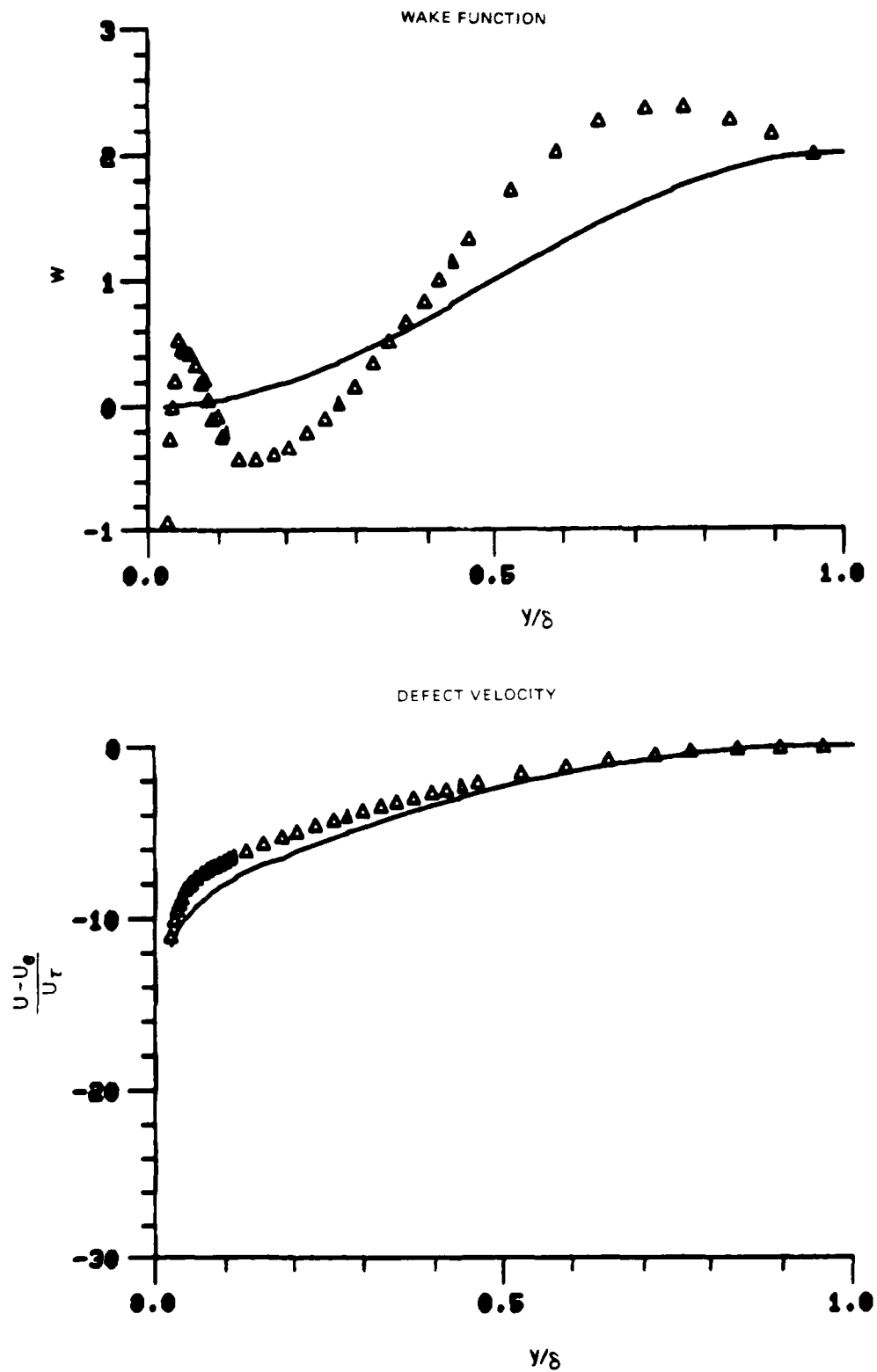


Figure 17. Boundary Layer Velocity Profiles
Run No.8 Point No.3

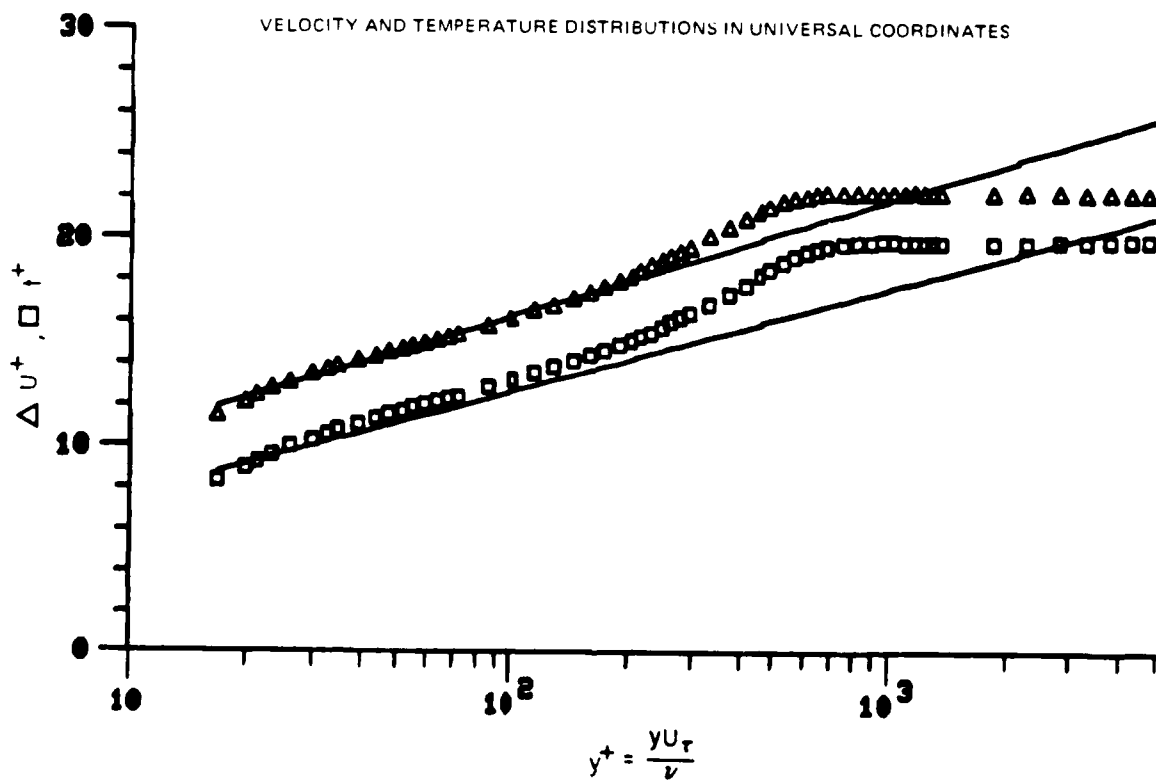
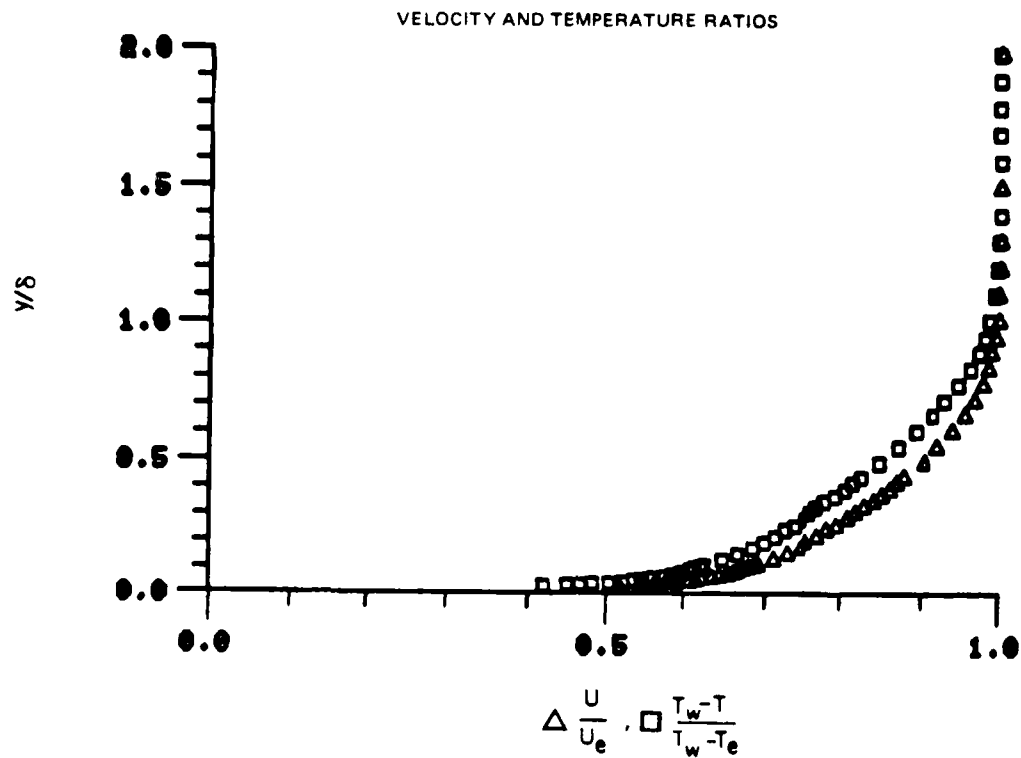


Figure 18. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 4

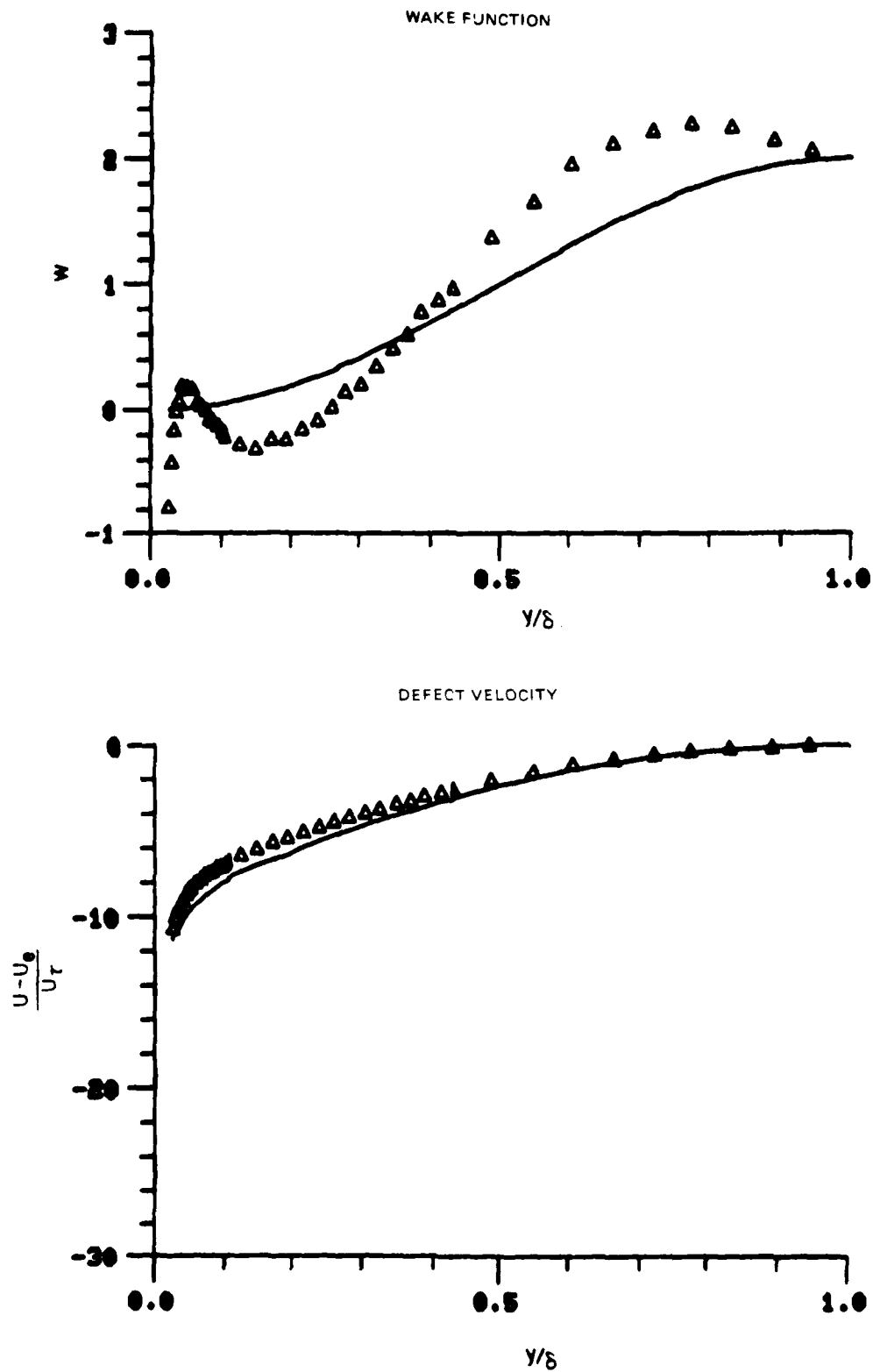


Figure 18. Boundary Layer Velocity Profiles
Run No. 8 Point No. 4

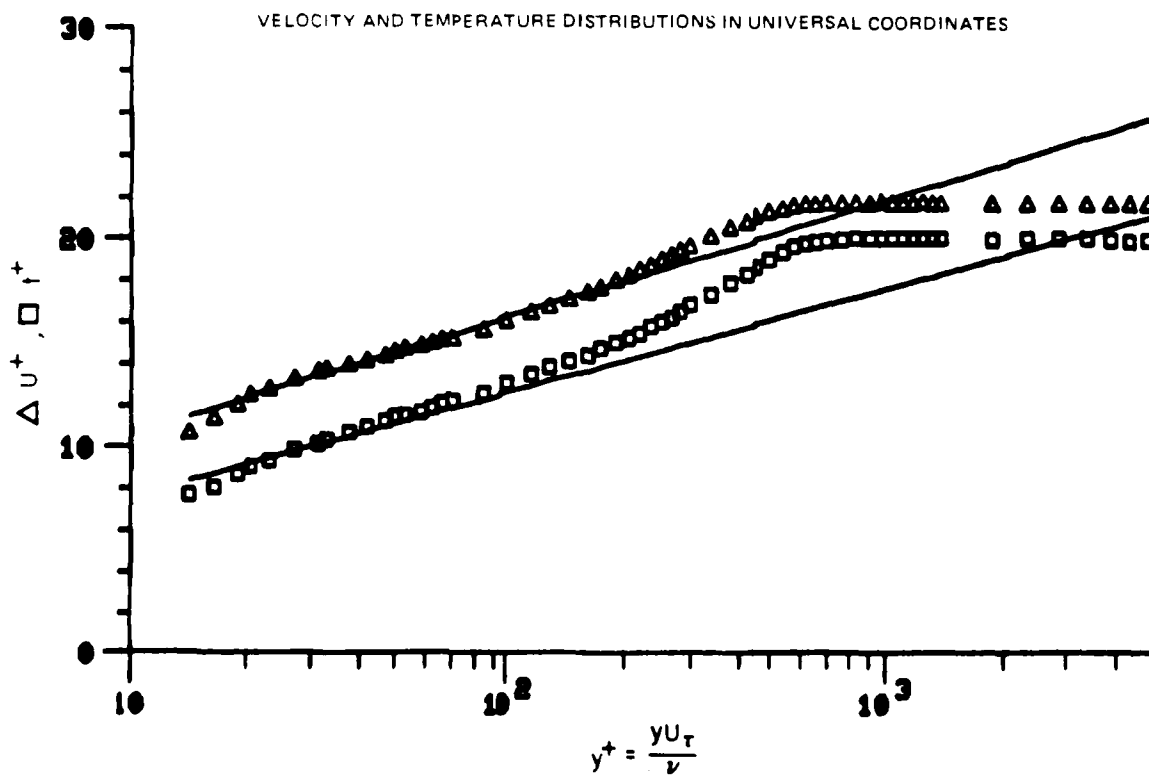
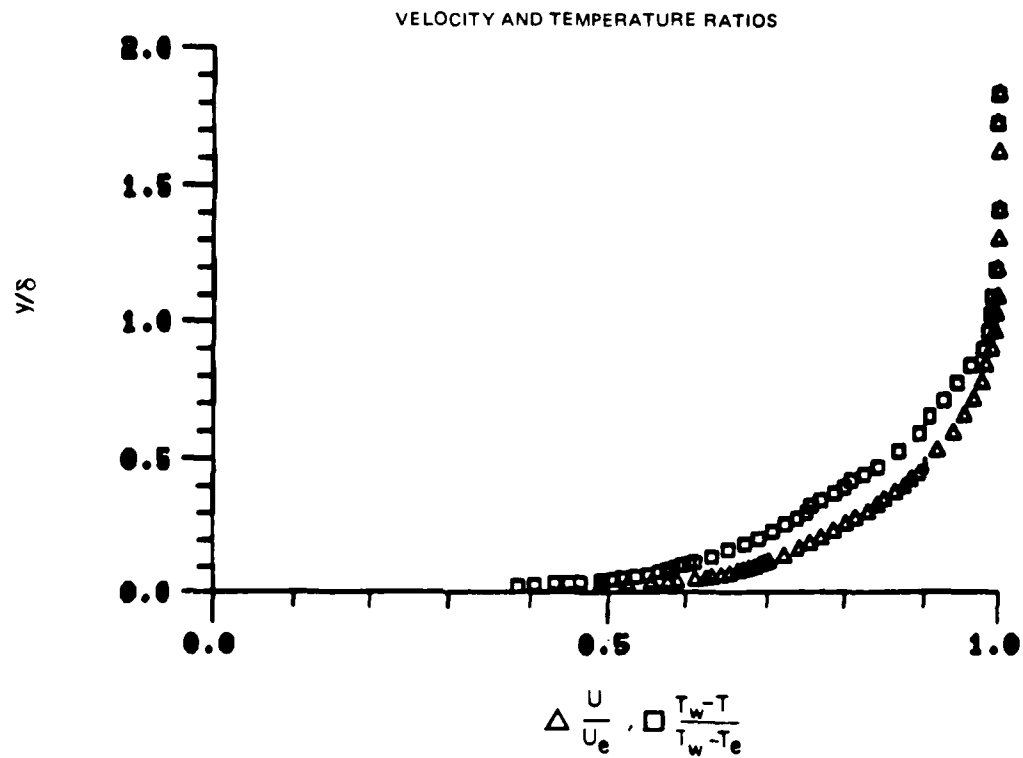


Figure 19. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 5

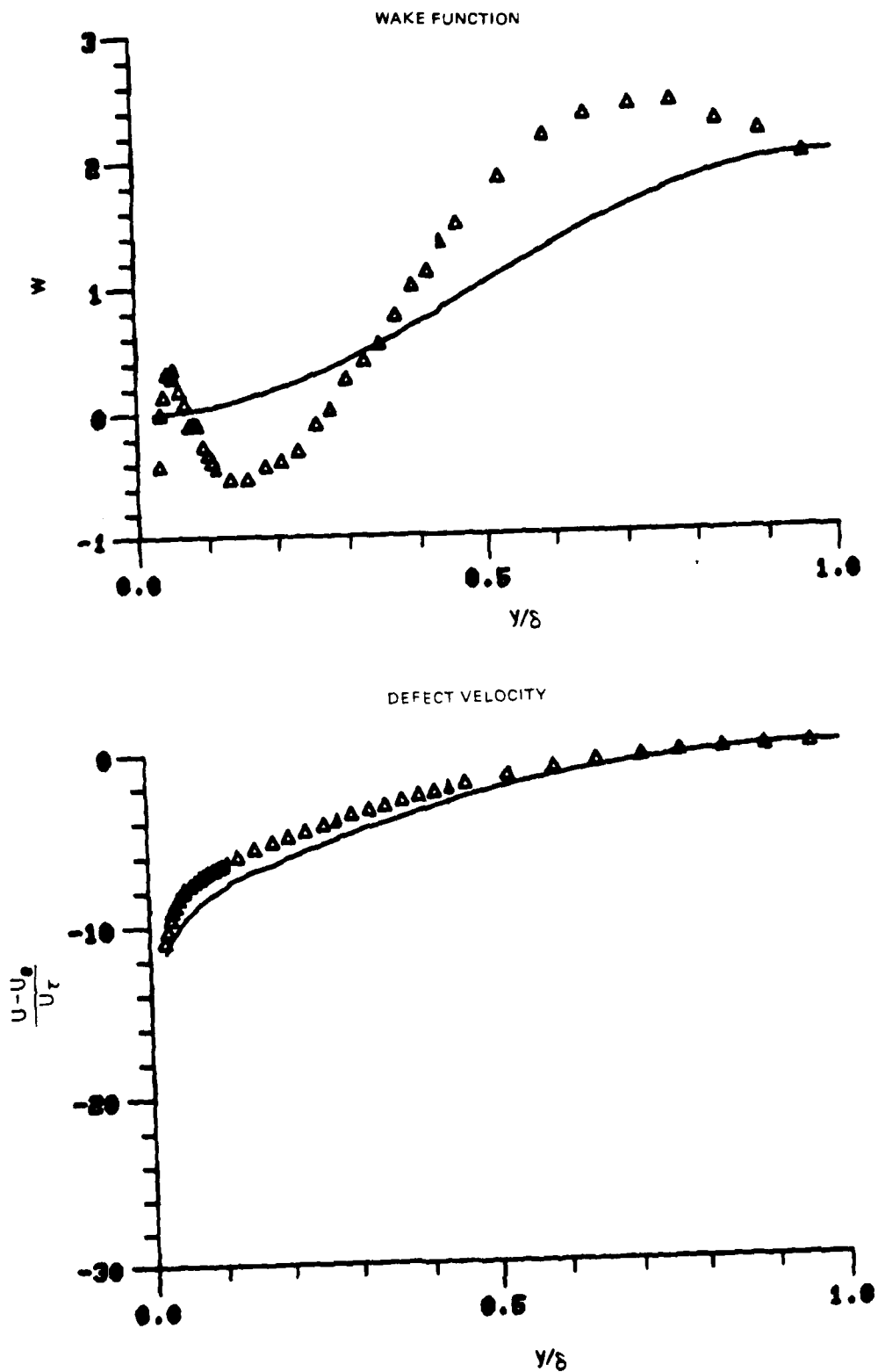


Figure 19. Boundary Layer Velocity Profiles
Run No. 8 Point No. 5

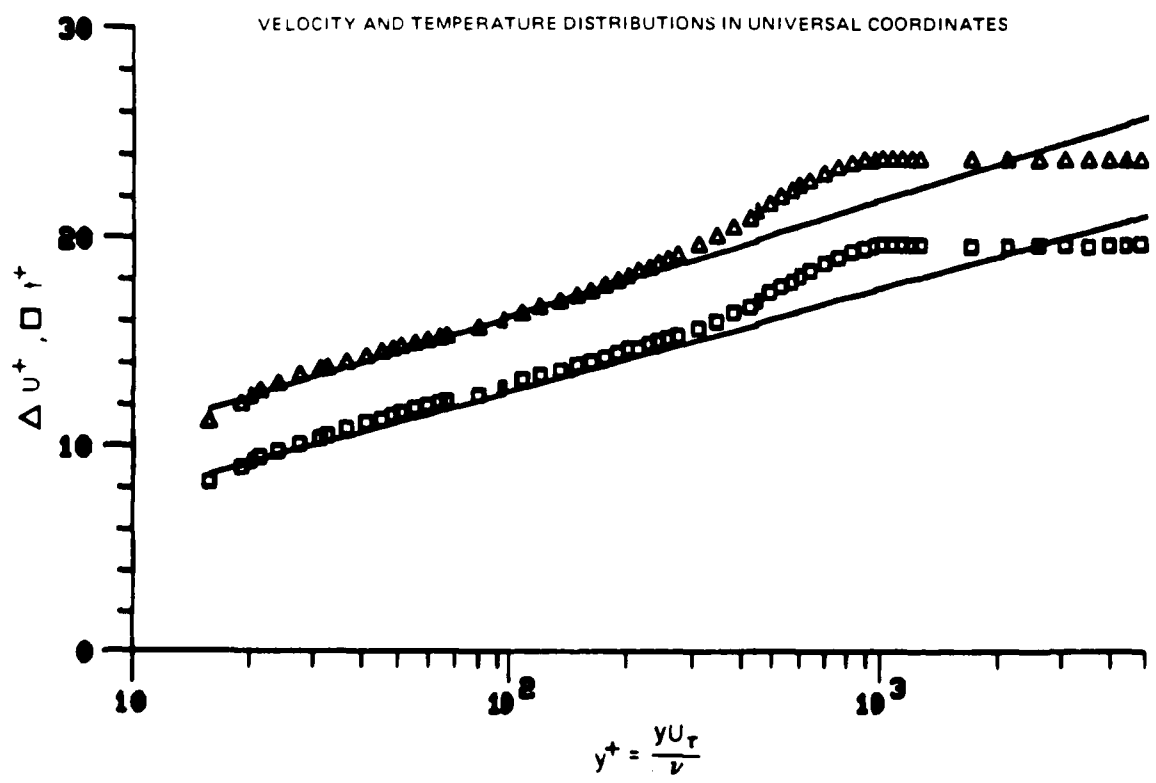
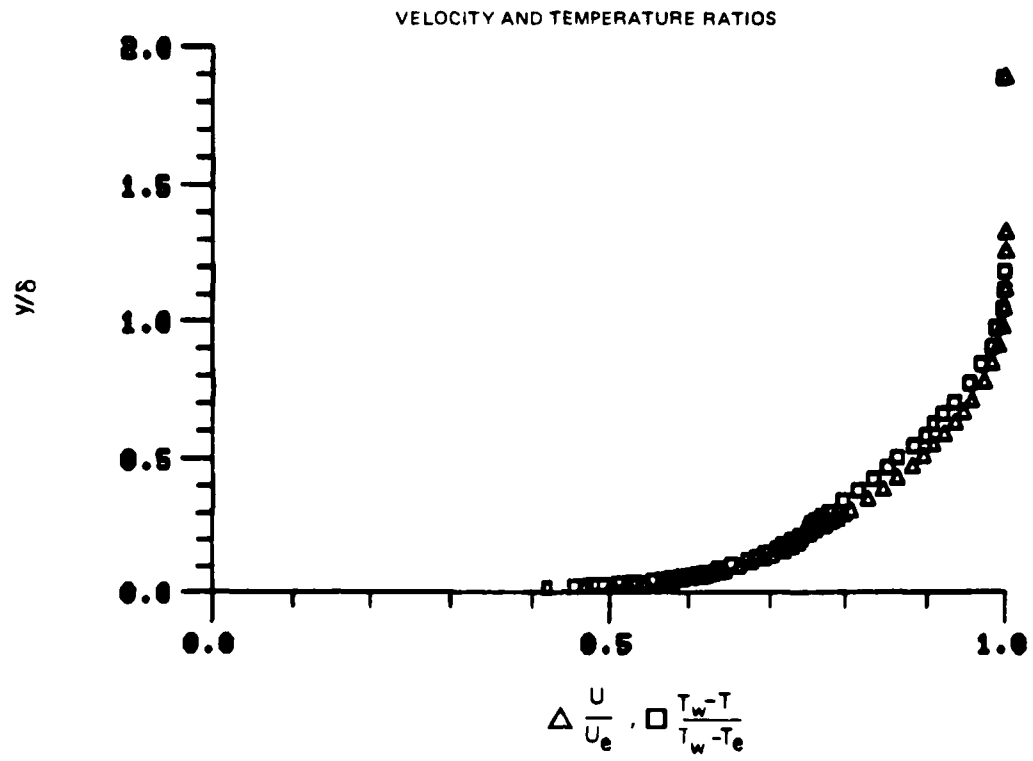


Figure 20. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 7

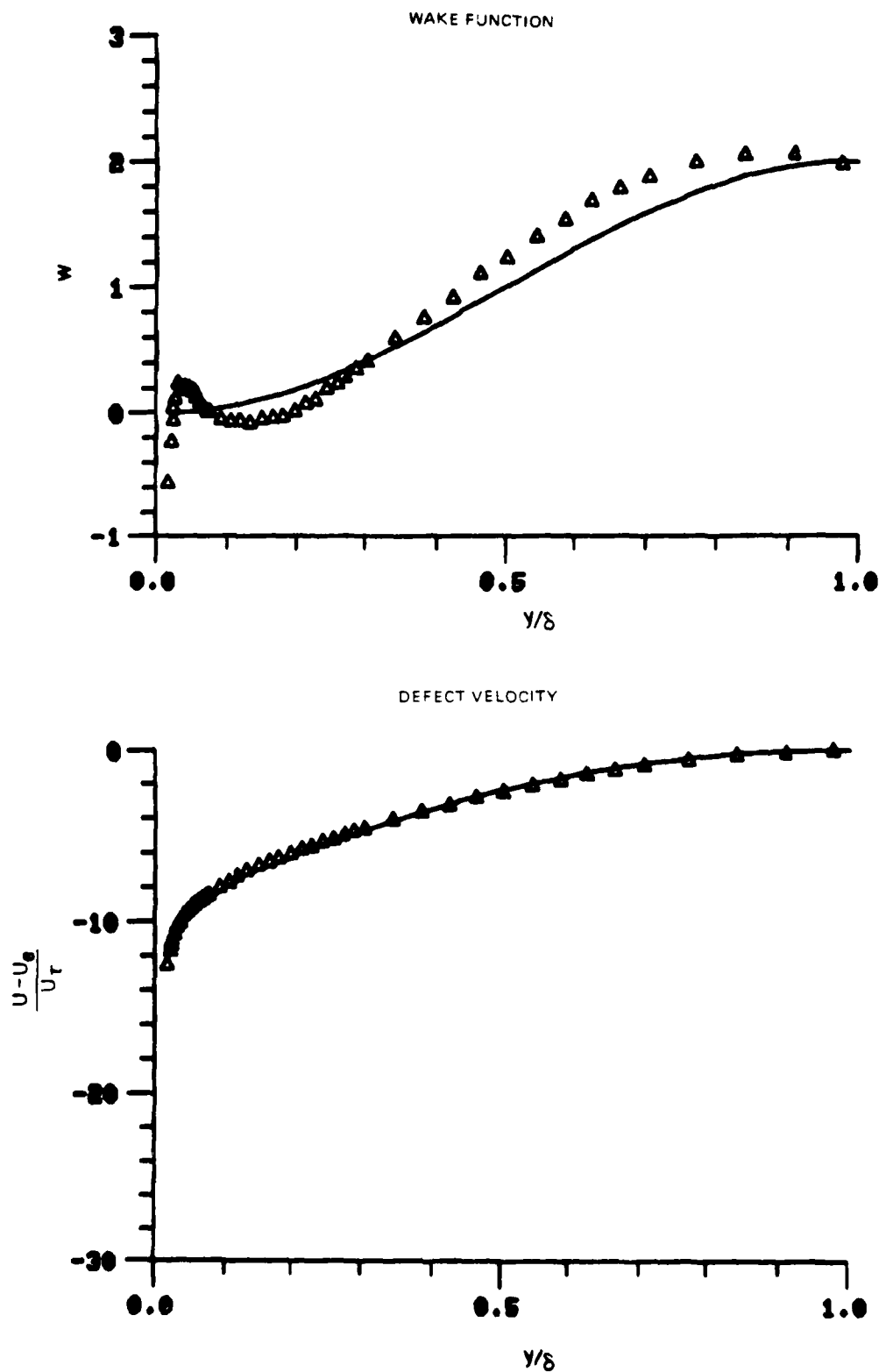


Figure 20. Boundary Layer Velocity Profiles
Run No. 8 Point No. 7

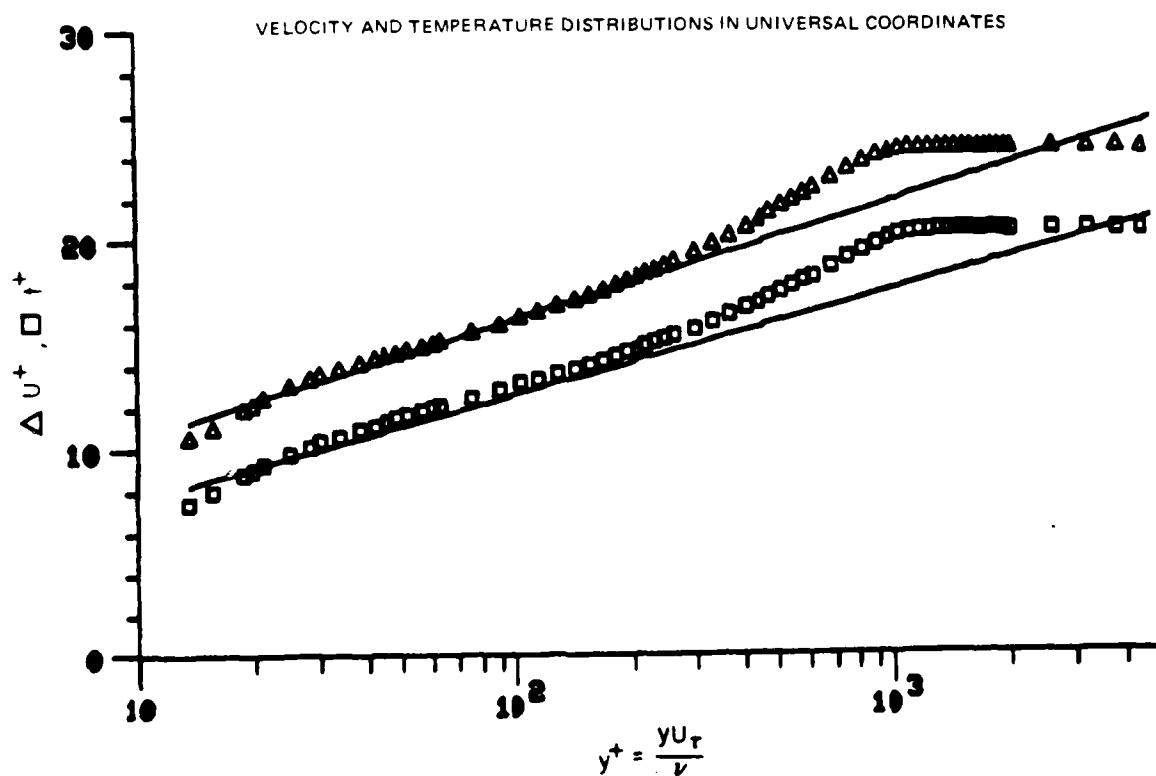
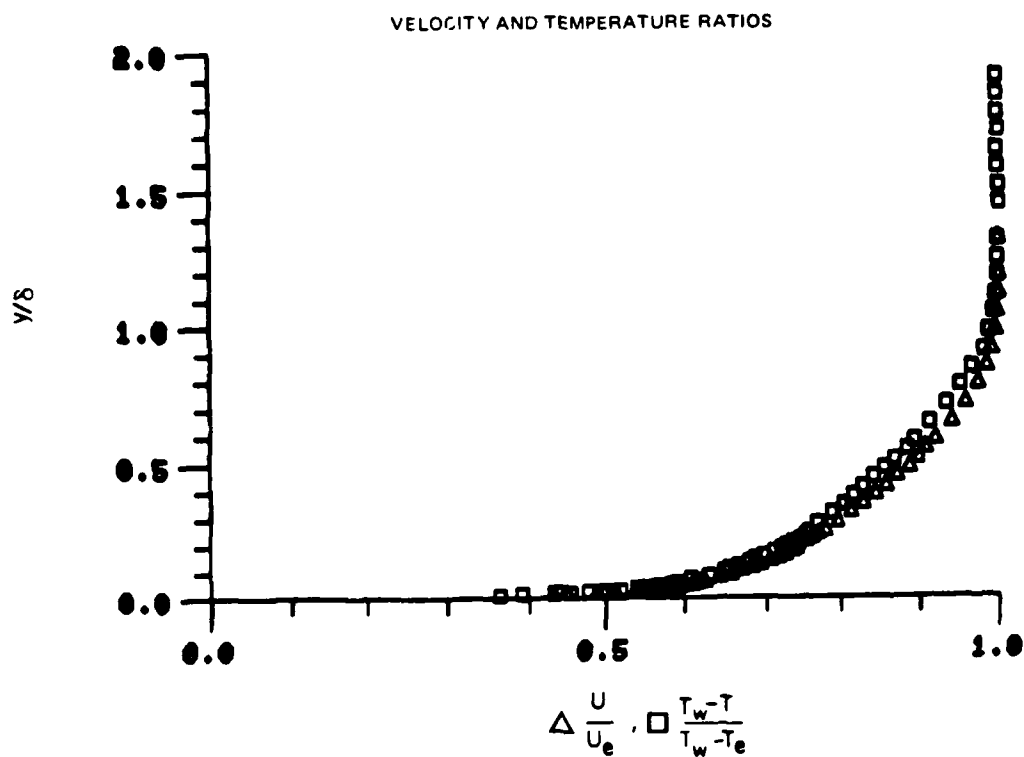


Figure 21. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 9

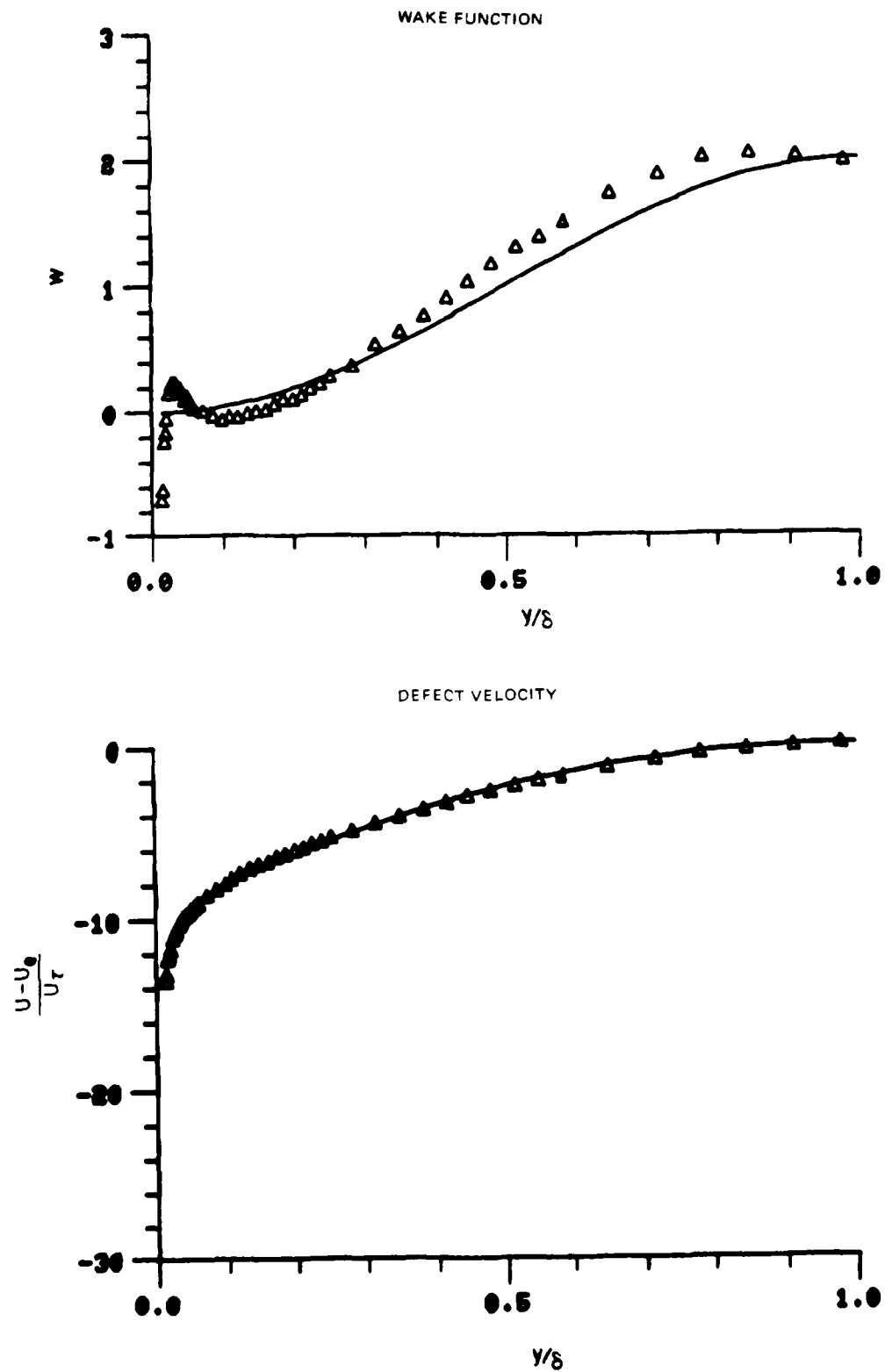


Figure 21. Boundary Layer Velocity Profiles
Run No.8 Point No.9

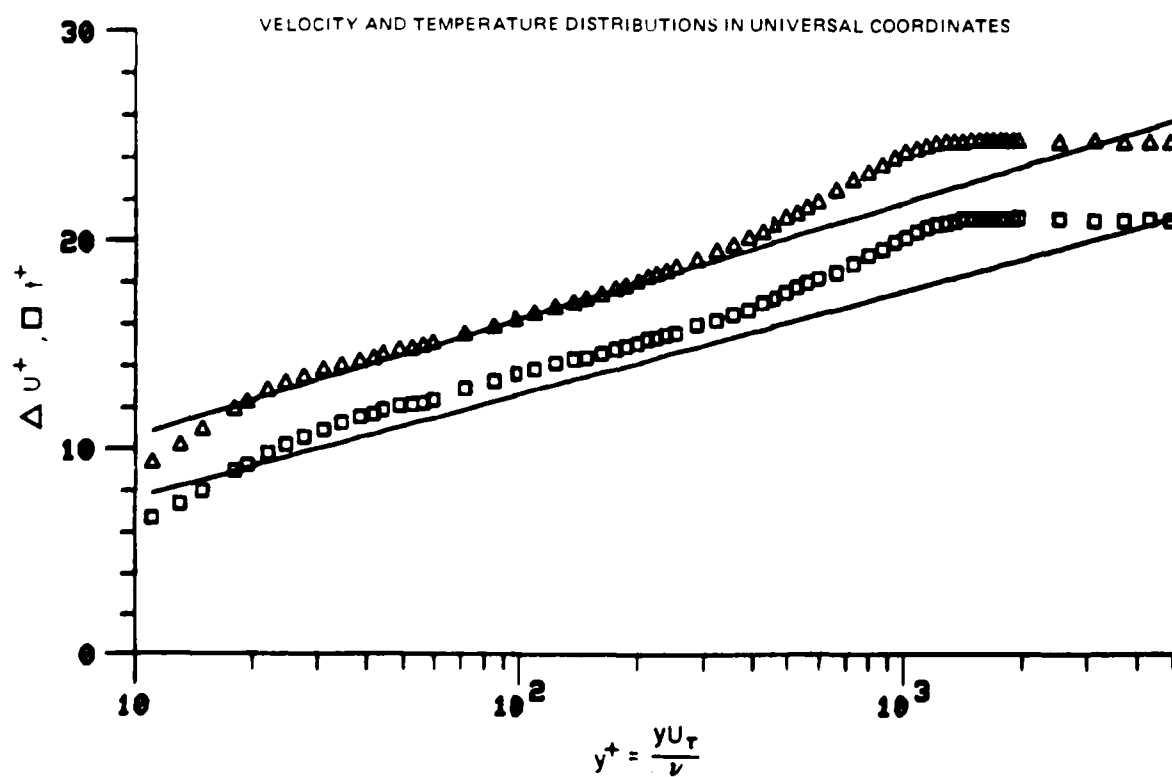
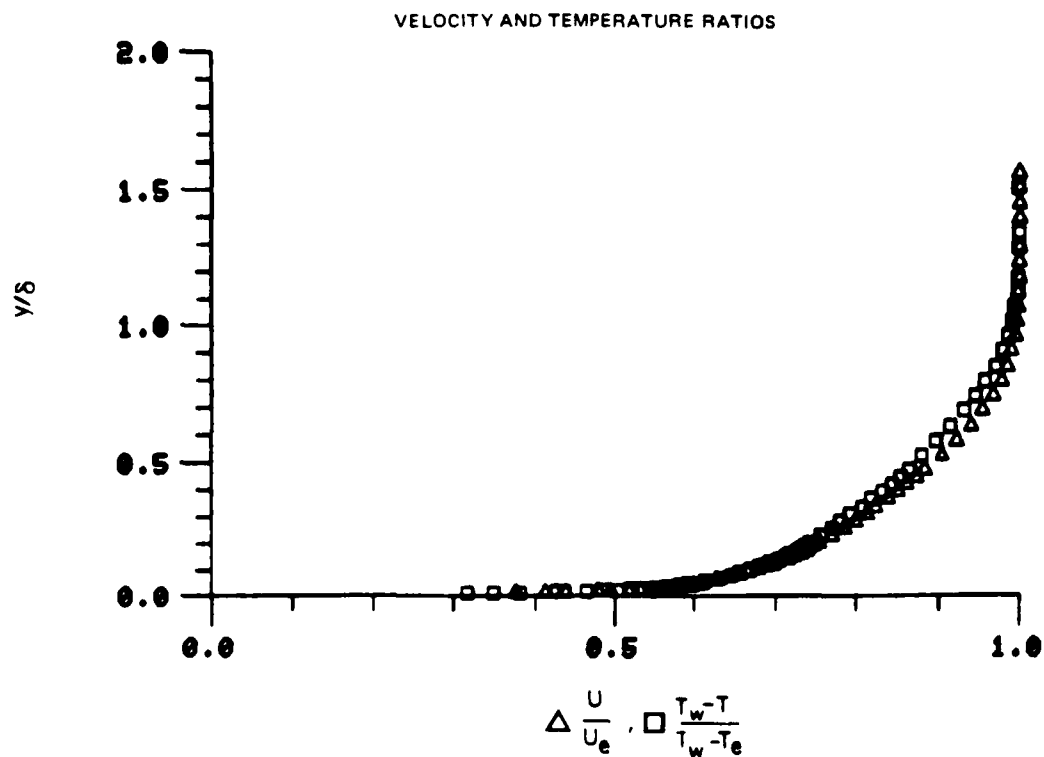


Figure 22. Boundary Layer Velocity and Temperature Profiles
Run No.8 Point No.10

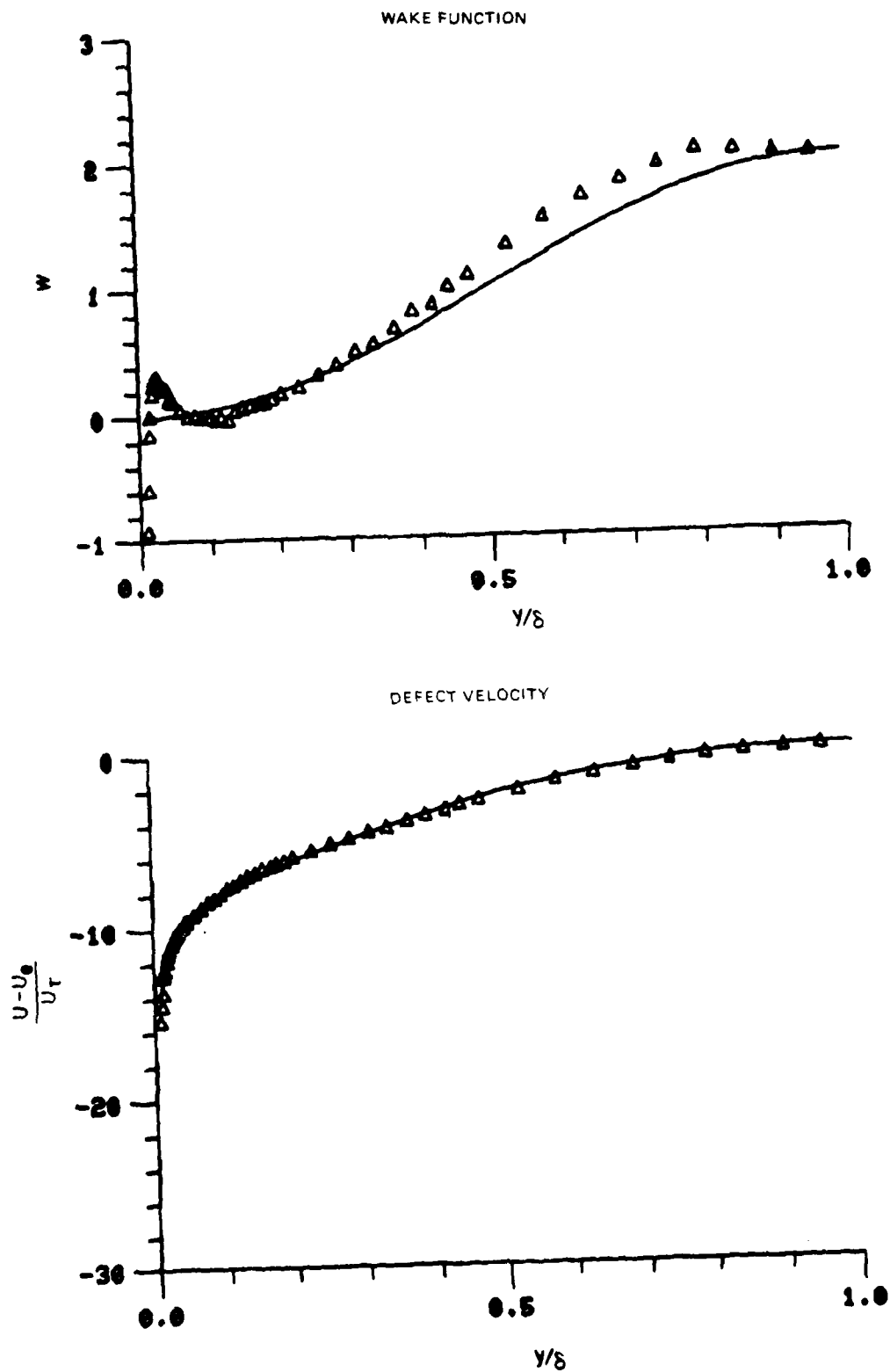


Figure 22. Boundary Layer Velocity Profiles
Run No.8 Point No.10

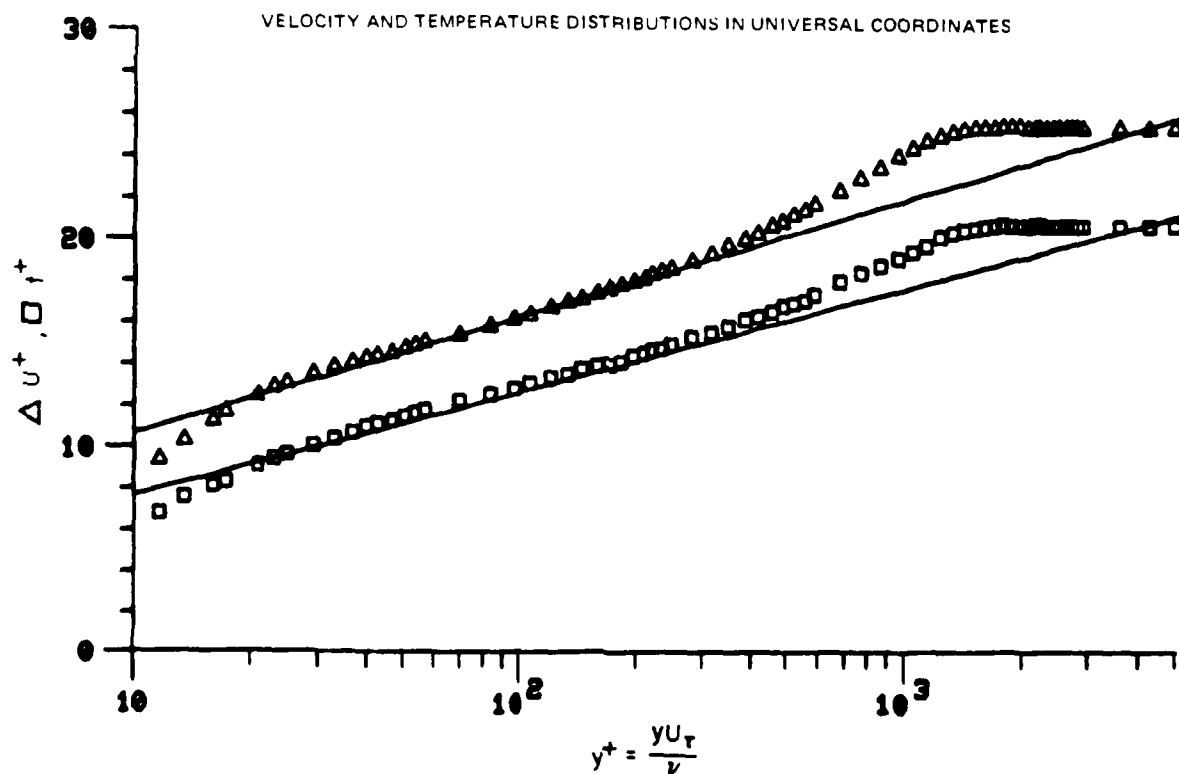
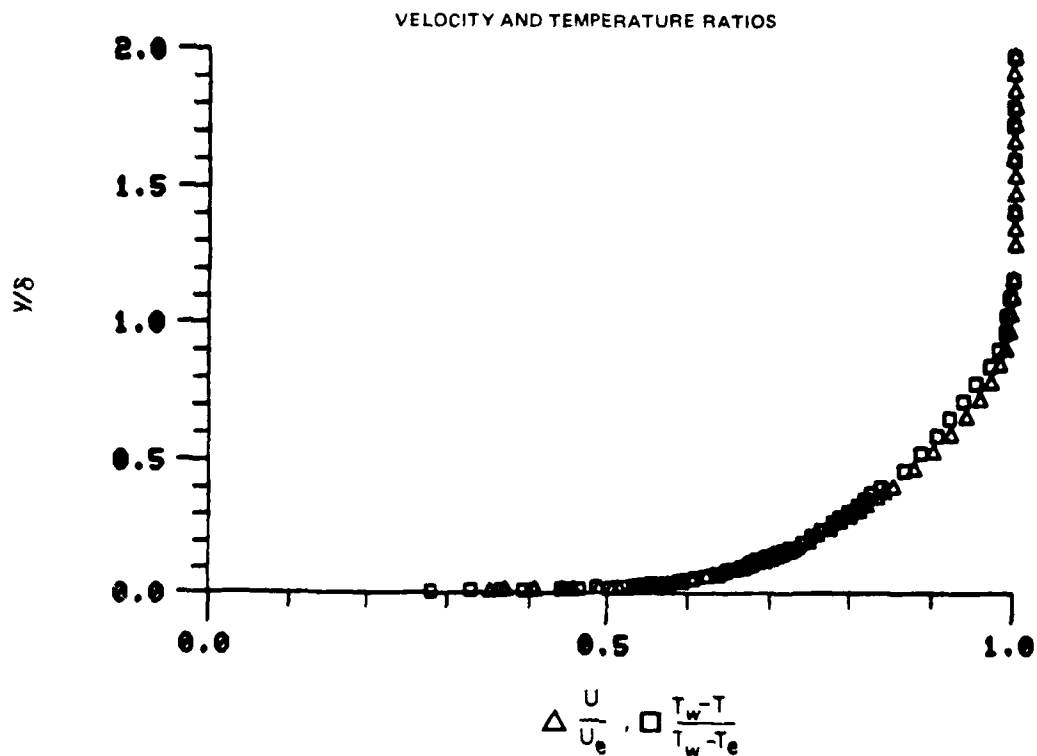


Figure 23. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 13

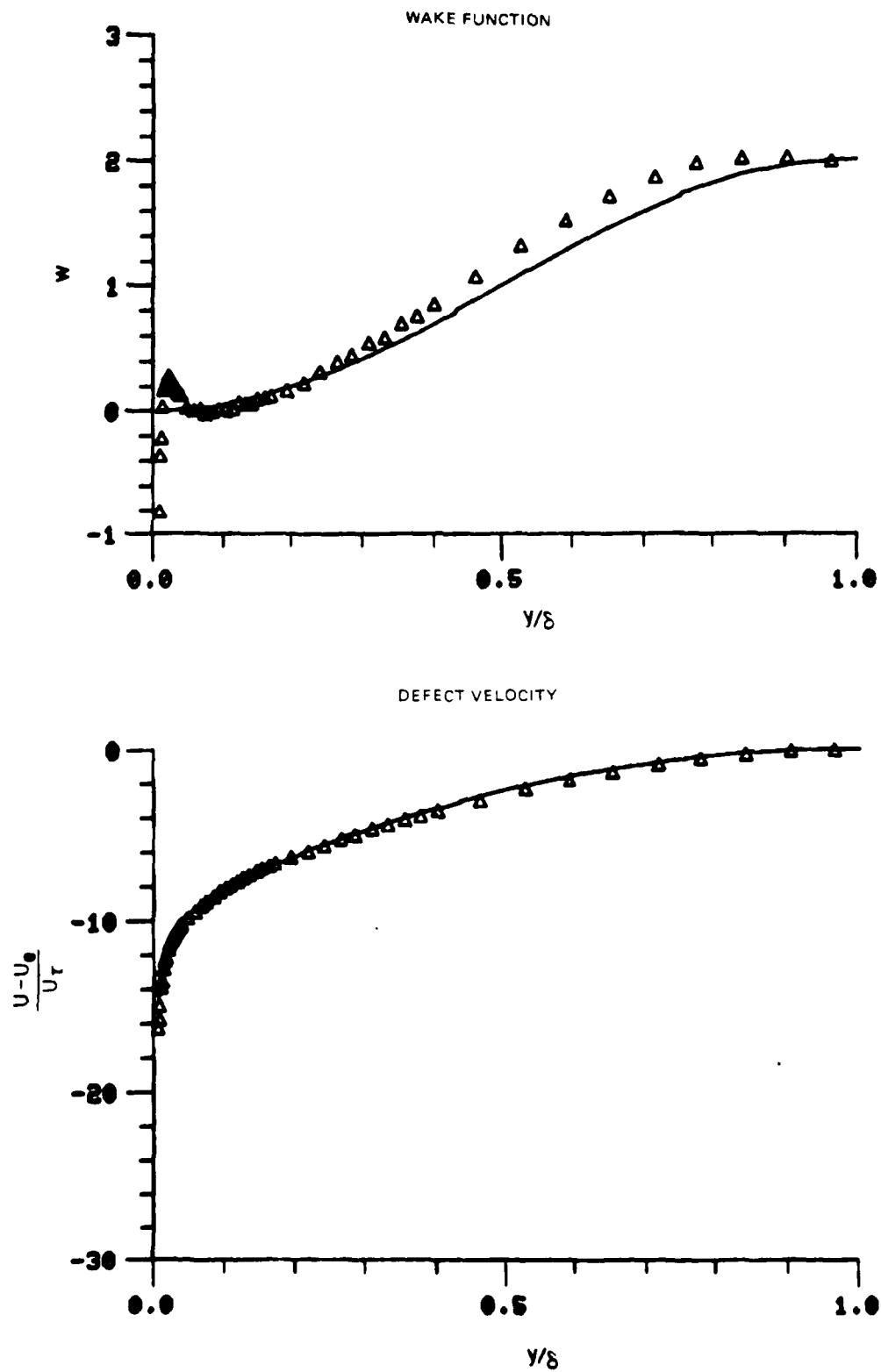


Figure 23. Boundary Layer Velocity Profiles
Run No. 8 Point No. 13

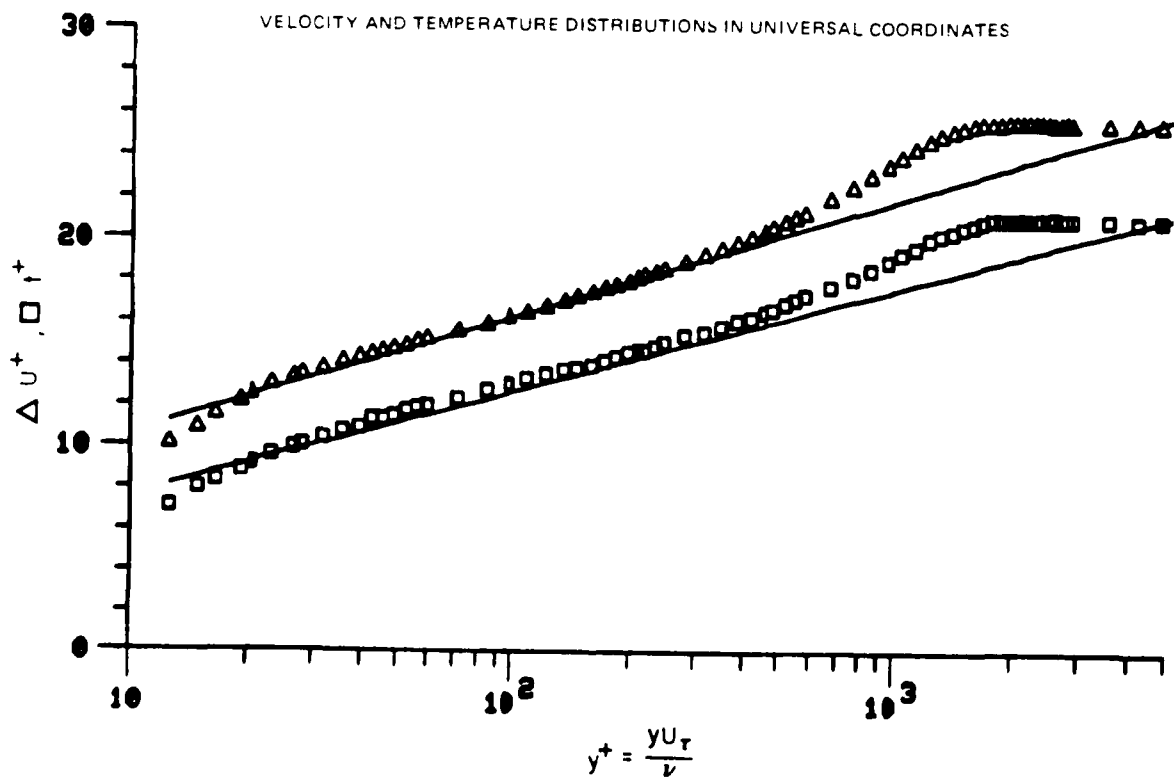
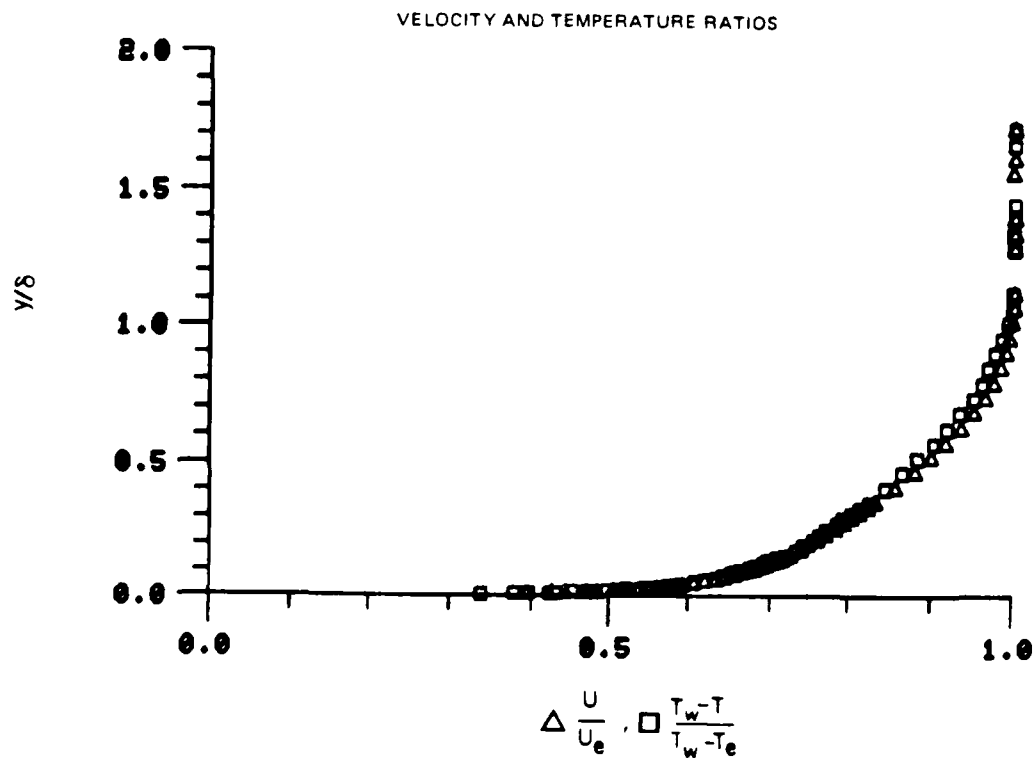


Figure 24. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 14

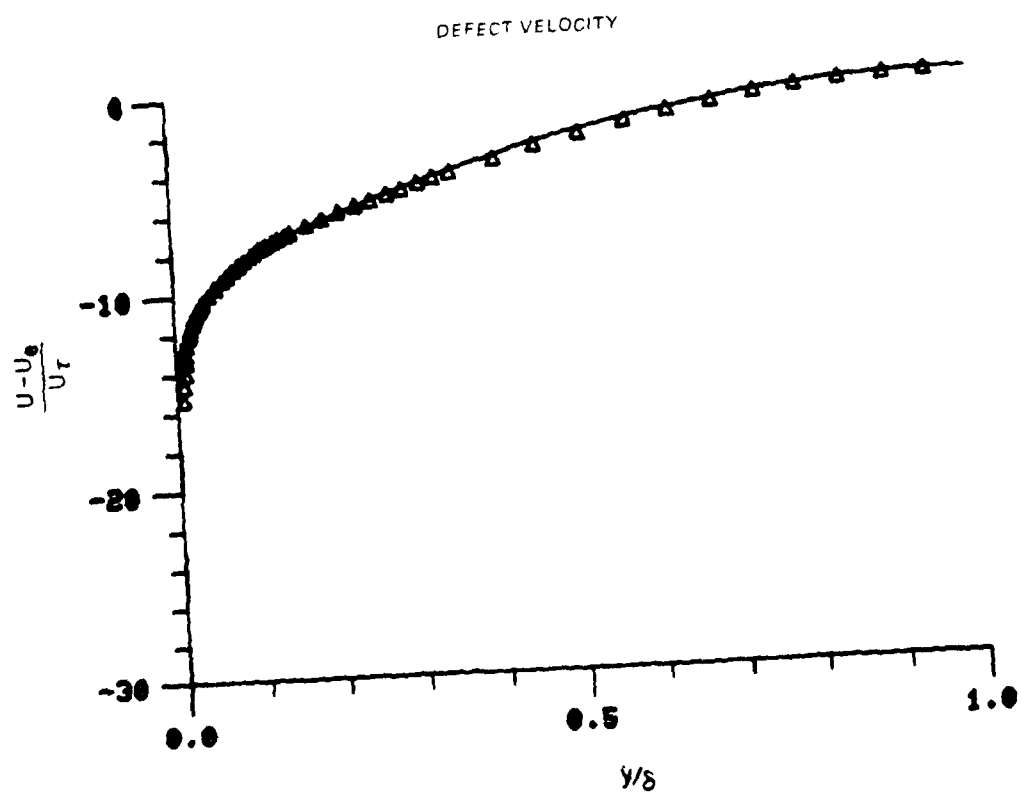
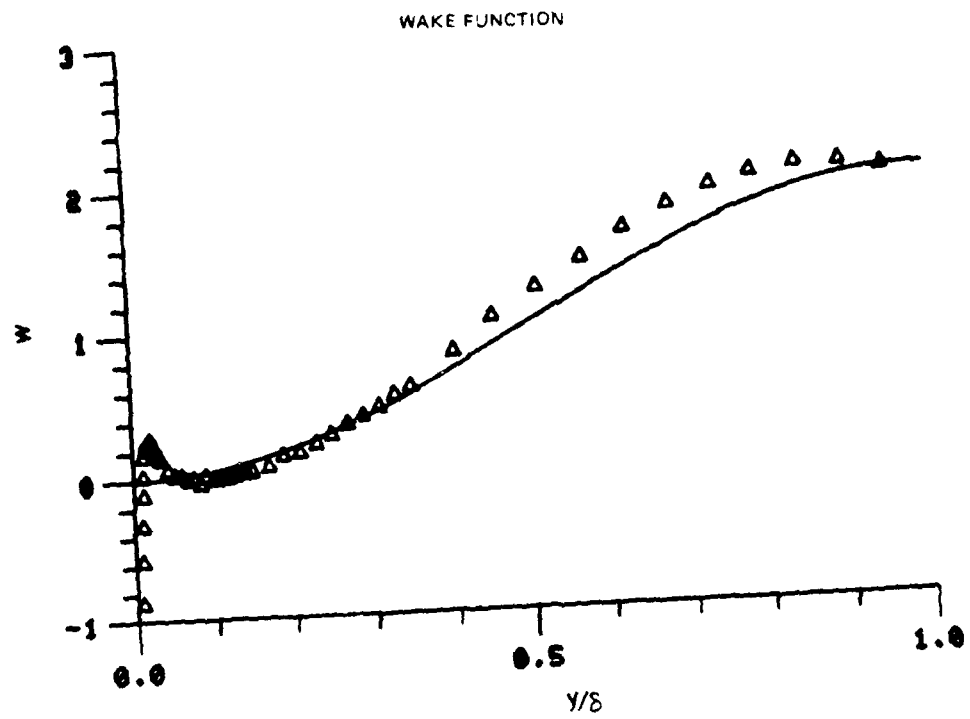


Figure 24. Boundary Layer Velocity Profiles
Run No.8 Point No.14

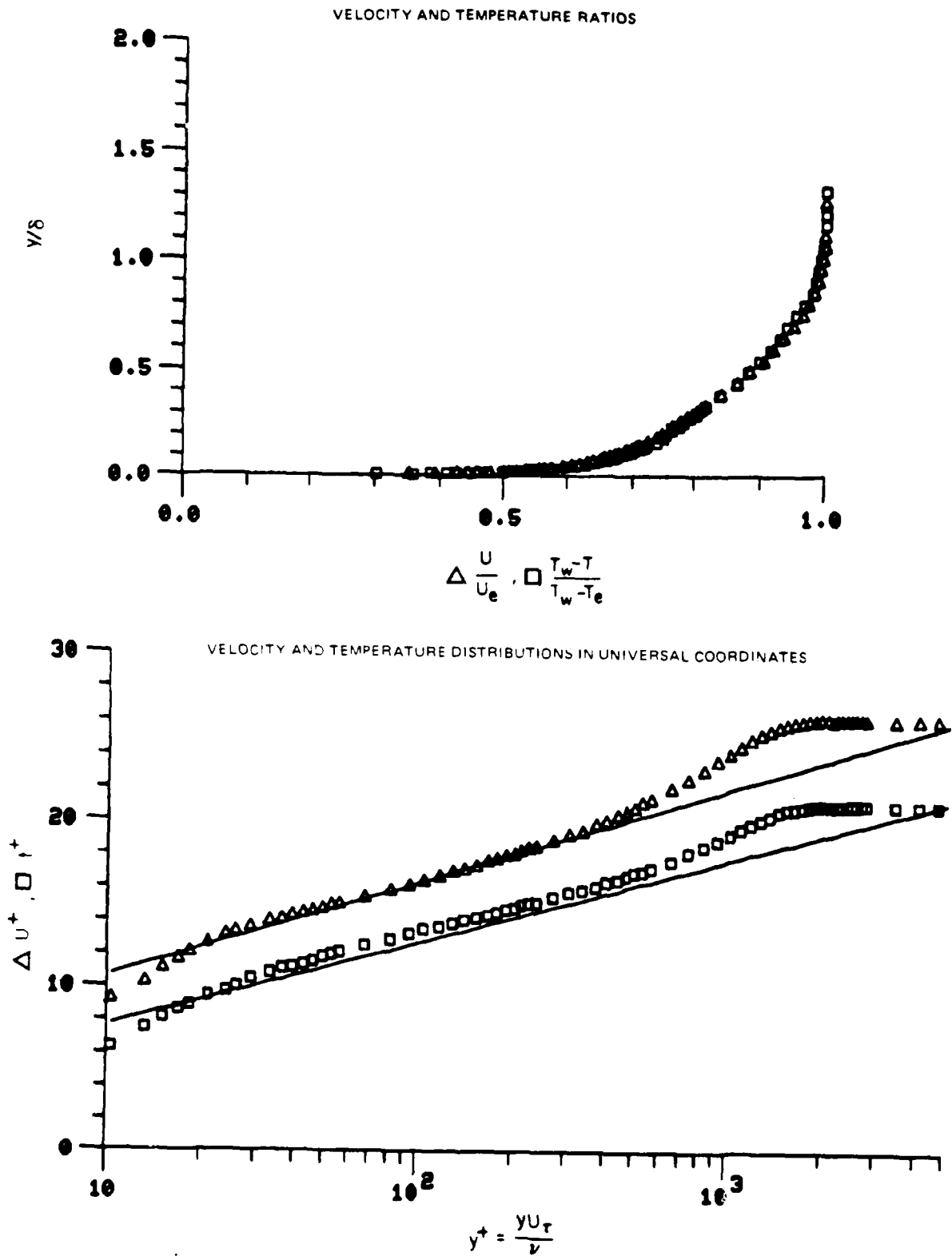


Figure 25. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 15

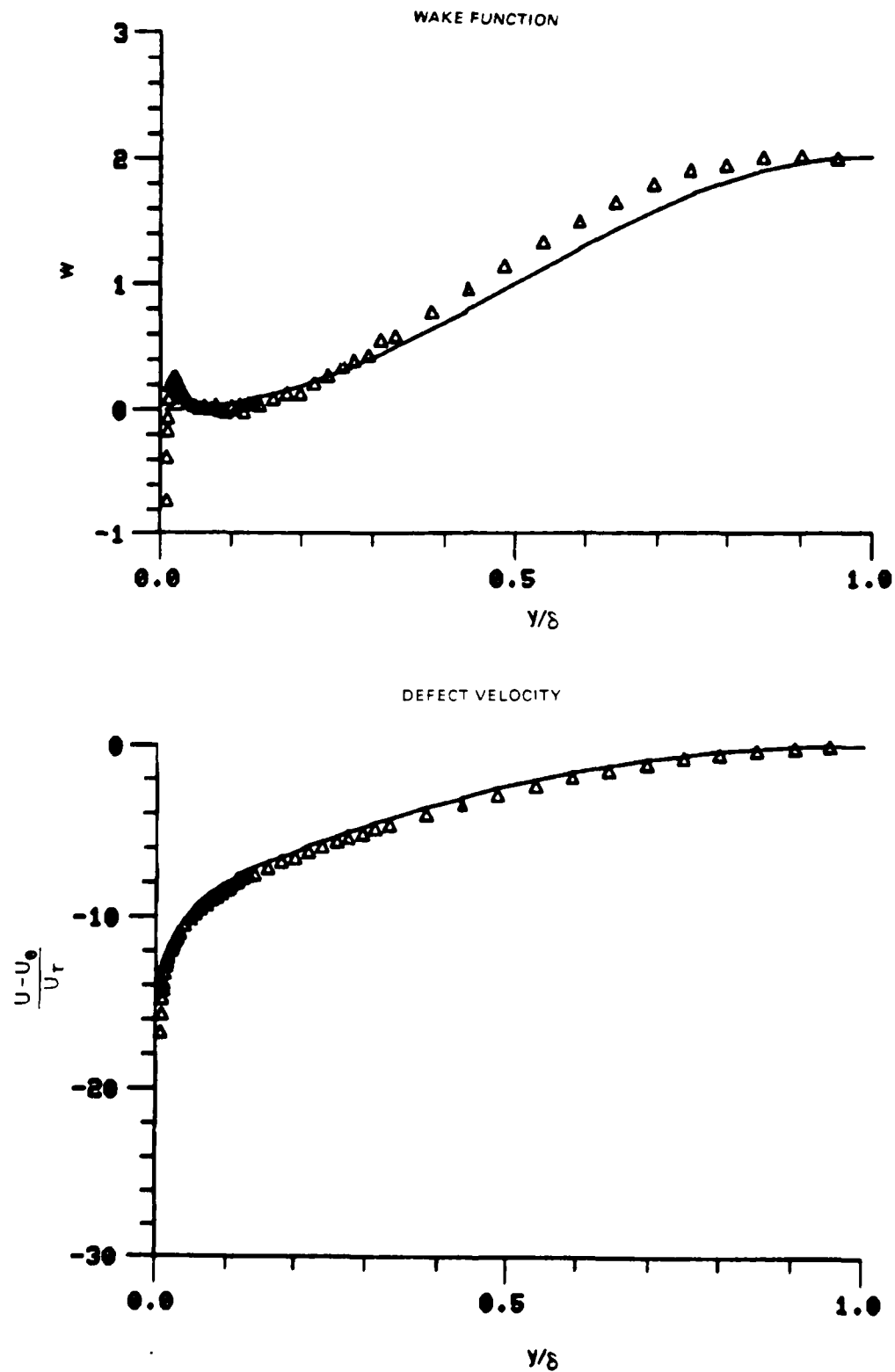


Figure 25. Boundary Layer Velocity Profiles
Run No.8 Point No.15

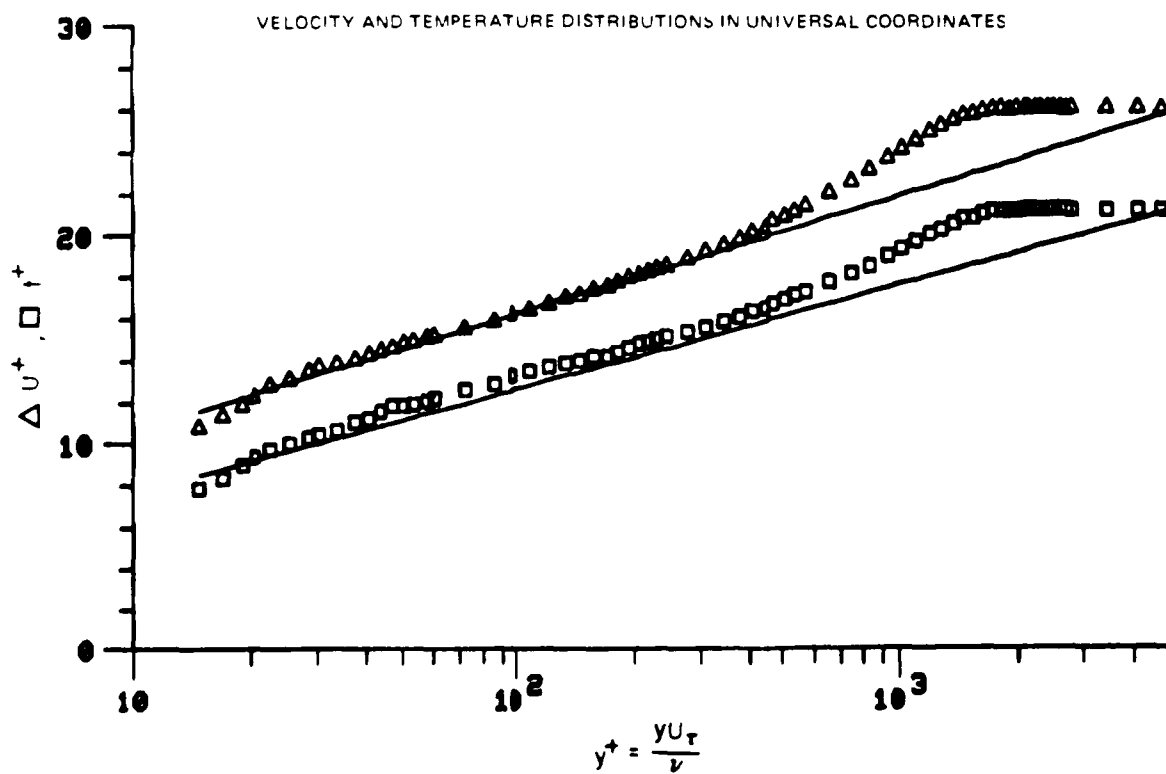
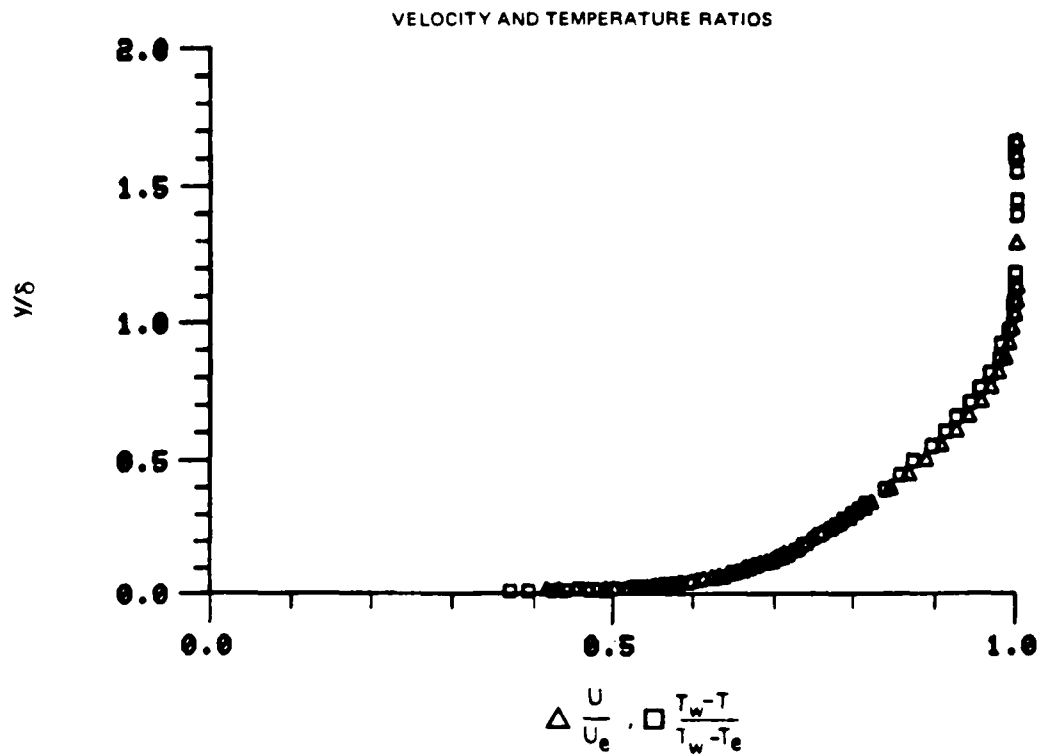


Figure 26. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 16

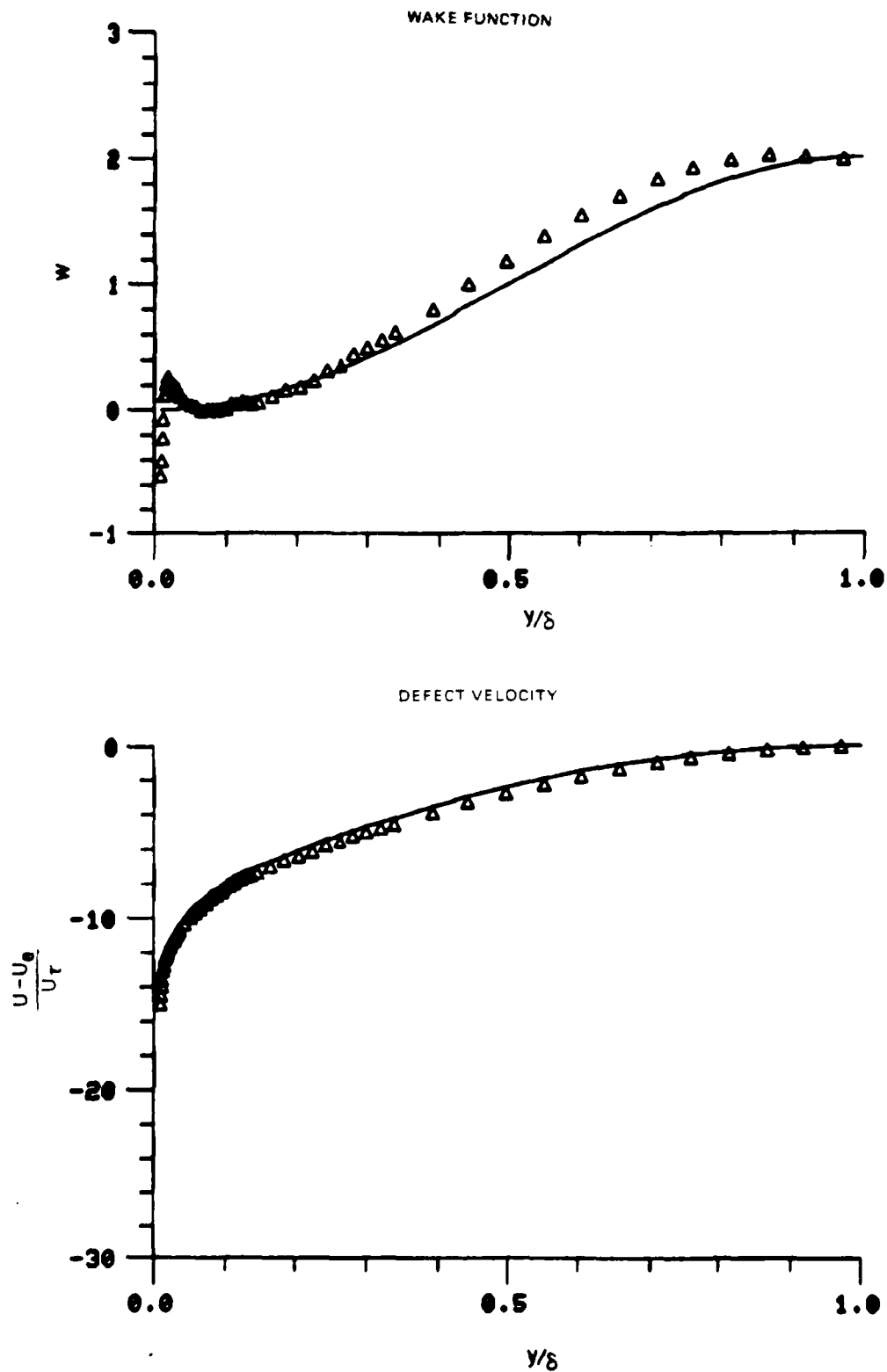


Figure 26. Boundary Layer Velocity Profiles
Run No. 8 Point No. 16

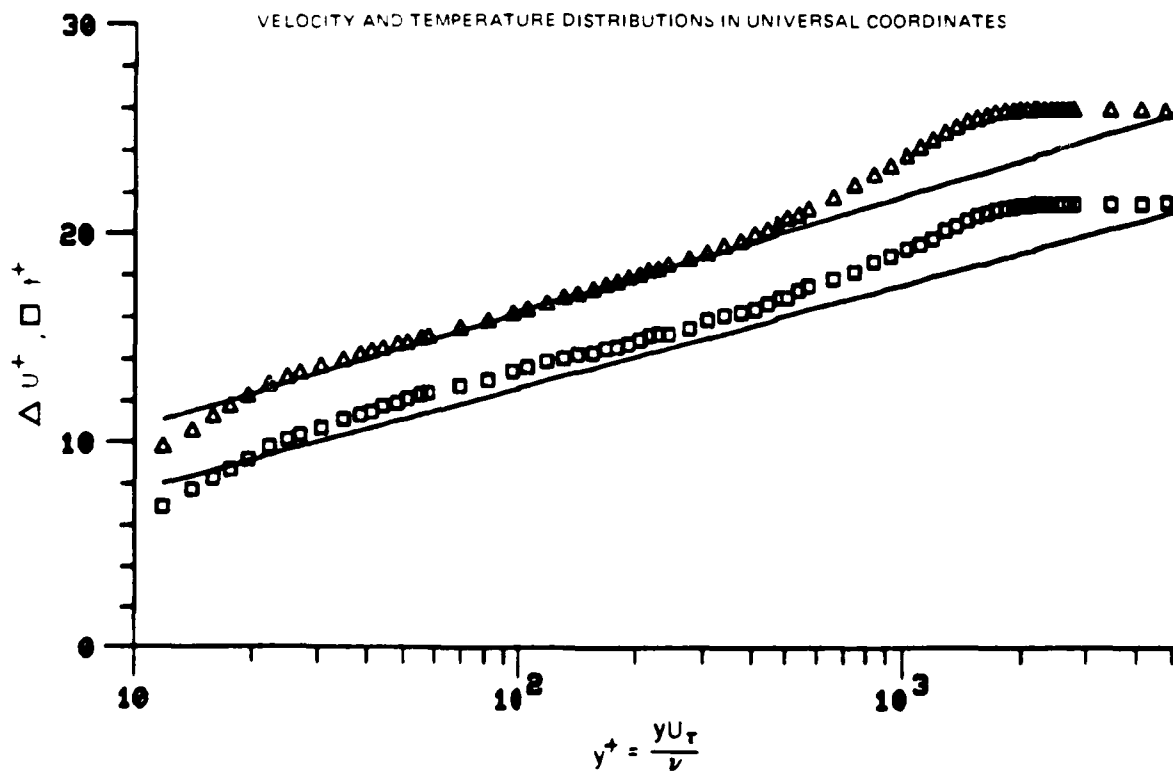
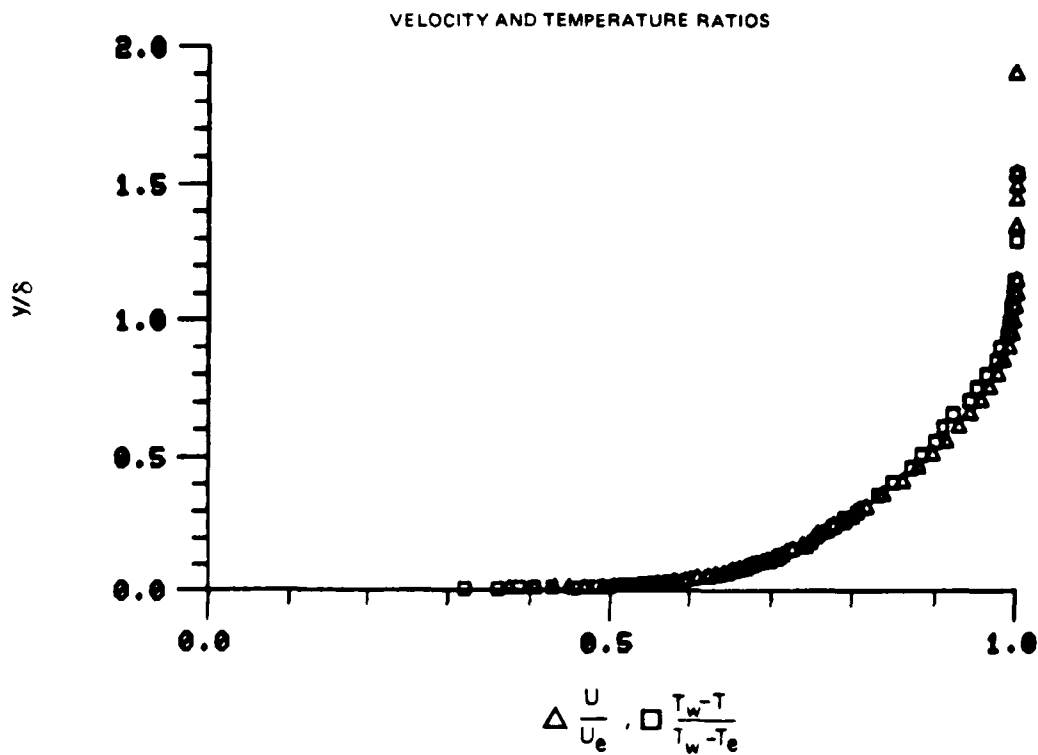


Figure 27. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 17

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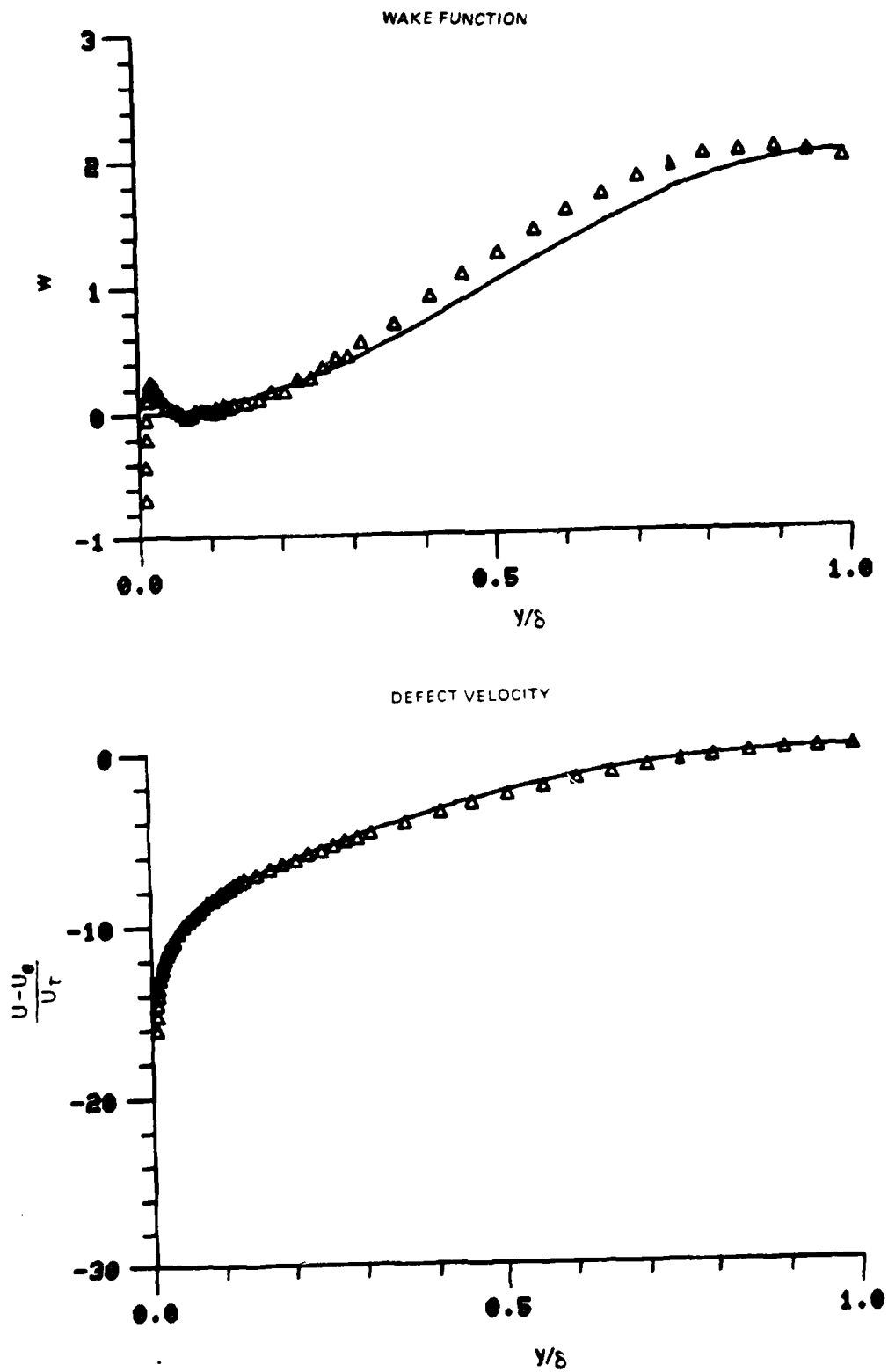


Figure 27. Boundary Layer Velocity Profiles
Run No.8 Point No.17

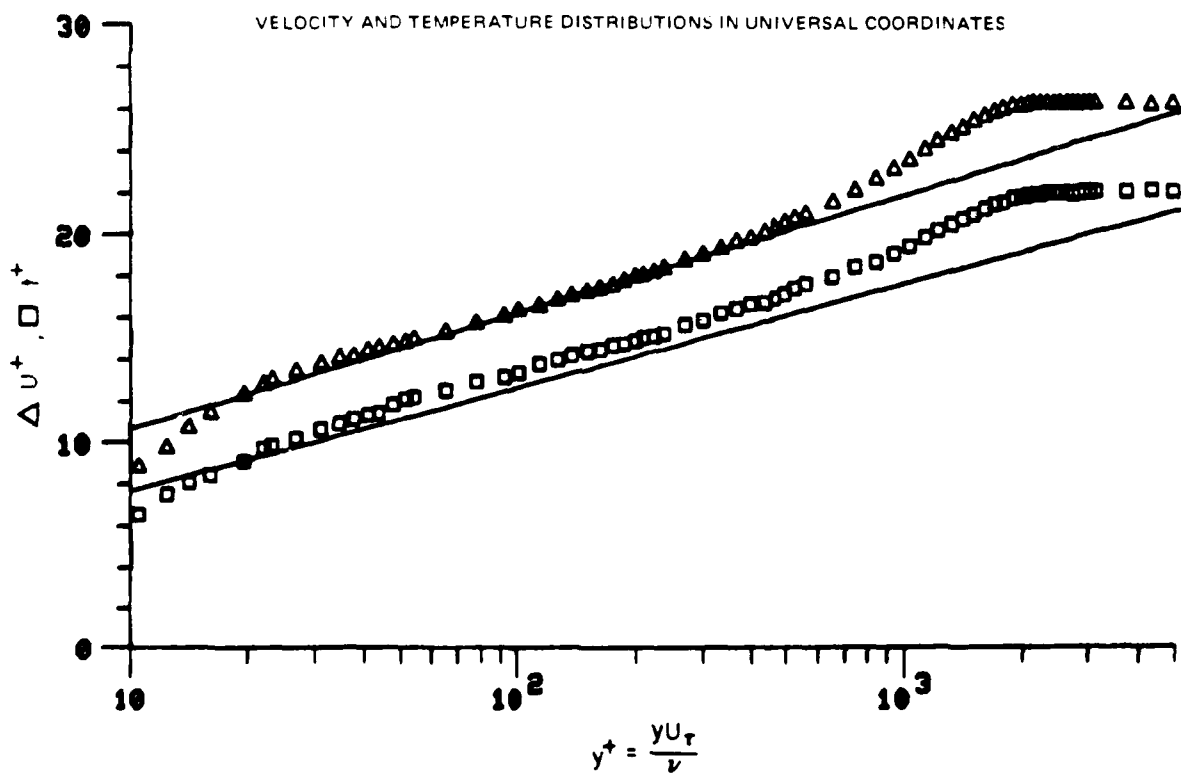
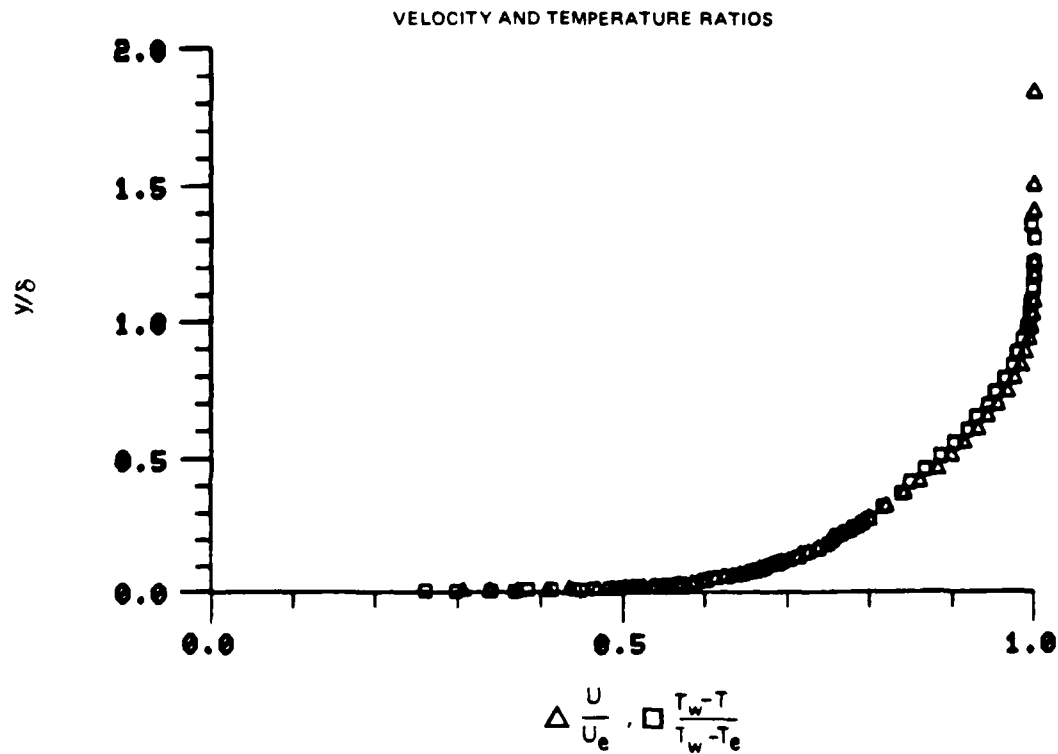


Figure 28. Boundary Layer Velocity and Temperature Profiles
Run No.8 Point No.18

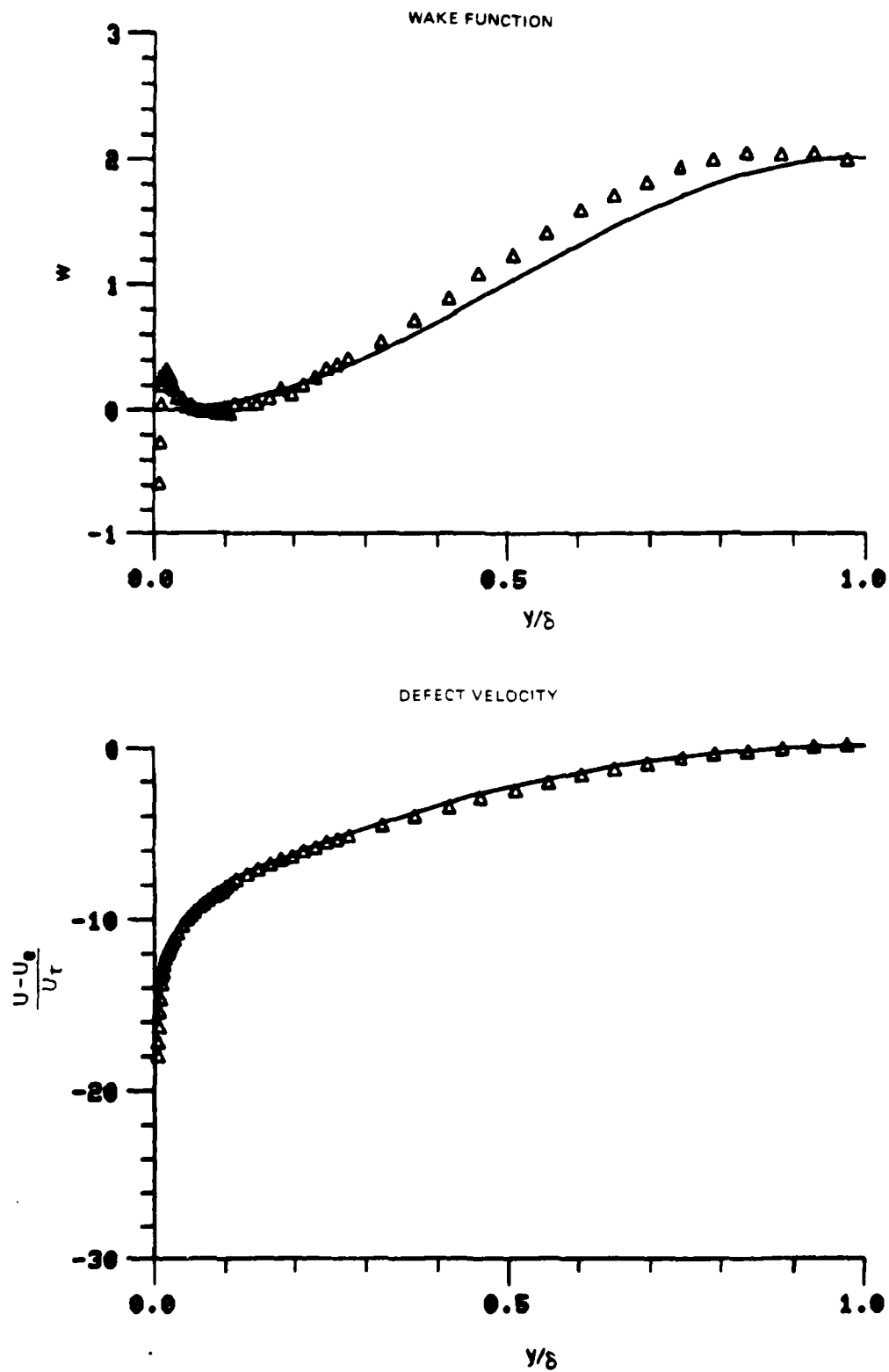


Figure 28. Boundary Layer Velocity Profiles
Run No.8 Point No.18

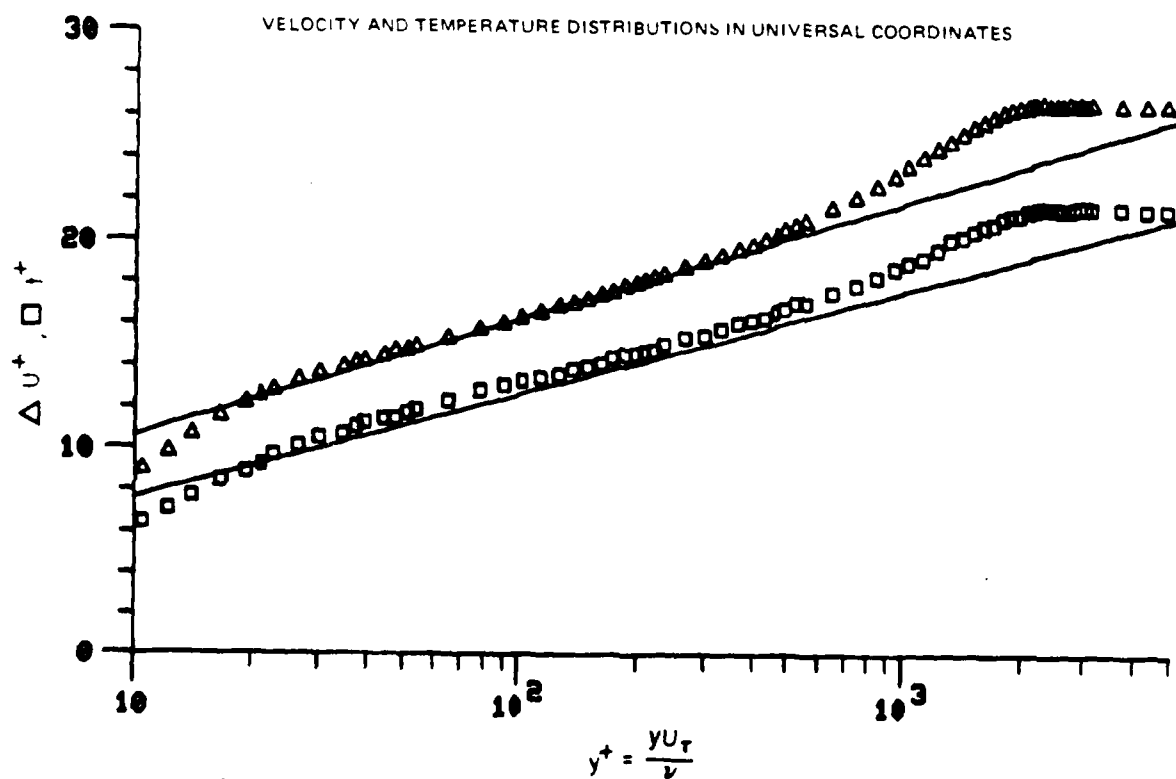
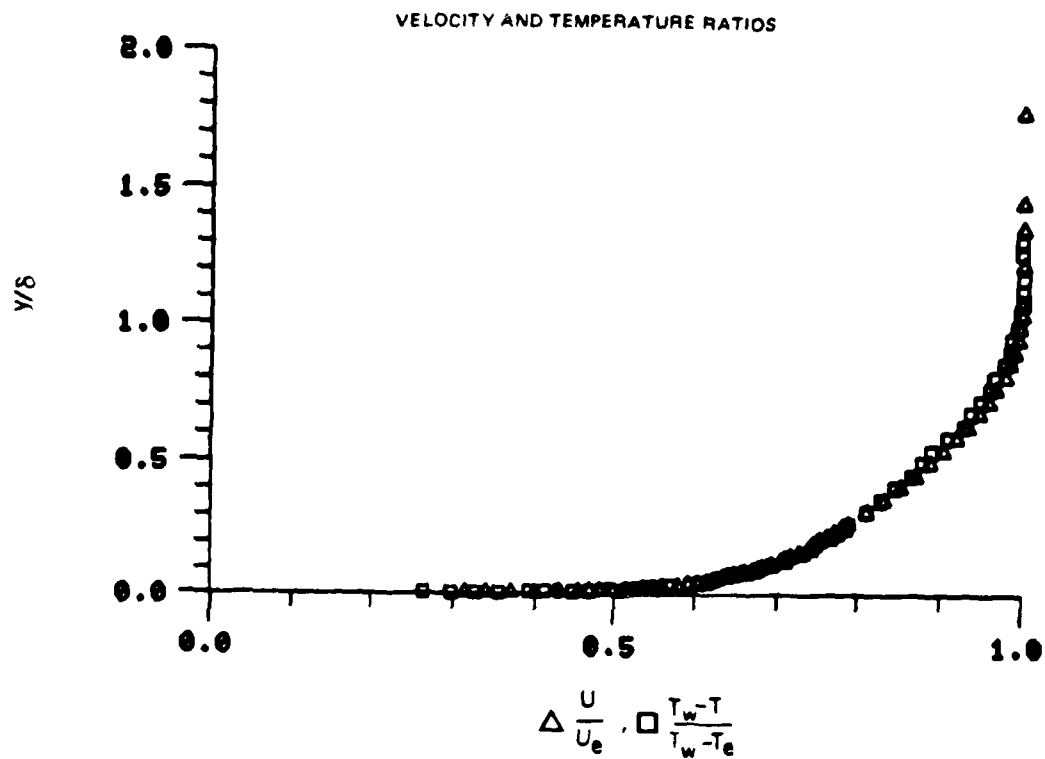


Figure 29. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 20

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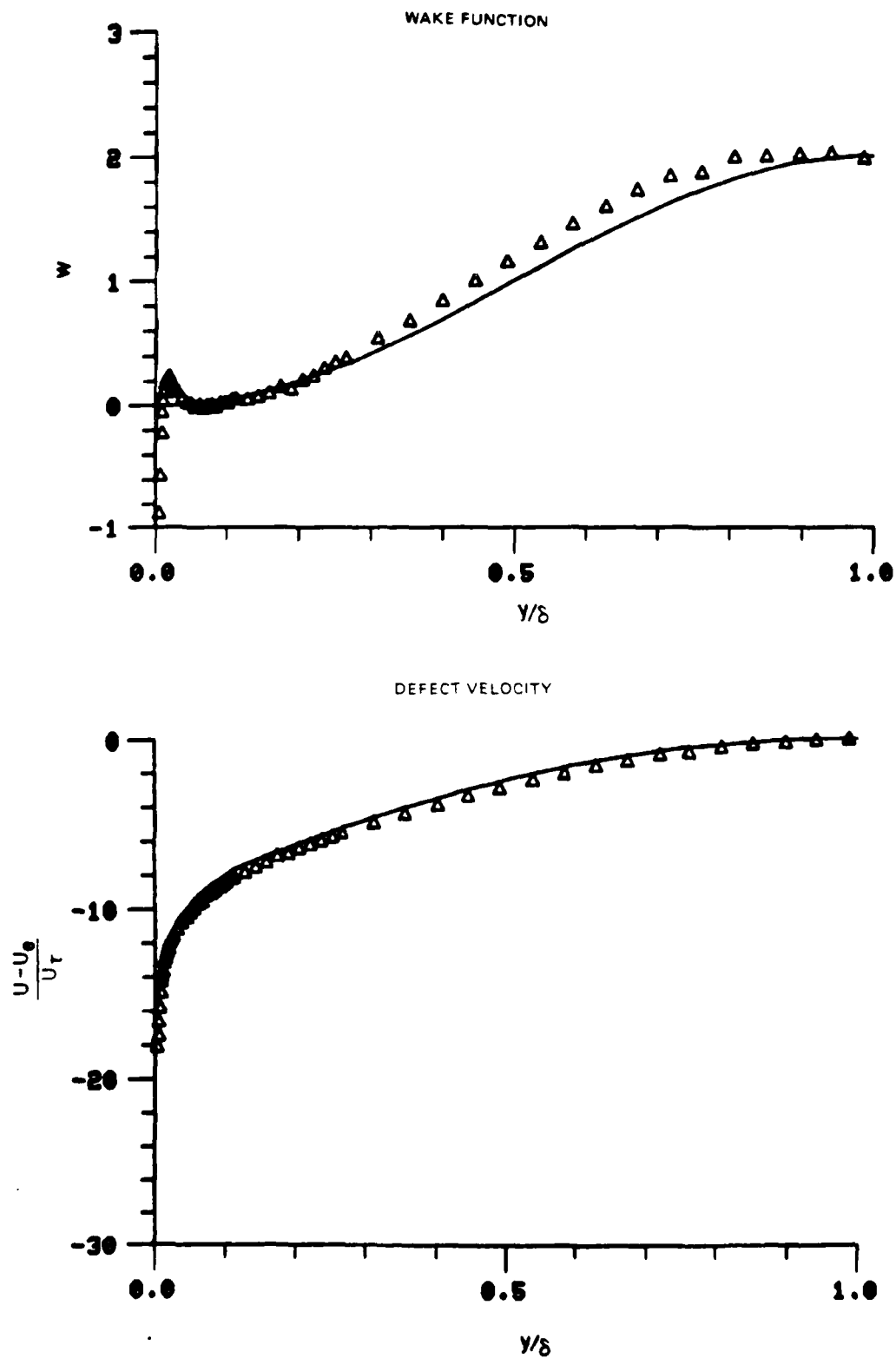


Figure 29. Boundary Layer Velocity Profiles
Run No.8 Point No.20

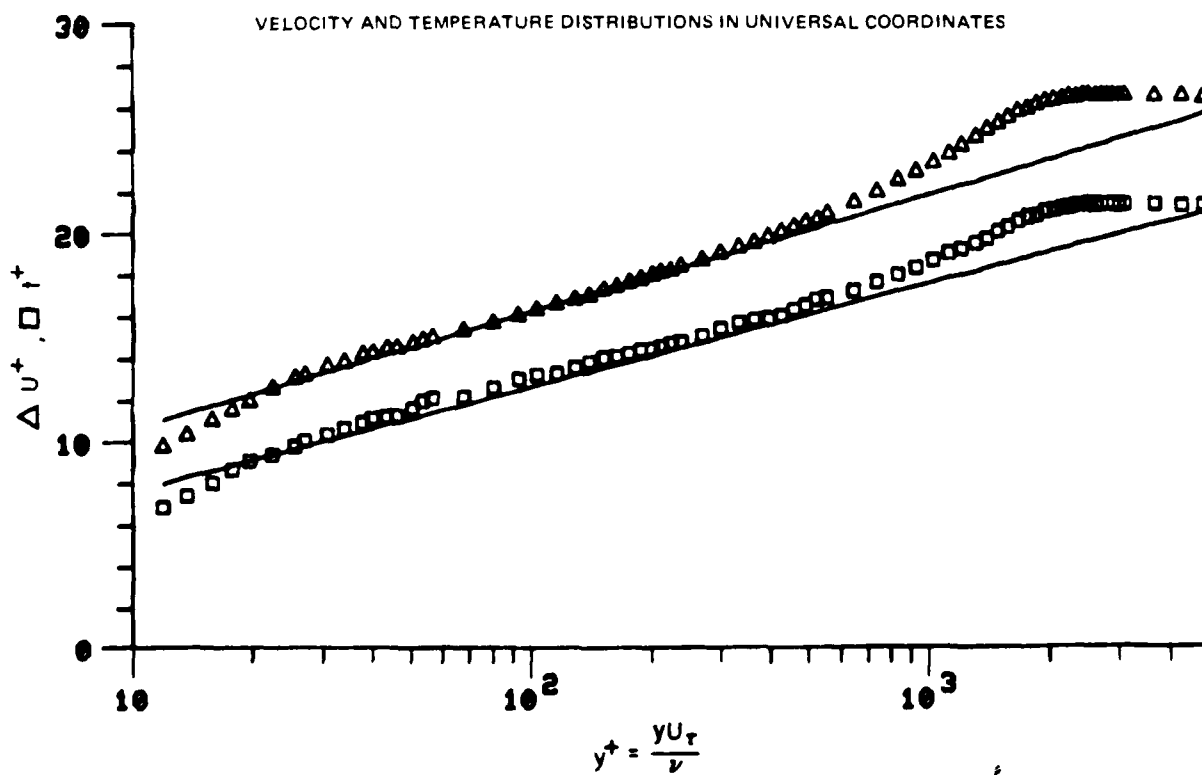
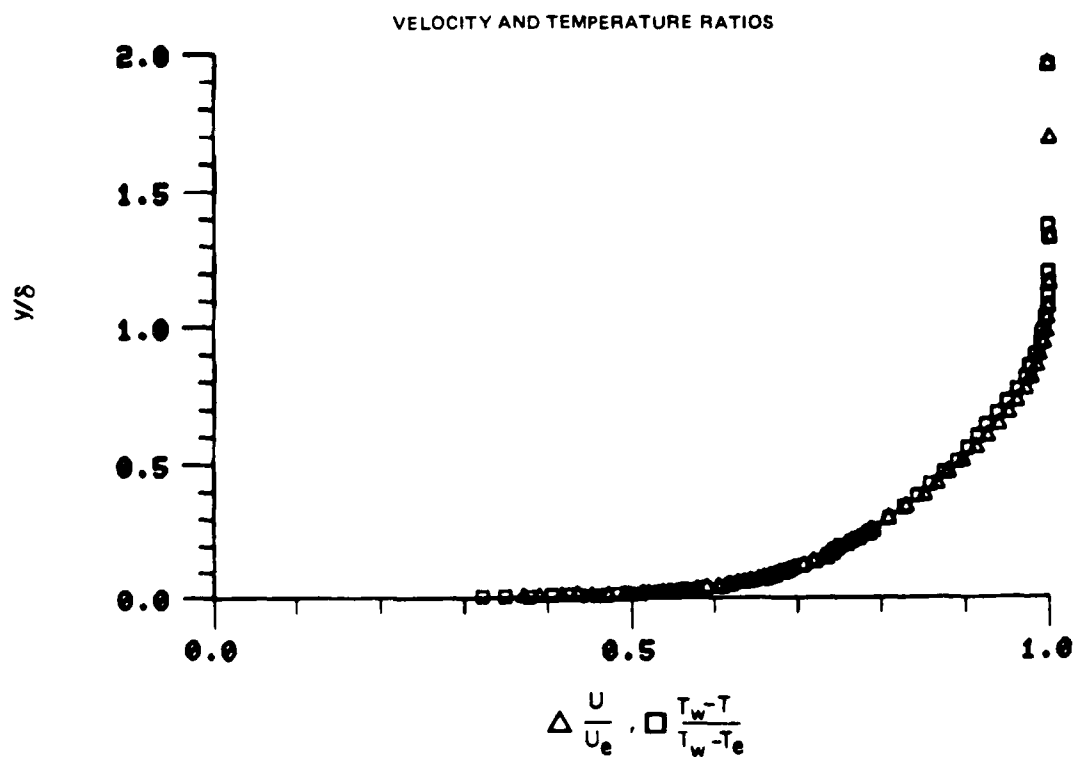


Figure 30. Boundary Layer Velocity and Temperature Profiles
Run No.8 Point No. 21

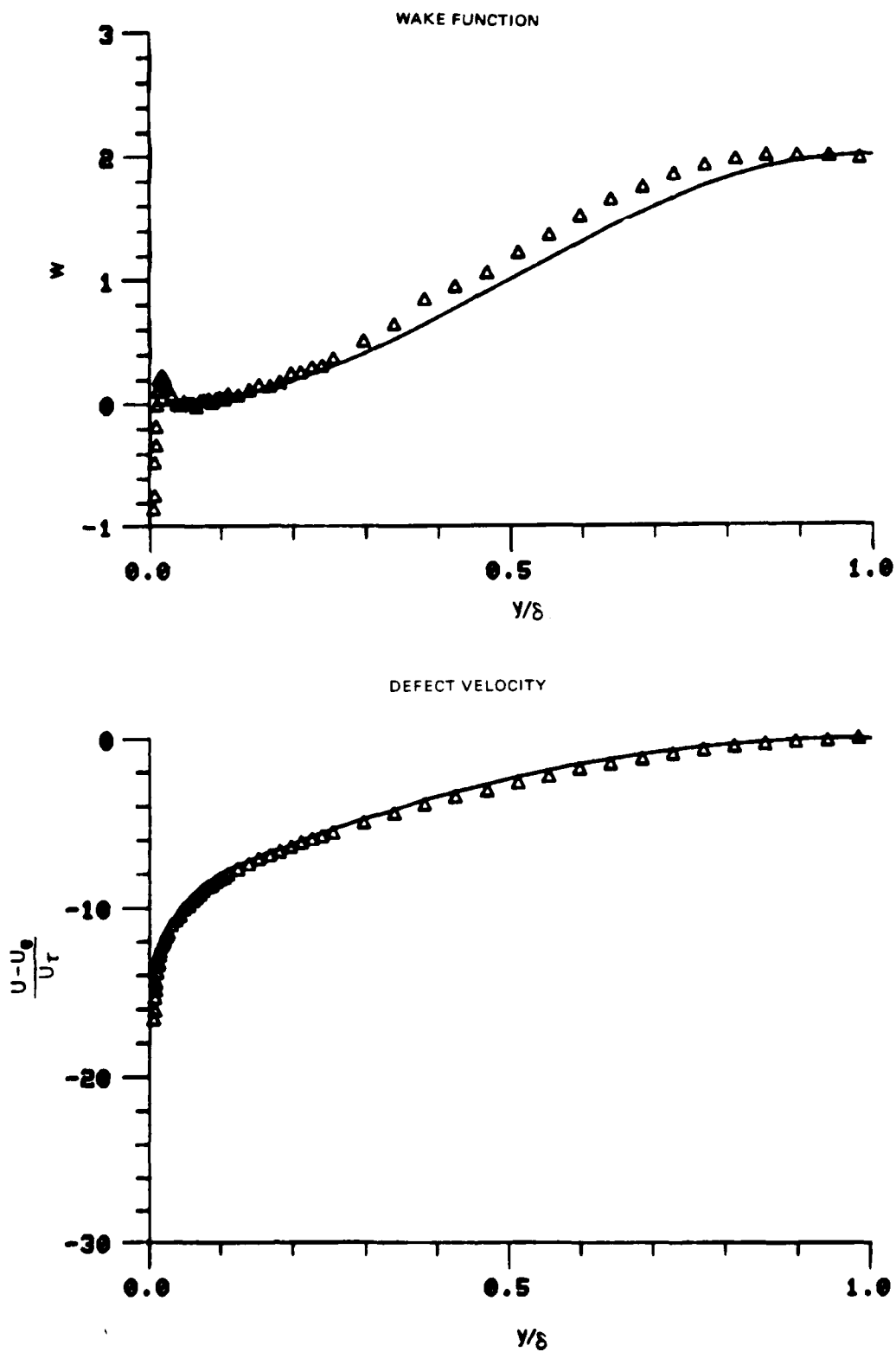


Figure 30. Boundary Layer Velocity Profiles
Run No.8 Point No.21

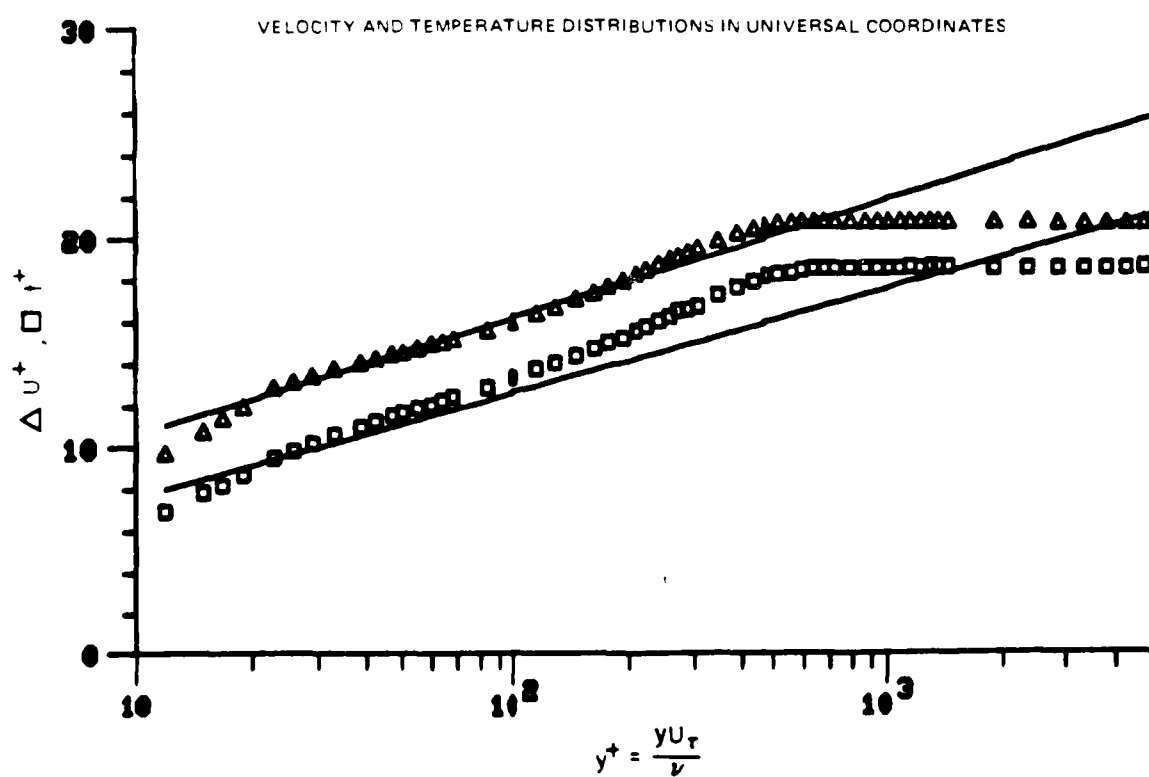
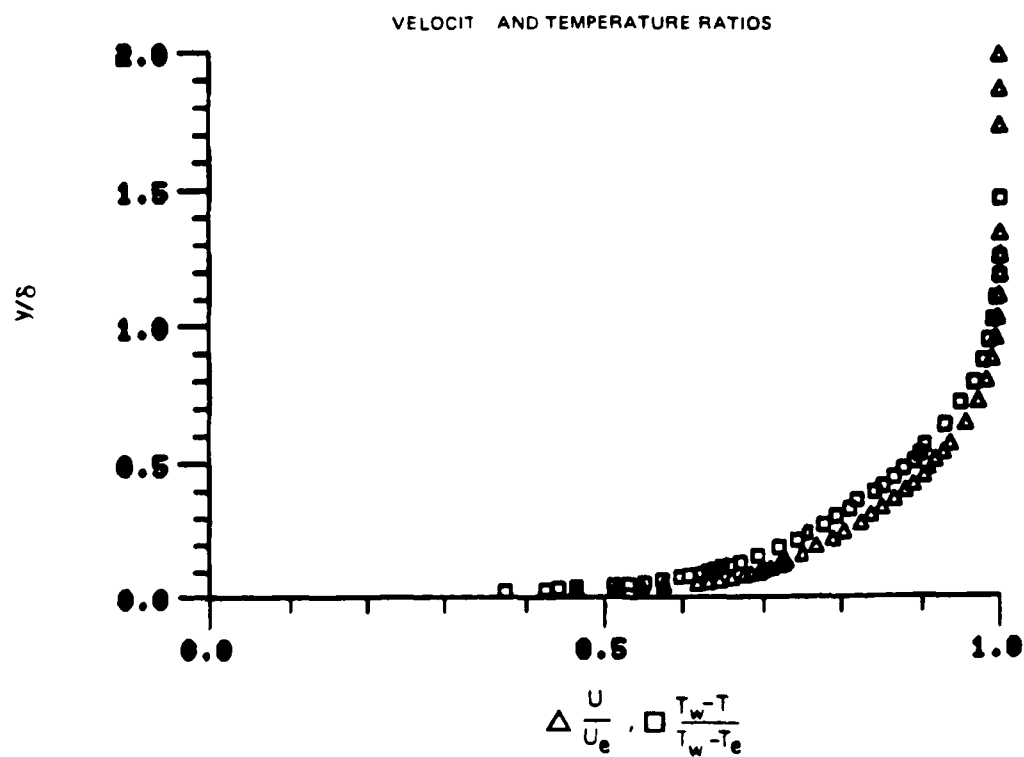


Figure 31. Boundary Layer Velocity and Temperature Profiles
Run No. 7 Point No. 3

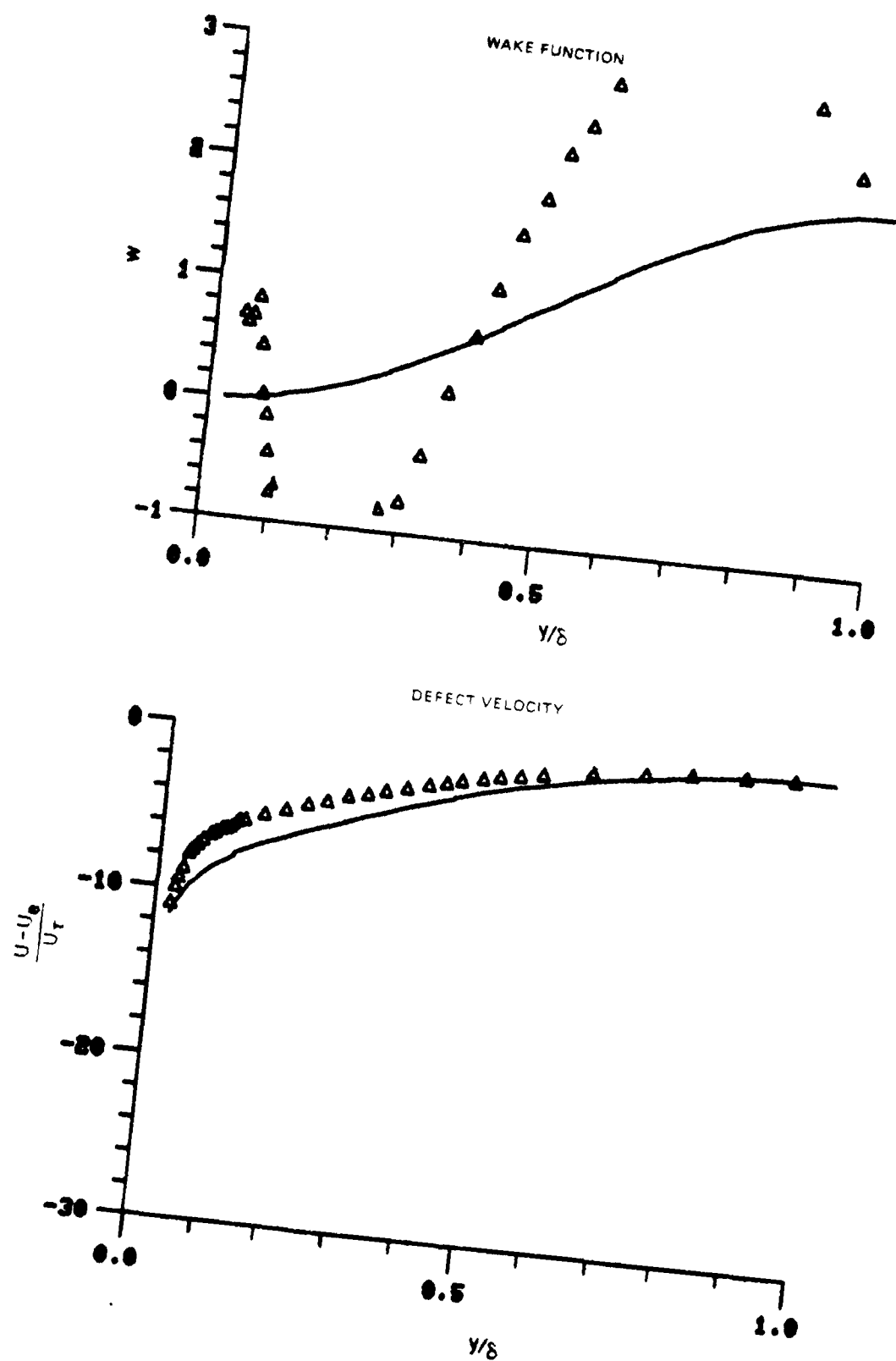


Figure 31. Boundary Layer Velocity Profiles
Run No. 7 Point No. 3

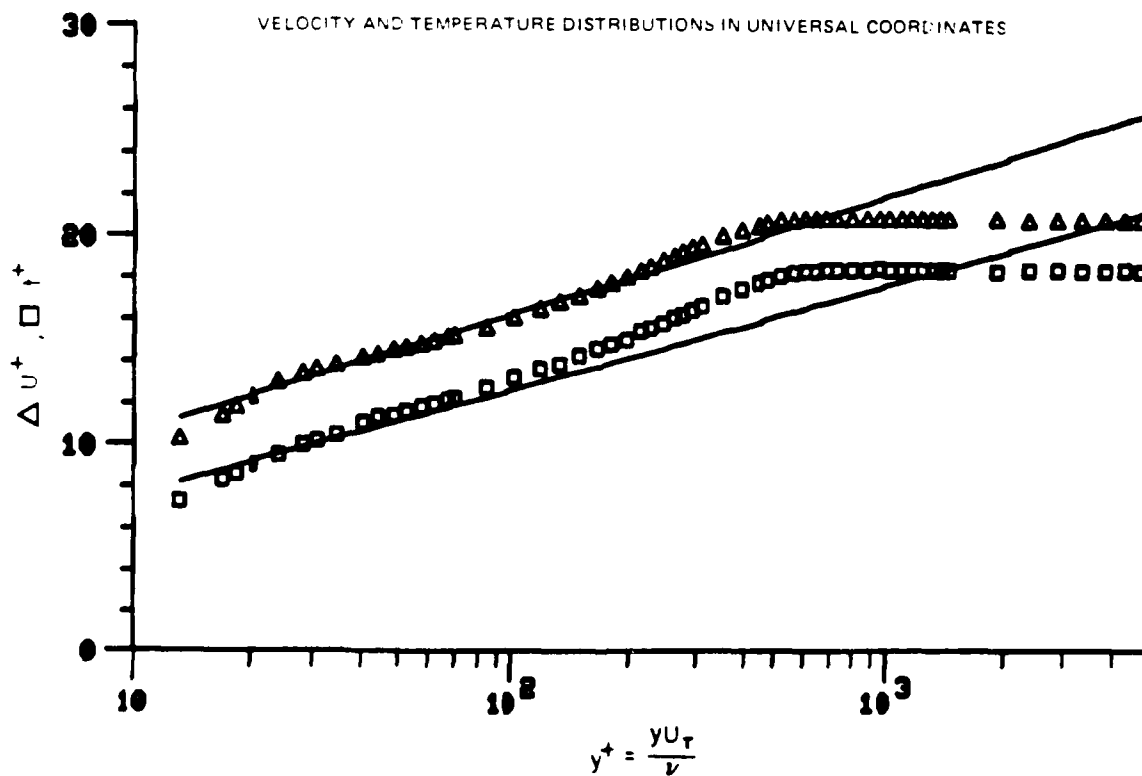
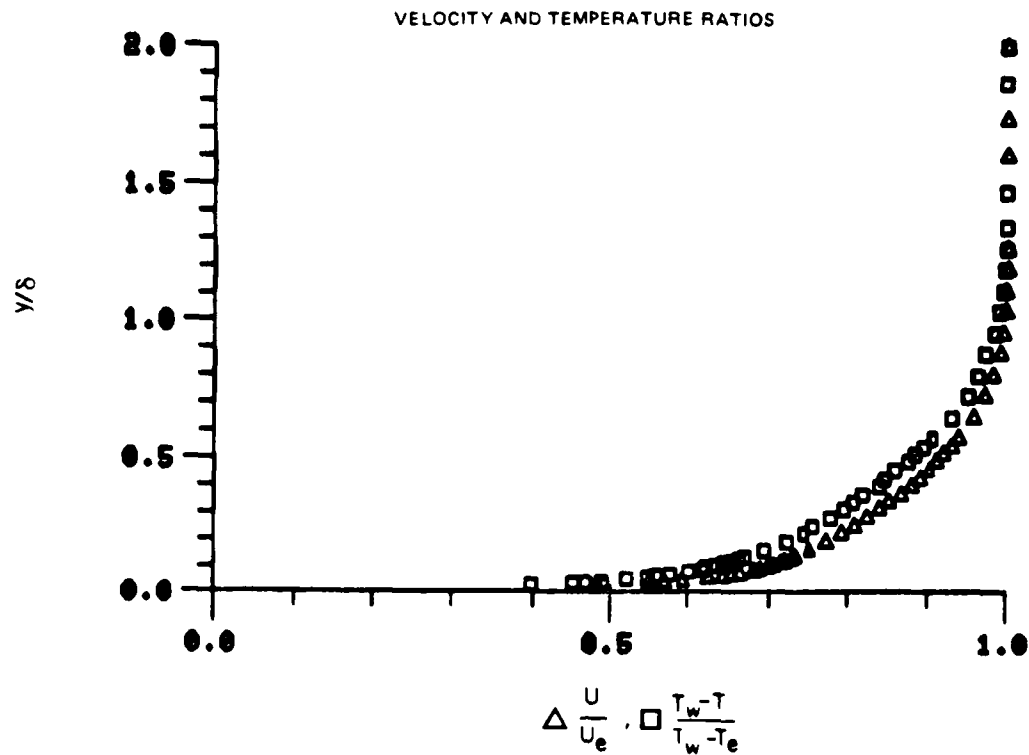


Figure 32. Boundary Layer Velocity and Temperature Profiles
Run No. 7 Point No. 4

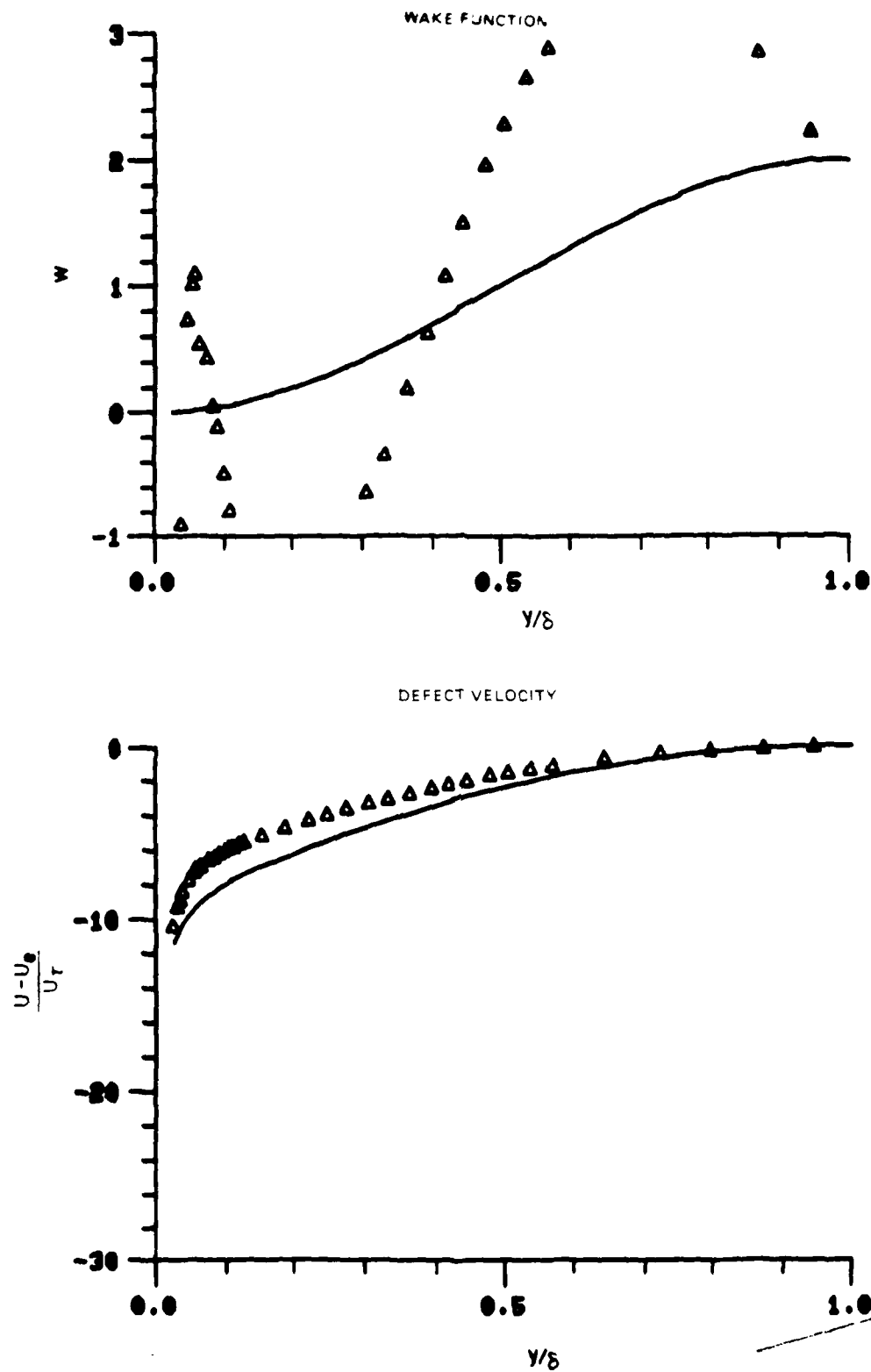


Figure 32. Boundary Layer Velocity Profiles
Run No.7 Point No.4

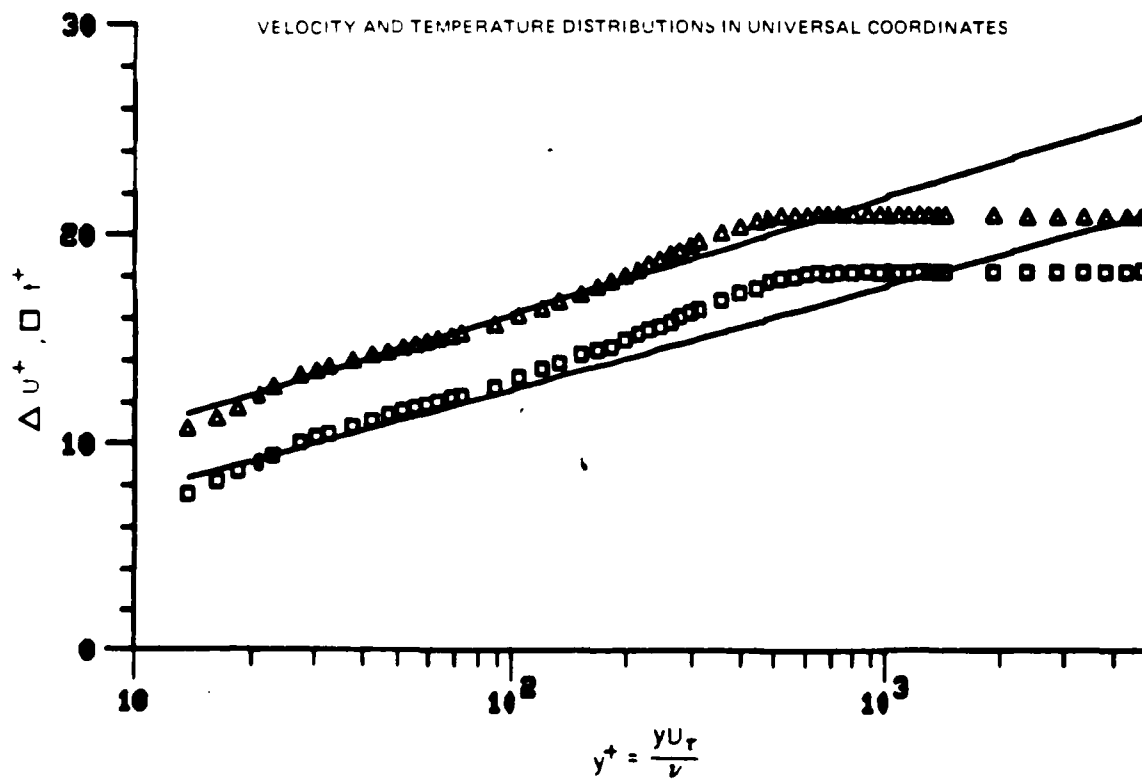
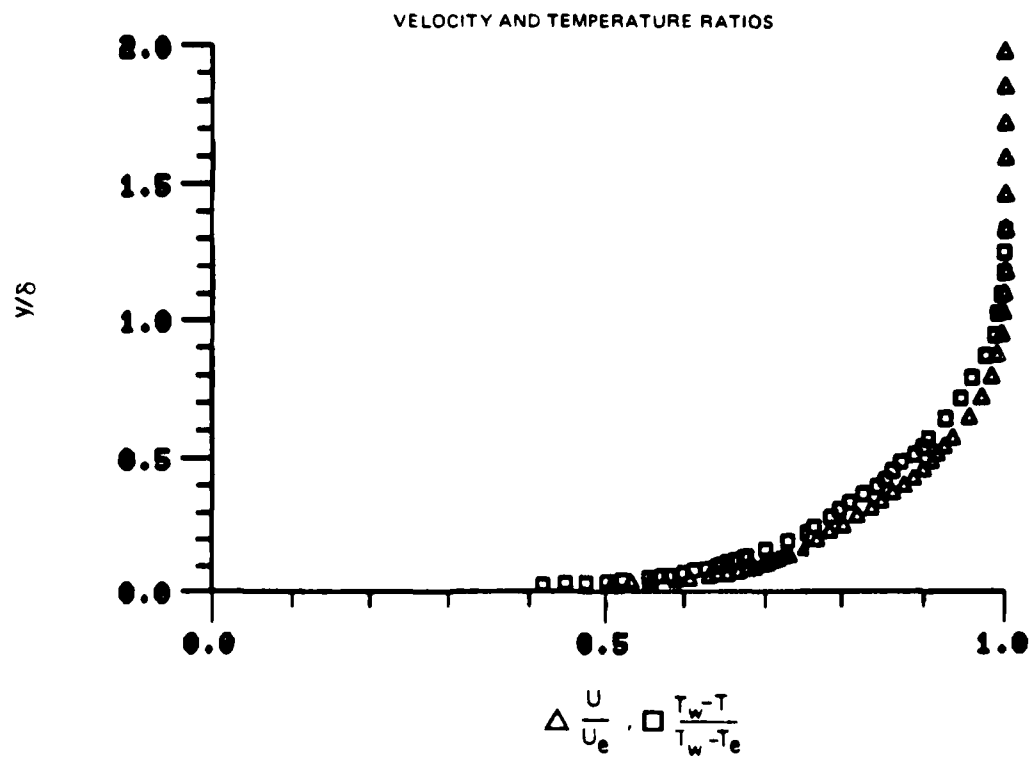


Figure 33. Boundary Layer Velocity and Temperature Profiles
Run No.7 Point No.5

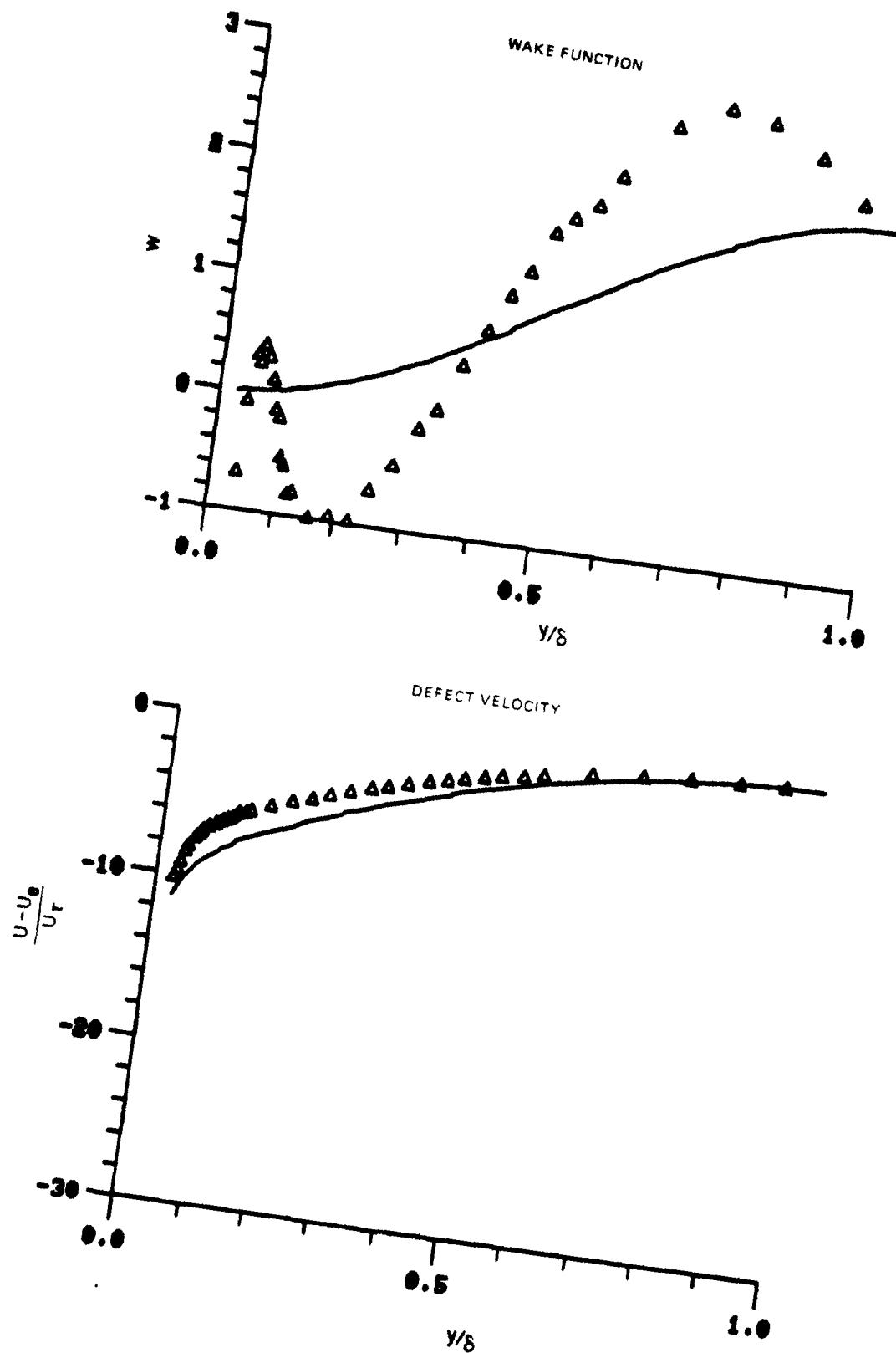


Figure 33. Boundary Layer Velocity Profiles
Run No.7 Point No.5

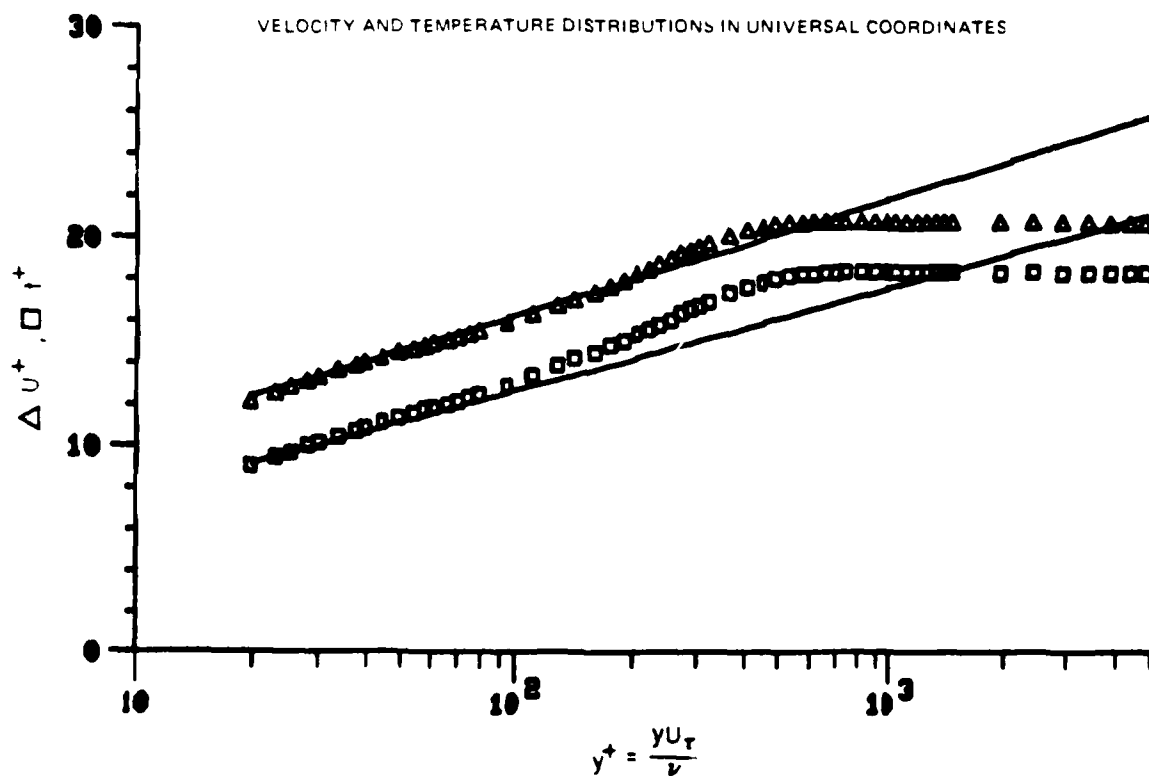
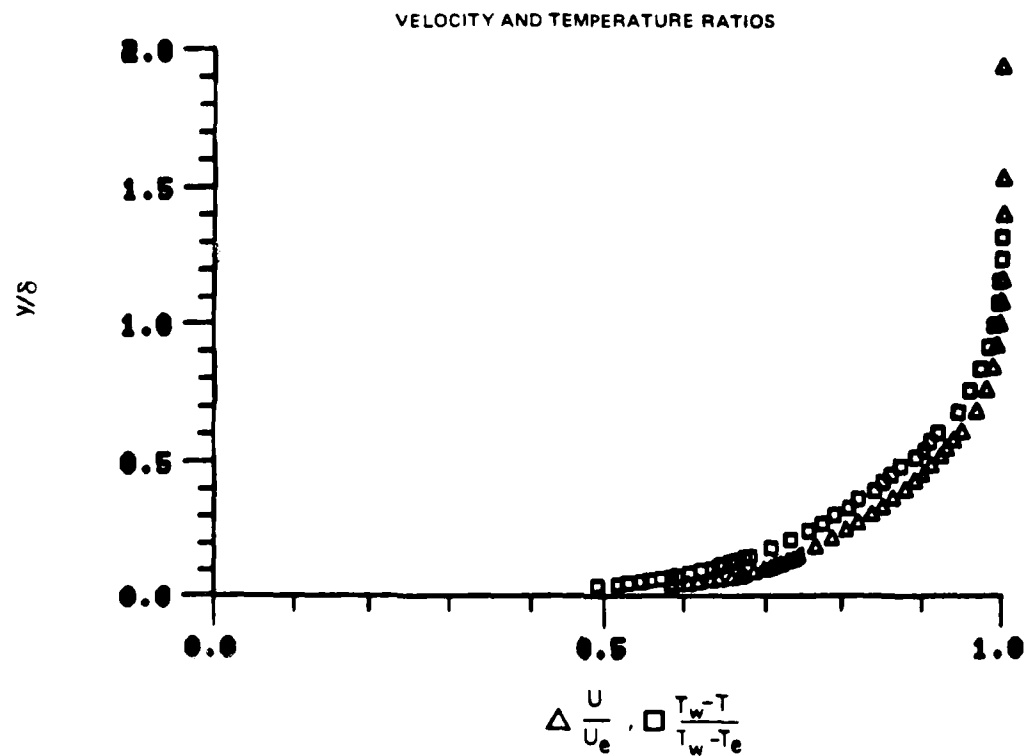


Figure 34. Boundary Layer Velocity and Temperature Profiles
Run No. 7 Point No. 6

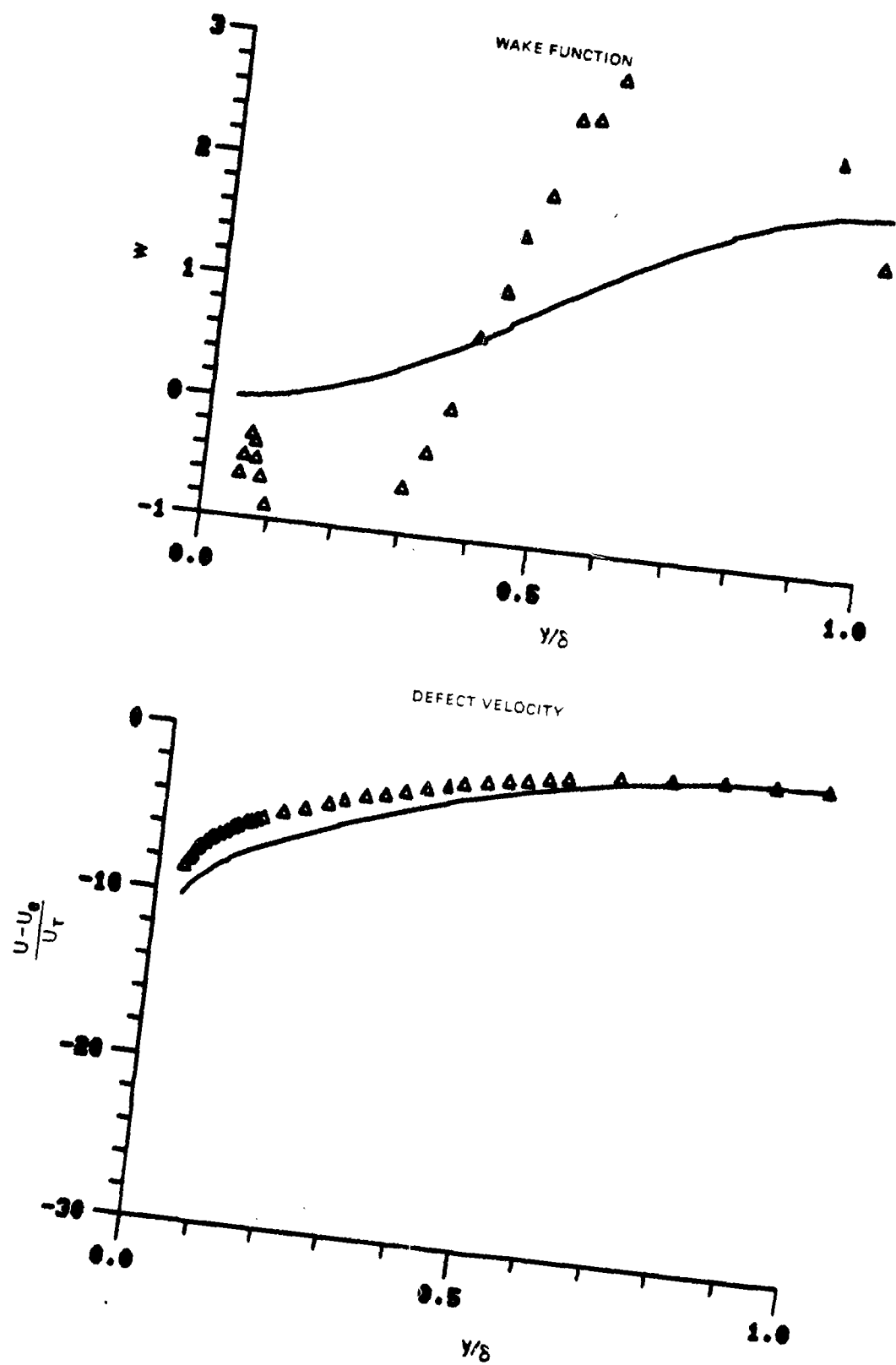


Figure 34. Boundary Layer Velocity Profiles
Run No. 7 Point No. 6

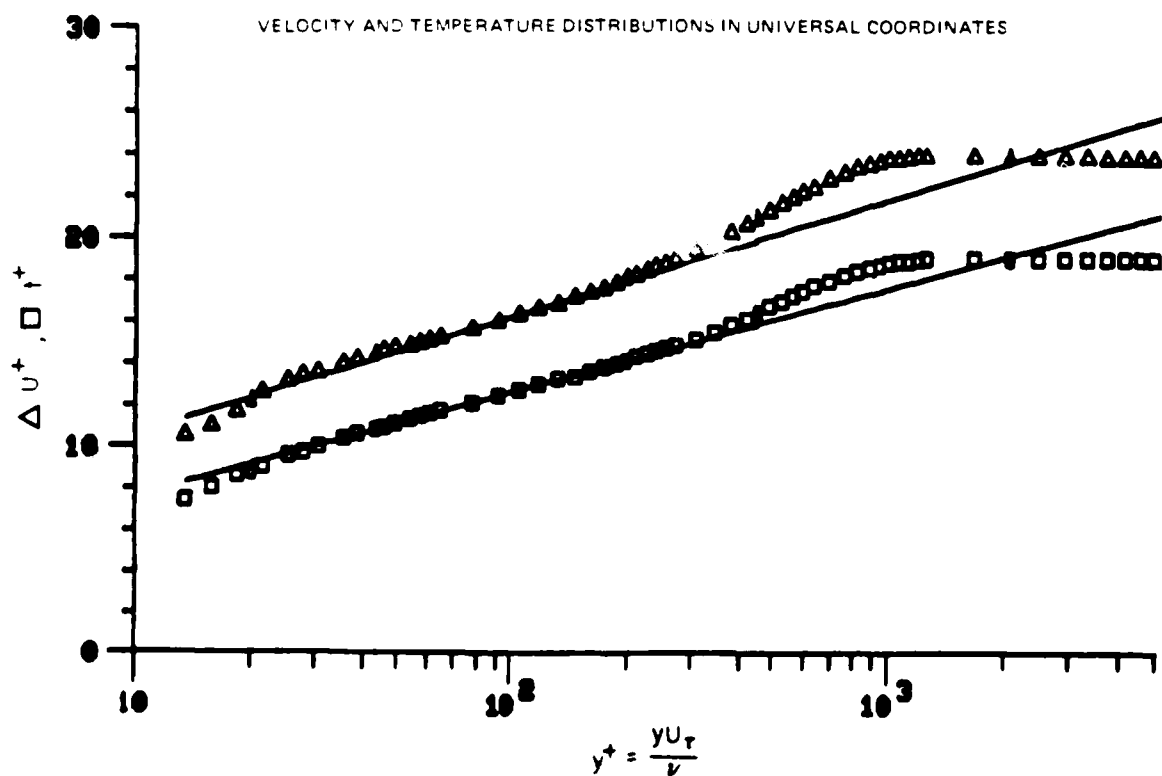
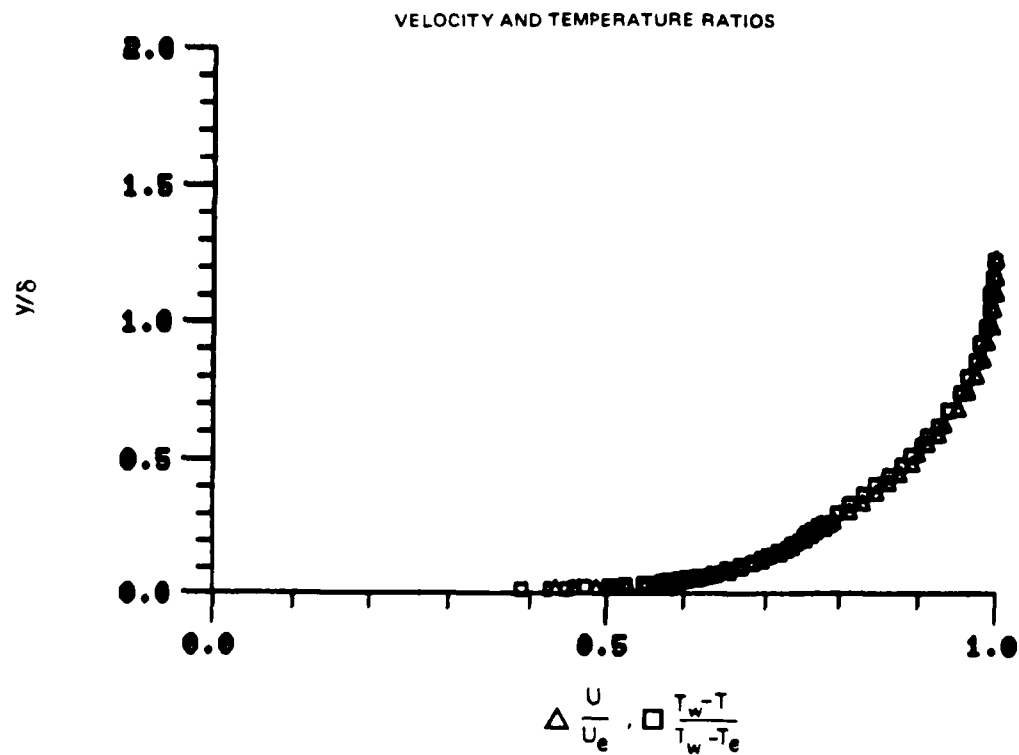


Figure 35. Boundary Layer Velocity and Temperature Profiles
Run No.7 Point No.8

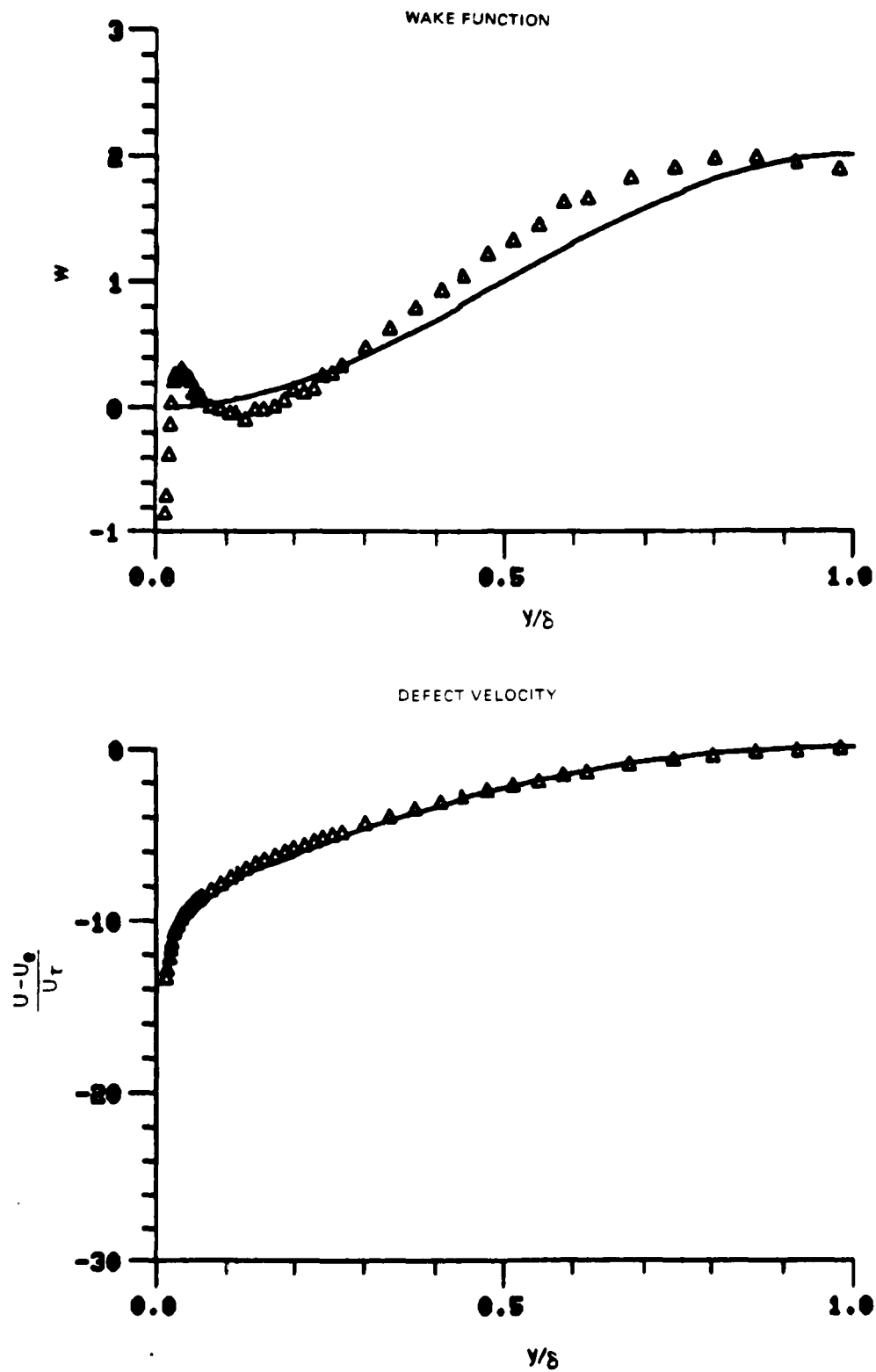


Figure 35. Boundary Layer Velocity Profiles
Run No. 7 Point No. 8

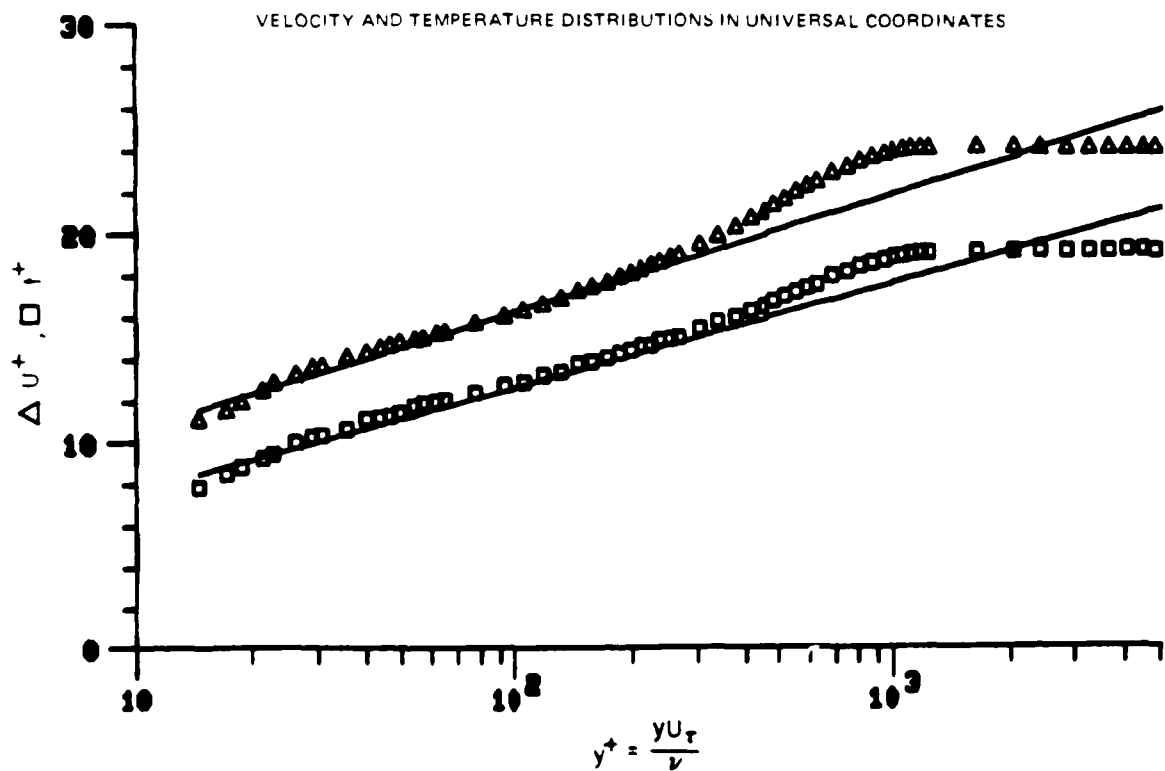
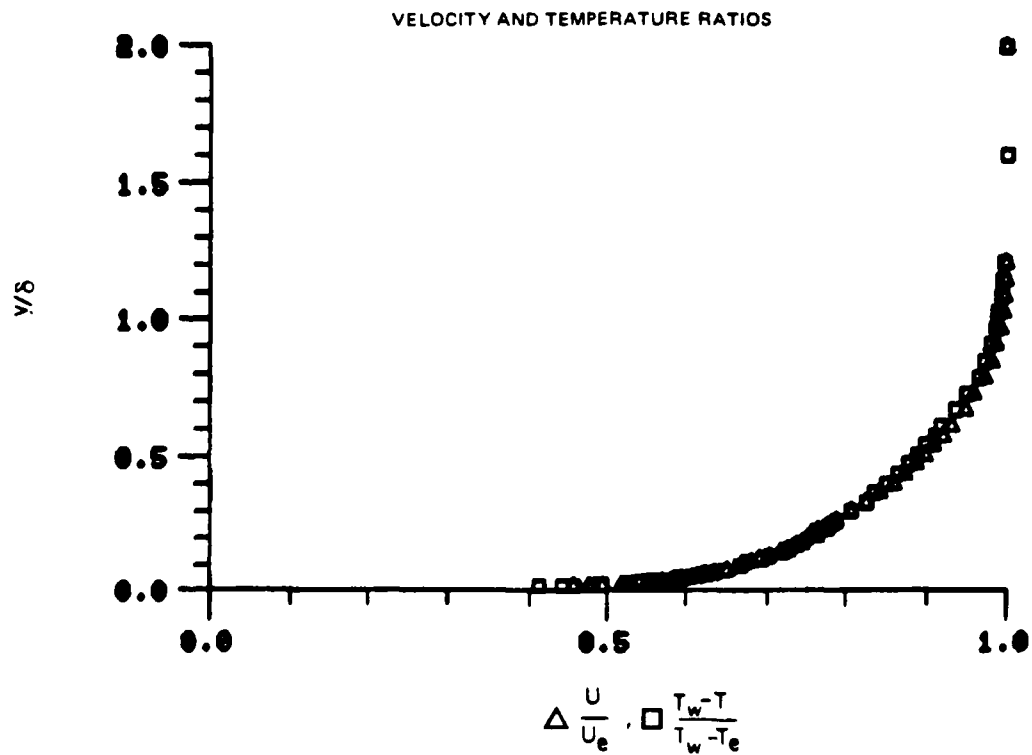


Figure 36. Boundary Layer Velocity and Temperature Profiles
Run No.7 Point No.9

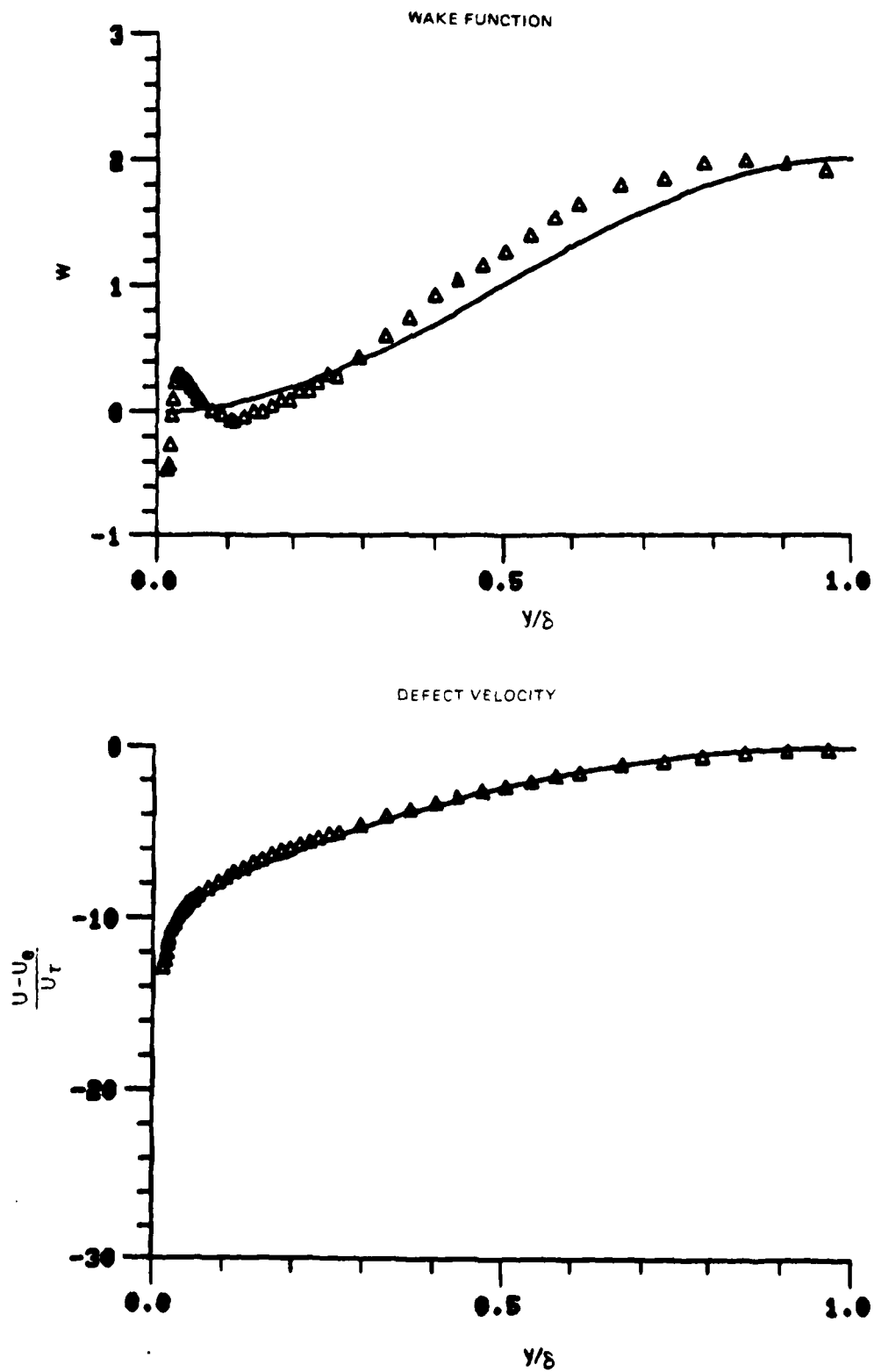


Figure 36. Boundary Layer Velocity Profiles
Run No. 7 Point No. 9

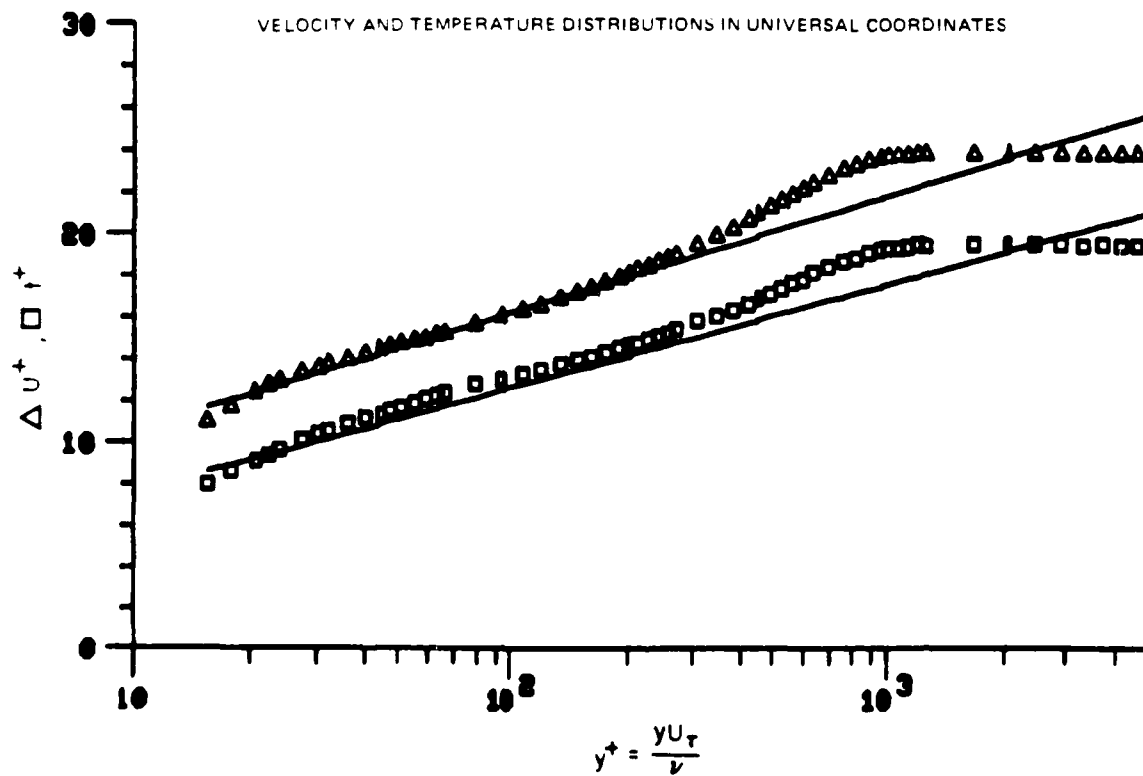
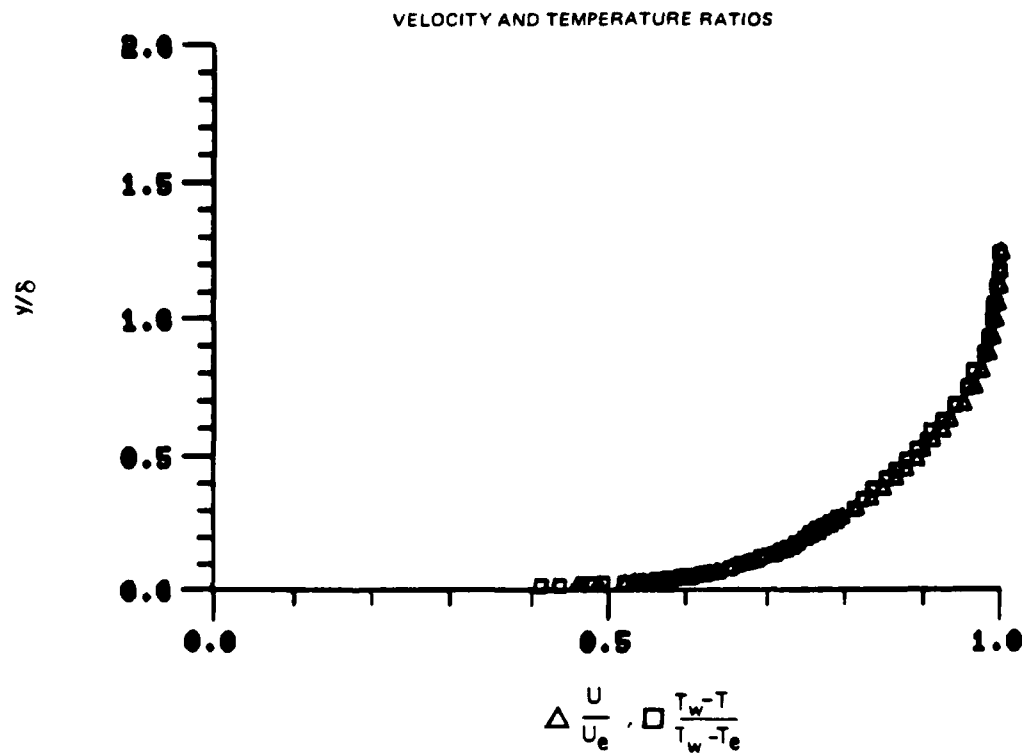


Figure 37. Boundary Layer Velocity and Temperature Profiles
Run No.7 Point No.10

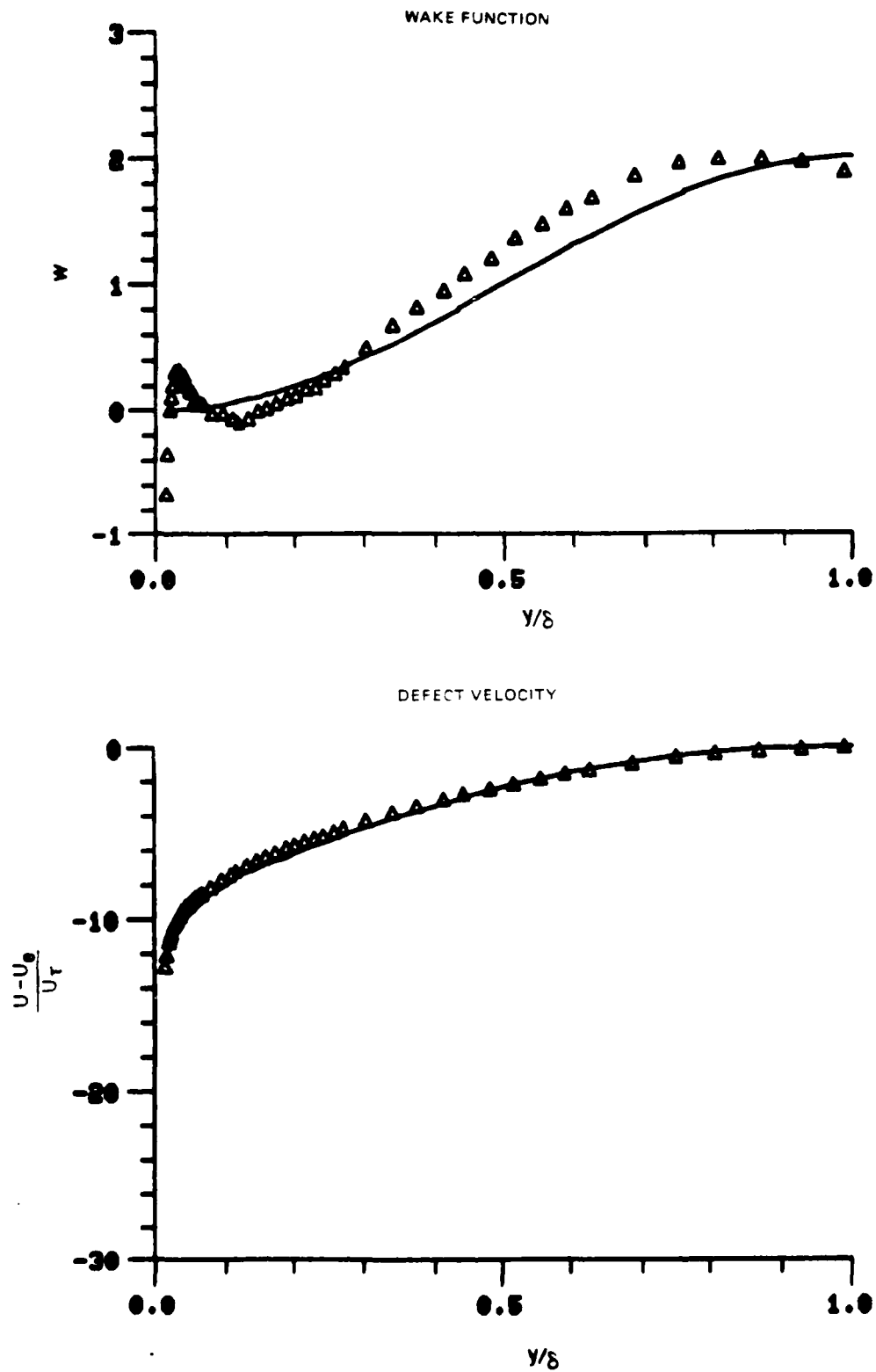


Figure 37. Boundary Layer Velocity Profiles
Run No.7 Point No.10

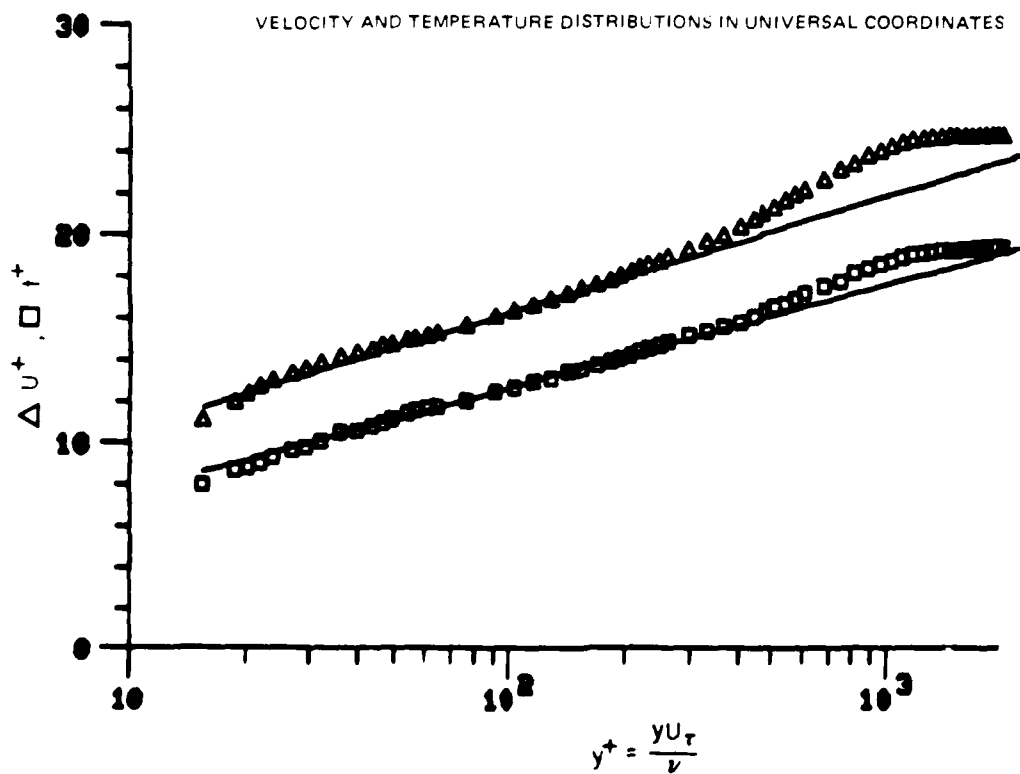
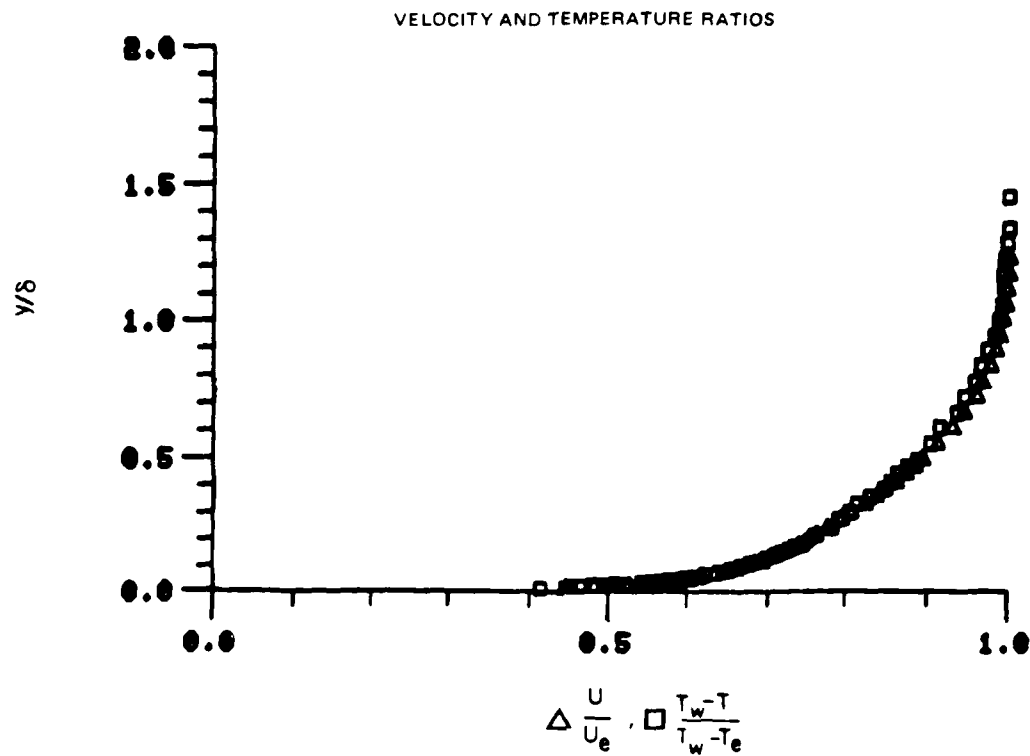


Figure 33. Boundary Layer Velocity and Temperature Profiles
Run No.7 Point No.11

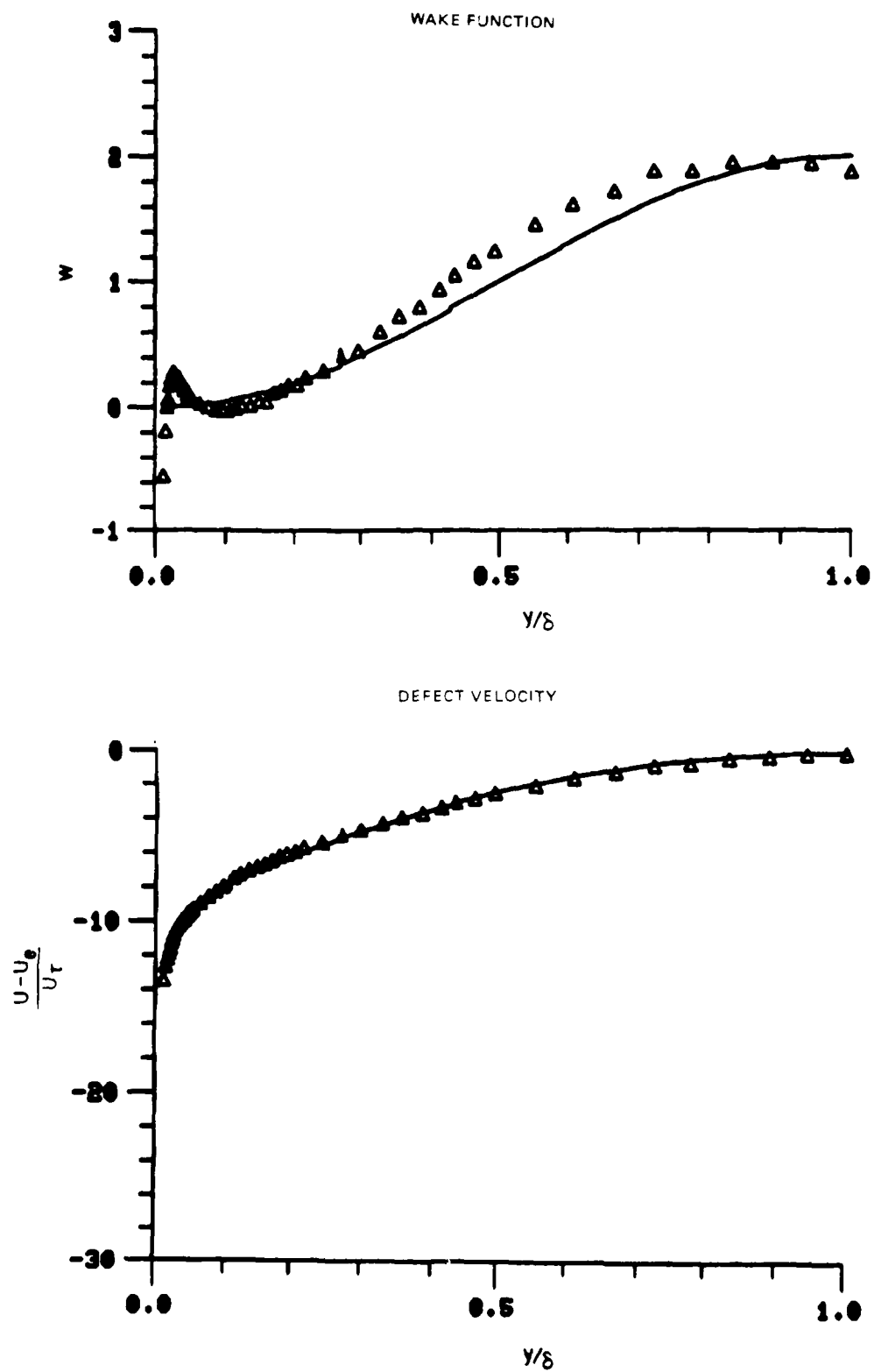


Figure 38. Boundary Layer Velocity Profiles
Run No. 7 Point No. 11

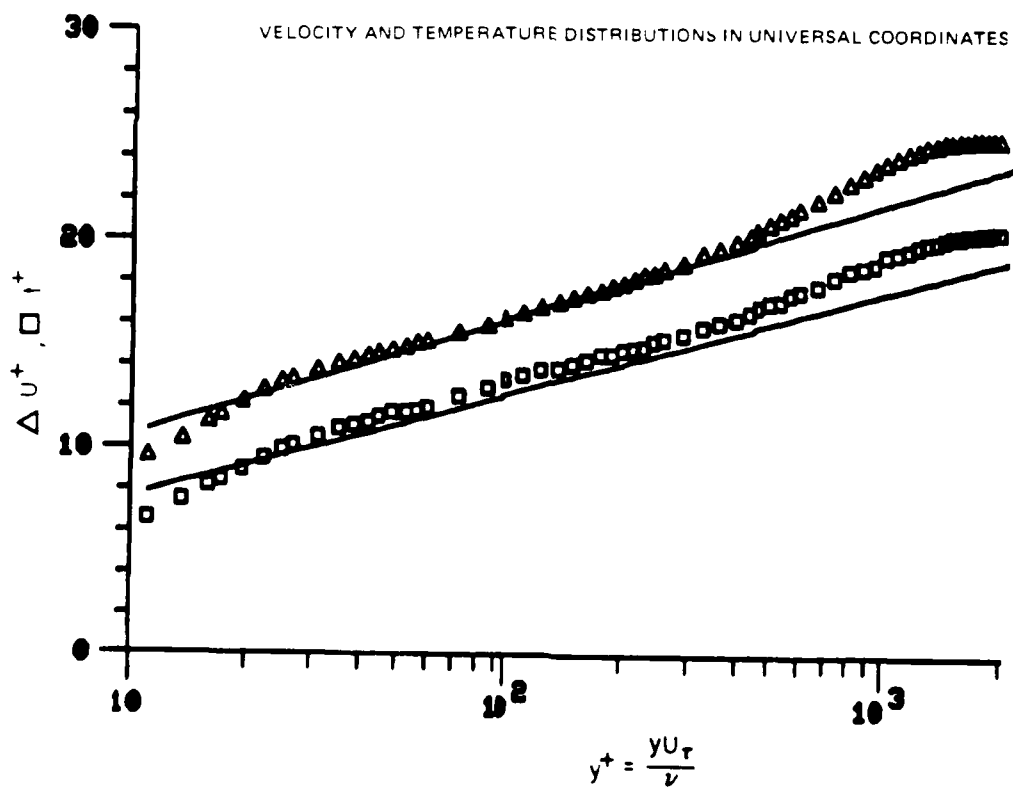
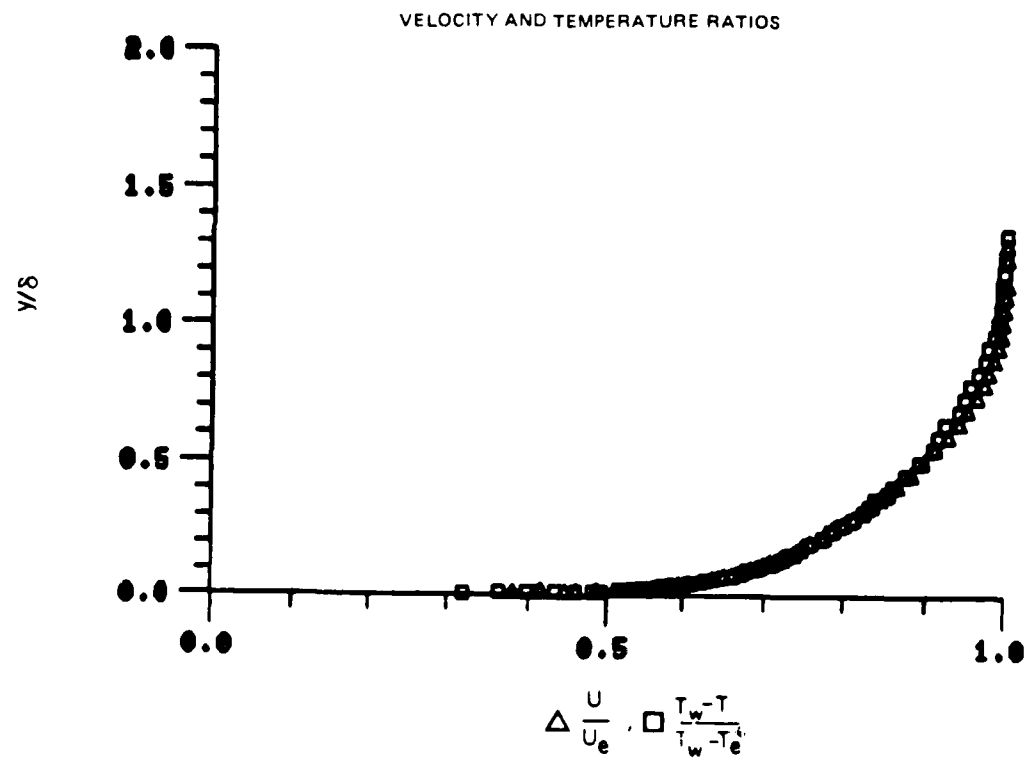


Figure 39. Boundary Layer Velocity and Temperature Profiles
Run No. 7 Point No. 12

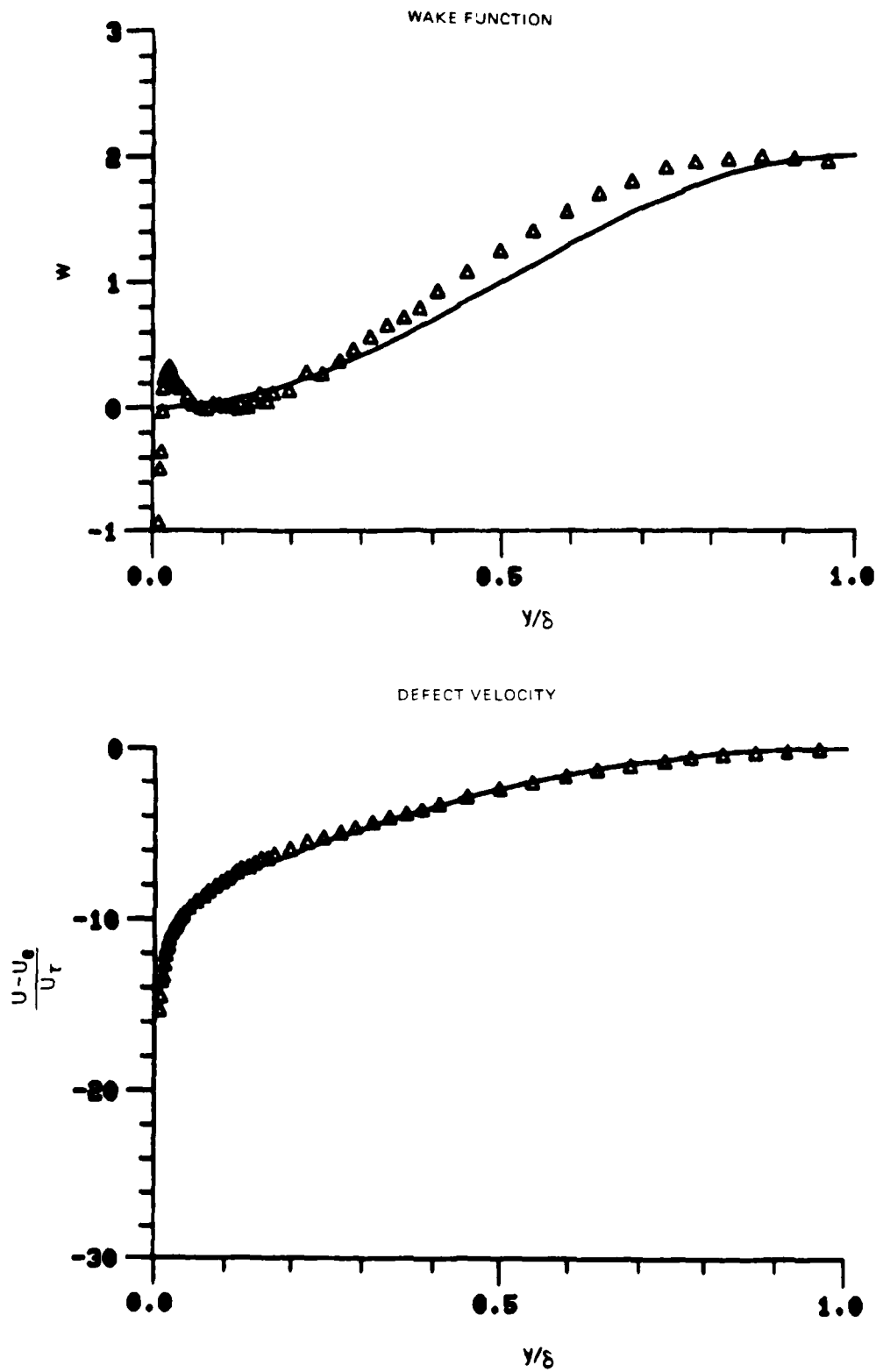


Figure 39. Boundary Layer Velocity Profiles
Run No.7 Point No.12

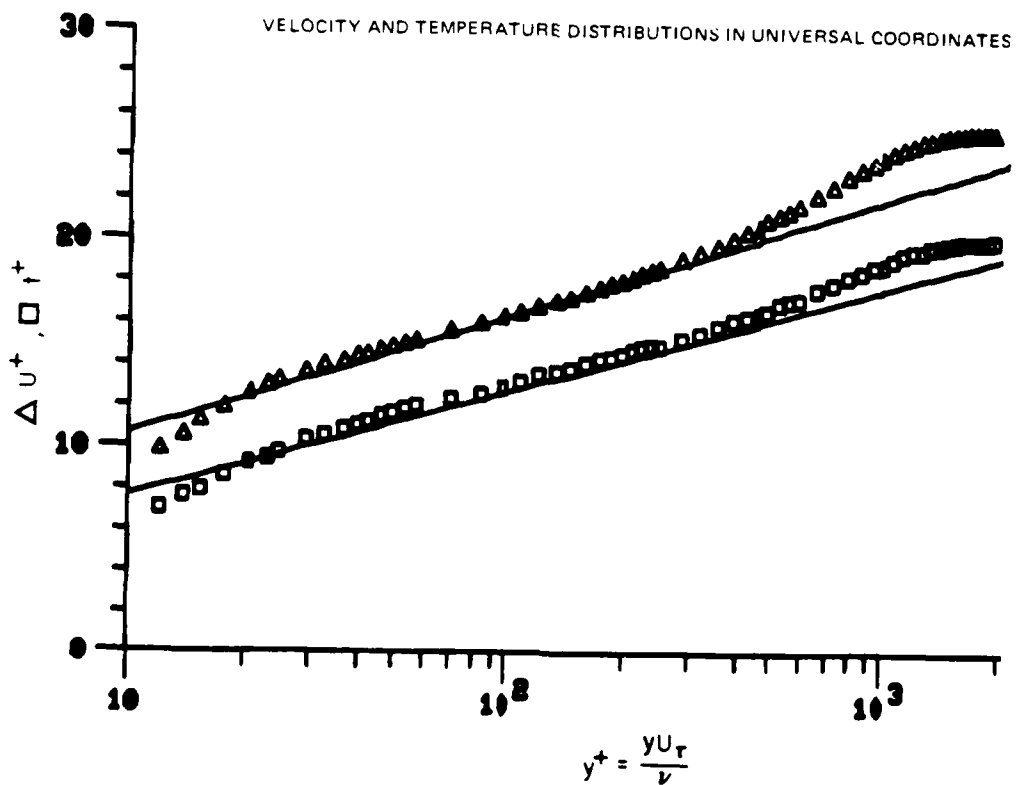
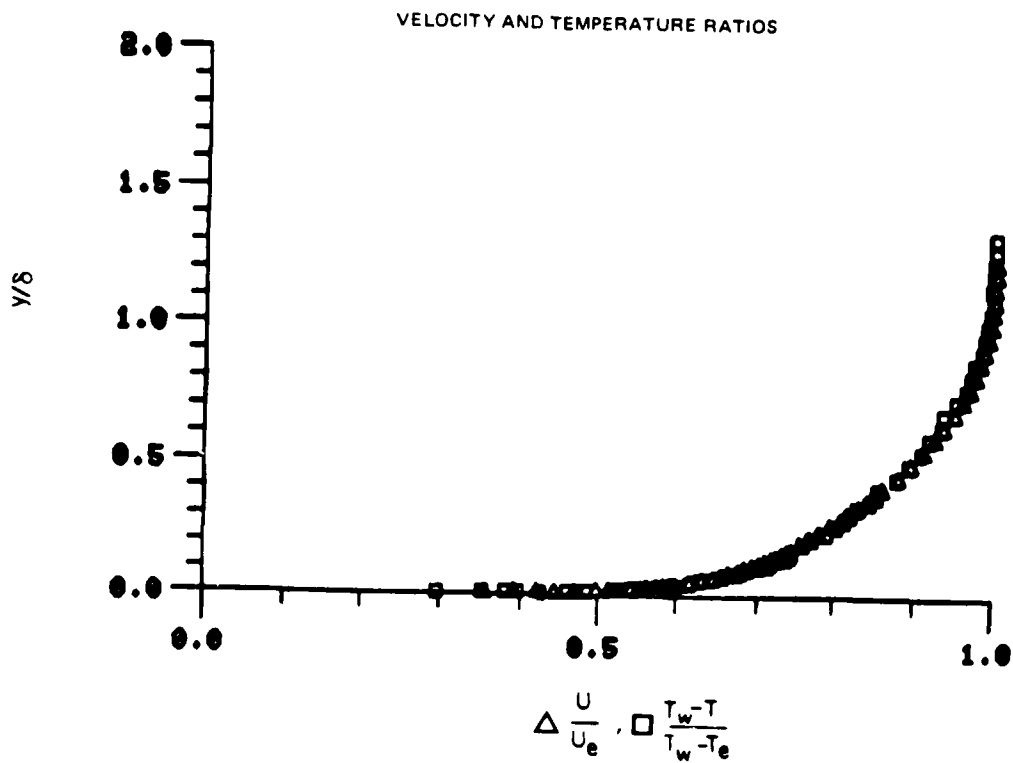


Figure 40. Boundary Layer Velocity and Temperature Profiles
Run No.7 Point No.13

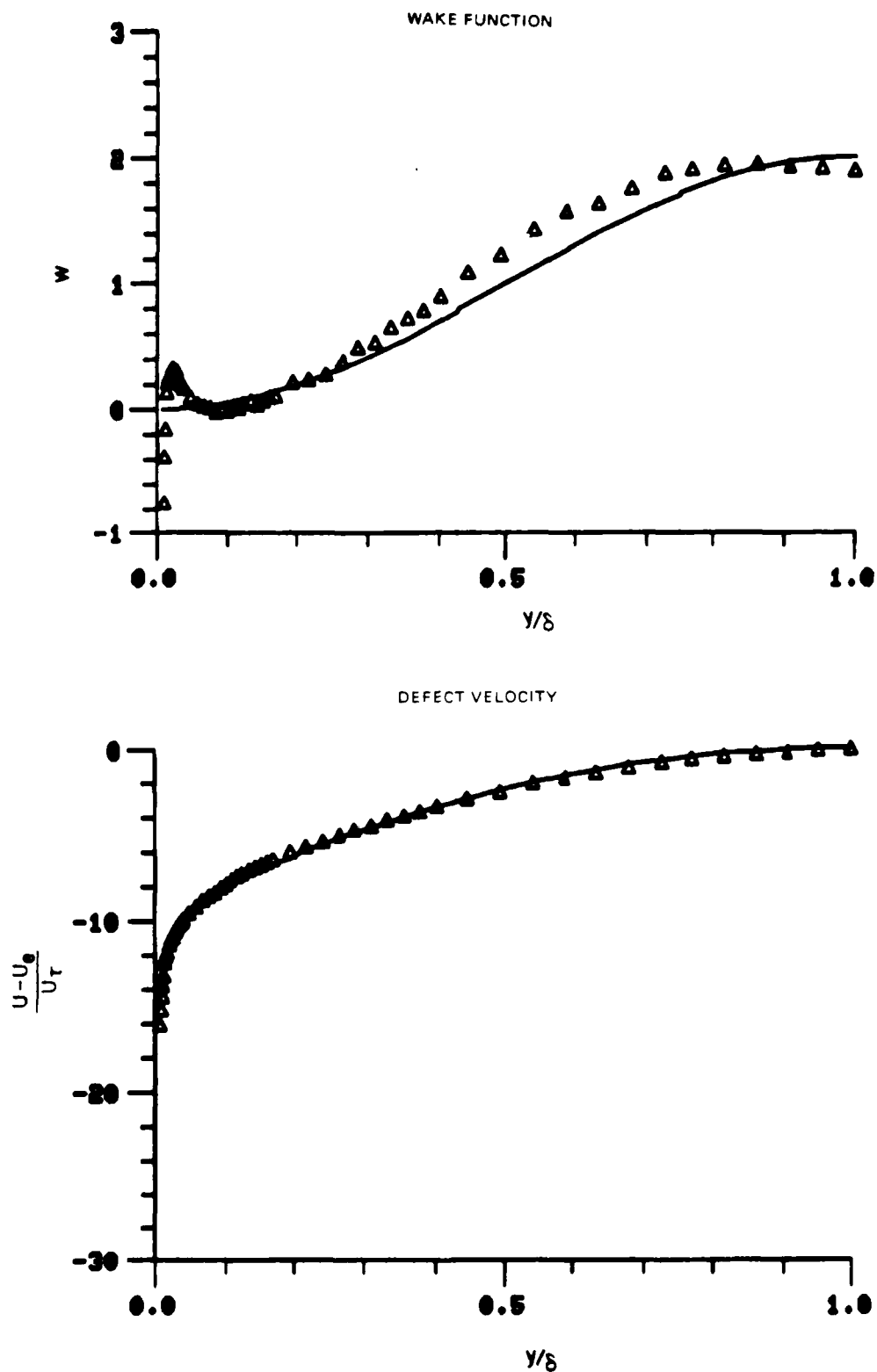


Figure 40. Boundary Layer Velocity Profiles
Run No.7 Point No.13

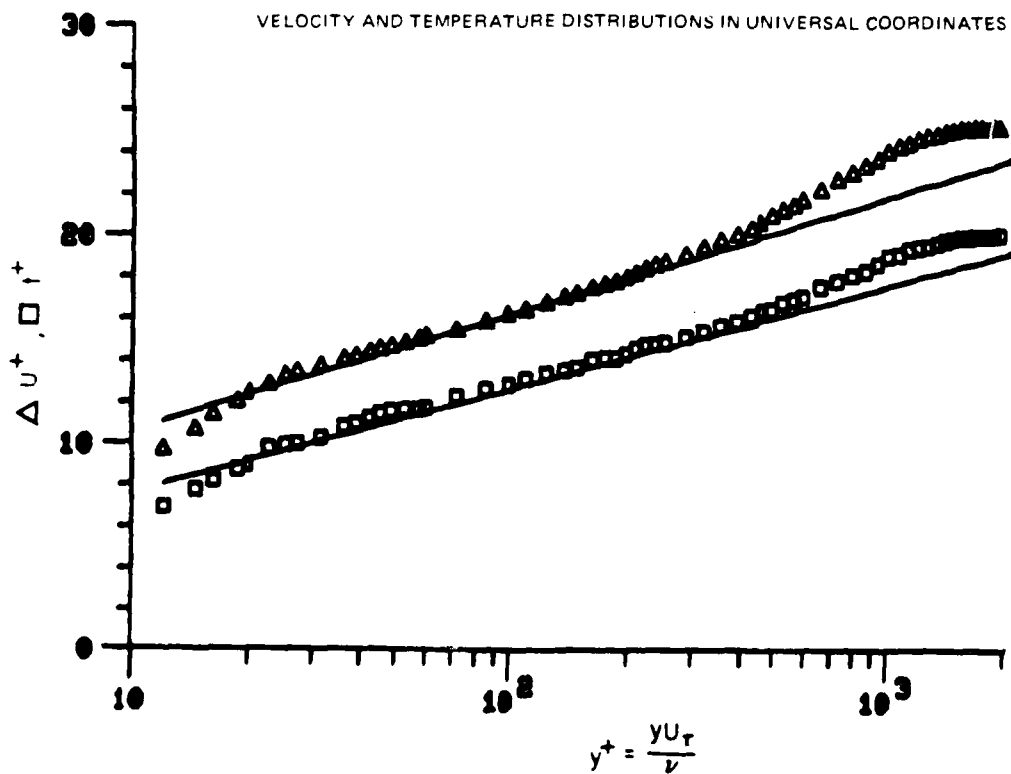
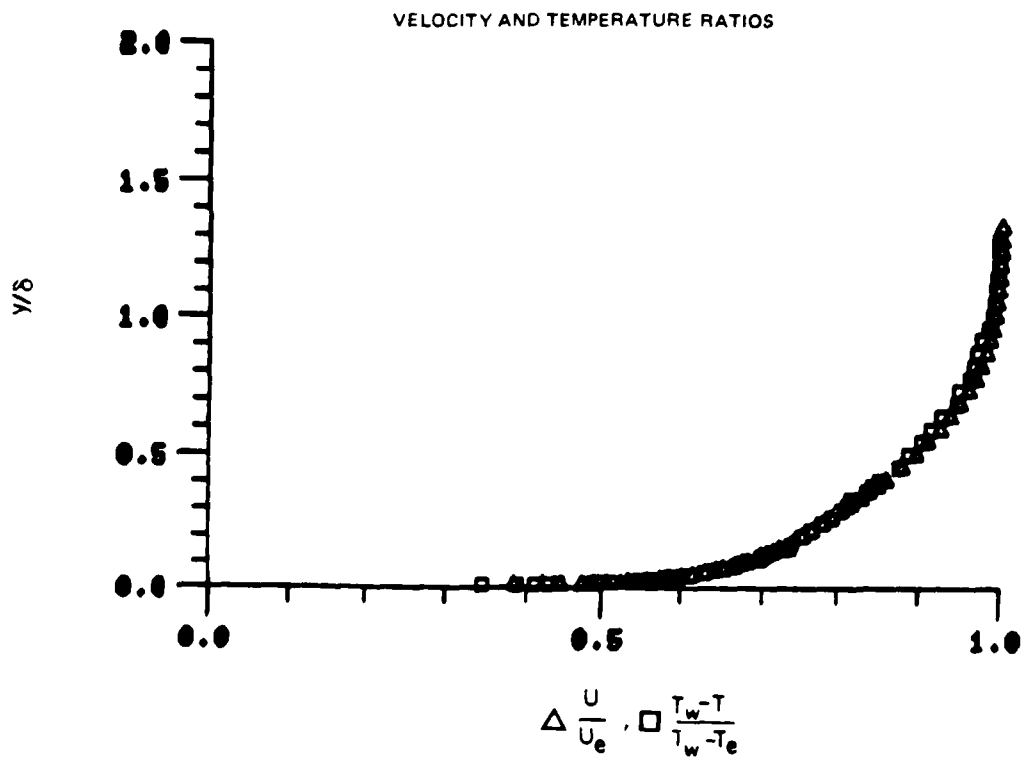


Figure 41. Boundary Layer Velocity and Temperature Profiles
Run No.7 Point No.14

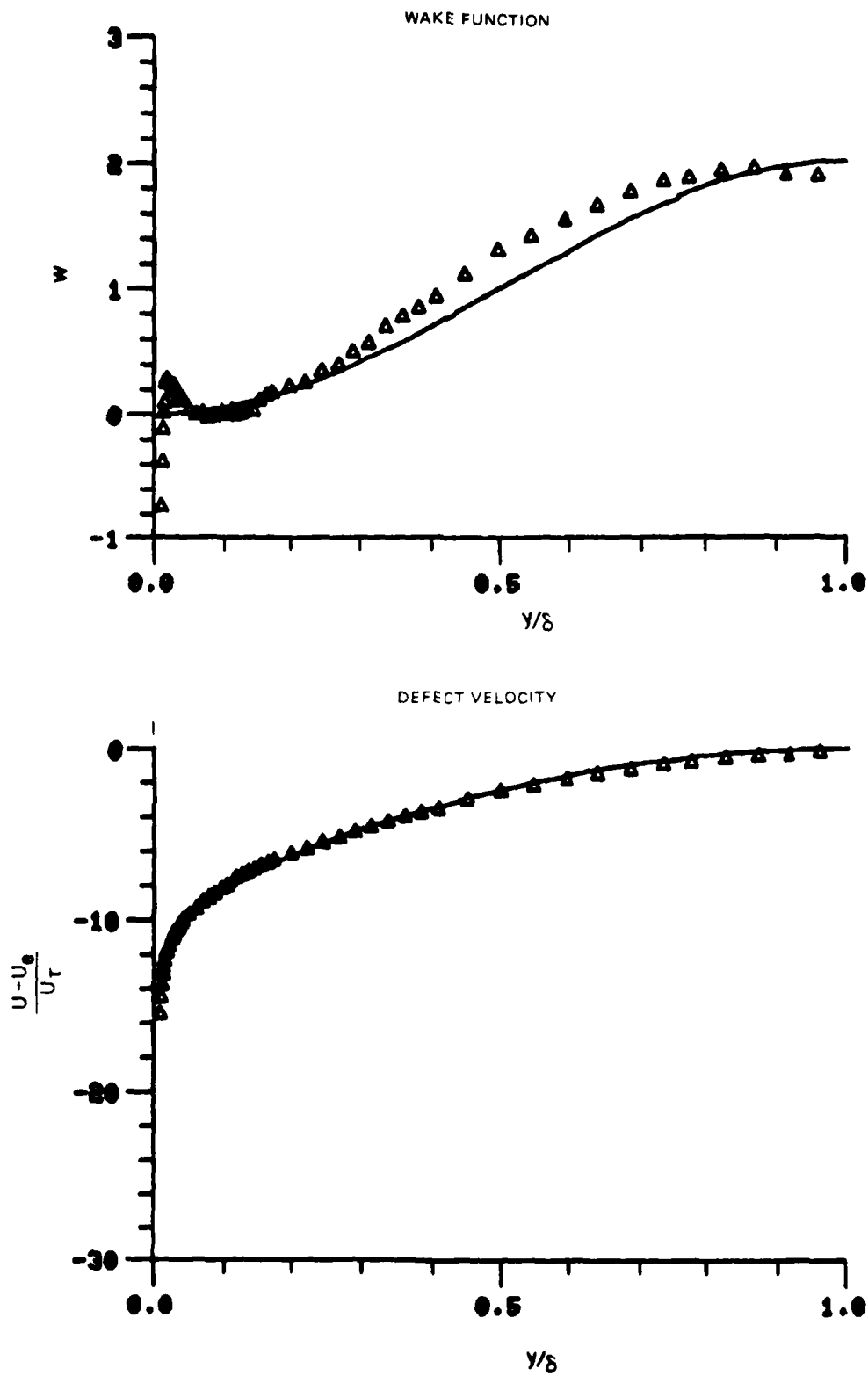


Figure 41. Boundary Layer Velocity Profiles
Run No. 7 Point No. 14

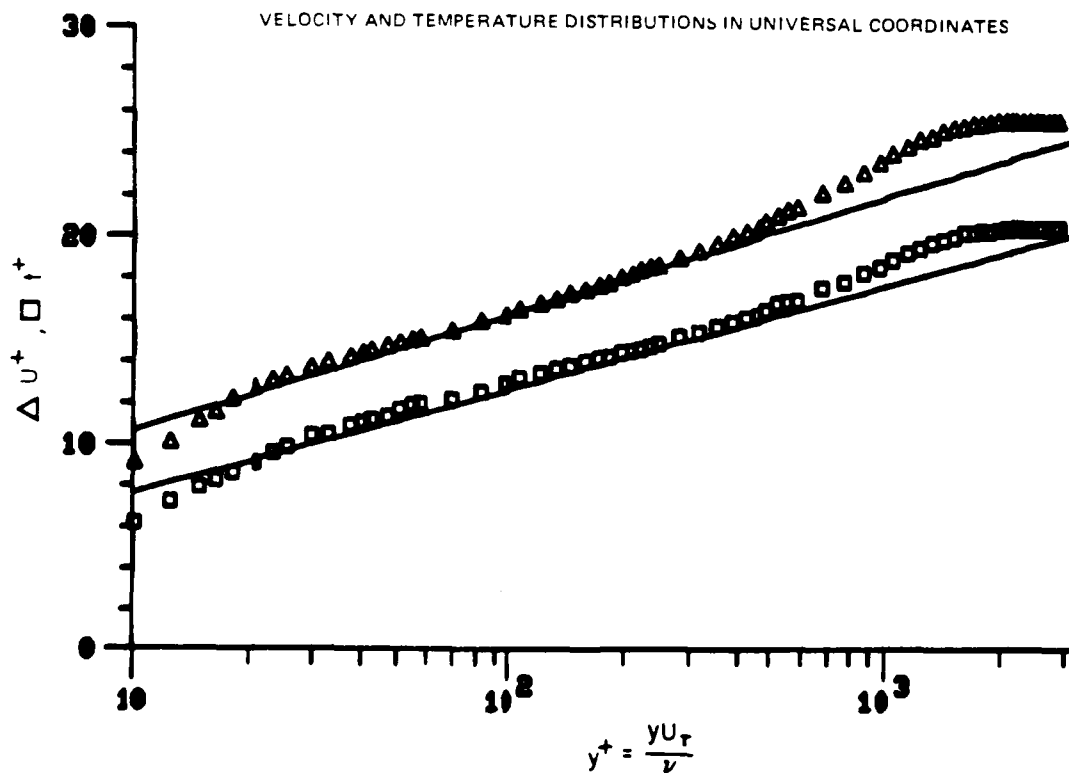
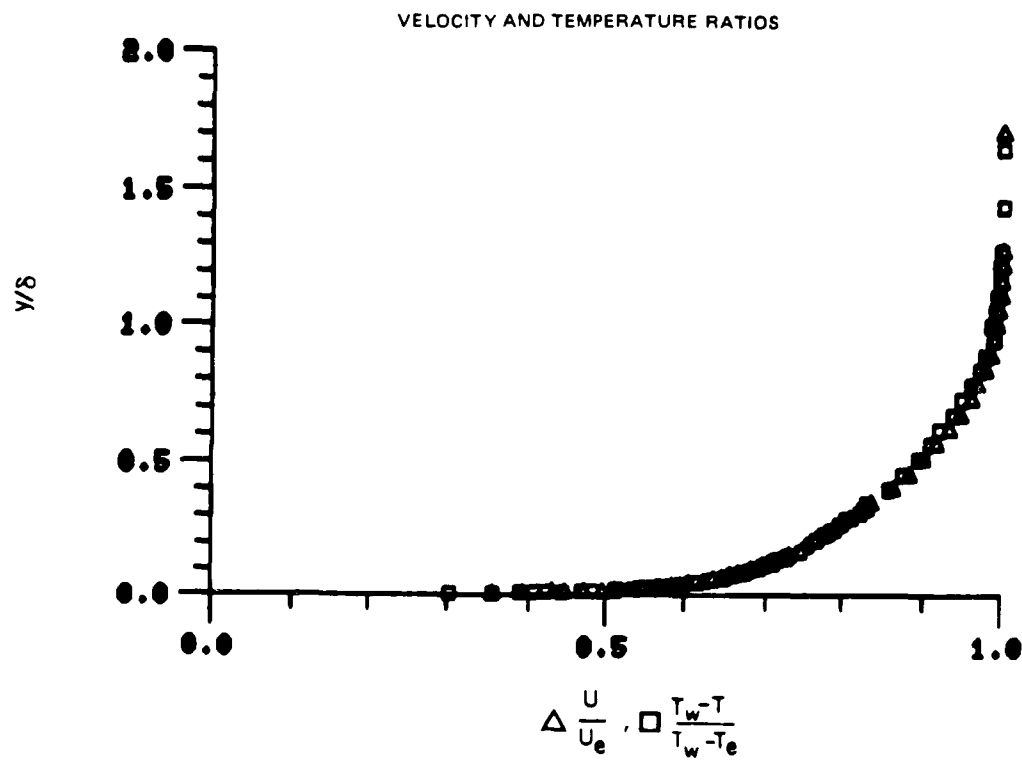


Figure 42. Boundary Layer Velocity and Temperature Profiles
Run No.7 Point No.15

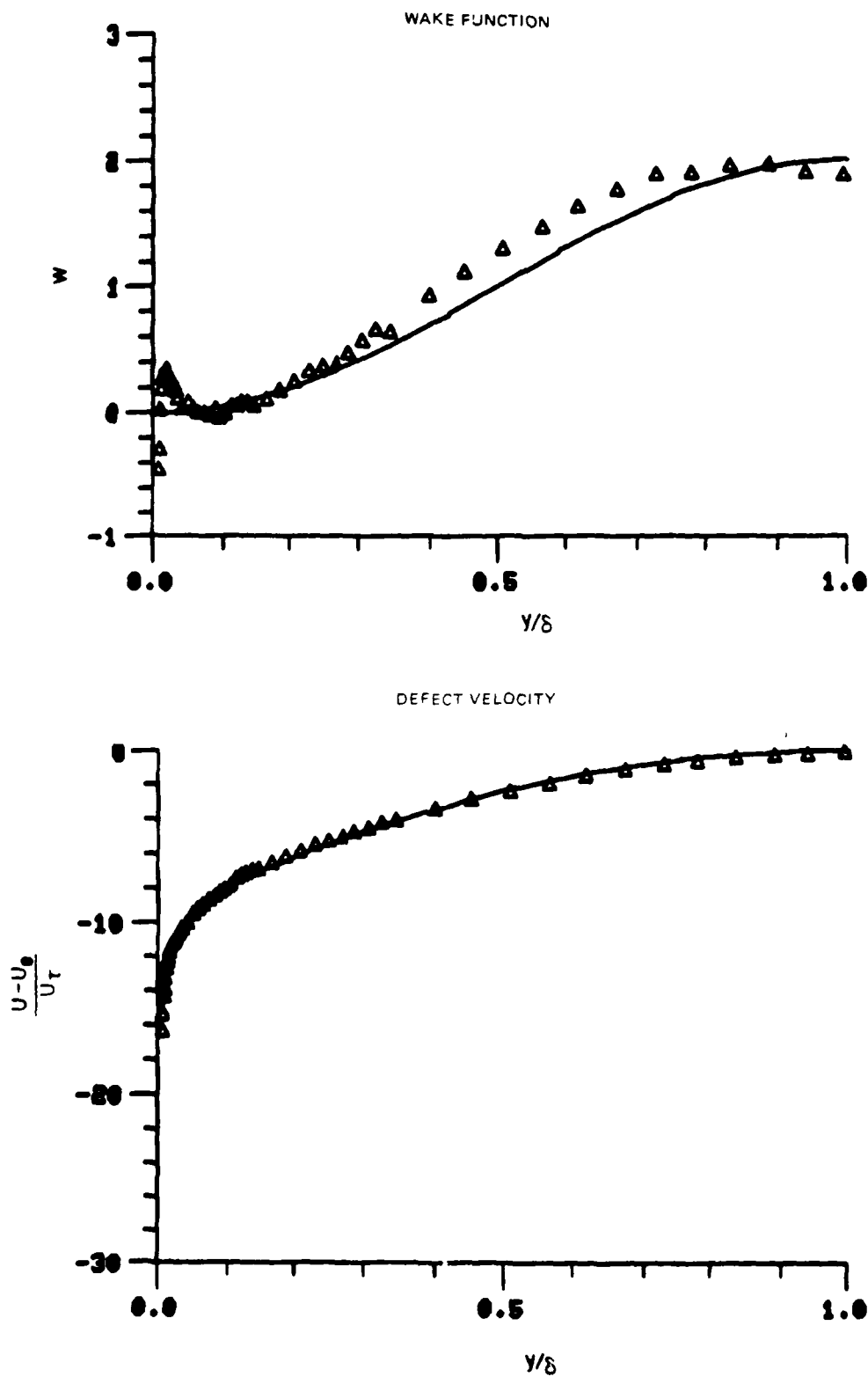


Figure 42. Boundary Layer Velocity Profiles
Run No.7 Point No.15

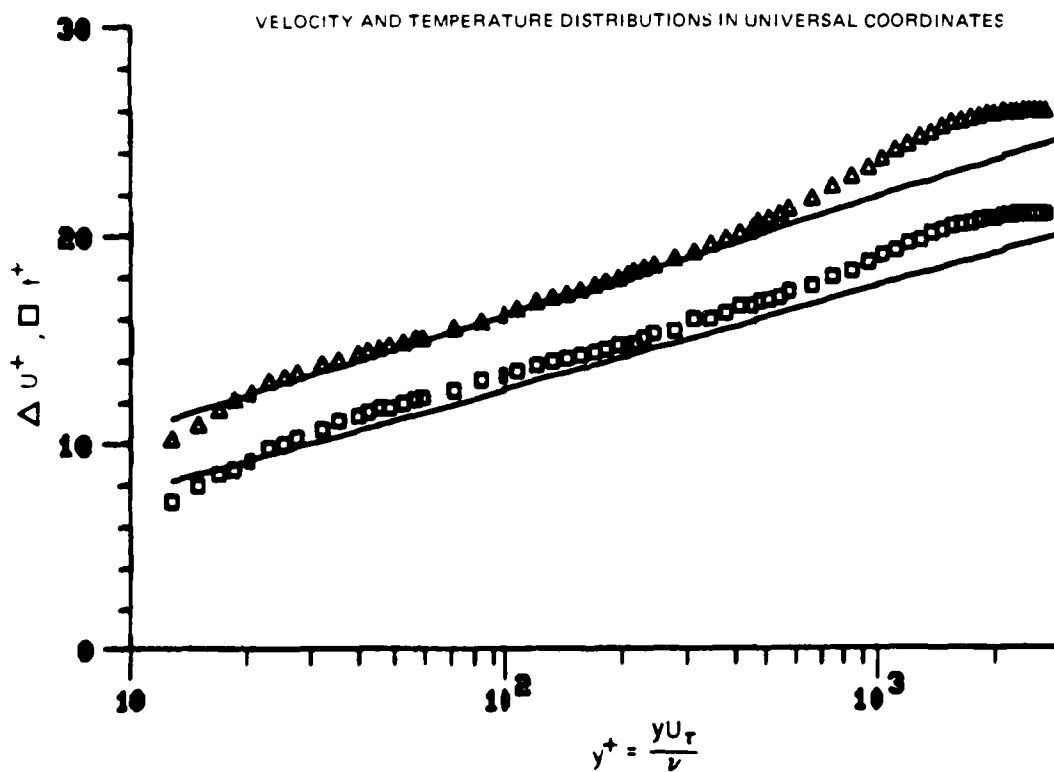
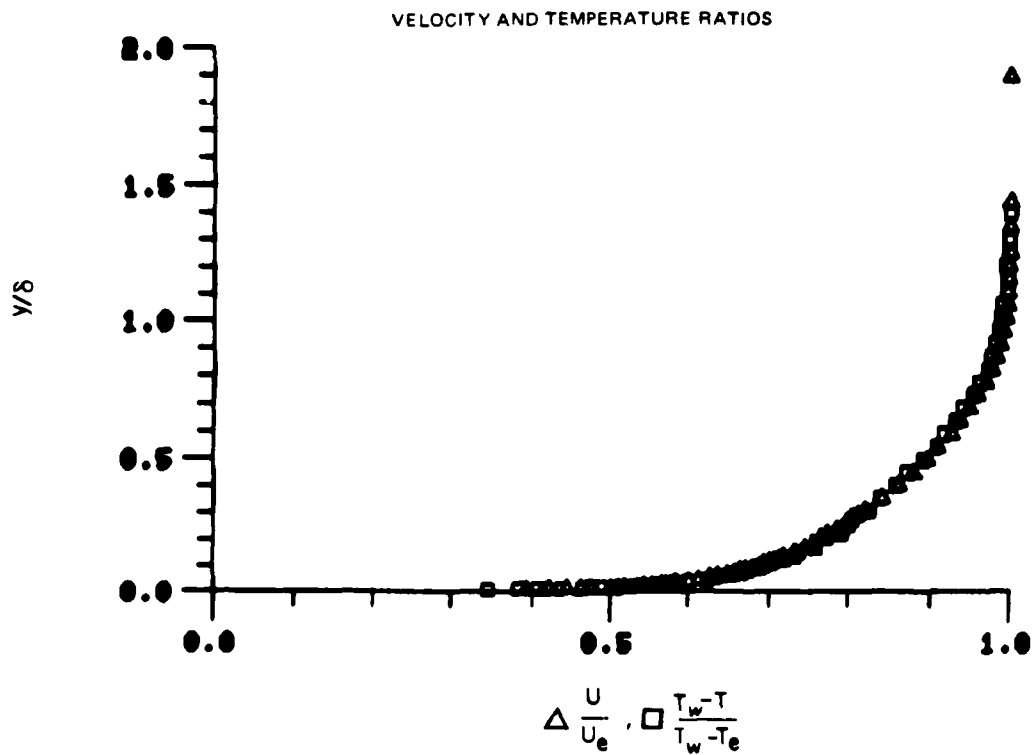


Figure 43. Boundary Layer Velocity and Temperature Profiles
Run No.7 Point No.17

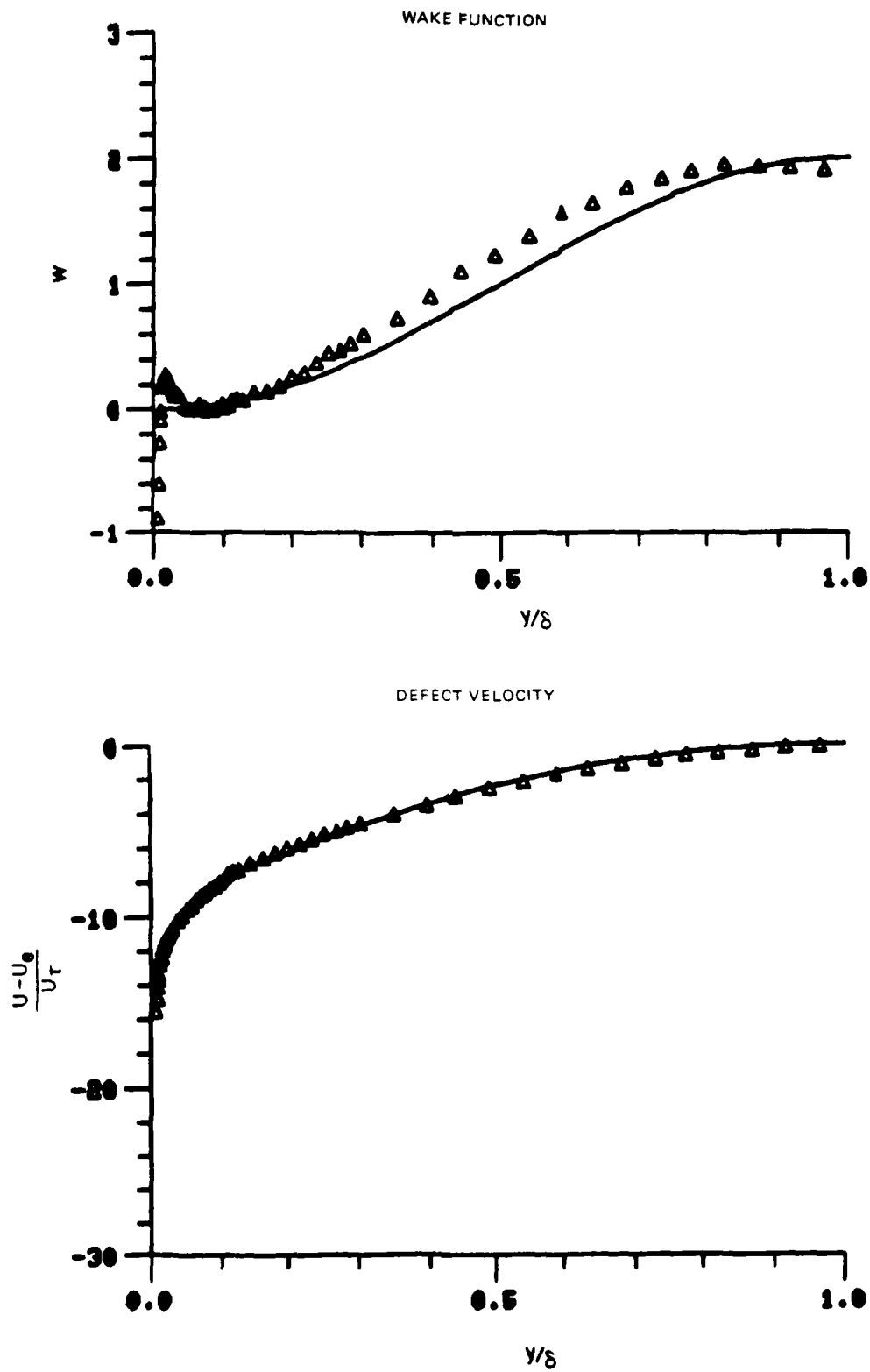


Figure 43. Boundary Layer Velocity Profiles
Run No.7 Point No.17

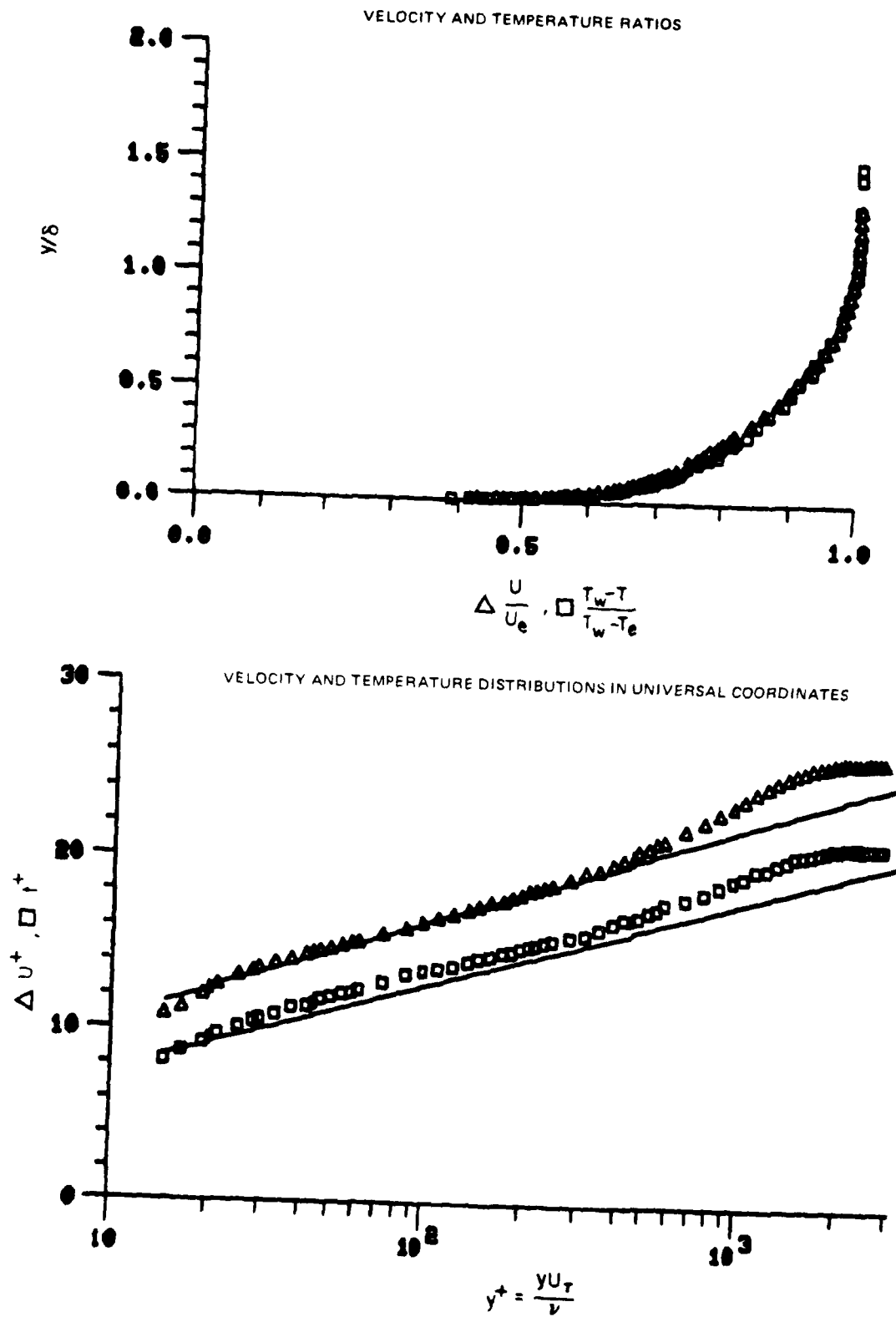


Figure 44. Boundary Layer Velocity and Temperature Profiles
Run No. 7 Point No. 18

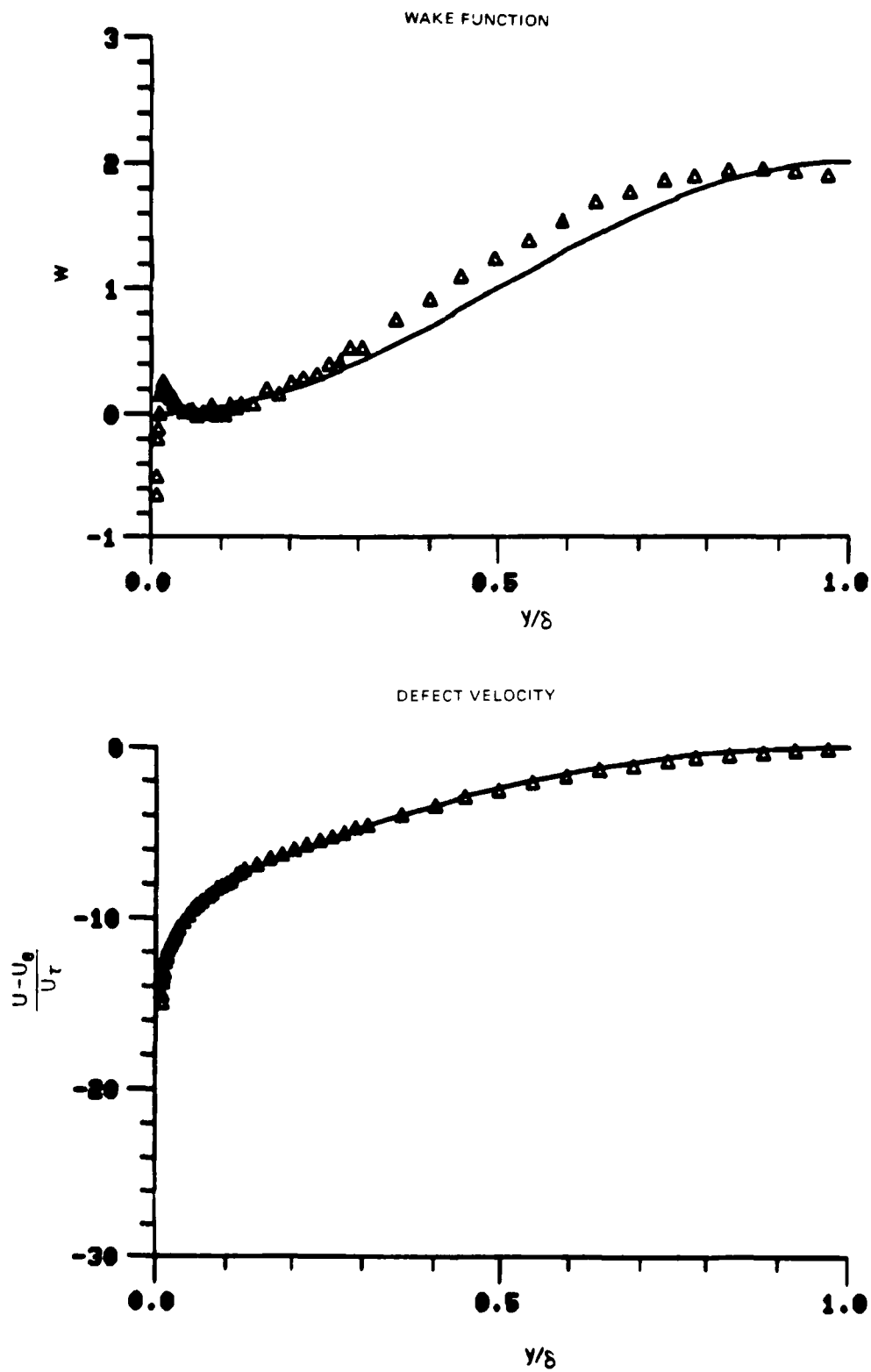


Figure 44. Boundary Layer Velocity Profiles
Run No. 7 Point No. 18

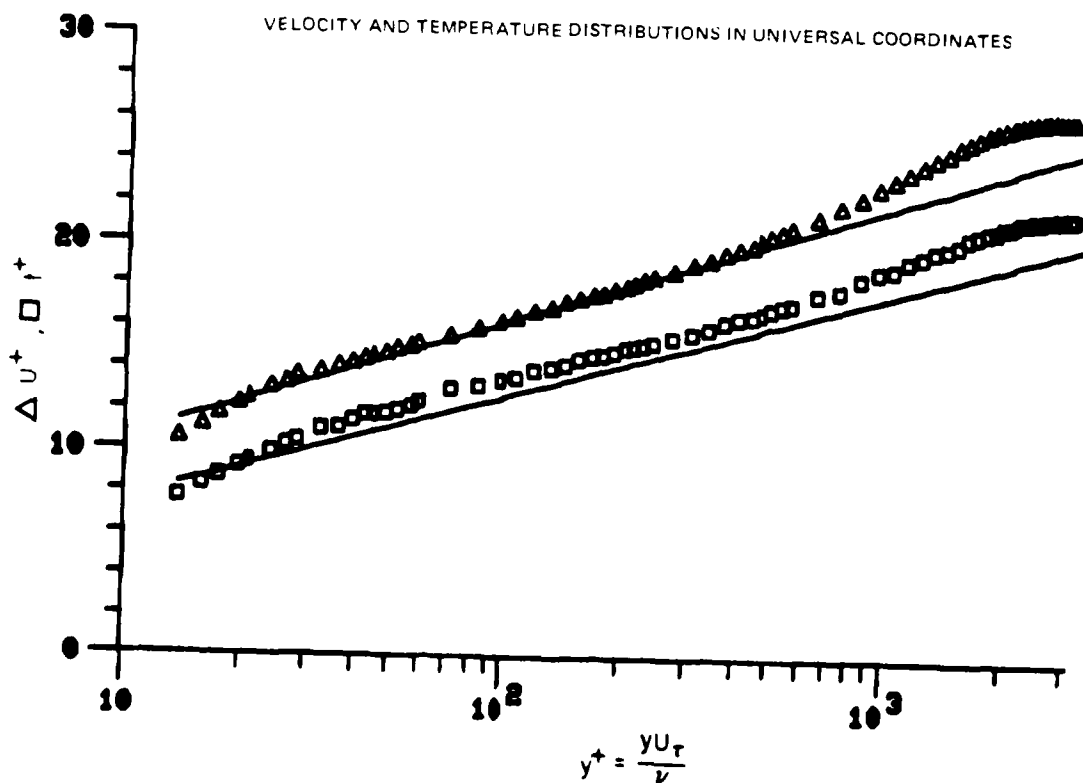
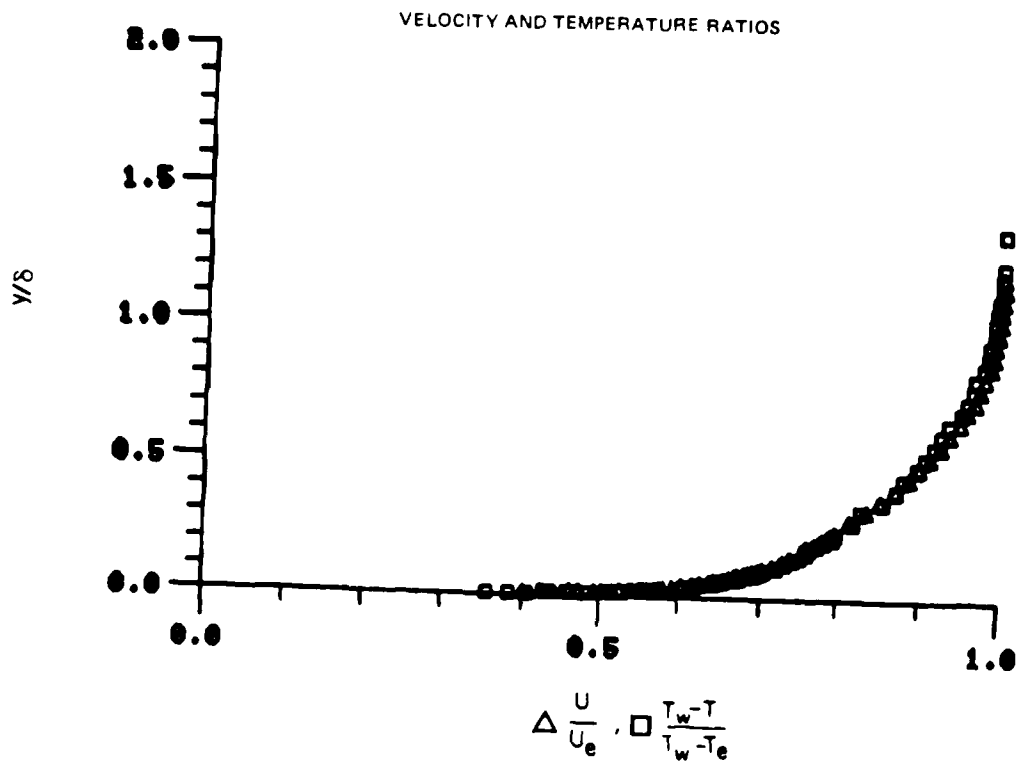


Figure 45. Boundary Layer Velocity and Temperature Profiles
Run No. 7 Point No. 20

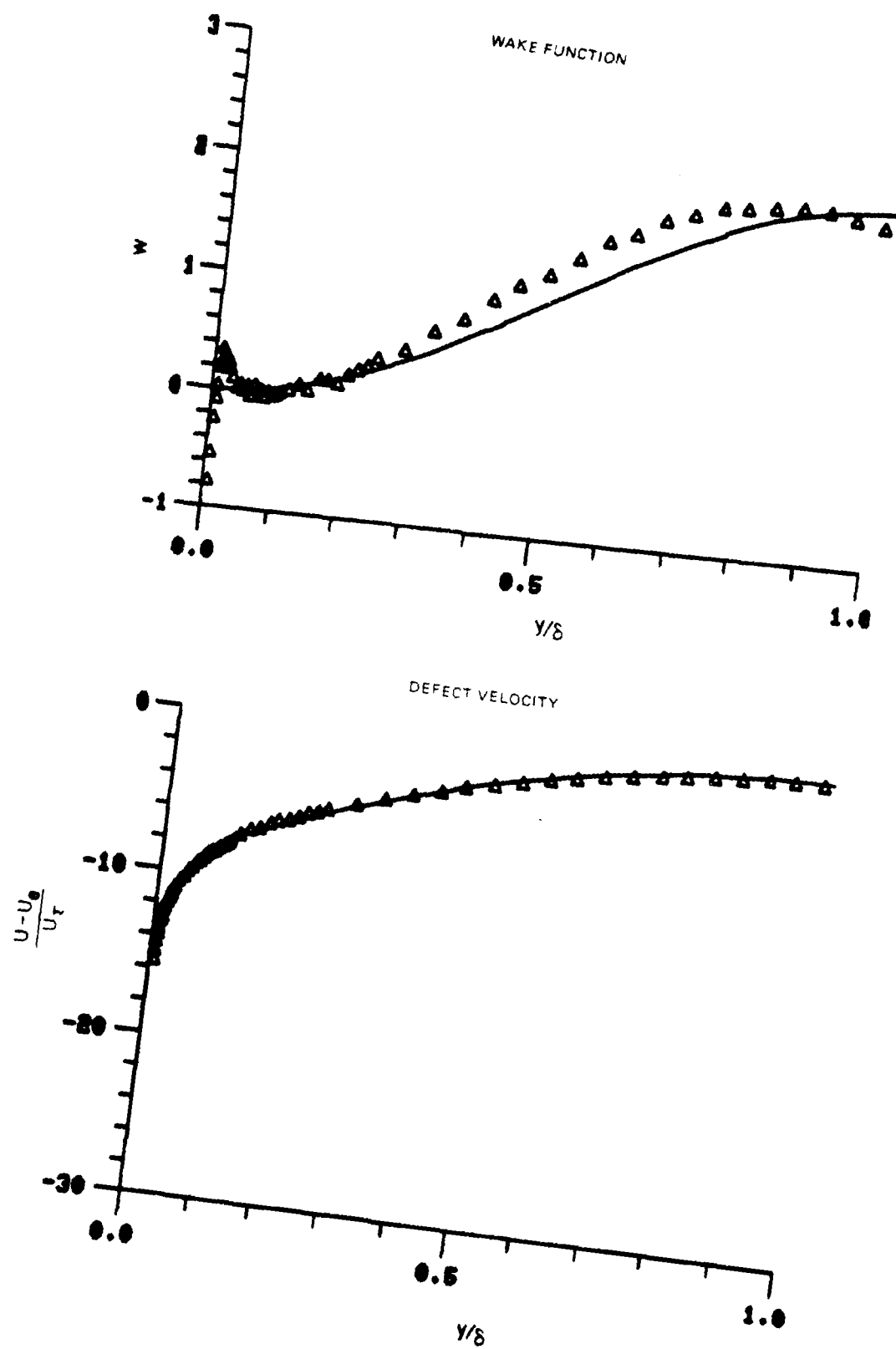


Figure 45. Boundary Layer Velocity Profiles
Run No. 7 Point No. 20

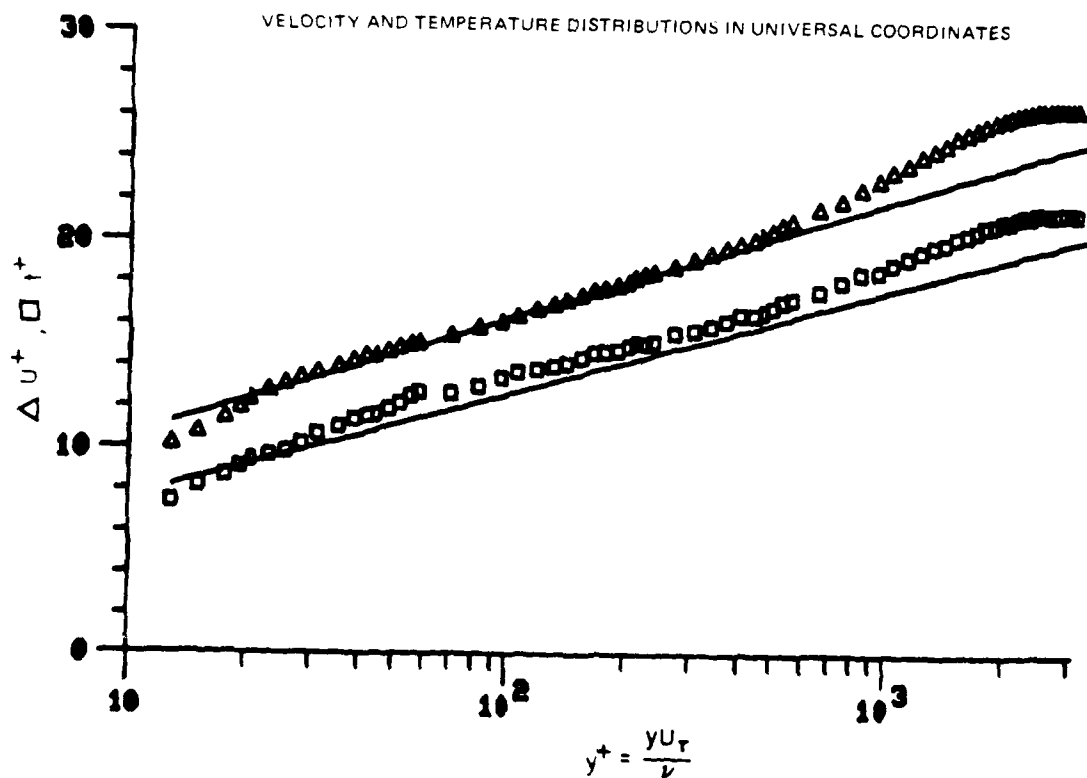
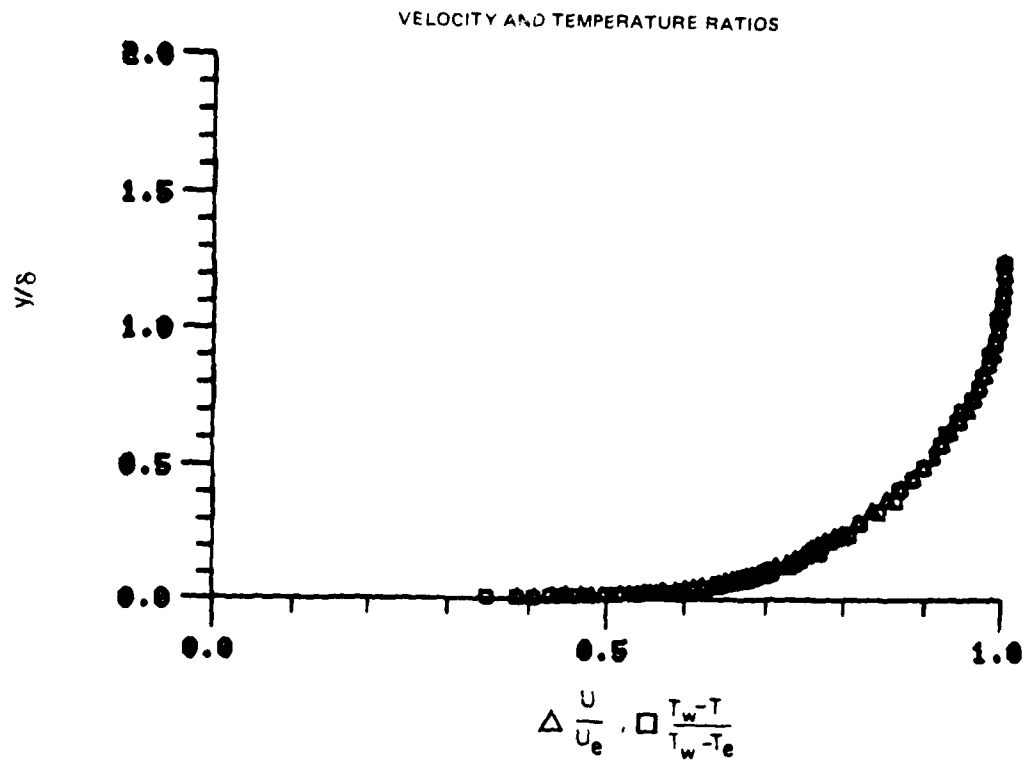


Figure 46. Boundary Layer Velocity and Temperature Profiles
Run No. 7 Point No. 22

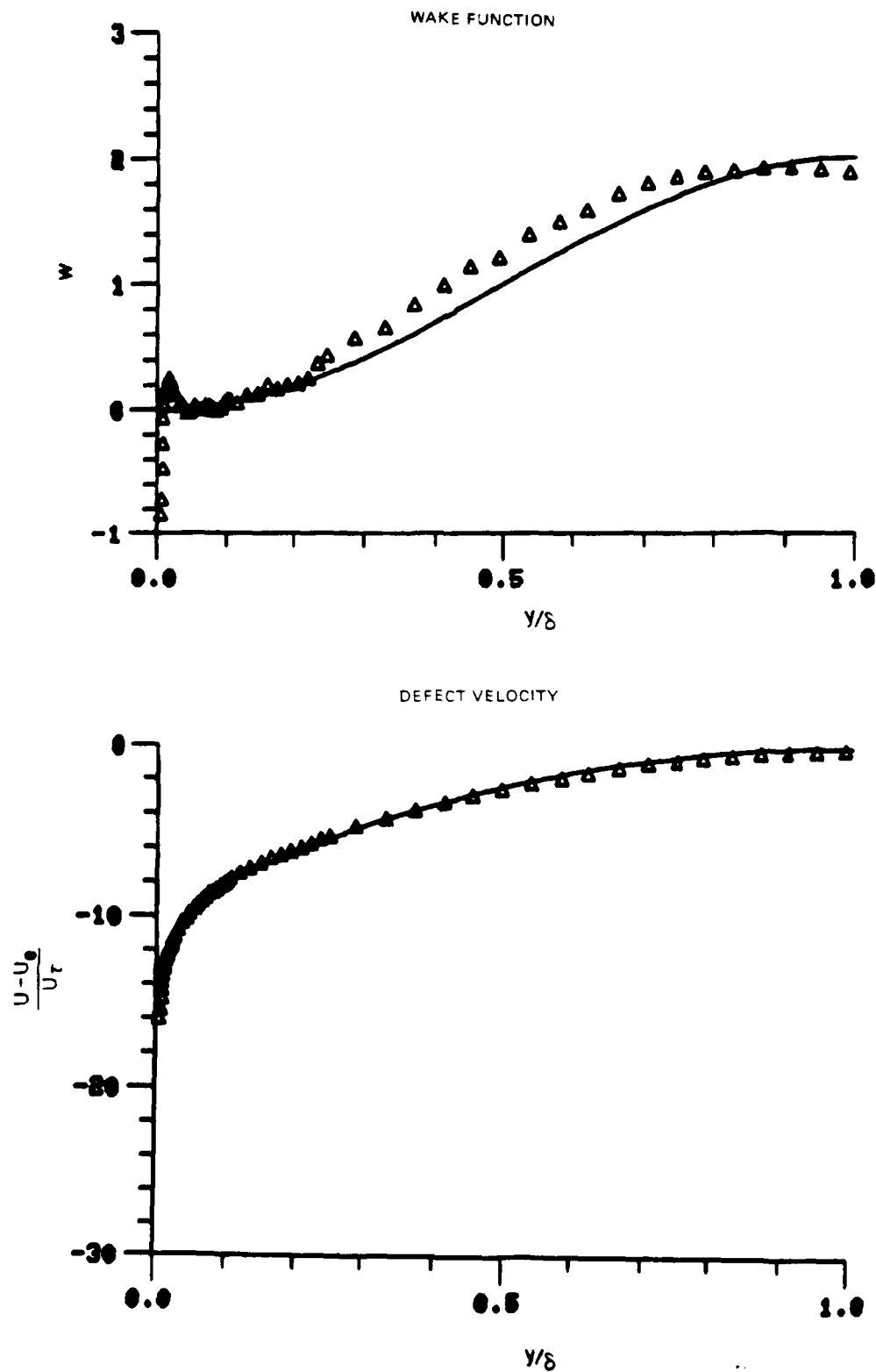


Figure 46. Boundary Layer Velocity Profiles
Run No. 7 Point No. 22

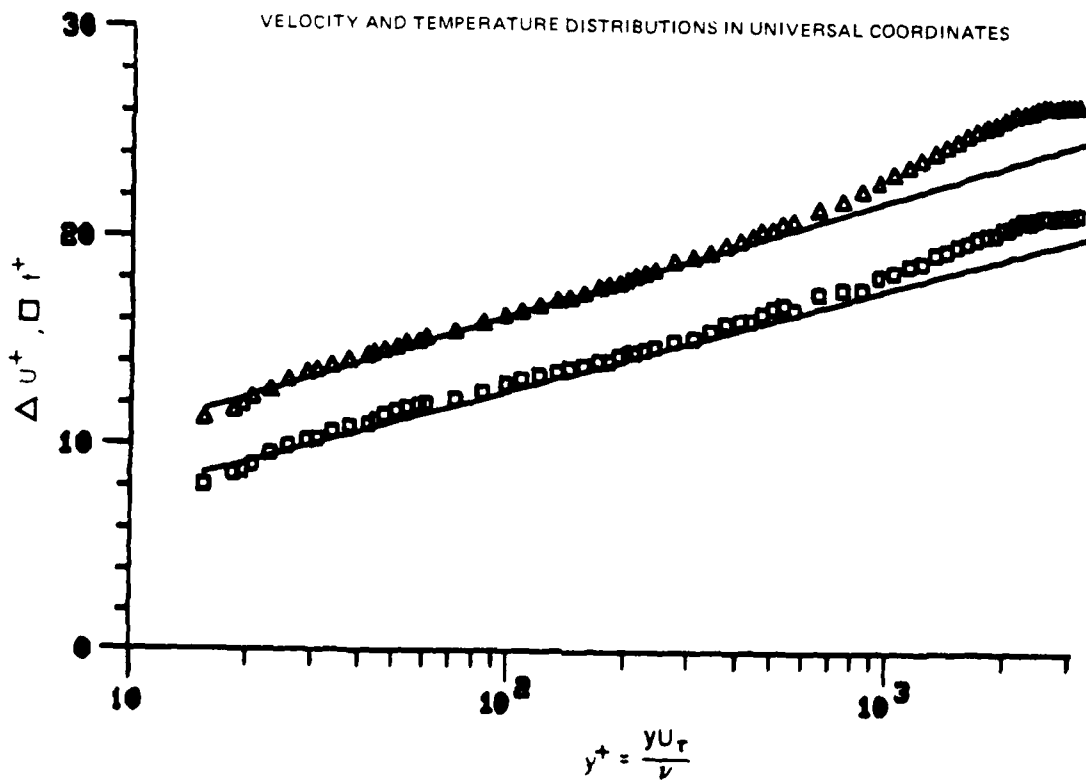
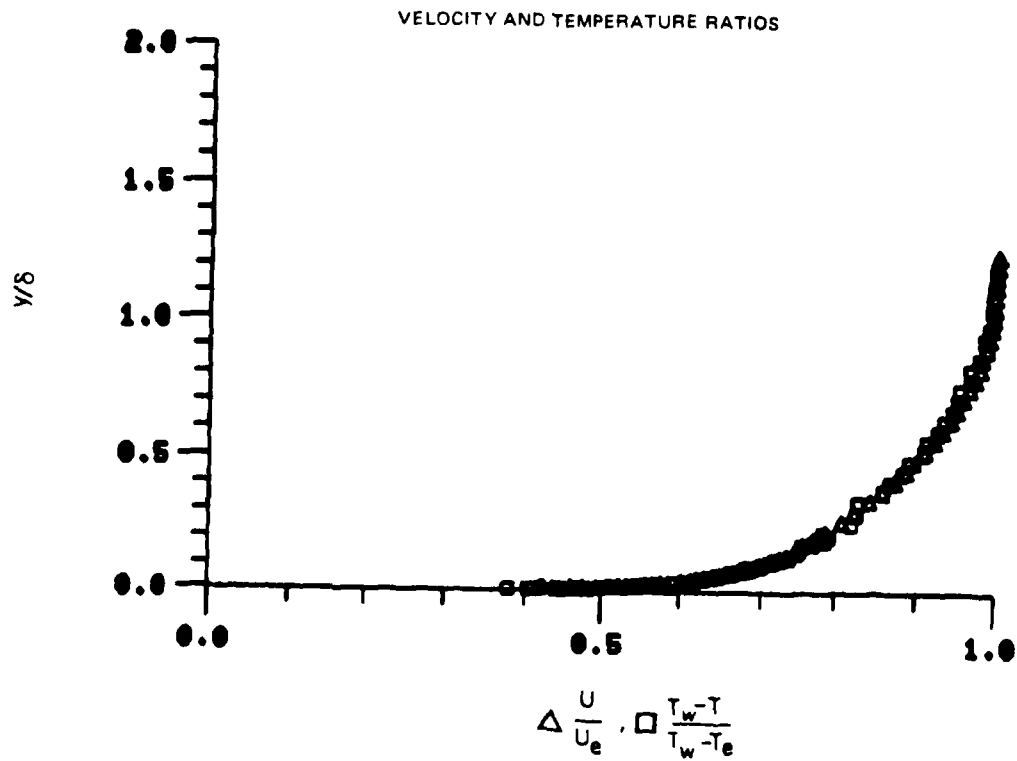


Figure 47. Boundary Layer Velocity and Temperature Profiles
Run No. 7 Point No. 23

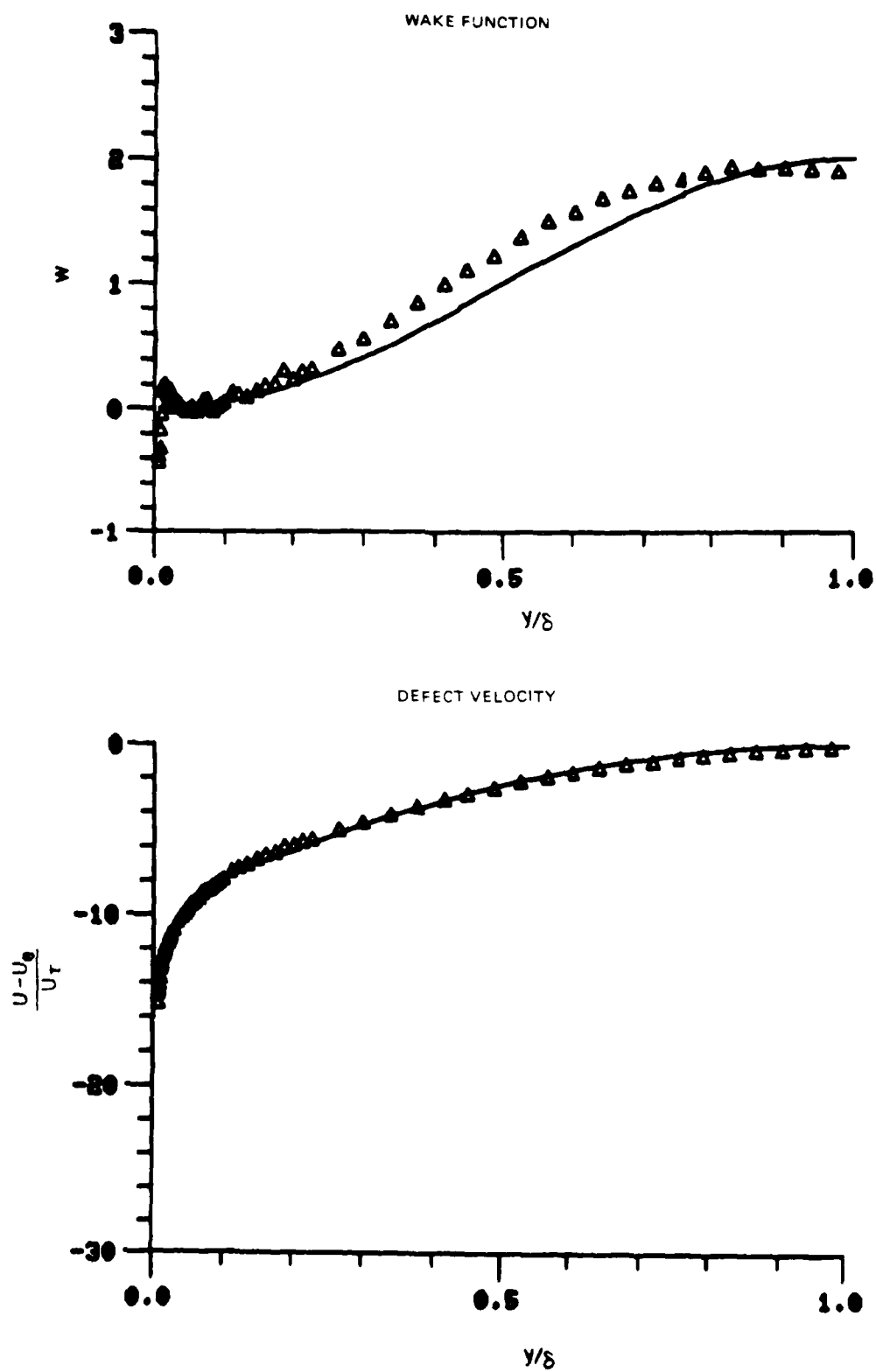


Figure 47. Boundary Layer Velocity Profiles
Run No. 7 Point No. 23

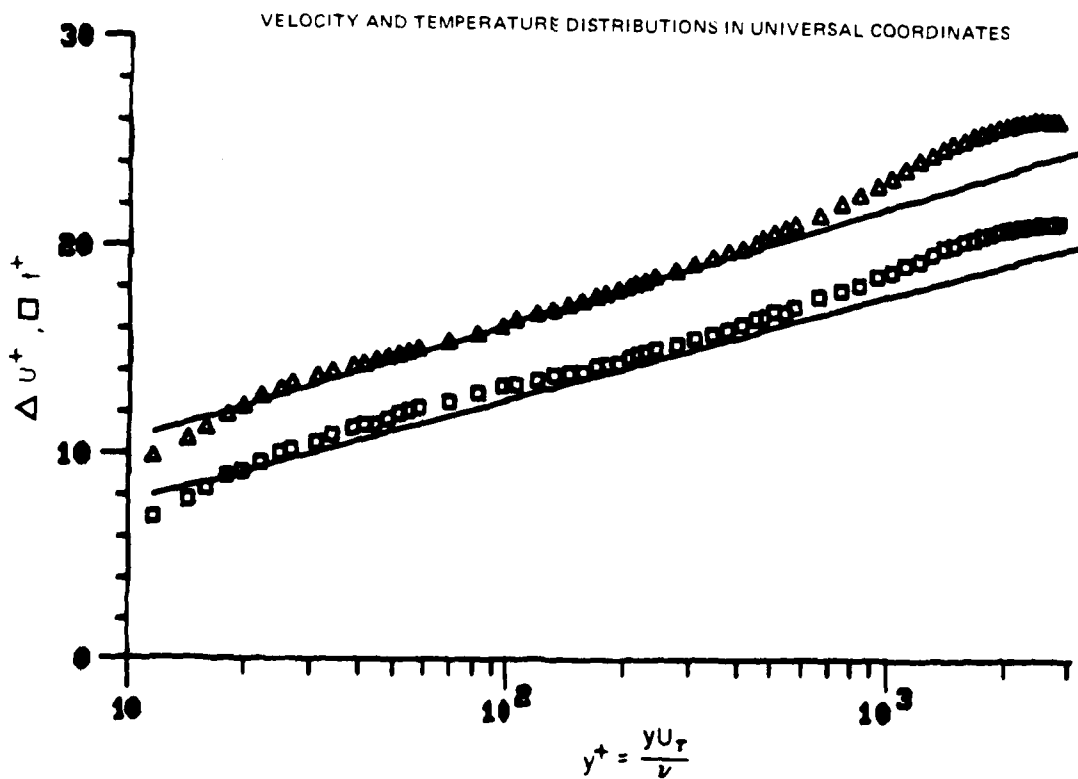
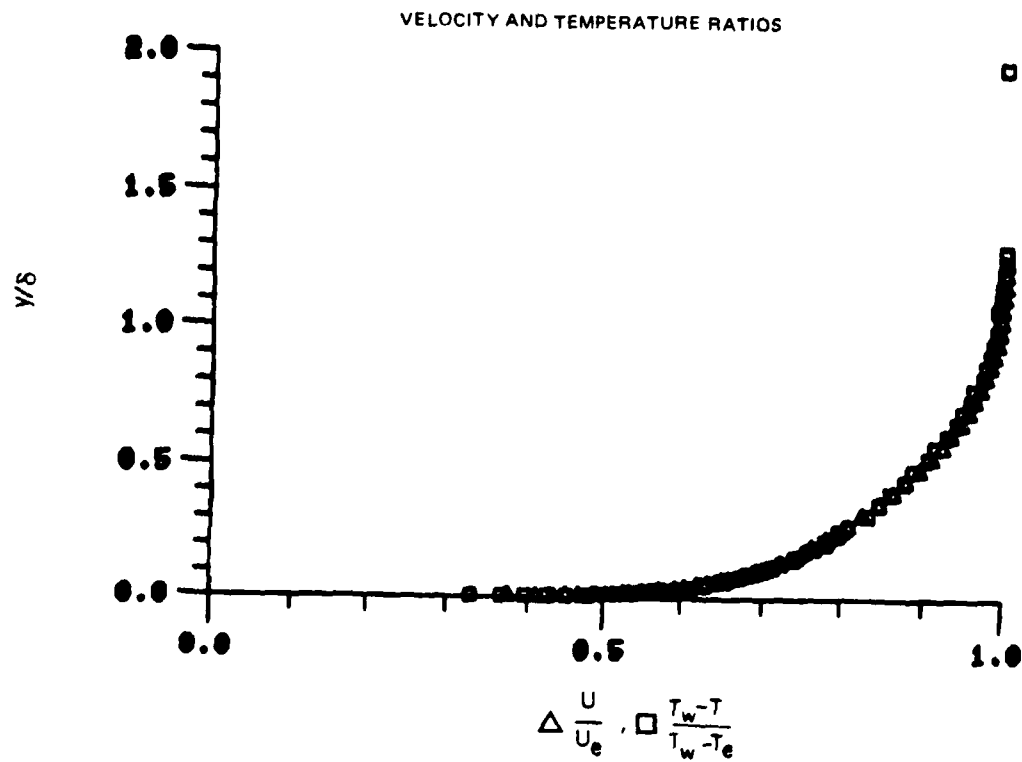


Figure 48. Boundary Layer Velocity and Temperature Profiles
Run No. 7 Point No. 24

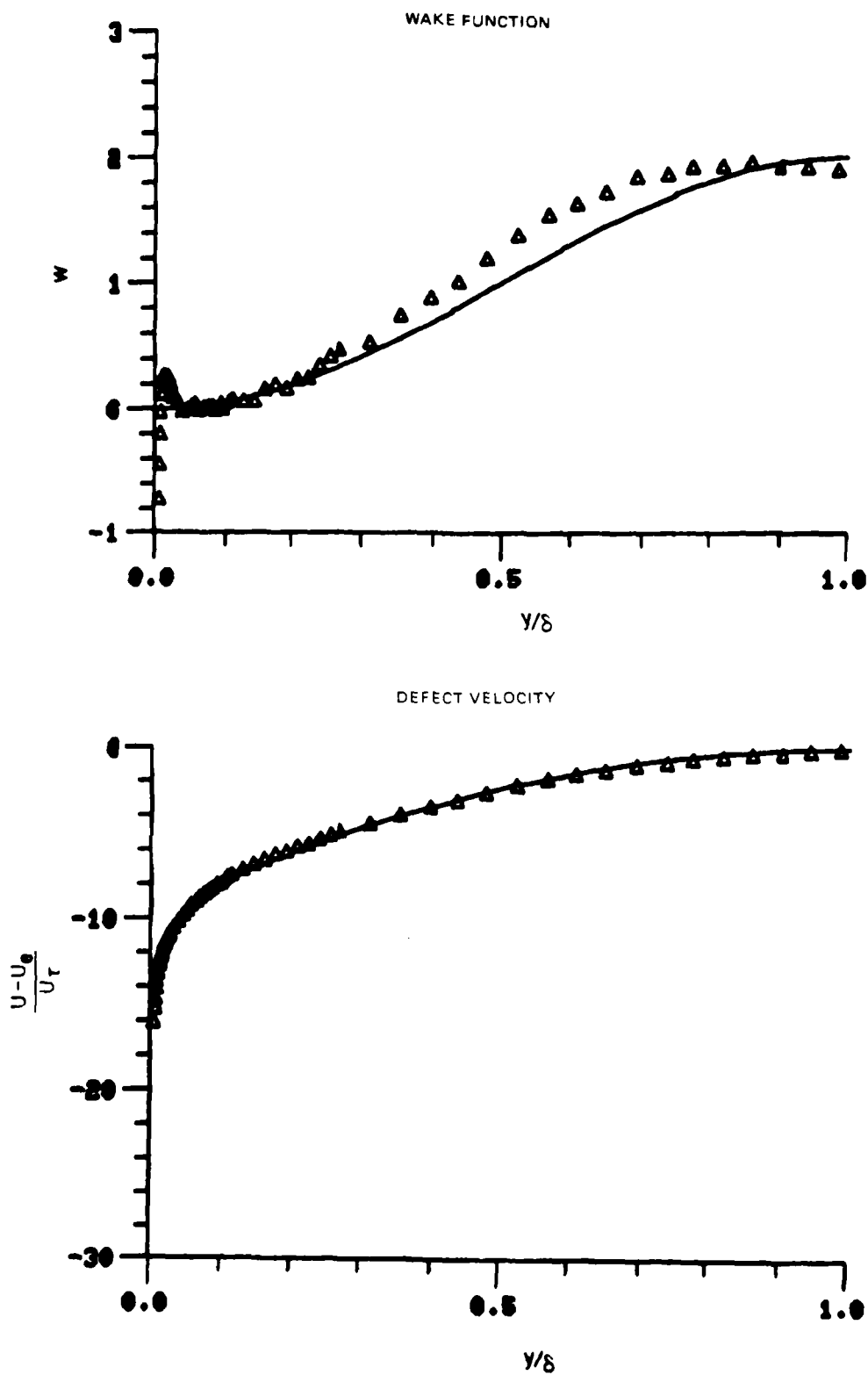


Figure 48. Boundary Layer Velocity Profiles
Run No. 7 Point No. 24

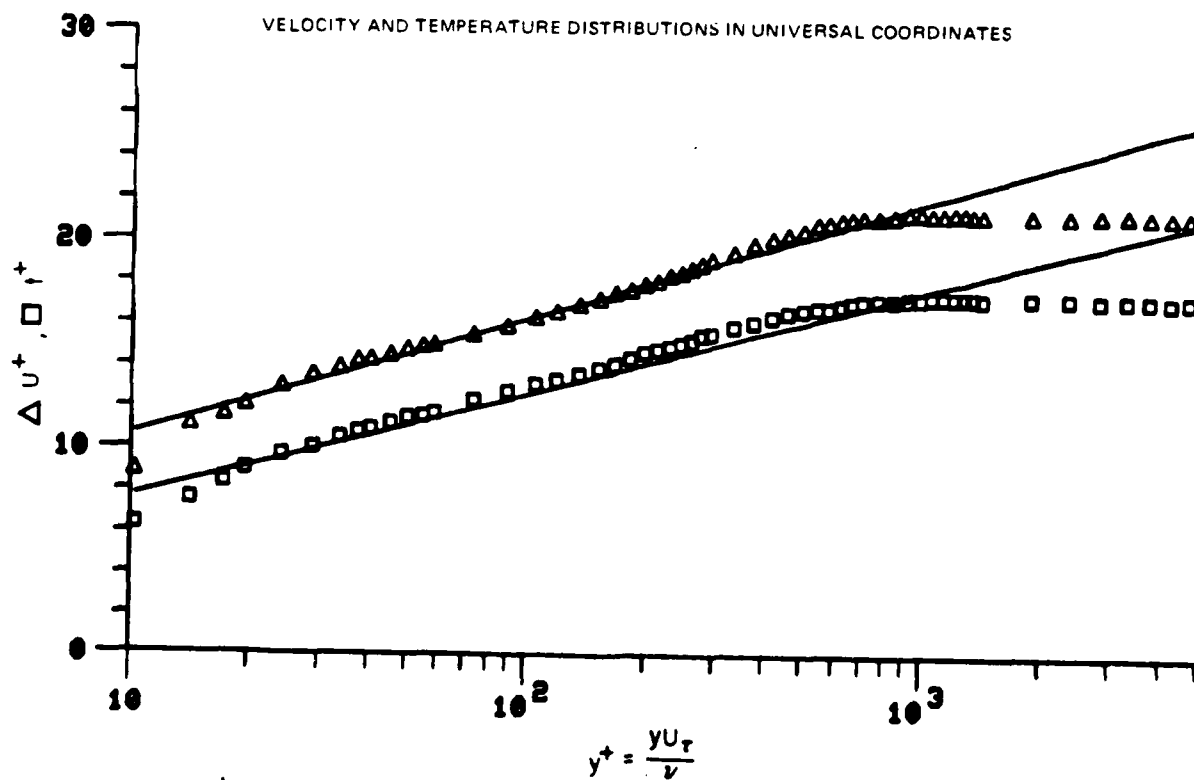
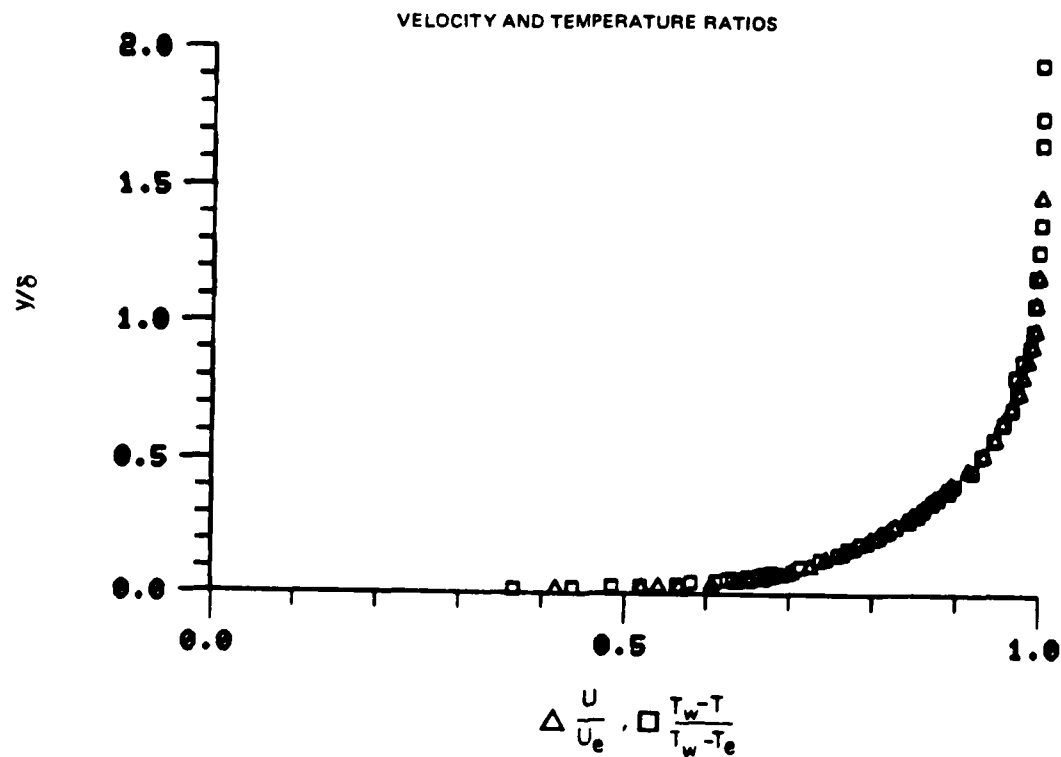


Figure 49. Boundary Layer Velocity and Temperature Profiles
Run No. 10 Point No. 1

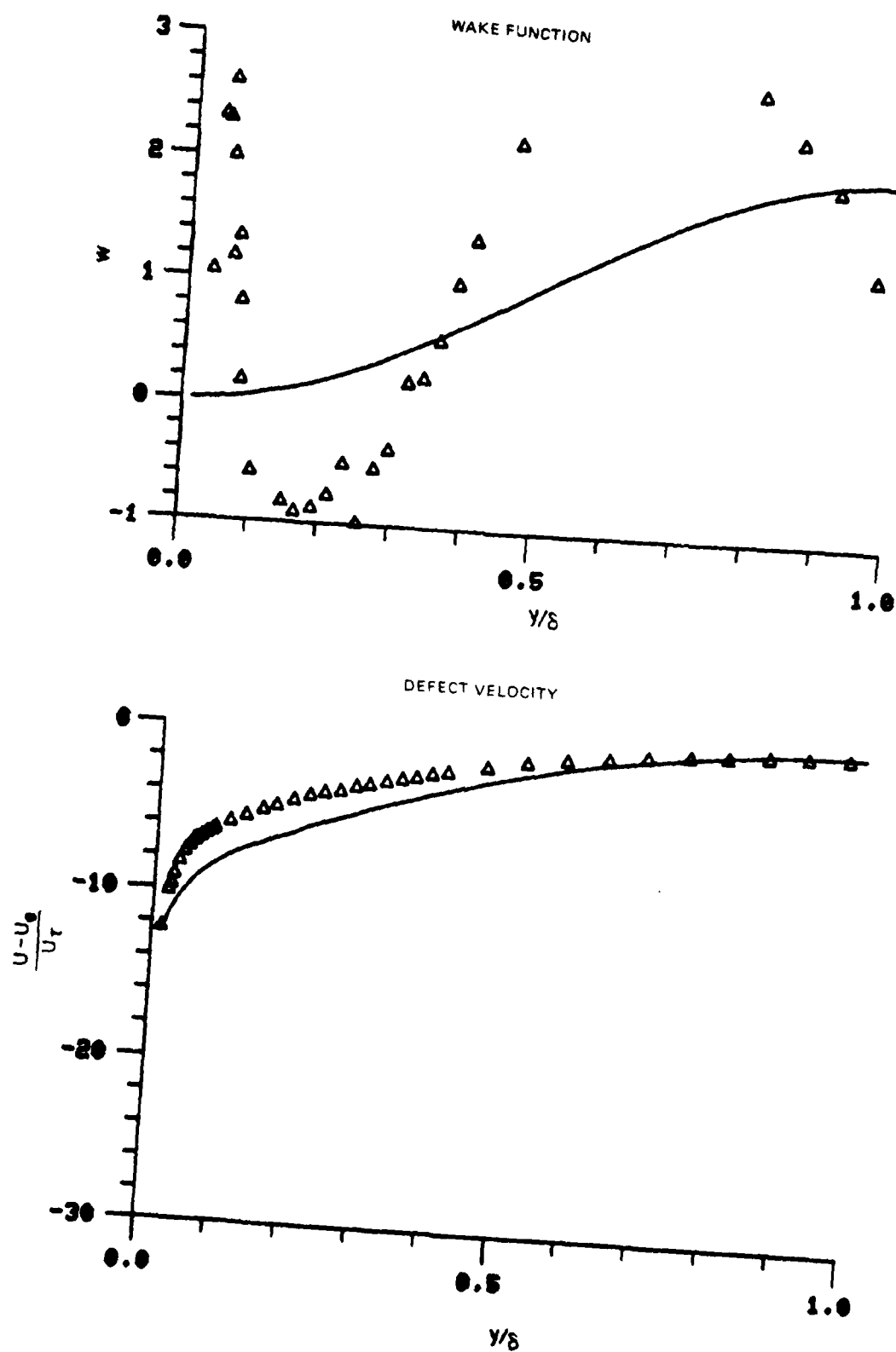


Figure 49. Boundary Layer Velocity Profiles
Run No. 10 Point No. 1

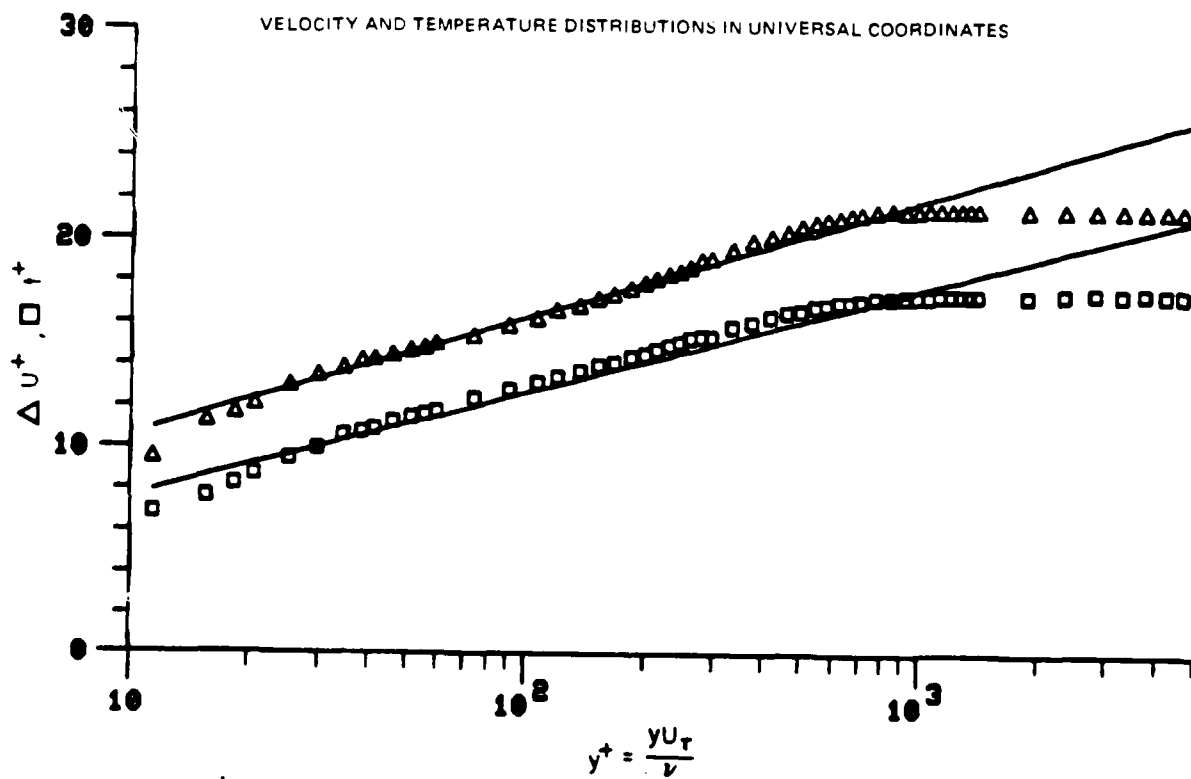
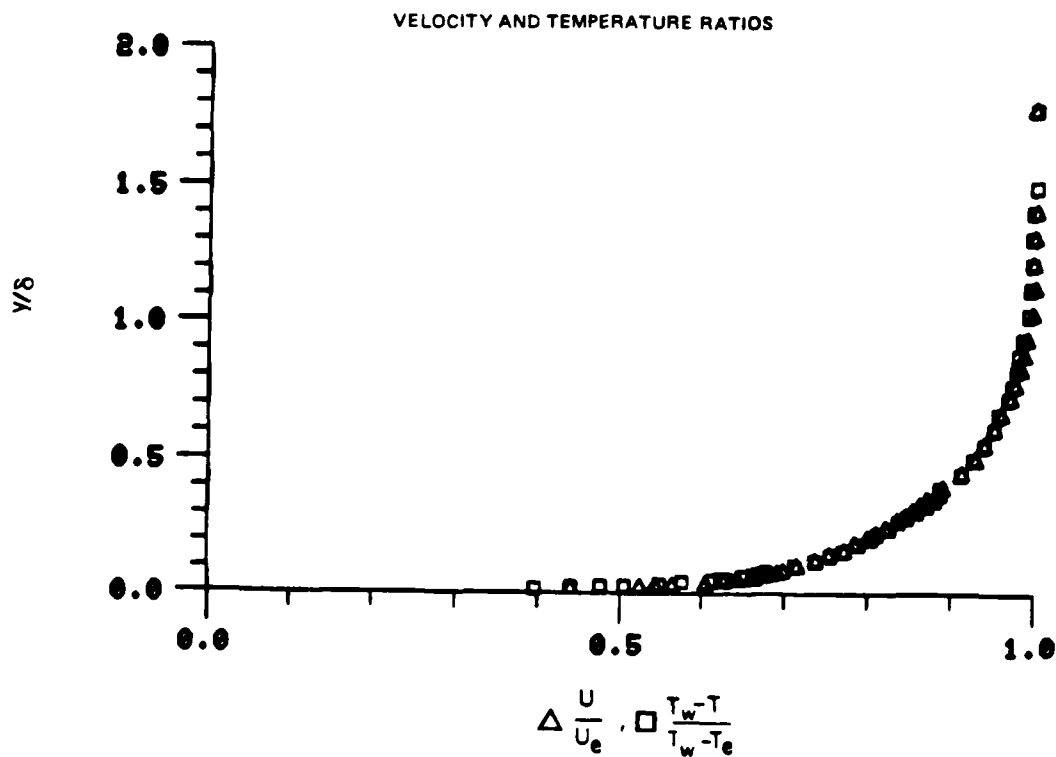


Figure 50. Boundary Layer Velocity and Temperature Profiles
Run No. 10 Point No. 2

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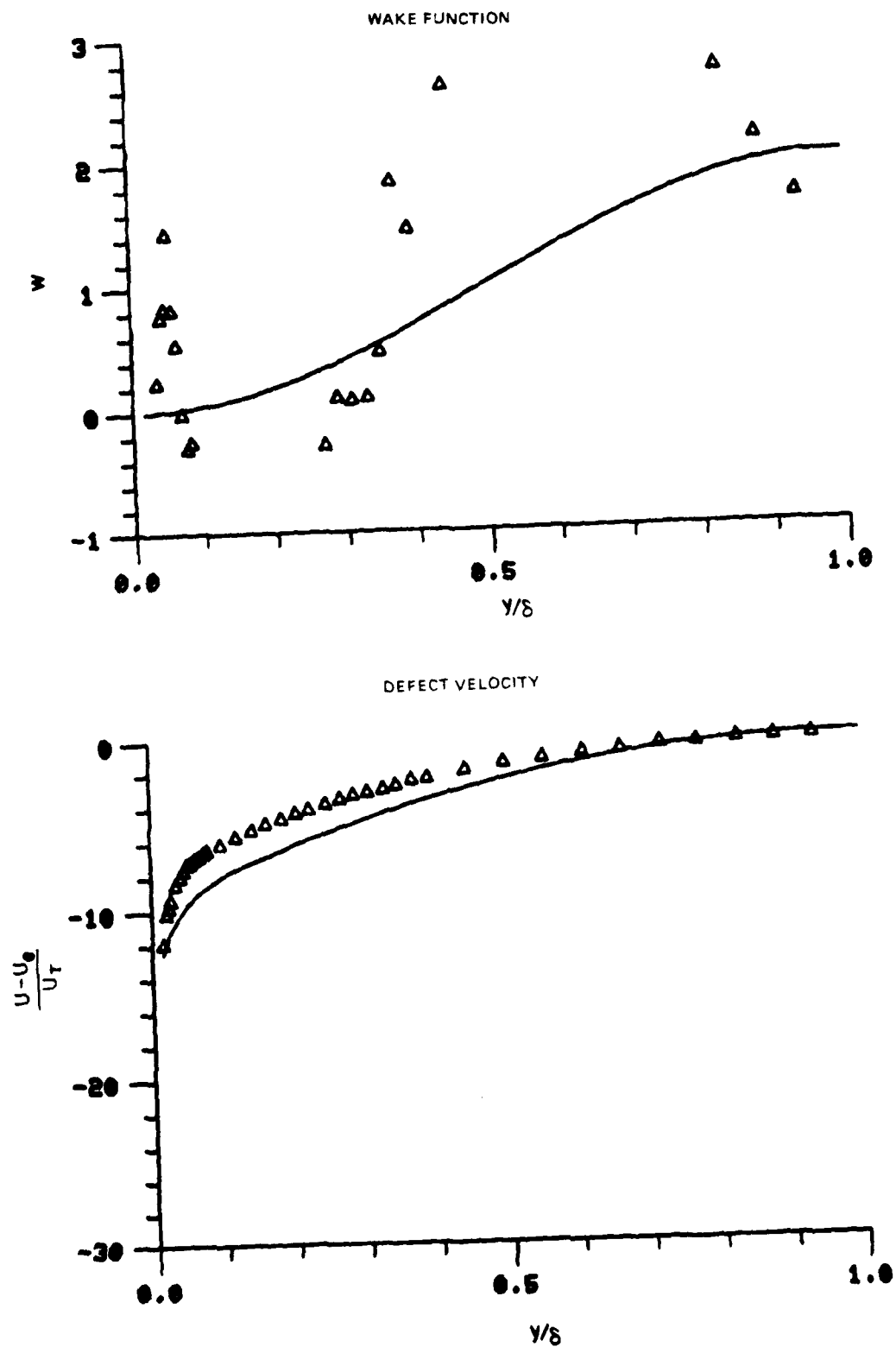


Figure 50. Boundary Layer Velocity Profiles
Run No. 10 Point No. 2

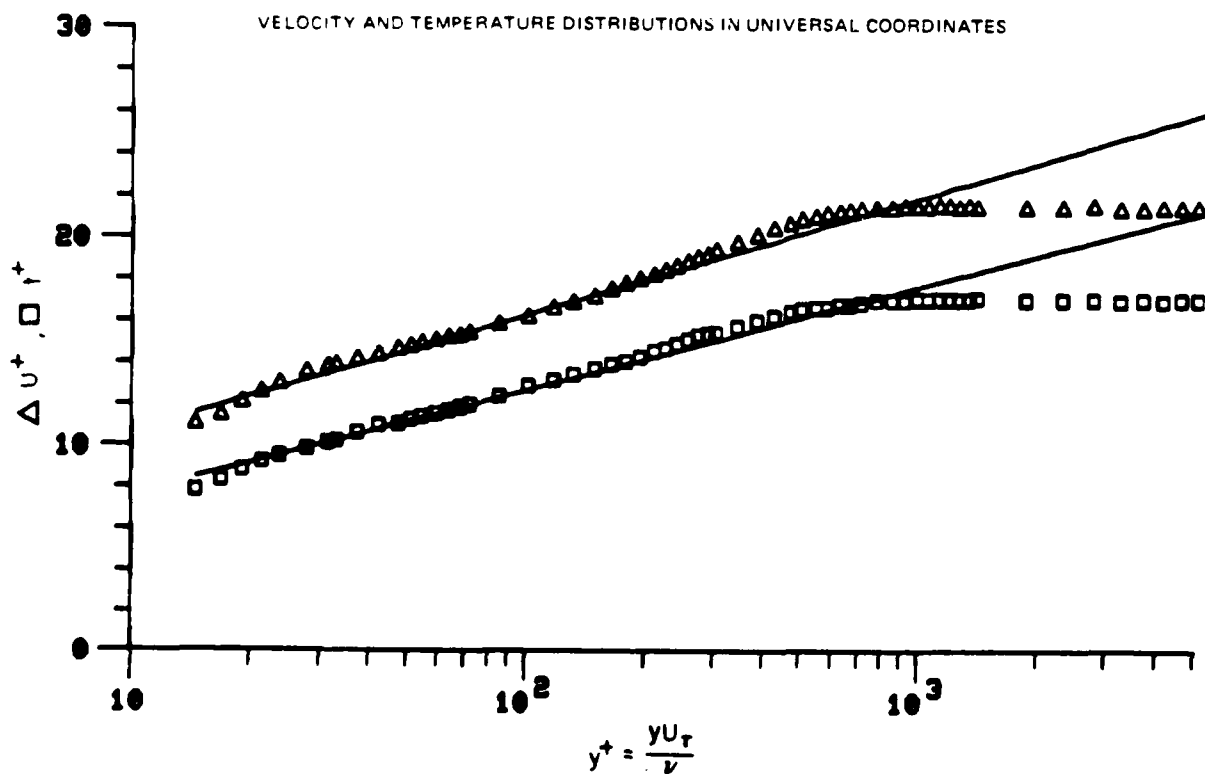
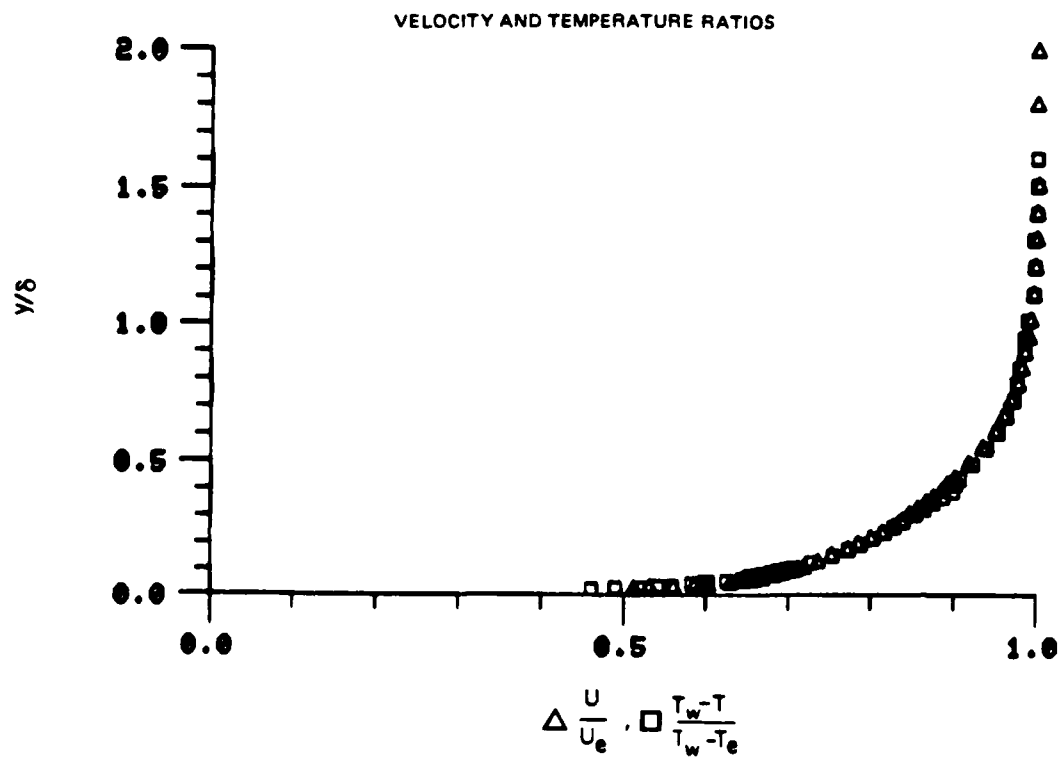


Figure 51. Boundary Layer Velocity and Temperature Profiles
Run No. 10 Point No. 3

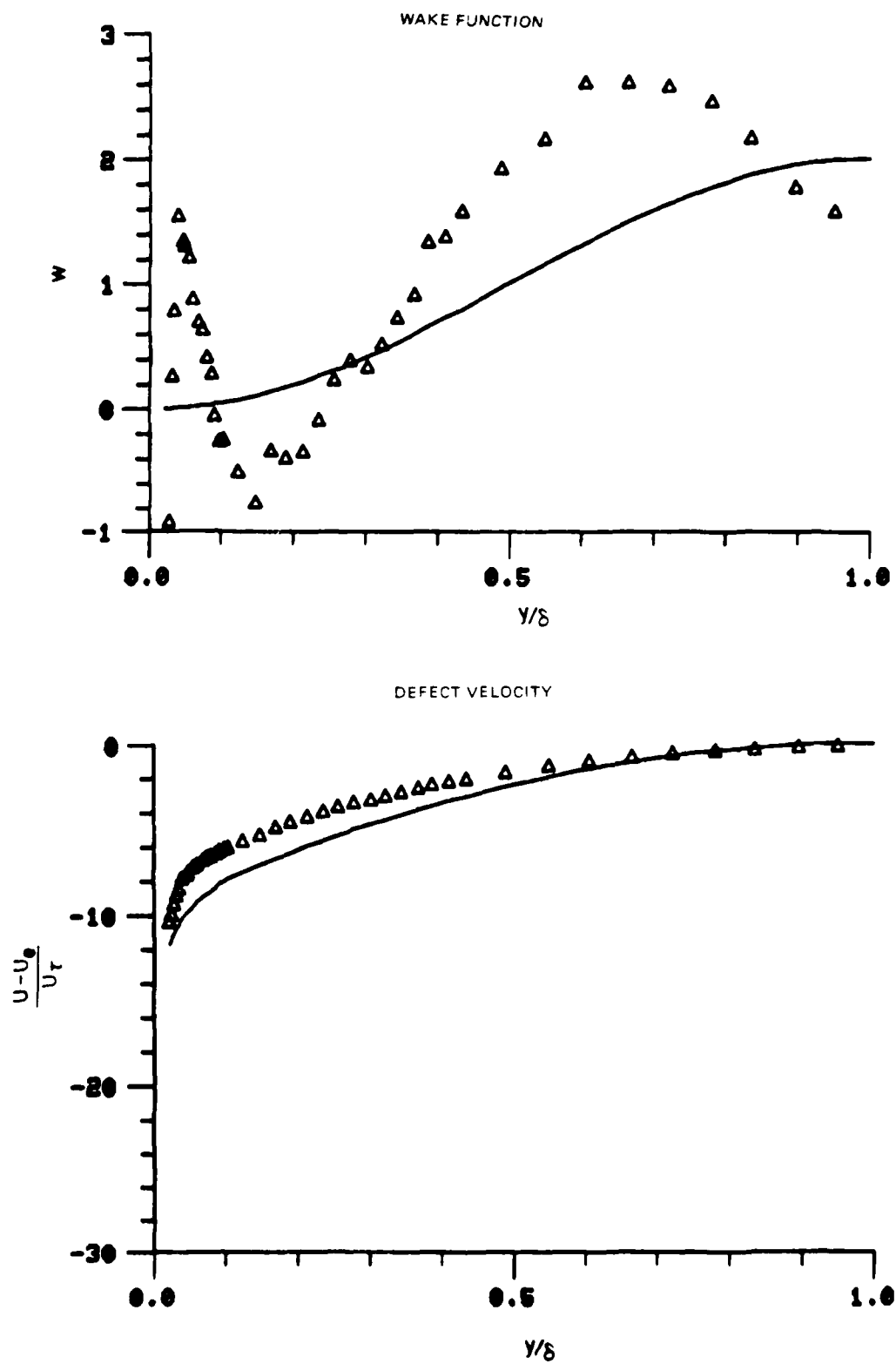


Figure 51. Boundary Layer Velocity Profiles
Run No. 10 Point No. 3

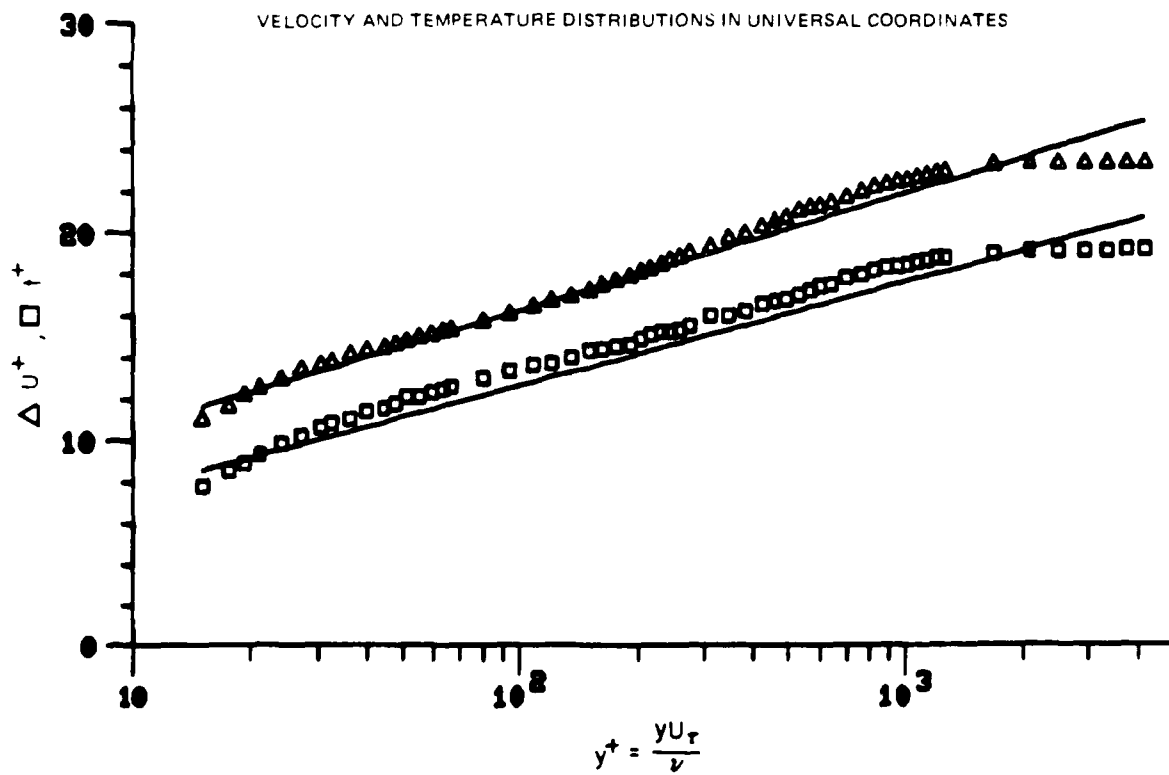
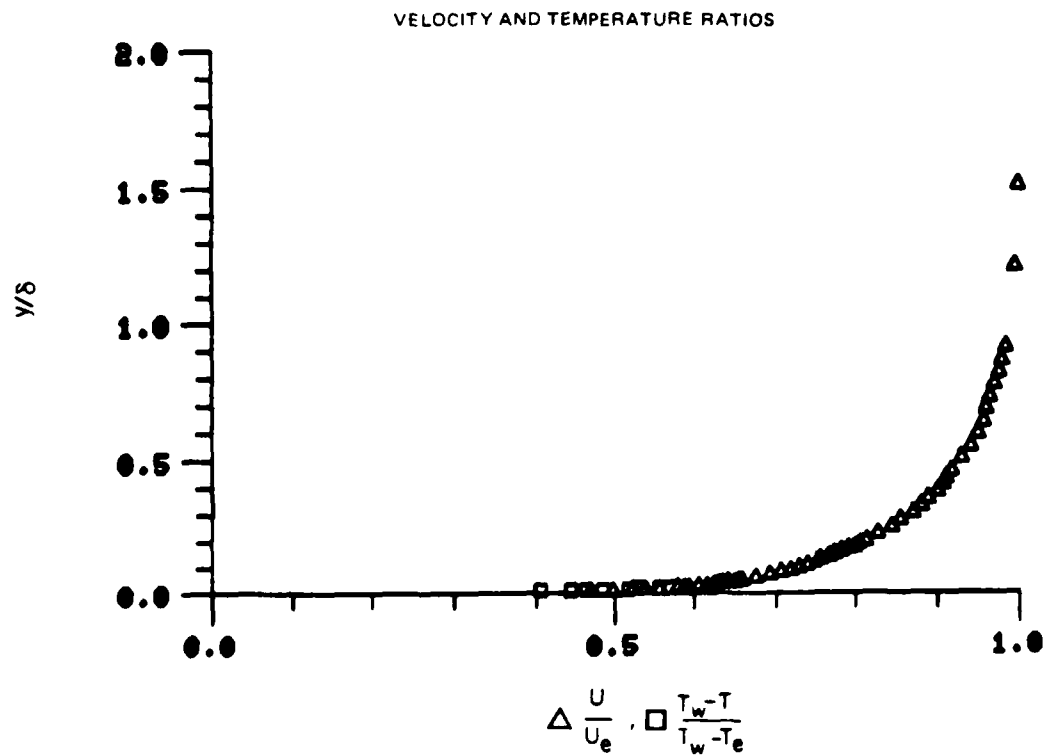


Figure 52. Boundary Layer Velocity and Temperature Profiles
Run No. 6 Point No. 7

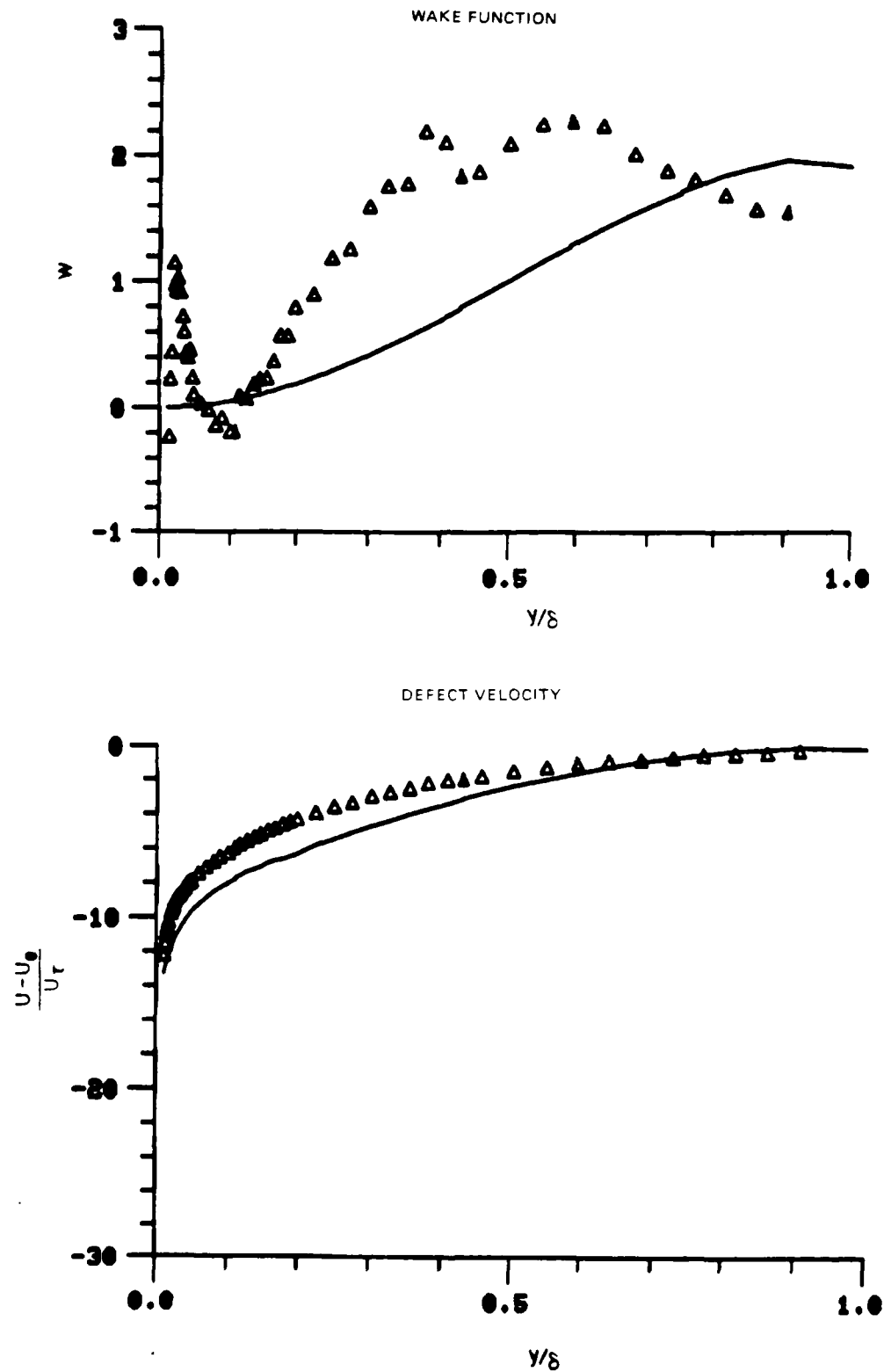
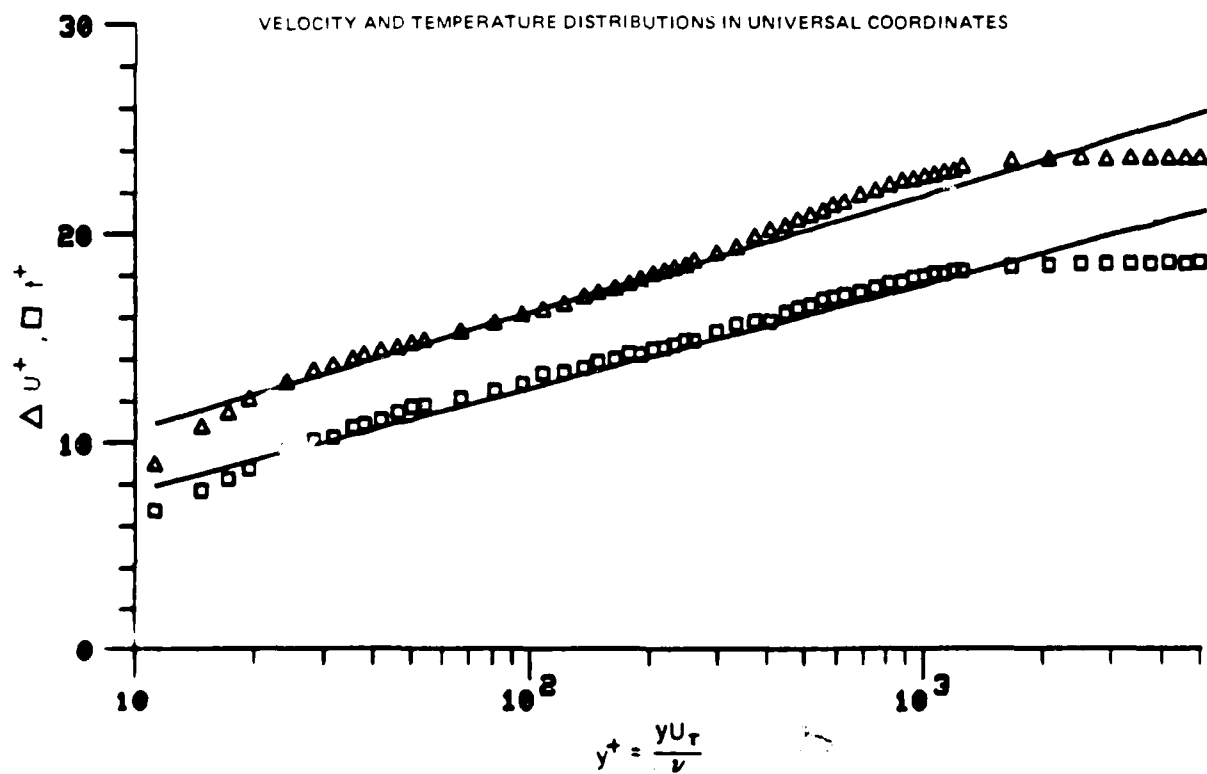
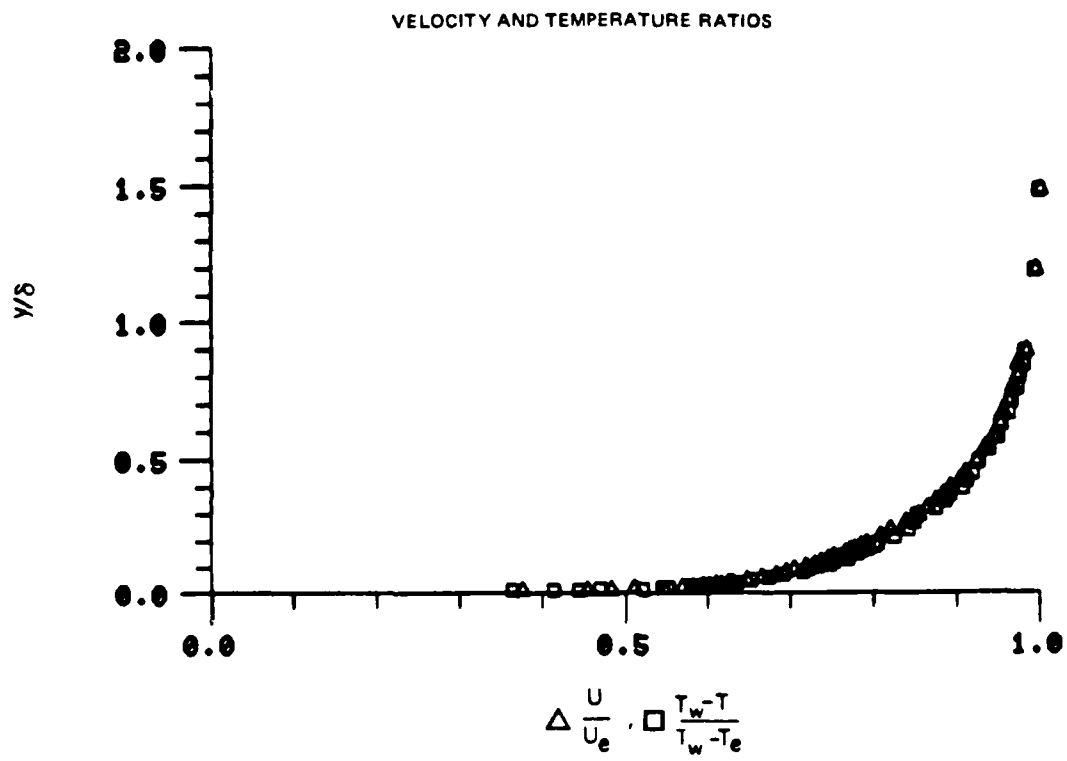


Figure 52. Boundary Layer Velocity Profiles
Run No. 6 Point No. 7



Boundary Layer Velocity and Temperature Profiles

Run No. 10 Point No. 4

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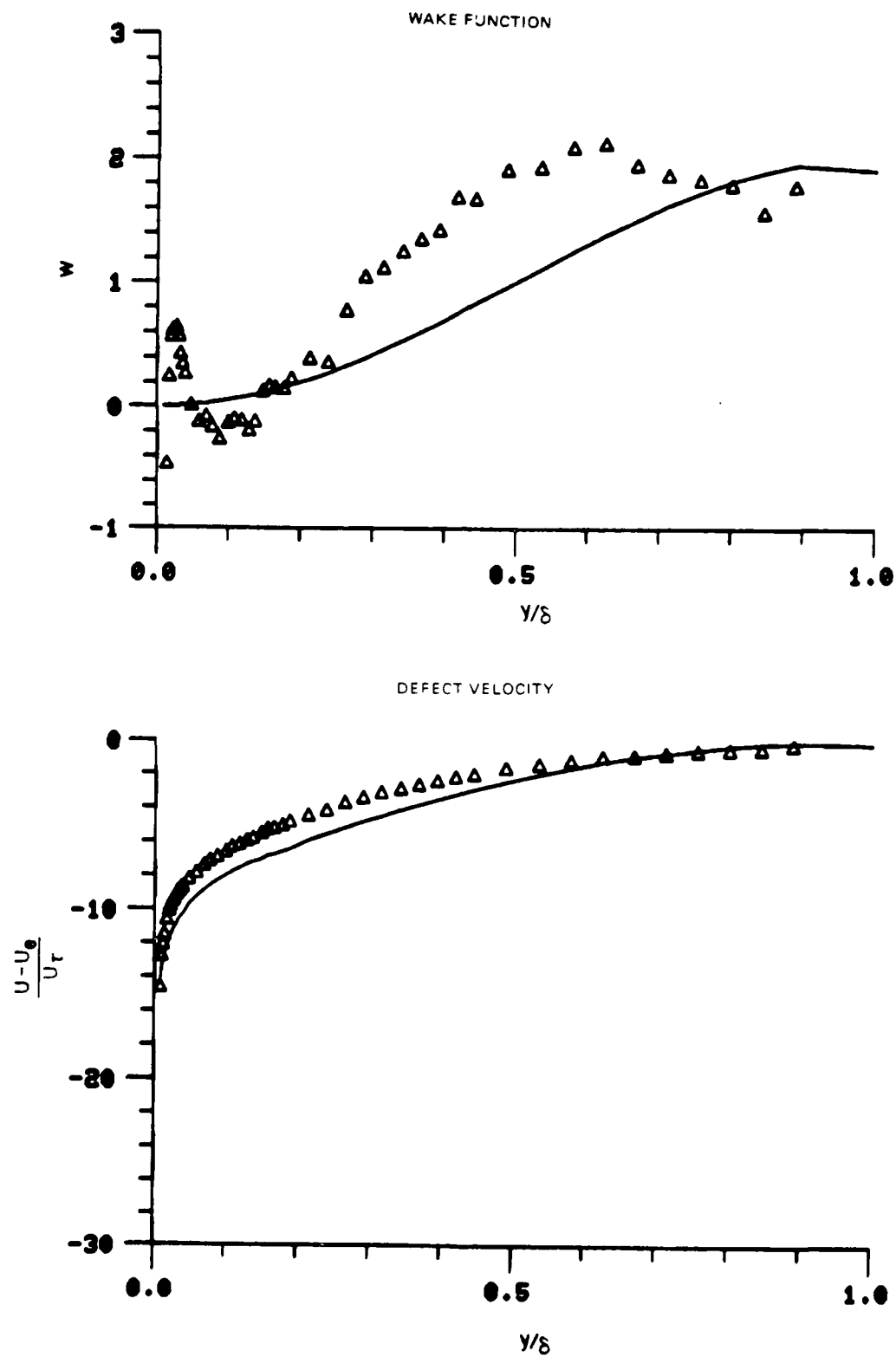


Figure 53. Boundary Layer Velocity Profiles
Run No.10 Point No. 4

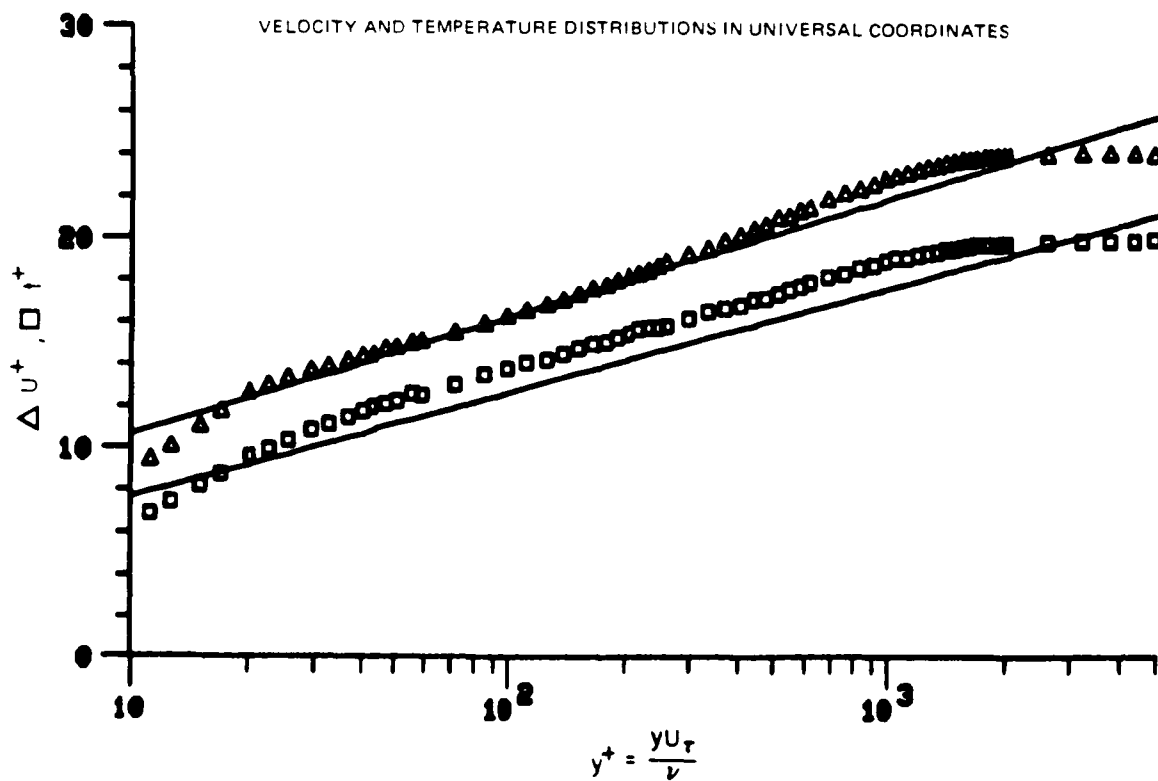
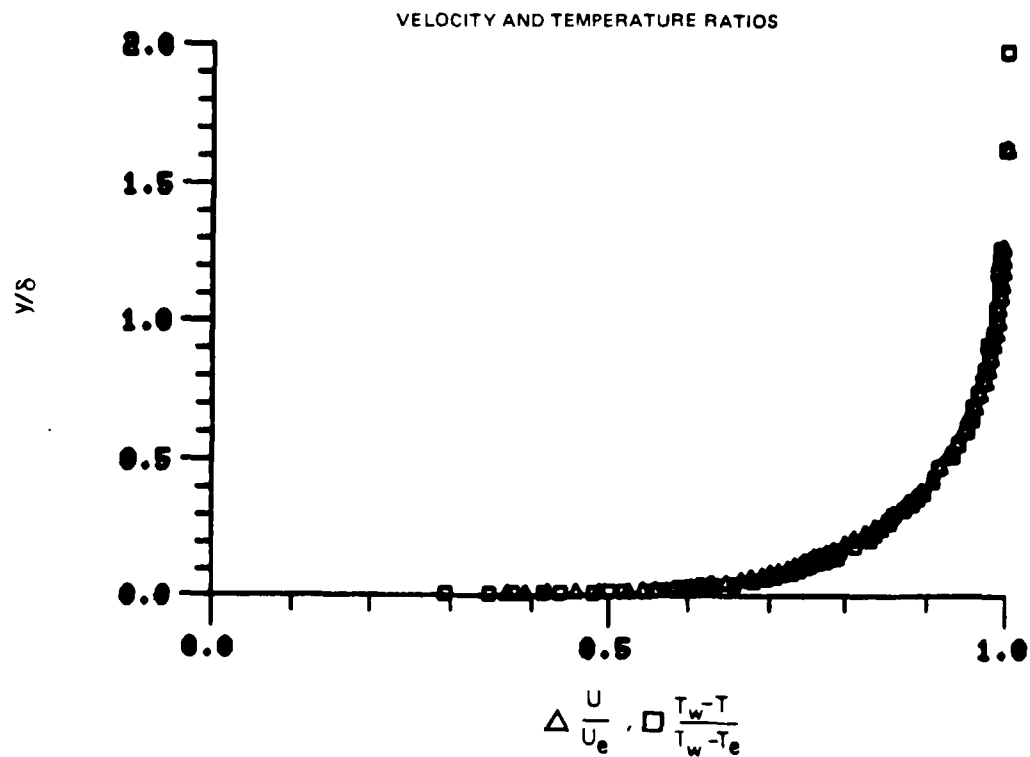


Figure 54. Boundary Layer Velocity and Temperature Profiles
Run No. 6 Point No. 11

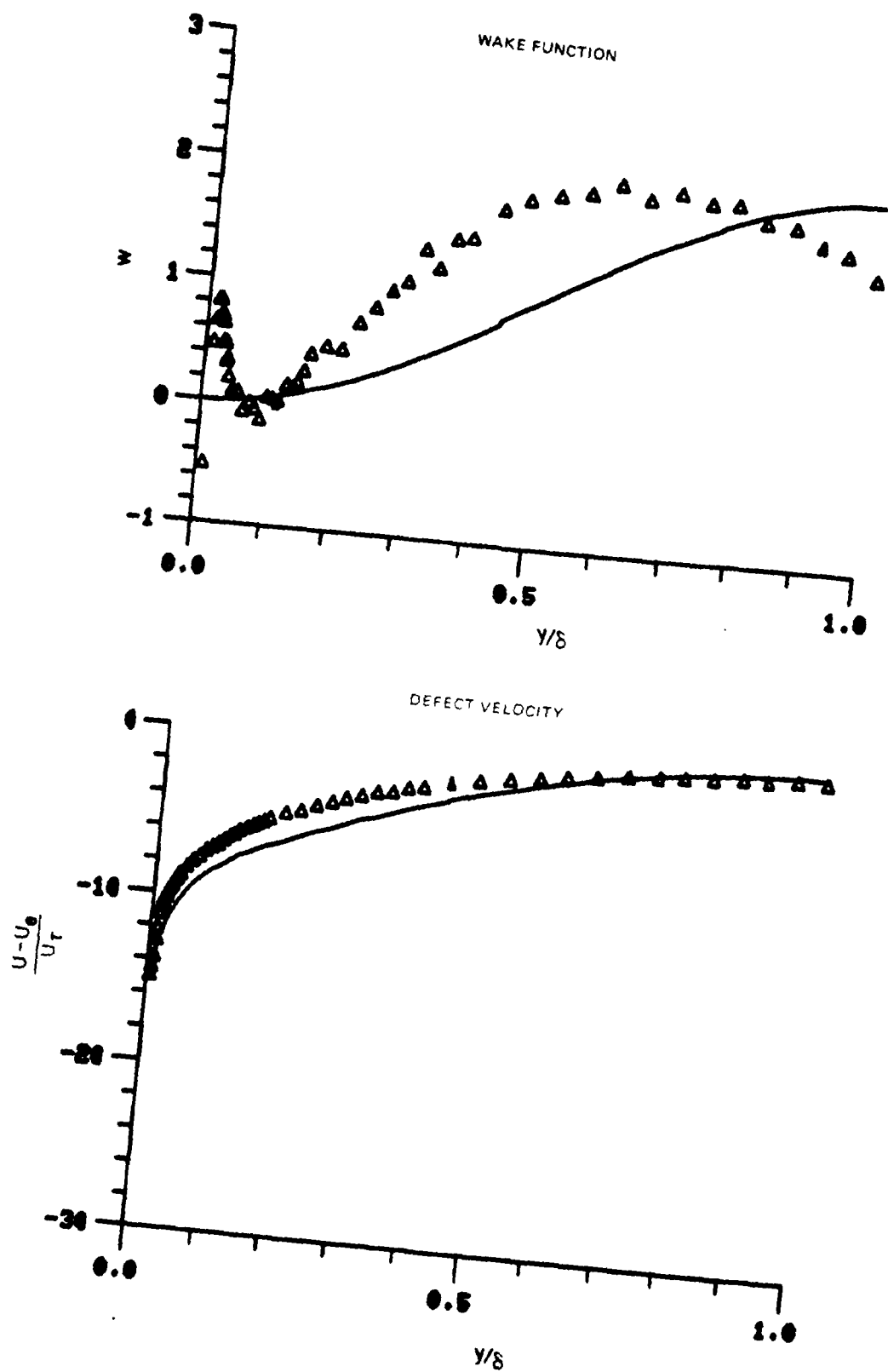


Figure 54. Boundary Layer Velocity Profiles
Run No. 6 Point No. 11

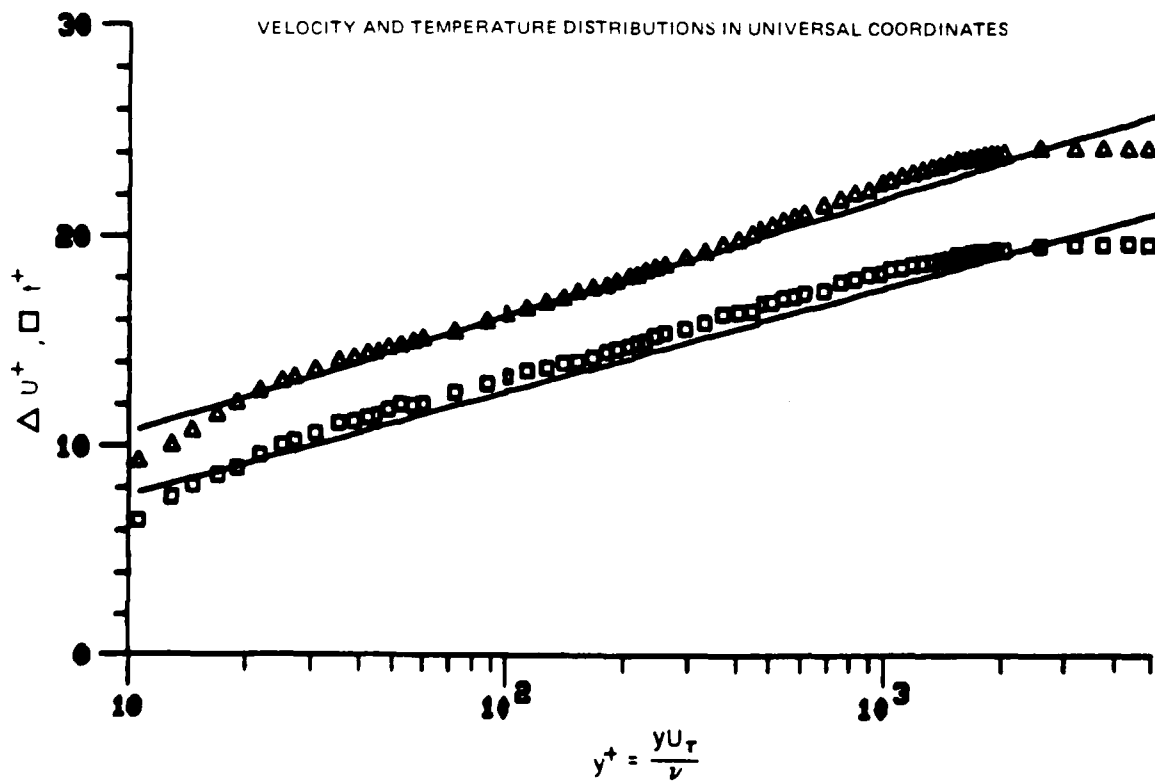
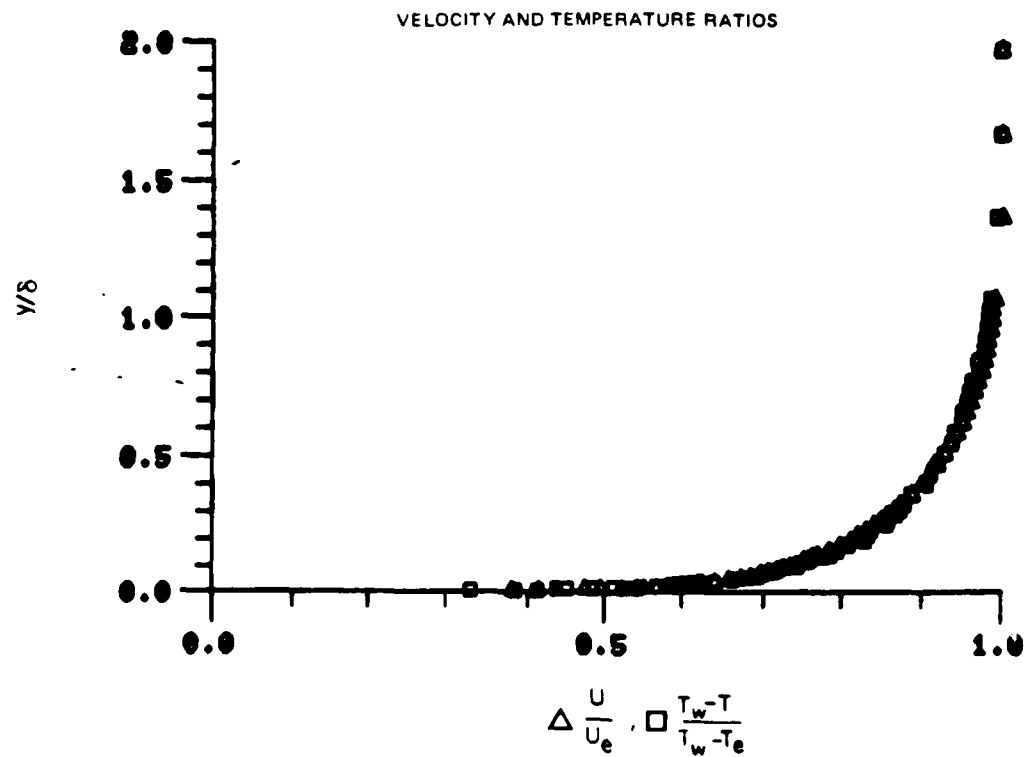


Figure 55. Boundary Layer Velocity and Temperature Profiles
Run No. 6 Point No. 12

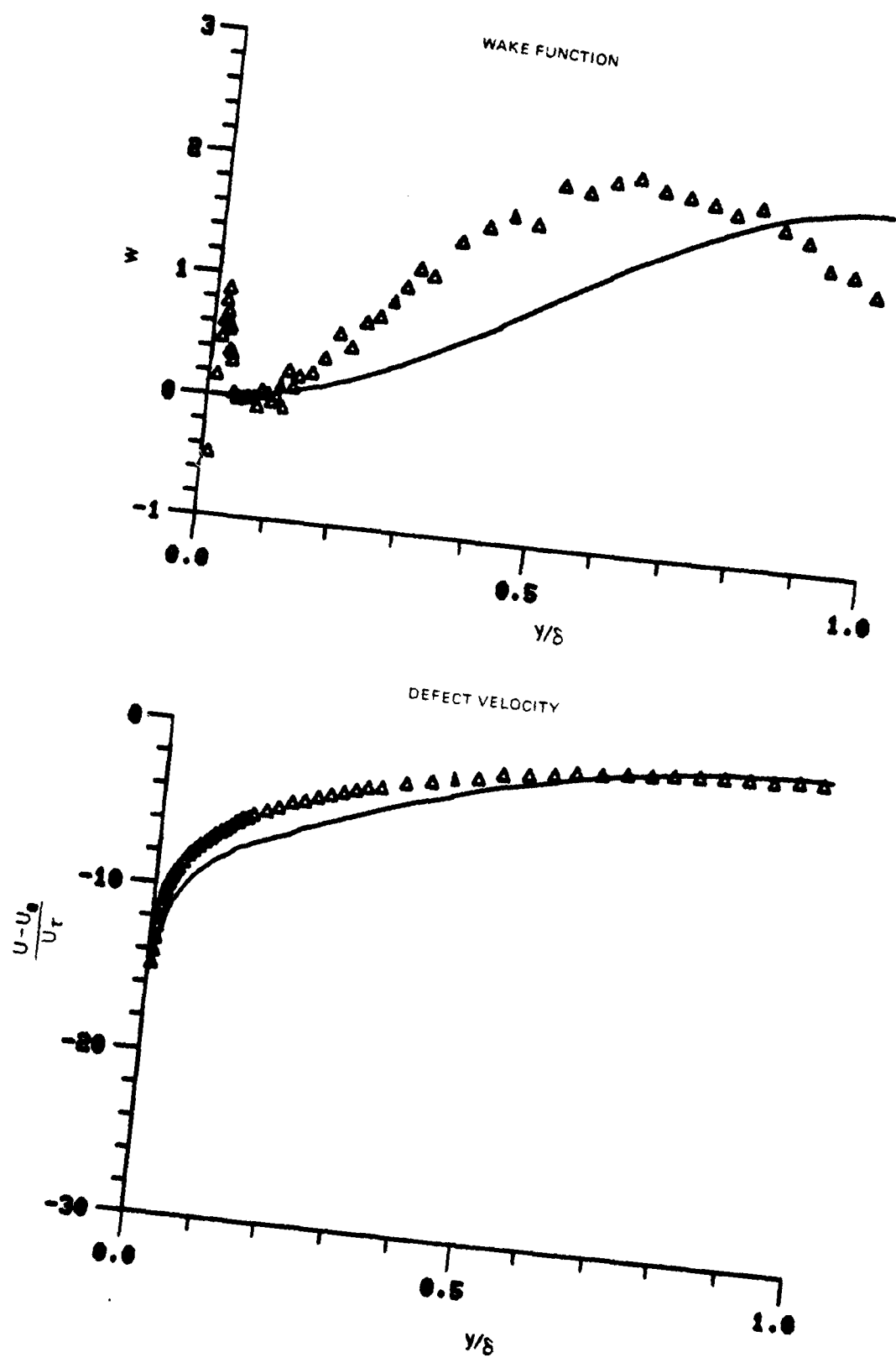


Figure 55. Boundary Layer Velocity Profiles
Run No. 6 Point No. 12

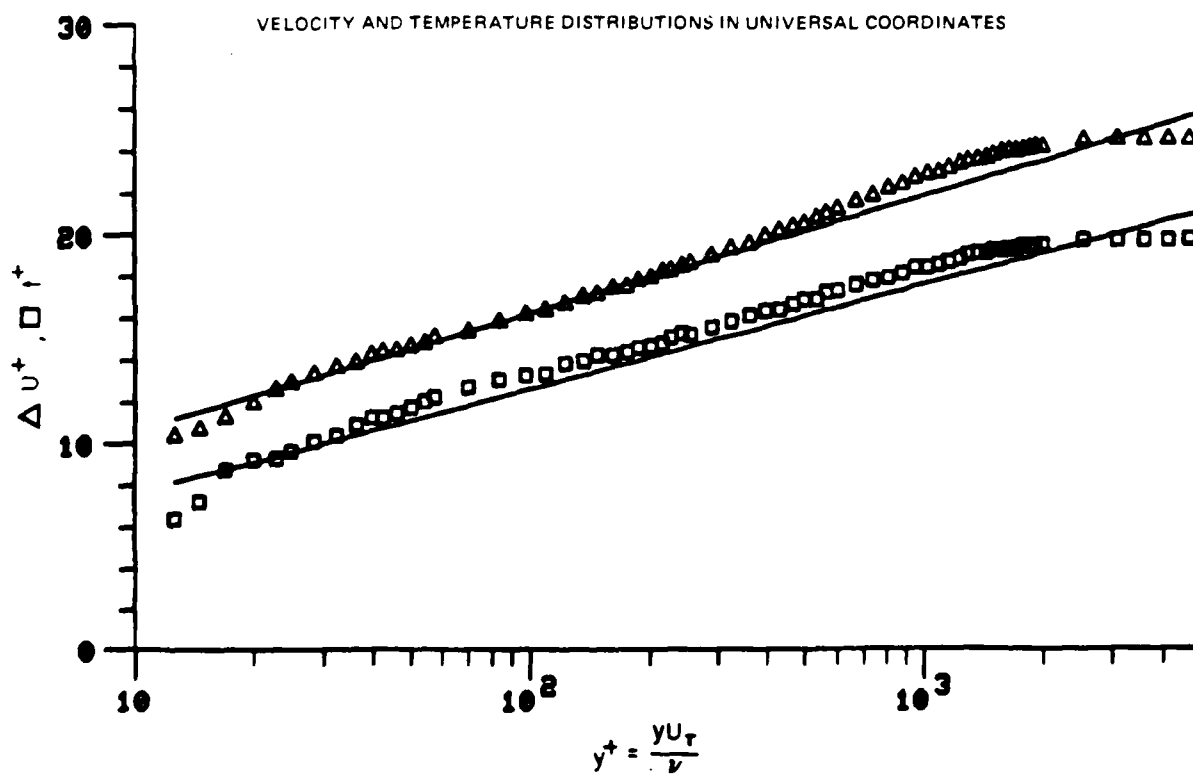
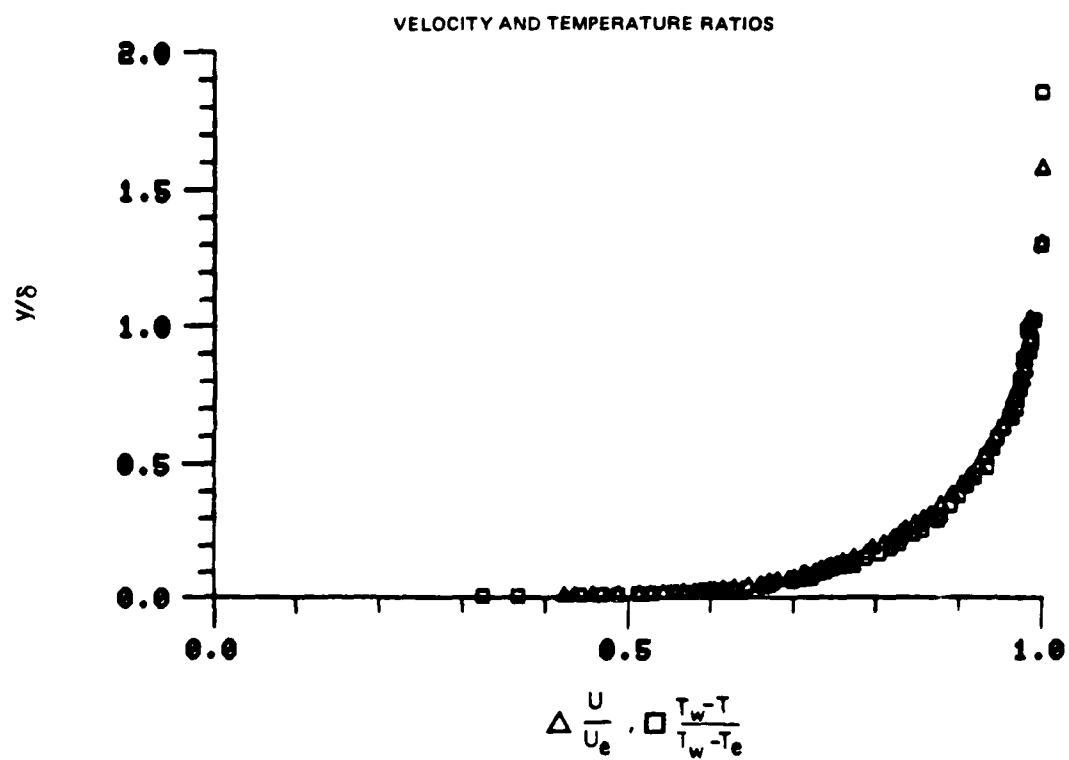


Figure 56. Boundary Layer Velocity and Temperature Profiles
Run No.10 Point No. 6

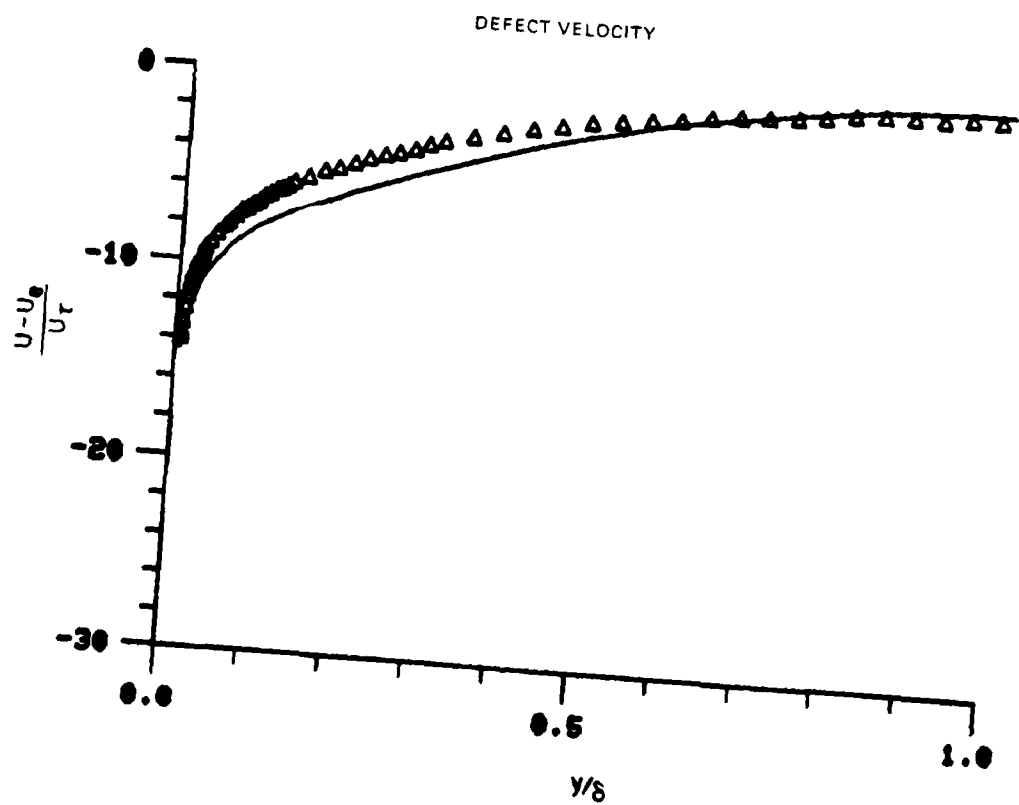
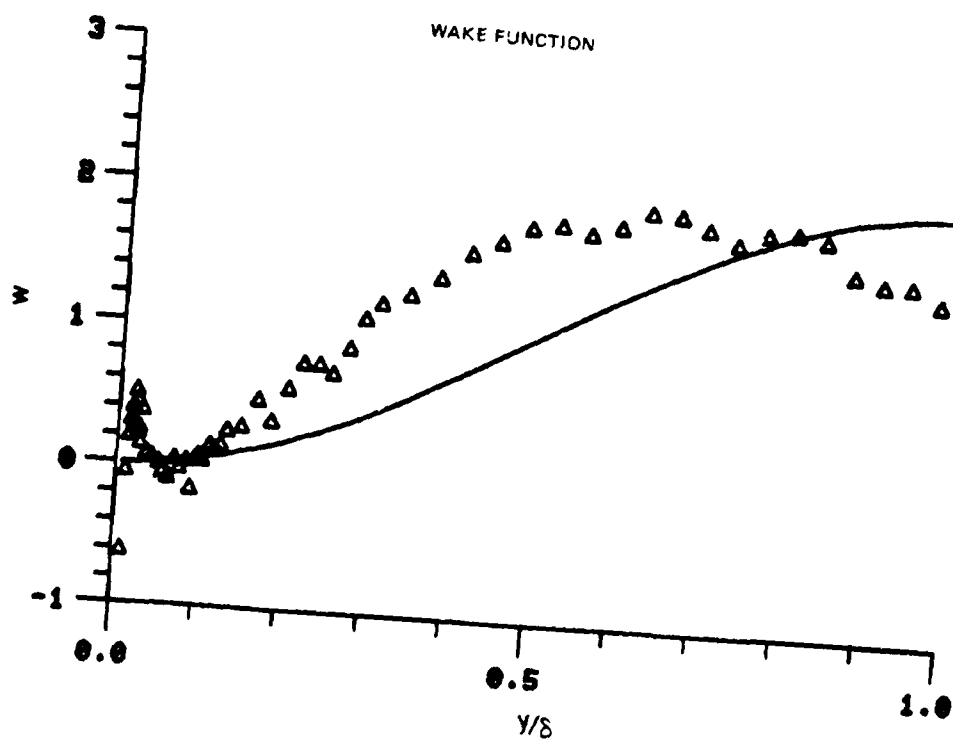


Figure 56. Boundary Layer Velocity Profiles
Run No. 10 Point No. 6

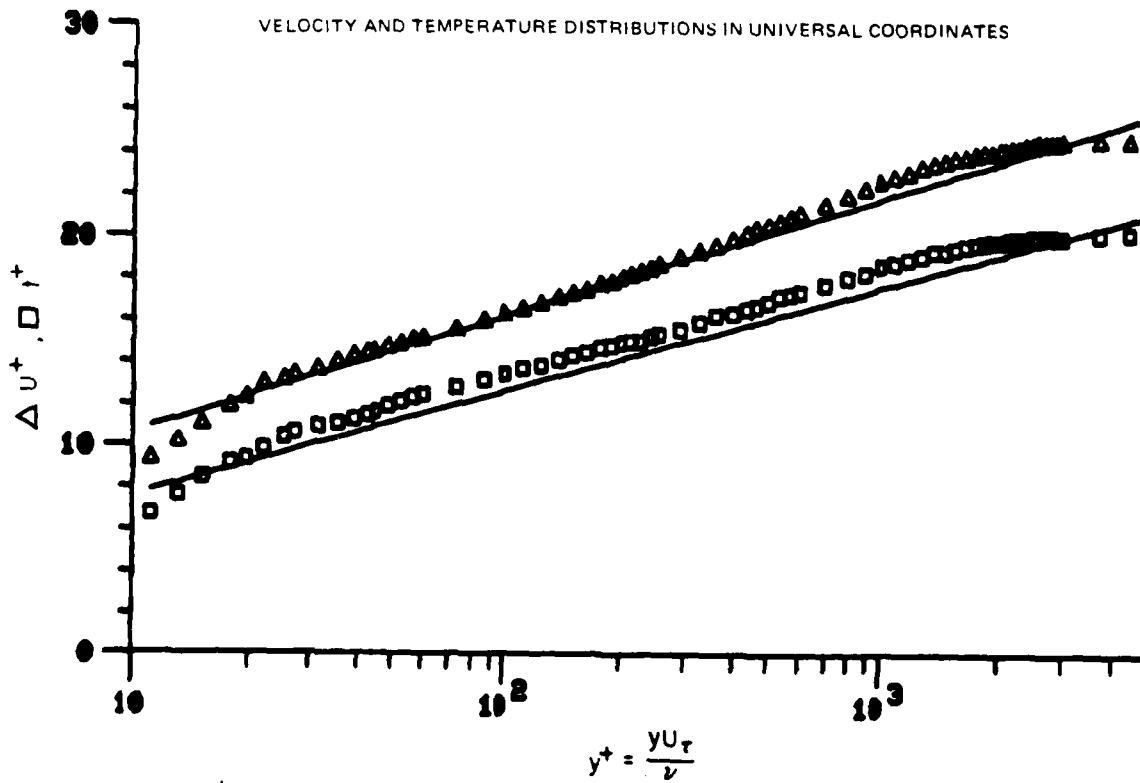
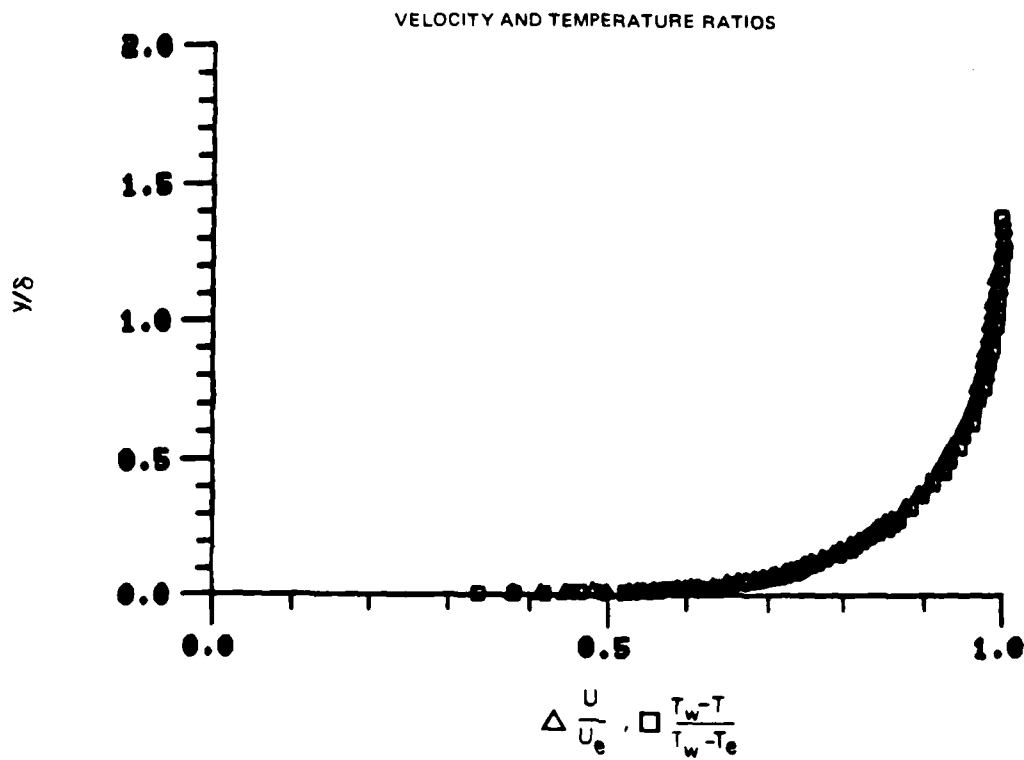


Figure 57. Boundary Layer Velocity and Temperature Profiles
Run No. 6 Point No. 15

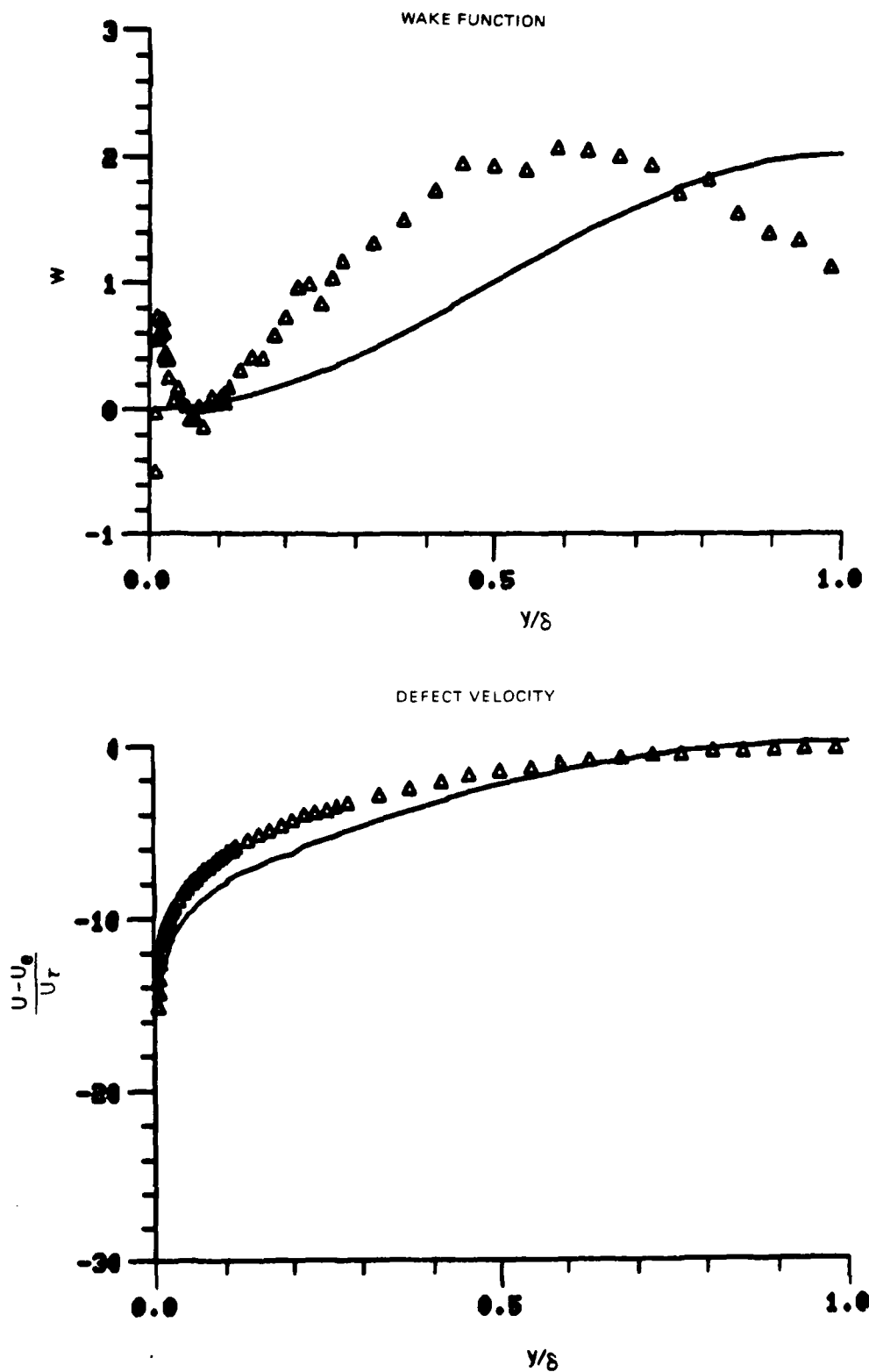


Figure 57. Boundary Layer Velocity Profiles
Run No. 6 Point No. 15

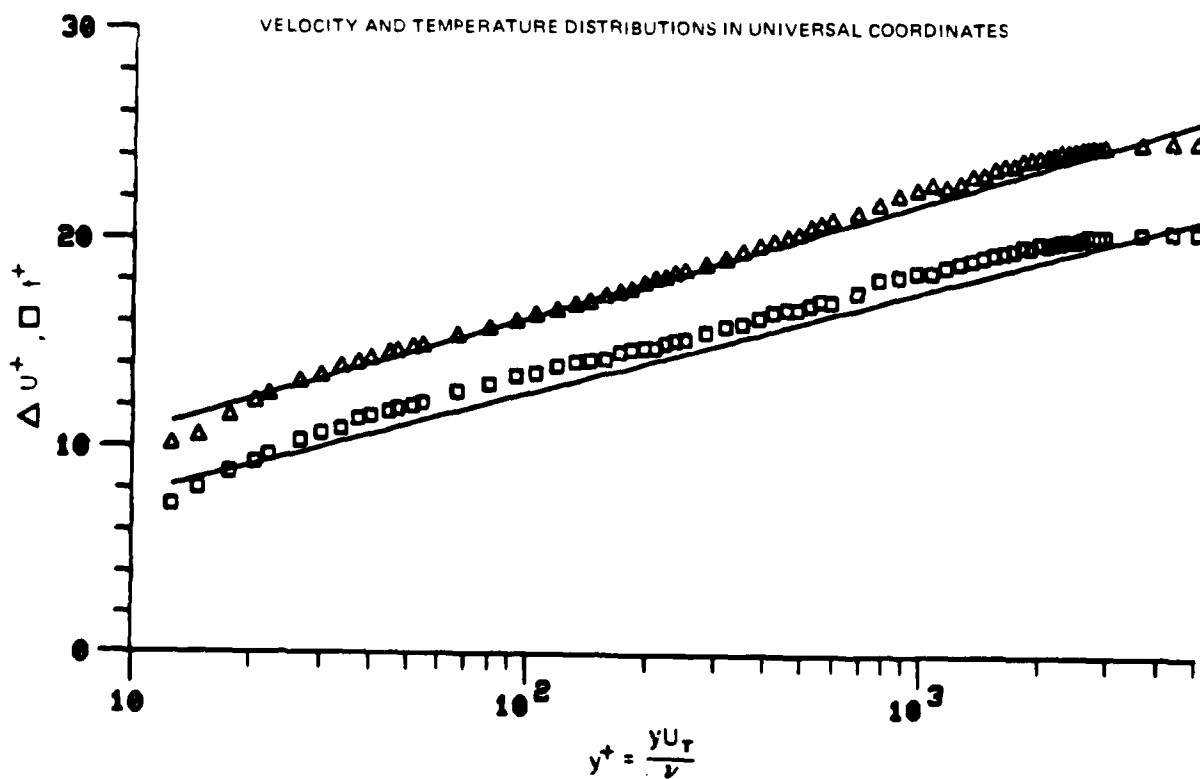
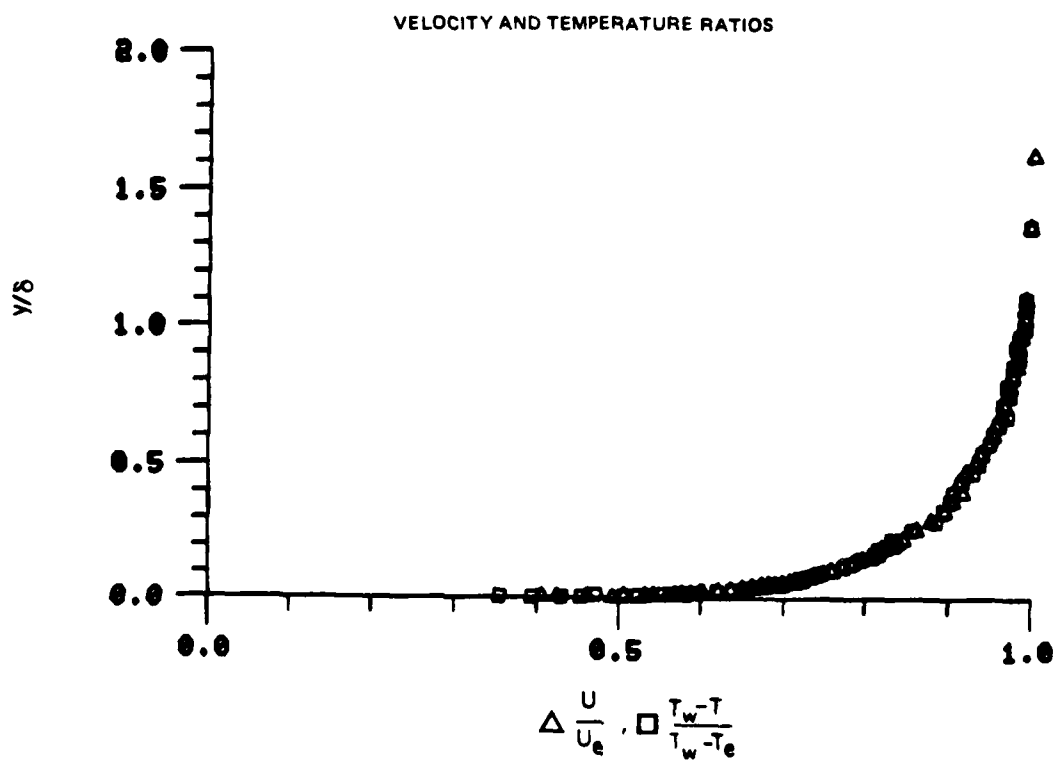


Figure 58. Boundary Layer Velocity and Temperature Profiles
Run No. 10 Point No. 7

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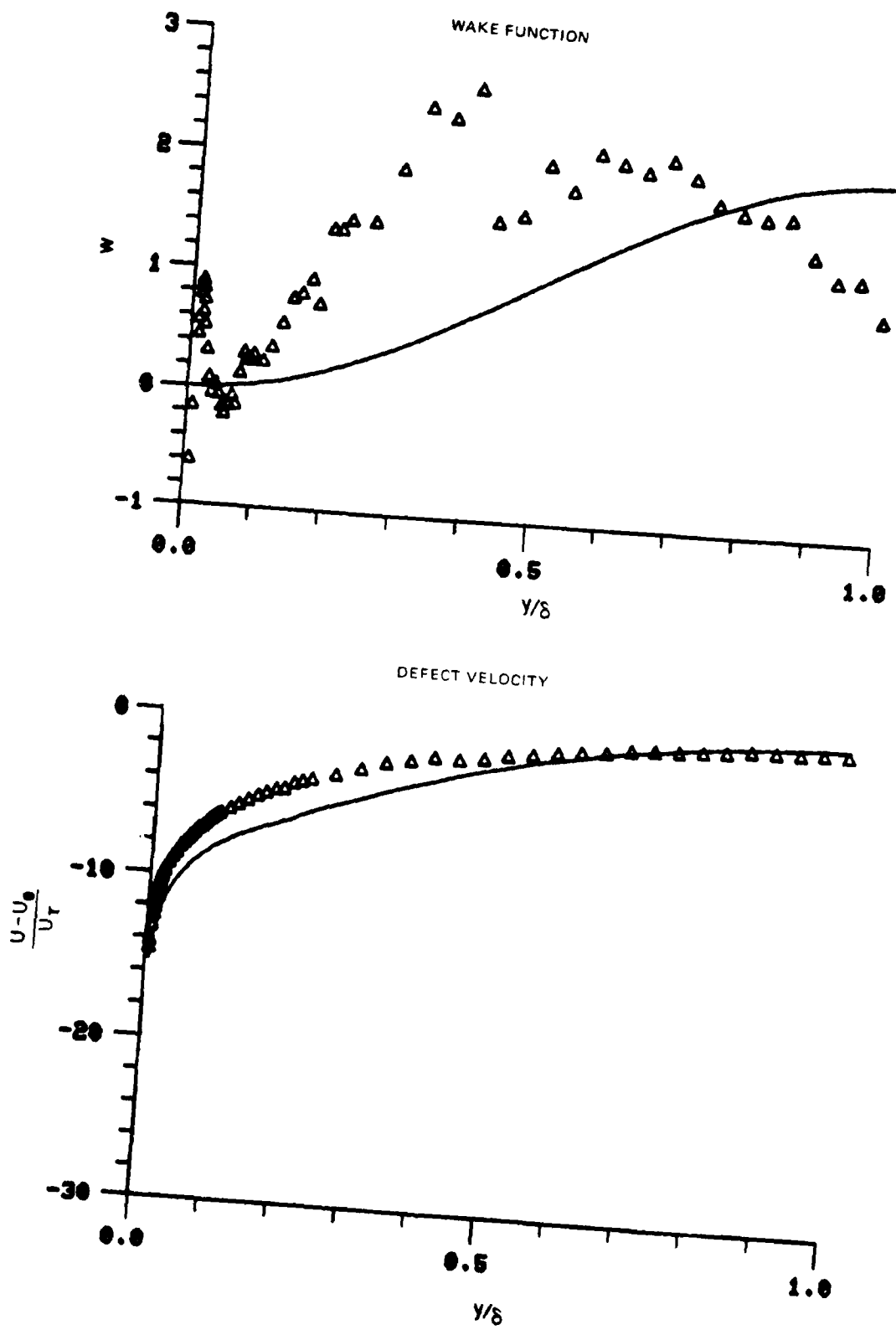


Figure 58. Boundary Layer Velocity Profiles
Run No.10 Point No. 7

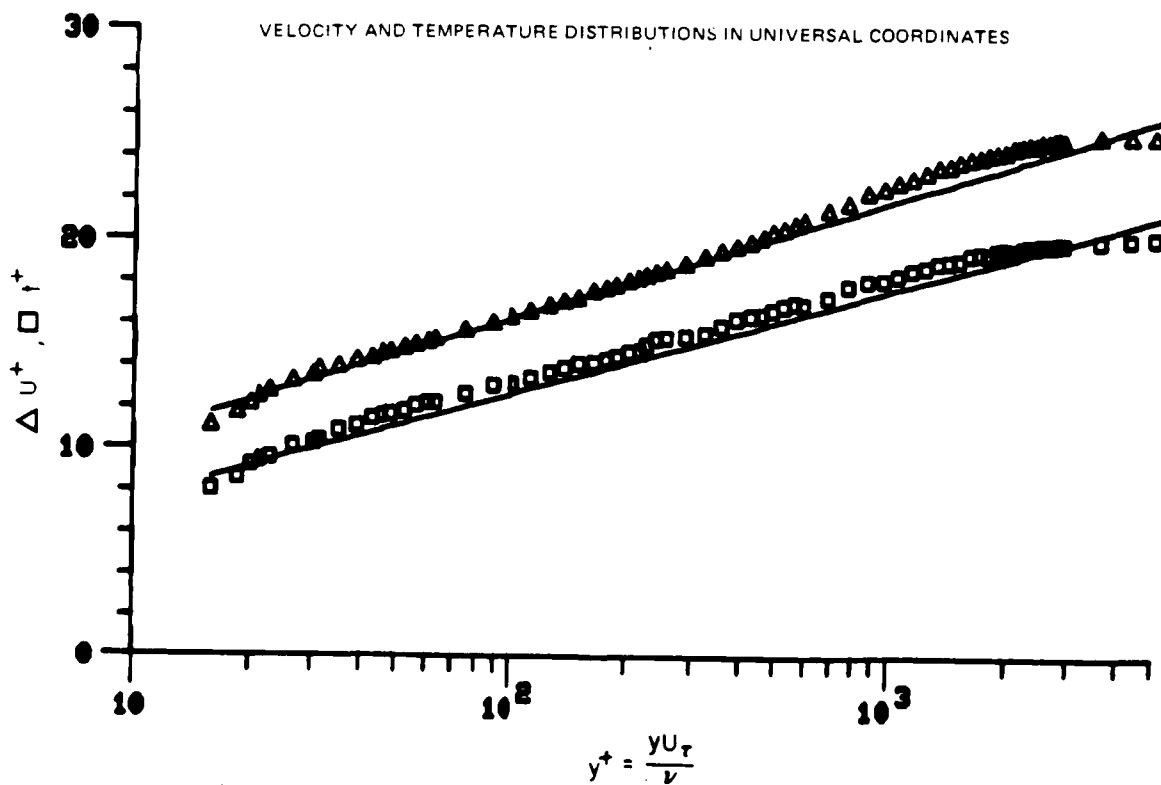
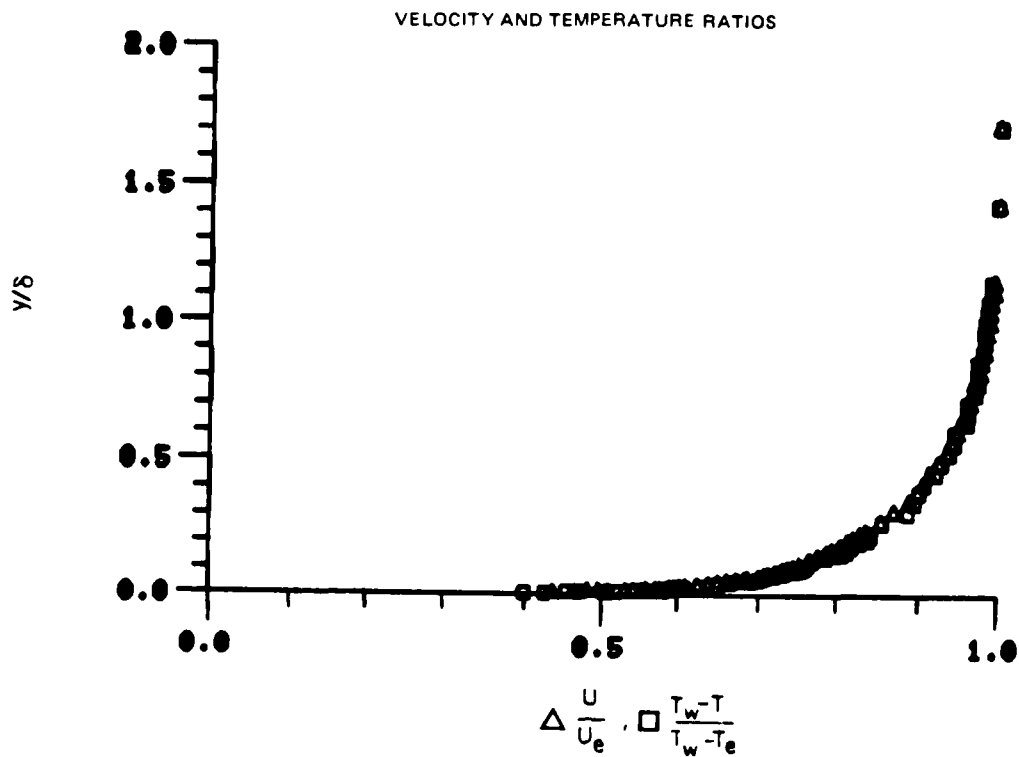


Figure 59. Boundary Layer Velocity and Temperature Profiles
Run No. 6 Point No. 18

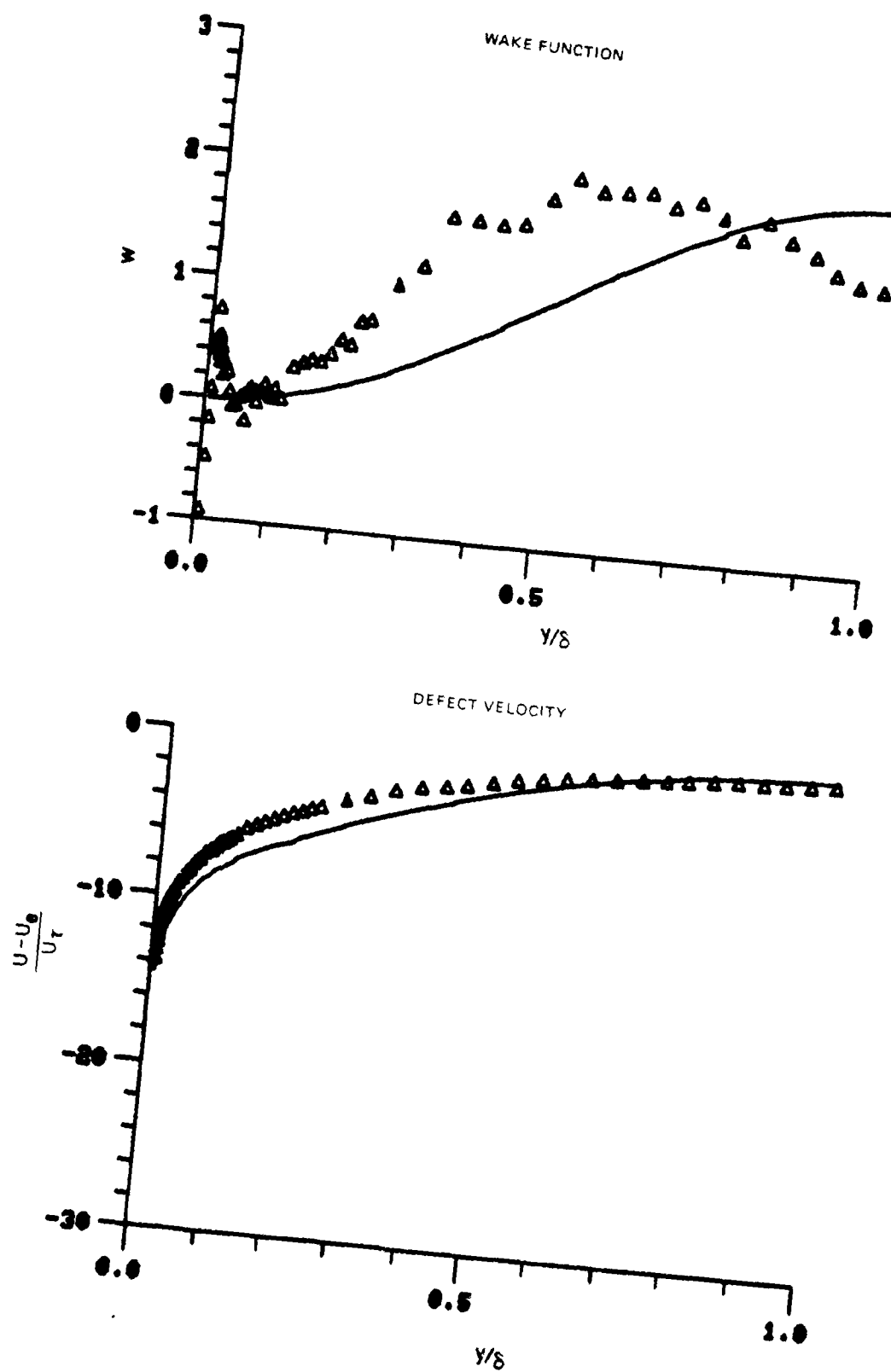


Figure 59. Boundary Layer Velocity Profiles
Run No. 6 Point No. 18

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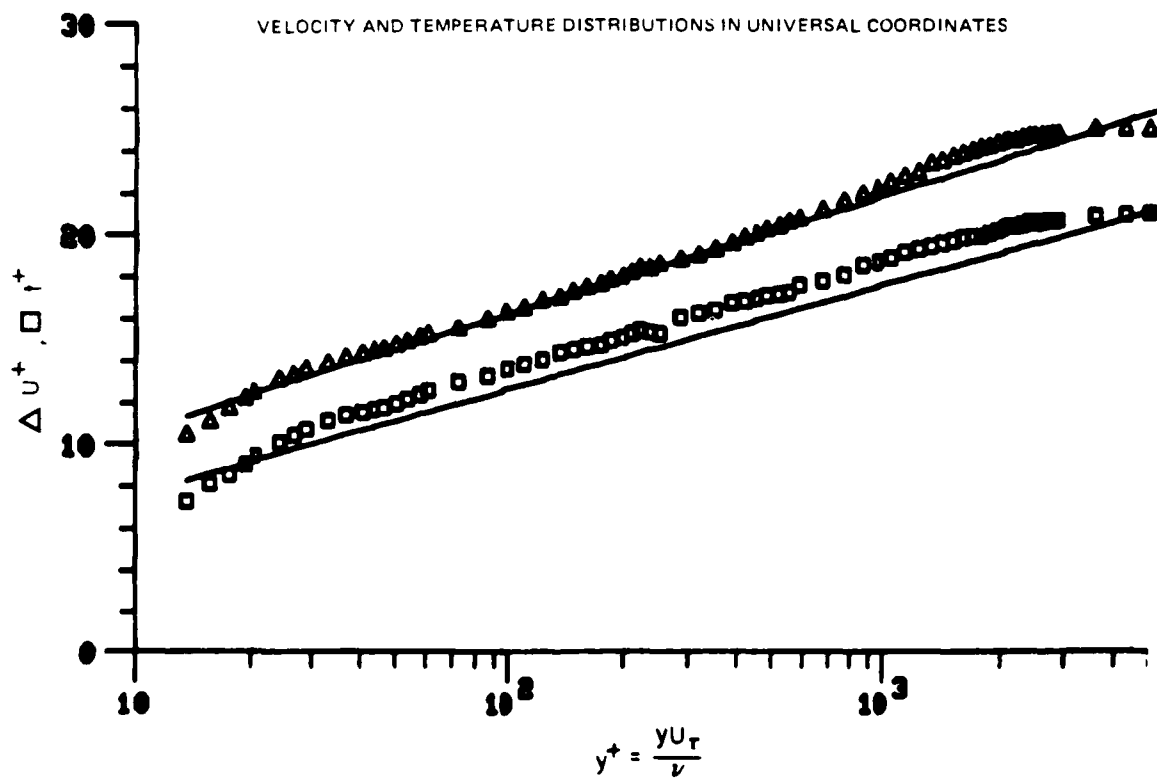
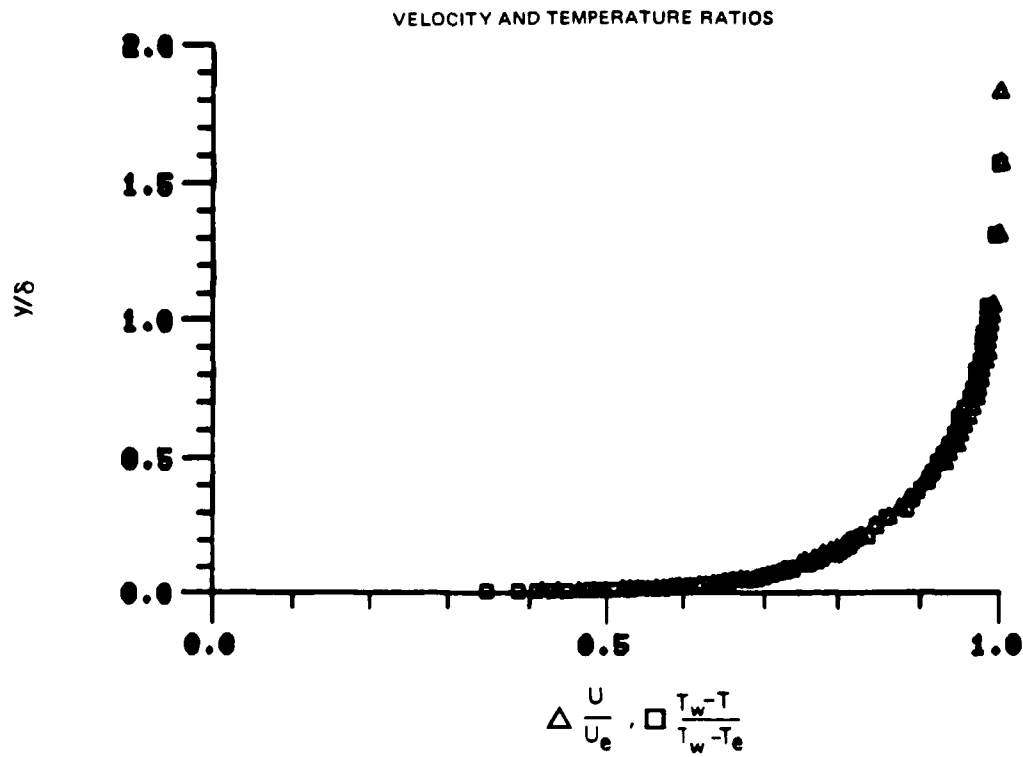


Figure 60. Boundary Layer Velocity and Temperature Profiles
Run No. 6 Point No. 19

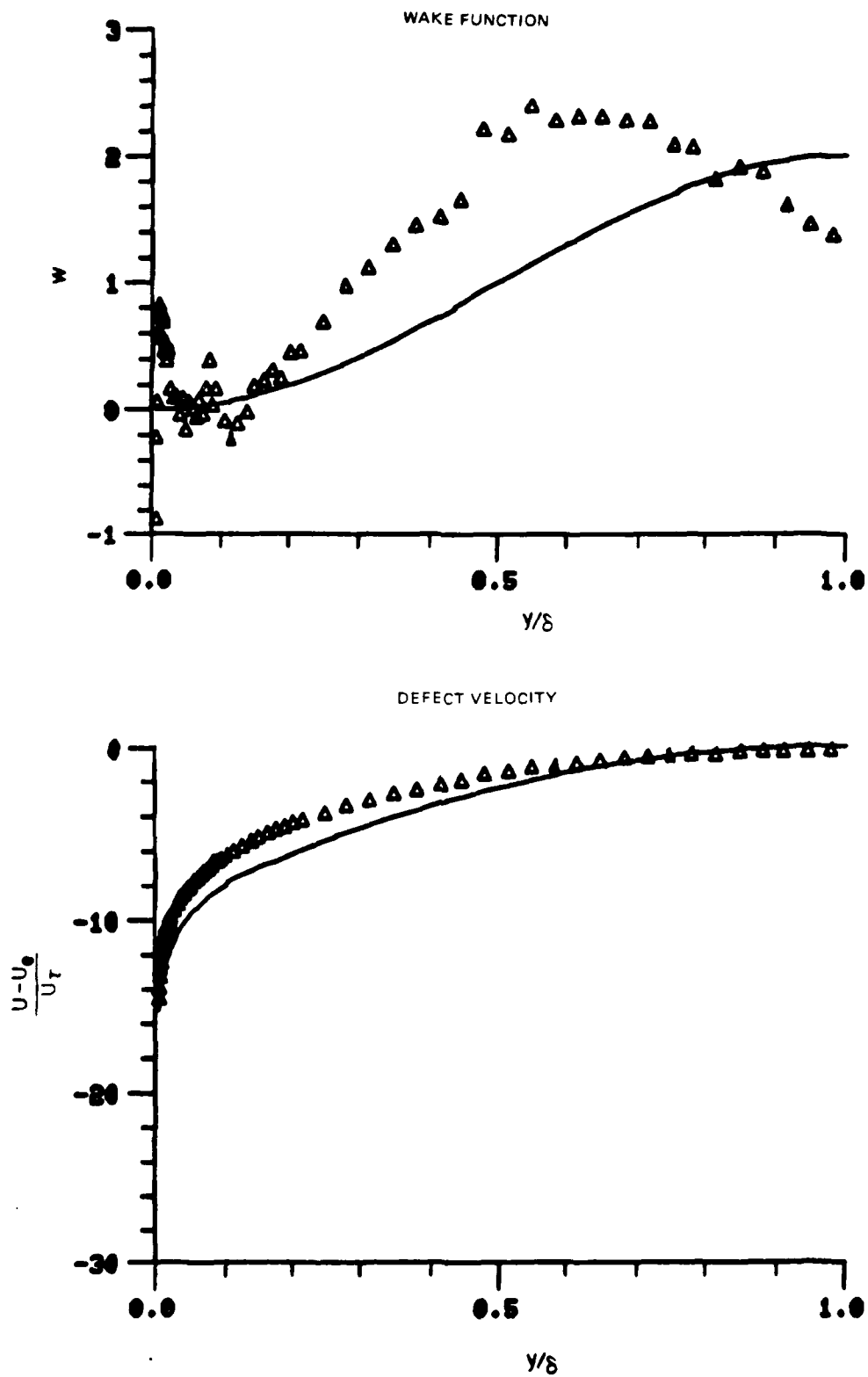


Figure 60. Boundary Layer Velocity Profiles
Run No. 6 Point No. 19

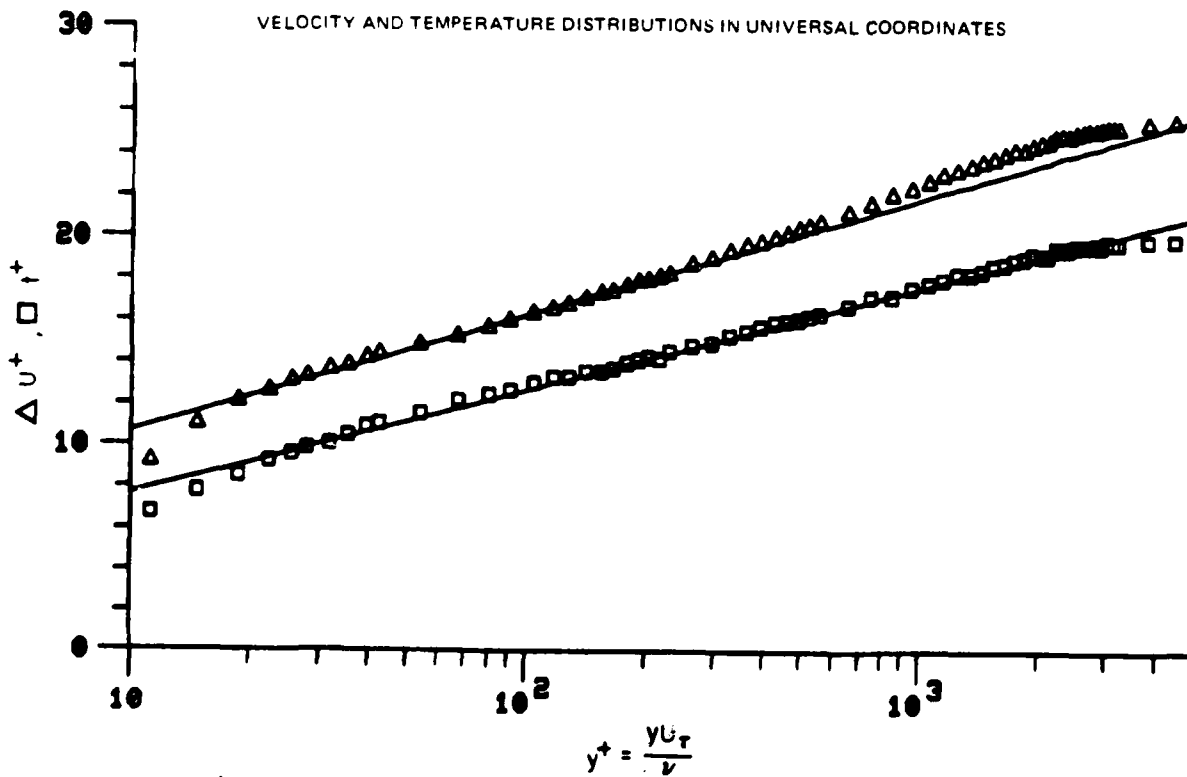
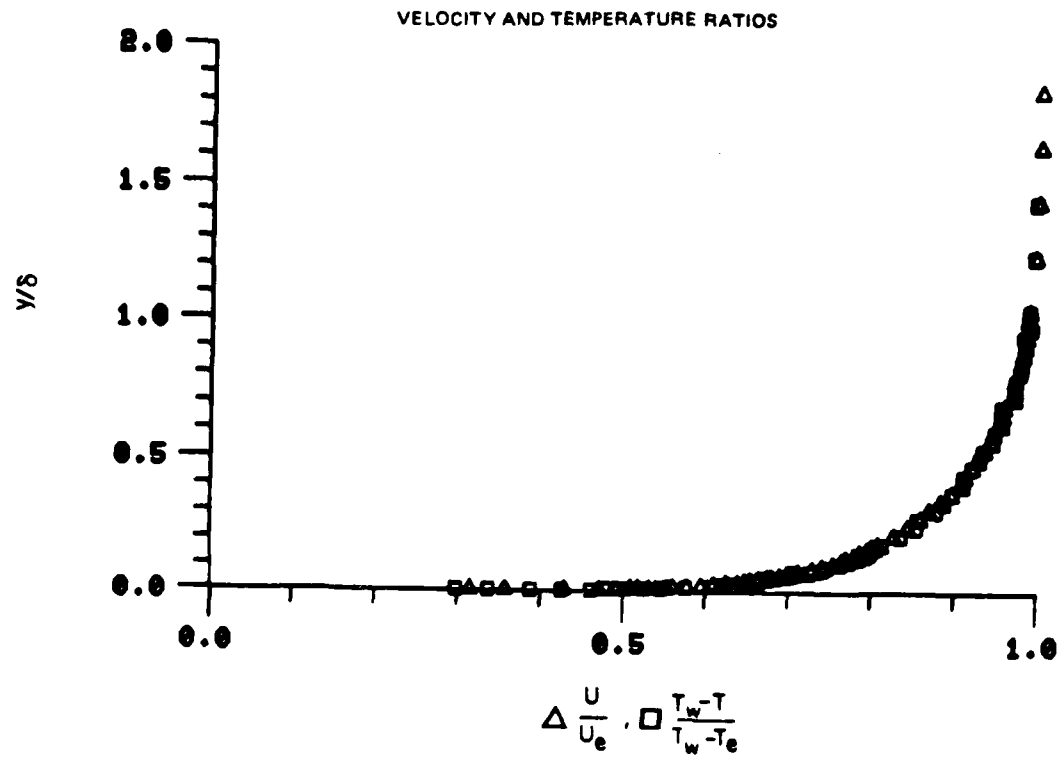


Figure 61. Boundary Layer Velocity and Temperature Profiles
Run No. 10 Point No. 9

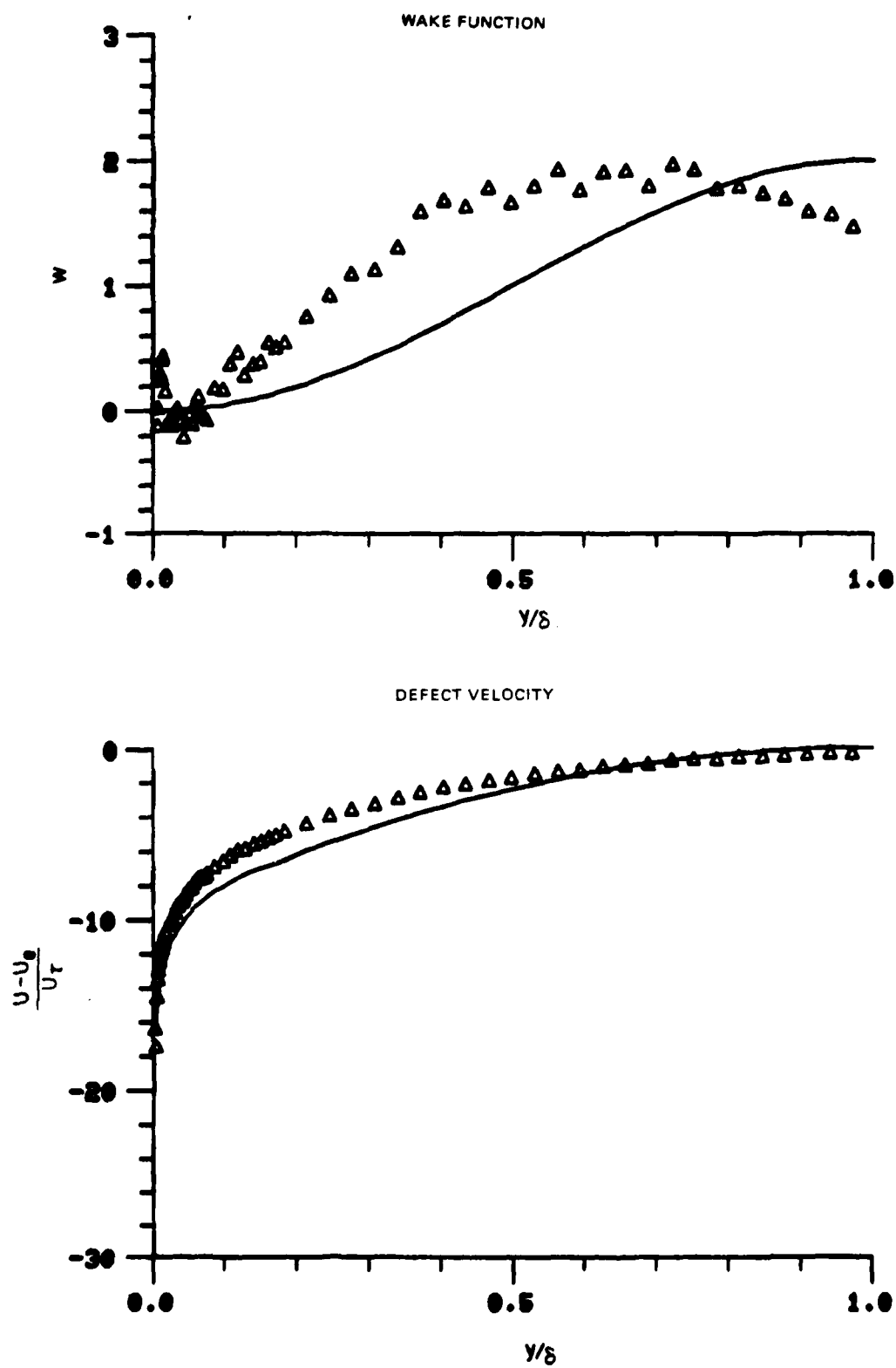


Figure 61. Boundary Layer Velocity Profiles
Run No. 10 Point No. 9

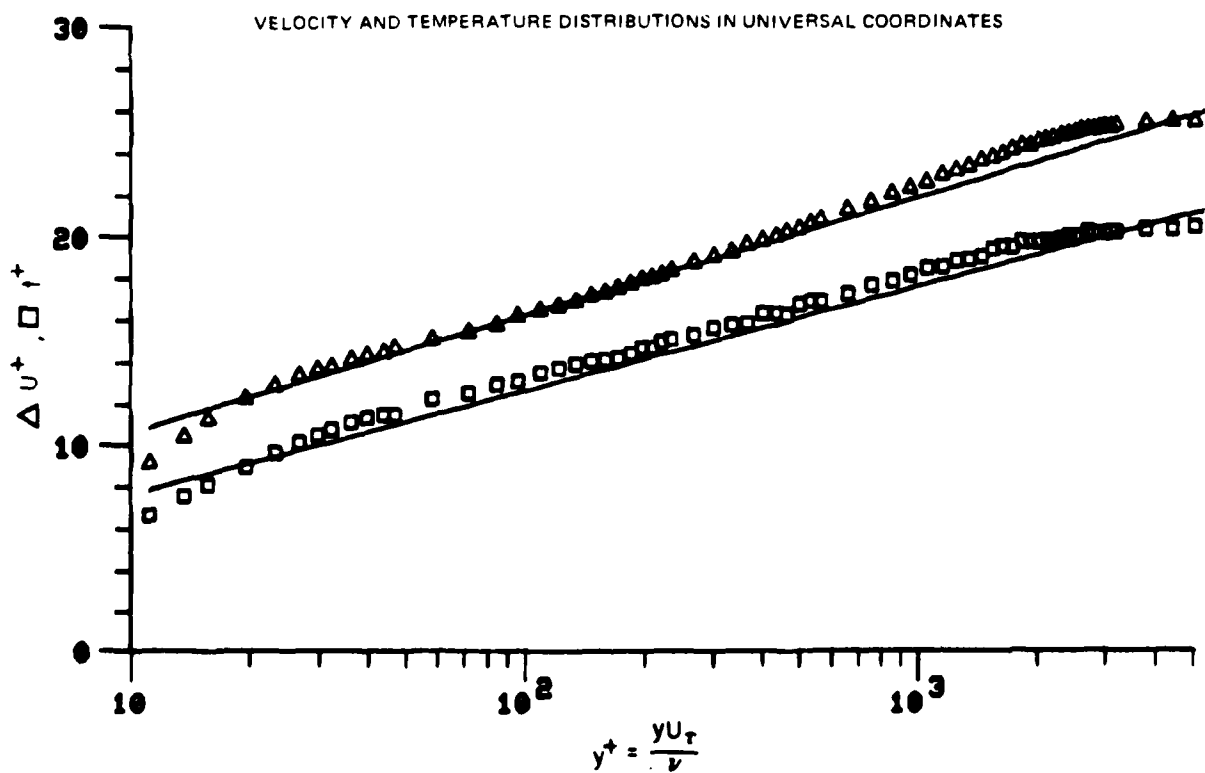
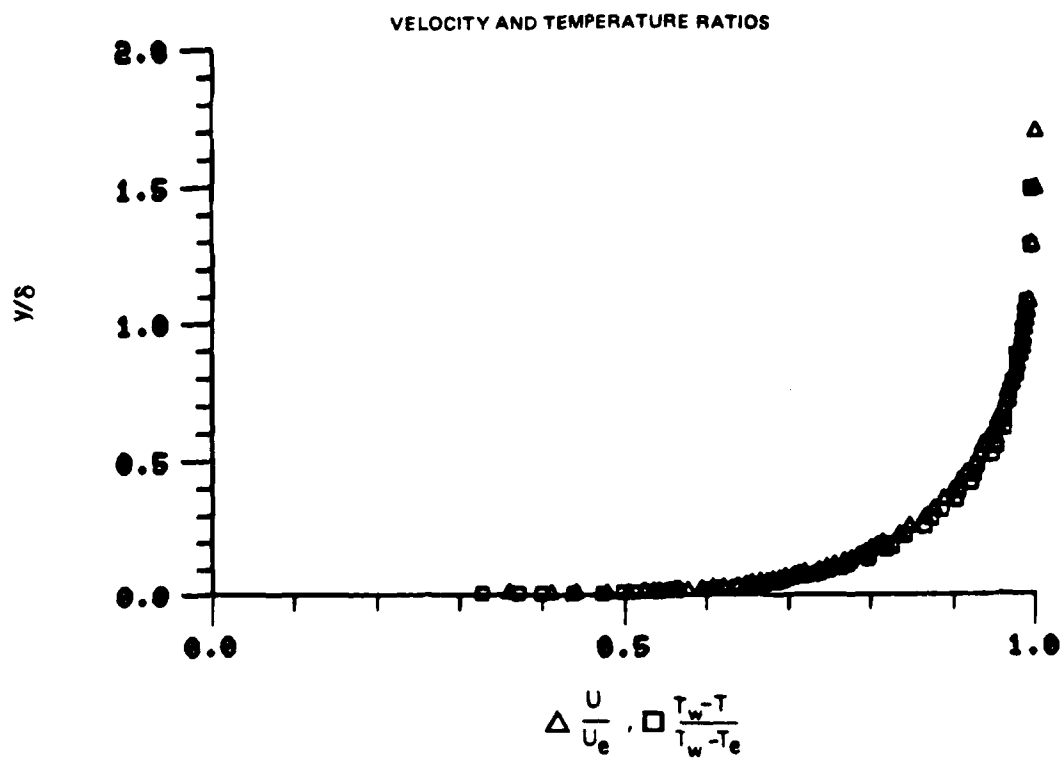


Figure 62. Boundary Layer Velocity and Temperature Profiles
Run No. 10 Point No. 10

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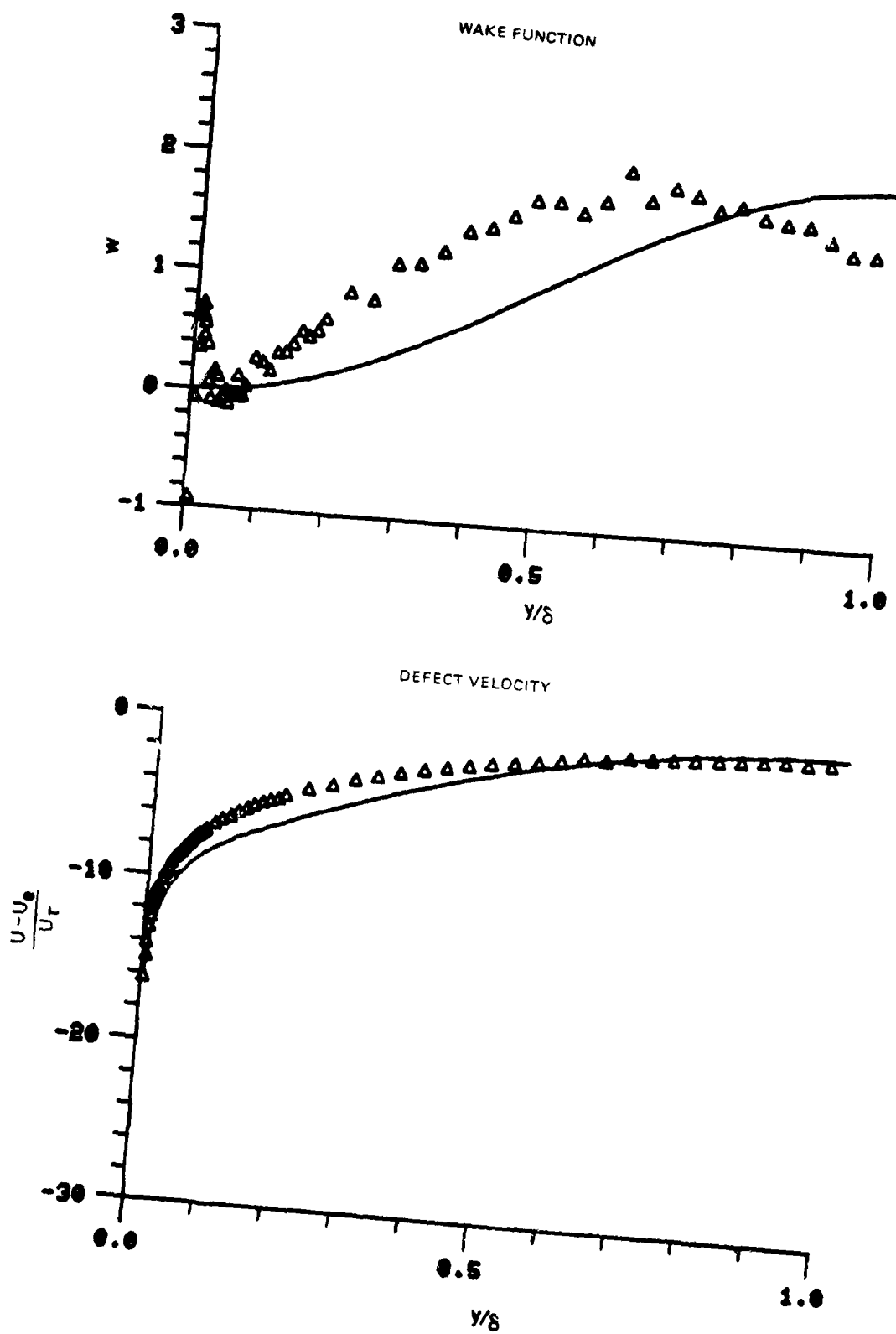


Figure 62. Boundary Layer Velocity Profiles
Run No. 10 Point No. 10

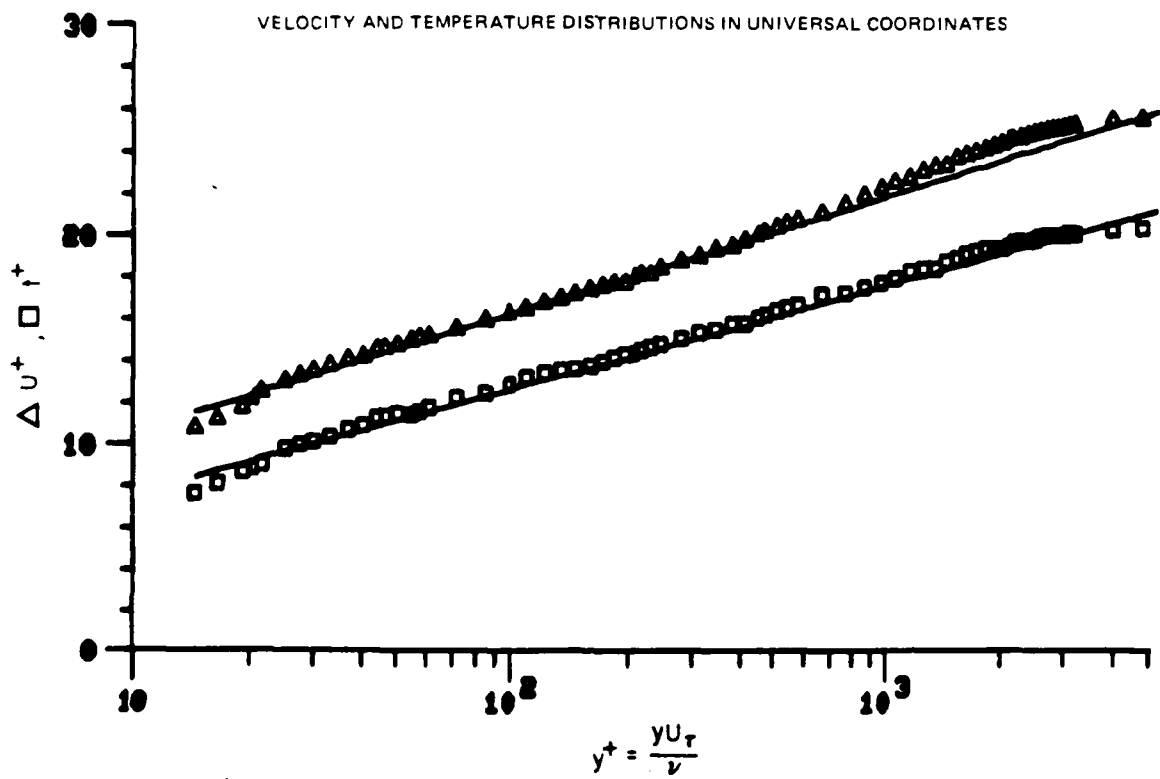
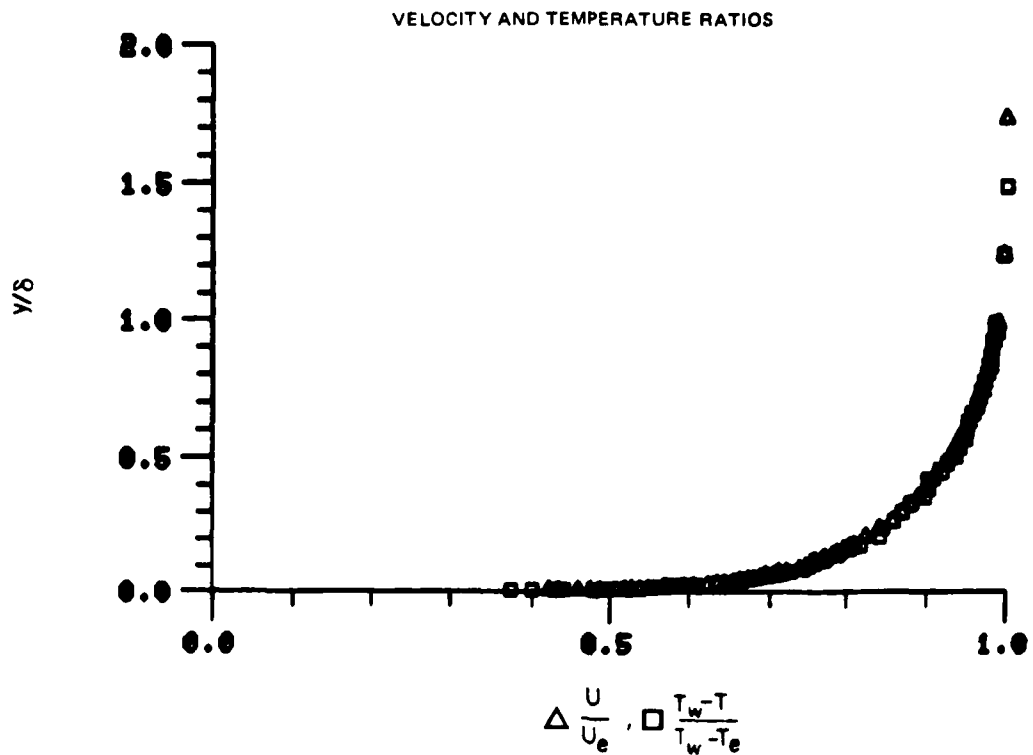


Figure 63. Boundary Layer Velocity and Temperature Profiles
Run No. 6 Point No. 24

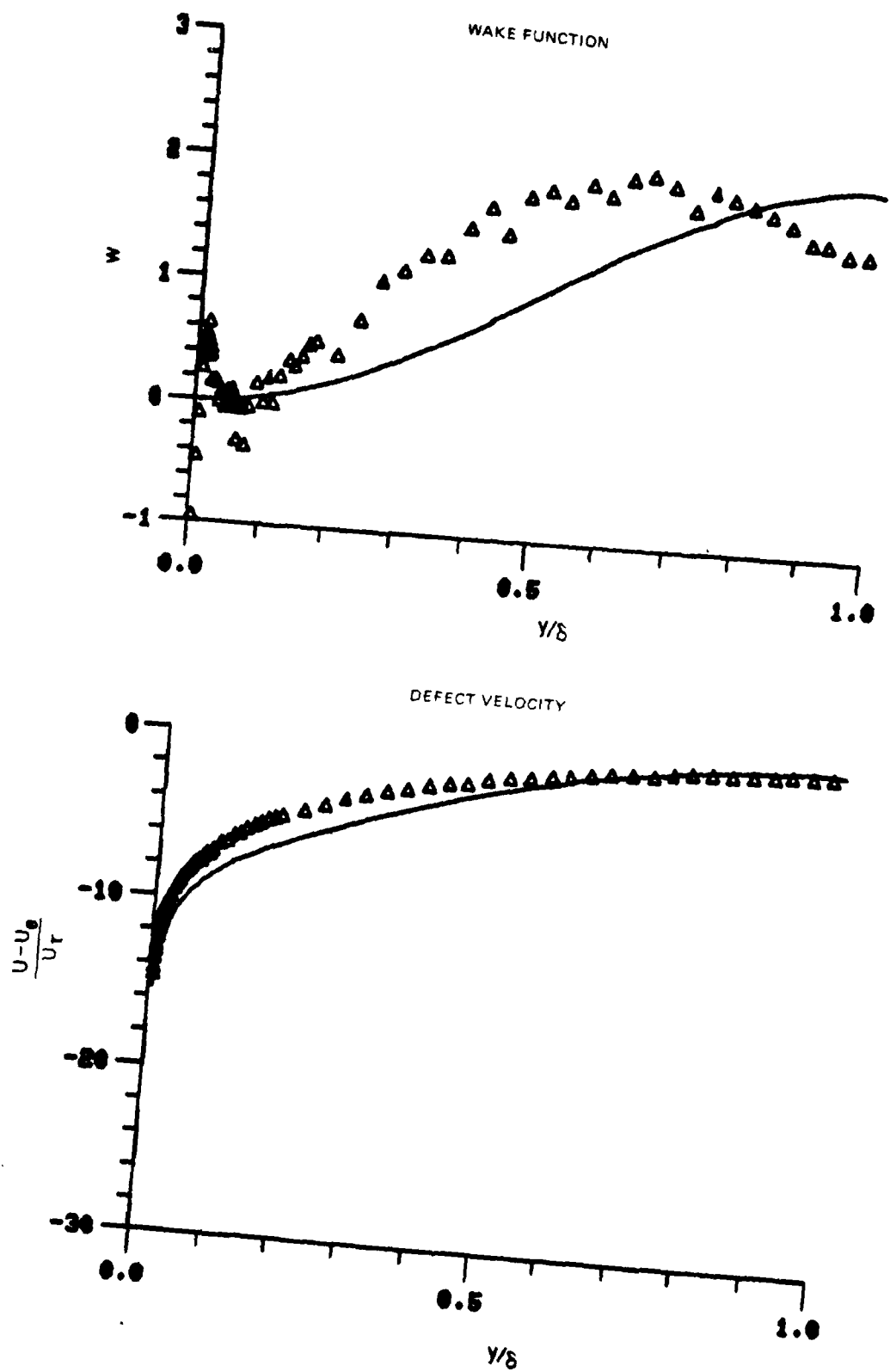


Figure 63. Boundary Layer Velocity Profiles
Run No. 6 Point No. 24

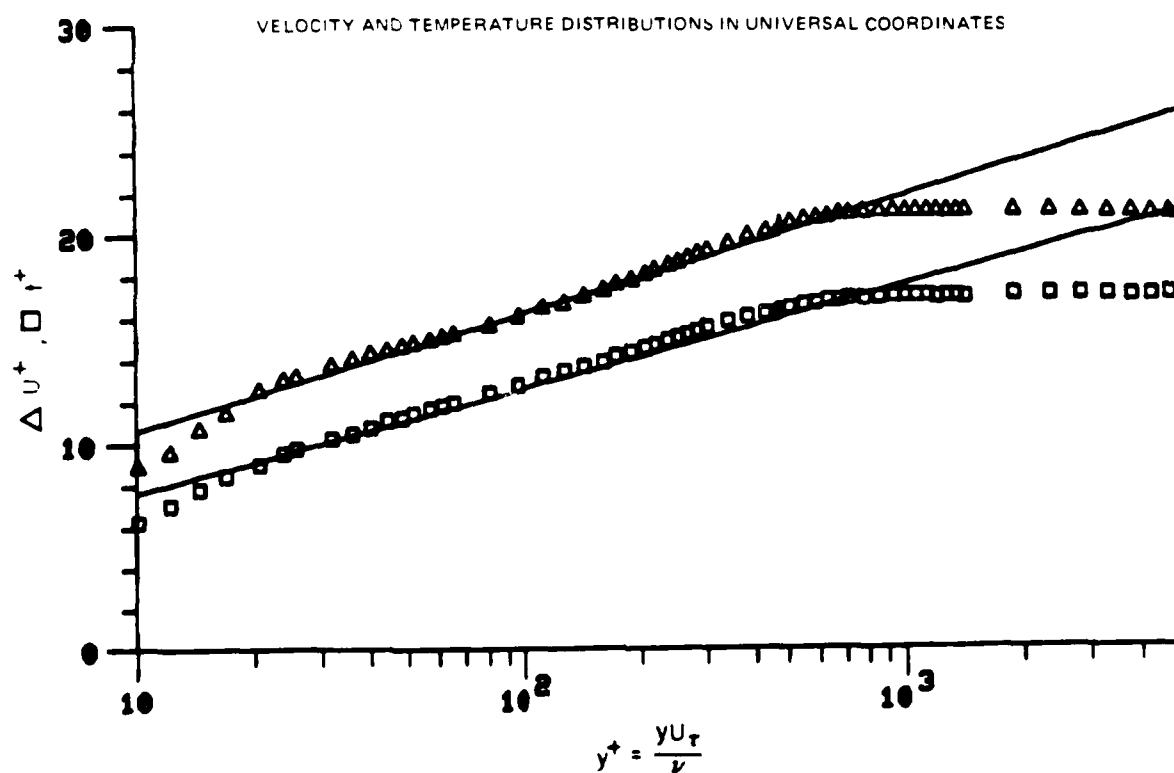
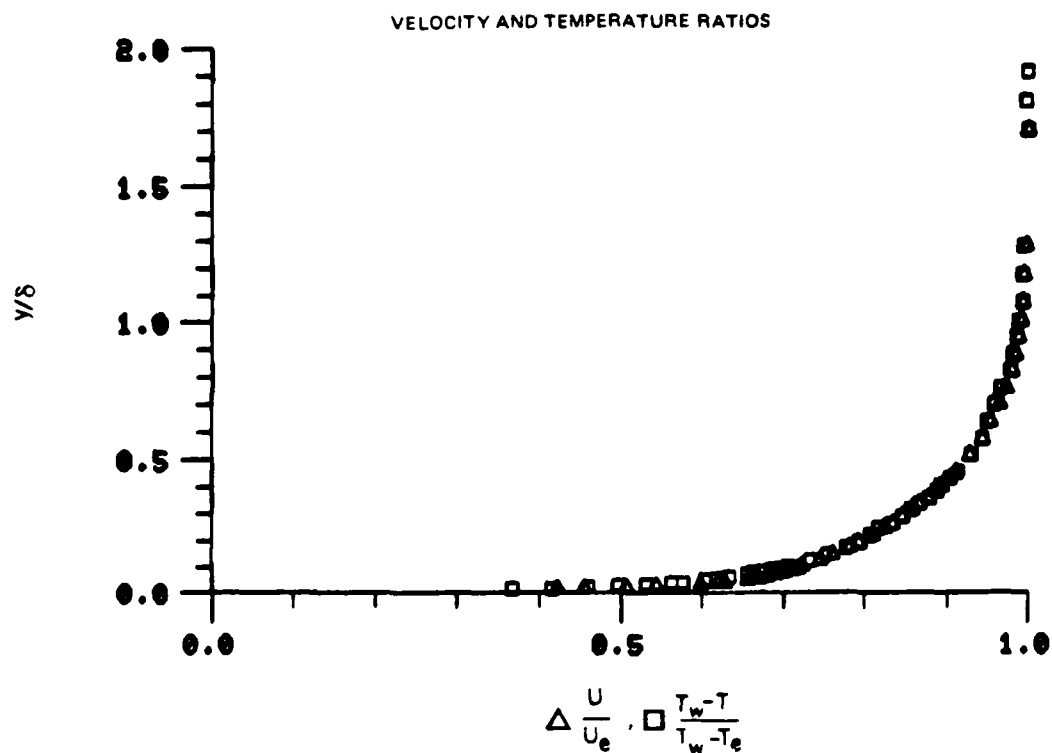


Figure 64. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 3

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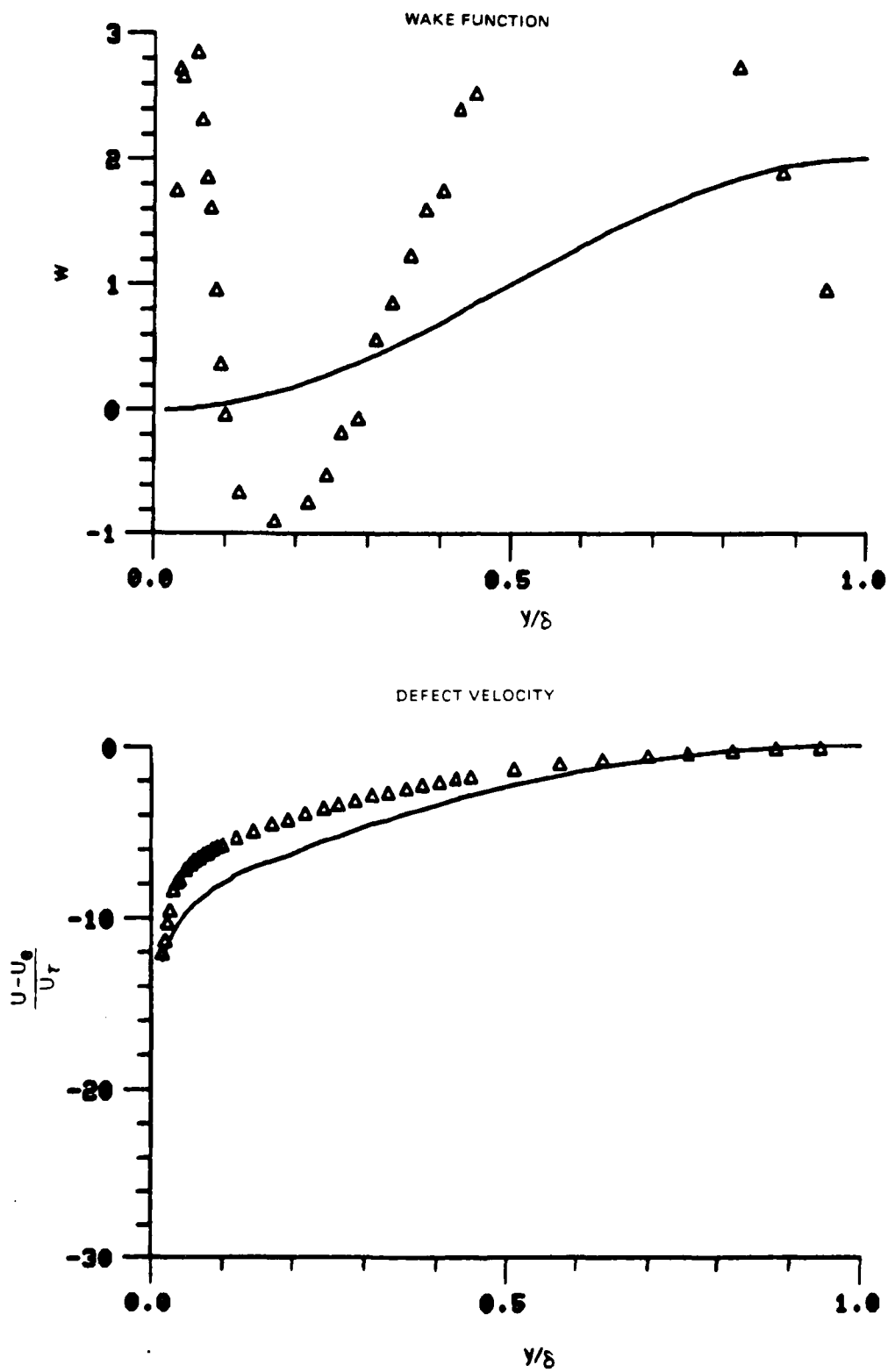


Figure 64. Boundary Layer Velocity Profiles
Run No. 9 Point No. 3

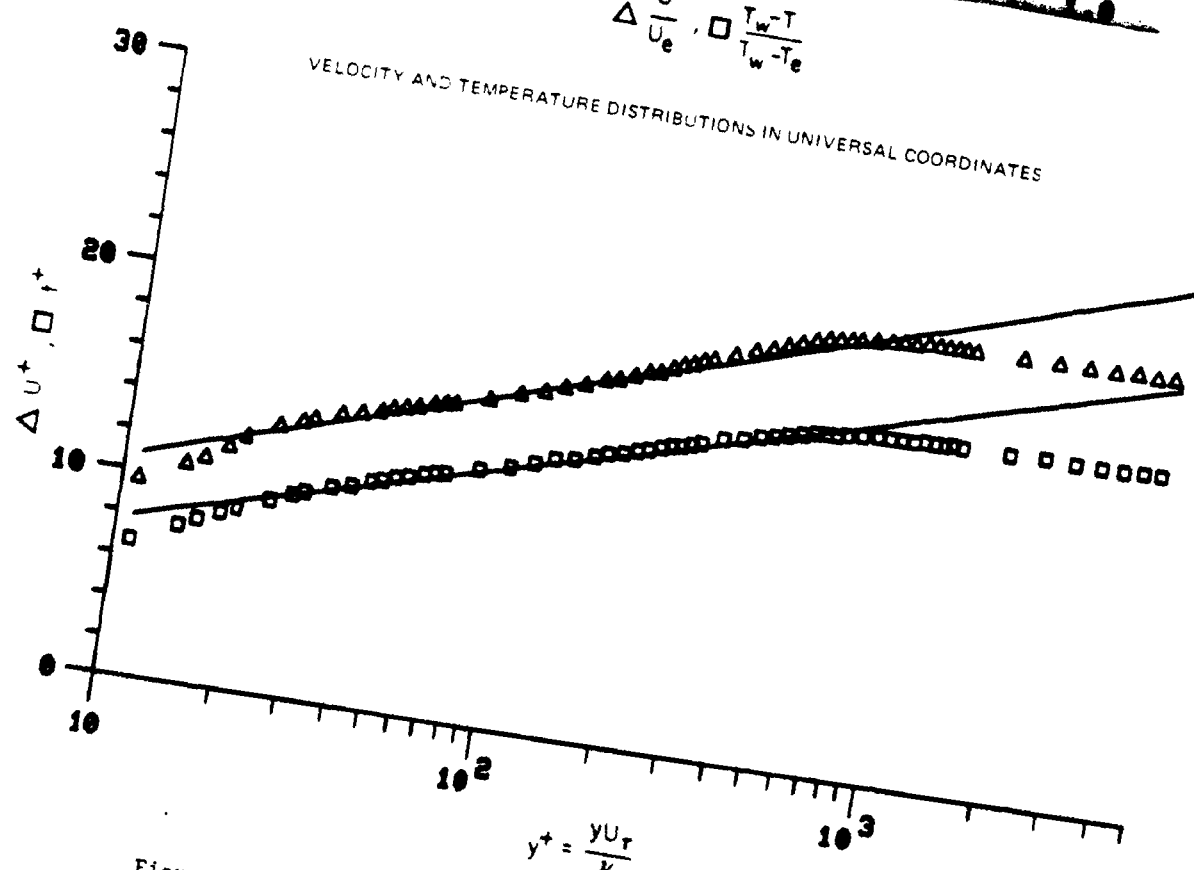
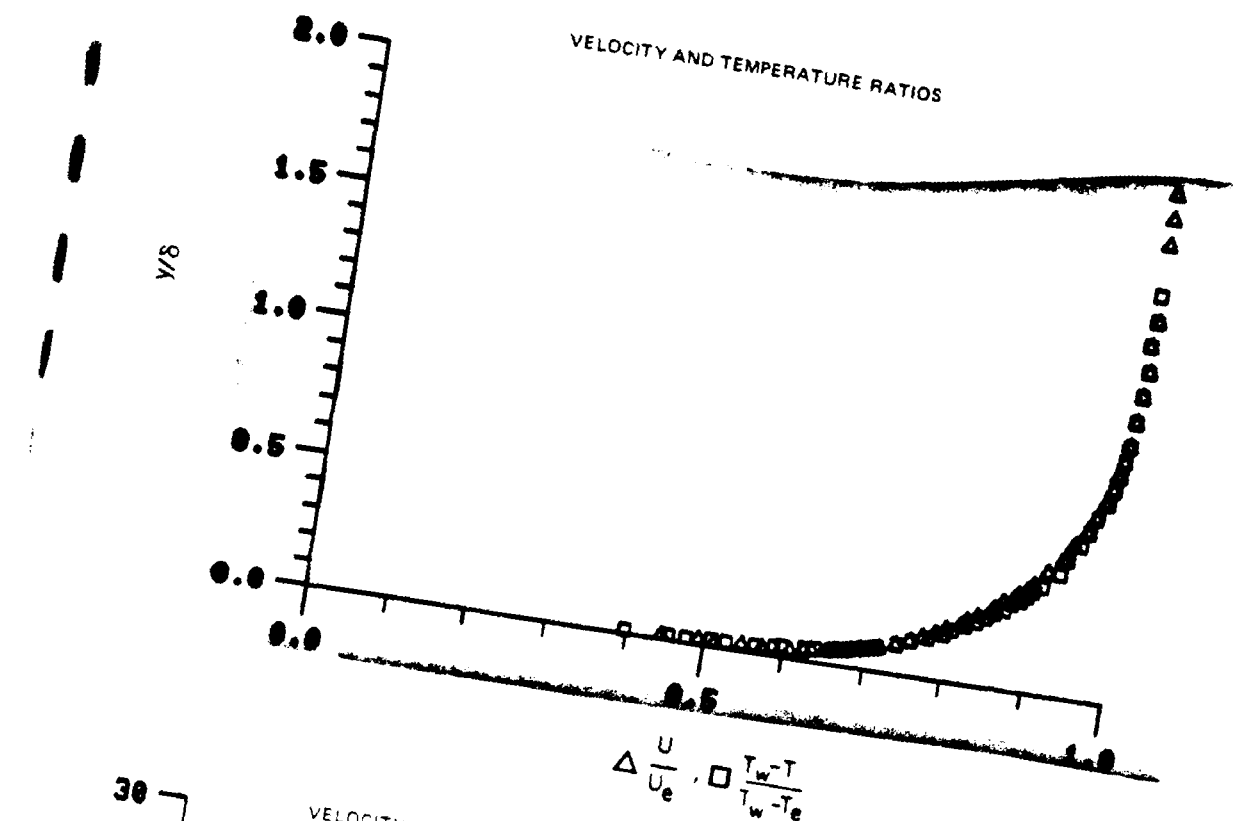


Figure 65. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 4

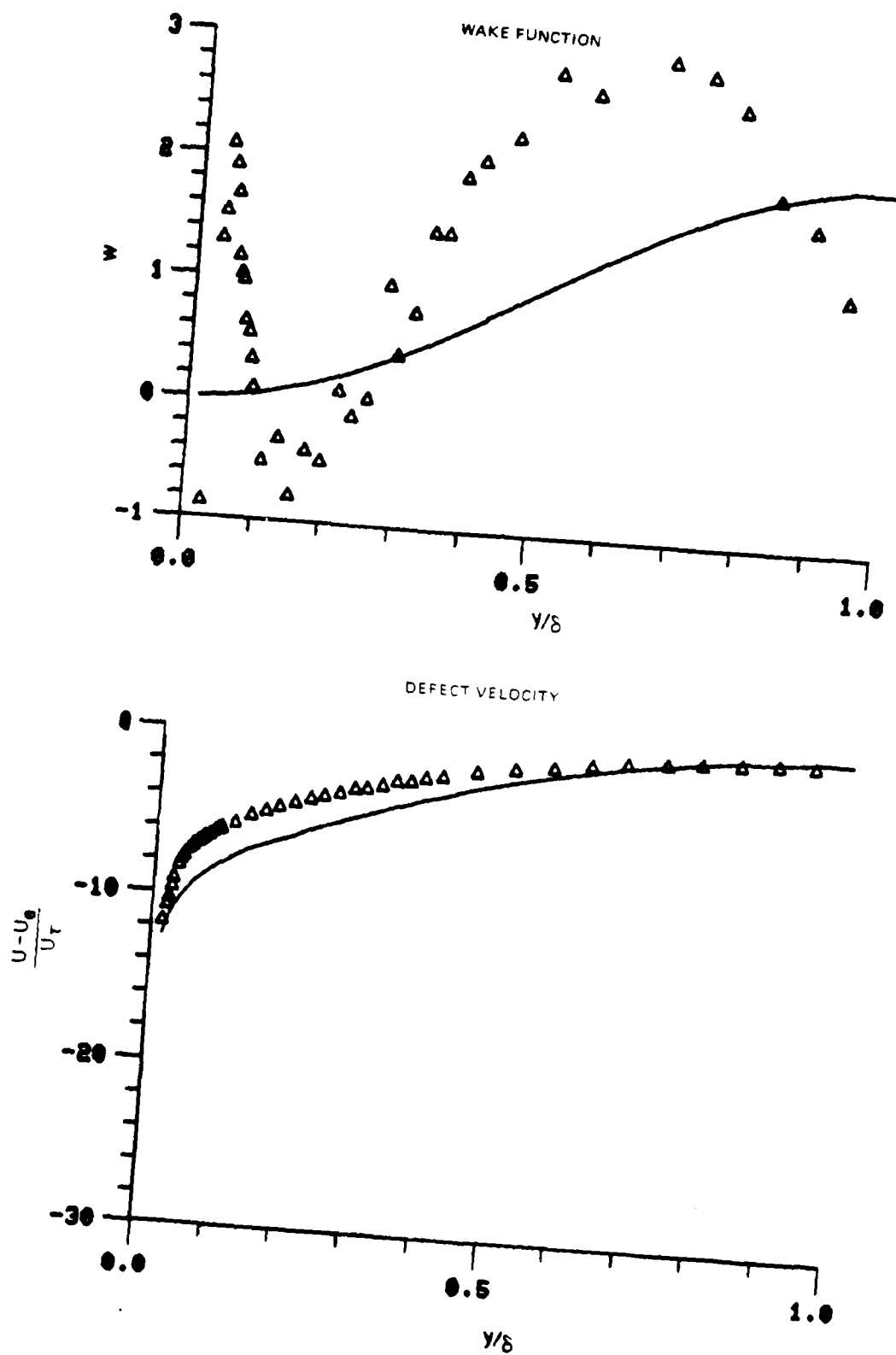


Figure 65. Boundary Layer Velocity Profiles
Run No. 9 Point No. 4

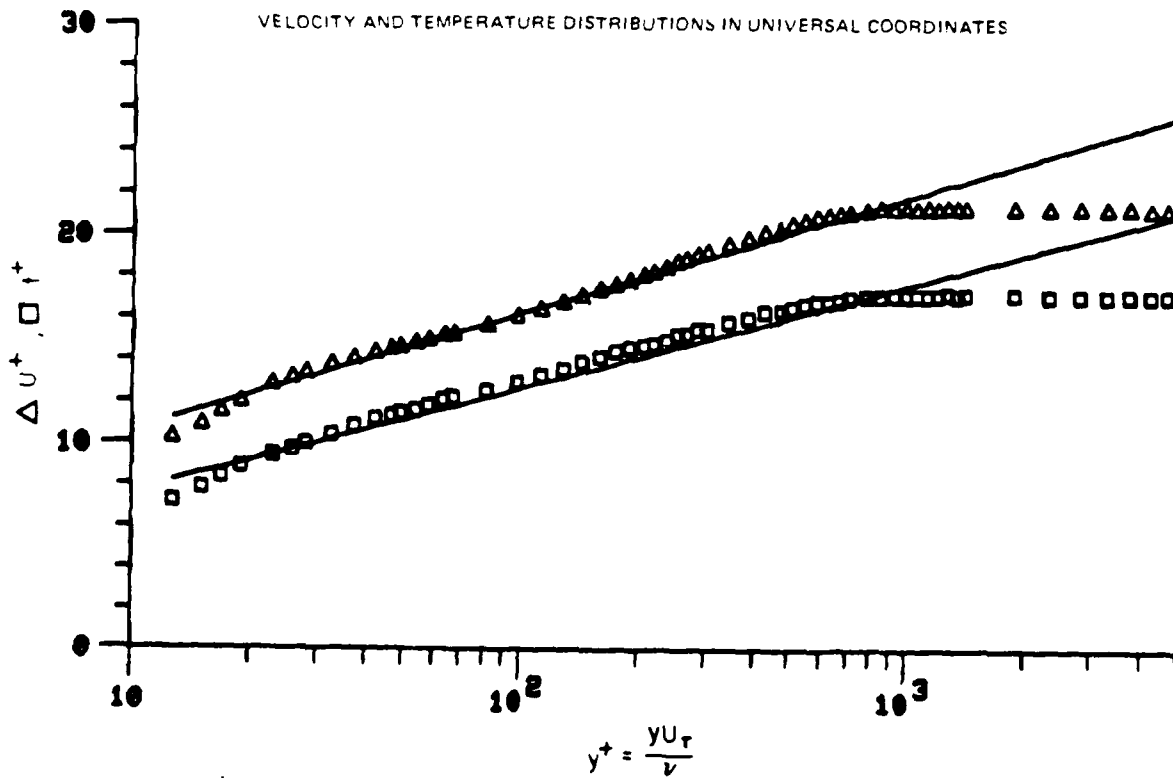
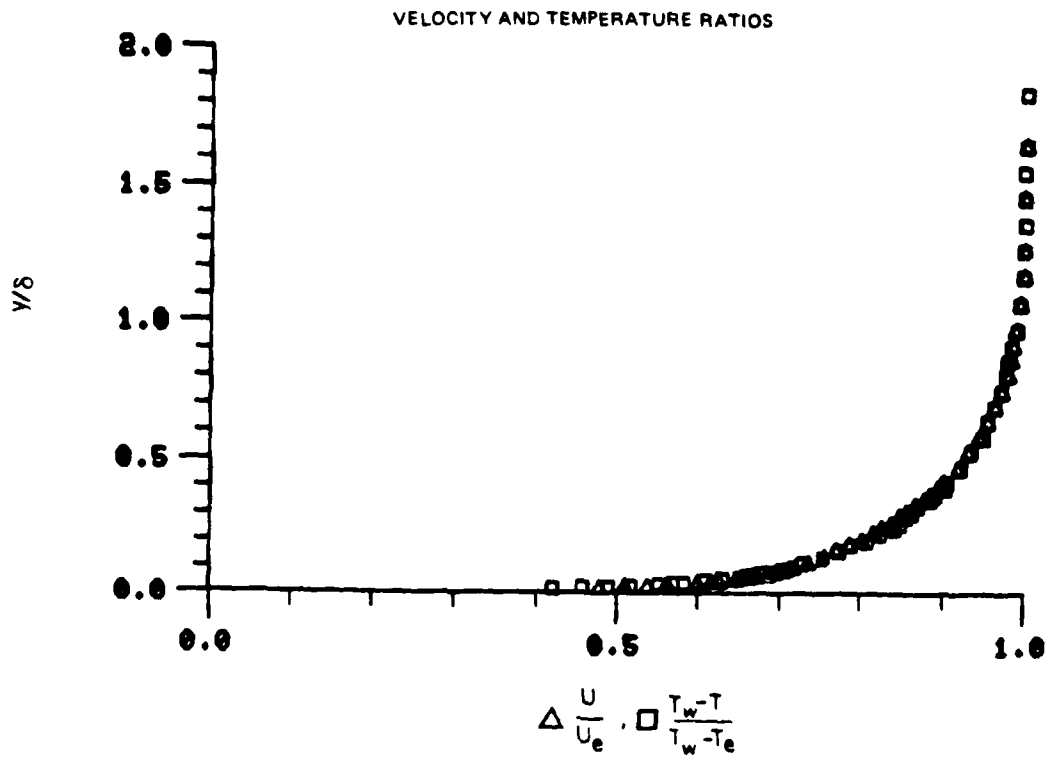


Figure 66. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 5

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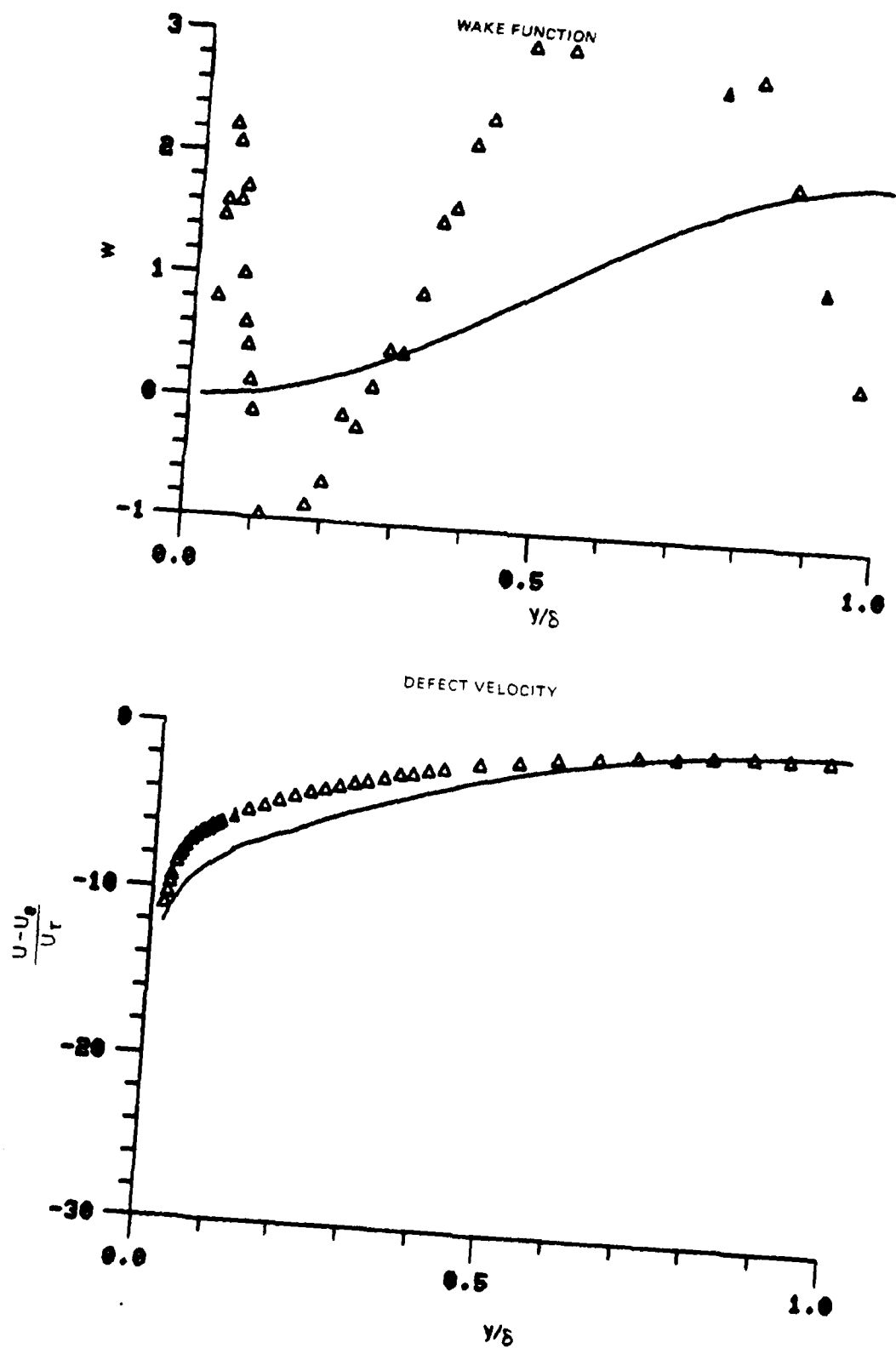


Figure 66. Boundary Layer Velocity Profiles
Run No. 9 Point No. 5

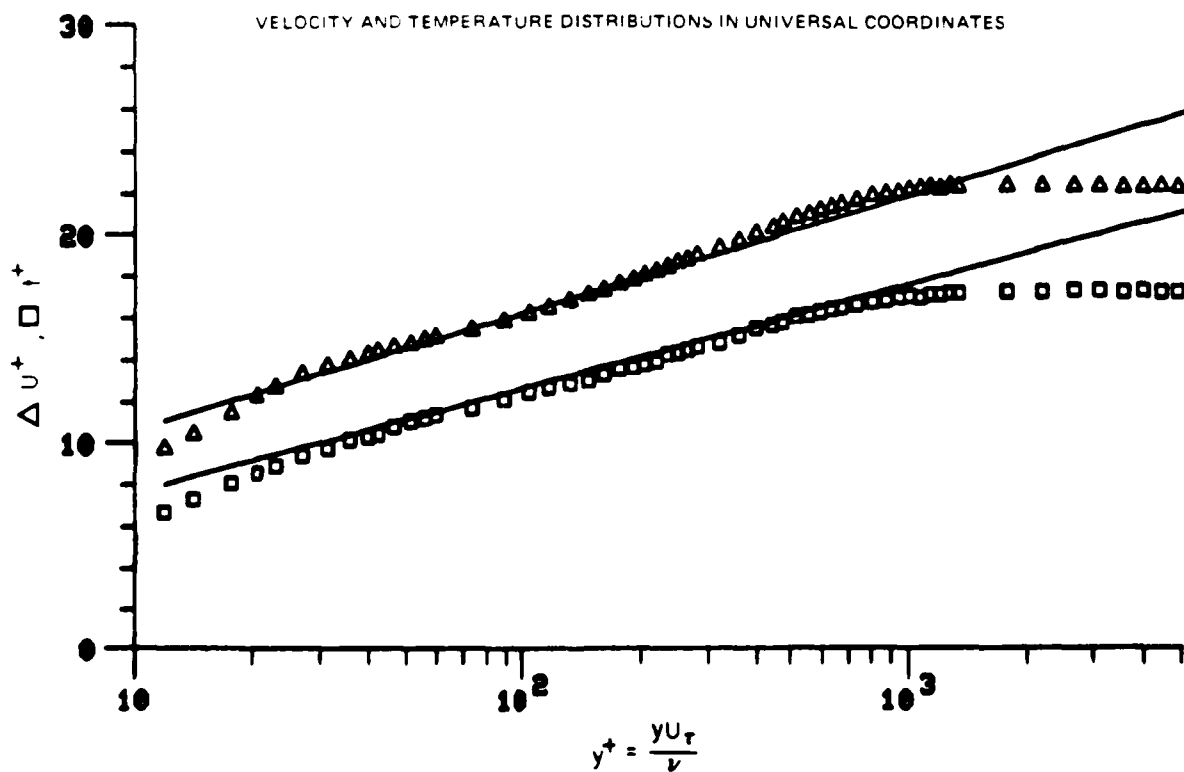
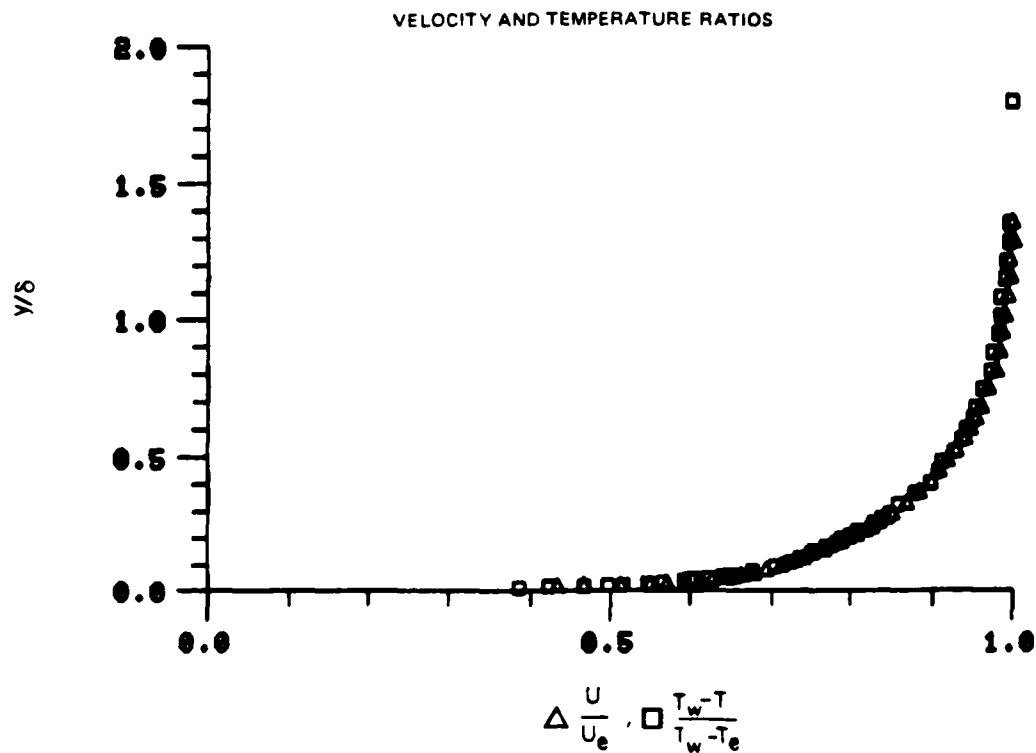


Figure 67. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 6

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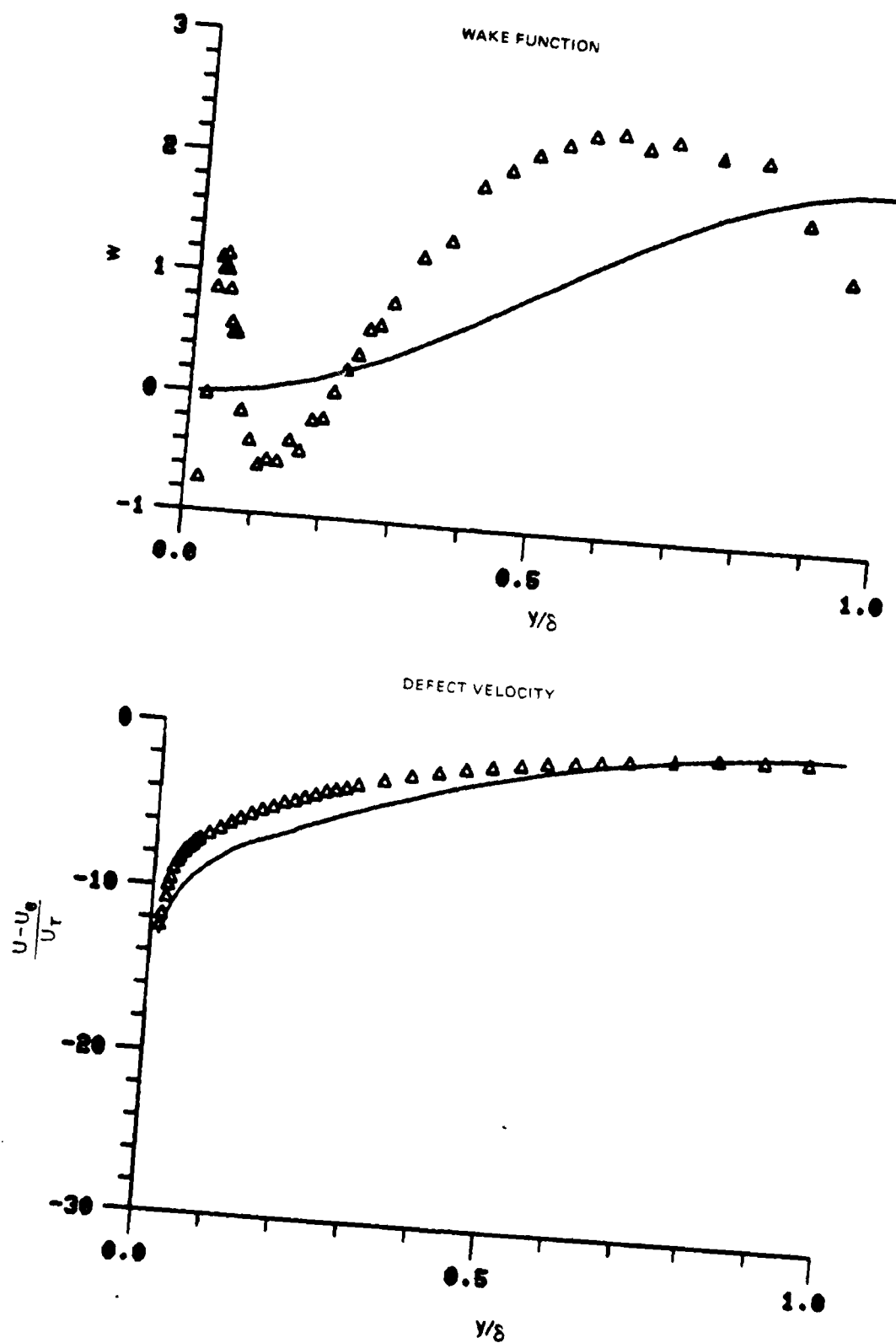


Figure 67. Boundary Layer Velocity Profiles
Run No. 9 Point No. 6

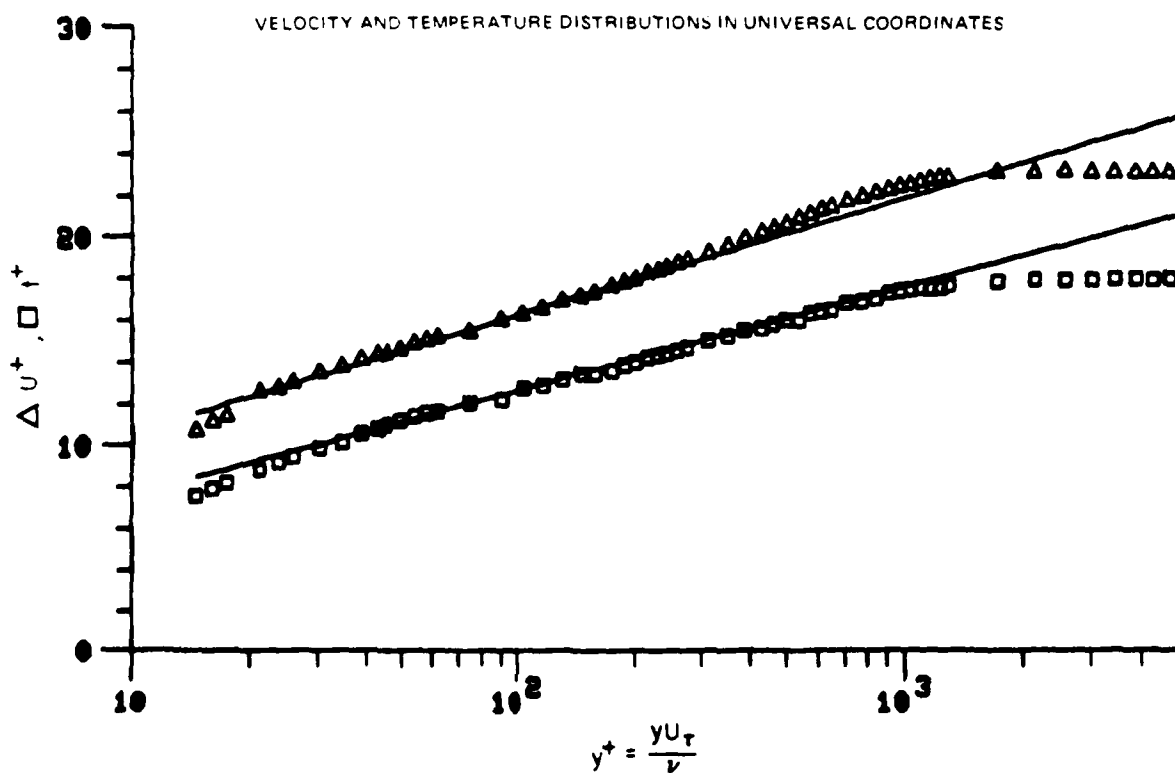
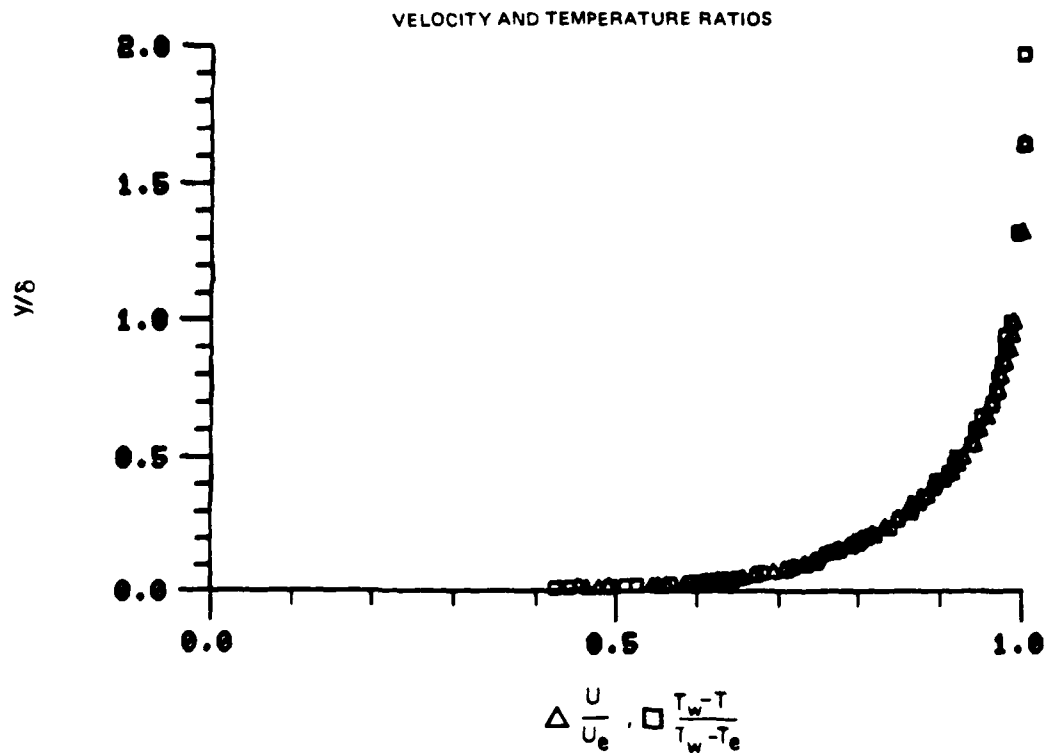


Figure 68. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 7

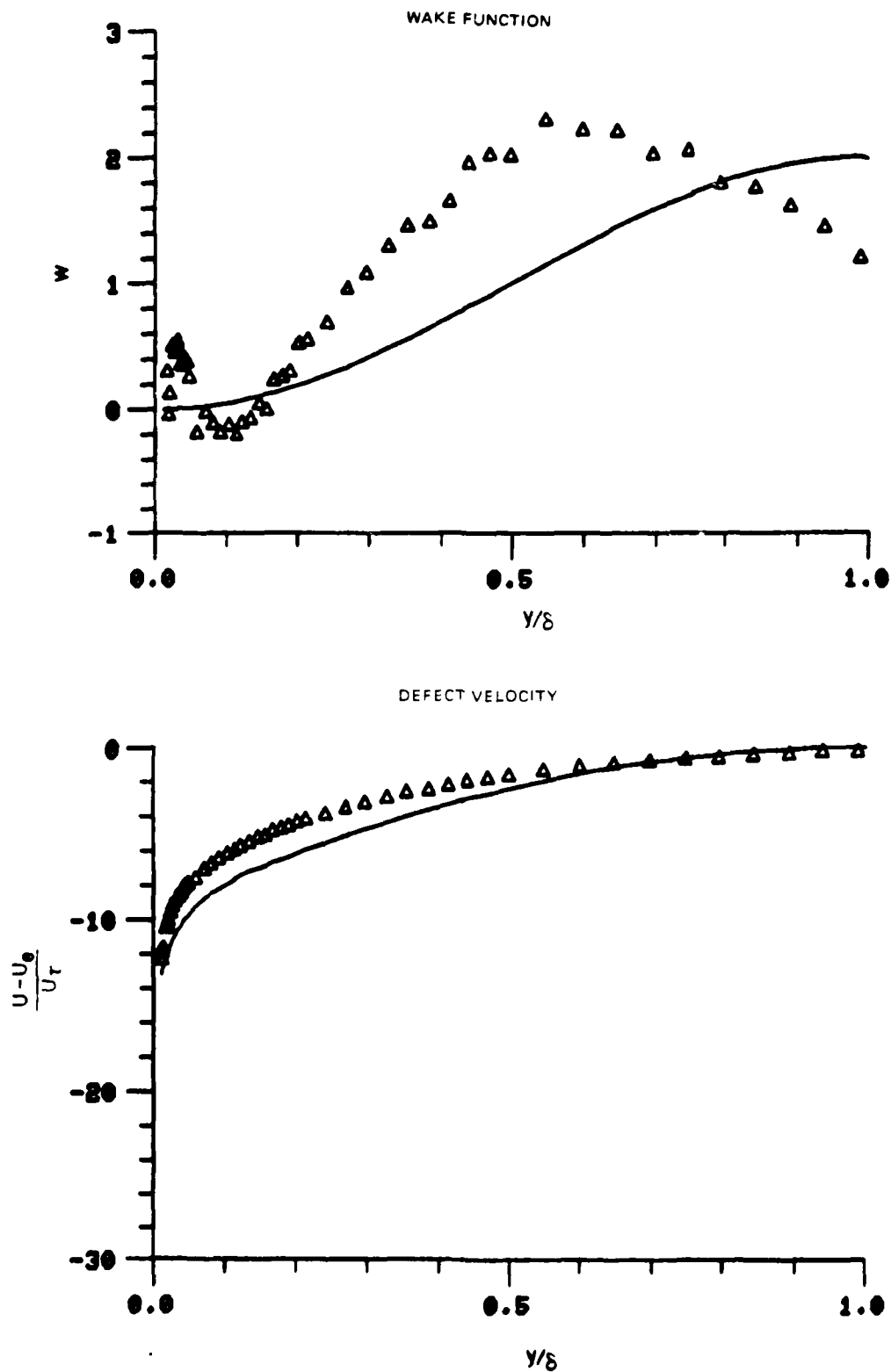


Figure 68. Boundary Layer Velocity Profiles
Run No. 9 Point No. 7

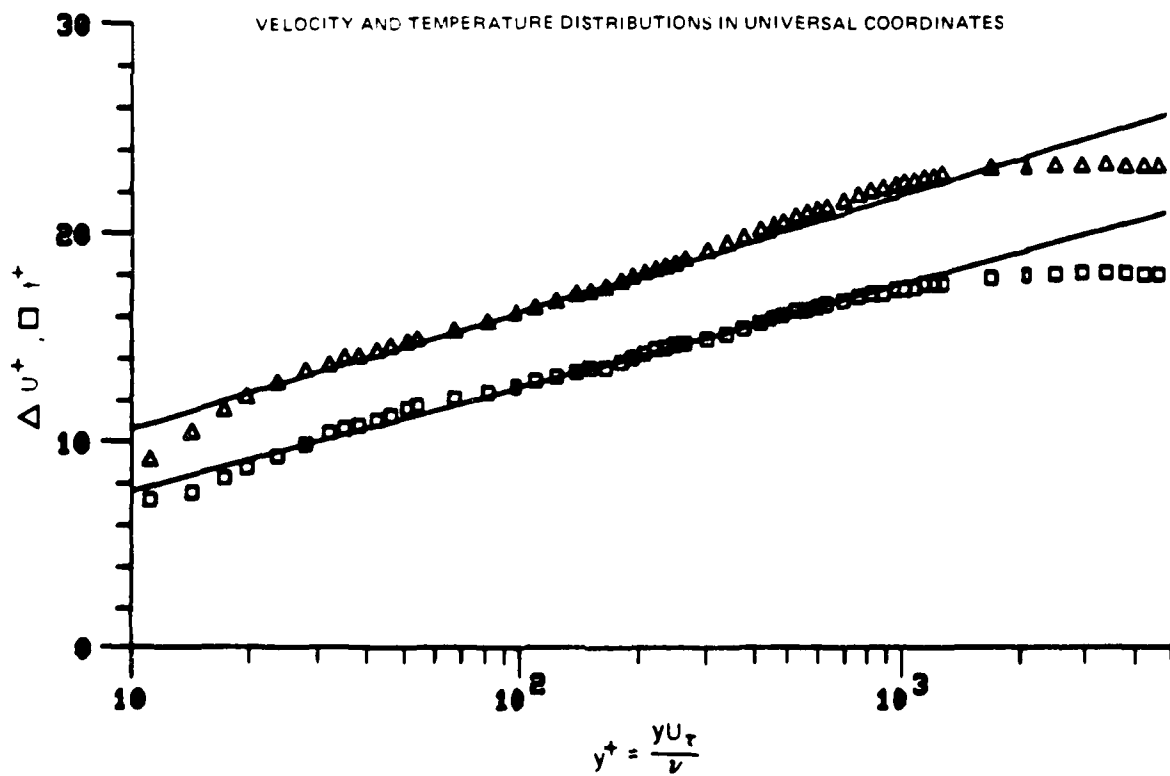
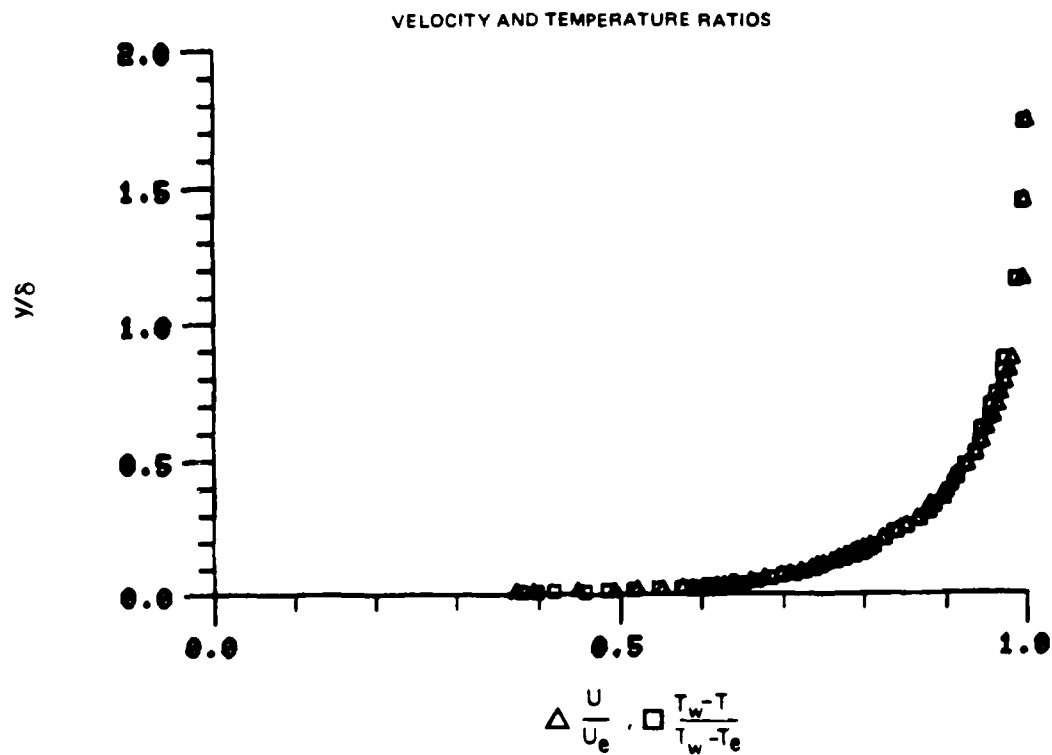


Figure 69. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 8

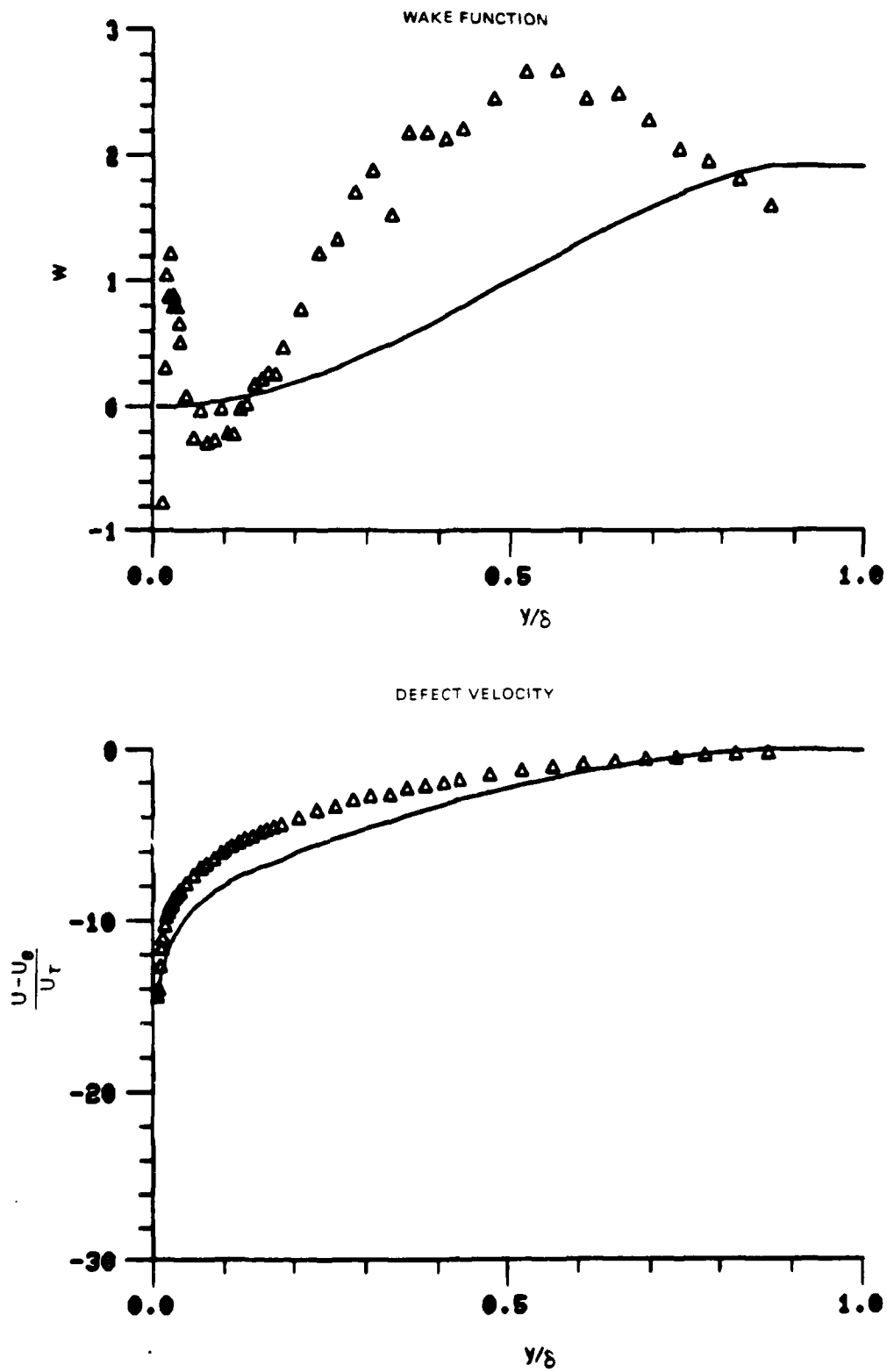


Figure 69. Boundary Layer Velocity Profiles
Run No. 9 Point No. 8

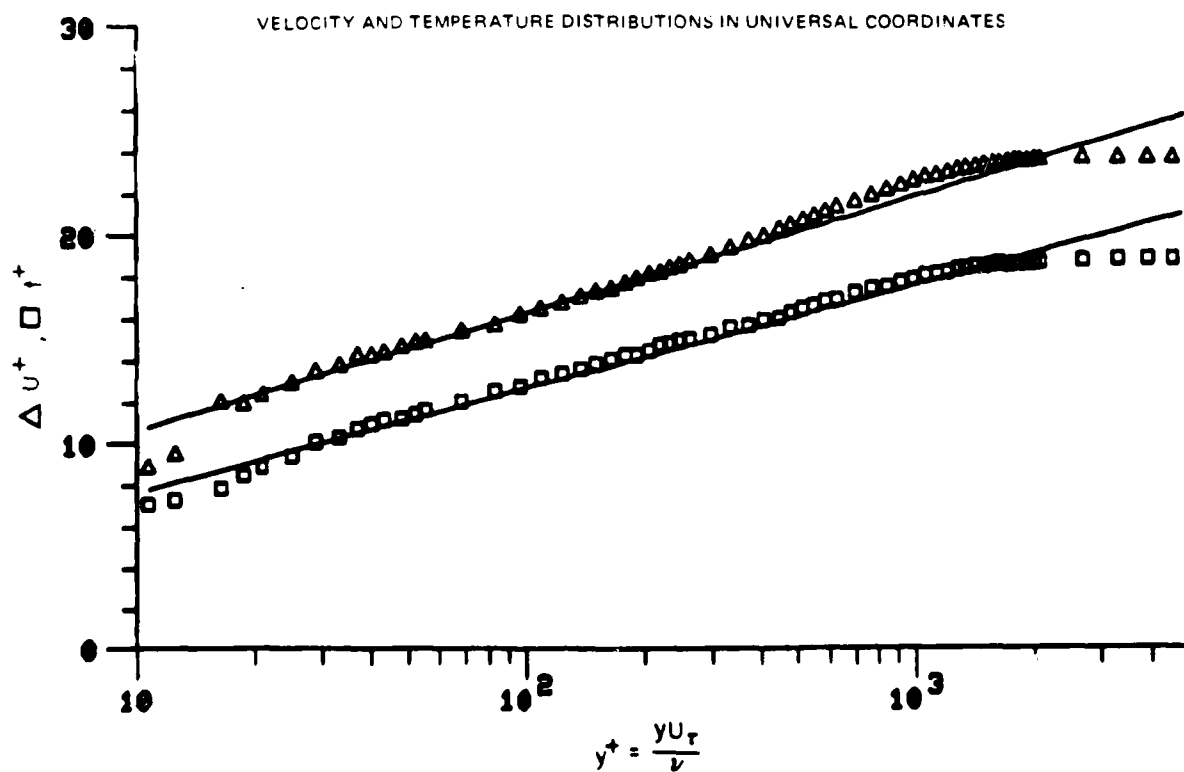
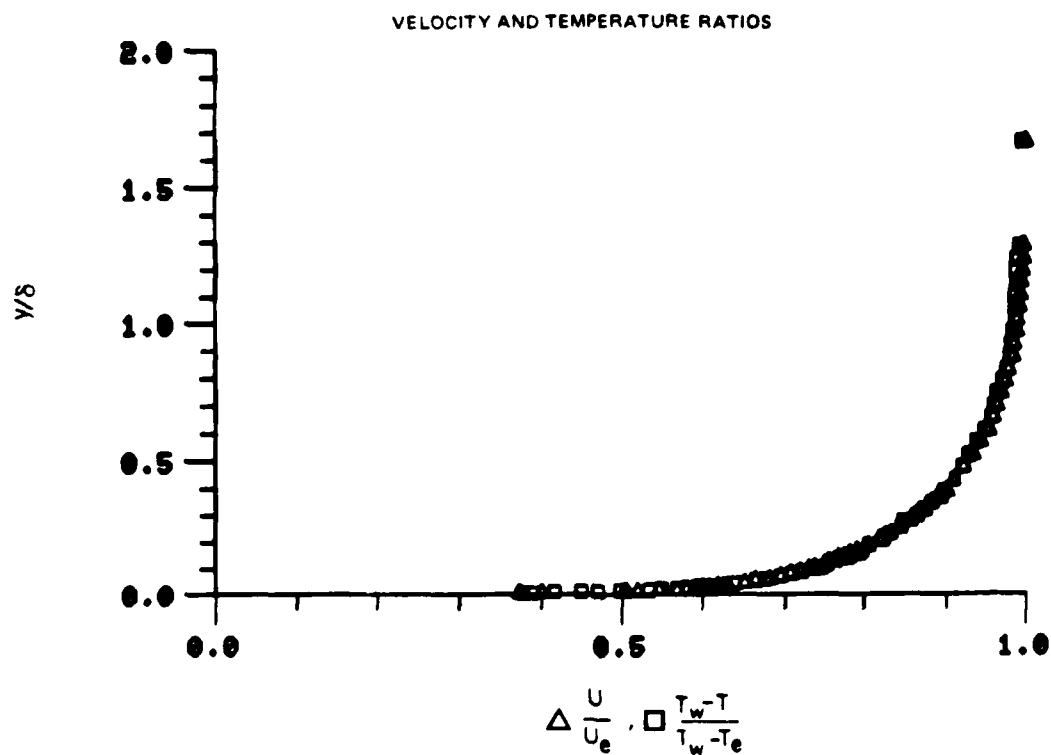


Figure 70. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 10 78-12-100-1

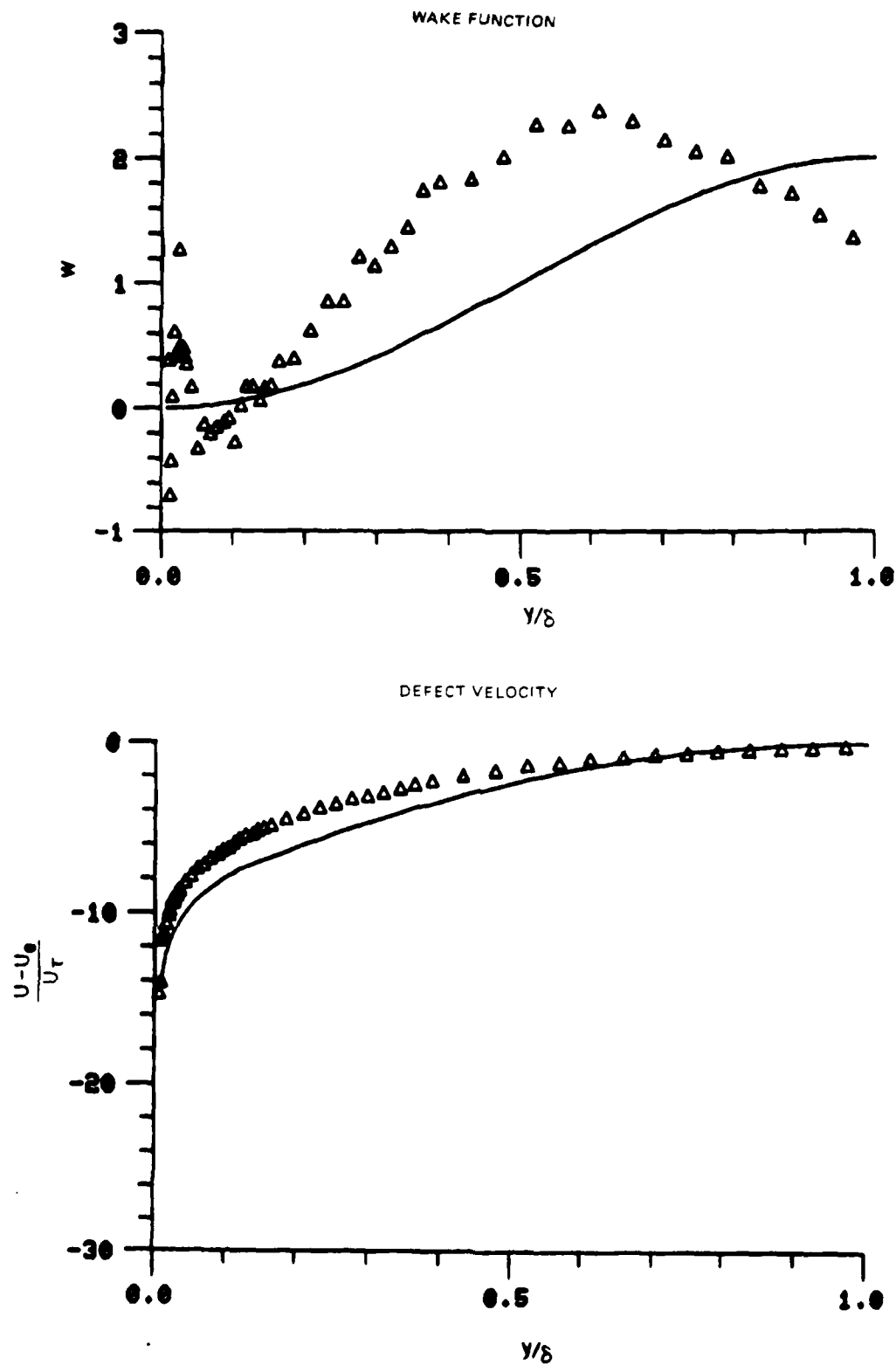


Figure 70. Boundary Layer Velocity Profiles
Run No. 9 Point No. 10

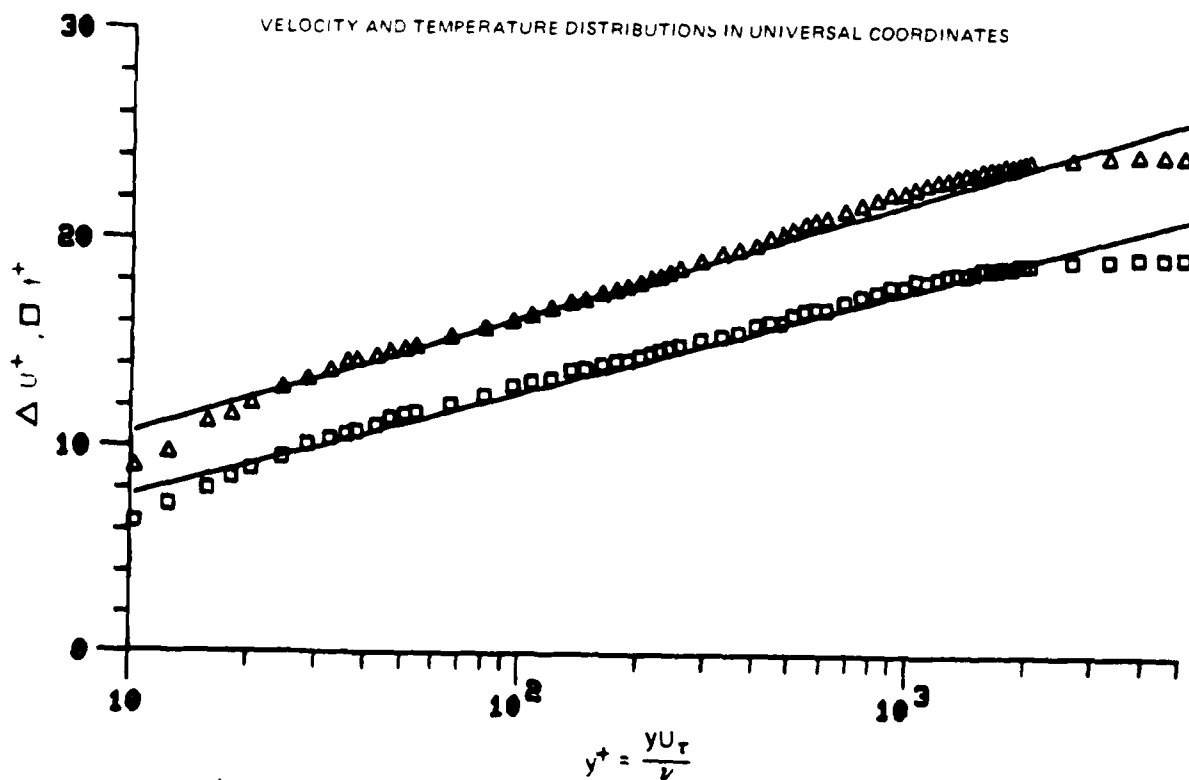
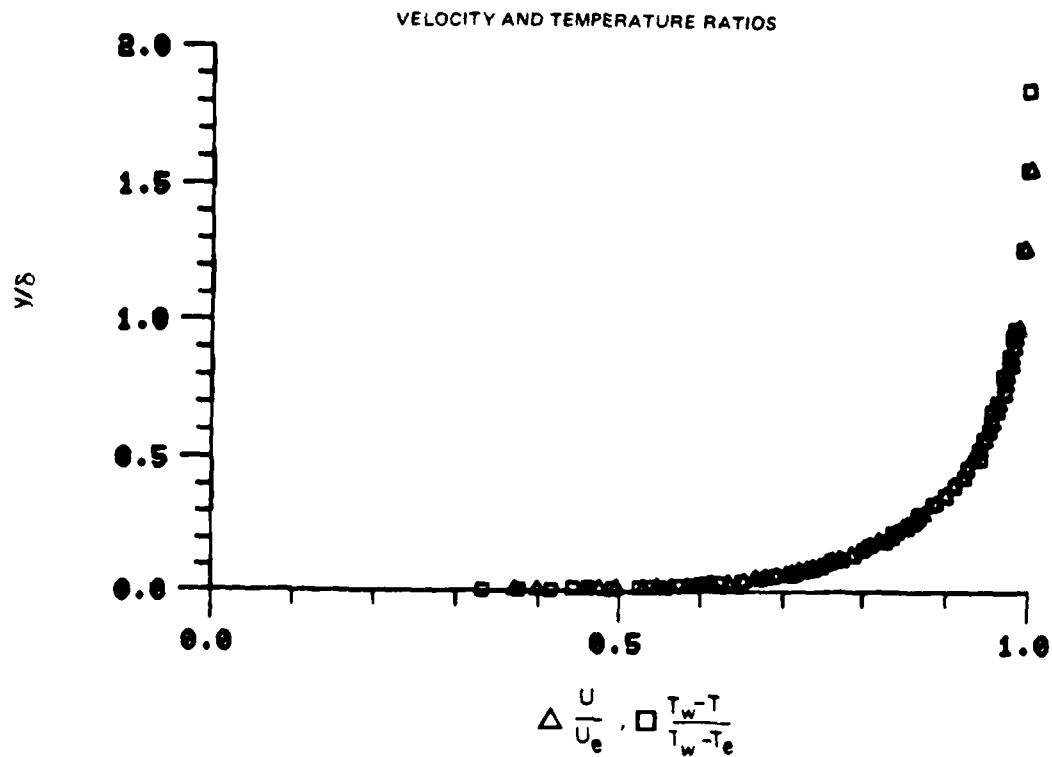


Figure 71. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 12

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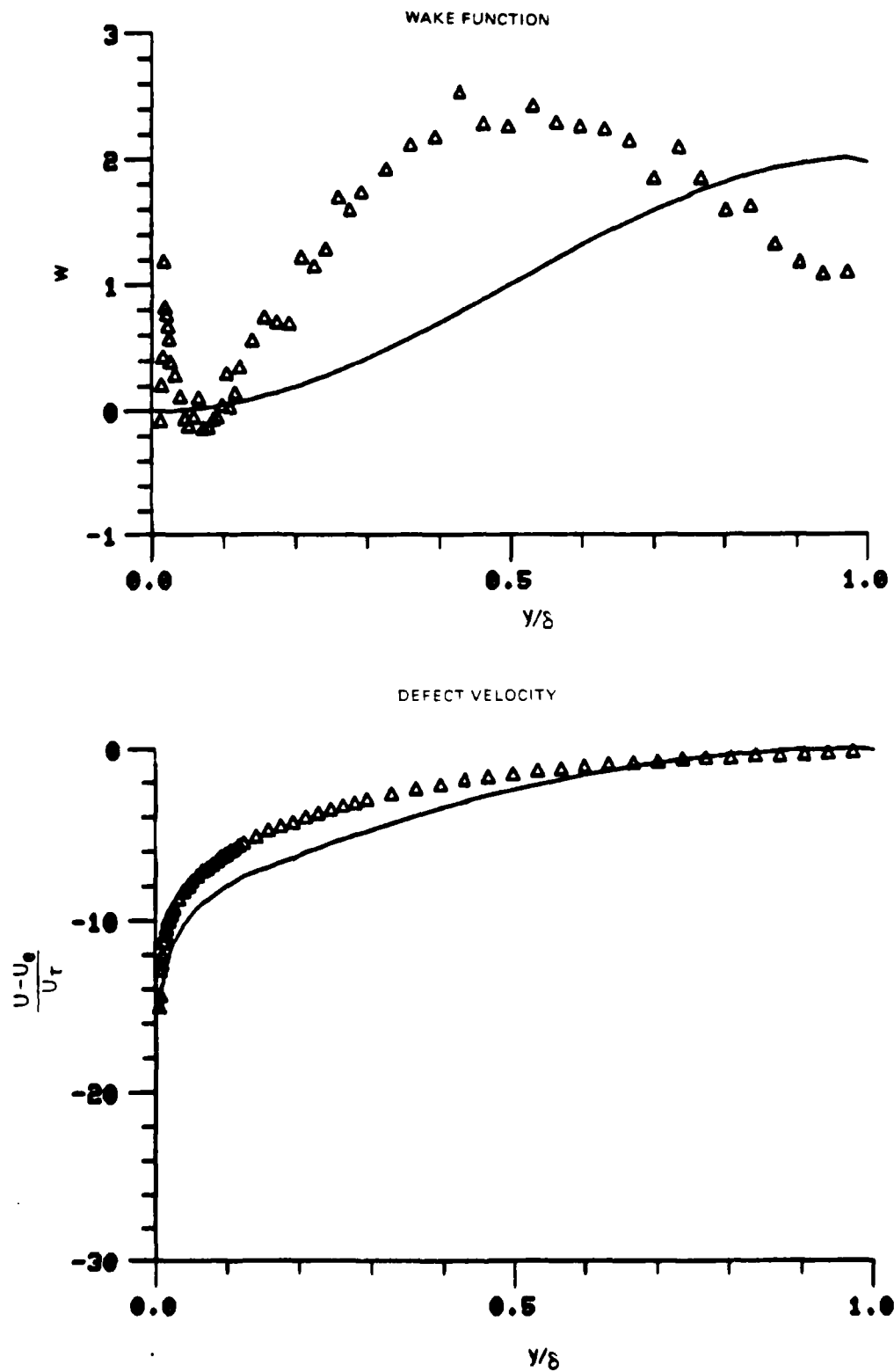


Figure 71. Boundary Layer Velocity Profiles
Run No. 9 Point No. 12

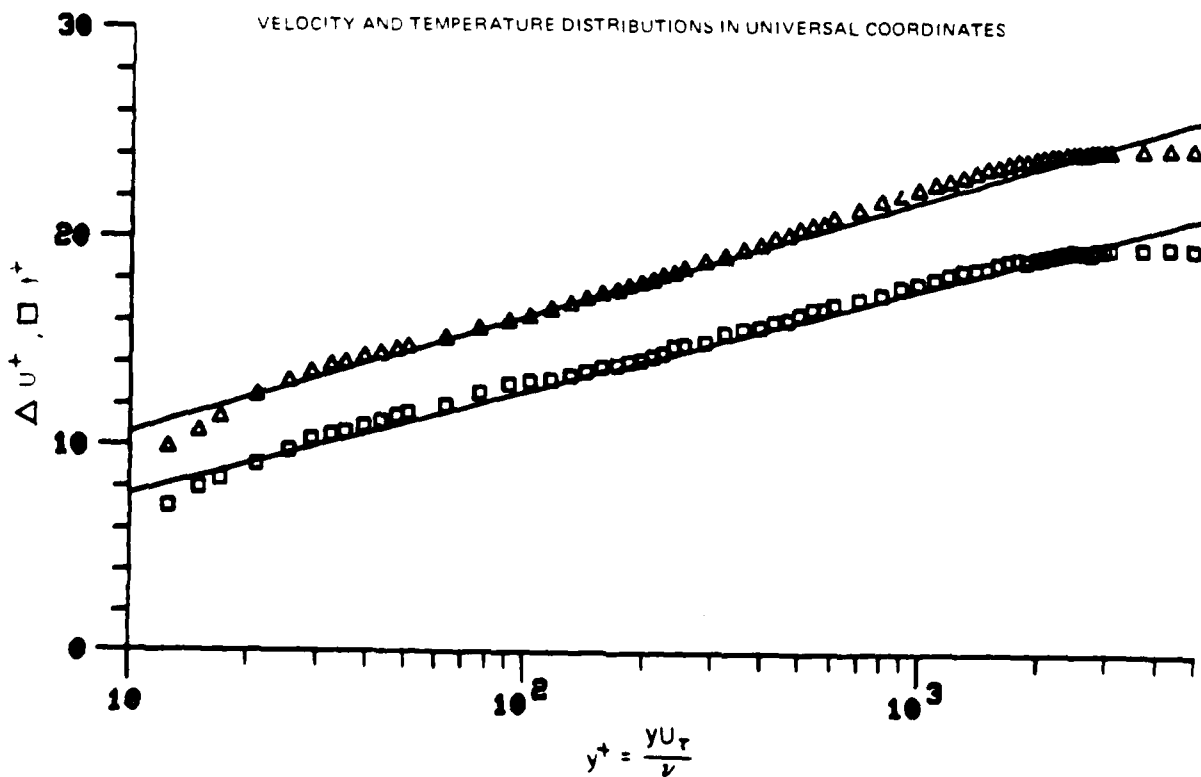
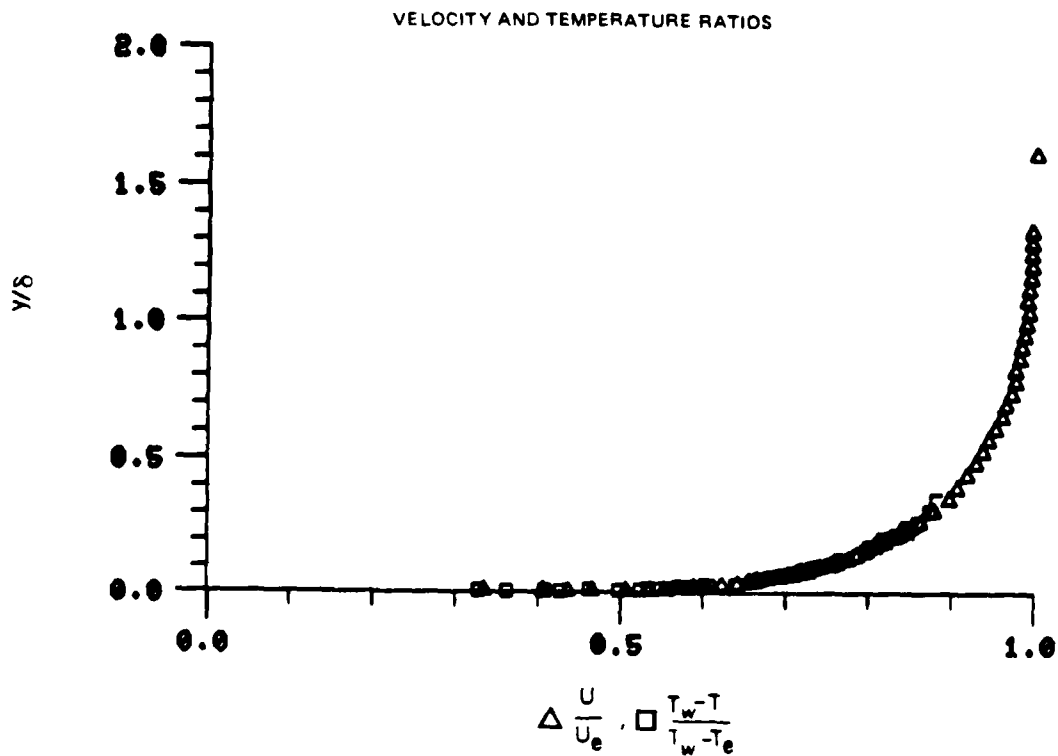


Figure 72. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 14

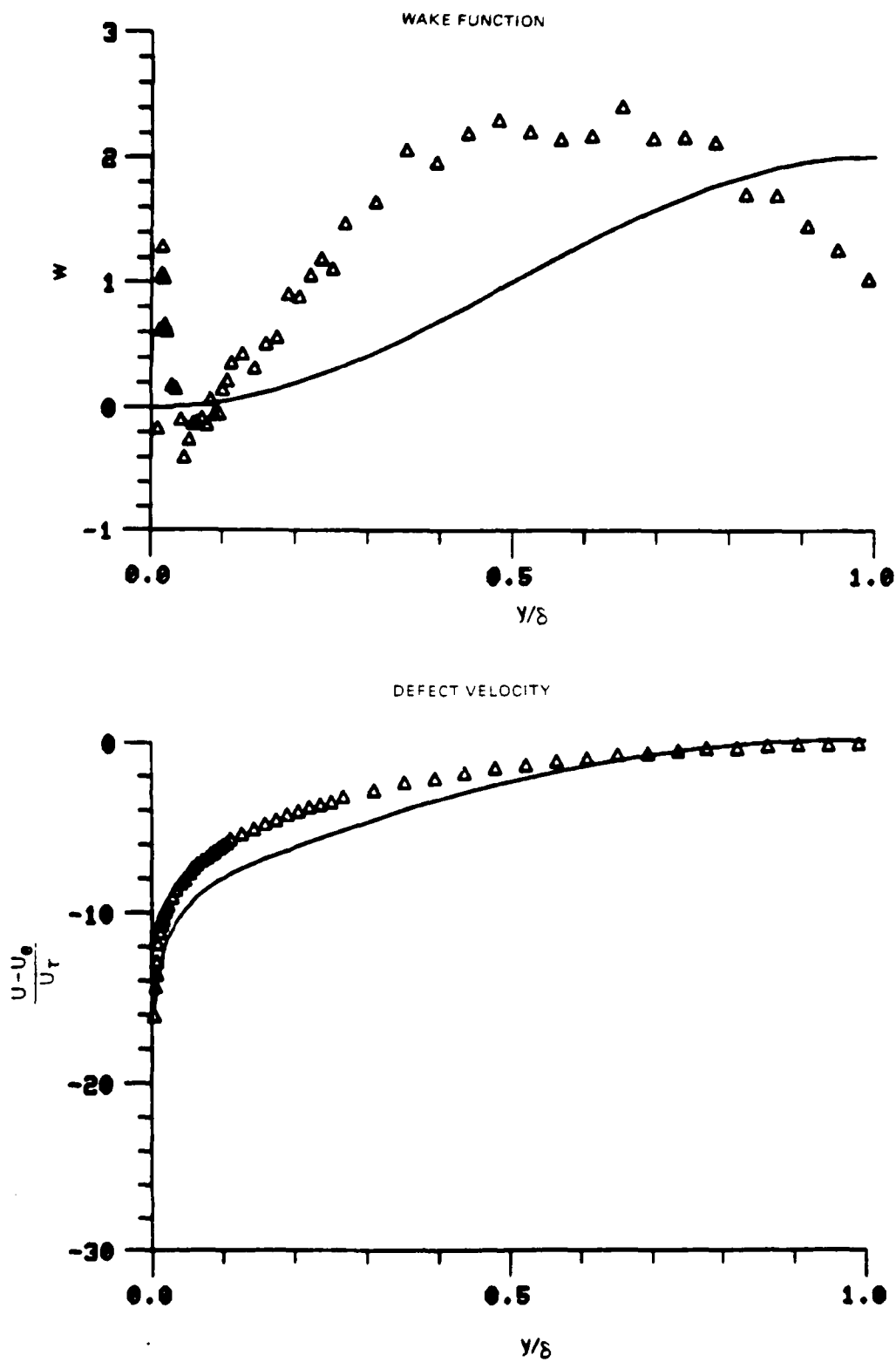


Figure 72. Boundary Layer Velocity Profiles
Run No. 9 Point No. 14

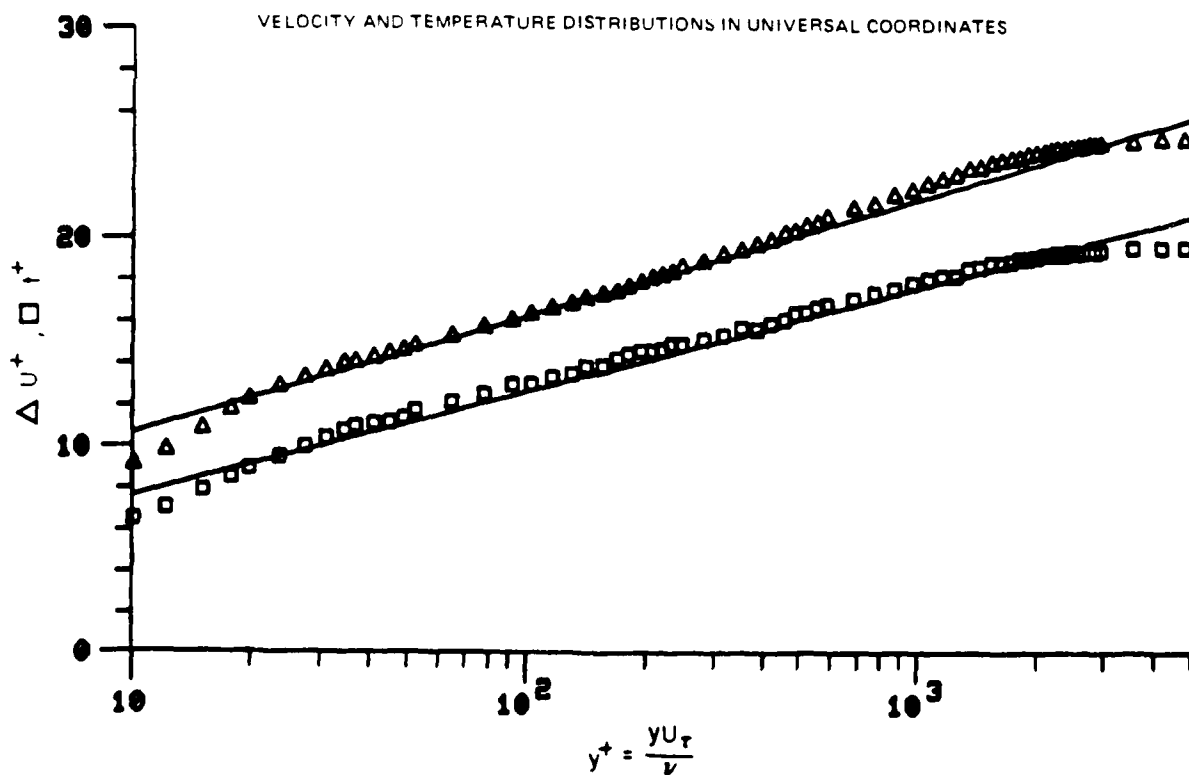
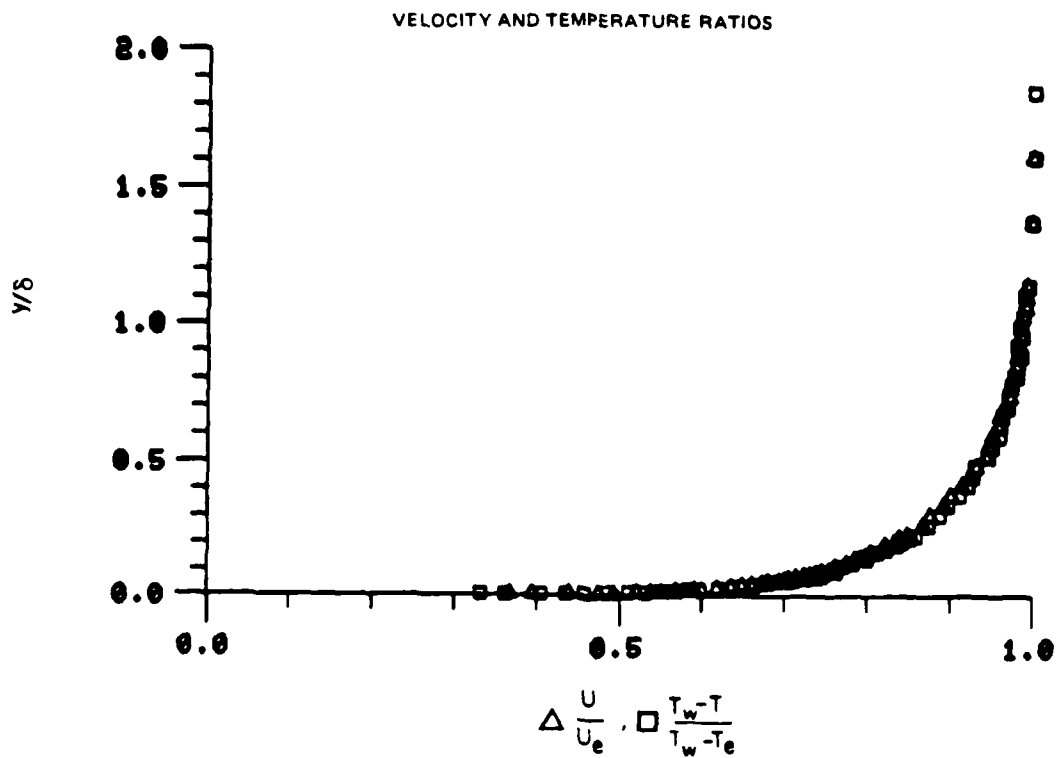


Figure 73. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 16

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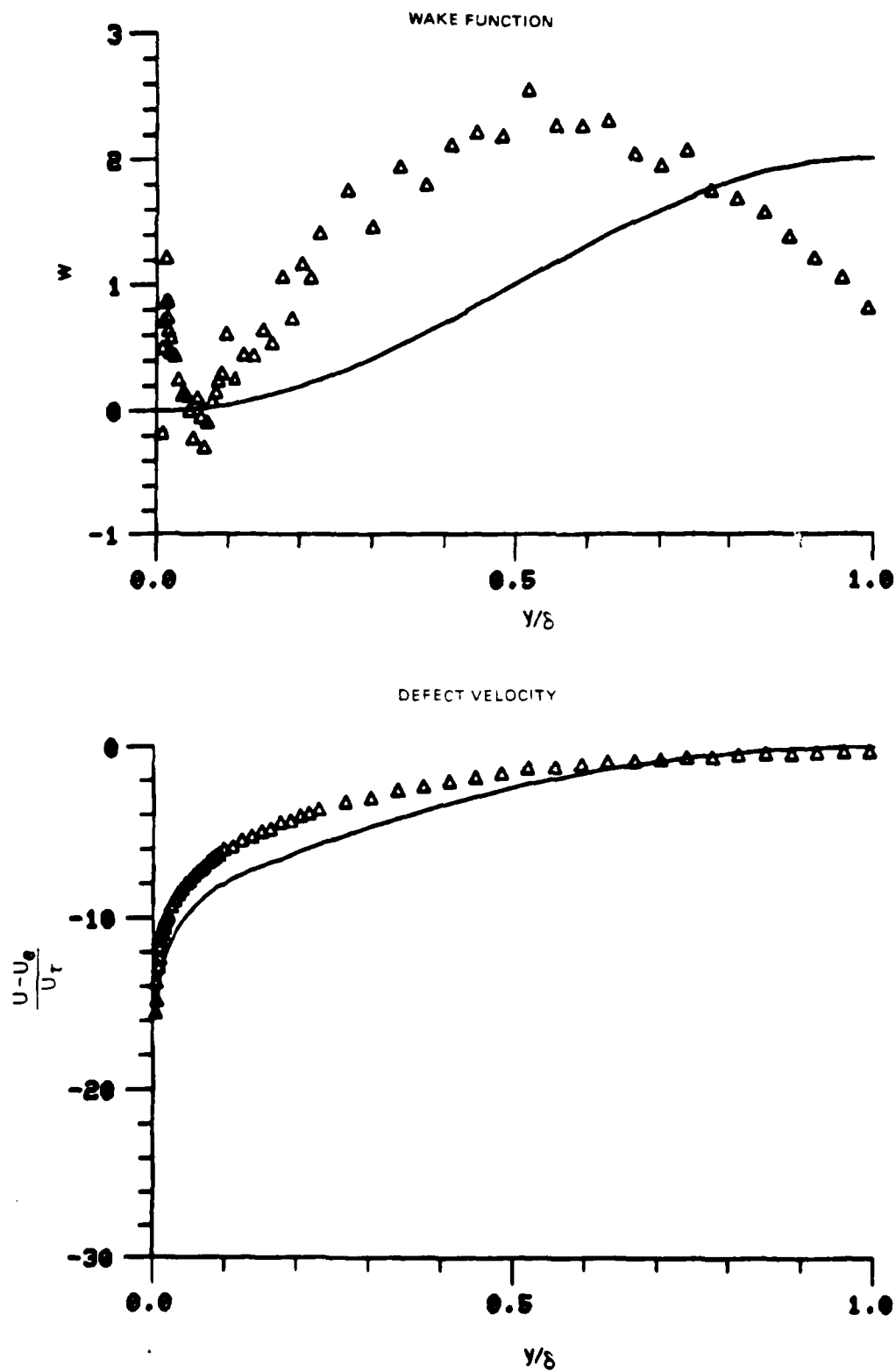


Figure 73. Boundary Layer Velocity Profiles
Run No. 9 Point No. 16

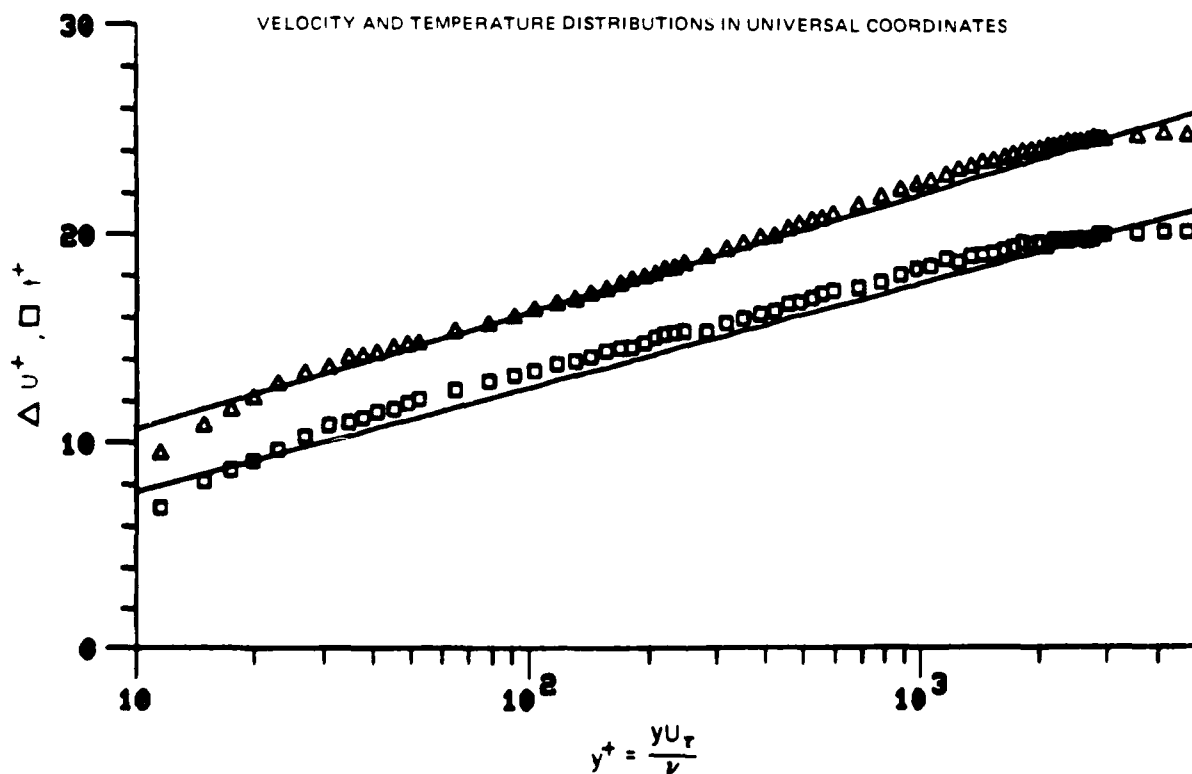
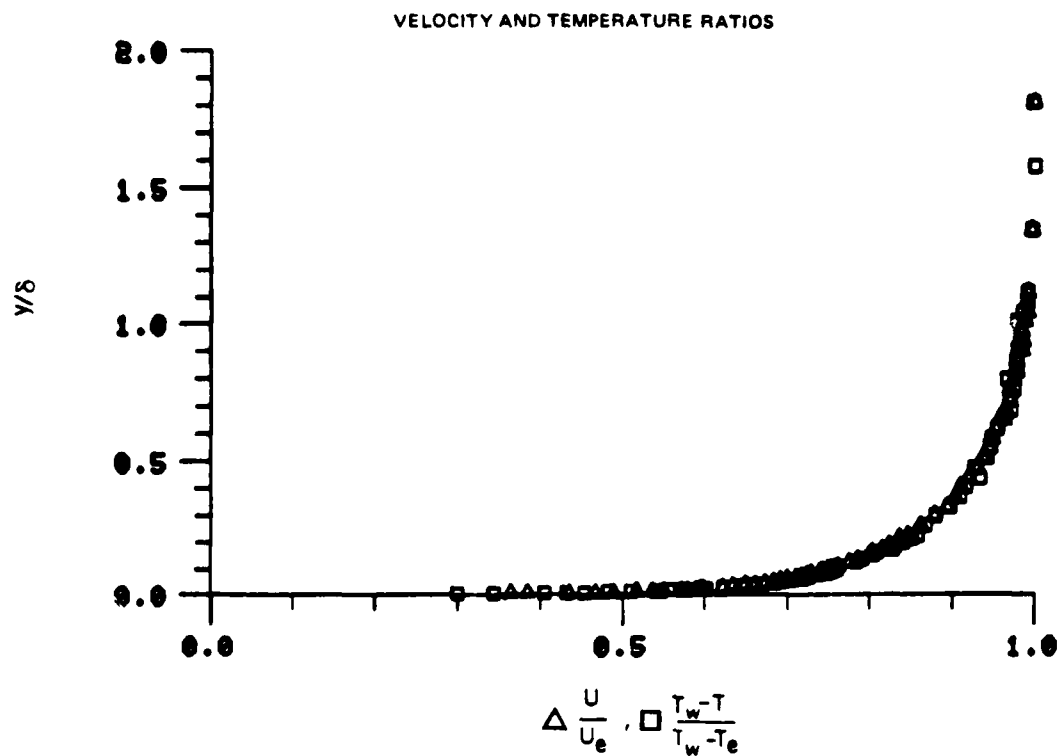


Figure 74. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 17

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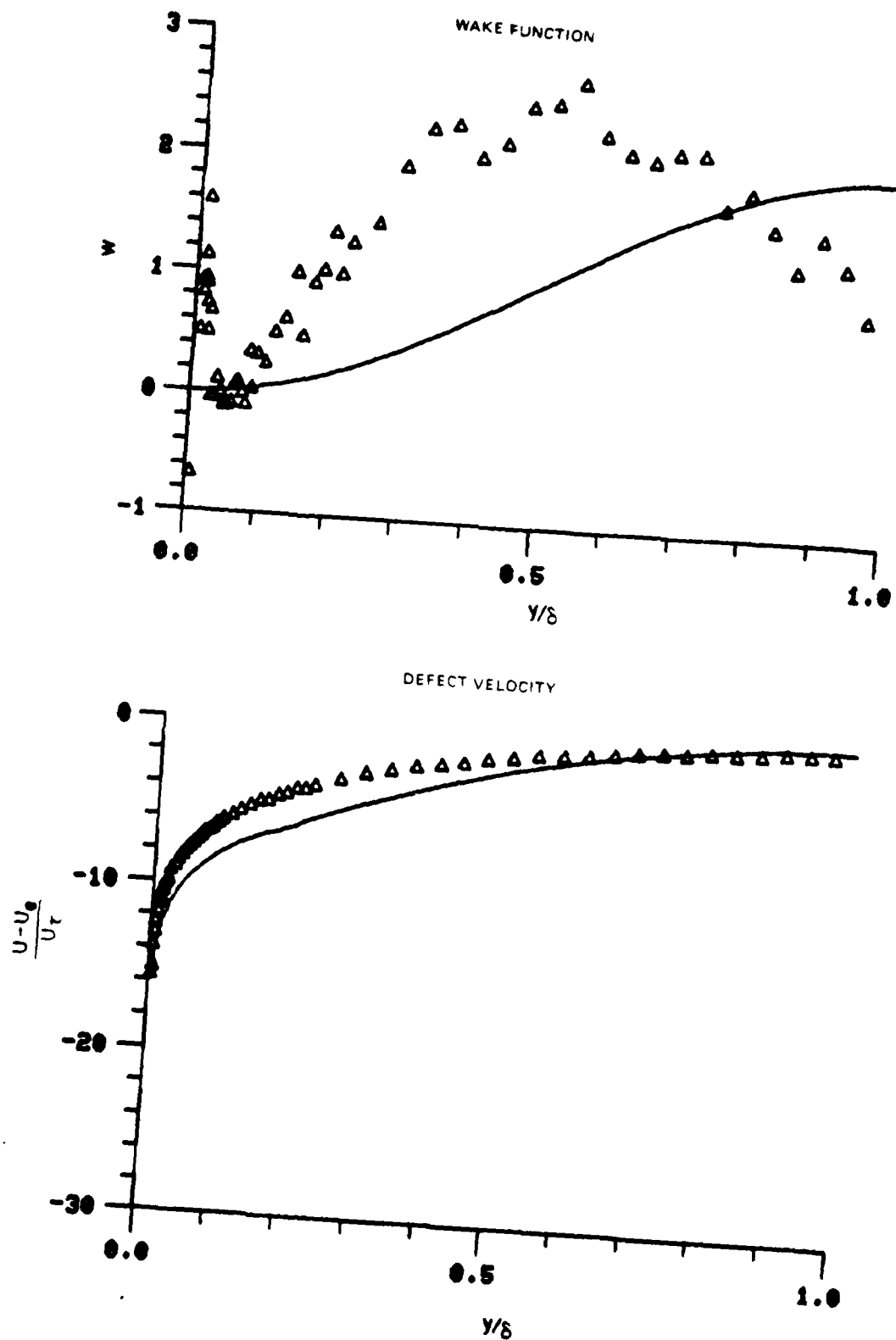


Figure 74. Boundary Layer Velocity Profiles
Run No. 9 Point No. 17

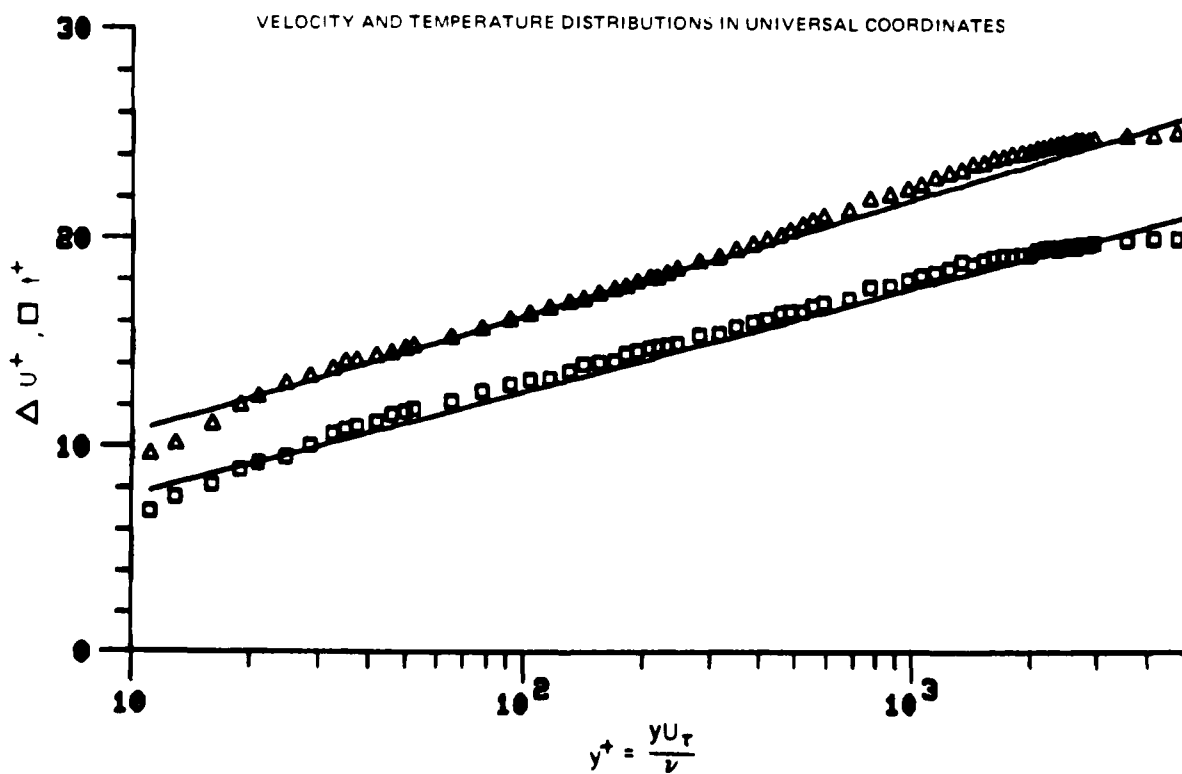
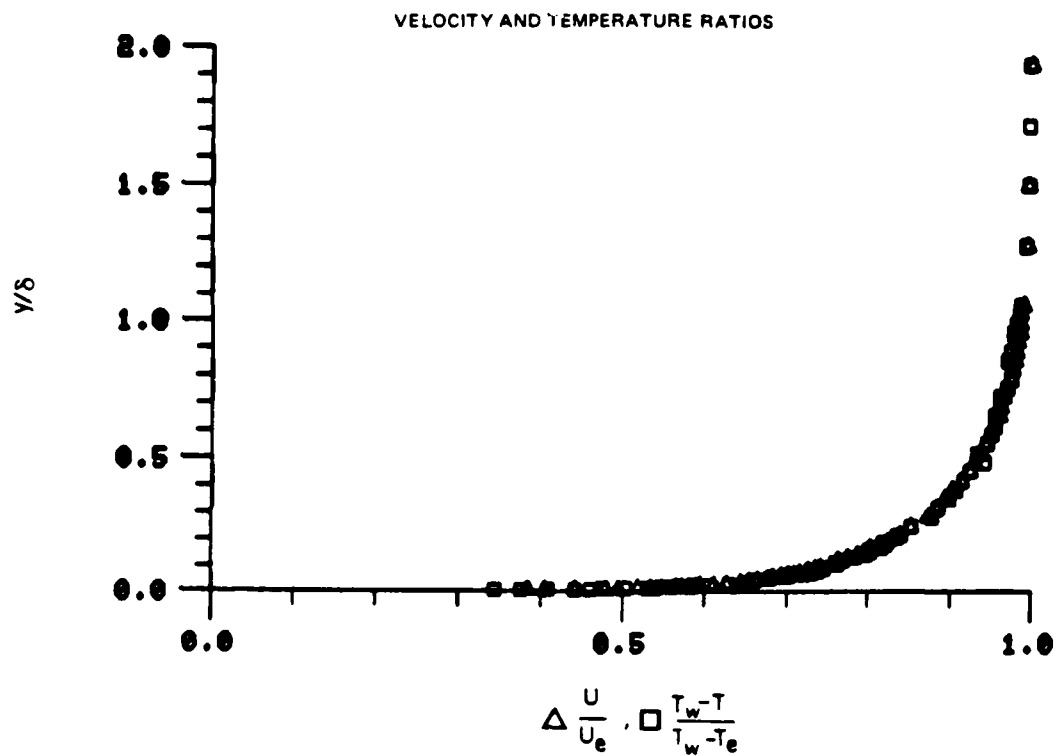


Figure 75. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 18

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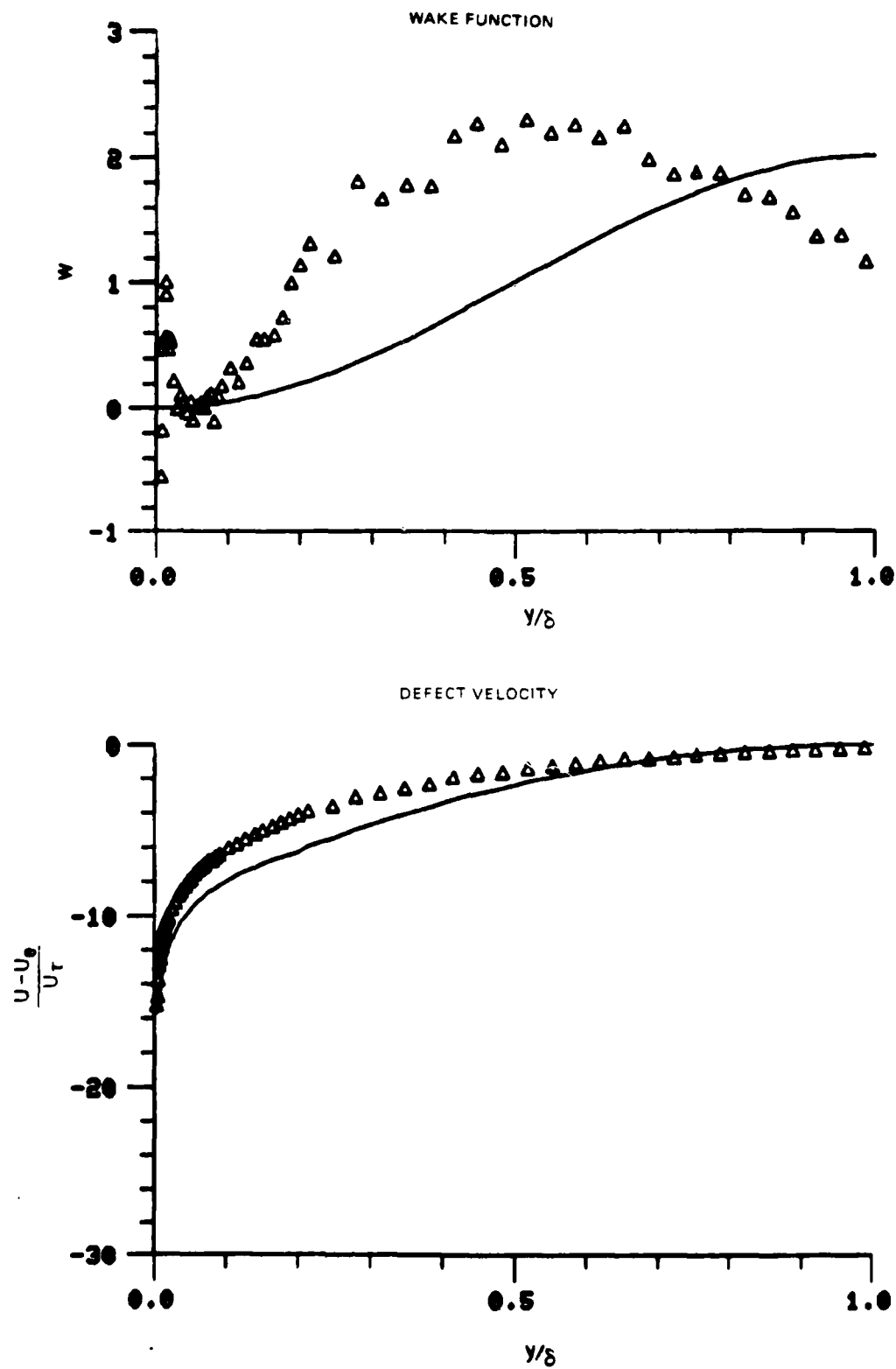


Figure 75. Boundary Layer Velocity Profiles
Run No. 9 Point No. 18

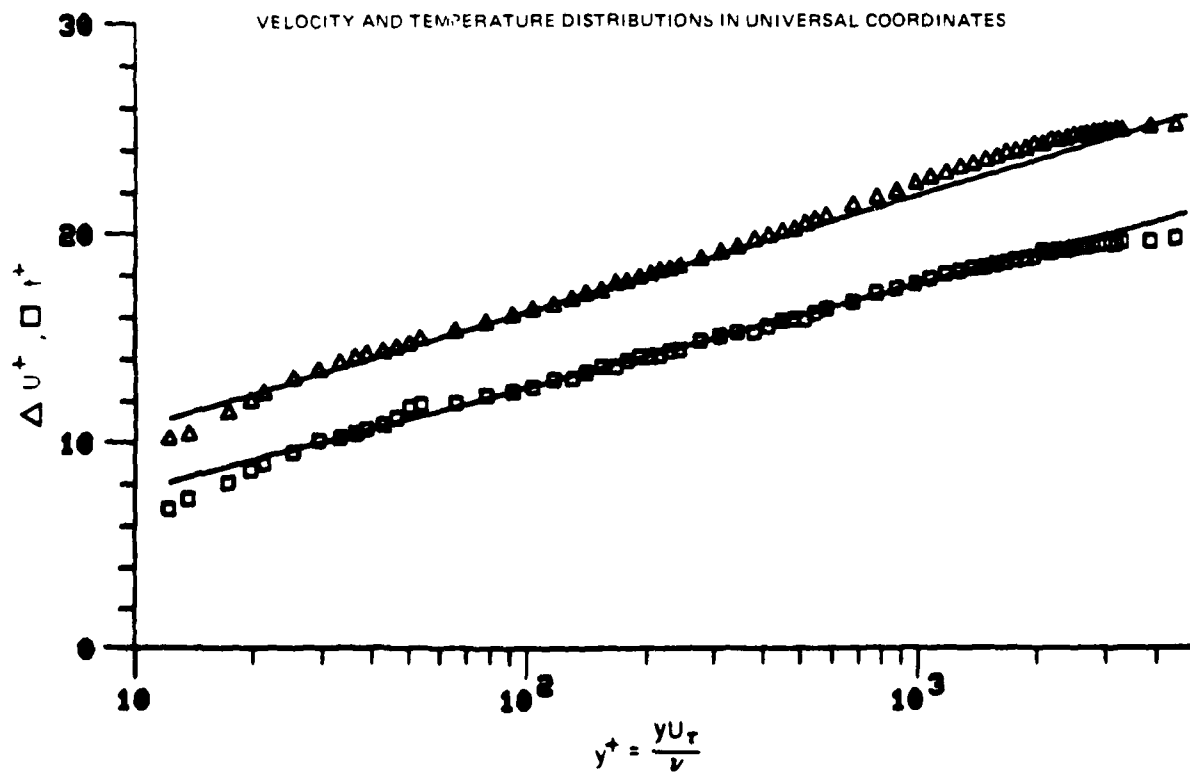
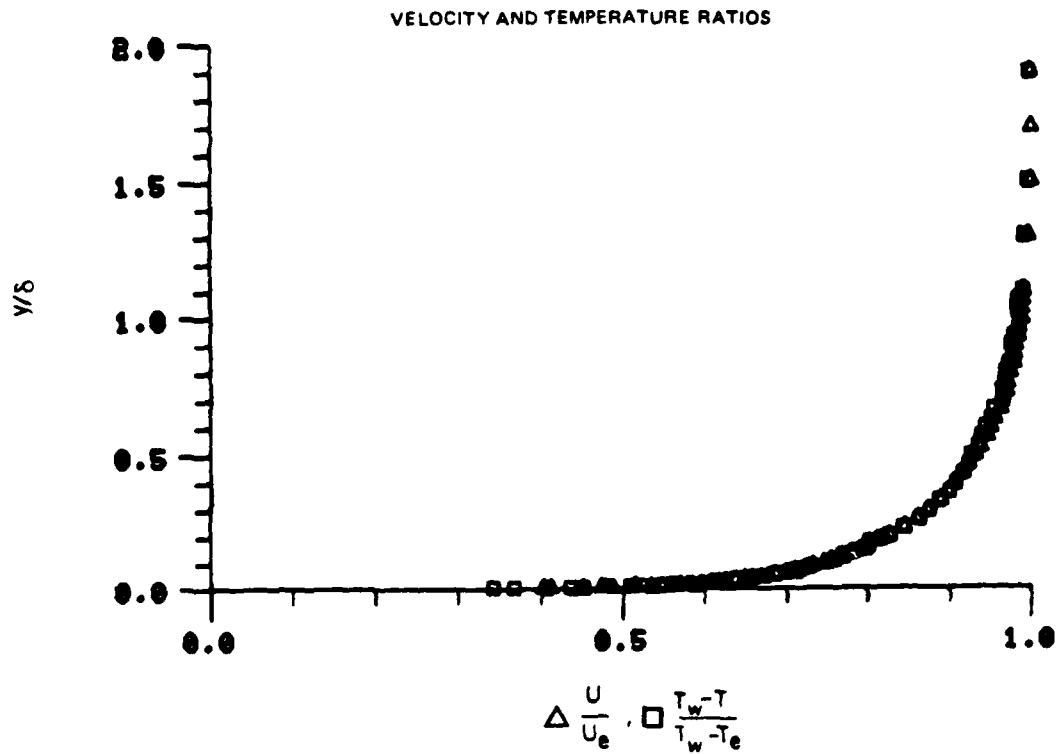


Figure 76. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 19

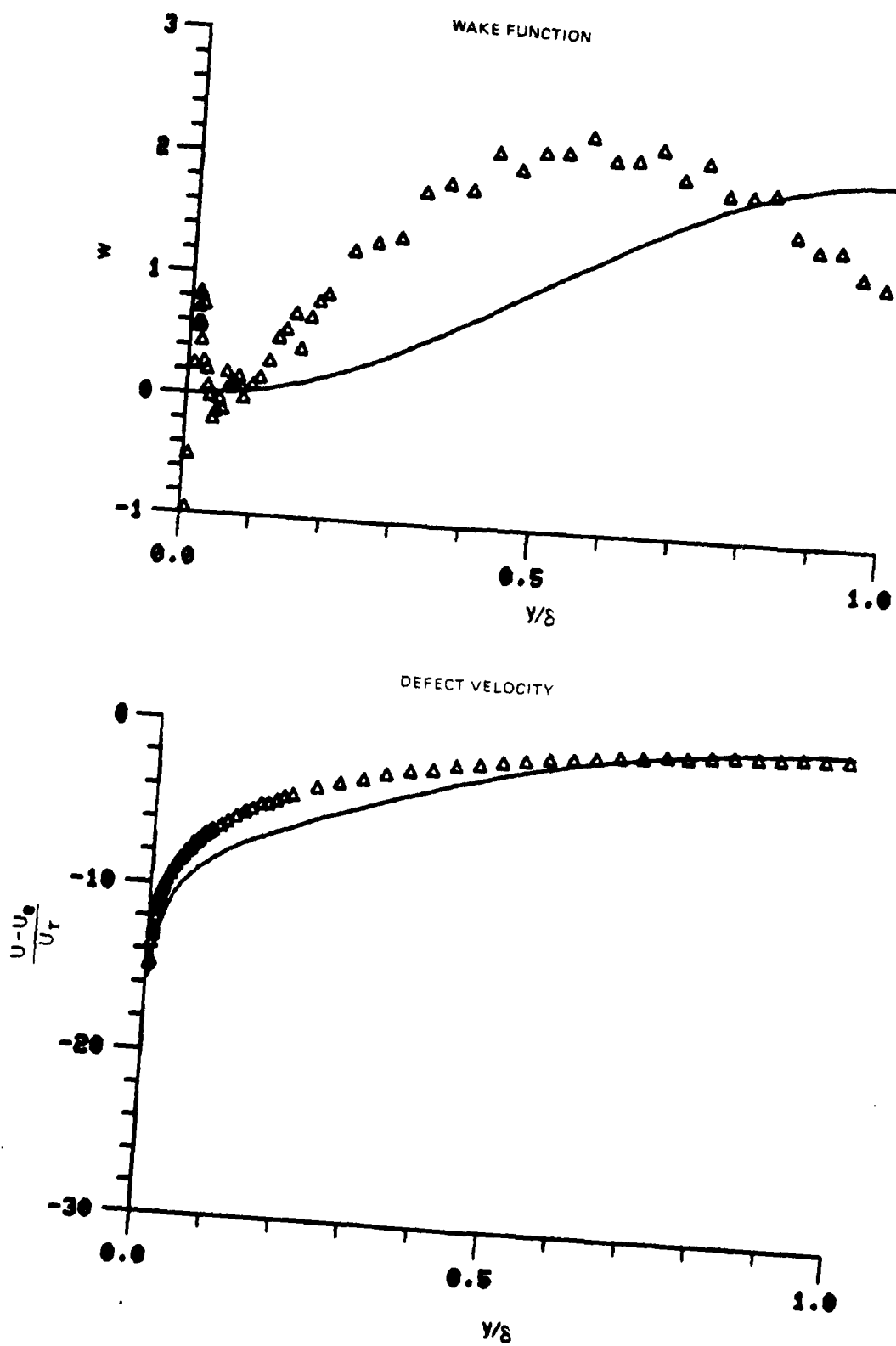


Figure 76. Boundary Layer Velocity Profiles
Run No. 9 Point No. 19

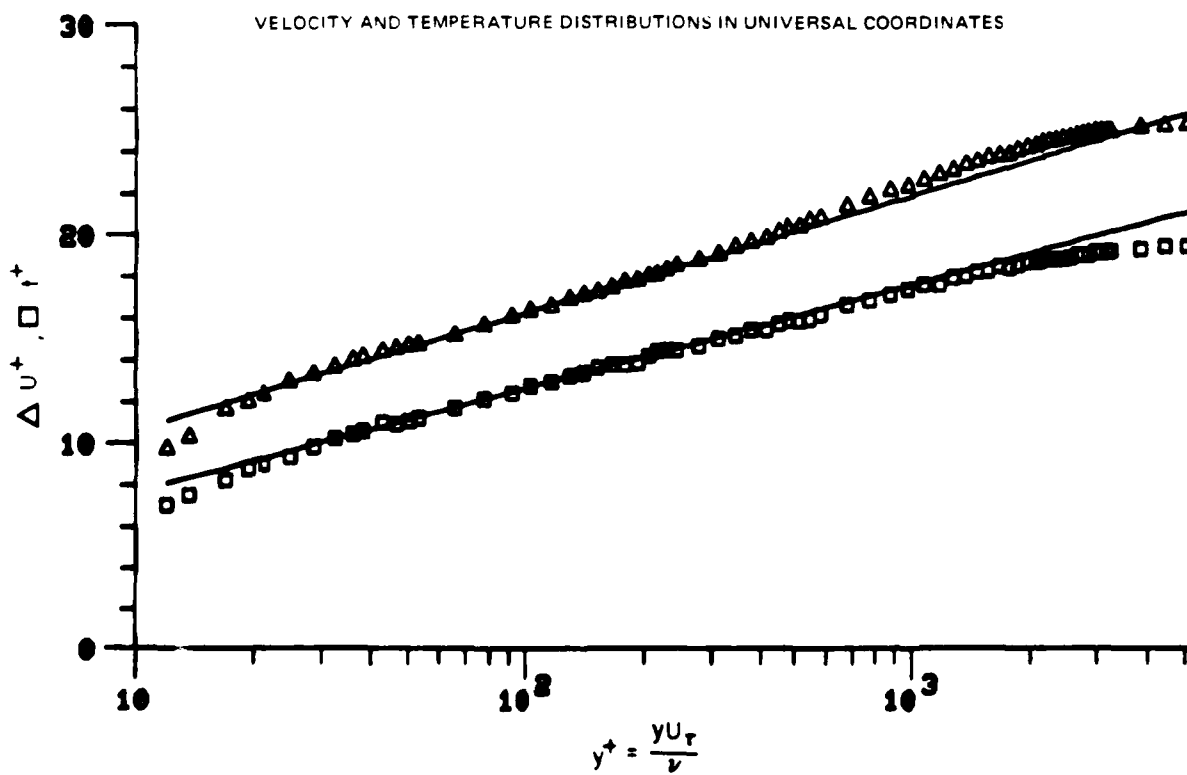
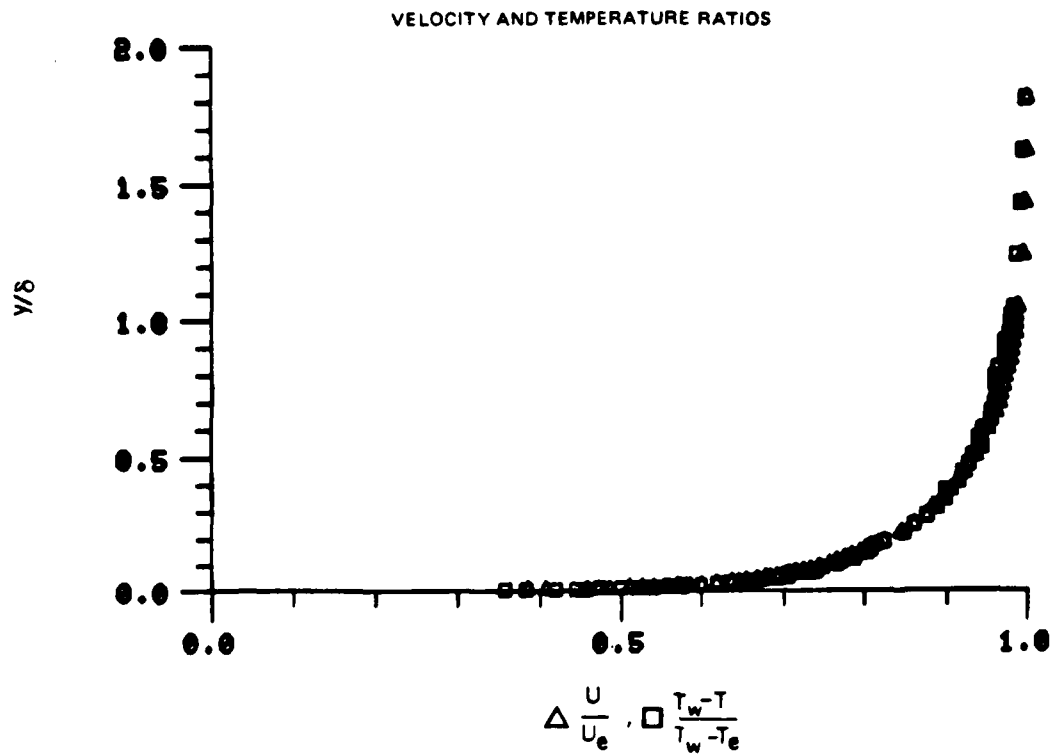


Figure 77. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 20

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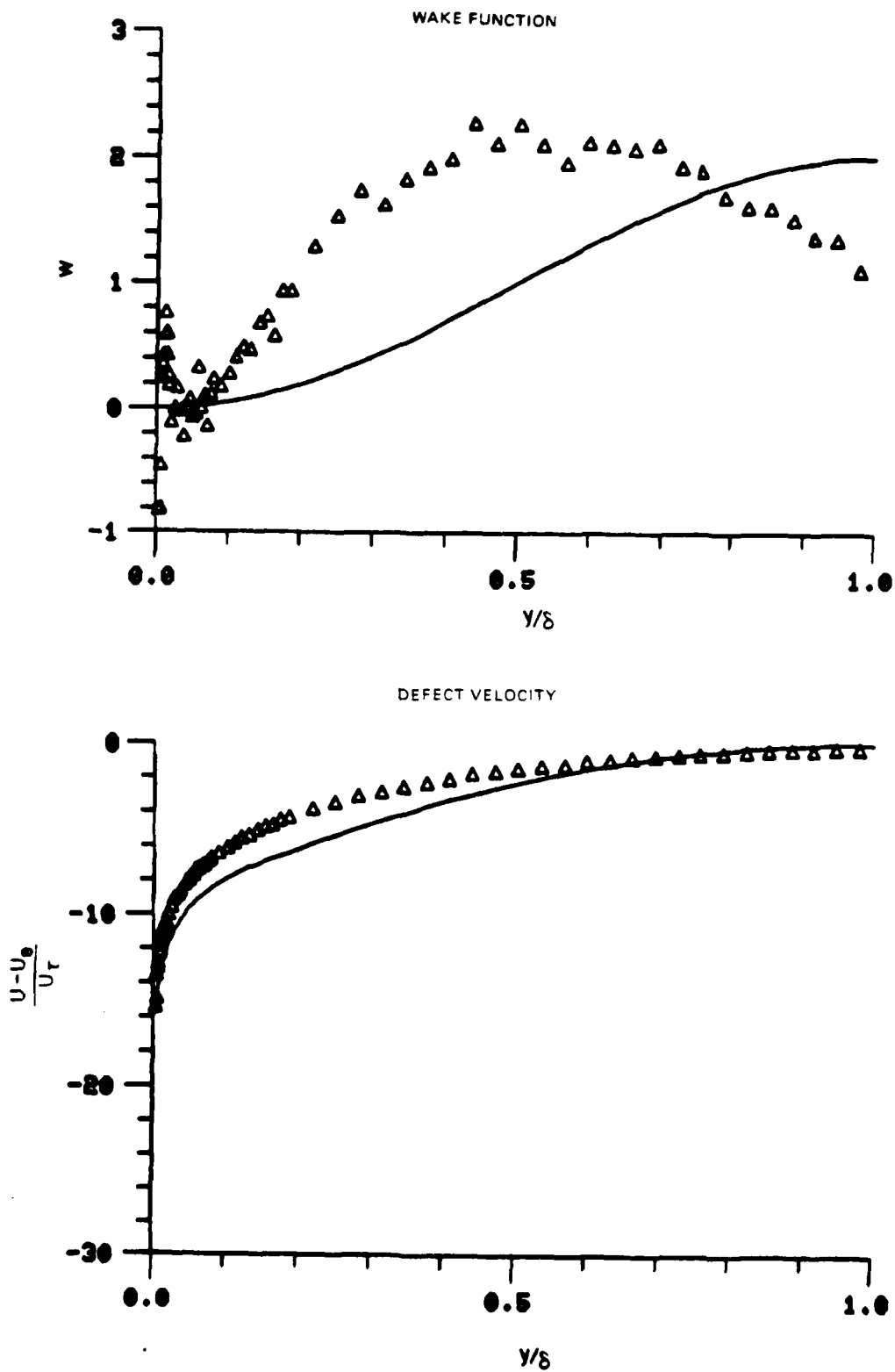


Figure 77. Boundary Layer Velocity Profiles
Run No. 9 Point No. 20

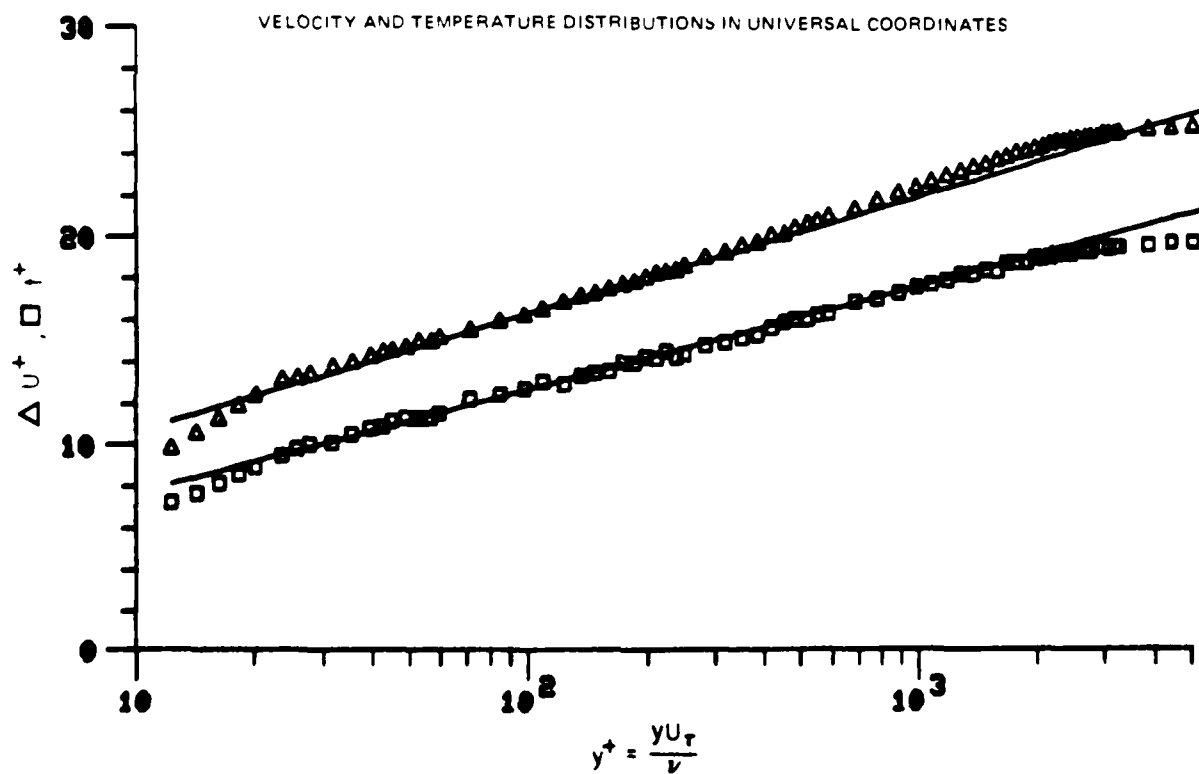
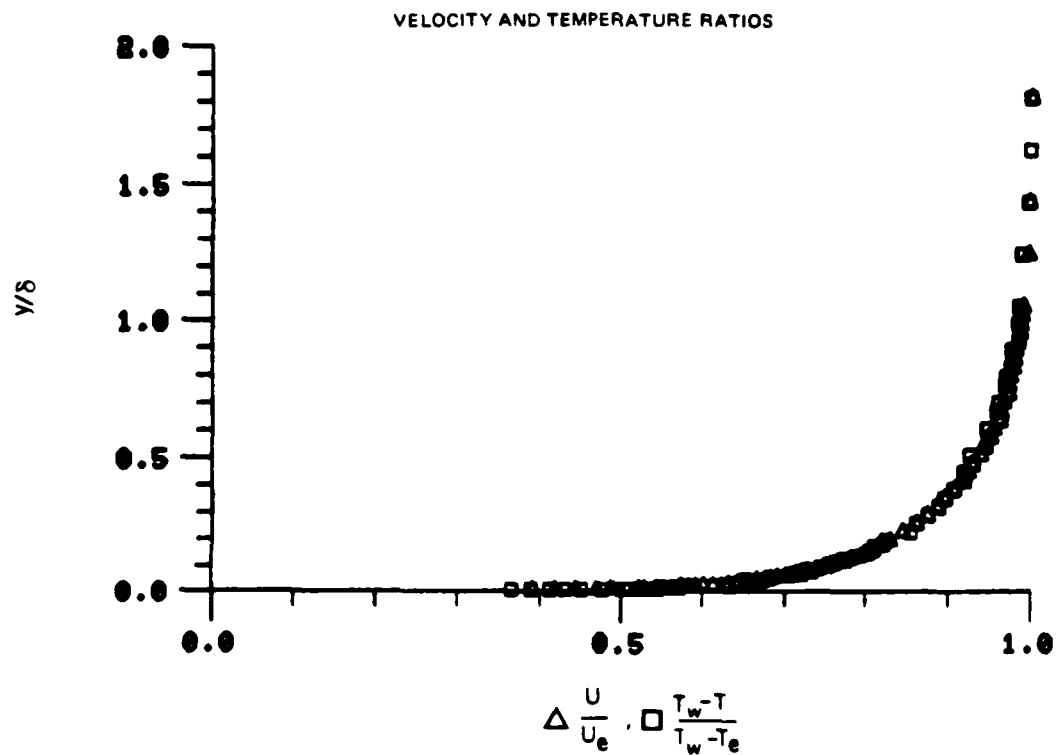


Figure 78. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 21

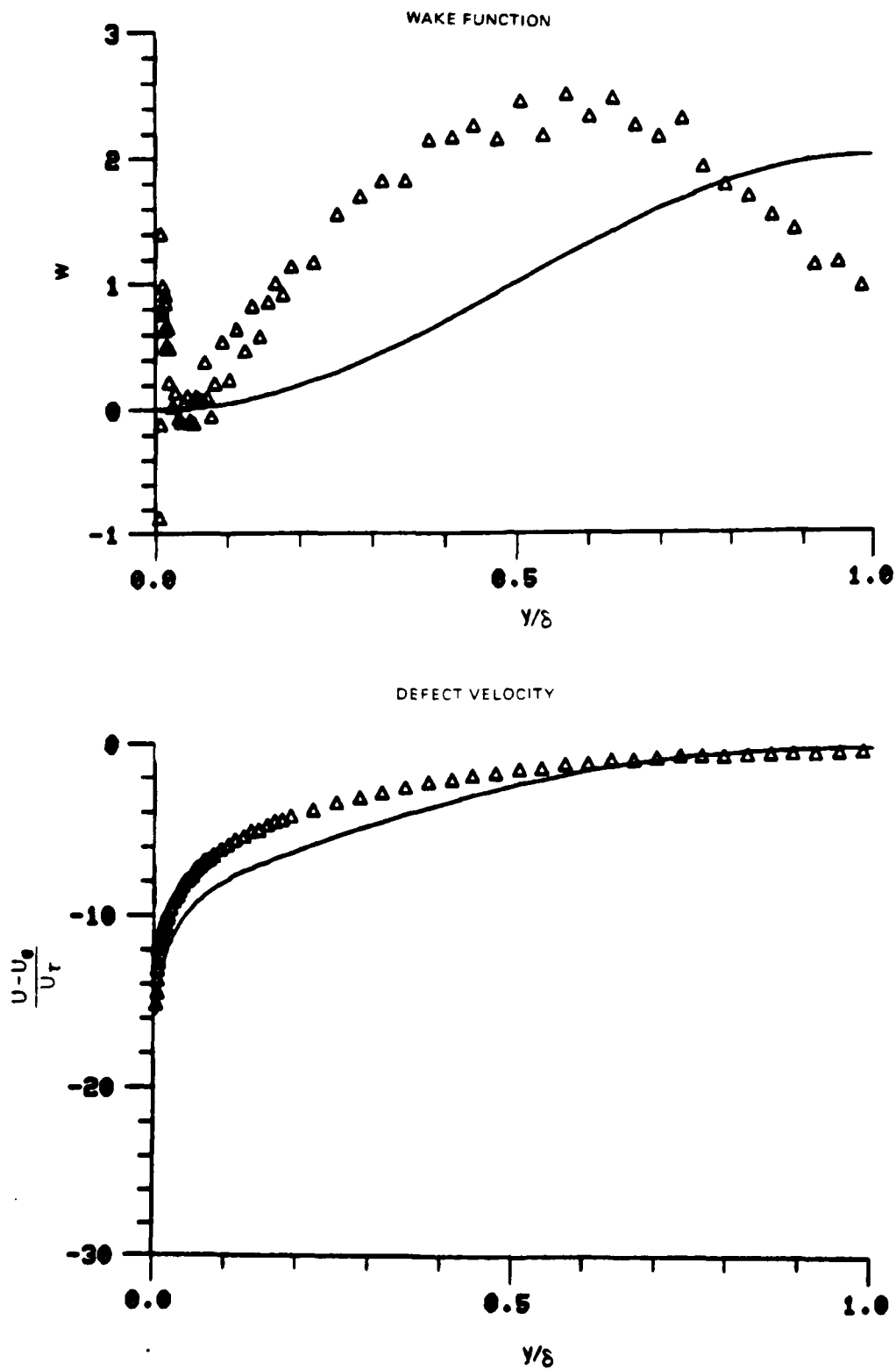


Figure 78. Boundary Layer Velocity Profiles
Run No. 9 Point No. 21

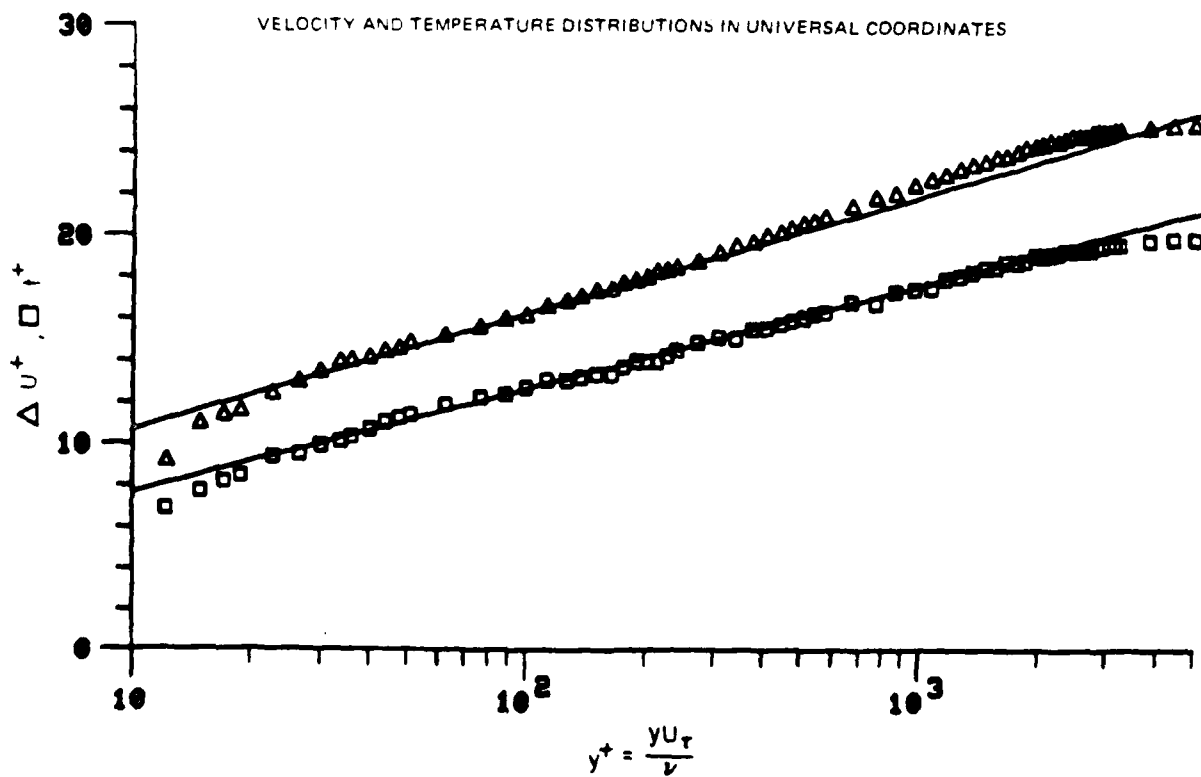
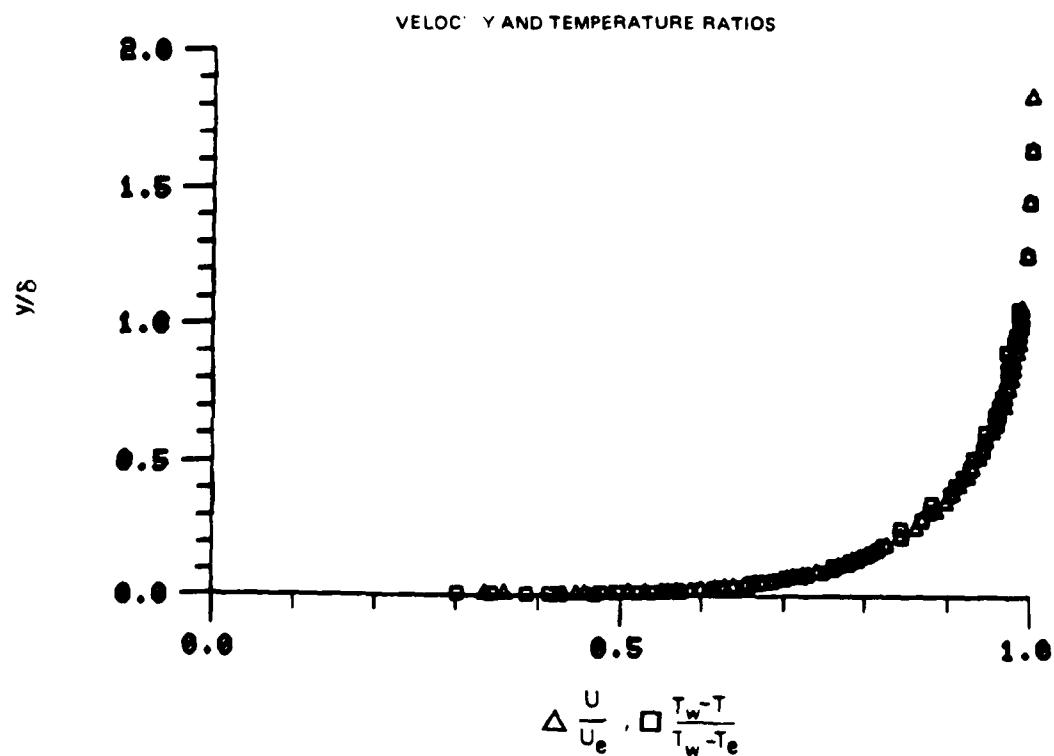


Figure 79. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 22

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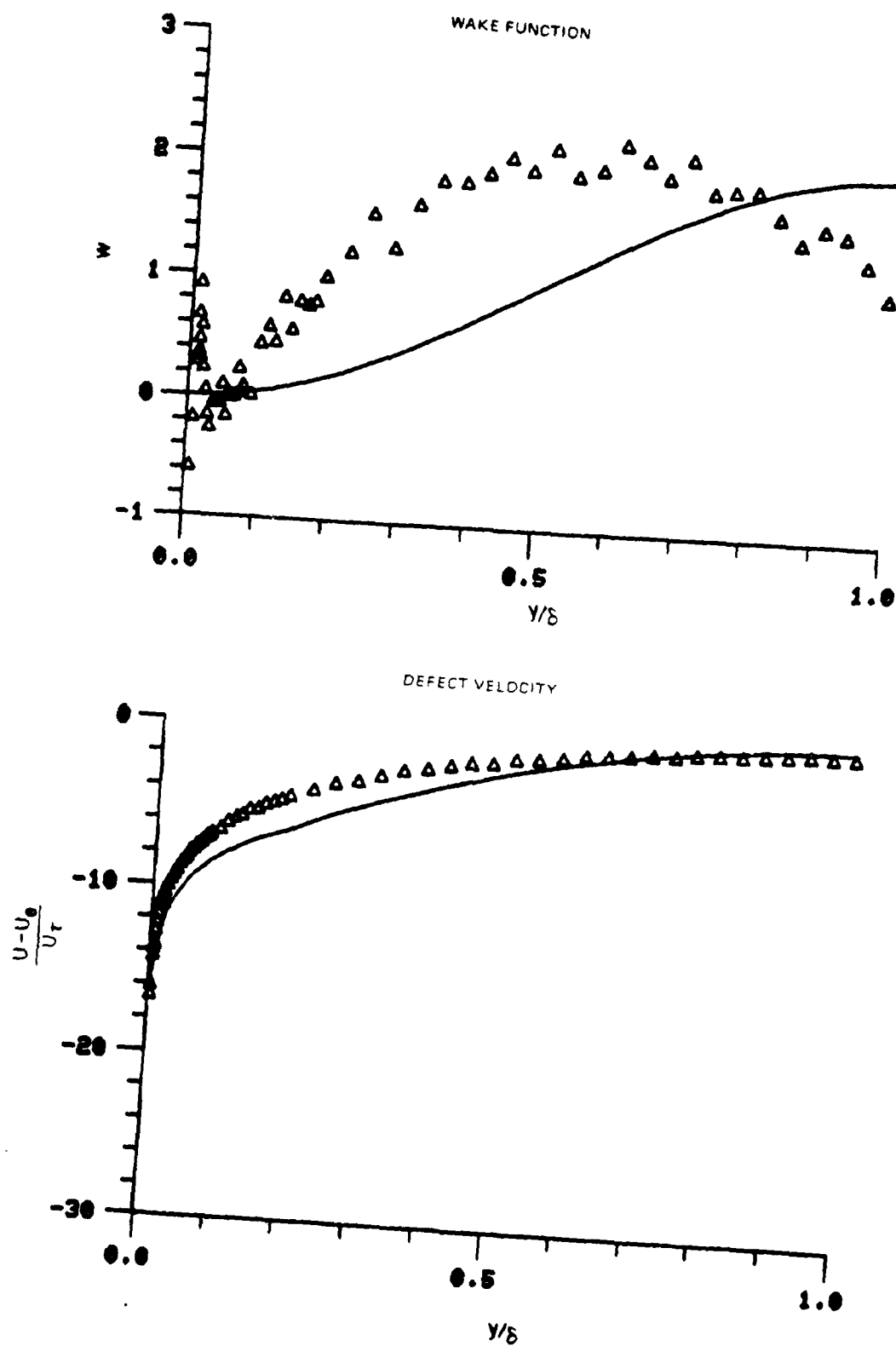


Figure 79. Boundary Layer Velocity Profiles
Run No. 9 Point No. 22

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