NASA-TM-84628 19830022194

NASA Technical Memorandum **84628**

PRESSURE DISTRIBUTIONS ON A 0.04-SCALE MODEL OF THE SPACE SHUTTLE ORBITER'S FORWARD FUSELAGE IN THE LANGLEY UNITARY PLAN WIND TUNNEL

Pamela F. Bradley,
Paul M. Siemers III,
Paul F. Flanagan,
and Martin W. Henry

MARCH 1983

National Aeronautics and
Space Administration

Langley Research Center
Hampton, Virginia 23665

ENTER:
28 1 1 RN/NASA-TM-84628
DISPLAY 28/2/1
83N30465*# ISSUE 19 PAGE 3062 CATEGORY 12 RPT#: NASA-TM-84628 NAS 1.15:84628 83/03/00 101 PAGES UNCLASSIFIED DOCUMENT
UTTL: Pressure distributions on a 0.04-scale model of the Space Shuttle Orbiter's forward fuselage in the Langley unitary plan wind tunnel
AUTH: A/BRADLEY, P. F.; B/SIEMERS, P. M., III; C/FLANAGAN, P. F.; D/HENRY, M. W.
CORP: National Aeronautics and Space Administration. Langley Research Center, Hampton, Va. AVAIL.NTIS SAP: HC A06/MF A01
MAJS: /*FUSELAGES/*PRESSURE DISTRIBUTION/*SPACE SHUTTLE ORBITERS
MINS: / INFORMATION FLOW/ ORIFICES/ WIND TUNNEL TESTS
ABA: Author

ERRATA

NASA Technical Memorandum 84628

PRESSURE DISTRIBUTIONS ON A 0.04-SCALE MODEL OF THE SPACE SHUTTLE ORBITER'S FORWARD FUSELAGE IN THE LANGLEY UNITARY PLAN WIND TUNNEL

Pamela F. Bradley, Paul M. Siemers III,
Paul F. Flanagan, and Martin W. Henry

March 1983

Page 32 - Wrong page was inadvertently printed in report. Replace with the attached new page 32.

Issued 8-15-83

Pressure Distributions Obtained on a 0.04-Scale Model of the Space Shuttle Orbiter's Forward Fuselage in the Langley Unitary Plan Wind Tunnel

Pamela F. Bradley; Paul M. Siemers III;
Paul F. Flanagan; and Martin W. Henry

Summary

Results from pressure distribution tests on a 0.04-scale model of the forward fuselage of the Space Shuttle Orbiter are presented without analysis. The tests were completed in the Langley Unitary Plan Wind Tunnel (UPWT). The model was tested at angles of attack from -2.5° to 30° and angles of sideslip from -5° to 5° in both test sections.

The tests were conducted in support of the development of the Shuttle Entry Air Data System (SEADS). In addition to modeling the 20 SEADS pressure orifices, the wind-tunnel model was also instrumented with orifices to match Development Flight Instrumentation (DFI) port locations currently existing on the Space Shuttle Orbiter Columbia (OV-102). This DFI simulation has provided a means for comparisons between reentry flight pressure data and wind-tunnel data.

Introduction

The SEADS is an across-the-speed-range flush orifice air data system proposed for installation on the Space Shuttle Orbiter (ref. 1). The system consists of 20 pressure orifices, 14 of which are arranged in a cruciform pattern and are installed in a baseline geometry nose cap assembly. The other six are located on the forward fuselage. An extensive flow-field model

development program has been completed to define the algorithm which will enable researchers to convert the SEADS flight data into research quality air data. This reduction algorithm is based on a modification of Newtonian flow theory which entails the use of correction factors based on wind-tunnel data obtained across the Mach number range on various models of the orbiter's forward fuselage. The wind-tunnel data presented in this report are an important part of the SEADS data base for the Mach numbers tested--in the range 1.5 to 4.63 (refs. 2 and 3).

Data are presented for a 0.04-scale model of the forward fuselage. This investigation was completed in the Langley UPWT. The angle of attack was varied from -2.5° to 30° and the angle of sideslip from -5° to 5°. The model is of the forward fuselage region of the Space Shuttle Orbiter. The model extends back to the canopy region and includes scaled forward RCS jet scallops. Thirty-four pressure orifices on the model duplicate locations of the propsed SEADS and current DFI orifices. The remaining orifices support the SEADS flow-field model development. The data are presented in plotted and tabular form.

Wind-Tunnel Facility

The tests were conducted in both the low and high Mach number test sections of the Langley UPWT which is a variable-pressure, continuous-flow facility. Asymmetric sliding-block nozzles lead to the test sections and permit continuous variation in Mach number from 1.5 to 2.9 in the low Mach number test section and from 2.3 to 4.7 in the high Mach number test section. The present tests were run at a nominal Reynolds number of $6.6 \times 10^6/m$.

Model and Instrumentation

The 0.04-scale model was instrumented with 72 pressure orifices matching locations of proposed SEADS, current DFI, and SEADS support orifices. The model was instrumented with two chromel-alumel thermocouples installed near the nose of the model. This instrumentation was necessary to monitor model temperature during runs in wind tunnels with high stagnation temperatures. The stagnation temperature at the test conditions in the UPWT was lower than the models design limit. It was, therefore, not necessary to monitor model temperature during these tests.

A photograph of the model is shown in figure 1. Figure 2 gives the model's coordinate system. Table I gives the orifice numbers and locations. The SEADS array of orifices is modeled by orifices 201 through 220. The DFI locations duplicated are listed in table II along with their corresponding model orifices. The model was sting mounted from the back to the tunnel's model support system.

Test Setup

Data were obtained from the orifices via a scani-valve system. Four scani-valves were used. Several orifices were redundantly connected to each scani-valve to provide a means for pressure accuracy assessment. A nominal run consisted of 10 data points; a data point is one angle-of-attack/sideslip combination and identified sequentially by the "Ref" number. The model was also tested in the inverted position to determine any flow asymmetry in the tunnel. The data points are listed in table III.

Presentation of Results

To preserve data accuracy and for the convenience of the reader, the data are presented in tables IV through XXXIX. Data are presented in dimensional form (psia). Since these are being used in both pressure coefficients and nondimensional forms P/Q and P/P_{t_2}, they are presented here in dimensional form along with enough tunnel information to provide the reader any of the three nondimensional forms. A limited amount of data are plotted in figures 3 through 14 to show trends. These data are nondimensionalized by P_{t_2} as calculated from tunnel conditions. Some limited comparisons of the present data to flight data have been obtained. Reference 4 presents these comparisons at the times the oribter passes through the Mach numbers tested during its reentry.

List of Symbols

M_∞	free-stream number
P_i	pressure at orifice "i", psia
P_{t_1}	tunnel stagnation pressure, psia
P_{t_2}	total pressure behind the shock, psia
P_∞	tunnel free-stream static pressure, psia
q_∞	tunnel free-stream dynamic pressure, psia
x,y,z	model coordinates, m
α	angle of attack, deg.
β	angle of sideslip, deg.
λ_1	orifice lateral angle, deg.
ϕ	model roll angle, deg.
ϕ_1	orifice longitudinal angle, deg.

References

1. Pruett, C. D.; Wolf, H.; Siemers, P. M. III; and Heck, M. L.: An Innovative Air Data System for the Space Shuttle Orbiter: Data Analysis Techniques. AIAA Paper No. 81-2455, Nov. 1981.

2. Bradley, P. F.; Siemers, P. M. III; Flanagan, P. F.; and Henry, M. W.: Pressure Distributions Obtained on a 0.04-Scale and 0.02-Scale Model of the Space Shuttle Orbiter's Forward Fuselage in the Langley 20-Inch Mach 6 Air Tunnel. NASA TM-84629, March 1983.

3. Bradley, P. F.; Siemers, P. M. III; Flanagan, P. F.; and Henry, M. W.: Pressure Distributions on a 0.04-Scale Model of the Space Shuttle Orbiter's Forward Fuselage in the Langley Continuous Flow Hypersonic Tunnel. NASA TM-84630, March 1983.

4. Bradley, P. F.; Siemers, P. M. III; and Weilmuenster, K. J.: An Evaluation of Space Shuttle Orbiter Forward Fuselage Surface Pressures: Comparisons with Wind-Tunnel and Theoretical Predictions. AIAA Paper No. 83-0119, Jan. 1983.

Table I
0.04-Scale Model Orifice Locations

Orifice Number	X,m	Y,m	Z,m
02	.1880	.0000	.0362
05	.1879	-.0418	.0049
06	.1879	.0418	.0049
09	.1881	.00005	.0419
10	.1676	-.0001	-.0426
13	.1676	-.0508	.0041
14	.1676	.0508	.0041
17	.1717	-.0001	-.0504
19	.1270	-.0646	.0016
20	.1270	.0646	.0016
21	.0863	-.0761	-.0021
22	.0863	.0761	-.0021
23	.0457	-.0856	-.0072
24	.0457	.0856	-.0072
25	.0051	-.0938	-.0193
26	.0051	.0938	-.0193
43	.1721	-.0478	.0183
44	.1721	.0478	.0183
85	.1970	-.0338	.0062
86	.1970	.0338	.0062
87	.1880	-.0315	.0283
88	.1880	.0315	.0283
89	.0701	-.0315	.0553
90	.0701	.0315	.0553
91	.0701	.0000	.0570
92U	.1880	.0000	-.0355
92L	.1880	.0000	.0327
93	.1643	.0000	.0432
128	.0389	-.0019	-.1073
201	.2264	.0000	-.0094
202	.2280	.0000	-.0048
203	.2286	.0000	.0000
204	.2281	.0000	.0047
205	.2265	.0000	.0093
206	.2241	.0000	.0135
207	.2210	.0000	.0173
208	.2174	.0000	.0207
209	.2241	-.0137	.0041
210	.2263	-.0094	.0045
211	.2277	-.0048	.0047
212	.2277	.0048	.0047
213	.2263	.0094	.0045
214	.2241	.0137	.0041
215	.1958	-.0032	-.0380
216	.1959	-.0371	.0114
217	.1959	.0371	.0114
218	.1961	-.0053	.0329
219	.0862	-.0761	.0086
220	.0862	.0761	.0086
225	.1236	.0000	-.0723
226	.2134	.0000	-.0249
227	.2184	.0000	-.0208
228	.2235	.0000	-.0144
229	.2083	.0000	.0269
230	.1199	.0000	.0533
231	.2131	-.0256	.0026
232	.2207	-.0183	.0037
233	.2207	.0183	.0037
234	.2131	.0256	.0026
235	.1010	-.0692	.0294
236	.1004	-.0623	.0389
237	.0951	-.0415	.0503

Table I continued

Orifice Number	X,m	Y,m	Z,m
238	.0964	-.0264	.0529
239	.0953	-.0005	.0544
244	.0699	.0009	-.0945
245	.1009	.0010	-.0818
246	.1405	-.0602	-.0046
247	.0949	-.0737	.0181
248	.0383	-.0873	-.0333
249	.0383	.0873	-.0333
252	.2110	.0000	.0260

Table II

Corresponding Orbiter/Model Orifices

Orbiter DFI Designation	Model Orifice
V07P9100	218
V07P9451	218
V07P9453	239
V07P9455	238
V07P9457	237
V07P9459	236
V07P9461	235
V07P9801	215
V07P9805	225
V07P9807	245
V07P9810	244
V07P9871	216
V07P9873	247
V07P9877	246
V07P9887	248
V07P9888	249

Table III: Data Summary - Unitary Plan Wind Tunnel - 4% Model

Ref	Run	Point	M_∞	α	β	ϕ	P_{t_1}	q_∞	P_∞	P_{t_2}
				deg	deg	deg	psf	psf	psf	psf
1	1	25	1.50	-2.4	.0	0	992.35	425.752	270.319	922.686
2	1	26	1.50	-.3	.0	0	990.78	425.079	269.891	921.226
3	1	27	1.50	2.3	.0	0	991.07	425.202	269.970	921.494
4	1	28	1.50	4.8	.0	0	991.16	425.241	269.994	921.578
5	1	29	1.50	9.7	.0	0	991.53	425.401	270.096	921.925
6	1	30	1.50	14.7	.0	0	991.53	425.402	270.097	921.928
7	1	31	1.50	19.7	.0	0	991.61	425.434	270.117	921.995
8	1	34	1.50	-.2	.0	0	992.08	425.638	270.246	922.438
9	2	35	1.50	-2.4	2.0	0	991.49	425.384	270.085	921.888
10	2	36	1.50	-.2	2.0	0	991.52	425.398	270.094	921.919
11	2	38	1.50	4.8	2.0	0	990.35	424.897	269.776	920.832
12	2	39	1.50	9.8	2.0	0	990.49	424.956	269.814	920.961
13	2	40	1.50	14.7	2.0	0	990.61	425.007	269.846	921.071
14	2	41	1.50	19.8	2.0	0	990.78	425.079	269.891	921.226
15	2	43	1.50	-.2	2.0	0	990.81	425.093	269.900	921.257
16	3	44	1.50	-2.3	5.0	0	991.12	425.227	269.985	921.547
17	3	45	1.50	-.2	5.0	0	991.17	425.246	269.998	921.590
18	3	46	1.50	4.8	5.0	0	991.32	425.310	270.038	921.728
19	3	50	1.50	4.8	5.0	0	991.51	425.393	270.091	921.908
20	3	51	1.50	9.8	5.0	0	991.55	425.410	270.102	921.945
21	3	52	1.50	14.7	5.0	0	991.74	425.492	270.154	922.122
22	3	53	1.50	19.7	5.0	0	992.02	425.613	270.230	922.384
23	3	55	1.50	-.2	5.0	0	992.00	425.601	270.223	922.359
24	4	56	1.50	-.2	-2.0	0	992.04	425.619	270.235	922.398
25	4	57	1.50	14.8	-2.0	0	992.21	425.694	270.282	922.559
26	5	59	1.50	-.3	-5.0	0	992.39	425.770	270.330	922.725
27	5	60	1.50	14.7	-5.0	0	992.32	425.742	270.312	922.663
28	6	62	2.00	-1.3	.0	0	1179.96	422.252	150.804	850.634
29	6	63	2.00	-.1	.0	0	1179.99	422.263	150.808	850.655
30	6	64	2.00	2.4	.0	0	1179.85	422.212	150.790	850.553
31	6	65	2.00	4.9	.0	0	1179.90	422.231	150.797	850.592
32	6	67	2.00	9.9	.0	0	1179.92	422.236	150.798	850.601
33	6	68	2.00	14.9	.0	0	1180.10	422.303	150.823	850.736
34	6	70	2.00	19.9	.0	0	1180.15	422.319	150.828	850.769
35	6	71	2.00	24.9	.0	0	1177.99	421.546	150.552	849.211
36	6	72	2.00	29.9	.0	0	1178.04	421.563	150.558	849.246
37	6	74	2.00	-.1	.0	0	1178.15	421.605	150.573	849.329
38	7	75	2.00	-1.3	.0	0	1178.26	421.644	150.587	849.408
39	7	76	2.00	-1.3	2.0	0	1178.36	421.681	150.600	849.482
40	7	78	2.00	-.1	2.0	0	1178.20	421.622	150.579	849.364
41	7	79	2.00	1.9	2.0	0	1178.33	421.670	150.596	849.460
42	7	80	2.00	4.9	2.0	0	1178.31	421.661	150.593	849.443
43	7	81	2.00	9.9	2.0	0	1178.54	421.742	150.622	849.607
44	7	82	2.00	14.9	2.0	0	1178.58	421.756	150.627	849.635
45	7	83	2.00	19.9	2.0	0	1178.50	421.730	150.618	849.583
46	7	88	2.00	24.9	2.0	0	1178.59	421.762	150.629	849.646
47	7	89	2.00	29.9	2.0	0	1178.68	421.793	150.640	849.710
48	7	91	2.00	-.1	2.0	0	1178.72	421.810	150.646	849.742
49	7	92	2.00	-.1	2.0	0	1178.76	421.824	150.651	849.771
50	8	93	2.00	-1.3	5.0	0	1178.88	421.864	150.666	849.852
51	8	94	2.00	-.1	5.0	0	1178.96	421.893	150.676	849.911
52	8	95	2.00	4.9	5.0	0	1179.02	421.915	150.684	849.954
53	8	96	2.00	9.9	5.0	0	1179.04	421.921	150.686	849.967
54	8	97	2.00	14.9	5.0	0	1179.12	421.952	150.697	850.028
55	8	98	2.00	19.9	5.0	0	1179.06	421.930	150.689	849.985
56	8	99	2.00	24.9	5.0	0	1179.01	421.912	150.683	849.948
57	8	100	2.00	29.9	5.0	0	1178.96	421.894	150.677	849.913
58	8	102	2.00	-.1	5.0	0	1179.07	421.933	150.690	849.991
59	9	103	2.00	-.1	-2.0	0	1179.17	421.969	150.703	850.063
60	9	104	2.00	14.9	-2.0	0	1179.18	421.974	150.705	850.074
61	9	105	2.00	24.9	-2.0	0	1179.26	422.002	150.715	850.129
62	10	106	2.00	-.1	-5.0	0	1179.24	421.995	150.713	850.116

Table III(continued)

Ref	Run	Point	M_∞	α	β	ϕ	P_{t_1}	q_∞	P_∞	P_{t_2}
				deg	deg	deg	psf	psf	psf	psf
63	10	107	2.00	14.9	-5.0	0	1179.20	421.980	150.707	850.085
64	10	108	2.00	24.9	-5.0	0	1179.28	422.008	150.717	850.142
65	11	127	1.50	2.4	0.0	180	992.30	425.731	270.306	922.641
66	11	128	1.50	.3	0.0	180	992.61	425.863	270.389	922.925
67	11	130	1.50	-2.2	0.0	180	992.70	425.903	270.415	923.012
68	11	131	1.50	-4.8	0.0	180	992.55	425.839	270.374	922.874
69	11	132	1.50	.2	0.0	180	992.58	425.850	270.381	922.897
70	12	133	2.00	1.6	0.0	180	1180.62	422.487	150.888	851.108
71	12	136	2.00	.1	0.0	180	1180.80	422.552	150.912	851.239
72	12	139	2.00	-2.4	0.0	180	1180.88	422.581	150.922	851.296
73	12	143	2.00	-4.9	0.0	180	1180.90	422.588	150.924	851.311
74	12	145	2.00	.1	0.0	180	1180.74	422.531	150.904	851.195
75	1	8	2.30	-2.4	.0	0	1443.71	427.539	115.457	842.118
76	1	9	2.30	.1	.0	0	1462.55	433.118	116.964	853.107
77	1	10	2.30	2.6	.0	0	1443.80	427.566	115.485	842.170
78	1	11	2.30	5.1	.0	0	1472.54	436.076	117.763	858.933
79	1	12	2.30	10.1	.0	0	1443.60	427.506	115.448	842.052
80	1	13	2.30	15.1	.0	0	1448.12	428.845	115.810	844.689
81	1	14	2.30	20.1	.0	0	1448.28	428.893	115.823	844.784
82	1	15	2.30	25.1	.0	0	1444.19	427.681	115.496	842.398
83	1	16	2.30	25.1	.0	0	1437.69	425.755	114.976	838.603
84	1	17	2.30	30.1	.0	0	1441.69	426.999	115.312	841.055
85	1	18	2.30	.1	.0	0	1442.83	427.276	115.386	841.600
86	2	19	2.30	-1.9	2.0	0	1438.16	425.895	115.014	838.880
87	2	20	2.30	.1	2.0	0	1434.70	424.869	114.736	836.859
88	2	21	2.30	5.1	2.0	0	1441.58	426.908	115.287	840.874
89	2	22	2.30	10.1	2.0	0	1441.44	426.866	115.276	840.792
90	2	23	2.30	15.1	2.0	0	1435.51	425.111	114.802	837.334
91	2	24	2.30	20.1	2.0	0	1444.46	427.760	115.517	842.553
92	2	25	2.30	25.1	2.0	0	1434.76	424.888	114.741	836.895
93	2	26	2.30	30.1	2.0	0	1444.14	427.667	115.492	842.369
94	2	27	2.30	.1	2.0	0	1440.56	426.604	115.205	840.276
95	3	36	2.30	-2.4	5.0	0	1446.62	428.399	115.690	843.811
96	3	37	2.30	.1	5.0	0	1435.66	425.221	114.831	837.551
97	3	38	2.30	.1	5.0	0	1450.85	429.654	116.028	846.283
98	3	39	2.30	.1	5.0	0	1425.20	422.058	113.977	831.321
99	3	40	2.30	5.1	5.0	0	1447.51	428.664	115.761	844.334
100	3	41	2.30	10.1	5.0	0	1444.97	427.911	115.558	842.850
101	3	59	2.30	15.1	5.0	0	1441.66	426.930	115.293	840.918
102	3	60	2.30	20.1	5.0	0	1441.79	426.971	115.304	840.998
103	3	61	2.30	25.1	5.0	0	1441.51	426.886	115.281	840.831
104	3	62	2.30	30.1	5.0	0	1442.66	427.227	115.373	841.503
105	3	63	2.30	.1	5.0	0	1441.48	426.879	115.279	840.818
106	4	64	2.30	.1	-2.0	0	1442.28	427.114	115.343	841.281
107	4	65	2.30	15.1	-2.0	0	1442.24	427.103	115.340	841.259
108	4	66	2.30	25.1	-2.0	0	1442.33	427.128	115.346	841.308
109	5	67	2.30	.1	-5.0	0	1442.78	427.261	115.382	841.571
110	5	68	2.30	15.1	-5.0	0	1442.74	427.250	115.379	841.549
111	5	69	2.30	25.1	-5.0	0	1442.62	427.214	115.370	841.478
112	6	85	2.96	-2.4	.0	0	2039.29	361.588	58.957	692.951
113	6	86	2.96	.1	.0	0	2038.93	361.524	58.946	692.828
114	6	87	2.96	2.6	.0	0	2039.56	361.636	58.964	693.042
115	6	88	2.96	5.1	.0	0	2039.81	361.680	58.972	693.126
116	6	89	2.96	10.1	.0	0	2040.08	361.728	58.979	693.219
117	6	90	2.96	15.1	.0	0	2040.26	361.761	58.985	693.281
118	6	91	2.96	20.1	.0	0	2039.48	361.622	58.962	693.016
119	6	92	2.96	25.1	.0	0	2039.45	361.617	58.961	693.006
120	6	93	2.96	30.1	.0	0	2039.53	361.631	58.964	693.033
121	6	94	2.96	.1	.0	0	2039.41	361.609	58.960	692.991
122	6	95	2.96	.1	.0	0	2039.23	361.577	58.955	692.929
123	7	96	2.96	-2.4	2.0	0	2039.42	361.610	58.960	692.993
124	7	97	2.96	.1	2.0	0	2039.21	361.574	58.954	692.923

Table III(continued)

Ref	Run	Point	M_∞	α	β	ϕ	P_{t_1}	q_∞	P_∞	P_{t_2}
				deg	deg	deg	psf	psf	psf	psf
125	7	98	2.96	5.1	2.0	0	2039.22	361.576	58.955	692.928
126	7	99	2.96	10.1	2.0	0	2039.33	361.596	58.958	692.966
127	7	100	2.96	15.1	2.0	0	2039.12	361.557	58.952	692.891
128	7	101	2.96	20.1	2.0	0	2039.23	361.577	58.955	692.929
129	7	102	2.96	25.1	2.0	0	2039.32	361.594	58.958	692.962
130	7	103	2.96	30.1	2.0	0	2038.79	361.500	58.942	692.781
131	7	104	2.96	.1	2.0	0	2039.02	361.540	58.949	692.859
132	8	105	2.96	-2.4	5.0	0	2039.04	361.543	58.949	692.865
133	8	106	2.96	.1	5.0	0	2038.97	361.532	58.947	692.843
134	8	107	2.96	5.1	5.0	0	2038.91	361.521	58.946	692.822
135	8	108	2.96	10.1	5.0	0	2039.05	361.545	58.950	692.868
136	8	109	2.96	15.1	5.0	0	2039.00	361.537	58.948	692.853
137	8	110	2.96	20.1	5.0	0	2038.85	361.510	58.944	692.801
138	8	111	2.96	25.1	5.0	0	2038.81	361.504	58.943	692.788
139	8	112	2.96	30.1	5.0	0	2038.81	361.502	58.943	692.786
140	8	113	2.96	.1	5.0	0	2038.81	361.503	58.943	692.787
141	9	114	2.96	.1	-1.9	0	2039.80	361.678	58.971	693.123
142	9	115	2.96	15.1	-1.9	0	2039.62	361.646	58.966	693.062
143	9	117	2.96	25.1	-1.9	0	2039.63	361.648	58.966	693.065
144	10	118	2.96	.1	-5.0	0	2039.48	361.623	58.962	693.017
145	10	121	2.96	15.1	-5.0	0	2039.48	361.621	58.962	693.014
146	10	122	2.96	25.1	-5.0	0	2039.39	361.607	58.960	692.986
147	11	126	3.50	-2.5	.0	0	2702.34	303.814	35.430	575.328
148	11	127	3.50	-.0	.0	0	2702.56	303.838	35.433	575.374
149	11	128	3.50	2.5	.0	0	2703.92	303.991	35.451	575.664
150	11	129	3.50	5.0	.0	0	2703.93	303.992	35.451	575.666
151	11	130	3.50	10.0	.0	0	2703.93	303.992	35.451	575.666
152	11	131	3.50	15.0	.0	0	2703.65	303.961	35.447	575.607
153	11	132	3.50	20.0	.0	0	2703.83	303.981	35.450	575.646
154	11	133	3.50	25.0	.0	0	2703.68	303.964	35.448	575.613
155	11	134	3.50	30.0	.0	0	2703.81	303.978	35.449	575.640
156	11	135	3.50	-.0	.0	0	2703.81	303.979	35.449	575.641
157	12	136	3.50	-2.5	2.0	0	2703.70	303.967	35.448	575.618
158	12	137	3.50	-.0	2.0	0	2702.47	303.828	35.432	575.356
159	12	138	3.50	5.0	2.0	0	2703.82	303.980	35.450	575.643
160	12	139	3.50	10.0	2.0	0	2703.83	303.981	35.450	575.644
161	12	140	3.50	15.0	2.0	0	2703.98	303.997	35.452	575.676
162	12	141	3.50	20.0	2.0	0	2704.03	304.004	35.452	575.688
163	12	142	3.50	25.0	2.0	0	2703.81	303.979	35.449	575.641
164	12	143	3.50	30.0	2.0	0	2703.71	303.968	35.448	575.620
165	12	144	3.50	-.1	2.0	0	2703.67	303.963	35.448	575.610
166	13	145	3.50	-2.5	5.0	0	2704.06	304.007	35.453	575.694
167	13	146	3.50	-.0	5.0	0	2703.88	303.987	35.450	575.657
168	13	147	3.50	5.0	5.0	0	2703.72	303.968	35.448	575.621
169	13	148	3.50	10.0	5.0	0	2703.84	303.982	35.450	575.647
170	13	149	3.50	15.0	5.0	0	2703.94	303.993	35.451	575.668
171	13	150	3.50	20.0	5.0	0	2703.75	303.973	35.449	575.629
172	13	151	3.50	25.0	5.0	0	2703.62	303.957	35.447	575.600
173	13	152	3.50	30.0	5.0	0	2703.74	303.971	35.448	575.626
174	13	153	3.50	-.0	5.0	0	2703.70	303.967	35.448	575.618
175	14	155	3.50	-.0	-1.9	0	2703.67	303.963	35.448	575.611
176	14	156	3.50	15.0	-1.9	0	2703.87	303.986	35.450	575.654
177	14	157	3.50	25.0	-1.9	0	2703.51	303.945	35.446	575.578
178	15	158	3.50	-.0	-4.9	0	2703.87	303.985	35.450	575.653
179	15	159	3.50	15.0	-4.9	0	2703.86	303.985	35.450	575.652
180	15	160	3.50	25.0	-4.9	0	2703.68	303.964	35.448	575.612
181	16	167	4.63	-2.2	0.0	0	4940.42	218.113	14.535	407.930
182	16	168	4.63	-.0	0.0	0	4941.15	218.145	14.537	407.991
183	16	169	4.63	2.5	0.0	0	4941.63	218.167	14.539	408.030
184	16	170	4.63	5.0	0.0	0	4942.01	218.184	14.540	408.062
185	16	171	4.63	10.0	0.0	0	4942.32	218.197	14.541	408.087
186	16	172	4.63	15.0	0.0	0	4942.58	218.209	14.542	408.109

Table III(continued)

Ref	Run	Point	M_∞	α	β	ϕ	P_{t_1}	q_∞	P_∞	P_{t_2}
				deg	deg	deg	psf	psf	psf	psf
187	16	173	4.63	19.9	0.0	0	4942.96	218.225	14.543	408.140
188	16	174	4.63	25.0	0.0	0	4943.11	218.232	14.543	408.153
189	16	175	4.63	29.9	0.0	0	4943.55	218.251	14.544	408.189
190	16	176	4.63	31.4	0.0	0	4943.69	218.258	14.545	408.201
191	16	180	4.63	-.1	0.0	0	4944.16	218.278	14.546	408.239
192	17	182	4.63	-2.2	2.0	0	4938.74	218.039	14.530	407.792
193	17	183	4.63	-.1	2.0	0	4939.15	218.057	14.532	407.826
194	17	184	4.63	4.9	2.0	0	4939.30	218.064	14.532	407.838
195	17	185	4.63	9.9	2.0	0	4939.54	218.074	14.533	407.858
196	17	186	4.63	14.9	2.0	0	4939.66	218.080	14.533	407.867
197	17	187	4.63	19.9	2.0	0	4939.67	218.080	14.533	407.868
198	17	188	4.63	24.9	2.0	0	4939.61	218.086	14.533	407.860
199	17	189	4.63	30.0	2.0	0	4939.99	218.094	14.534	407.895
200	17	190	4.63	31.5	2.0	0	4940.02	218.096	14.534	407.898
201	17	191	4.63	-.0	2.0	0	4940.07	218.098	14.534	407.902
202	18	201	4.63	-.0	5.0	0	4940.90	218.134	14.537	407.970
203	18	202	4.63	4.9	5.0	0	4940.84	218.132	14.536	407.965
204	18	203	4.63	10.0	5.0	0	4940.85	218.132	14.536	407.966
205	18	204	4.63	14.9	5.0	0	4940.96	218.137	14.537	407.975
206	18	205	4.63	20.0	5.0	0	4941.06	218.141	14.537	407.983
207	18	206	4.63	24.9	5.0	0	4941.07	218.142	14.537	407.984
208	18	207	4.63	30.0	5.0	0	4941.03	218.140	14.537	407.981
209	18	208	4.63	31.4	5.0	0	4941.31	218.152	14.538	408.004
210	18	209	4.63	-.0	5.0	0	4941.23	218.149	14.538	407.998
211	19	211	4.63	.6	-1.9	0	4941.44	218.158	14.538	408.014
212	19	212	4.63	-.0	-1.9	0	4941.43	218.158	14.538	408.014
213	19	213	4.63	14.9	-1.9	0	4941.46	218.159	14.538	408.016
214	19	214	4.63	24.9	-1.9	0	4941.44	218.158	14.538	408.015
215	20	215	4.63	-.0	-5.0	0	4941.67	218.168	14.539	408.033
216	20	216	4.63	14.9	-5.0	0	4941.69	218.169	14.539	408.035
217	20	217	4.63	25.0	-5.0	0	4941.77	218.173	14.539	408.042
218	21	244	2.30	2.9	.0	180	1444.42	427.749	115.514	842.531
219	21	245	2.30	-.1	.0	180	1446.28	428.300	115.663	843.616
220	21	246	2.30	-2.6	.0	180	1446.76	428.440	115.701	843.893
221	21	247	2.30	-5.1	0.0	180	1445.98	428.212	115.639	843.443
222	21	248	2.30	-.1	0.0	180	1446.09	428.244	115.648	843.506
223	22	249	2.96	3.0	0.0	180	2039.35	361.598	58.958	692.970
224	22	250	2.96	-.1	0.0	180	2039.63	361.649	58.967	693.067
225	22	251	2.96	-2.6	0.0	180	2039.54	361.633	58.964	693.036
226	22	252	2.96	-5.1	0.0	180	2039.57	361.637	58.965	693.044
227	22	253	2.96	-.1	0.0	180	2039.61	361.680	58.972	693.127
228	23	255	3.50	3.2	0.0	180	2703.20	303.910	35.441	575.511
229	23	256	3.50	-.0	0.0	180	2702.66	303.883	35.436	575.459
230	23	257	3.50	-2.5	0.0	180	2703.06	303.885	35.440	575.482
231	23	258	3.50	-5.0	0.0	180	2702.91	303.878	35.436	575.449
232	23	259	3.50	-.0	0.0	180	2703.13	303.903	35.441	575.497
233	24	260	4.63	2.4	0.0	180	4941.23	218.149	14.538	407.997
234	24	261	4.63	.0	0.0	180	4941.54	218.163	14.539	408.023
235	24	262	4.63	-2.5	0.0	180	4941.76	218.172	14.539	408.041
236	24	263	4.63	-5.0	0.0	180	4942.00	218.183	14.540	408.061
237	24	265	4.63	.0	0.0	180	4942.30	218.196	14.541	408.086

Table IV: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: β = 0.0°, M_∞ = 1.5, Inverted, Pressures in psf

Orifice ID	Nominal α			
	-5.0°	-2.5°	0.0°	2.5°
	Ref 68	Ref 67	Ref 66	Ref 65
	Pi	Pi	Pi	Pi
2	350.3	374.9	400.5	423.5
5	460.5	463.5	464.2	463.9
6	479.1	479.4	480.5	480.3
9	579.7	548.7	513.7	485.4
10	304.8	326.5	349.8	370.6
13	416.9	417.9	418.9	416.8
14	428.4	430.6	430.6	431.7
17	564.4	540.9	517.6	492.6
19	381.0	376.6	375.7	375.7
20	404.5	397.4	393.5	389.6
21	335.1	338.2	343.1	343.6
22	346.1	348.3	352.5	354.7
23	313.5	315.3	315.6	316.4
24	323.3	326.6	327.0	329.7
25	295.3	298.5	301.1	302.2
26	313.0	315.4	317.6	318.8
43	396.0	408.0	419.0	426.6
44	406.9	419.7	430.8	440.2
85	487.2	491.0	493.9	493.7
86	497.4	501.1	504.1	505.6
87	378.8	401.1	423.1	443.7
88	382.7	406.9	431.8	452.7
89	255.6	270.0	283.9	297.0
90	252.3	268.4	283.7	297.8
91	254.8	266.5	282.0	292.2
921	599.5	566.3	533.8	504.7
922	370.7	397.4	426.0	451.1
93	300.4	321.5	344.4	365.2
128	475.2	449.8	426.2	405.1
201	876.7	856.9	836.3	814.2
202	918.9	911.9	901.9	889.7
203	918.6	922.8	924.9	924.0
204	879.0	895.6	909.3	918.3
205	777.6	806.9	833.9	856.1
206	699.7	731.7	761.6	786.8
207	615.1	648.5	681.0	709.1

Table IV(continued)

Nominal Conditions: β = 0.0°, M_∞ = 1.5, Inverted, Pressures in psf

Orifice ID	Nominal α			
	-5.0°	-2.5°	0.0°	2.5°
	Ref 68	Ref 67	Ref 66	Ref 65
	Pi	Pi	Pi	Pi
208	512.0	551.8	587.7	619.4
209	756.7	766.8	773.9	777.5
210	805.7	819.1	829.8	835.2
211	850.2	866.2	880.3	889.0
212	858.1	874.6	887.8	896.2
213	816.3	829.3	840.4	847.8
214	769.8	778.8	786.0	789.8
215	594.3	561.5	527.8	498.6
216	469.3	477.9	485.9	491.1
217	483.5	493.3	499.7	504.1
218	377.3	403.6	432.4	456.3
219	326.1	325.9	331.1	336.0
220	332.9	332.5	337.2	343.2
225	492.0	461.7	433.8	410.8
226	694.4	663.3	632.2	603.0
227	734.7	701.7	670.4	640.0
228	820.5	794.9	769.3	743.8
229	448.1	477.7	508.0	535.3
230	271.3	287.6	305.0	320.8
231	599.4	603.1	602.9	603.1
232	691.7	697.0	702.2	702.9
233	709.9	717.0	720.9	722.2
234	617.8	619.1	620.9	618.8
235	301.9	322.7	339.6	350.6
236	278.3	300.7	320.0	334.9
237	268.3	284.6	301.8	318.0
238	267.4	282.2	299.1	314.3
239	267.3	281.8	297.4	312.2
244	478.9	453.5	428.0	408.2
245	487.1	459.6	433.8	411.8
246	394.9	389.7	381.5	379.9
247	310.7	329.3	344.0	350.8
248	318.7	320.1	321.9	321.2
249	330.2	332.3	335.3	335.4
252	470.4	502.4	533.6	562.3

Table V: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: β = 0.0°, M_∞ = 1.5, Upright, Pressures in psf

Ori-fice ID	Nominal α						
	-2.5°	0.0°	2.5°	5.0°	10.0°	15.0°	20.0°
	Ref 1	Ref 2	Ref 3	Ref 4	Ref 5	Ref 6	Ref 7
	Pi	Pi	Pi	Pi	Pi	Pi	Pi
2	372.6	394.2	422.0	449.5	507.3	570.9	635.9
5	478.1	479.5	479.0	477.7	475.0	465.1	453.4
6	464.6	463.7	464.3	463.6	457.0	451.1	436.8
9	550.0	521.3	489.0	458.1	403.1	354.2	312.0
10	323.9	342.9	368.5	395.3	449.5	506.8	568.8
13	432.3	432.7	433.1	430.8	427.4	420.3	408.6
14	415.3	416.4	415.6	415.7	412.3	405.0	395.6
17	542.0	522.2	495.0	466.2	412.0	362.7	316.5
19	390.0	388.1	388.2	388.5	385.3	373.0	364.7
20	384.4	382.3	378.2	374.8	368.7	360.7	353.5
21	350.7	353.7	356.8	357.9	356.3	357.1	353.5
22	335.6	339.0	341.7	343.4	345.4	346.5	342.1
23	326.9	326.3	325.7	325.8	326.9	325.2	322.8
24	316.2	318.0	319.9	320.2	319.9	318.9	308.4
25	312.0	312.6	314.8	315.5	314.6	309.2	306.1
26	307.7	308.4	311.4	312.7	311.5	304.4	298.3
43	419.3	429.3	439.1	448.3	460.1	464.8	461.2
44	405.7	415.4	425.8	432.4	441.0	443.6	436.7
85	507.2	508.0	510.4	509.4	506.1	497.0	482.0
86	485.3	487.7	487.9	488.4	484.7	474.8	461.3
87	405.1	425.7	449.9	472.9	518.2	563.0	603.6
88	397.0	417.6	442.1	464.4	509.4	552.4	591.9
89	265.9	279.3	295.0	310.2	348.5	393.0	439.8
90	266.3	278.1	293.7	310.0	346.6	390.5	436.3
91	266.9	278.3	293.3	309.2	347.3	394.2	440.6
921	570.4	540.4	508.0	479.7	427.0	374.5	330.1
922	395.8	419.7	449.3	480.4	543.3	609.1	674.3
93	316.8	337.3	363.1	389.0	442.7	500.1	561.9
128	453.6	431.9	409.3	387.1	350.1	320.7	295.7
201	860.1	840.1	813.8	786.5	727.4	662.2	594.1
202	913.9	903.3	888.7	871.9	829.4	776.6	717.3
203	923.8	923.5	921.3	917.1	897.1	867.7	823.3
204	895.4	905.4	914.5	920.9	924.0	918.2	894.4
205	806.8	827.8	851.3	871.8	902.8	923.3	925.9
206	731.3	754.4	783.0	809.3	854.1	892.5	915.6
207	647.4	672.8	705.6	735.7	792.2	844.1	883.2

Table V(continued)

Nominal Conditions: β = 0.0°, M_∞ = 1.5, Upright, Pressures in psf

Ori-fice ID	Nominal α						
	-2.5°	0.0°	2.5°	5.0°	10.0°	15.0°	20.0°
	Ref 1	Ref 2	Ref 3	Ref 4	Ref 5	Ref 6	Ref 7
	Pi	Pi	Pi	Pi	Pi	Pi	Pi
208	549.2	579.8	616.0	649.7	716.2	778.8	832.7
209	782.2	786.9	789.5	791.8	787.7	771.0	746.7
210	831.7	839.1	845.7	850.2	851.0	838.3	815.1
211	874.8	883.8	892.9	900.0	904.3	896.9	873.8
212	866.6	876.2	884.9	891.6	895.1	888.9	866.6
213	817.0	823.8	830.2	834.0	833.3	823.1	799.5
214	763.8	767.6	772.2	773.2	768.0	754.4	731.4
215	564.7	535.5	502.8	472.2	419.7	368.5	324.2
216	493.8	499.0	504.7	509.0	512.1	509.1	496.5
217	476.9	482.7	487.6	491.3	493.8	488.6	479.1
218	402.8	426.3	454.4	485.1	546.0	611.5	674.9
219	339.1	340.8	348.4	354.2	361.4	356.6	345.8
220	319.7	322.4	329.6	339.2	352.8	344.8	333.3
225	465.8	440.4	414.4	389.9	347.7	308.3	279.8
226	666.8	638.0	606.6	573.8	513.4	458.0	386.0
227	706.8	676.6	641.3	607.0	534.4	456.4	389.9
228	798.7	774.6	743.9	713.6	649.9	585.0	524.2
229	474.5	500.9	532.1	562.3	626.3	691.1	751.7
230	286.1	298.5	317.1	338.6	386.6	437.4	498.6
231	620.7	620.2	620.3	617.4	606.3	591.6	572.2
232	715.4	718.1	720.9	720.0	713.4	696.7	675.0
233	699.3	700.7	701.2	700.7	692.9	677.0	655.6
234	602.3	601.5	600.1	596.7	588.0	570.6	552.1
235	325.5	341.5	358.0	367.9	382.4	383.2	378.6
236	299.7	317.3	335.7	353.9	387.3	416.5	443.7
237	282.8	296.9	314.2	334.4	376.8	422.9	473.2
238	279.9	294.2	310.8	330.2	374.2	422.0	476.7
239	279.7	292.5	308.4	326.5	370.2	420.0	477.5
244	456.0	434.0	409.3	386.7	348.8	315.3	291.9
245	463.7	440.8	415.2	392.1	348.5	315.4	289.3
246	406.2	396.2	393.8	391.1	387.7	376.4	365.4
247	334.9	347.9	361.3	367.3	366.8	354.6	339.0
248	332.0	332.5	331.7	331.1	325.5	316.3	311.9
249	321.7	323.6	325.2	322.4	320.0	311.7	301.5
252	500.5	526.4	557.7	589.7	652.9	716.6	775.4

Table VI: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: β = 2.0°, M_∞ = 1.5, Upright, Pressures in psf

Orifice ID	Nominal α					
	-2.5°	0.0°	5.0°	10.0°	15.0°	20.0°
	Ref 9	Ref 10	Ref 11	Ref 12	Ref 13	Ref 14
	Pi	Pi	Pi	Pi	Pi	Pi
2	371.9	394.4	447.6	506.2	570.3	634.2
5	455.9	456.5	455.7	450.9	444.0	429.7
6	488.2	488.5	486.3	481.9	473.2	460.4
9	549.2	521.7	458.1	402.4	354.0	310.8
10	323.2	343.5	394.1	449.1	506.8	567.8
13	412.0	413.4	410.7	406.1	399.4	387.3
14	436.1	437.5	436.5	433.1	426.6	415.6
17	542.4	523.0	467.1	412.3	362.0	316.3
19	371.8	369.3	368.4	364.5	353.8	346.6
20	402.4	399.1	392.4	386.5	379.4	371.9
21	333.2	337.1	340.5	340.5	340.6	333.8
22	352.2	357.1	359.9	360.4	362.8	361.2
23	312.1	312.2	312.3	312.5	310.4	310.4
24	331.3	333.3	333.9	333.8	333.1	323.4
25	298.5	299.0	302.0	300.5	298.4	293.0
26	320.7	322.6	325.9	324.1	318.2	311.3
43	402.3	411.5	427.5	437.2	441.5	434.0
44	422.9	433.5	453.1	463.7	466.9	462.2
85	483.5	485.5	486.5	481.1	471.6	453.5
86	509.2	511.3	511.0	507.9	500.2	486.2
87	395.5	415.2	459.8	503.2	544.9	583.2
88	408.1	430.5	478.7	524.2	570.4	611.5
89	266.3	278.5	308.4	344.6	387.5	434.1
90	266.0	278.9	311.3	349.1	394.2	441.0
91	266.5	277.9	308.2	346.3	393.8	440.0
921	569.7	540.2	479.3	427.8	374.9	330.3
922	394.3	420.4	478.9	542.3	607.3	672.4
93	318.8	337.6	387.9	442.4	500.1	560.4
128	452.5	431.6	386.3	349.8	319.2	294.7
201	860.3	841.0	788.1	728.2	661.4	593.0
202	914.6	905.4	873.4	829.3	774.9	715.7
203	924.7	925.6	918.7	898.9	864.5	822.6
204	896.5	907.7	923.2	925.7	915.0	893.8
205	807.0	829.6	873.3	905.2	920.2	924.9
206	731.2	756.4	809.8	854.9	889.3	914.8
207	646.5	673.9	736.3	792.8	841.3	882.5

Table VI(continued)

Nominal Conditions: β = 2.0°, M_∞ = 1.5, Upright, Pressures in psf

Orifice ID	Nominal α					
	-2.5°	0.0°	5.0°	10.0°	15.0°	20.0°
	Ref 9	Ref 10	Ref 11	Ref 12	Ref 13	Ref 14
	Pi	Pi	Pi	Pi	Pi	Pi
208	548.0	579.7	650.2	716.7	776.6	832.1
209	759.5	765.0	769.8	763.5	748.3	725.3
210	813.6	822.9	833.8	832.3	818.5	797.4
211	863.6	875.6	892.9	894.9	884.2	863.3
212	876.5	886.3	901.2	905.7	896.3	875.4
213	833.0	840.4	851.1	850.1	840.0	815.9
214	783.6	789.5	794.1	788.8	776.2	751.1
215	562.1	532.8	470.7	418.6	367.8	323.6
216	471.0	477.6	486.3	486.5	483.1	468.8
217	499.5	505.6	514.2	519.7	514.8	504.8
218	400.1	424.8	482.2	543.6	607.3	670.8
219	321.7	324.3	338.3	344.9	337.1	324.3
220	337.0	340.1	355.3	367.0	364.1	354.4
225	465.3	440.7	390.0	346.8	307.7	279.2
226	666.1	638.4	574.9	513.6	457.4	383.3
227	706.0	677.4	606.8	533.5	454.9	389.7
228	798.8	775.7	714.1	650.3	584.4	523.5
229	473.9	501.0	561.9	624.7	689.2	750.0
230	285.3	298.7	338.1	385.9	437.9	497.5
231	595.5	595.7	591.4	581.1	565.4	547.7
232	690.9	694.4	694.1	685.9	671.4	650.5
233	721.3	724.2	725.1	716.9	702.4	678.1
234	625.8	626.7	622.0	611.6	597.2	576.1
235	316.3	330.4	354.7	364.8	360.0	353.6
236	295.7	311.7	345.0	373.9	398.8	423.4
237	281.8	296.2	330.0	370.2	414.4	463.3
238	280.4	294.0	327.8	370.2	417.4	471.0
239	279.4	292.7	326.5	369.7	418.2	475.0
244	455.1	433.7	386.5	348.8	313.8	291.3
245	462.9	440.8	391.8	347.9	315.3	288.6
246	384.9	378.0	374.1	367.6	357.5	346.6
247	324.7	336.6	351.3	348.3	334.3	316.9
248	316.3	317.7	316.7	312.2	303.1	295.9
249	337.7	340.1	338.1	332.9	324.8	314.3
252	499.1	527.1	588.9	652.7	714.2	774.0

Table VII: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: β = 5.0°, M_∞ = 1.5, Upright, Pressures in psf

Orifice ID	Nominal α					
	-2.5°	0.0°	5.0°	10.0°	15.0°	20.0°
	Ref 16	Ref 17	Ref 19	Ref 20	Ref 21	Ref 22
	Pi	Pi	Pi	Pi	Pi	Pi
2	372.5	394.8	449.0	505.6	569.0	633.2
5	419.8	421.0	419.3	415.7	407.8	390.1
6	523.6	525.2	525.1	520.2	512.9	501.9
9	545.7	517.8	457.4	401.5	352.0	309.2
10	322.1	341.5	393.9	448.5	506.0	566.4
13	380.7	380.9	378.8	375.6	367.6	356.0
14	470.4	472.2	471.7	468.3	462.9	451.7
17	534.9	513.8	458.9	405.0	355.9	312.0
19	343.7	344.6	342.7	339.7	327.1	315.8
20	437.1	432.9	425.5	419.6	408.1	405.6
21	309.2	314.1	318.0	317.5	315.1	306.3
22	379.5	385.1	386.3	389.0	393.1	394.1
23	290.2	292.2	291.9	292.5	291.1	281.6
24	357.6	357.4	360.4	360.9	357.7	352.0
25	279.5	281.6	285.5	284.6	276.5	272.6
26	345.0	346.6	348.6	346.4	345.5	335.8
43	374.0	382.8	396.7	403.5	403.2	392.2
44	452.1	463.5	484.7	499.1	505.6	504.2
85	447.6	450.1	451.2	446.4	435.7	418.1
86	546.9	548.6	550.2	547.4	539.9	526.4
87	379.0	397.0	438.6	478.2	516.8	552.0
88	423.9	446.6	500.3	550.0	597.8	641.4
89	265.9	276.6	305.0	338.8	381.9	424.1
90	262.2	275.7	313.2	353.4	399.8	448.8
91	264.1	276.2	308.7	346.9	391.7	440.1
921	567.2	538.3	477.8	426.1	374.3	329.6
922	393.2	417.3	478.4	542.3	605.7	671.9
93	318.0	336.5	387.7	441.6	498.3	560.0
128	448.2	428.3	383.5	346.7	316.5	292.5
201	856.2	836.6	784.7	726.0	661.0	594.7
202	909.0	899.3	867.7	825.4	773.0	714.0
203	919.6	920.0	913.0	893.9	862.5	820.2
204	891.7	901.7	917.7	921.5	913.3	891.7
205	802.0	823.7	867.4	899.6	918.4	922.6
206	725.5	751.1	804.7	850.2	887.0	911.6
207	643.6	670.8	732.2	789.3	838.9	880.0

Table VII(continued)

Nominal Conditions: β = 5.0°, M_∞ = 1.5, Upright, Pressures in psf

Orifice ID	Nominal α					
	-2.5°	0.0°	5.0°	10.0°	15.0°	20.0°
	Ref 16	Ref 17	Ref 19	Ref 20	Ref 21	Ref 22
	Pi	Pi	Pi	Pi	Pi	Pi
208	545.0	576.3	646.7	713.7	775.0	828.9
209	725.1	730.6	735.2	729.7	714.4	689.9
210	784.0	791.7	803.5	802.0	789.4	767.7
211	844.5	854.2	871.8	875.5	866.5	845.6
212	886.1	896.4	912.1	915.9	909.0	888.0
213	855.5	863.8	875.4	876.5	865.9	842.9
214	813.1	819.3	826.3	821.9	808.6	785.7
215	554.9	528.4	466.5	415.0	365.0	322.4
216	437.8	442.8	450.9	450.5	444.1	429.0
217	535.4	543.2	554.5	559.2	557.3	548.8
218	397.0	421.8	479.0	539.7	602.5	666.0
219	296.4	302.1	318.2	321.5	311.0	294.1
220	365.3	369.3	380.2	393.9	397.4	389.5
225	463.4	437.5	387.1	344.4	306.6	277.5
226	662.7	635.7	572.0	513.2	456.5	381.4
227	702.5	674.4	604.1	531.4	452.1	392.3
228	794.8	771.2	711.6	648.9	584.0	523.2
229	471.4	498.5	560.7	624.5	687.1	749.5
230	283.1	297.8	336.6	385.1	436.2	497.0
231	555.6	555.6	552.9	542.9	528.6	510.4
232	650.6	654.6	656.6	648.1	633.7	613.8
233	757.7	760.7	761.1	755.1	739.9	716.3
234	664.9	666.4	661.5	651.8	635.6	615.6
235	305.1	316.9	330.6	334.2	327.0	314.2
236	290.9	303.9	328.8	351.6	373.1	391.5
237	279.7	292.5	323.3	360.9	401.8	448.4
238	278.6	291.3	323.3	364.0	410.3	462.9
239	277.6	290.8	325.0	367.3	417.4	473.7
244	451.3	430.2	383.0	344.3	312.0	287.0
245	460.1	438.3	389.3	346.2	311.0	282.6
246	355.1	351.8	345.6	341.2	332.0	319.0
247	308.3	318.3	328.9	323.7	305.3	282.6
248	292.6	294.4	296.2	293.8	285.7	278.3
249	366.8	366.6	364.9	358.0	349.0	333.5
252	496.8	524.5	586.9	648.9	711.7	772.7

Table VIII: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: β = -2.0°, M_∞ = 1.5, Upright, Pressures in psf

Orifice ID	Nominal α 0.0° Ref 24 Pi	Nominal α 15.0° Ref 25 Pi
2	393.7	571.2
5	504.3	493.3
6	439.2	424.5
9	520.3	354.2
10	342.4	507.7
13	456.4	443.6
14	394.8	383.2
17	517.7	360.8
19	410.0	395.0
20	366.5	341.0
21	373.9	376.4
22	322.7	329.5
23	343.0	341.7
24	304.2	303.7
25	329.2	322.7
26	295.2	293.3
43	449.2	490.5
44	396.7	416.7
85	535.7	524.0
86	463.9	450.7
87	438.1	582.4
88	405.0	533.4
89	279.4	399.0
90	276.3	385.9
91	277.5	393.3
921	540.8	374.3
922	419.5	608.7
93	336.9	501.0
128	431.6	319.3
201	838.1	661.4
202	903.1	776.1
203	923.4	865.3
204	904.7	915.2
205	827.6	920.7
206	755.9	869.9
207	673.6	842.4

Table VIII(continued)

Nominal Conditions: $\beta = -2.0^{\circ}$, $M_{\infty} = 1.5$, Upright, Pressures in psf

Orifice ID	Nominal α	
	0.0°	15.0°
	Ref 24	Ref 25
	Pi	Pi
208	579.9	777.9
209	808.6	796.0
210	856.3	858.6
211	893.8	906.3
212	865.1	874.7
213	805.4	801.5
214	745.2	729.8
215	537.2	368.5
216	525.3	536.3
217	459.3	463.1
218	426.9	612.8
219	362.8	377.5
220	306.5	327.4
225	438.2	308.2
226	637.2	457.4
227	676.3	457.4
228	772.8	583.3
229	499.6	689.3
230	298.4	438.2
231	648.2	619.6
232	744.3	724.3
233	675.0	651.4
234	575.3	544.5
235	353.5	408.8
236	322.0	435.1
237	298.2	430.7
238	294.8	427.5
239	292.5	421.5
244	432.2	314.2
245	440.3	312.9
246	418.2	399.1
247	363.5	377.5
248	350.6	332.6
249	307.4	299.4
252	526.6	714.6

Table IX: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: $\beta = -5.0^{\circ}$, $M_{\infty} = 1.5$, Upright, Pressures in psf

Orifice ID	Nominal α	
	0.0°	15.0°
	Ref 26	Ref 27
	Pi	Pi
2	390.8	568.9
5	541.3	531.3
6	404.0	389.4
9	519.0	351.5
10	340.7	504.3
13	490.4	480.7
14	365.4	352.9
17	511.6	354.7
19	440.9	426.8
20	340.8	315.8
21	402.9	404.2
22	300.1	305.3
23	369.6	369.1
24	285.3	284.0
25	352.6	354.5
26	278.5	276.7
43	479.8	527.8
44	367.6	380.5
85	573.1	563.3
86	432.1	415.6
87	454.1	607.8
88	387.6	504.3
89	276.1	404.0
90	274.0	378.3
91	275.5	391.9
921	538.2	371.7
922	417.9	605.5
93	336.1	499.3
128	429.3	315.6
201	832.7	656.2
202	896.9	771.5
203	917.4	860.0
204	897.7	909.8
205	821.3	915.6
206	749.9	885.3
207	668.9	837.4

Table IX(continued)

Nominal Conditions: $\beta = -5.0^{\circ}$, $M_{\infty} = 1.5$, Upright, Pressures in psf

Orifice ID	Nominal α	
	0.0°	15.0°
	Ref 26	Ref 27
	Pi	Pi
208	577.4	774.6
209	837.3	823.8
210	877.9	878.5
211	902.1	913.6
212	843.5	856.4
213	773.2	770.5
214	709.0	693.6
215	537.2	368.3
216	560.5	576.2
217	428.6	426.5
218	426.1	613.4
219	392.2	409.1
220	286.6	301.6
225	436.2	301.7
226	634.2	453.4
227	672.4	456.7
228	768.0	579.8
229	496.6	686.5
230	296.5	436.1
231	686.2	658.0
232	780.0	758.5
233	635.9	612.6
234	536.6	505.8
235	371.6	442.1
236	332.0	457.5
237	298.7	440.6
238	294.2	433.0
239	290.7	422.9
244	427.4	309.4
245	435.7	308.0
246	452.2	430.6
247	382.9	412.7
248	378.6	358.1
249	286.4	282.0
252	522.8	711.5

Table X: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: β = 0.0°, M_∞ = 2.0, Inverted, Pressures in psf

Orifice ID	Nominal α			
	-5.0°	-2.5°	0.0°	2.5°
	Ref 73	Ref 72	Ref 71	Ref 70
	Pi	Pi	Pi	Pi
2	235.8	257.7	282.7	298.1
5	335.5	335.5	337.5	337.2
6	347.3	350.3	351.9	353.0
9	441.4	410.1	379.6	361.5
10	191.2	209.7	229.7	243.0
13	291.2	290.1	291.4	291.0
14	303.1	305.1	305.1	305.2
17	442.7	412.2	381.9	361.7
19	252.3	250.5	246.6	245.0
20	271.5	270.3	270.8	269.1
21	216.6	218.6	220.6	219.7
22	226.7	228.1	229.0	228.8
23	199.4	199.2	198.9	198.3
24	207.4	208.6	209.5	208.9
25	183.4	184.9	185.1	185.2
26	198.1	198.9	199.9	200.1
43	275.6	286.5	294.9	300.3
44	286.2	298.0	308.5	312.9
85	366.6	369.1	370.8	371.5
86	377.8	381.9	384.9	385.3
87	263.9	284.8	305.7	318.4
88	268.9	290.4	312.8	326.4
89	141.2	152.9	164.6	172.7
90	140.4	152.5	165.0	172.8
91	141.5	151.6	163.3	169.4
921	467.9	438.6	408.5	390.2
922	256.0	279.7	305.5	321.8
93	186.8	205.4	224.9	237.9
128	349.9	324.4	299.5	284.7
201	788.5	766.5	743.1	726.7
202	843.7	834.7	822.8	812.7
203	846.1	849.3	850.8	849.6
204	802.2	818.2	832.4	838.9
205	686.1	715.6	743.7	759.9
206	602.7	633.3	662.5	680.7
207	512.9	542.8	573.3	593.5

Table X(continued)

Nominal Conditions: β = 0.0°, M_∞ = 2.0, Inverted, Pressures in psf

Orifice ID	Nominal α -5.0° Ref 73 Pi	-2.5° Ref 72 Pi	0.0° Ref 71 Pi	2.5° Ref 70 Pi
208	392.7	426.8	463.0	486.0
209	658.8	667.4	673.2	676.3
210	715.9	727.4	738.5	743.3
211	769.1	784.2	799.0	805.2
212	777.1	791.6	806.2	812.2
213	725.7	738.5	749.4	754.1
214	670.7	679.5	686.7	689.8
215	459.3	430.1	399.3	381.9
216	350.1	357.8	363.5	366.2
217	365.0	373.6	380.6	384.3
218	261.0	285.1	310.9	328.2
219	202.8	208.1	216.5	221.1
220	210.4	213.9	218.1	222.7
225	351.7	324.6	298.5	283.8
226	573.9	542.3	511.0	491.3
227	617.4	583.0	547.9	524.3
228	721.7	694.5	665.9	646.1
229	324.3	354.5	385.0	404.3
230	155.8	168.7	184.5	194.8
231	478.2	480.2	479.9	479.2
232	584.2	589.3	592.1	593.5
233	602.5	607.8	611.4	612.9
234	495.9	497.1	497.2	497.8
235	192.1	204.9	215.3	221.5
236	167.4	183.5	198.1	207.5
237	152.6	166.4	180.8	190.2
238	150.9	158.0	177.2	186.8
239	150.7	162.3	176.0	185.0
244	347.7	324.1	297.3	282.2
245	352.7	327.0	301.8	287.3
246	264.0	259.6	256.2	254.7
247	215.0	220.9	225.9	227.5
248	204.4	204.9	203.3	202.2
249	214.2	214.7	213.6	212.9
252	342.5	374.8	407.6	428.2

Table XI: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: β = 0.0°, M_∞ = 2.0, Upright, Pressures in psf

Orifice ID	Nominal α								
	-2.5°	0.0°	2.5°	5.0°	10.0°	15.0°	20.0°	25.0°	30.0°
	Ref 28	Ref 29	Ref 30	Ref 31	Ref 32	Ref 33	Ref 34	Ref 35	Ref 36
	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi
2	268.1	279.0	304.5	329.9	386.2	445.3	507.3	573.5	637.1
5	354.8	354.6	355.2	354.7	350.4	341.5	331.9	321.7	306.3
6	332.2	333.4	334.2	334.0	329.8	324.1	317.1	305.8	288.3
9	394.9	380.5	351.3	324.0	274.4	232.0	196.1	164.6	139.8
10	217.8	227.3	249.8	272.7	324.0	380.7	441.7	503.6	567.2
13	307.4	306.9	306.4	305.7	302.1	298.7	292.7	283.1	272.9
14	287.2	287.8	288.4	287.7	286.5	283.0	278.0	268.2	257.9
17	396.0	381.5	351.9	322.2	271.2	228.5	191.9	157.1	127.3
19	259.3	258.1	256.7	257.2	254.9	252.5	250.1	245.1	238.9
20	255.2	255.7	254.0	243.0	241.7	239.7	236.8	230.1	226.4
21	231.5	231.6	230.2	231.2	237.1	236.7	228.4	221.7	221.8
22	214.5	215.3	216.1	217.4	222.8	221.9	215.6	211.1	212.8
23	208.2	207.7	208.9	209.3	209.0	206.9	208.2	209.2	208.5
24	197.2	197.4	198.3	199.1	199.6	196.4	197.9	198.7	196.9
25	197.5	197.6	198.3	198.7	197.4	191.7	190.4	191.7	195.8
26	188.0	188.0	188.4	188.9	187.3	184.9	184.2	183.6	187.6
43	303.5	308.2	317.4	324.0	335.1	341.8	342.4	337.0	330.0
44	286.5	290.5	299.5	306.2	315.9	319.9	319.6	314.2	306.4
85	387.6	388.2	388.3	387.5	383.6	375.9	366.2	351.8	331.5
86	364.6	365.8	366.9	366.7	364.0	358.1	348.6	335.1	314.9
87	301.4	311.8	333.8	354.6	398.3	442.4	483.7	523.4	558.1
88	290.2	300.3	322.3	343.1	386.4	429.0	469.4	509.5	541.6
89	156.2	162.0	175.6	192.5	229.3	273.1	320.4	372.6	426.9
90	155.8	161.3	175.3	191.7	227.0	270.5	316.4	367.3	423.3
91	155.7	161.0	174.9	191.1	228.0	271.7	320.2	375.1	432.4
921	423.7	410.1	379.7	351.2	298.8	253.1	213.2	177.4	149.2
922	290.8	302.8	329.9	357.2	417.6	483.6	548.4	613.7	676.8
93	212.8	223.0	244.2	266.9	317.4	373.4	433.9	496.3	560.5
128	313.7	301.9	279.1	257.5	221.0	192.1	169.4	152.6	143.4
201	756.4	743.9	716.5	689.6	627.7	561.6	492.4	425.8	364.3
202	829.5	823.8	807.4	789.9	744.3	690.0	630.5	568.9	508.1
203	849.8	850.4	848.1	844.1	823.4	789.9	745.9	695.8	638.8
204	823.9	830.7	840.2	848.1	852.2	844.2	821.9	789.7	744.0
205	728.6	741.6	766.5	790.3	825.7	846.1	851.1	846.6	826.9
206	645.7	660.1	689.3	716.3	767.3	806.6	833.2	850.2	853.4
207	555.2	570.3	601.4	632.8	694.2	747.4	791.2	825.7	847.0

Table XI(continued)

Nominal Conditions: β = 0.0°, M_∞ = 2.0, Upright, Pressures in psf

Ori-fice ID	Nominal α								
	-2.5°	0.0°	2.5°	5.0°	10.0°	15.0°	20.0°	25.0°	30.0°
	Ref 28	Ref 29	Ref 30	Ref 31	Ref 32	Ref 33	Ref 34	Ref 35	Ref 36
	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi
208	441.7	459.2	496.6	532.4	604.7	670.8	727.7	778.3	817.9
209	687.1	689.0	692.8	695.7	692.3	677.6	654.2	623.7	585.9
210	746.3	750.7	758.2	763.9	765.5	753.9	731.6	700.2	659.4
211	798.6	804.7	815.4	824.0	829.3	820.5	798.1	766.5	722.6
212	790.7	796.7	806.2	814.5	818.8	811.5	790.8	760.9	719.9
213	729.2	734.0	740.5	745.2	746.4	736.2	713.3	684.5	646.0
214	665.5	668.6	673.0	675.3	671.7	659.3	636.6	607.7	571.7
215	416.6	402.4	372.3	344.4	292.6	247.3	208.8	174.1	146.6
216	376.2	379.3	384.4	388.4	391.3	389.6	383.1	371.9	354.0
217	359.2	362.4	367.0	370.9	375.4	373.3	367.9	355.8	336.0
218	297.4	310.0	337.0	364.5	423.2	486.8	550.5	615.4	676.5
219	221.5	225.9	231.9	236.4	237.8	234.9	228.0	221.4	206.3
220	204.0	206.5	213.2	221.0	223.3	220.7	216.1	209.1	191.3
225	310.7	298.8	275.9	255.3	217.8	185.6	159.8	141.3	126.1
226	528.1	512.3	480.8	449.4	383.5	320.2	268.7	224.2	187.9
227	567.3	549.9	512.6	474.6	403.5	348.0	300.9	257.8	219.2
228	681.4	666.6	636.6	605.9	544.4	483.8	423.0	364.6	304.6
229	366.6	381.2	412.8	442.9	506.8	572.7	635.3	695.2	749.8
230	174.5	181.7	199.4	218.2	260.9	310.7	365.3	425.7	490.3
231	500.2	500.1	498.8	497.4	488.9	479.7	463.4	440.9	416.2
232	609.2	610.2	611.4	612.9	608.2	594.5	574.6	547.2	515.7
233	590.1	591.1	593.8	592.7	586.4	574.3	552.7	527.0	493.8
234	475.9	475.3	475.2	472.7	467.2	455.2	441.0	422.8	401.3
235	216.1	221.5	232.6	242.8	257.1	264.6	267.1	268.4	273.3
236	192.4	199.7	216.8	233.2	265.1	295.7	324.5	352.8	380.8
237	171.6	179.2	196.1	214.5	253.9	298.1	346.1	397.5	453.1
238	168.3	175.5	191.7	209.6	250.6	296.7	347.4	403.8	465.0
239	166.6	173.2	189.1	206.8	247.6	293.8	346.7	404.1	468.6
244	310.7	299.2	276.7	254.5	218.0	187.8	165.6	147.0	137.6
245	313.0	302.3	279.6	258.1	219.6	188.3	163.8	145.7	132.0
246	270.4	269.0	267.0	264.3	260.5	256.6	252.7	244.4	241.2
247	233.2	235.2	238.6	241.0	243.2	239.4	229.0	210.8	183.6
248	214.2	213.7	212.5	211.2	206.0	197.9	190.4	183.9	185.2
249	201.3	201.5	201.6	200.5	196.9	189.1	182.2	175.6	175.1
252	387.3	404.2	438.3	470.4	535.9	600.8	661.3	719.5	769.9

Table XII: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: β = 2.0°, M_∞ = 2.0, Upright, Pressures in psf

Orifice ID	Nominal α								
	-2.5°	0.0°	2.5°	5.0°	10.0°	15.0°	20.0°	25.0°	30.0°
	Ref 39	Ref 40	Ref 41	Ref 42	Ref 43	Ref 44	Ref 45	Ref 46	Ref 47
	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi
2	267.6	278.7	299.2	330.7	385.8	444.4	507.1	572.3	637.7
5	330.7	331.6	331.9	330.7	326.4	318.8	310.7	298.6	282.4
6	354.2	354.7	355.4	355.3	352.9	346.1	338.8	328.3	312.7
9	394.1	380.7	356.4	322.9	274.0	231.7	195.0	165.2	139.6
10	216.5	226.3	243.8	272.1	323.6	379.7	441.2	502.9	568.1
13	285.2	285.6	286.2	284.8	282.3	276.6	271.6	262.4	251.2
14	307.1	307.5	307.7	307.7	306.0	303.4	297.9	289.9	280.4
17	395.3	380.9	357.3	322.9	270.8	226.7	189.1	156.4	129.0
19	242.0	240.1	238.9	238.6	237.0	234.5	230.3	224.8	218.1
20	273.3	273.5	262.4	260.1	258.8	256.9	254.9	250.0	247.0
21	213.9	214.1	214.4	216.0	220.3	217.9	210.9	204.1	206.4
22	229.3	230.2	231.3	232.2	238.8	239.0	234.1	227.6	227.4
23	192.3	192.3	193.6	194.5	194.8	193.0	193.1	193.2	190.2
24	212.3	212.6	212.9	213.7	213.7	211.2	211.5	215.9	216.1
25	182.7	183.2	183.9	183.9	183.2	178.7	176.2	178.3	180.9
26	201.0	201.9	202.9	203.2	201.5	197.0	197.1	198.2	202.4
43	284.1	288.9	296.1	304.2	313.4	316.4	317.2	311.3	305.1
44	304.2	308.6	316.5	325.9	336.8	342.5	343.7	340.2	328.5
85	364.0	364.4	365.4	363.5	358.2	351.7	342.2	328.3	309.6
86	387.1	388.2	388.6	390.5	388.0	381.3	371.0	358.0	339.4
87	289.2	300.4	316.9	340.3	382.1	424.4	463.9	503.0	536.3
88	300.3	311.3	329.1	355.7	400.3	445.2	488.4	529.9	565.5
89	154.5	159.8	170.3	189.5	225.5	267.8	313.8	365.5	420.2
90	154.6	160.6	172.2	192.1	229.5	273.2	321.0	373.6	430.1
91	153.8	159.5	170.7	189.6	226.9	270.3	319.5	375.0	432.2
921	424.0	409.7	385.4	351.4	299.0	253.3	212.2	177.7	148.5
922	289.1	301.2	322.7	355.5	416.9	482.4	548.3	613.9	677.8
93	211.8	221.9	239.1	266.5	316.8	372.7	433.4	495.6	561.3
128	312.9	300.6	282.0	257.3	221.1	191.6	168.6	152.2	142.8
201	755.0	743.4	723.0	689.8	629.3	561.1	492.3	426.9	366.4
202	827.8	821.9	809.2	788.6	744.1	688.5	629.3	568.2	509.0
203	848.6	848.3	847.4	842.7	823.5	788.7	745.3	695.1	639.3
204	822.6	828.4	837.3	846.6	852.0	843.1	821.4	789.6	745.2
205	726.7	739.3	760.2	788.5	824.9	844.7	850.1	846.8	828.5
206	644.5	658.3	680.9	714.3	765.2	804.5	832.1	850.2	854.9
207	554.2	568.6	593.6	631.2	692.5	745.7	790.2	825.7	848.7

Table XII(continued)

Nominal Conditions: β = 2.0°, M_∞ = 2.0, Upright, Pressures in psf

Ori-fice ID	Nominal α								
	-2.5°	0.0°	2.5°	5.0°	10.0°	15.0°	20.0°	25.0°	30.0°
	Ref 39	Ref 40	Ref 41	Ref 42	Ref 43	Ref 44	Ref 45	Ref 46	Ref 47
	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi
208	440.6	458.4	487.0	530.9	603.4	668.4	726.5	778.2	818.9
209	663.2	665.1	669.0	672.0	668.0	654.3	629.9	600.5	564.0
210	726.4	730.8	736.9	743.6	745.7	734.5	711.1	680.5	642.4
211	786.1	792.2	801.2	811.0	818.4	809.2	786.3	755.9	714.0
212	799.1	805.1	813.4	823.7	830.1	820.5	800.1	771.6	730.5
213	747.1	751.0	757.3	763.7	766.4	753.6	732.8	703.2	663.1
214	687.5	691.0	693.8	697.8	695.1	680.8	659.4	630.0	593.5
215	414.4	400.4	376.3	342.5	291.7	246.7	207.1	174.6	146.5
216	354.2	357.0	360.5	364.0	366.0	364.5	358.5	347.6	330.3
217	379.7	383.4	387.7	393.7	398.2	397.1	391.0	381.6	362.9
218	294.6	306.6	328.3	361.3	421.2	483.8	548.1	611.9	673.6
219	206.0	209.7	215.7	220.6	221.2	215.3	209.9	201.4	179.5
220	217.4	219.5	228.8	236.5	239.5	237.8	234.1	229.0	214.5
225	309.2	298.0	279.8	254.5	216.8	185.1	160.1	140.9	125.1
226	526.8	512.2	487.3	449.1	382.6	320.9	268.4	225.1	188.1
227	566.4	549.0	520.2	474.3	403.1	348.4	301.1	258.4	219.9
228	680.5	666.8	642.3	606.0	544.4	482.5	422.7	365.5	304.1
229	365.8	380.5	406.0	441.8	506.5	570.8	634.6	695.1	751.1
230	172.8	180.2	194.5	217.4	260.2	309.9	364.4	424.4	489.7
231	472.0	472.5	470.9	468.5	462.9	451.6	436.5	415.8	392.4
232	583.5	583.9	585.4	586.5	582.6	569.1	549.6	523.3	492.9
233	615.2	616.7	617.8	618.2	612.2	598.5	576.9	551.3	519.1
234	503.3	502.7	502.2	500.8	493.1	482.1	465.7	447.1	423.3
235	204.6	209.9	218.3	227.4	238.9	245.3	245.3	247.3	251.8
236	185.6	192.4	204.8	222.7	251.4	279.3	304.9	330.5	358.7
237	168.7	175.7	188.2	208.7	247.8	289.5	337.3	388.5	442.3
238	166.0	172.6	185.2	206.4	246.4	291.7	342.6	398.4	458.9
239	164.9	171.6	184.1	205.2	246.2	292.0	345.3	402.9	466.7
244	309.7	298.2	280.1	254.0	217.3	187.9	165.0	147.1	136.1
245	312.3	301.6	282.8	257.3	218.8	187.5	163.3	145.1	132.0
246	251.0	249.9	248.1	246.1	242.4	238.3	233.3	228.0	222.7
247	217.3	219.7	222.9	225.6	226.3	219.5	207.0	187.8	158.4
248	197.6	197.3	197.1	195.9	192.0	185.3	176.8	170.6	170.7
249	217.1	216.9	216.4	215.2	210.8	202.5	194.5	189.6	190.4
252	387.6	402.7	429.5	469.0	534.6	598.6	660.2	718.6	771.6

Table XIII: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: β = 5.0°, M_∞ = 2.0, Upright, Pressures in psf

Orifice ID	Nominal α							
	-2.5°	0.0°	5.0°	10.0°	15.0°	20.0°	25.0°	30.0°
	Ref 50	Ref 51	Ref 52	Ref 53	Ref 54	Ref 55	Ref 56	Ref 57
	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi
2	265.4	277.0	330.1	385.9	443.3	504.9	570.2	634.5
5	298.7	299.3	298.3	293.5	285.5	278.2	266.2	250.3
6	390.3	391.6	393.2	389.9	383.7	376.2	363.7	350.5
9	393.2	378.2	322.2	272.9	230.6	194.3	162.7	137.9
10	215.7	226.2	270.5	322.0	378.4	439.7	501.5	566.0
13	257.3	257.6	255.9	252.8	248.0	241.3	233.7	220.0
14	339.5	339.8	341.0	339.3	337.1	331.4	322.2	313.5
17	387.4	372.5	316.2	266.7	221.3	187.8	148.7	126.1
19	222.6	221.7	214.5	211.6	209.9	205.5	198.4	187.6
20	295.5	293.2	289.9	289.5	286.7	284.6	282.7	279.6
21	191.0	192.2	194.8	198.5	196.2	186.9	180.3	173.4
22	259.6	260.3	260.0	265.4	267.6	262.4	257.1	256.1
23	174.4	174.6	177.3	176.9	173.7	172.5	170.8	168.6
24	232.7	233.6	236.1	236.0	233.7	239.4	243.8	243.8
25	165.3	165.8	167.7	166.1	162.3	159.4	157.0	162.3
26	225.6	225.9	226.5	224.4	223.1	220.1	220.4	226.3
43	258.6	262.8	274.6	280.6	282.8	280.9	277.1	270.8
44	333.3	338.3	357.5	371.9	379.8	382.4	377.3	370.9
85	329.7	330.0	329.0	323.0	315.9	307.5	293.4	276.2
86	421.7	423.2	426.7	424.5	418.3	409.4	393.9	375.7
87	273.0	281.9	319.4	357.9	397.2	434.4	470.4	502.8
88	316.3	327.2	375.2	423.3	471.9	517.5	559.4	596.8
89	152.5	157.7	185.7	219.7	261.4	305.8	357.0	410.4
90	154.1	161.3	195.1	233.2	279.0	327.1	380.0	437.9
91	152.9	158.6	189.4	226.7	270.6	318.8	373.5	431.0
921	422.8	408.7	351.0	297.8	251.9	211.6	175.5	147.1
922	286.9	299.2	354.2	415.3	480.8	545.5	611.0	674.2
93	211.1	221.2	265.1	315.4	371.3	431.9	494.1	560.2
128	310.7	299.3	254.2	218.2	188.6	165.8	150.4	138.9
201	752.7	740.5	687.9	625.8	560.3	491.8	425.9	366.0
202	824.4	818.4	785.1	739.0	685.8	625.7	565.2	505.9
203	845.3	845.9	839.4	818.6	785.5	741.1	692.5	636.4
204	819.4	826.0	843.9	848.1	840.2	817.5	786.6	741.8
205	722.3	736.3	784.7	820.8	841.3	846.4	843.0	823.7
206	640.9	655.2	710.1	761.6	801.6	827.7	846.0	850.4
207	551.9	567.2	628.3	690.3	743.2	785.7	821.3	843.4

Table XIII(continued)

Nominal Conditions: β = 5.0°, M_∞ = 2.0, Upright, Pressures in psf

Orifice ID	Nominal α							
	-2.5°	0.0°	5.0°	10.0°	15.0°	20.0°	25.0°	30.0°
	Ref 50	Ref 51	Ref 52	Ref 53	Ref 54	Ref 55	Ref 56	Ref 57
	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi
208	438.7	456.2	529.2	600.9	665.6	723.0	774.4	813.8
209	627.6	630.4	636.7	632.3	618.4	594.3	565.3	530.1
210	695.0	698.7	711.6	713.0	701.6	679.3	650.9	613.2
211	765.9	772.8	791.3	797.2	789.4	767.6	737.1	695.1
212	811.8	817.9	835.9	840.3	833.8	811.7	783.1	741.3
213	771.4	776.6	790.1	791.1	781.7	758.8	728.8	688.5
214	718.6	721.7	729.9	727.7	714.5	692.2	662.9	624.7
215	409.8	395.6	339.2	288.2	244.3	205.8	171.6	144.9
216	321.7	325.1	329.2	330.7	328.8	323.1	310.5	295.7
217	413.4	416.8	430.2	435.4	435.5	430.9	419.8	402.2
218	289.2	301.6	356.1	416.2	479.3	541.1	604.9	665.7
219	184.2	188.6	198.1	198.3	193.2	183.9	169.0	143.7
220	243.0	247.6	263.8	267.4	266.7	260.5	260.8	255.9
225	308.2	295.8	253.4	215.1	184.9	158.5	138.3	123.0
226	525.3	510.1	447.6	381.9	320.8	269.3	225.5	189.0
227	564.3	547.2	472.7	403.7	349.0	301.0	258.5	218.6
228	678.7	664.3	604.8	543.1	482.2	421.8	364.0	303.0
229	364.1	379.6	441.0	505.2	569.1	631.4	691.9	746.6
230	171.7	180.0	215.7	259.7	308.8	363.8	423.1	488.9
231	431.5	431.7	427.0	422.6	413.6	398.0	378.6	357.9
232	545.3	546.2	548.1	544.1	531.7	513.0	487.9	458.8
233	651.5	652.6	656.0	649.7	635.8	614.5	587.1	552.7
234	543.4	543.1	541.6	533.8	521.0	504.8	483.7	457.2
235	189.6	193.5	207.3	213.8	215.8	216.4	216.4	220.2
236	176.3	182.2	207.9	232.0	255.3	278.3	302.1	328.4
237	164.8	171.7	202.5	238.3	278.2	323.1	371.3	426.2
238	163.3	170.2	202.5	240.7	284.5	334.3	387.8	448.3
239	163.5	170.5	204.8	243.8	290.5	343.0	399.2	463.7
244	309.0	296.8	253.4	215.0	185.1	161.9	144.7	133.4
245	311.2	299.6	255.6	217.1	184.6	158.9	141.5	127.0
246	229.4	228.3	221.5	217.5	212.9	209.0	201.4	198.2
247	195.9	198.2	203.0	200.6	192.7	178.3	153.9	129.8
248	177.4	178.0	177.7	175.4	168.5	160.0	152.8	151.5
249	239.8	239.4	237.6	231.3	225.1	218.7	214.0	212.8
252	385.2	401.6	467.6	533.2	597.7	657.8	715.4	766.6

Table XIV: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: $\beta = -2.0^{\circ}$, $M_{\infty} = 2.0$, Upright, Pressures in psf

Orifice ID	Nominal α		
	0.0°	15.0°	25.0°
	Ref 59	Ref 60	Ref 61
	Pi	Pi	Pi
2	275.9	443.6	572.1
5	375.6	364.8	345.9
6	311.4	302.6	283.4
9	380.3	231.7	163.7
10	225.7	379.7	502.8
13	326.5	319.0	306.1
14	268.5	263.4	246.4
17	378.6	226.7	156.8
19	275.7	270.4	264.6
20	237.1	222.1	214.0
21	246.8	254.1	241.1
22	199.0	204.0	194.3
23	223.1	223.1	226.8
24	181.8	182.9	185.5
25	211.9	206.0	206.2
26	177.1	174.1	171.0
43	326.1	364.1	363.6
44	272.5	297.5	288.5
85	410.2	399.8	376.1
86	342.7	335.5	311.2
87	320.5	458.0	543.7
88	288.0	411.4	487.0
89	160.7	276.4	376.6
90	159.0	264.9	362.0
91	159.1	271.1	373.9
921	408.4	252.3	176.8
922	301.0	482.2	612.8
93	220.9	371.9	496.2
128	302.3	190.9	152.3
201	742.0	560.1	424.8
202	820.9	688.8	569.0
203	847.3	787.6	695.1
204	826.1	841.8	788.2
205	737.7	844.2	845.3
206	657.0	805.2	849.1
207	567.7	746.6	825.0

Table XIV(continued)

Nominal Conditions: $\beta = -2.0^{\circ}$, $M_{\infty} = 2.0$, Upright, Pressures in psf

Orifice ID	Nominal α		
	0.0°	15.0°	25.0°
	Ref 59	Ref 60	Ref 61
	Pi	Pi	Pi
208	458.2	668.9	778.4
209	710.1	701.4	645.1
210	766.9	773.3	718.3
211	812.0	829.6	775.3
212	781.5	798.2	749.2
213	712.1	713.7	664.6
214	644.1	634.0	584.9
215	403.7	247.7	173.7
216	400.6	414.0	397.2
217	339.2	349.9	329.4
218	308.8	487.7	616.8
219	239.9	252.3	243.6
220	191.6	203.0	187.8
225	296.7	184.7	140.4
226	512.0	320.3	224.2
227	549.5	348.6	257.0
228	665.4	481.4	363.5
229	380.2	571.7	694.7
230	180.9	308.7	424.8
231	525.0	504.7	466.8
232	633.9	620.1	572.0
233	566.3	547.9	501.5
234	448.5	430.8	400.0
235	232.5	284.7	291.9
236	205.3	310.4	371.3
237	180.0	304.3	406.8
238	175.1	299.3	407.9
239	172.0	293.4	403.6
244	298.2	186.6	146.4
245	300.9	186.2	144.0
246	287.6	275.0	264.3
247	250.0	258.3	235.6
248	230.3	211.9	198.4
249	185.9	177.6	164.1
252	402.5	599.8	718.4

Table XV: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: $\beta = -5.0^{\circ}$, $M_{\infty} = 2.0$, Upright, Pressures in psf

Orifice ID	Nominal α		
	0.0°	15.0°	25.0°
	Ref 62	Ref 63	Ref 64
	Pi	Pi	Pi
2	273.7	442.3	570.2
5	413.6	403.4	384.6
6	280.2	271.1	250.6
9	377.2	229.6	162.2
10	226.4	378.0	501.2
13	362.2	353.6	339.4
14	240.4	234.1	217.7
17	371.6	220.9	148.7
19	305.8	301.9	298.6
20	212.3	198.4	186.8
21	275.6	285.0	271.0
22	180.5	182.0	173.0
23	248.5	247.9	255.4
24	165.0	163.5	160.5
25	237.1	229.2	230.2
26	160.1	158.1	152.0
43	357.1	402.5	406.7
44	246.7	263.8	253.9
85	448.0	439.3	414.9
86	310.1	300.8	278.7
87	339.0	483.4	574.1
88	271.1	384.0	454.6
89	161.3	281.5	384.8
90	155.6	258.3	352.5
91	158.1	270.9	373.9
921	405.3	250.3	175.6
922	300.5	479.8	610.3
93	221.3	371.1	493.7
128	300.1	188.1	147.7
201	735.5	554.2	421.2
202	813.0	683.9	566.7
203	840.1	781.8	690.0
204	818.6	835.6	782.1
205	731.9	838.0	839.8
206	652.7	799.3	844.0
207	563.5	741.1	820.0

Table XV(continued)

Nominal Conditions: $\beta = -5.0^{\circ}$, $M_{\infty} = 2.0$, Upright, Pressures in psf

Orifice ID	Nominal α		
	0.0°	15.0°	25.0°
	Ref 62	Ref 63	Ref 64
	Pi	Pi	Pi
208	457.0	665.4	774.3
209	741.1	733.0	678.0
210	789.9	797.3	742.8
211	821.8	839.3	785.0
212	758.3	775.4	728.1
213	678.8	679.7	631.8
214	606.9	595.2	548.7
215	404.1	247.1	173.1
216	436.8	453.9	438.3
217	307.2	314.2	293.2
218	310.6	487.9	619.4
219	266.8	283.5	274.3
220	175.5	180.9	157.5
225	293.1	182.9	137.0
226	508.5	320.5	223.0
227	546.7	345.4	254.4
228	660.1	476.1	358.4
229	379.1	567.9	690.7
230	179.8	309.2	423.5
231	566.0	543.3	504.1
232	672.0	656.8	608.2
233	527.7	507.9	463.9
234	406.5	392.1	365.0
235	252.6	316.9	327.7
236	216.3	334.2	403.3
237	182.6	315.1	422.0
238	176.1	305.4	416.5
239	170.8	294.2	405.2
244	296.4	183.2	142.2
245	296.1	181.8	138.3
246	318.5	305.0	295.0
247	275.5	289.7	272.5
248	256.4	236.1	223.4
249	166.6	161.2	145.4
252	400.8	595.9	714.7

Table XVI: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: β = 0.0°, M_∞ = 2.3, Inverted, Pressures in psf

Orifice ID	Nominal α			
	-5.0°	-2.5°	0.0°	2.5°
	Ref 73	Ref 72	Ref 71	Ref 70
	Pi	Pi	Pi	Pi
2	235.8	257.7	282.7	298.1
5	335.5	335.5	337.5	337.2
6	347.3	350.3	351.9	353.0
9	441.4	410.1	379.6	361.5
10	191.2	209.7	229.7	243.0
13	291.2	290.1	291.4	291.0
14	303.1	305.1	305.1	305.2
17	442.7	412.2	381.9	361.7
19	252.3	250.5	246.6	245.0
20	271.5	270.3	270.8	269.1
21	216.6	218.6	220.6	219.7
22	226.7	228.1	229.0	228.8
23	199.4	199.2	198.9	198.3
24	207.4	208.6	209.5	208.9
25	183.4	184.9	185.1	185.2
26	198.1	198.9	199.9	200.1
43	275.6	286.5	294.9	300.3
44	286.2	298.0	308.5	312.9
85	366.6	369.1	370.8	371.5
86	377.8	381.9	384.9	385.3
87	263.9	284.8	305.7	318.4
88	268.9	290.4	312.8	326.4
89	141.2	152.9	164.6	172.7
90	140.4	152.5	165.0	172.8
91	141.5	151.6	163.3	169.4
921	467.9	438.6	408.5	390.2
922	256.0	279.7	305.5	321.8
93	186.8	205.4	224.9	237.9
128	349.9	324.4	299.5	284.7
201	788.5	766.5	743.1	726.7
202	843.7	834.7	822.8	812.7
203	846.1	849.3	850.8	849.6
204	802.2	818.2	832.4	838.9
205	686.1	715.6	743.7	759.9
206	602.7	633.3	662.5	680.7
207	512.9	542.8	573.3	593.5

Table XVI(continued)

Nominal Conditions: β = 0.0°, M_∞ = 2.3, Inverted, Pressures in psf

Orifice ID	Nominal α			
	-5.0°	-2.5°	0.0°	2.5°
	Ref 73	Ref 72	Ref 71	Ref 70
	Pi	Pi	Pi	Pi
208	392.7	426.8	463.0	486.0
209	658.8	667.4	673.2	676.3
210	715.9	727.4	738.5	743.3
211	769.1	784.2	799.0	805.2
212	777.1	791.6	806.2	812.2
213	725.7	738.5	749.4	754.1
214	670.7	679.5	686.7	689.8
215	459.3	430.1	399.3	381.9
216	350.1	357.8	363.5	366.2
217	365.0	373.6	380.6	384.3
218	261.0	285.1	310.9	328.2
219	202.8	208.1	216.5	221.1
220	210.4	213.9	218.1	222.7
225	351.7	324.6	298.5	283.8
226	573.9	542.3	511.0	491.3
227	617.4	583.0	547.9	524.3
228	721.7	694.5	665.9	646.1
229	324.3	354.5	385.0	404.3
230	155.8	168.7	184.5	194.8
231	478.2	480.2	479.9	479.2
232	584.2	589.3	592.1	593.5
233	602.5	607.8	611.4	612.9
234	495.9	497.1	497.2	497.8
235	192.1	204.9	215.3	221.5
236	167.4	183.5	198.1	207.5
237	152.6	166.4	180.8	190.2
238	150.9	158.0	177.2	186.8
239	150.7	162.3	176.0	185.0
244	347.7	324.1	297.3	282.2
245	352.7	327.0	301.8	287.3
246	264.0	259.6	256.2	254.7
247	215.0	220.9	225.9	227.5
248	204.4	204.9	203.3	202.2
249	214.2	214.7	213.6	212.9
252	342.5	374.8	407.6	428.2

Table XVII: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: β = 0.0°, M_∞ = 2.3, Upright, Pressures in psf

Orifice ID	Nominal α								
	-2.5°	0.0°	2.5°	5.0°	10.0°	15.0°	20.0°	25.0°	30.0°
	Ref 28	Ref 29	Ref 30	Ref 31	Ref 32	Ref 33	Ref 34	Ref 35	Ref 36
	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi
2	268.1	279.0	304.5	329.9	386.2	445.3	507.3	573.5	637.1
5	354.8	354.6	355.2	354.7	350.4	341.5	331.9	321.7	306.3
6	332.2	333.4	334.2	334.0	329.8	324.1	317.1	305.8	288.3
9	394.9	380.5	351.3	324.0	274.4	232.0	196.1	164.6	139.8
10	217.8	227.3	249.8	272.7	324.0	380.7	441.7	503.6	567.2
13	307.4	306.9	306.4	305.7	302.1	298.7	292.7	283.1	272.9
14	287.2	287.8	288.4	287.7	286.5	283.0	278.0	268.2	257.9
17	396.0	381.5	351.9	322.2	271.2	228.5	191.9	157.1	127.3
19	259.3	258.1	256.7	257.2	254.9	252.5	250.1	245.1	238.9
20	255.2	255.7	254.0	243.0	241.7	239.7	236.8	230.1	226.4
21	231.5	231.6	230.2	231.2	237.1	236.7	228.4	221.7	221.8
22	214.5	215.3	216.1	217.4	222.8	221.9	215.6	211.1	212.8
23	208.2	207.7	208.9	209.3	209.0	206.9	208.2	209.2	208.5
24	197.2	197.4	198.3	199.1	199.6	196.4	197.9	198.7	196.9
25	197.5	197.6	198.3	198.7	197.4	191.7	190.4	191.7	195.8
26	188.0	188.0	188.4	188.9	187.3	184.9	184.2	183.6	187.6
43	303.5	308.2	317.4	324.0	335.1	341.8	342.4	337.0	330.0
44	286.5	290.5	299.5	306.2	315.9	319.9	319.6	314.2	306.4
85	387.6	388.2	388.3	387.5	383.6	375.9	366.2	351.8	331.5
86	364.6	365.8	366.9	366.7	364.0	358.1	348.6	335.1	314.9
87	301.4	311.8	333.8	354.6	398.3	442.4	483.7	523.4	558.1
88	290.2	300.3	322.3	343.1	386.4	429.0	469.4	509.5	541.6
89	156.2	162.0	175.6	192.5	229.3	273.1	320.4	372.6	426.9
90	155.8	161.3	175.3	191.7	227.0	270.5	316.4	367.3	423.3
91	155.7	161.0	174.9	191.1	228.0	271.7	320.2	375.1	432.4
921	423.7	410.1	379.7	351.2	298.8	253.1	213.2	177.4	149.2
922	290.8	302.8	329.9	357.2	417.6	483.6	548.4	613.7	676.8
93	212.8	223.0	244.2	266.9	317.4	373.4	433.9	496.3	560.5
128	313.7	301.9	279.1	257.5	221.0	192.1	169.4	152.6	143.4
201	756.4	743.9	716.5	689.6	627.7	561.6	492.4	425.8	364.3
202	829.5	823.8	807.4	789.9	744.3	690.0	630.5	568.9	508.1
203	849.8	850.4	848.1	844.1	823.4	789.9	745.9	695.8	638.8
204	823.9	830.7	840.2	848.1	852.2	844.2	821.9	789.7	744.0
205	728.6	741.6	766.5	790.3	825.7	846.1	851.1	846.6	826.9
206	645.7	660.1	689.3	716.3	767.3	806.6	833.2	850.2	853.4
207	555.2	570.3	601.4	632.8	694.2	747.4	791.2	825.7	847.0

Table XVII(continued)

Nominal Conditions: β = 0.0°, M_∞ = 2.3, Upright, Pressures in psf

Orifice ID	Nominal α								
	-2.5°	0.0°	2.5°	5.0°	10.0°	15.0°	20.0°	25.0°	30.0°
	Ref 28	Ref 29	Ref 30	Ref 31	Ref 32	Ref 33	Ref 34	Ref 35	Ref 36
	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi
208	441.7	459.2	496.6	532.4	604.7	670.8	727.7	778.3	817.9
209	687.1	689.0	692.8	695.7	692.3	677.6	654.2	623.7	585.9
210	746.3	750.7	758.2	763.9	765.5	753.9	731.6	700.2	659.4
211	798.6	804.7	815.4	824.0	829.3	820.5	798.1	766.5	722.6
212	790.7	796.7	806.2	814.5	818.8	811.5	790.8	760.9	719.9
213	729.2	734.0	740.5	745.2	746.4	736.2	713.3	684.5	646.0
214	665.5	668.6	673.0	675.3	671.7	659.3	636.6	607.7	571.7
215	416.6	402.4	372.3	344.4	292.6	247.3	208.8	174.1	146.6
216	376.2	379.3	384.4	388.4	391.3	389.6	383.1	371.9	354.0
217	359.2	362.4	367.0	370.9	375.4	373.3	367.9	355.8	336.0
218	297.4	310.0	337.0	364.5	423.2	486.8	550.5	615.4	676.5
219	221.5	225.9	231.9	236.4	237.8	234.9	228.0	221.4	206.3
220	204.0	206.5	213.2	221.0	223.3	220.7	216.1	209.1	191.3
225	310.7	298.8	275.9	255.3	217.8	185.6	159.8	141.3	126.1
226	528.1	512.3	480.8	449.4	383.5	320.2	268.7	224.2	187.9
227	567.3	549.9	512.6	474.6	403.5	348.0	300.9	257.8	219.2
228	681.4	666.6	636.6	605.9	544.4	483.8	423.0	364.6	304.6
229	366.6	381.2	412.8	442.9	506.8	572.7	635.3	695.2	749.8
230	174.5	181.7	199.4	218.2	260.9	310.7	365.3	425.7	490.3
231	500.2	500.1	498.8	497.4	488.9	479.7	463.4	440.9	416.2
232	609.2	610.2	611.4	612.9	608.2	594.5	574.6	547.2	515.7
233	590.1	591.1	593.8	592.7	586.4	574.3	552.7	527.0	493.8
234	475.9	475.3	475.2	472.7	467.2	455.2	441.0	422.8	401.3
235	216.1	221.5	232.6	242.8	257.1	264.6	267.1	268.4	273.3
236	192.4	199.7	216.8	233.2	265.1	295.7	324.5	352.8	380.8
237	171.6	179.2	196.1	214.5	253.9	298.1	346.1	397.5	453.1
238	168.3	175.5	191.7	209.6	250.6	296.7	347.4	403.8	465.0
239	166.6	173.2	189.1	206.8	247.6	293.8	346.7	404.1	468.6
244	310.7	299.2	276.7	254.5	218.0	187.8	165.6	147.0	137.6
245	313.0	302.3	279.6	258.1	219.6	188.3	163.8	145.7	132.0
246	270.4	269.0	267.0	264.3	260.5	256.6	252.7	244.4	241.2
247	233.2	235.2	238.6	241.0	243.2	239.4	229.0	210.8	183.6
248	214.2	213.7	212.5	211.2	206.0	197.9	190.4	183.9	185.2
249	201.3	201.5	201.6	200.5	196.9	189.1	182.2	175.6	175.1
252	387.3	404.2	438.3	470.4	535.9	600.8	661.3	719.5	769.9

Table XVIII: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: β = 2.0°, M_∞ = 2.3, Upright, Pressures in psf

Orifice ID	Nominal α							
	-2.5°	0.0°	5.0°	10.0°	15.0°	20.0°	25.0°	30.0°
	Ref 39	Ref 41	Ref 42	Ref 43	Ref 44	Ref 45	Ref 46	Ref 47
	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi
2	267.6	278.7	330.7	385.8	444.4	507.1	572.3	637.7
5	330.7	331.6	330.7	326.4	318.8	310.7	298.6	282.4
6	354.2	354.7	355.3	352.9	346.1	338.8	328.3	312.7
9	394.1	380.7	322.9	274.0	231.7	195.0	165.2	139.6
10	216.5	226.3	272.1	323.6	379.7	441.2	502.9	568.1
13	285.2	285.6	284.8	282.3	276.6	271.6	262.4	251.2
14	307.1	307.5	307.7	306.0	303.4	297.9	289.9	280.4
17	395.3	380.9	322.9	270.8	226.7	189.1	156.4	129.0
19	242.0	240.1	238.6	237.0	234.5	230.3	224.8	218.1
20	273.3	273.5	260.1	258.8	256.9	254.9	250.0	247.0
21	213.9	214.1	216.0	220.3	217.9	210.9	204.1	206.4
22	229.3	230.2	232.2	238.8	239.0	234.1	227.6	227.4
23	192.3	192.3	194.5	194.8	193.0	193.1	193.2	190.2
24	212.3	212.6	213.7	213.7	211.2	211.5	215.9	216.1
25	182.7	183.2	183.9	183.2	178.7	176.2	178.3	180.9
26	201.0	201.9	203.2	201.5	197.0	197.1	198.2	202.4
43	284.1	288.9	304.2	313.4	316.4	317.2	311.3	305.1
44	304.2	308.6	325.9	336.8	342.5	343.7	340.2	328.5
85	364.0	364.4	363.5	358.2	351.7	342.2	328.3	309.6
86	387.1	388.2	390.5	388.0	381.3	371.0	358.0	339.4
87	289.2	300.4	340.3	382.1	424.4	463.9	503.0	536.3
88	300.3	311.3	355.7	400.3	445.2	488.4	529.9	565.5
89	154.5	159.8	189.5	225.5	267.8	313.8	365.5	420.2
90	154.6	160.6	192.1	229.5	273.2	321.0	373.6	430.1
91	153.8	159.5	189.6	226.9	270.3	319.5	375.0	432.2
921	424.0	409.7	351.4	299.0	253.3	212.2	177.7	148.5
922	289.1	301.2	355.5	416.9	482.4	548.3	613.9	677.8
93	211.8	221.9	266.5	316.8	372.7	433.4	495.6	561.3
128	312.9	300.6	257.3	221.1	191.6	168.6	152.2	142.8
201	755.0	743.4	689.8	629.3	561.1	492.3	426.9	366.4
202	827.8	821.9	788.6	744.1	688.5	629.3	568.2	509.0
203	848.6	848.3	842.7	823.5	788.7	745.3	695.1	639.3
204	822.6	828.4	846.6	852.0	843.1	821.4	789.6	745.2
205	726.7	739.3	788.5	824.9	844.7	850.1	846.8	828.5
206	644.5	658.3	714.3	765.2	804.5	832.1	850.2	854.9
207	554.2	568.6	631.2	692.5	745.7	790.2	825.7	848.7

Table XVIII(continued)

Nominal Conditions: β = 2.0°, M_∞ = 2.3, Upright, Pressures in psf

Orifice ID	Nominal α							
	-2.5°	0.0°	5.0°	10.0°	15.0°	20.0°	25.0°	30.0°
	Ref 39	Ref 41	Ref 42	Ref 43	Ref 44	Ref 45	Ref 46	Ref 47
	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi
208	440.6	458.4	530.9	603.4	668.4	726.5	778.2	818.9
209	663.2	665.1	672.0	668.0	654.3	629.9	600.5	564.0
210	726.4	730.8	743.6	745.7	734.5	711.1	680.5	642.4
211	786.1	792.2	811.0	818.4	809.2	786.3	755.9	714.0
212	799.1	805.1	823.7	830.1	820.5	800.1	771.6	730.5
213	747.1	751.0	763.7	766.4	753.6	732.8	703.2	663.1
214	687.5	691.0	697.8	695.1	680.8	659.4	630.0	593.5
215	414.4	400.4	342.5	291.7	246.7	207.1	174.6	146.5
216	354.2	357.0	364.0	366.0	364.5	358.5	347.6	330.3
217	379.7	383.4	393.7	398.2	397.1	391.0	381.6	362.9
218	294.6	306.6	361.3	421.2	483.8	548.1	611.9	673.6
219	206.0	209.7	220.6	221.2	215.3	209.9	201.4	179.5
220	217.4	219.5	236.5	239.5	237.8	234.1	229.0	214.5
225	309.2	298.0	254.5	216.8	185.1	160.1	140.9	125.1
226	526.8	512.2	449.1	382.6	320.9	268.4	225.1	188.1
227	566.4	549.0	474.3	403.1	348.4	301.1	258.4	219.9
228	680.5	666.8	606.0	544.4	482.5	422.7	365.5	304.1
229	365.8	380.5	441.8	506.5	570.8	634.6	695.1	751.1
230	172.8	180.2	217.4	260.2	309.9	364.4	424.4	489.7
231	472.0	472.5	468.5	462.9	451.6	436.5	415.8	392.4
232	583.5	583.9	586.5	582.6	569.1	549.6	523.3	492.9
233	615.2	616.7	618.2	612.2	598.5	576.9	551.3	519.1
234	503.3	502.7	500.8	493.1	482.1	465.7	447.1	423.3
235	204.6	209.9	227.4	238.9	245.3	245.3	247.3	251.8
236	185.6	192.4	222.7	251.4	279.3	304.9	330.5	358.7
237	168.7	175.7	208.7	247.8	289.5	337.3	388.5	442.3
238	166.0	172.6	206.4	246.4	291.7	342.6	398.4	458.9
239	164.9	171.6	205.2	246.2	292.0	345.3	402.9	466.7
244	309.7	298.2	254.0	217.3	187.9	165.0	147.1	136.1
245	312.3	301.6	257.3	218.8	187.5	163.3	145.1	132.0
246	251.0	249.9	246.1	242.4	238.3	233.3	228.0	222.7
247	217.3	219.7	225.6	226.3	219.5	207.0	187.8	158.4
248	197.6	197.3	195.9	192.0	185.3	176.8	170.6	170.7
249	217.1	216.9	215.2	210.8	202.5	194.5	189.6	190.4
252	387.6	402.7	469.0	534.6	598.6	660.2	718.6	771.6

Table XIX: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: β = 5.0°, M_∞ = 2.3, Upright, Pressures in psf

Orifice ID	Nominal α							
	-2.5°	0.0°	5.0°	10.0°	15.0°	20.0°	25.0°	30.0°
	Ref 50	Ref 51	Ref 52	Ref 53	Ref 54	Ref 55	Ref 56	Ref 57
	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi
2	265.4	277.0	330.1	385.9	443.3	504.9	570.2	634.5
5	298.7	289.3	298.3	293.5	285.5	278.2	266.2	250.3
6	390.3	391.6	393.2	389.9	383.7	376.2	363.7	350.5
9	393.2	378.2	322.2	272.9	230.6	194.3	162.7	137.9
10	215.7	226.2	270.5	322.0	378.4	439.7	501.5	566.0
13	257.3	257.6	255.9	252.8	248.0	241.3	233.7	220.0
14	339.5	339.8	341.0	339.3	337.1	331.4	322.2	313.5
17	387.4	372.5	316.2	266.7	221.3	187.8	148.7	126.1
19	222.6	221.7	214.5	211.6	209.9	205.5	198.4	187.6
20	295.5	293.2	289.9	289.5	286.7	284.6	282.7	279.6
21	191.0	192.2	194.8	198.5	196.2	186.9	180.3	173.4
22	259.6	260.3	260.0	265.4	267.6	262.4	257.1	256.1
23	174.4	174.6	177.3	176.9	173.7	172.5	170.8	168.6
24	232.7	233.6	236.1	236.0	233.7	239.4	243.8	243.8
25	165.3	165.8	167.7	166.1	162.3	159.4	157.0	162.3
26	225.6	225.9	226.5	224.4	223.1	220.1	220.4	226.3
43	258.6	262.8	274.6	280.6	282.8	280.9	277.1	270.8
44	333.3	338.3	357.5	371.9	379.8	382.4	377.3	370.9
85	329.7	330.0	329.0	323.0	315.9	307.5	293.4	276.2
86	421.7	423.2	426.7	424.5	418.3	409.4	393.9	375.7
87	273.0	281.9	319.4	357.9	397.2	434.4	470.4	502.8
88	316.3	327.2	375.2	423.3	471.9	517.5	559.4	596.8
89	152.5	157.7	185.7	219.7	261.4	305.8	357.0	410.4
90	154.1	161.3	195.1	233.2	279.0	327.1	380.0	437.9
91	152.9	158.6	189.4	226.7	270.6	318.8	373.5	431.0
921	422.8	408.7	351.0	297.8	251.9	211.6	175.5	147.1
922	286.9	299.2	354.2	415.3	480.8	545.5	611.0	674.2
93	211.1	221.2	265.1	315.4	371.3	431.9	494.1	560.2
128	310.7	299.3	254.2	218.2	188.6	165.8	150.4	138.9
201	752.7	740.5	687.9	625.8	560.3	491.8	425.9	366.0
202	824.4	818.4	785.1	739.0	685.8	625.7	565.2	505.9
203	845.3	845.9	839.4	818.6	785.5	741.1	692.5	636.4
204	819.4	826.0	843.9	848.1	840.2	817.5	786.6	741.8
205	722.3	736.3	784.7	820.8	841.3	846.4	843.0	823.7
206	640.9	655.2	710.1	761.6	801.6	827.7	846.0	850.4
207	551.9	567.2	628.3	690.3	743.2	785.7	821.3	843.4

Table XIX(continued)

Nominal Conditions: β = 5.0°, M_∞ = 2.3, Upright, Pressures in psf

Orifice ID	Nominal α							
	-2.5°	0.0°	5.0°	10.0°	15.0°	20.0°	25.0°	30.0°
	Ref 50	Ref 51	Ref 52	Ref 53	Ref 54	Ref 55	Ref 56	Ref 57
	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi
208	438.7	453.2	529.2	600.9	665.6	723.0	774.4	813.8
209	627.6	630.4	636.7	632.3	618.4	594.3	565.3	530.1
210	695.0	698.7	711.6	713.0	701.6	679.3	650.9	613.2
211	765.9	772.8	791.3	797.2	789.4	767.6	737.1	695.1
212	811.8	817.9	835.9	840.3	833.8	811.7	783.1	741.3
213	771.4	776.6	790.1	791.1	781.7	758.8	728.8	688.5
214	718.6	721.7	729.9	727.7	714.5	692.2	662.9	624.7
215	409.8	395.6	339.2	288.2	244.3	205.8	171.6	144.9
216	321.7	325.1	329.2	330.7	328.8	323.1	310.5	295.7
217	413.4	416.8	430.2	435.4	435.5	430.9	419.8	402.2
218	289.2	301.6	356.1	416.2	479.3	541.1	604.9	665.7
219	184.2	188.6	198.1	198.3	193.2	183.9	169.0	143.7
220	243.0	247.6	263.8	267.4	266.7	260.5	260.8	255.9
225	308.2	295.8	253.4	215.1	184.9	158.5	138.3	123.0
226	525.3	510.1	447.6	381.9	320.8	269.3	225.5	189.0
227	564.3	547.2	472.7	403.7	349.0	301.0	258.5	218.6
228	678.7	664.3	604.8	543.1	482.2	421.8	364.0	303.0
229	364.1	379.6	441.0	505.2	569.1	631.4	691.9	746.6
230	171.7	180.0	215.7	259.7	308.8	363.8	423.1	488.9
231	431.5	431.7	427.0	422.6	413.6	398.0	378.6	357.9
232	545.3	546.2	548.1	544.1	531.7	513.0	487.9	458.8
233	651.5	652.6	656.0	649.7	635.8	614.5	587.1	552.7
234	543.4	543.1	541.6	533.8	521.0	504.8	483.7	457.2
235	189.6	193.5	207.3	213.8	215.8	216.4	216.4	220.2
236	176.3	182.2	207.9	232.0	255.3	278.3	302.1	328.4
237	164.8	171.7	202.5	238.3	278.2	323.1	371.3	426.2
238	163.3	170.2	202.5	240.7	284.5	334.3	387.8	448.3
239	163.5	170.5	204.8	243.8	290.5	343.0	399.2	463.7
244	309.0	296.8	253.4	215.0	185.1	161.9	144.7	133.4
245	311.2	299.6	255.6	217.1	184.6	158.9	141.5	127.0
246	229.4	228.3	221.5	217.5	212.9	209.0	201.4	198.2
247	195.9	198.2	203.0	200.6	192.7	178.3	153.9	129.8
248	177.4	178.0	177.7	175.4	168.5	160.0	152.8	151.5
249	239.8	239.4	237.6	231.3	225.1	218.7	214.0	212.8
252	385.2	401.6	467.6	533.2	597.7	657.8	715.4	766.6

Table XX: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: $\beta = -2.0°$, $M_\infty = 2.3$, Upright, Pressures in psf

Orifice ID	Nominal α		
	0.0°	15.0°	25.0°
	Ref 59	Ref 60	Ref 61
	Pi	Pi	Pi
2	275.9	443.6	572.1
5	375.6	364.8	345.9
6	311.4	302.6	283.4
9	380.3	231.7	163.7
10	225.7	379.7	502.8
13	326.5	319.0	306.1
14	268.5	263.4	246.4
17	378.6	226.7	156.8
19	275.7	270.4	264.6
20	237.1	222.1	214.0
21	246.8	254.1	241.1
22	199.0	204.0	194.3
23	223.1	223.1	226.8
24	181.8	182.9	185.5
25	211.9	206.0	206.2
26	177.1	174.1	171.0
43	326.1	364.1	363.6
44	272.5	297.5	288.5
85	410.2	399.8	376.1
86	342.7	335.5	311.2
87	320.5	458.0	543.7
88	288.0	411.4	487.0
89	160.7	276.4	376.6
90	159.0	264.9	362.0
91	159.1	271.1	373.9
921	408.4	252.3	176.8
922	301.0	482.2	612.8
93	220.9	371.9	496.2
128	302.3	190.9	152.3
201	742.0	560.1	424.8
202	820.9	688.8	569.0
203	847.3	787.6	695.1
204	826.1	841.8	788.2
205	737.7	844.2	845.3
206	657.0	805.2	849.1
207	567.7	746.6	825.0

Table XX(continued)

Nominal Conditions: $\beta = -2.0^{\circ}$, $M_{\infty} = 2.3$, Upright, Pressures in psf

Orifice ID	Nominal α		
	0.0°	15.0°	25.0°
	Ref 59	Ref 60	Ref 61
	Pi	Pi	Pi
208	458.2	668.9	778.4
209	710.1	701.4	645.1
210	766.9	773.3	718.3
211	812.0	829.6	775.3
212	781.5	798.2	749.2
213	712.1	713.7	664.6
214	644.1	634.0	584.9
215	403.7	247.7	173.7
216	400.6	414.0	397.2
217	339.2	349.9	329.4
218	308.8	487.7	616.8
219	239.9	252.3	243.6
220	191.6	203.0	187.8
225	296.7	184.7	140.4
226	512.0	320.3	224.2
227	549.5	348.6	257.0
228	665.4	481.4	363.5
229	380.2	571.7	694.7
230	180.9	308.7	424.8
231	525.0	504.7	466.8
232	633.9	620.1	572.0
233	566.3	547.9	501.5
234	448.5	430.8	400.0
235	232.5	284.7	291.9
236	205.3	310.4	371.3
237	180.0	304.3	406.8
238	175.1	299.3	407.9
239	172.0	293.4	403.6
244	298.2	186.6	146.4
245	300.9	186.2	144.0
246	287.6	275.0	264.3
247	250.0	258.3	235.6
248	230.3	211.9	198.4
249	185.9	177.6	164.1
252	402.5	599.8	718.4

Table XXI: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: $\beta = -5.0°$, $M_\infty = 2.3$, Upright, Pressures in psf

Orifice ID	Nominal α		
	0.0°	15.0°	25.0°
	Ref 62	Ref 63	Ref 64
	Pi	Pi	Pi
2	273.7	442.3	570.2
5	413.6	403.4	384.6
6	280.2	271.1	250.6
9	377.2	229.6	162.2
10	226.4	378.0	501.2
13	362.2	353.6	339.4
14	240.4	234.1	217.7
17	371.6	220.9	148.7
19	305.8	301.9	298.6
20	212.3	198.4	186.8
21	275.6	285.0	271.0
22	180.5	182.0	173.0
23	248.5	247.9	255.4
24	165.0	163.5	160.5
25	237.1	229.2	230.2
26	160.1	158.1	152.0
43	357.1	402.5	406.7
44	246.7	263.8	253.9
85	448.0	439.3	414.9
86	310.1	300.8	278.7
87	339.0	483.4	574.1
88	271.1	384.0	454.6
89	161.3	281.5	384.8
90	155.6	258.3	352.5
91	158.1	270.9	373.9
921	405.3	250.3	175.6
922	300.5	479.8	610.3
93	221.3	371.1	493.7
128	300.1	188.1	147.7
201	735.5	554.2	421.2
202	813.0	683.9	566.7
203	840.1	781.8	690.0
204	818.6	835.6	782.1
205	731.9	838.0	839.8
206	652.7	799.3	844.0
207	563.5	741.1	820.0

Table XXI(continued)

Nominal Conditions: $\beta = -5.0^{\circ}$, $M_{\infty} = 2.3$, Upright, Pressures in psf

Orifice ID	Nominal α 0.0° Ref 62 Pi	15.0° Ref 63 Pi	25.0° Ref 64 Pi
208	457.0	665.4	774.3
209	741.1	733.0	678.0
210	789.9	797.3	742.8
211	821.8	839.3	785.0
212	758.3	775.4	728.1
213	678.8	679.7	631.8
214	606.9	595.2	548.7
215	404.1	247.1	173.1
216	436.8	453.9	438.3
217	307.2	314.2	293.2
218	310.6	487.9	619.4
219	266.8	283.5	274.3
220	175.5	180.9	157.5
225	293.1	182.9	137.0
226	508.5	320.5	223.0
227	546.7	345.4	254.4
228	660.1	476.1	358.4
229	379.1	567.9	690.7
230	179.8	309.2	423.5
231	566.0	543.3	504.1
232	672.0	656.8	608.2
233	527.7	507.9	463.9
234	406.5	392.1	365.0
235	252.6	316.9	327.7
236	216.3	334.2	403.3
237	182.6	315.1	422.0
238	176.1	305.4	416.5
239	170.8	294.2	405.2
244	296.4	183.2	142.2
245	296.1	181.8	138.3
246	318.5	305.0	295.0
247	275.5	289.7	272.5
248	256.4	236.1	223.4
249	166.6	161.2	145.4
252	400.8	595.9	714.7

Table XXII: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: β = 0.0°, M_∞ = 3.0, Inverted, Pressures in psf

Orifice ID	Nominal α			
	-5.0°	-2.5°	0.0°	2.5°
	Ref 226	Ref 225	Ref 227	Ref 223
	Pi	Pi	Pi	Pi
2	127.5	144.1	162.3	186.8
5	210.2	210.8	211.0	210.9
6	218.1	219.0	219.6	219.8
9	295.9	269.7	244.2	213.7
10	96.1	108.8	123.7	143.2
13	172.3	172.5	172.8	172.8
14	180.5	180.5	180.4	180.1
17	291.1	261.7	234.1	202.3
19	140.9	140.5	135.1	132.6
20	146.2	149.6	149.4	141.5
21	112.3	112.5	112.9	113.7
22	119.8	119.1	119.1	120.1
23	100.4	99.8	98.6	98.3
24	107.2	106.6	105.4	105.2
25	92.7	92.8	92.0	91.5
26	100.5	100.2	100.0	99.4
43	162.7	169.9	176.5	184.6
44	169.2	176.4	182.9	190.6
85	237.3	238.3	238.7	239.7
86	246.1	247.8	249.4	250.8
87	154.8	170.4	186.8	208.0
88	158.0	173.9	190.5	212.3
89	59.3	66.5	74.8	87.1
90	57.2	64.6	73.3	86.3
91	57.4	64.4	72.4	84.5
921	325.8	298.0	271.7	239.1
922				
93	93.1	105.6	119.7	139.0
128	219.4	195.7	174.0	149.6
201	635.3	613.9	591.0	560.1
202	692.7	683.6	671.5	653.2
203	696.7	699.0	699.3	697.2
204	648.6	662.9	675.1	687.1
205	533.1	560.8	586.3	616.0
206	454.6	483.2	509.1	542.8
207	378.7	405.3	431.0	464.2

Table XXII(continued)

Nominal Conditions: β = 0.0°, M_∞ = 3.0, Inverted, Pressures in psf

Orifice ID	Nominal α -5.0° Ref 226 Pi	-2.5° Ref 225 Pi	0.0° Ref 227 Pi	2.5° Ref 223 Pi
208	275.3	299.5	323.7	358.4
209	511.0	518.7	524.2	528.6
210	564.0	575.5	584.6	593.1
211	618.1	632.4	645.3	657.2
212	625.6	639.1	651.3	662.8
213	574.1	584.6	593.2	601.8
214	520.1	527.4	532.7	537.9
215	317.3	290.3	264.2	232.6
216	224.7	229.9	234.9	240.5
217	233.8	240.1	245.3	251.0
218	147.8	166.2	185.9	212.8
219	107.1	110.0	113.3	115.4
220	112.0	114.6	117.9	121.1
225	219.8	196.7	175.2	150.9
226	421.9	392.2	362.5	324.7
227	458.6	426.7	395.2	358.2
228	567.9	543.1	516.9	484.3
229	201.0	223.7	246.7	278.8
230	68.4	77.4	87.7	102.9
231	333.7	333.7	333.4	333.9
232	443.0	447.1	449.8	452.5
233	456.0	459.7	461.8	463.9
234	345.1	345.6	345.5	345.5
235	97.6	105.5	112.2	120.5
236	76.8	87.2	97.8	111.3
237	64.6	73.6	83.9	98.3
238	62.6	71.3	81.0	95.1
239	62.2	70.2	79.5	93.7
244	216.1	193.0	171.6	147.4
245	219.2	195.5	173.3	148.4
246	153.7	149.0	144.2	142.4
247	110.2	114.0	116.8	119.3
248	103.1	102.5	101.3	99.7
249	111.4	110.7	109.3	107.7
252	216.1	240.1	264.5	298.6

Table XXIII: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: β = 0.0°, M_∞ = 3.0, Upright, Pressures in psf

Ori-fice ID	Nominal α								
	-2.5°	0.0°	2.5°	5.0°	10.0°	15.0°	20.0°	25.0°	30.0°
	Ref 112	Ref 122	Ref 114	Ref 115	Ref 116	Ref 117	Ref 118	Ref 119	Ref 120
	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi
2	144.9	163.7	184.3	205.7	253.8	306.4	361.3	418.7	477.3
5	220.2	221.0	221.2	221.0	219.6	216.5	210.2	201.7	190.0
6	209.6	209.8	210.0	209.9	208.8	204.9	199.6	190.8	180.6
9	266.8	242.7	218.9	195.8	156.4	123.6	97.3	77.2	61.4
10	109.5	124.6	140.9	158.7	199.7	247.2	299.9	356.8	416.5
13	181.3	181.5	182.1	181.3	180.0	177.4	173.6	169.6	160.9
14	172.3	172.2	171.7	171.6	170.7	168.1	163.7	159.4	152.0
17	260.2	234.4	208.3	185.1	139.4	105.1	81.3	63.9	51.9
19	147.0	141.9	140.5	139.5	139.1	138.9	138.6	137.6	133.4
20	141.9	141.6	135.1	133.8	132.8	132.0	131.1	129.6	125.5
21	118.9	119.8	120.7	121.5	123.5	122.7	120.9	121.6	119.4
22	112.2	112.5	113.5	114.4	115.5	115.4	113.7	114.6	112.7
23	105.8	105.2	105.2	105.1	105.3	107.0	108.1	107.9	108.4
24	100.2	99.5	99.5	99.4	99.7	101.0	102.2	101.6	101.9
25	98.6	97.7	97.7	97.0	94.8	94.0	95.0	99.7	101.3
26	94.3	93.8	93.4	92.7	91.2	90.5	91.0	94.6	95.6
43	178.2	185.5	192.5	198.5	208.8	216.1	219.4	222.0	222.9
44	169.3	175.9	181.6	186.9	195.4	201.8	203.5	203.4	202.8
85	248.9	249.8	250.3	251.0	250.9	247.0	239.5	228.9	215.7
86	237.7	239.4	240.5	241.3	240.6	236.7	229.8	219.1	206.0
87	175.6	193.0	211.3	229.6	267.9	307.4	344.5	380.7	416.0
88	170.3	186.9	204.9	222.2	259.7	297.1	333.5	368.3	402.5
89	66.9	75.3	85.4	97.1	125.0	159.6	200.3	247.4	299.7
90	64.3	73.0	83.5	95.0	123.2	157.8	197.8	244.9	296.6
91	64.2	72.6	82.4	93.9	122.0	157.3	198.7	247.5	300.7
921	294.9	269.2	244.7	219.7	177.4	140.8	111.1	88.1	69.0
922									
93	106.0	120.7	137.0	154.2	194.1	241.3	293.5	350.2	409.9
128	195.6	174.1	154.5	137.7	107.3	84.5	69.1	58.2	52.1
201	611.4	588.8	563.8	537.8	479.1	418.5	360.9	307.4	252.6
202	682.5	670.4	655.7	639.3	597.2	547.6	496.6	445.0	392.4
203	699.0	698.5	697.8	694.5	676.2	646.4	609.5	562.5	509.1
204	664.1	675.6	686.5	694.0	698.9	693.3	677.4	646.8	606.1
205	563.4	589.6	613.4	635.0	670.1	690.8	700.2	697.2	682.6
206	485.9	512.8	539.5	564.9	610.9	648.3	677.9	695.9	702.2
207	407.7	434.5	460.9	487.0	540.4	589.1	632.8	666.7	690.8

Table XXIII(continued)

Nominal Conditions: β = 0.0°, M_∞ = 3.0, Upright, Pressures in psf

Ori-fice ID	Nominal α								
	-2.5°	0.0°	2.5°	5.0°	10.0°	15.0°	20.0°	25.0°	30.0°
	Ref 112	Ref 122	Ref 114	Ref 115	Ref 116	Ref 117	Ref 118	Ref 119	Ref 120
	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi
208	301.3	327.3	354.9	385.1	448.3	509.1	565.7	615.8	655.6
209	529.6	535.2	539.3	541.5	538.7	527.1	507.8	481.0	448.4
210	585.3	594.0	602.4	608.0	610.3	602.5	585.7	557.5	521.5
211	639.2	649.9	661.9	670.3	676.8	670.4	654.0	625.0	584.5
212	635.2	645.4	657.4	664.8	671.0	665.2	648.8	621.6	583.3
213	576.4	584.9	592.3	597.4	598.9	590.3	572.6	545.3	510.5
214	517.8	523.3	527.5	529.8	527.2	514.6	495.6	470.2	438.7
215	288.3	263.3	238.7	214.1	172.7	137.2	108.3	85.9	67.6
216	239.9	244.9	250.2	254.4	260.5	262.6	259.0	251.4	241.3
217	231.0	235.3	240.4	244.5	250.0	250.7	246.5	237.6	226.2
218	167.9	188.6	210.6	234.3	285.9	340.6	398.6	457.2	514.7
219	116.5	120.1	122.4	123.8	124.7	124.6	123.9	120.2	108.8
220	108.4	111.7	114.5	115.9	117.1	117.2	116.4	112.2	100.6
225	195.7	174.3	155.6	137.6	108.2	85.8	68.4	56.5	47.5
226	388.1	358.9	330.5	301.9	249.4	203.8	164.5	132.5	104.2
227	422.2	391.6	362.9	336.2	285.6	240.2	198.7	162.5	128.6
228	539.1	514.1	488.2	461.7	404.4	347.5	291.4	239.4	190.9
229	225.3	249.6	275.4	302.8	360.2	419.1	477.2	534.0	586.2
230	77.4	87.9	100.7	114.4	147.1	187.3	234.3	286.7	343.9
231	345.5	345.7	345.5	345.1	341.2	332.6	320.7	304.1	285.3
232	458.1	461.3	463.6	464.6	460.4	449.5	432.5	409.5	381.8
233	449.6	451.7	452.4	453.0	446.6	433.7	415.2	392.6	364.4
234	334.4	334.0	333.6	333.0	328.3	320.2	308.0	294.1	276.0
235	110.2	117.3	125.5	132.2	144.2	154.6	163.1	171.9	182.4
236	90.2	101.1	113.5	125.4	150.1	176.7	204.8	233.3	264.4
237	74.8	85.3	97.6	110.9	141.4	178.1	220.2	266.5	317.7
238	72.0	81.9	93.6	106.9	137.9	175.9	219.9	269.8	324.3
239	70.6	79.8	91.5	104.5	135.4	173.6	218.3	269.2	325.3
244	193.1	171.3	151.6	133.9	105.8	83.4	67.6	56.5	50.2
245	195.3	173.4	153.3	135.3	106.0	84.0	67.5	57.5	49.7
246	155.5	151.4	150.4	149.1	146.4	143.8	141.8	140.3	138.3
247	120.1	123.3	126.4	128.1	130.5	130.0	124.8	113.4	103.6
248	108.9	108.0	106.7	105.4	101.8	97.3	95.0	94.7	96.5
249	104.0	102.8	102.0	100.7	96.8	92.5	90.0	89.3	91.9
252	241.4	267.6	295.0	323.9	384.8	444.5	502.9	556.9	606.8

Table XXIV: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: β = 2.0°, M_∞ = 3.0, Upright, Pressures in psf

Ori-fice ID	Nominal α							
	-2.5°	0.0°	5.0°	10.0°	15.0°	20.0°	25.0°	30.0°
	Ref 123	Ref 131	Ref 125	Ref 126	Ref 127	Ref 128	Ref 129	Ref 130
	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi
2	145.5	164.3	206.1	254.1	306.3	361.6	417.9	478.1
5	201.3	201.8	201.7	200.3	196.7	191.7	183.8	172.5
6	228.3	228.8	229.3	228.2	224.4	218.3	209.8	198.3
9	266.6	242.3	195.4	156.1	123.4	97.3	77.2	61.4
10	109.8	124.5	159.0	199.9	247.3	299.6	356.1	416.3
13	164.6	164.7	164.3	162.4	160.4	157.7	153.1	145.0
14	188.8	188.6	188.5	187.5	185.1	181.0	175.9	168.5
17	258.6	231.7	183.0	135.7	104.9	81.0	64.0	52.0
19	133.3	129.1	126.1	125.5	125.0	124.5	123.8	118.0
20	157.4	156.8	148.1	147.3	147.1	145.9	144.6	140.8
21	107.2	107.5	109.1	110.6	109.9	108.9	108.9	103.4
22	125.1	125.5	127.7	129.3	128.9	126.7	127.1	127.7
23	95.3	94.6	94.7	94.7	96.1	96.6	96.1	94.7
24	111.9	111.0	111.1	111.0	112.5	114.0	114.4	113.7
25	88.9	88.5	87.7	85.3	84.2	84.7	89.2	89.4
26	105.4	104.5	103.3	101.6	100.6	101.7	104.6	107.3
43	163.2	169.8	181.3	190.1	196.2	200.1	202.0	203.8
44	184.0	191.2	203.3	213.6	220.0	222.7	223.4	222.3
85	228.7	229.2	230.7	230.5	226.6	219.1	209.9	197.3
86	257.9	258.9	261.4	260.8	257.1	249.8	239.0	225.0
87	167.1	183.1	218.4	254.1	290.5	327.1	362.2	396.5
88	179.7	196.5	233.6	272.6	311.5	349.8	387.3	422.0
89	66.6	74.7	95.3	122.7	156.2	195.7	242.8	293.9
90	65.2	74.2	96.9	125.7	160.8	202.2	249.2	301.0
91	64.3	72.4	93.8	121.9	157.0	198.3	246.5	300.2
921	295.2	269.4	219.9	177.0	140.8	111.1	88.1	69.2
922								
93	106.5	120.8	154.7	194.4	241.3	293.1	349.4	409.4
128	194.9	173.6	136.9	106.7	84.4	68.9	58.0	52.3
201	611.9	588.1	537.5	479.1	418.4	361.0	308.2	253.2
202	682.6	669.5	638.4	596.3	547.0	496.2	445.3	392.4
203	700.4	699.1	693.0	675.4	646.1	608.3	562.4	509.1
204	666.2	676.8	692.9	698.7	693.1	676.5	647.4	606.5
205	564.8	589.7	634.6	668.8	690.5	700.0	697.6	682.5
206	485.7	512.9	563.4	609.7	647.3	677.0	695.2	701.8
207	408.5	434.0	486.4	538.7	588.5	631.7	665.8	691.3

Table XXIV(continued)

Nominal Conditions: β = 2.0°, M_∞ = 3.0, Upright, Pressures in psf

Orifice ID	Nominal α							
	-2.5°	0.0°	5.0°	10.0°	15.0°	20.0°	25.0°	30.0°
	Ref 123	Ref 131	Ref 125	Ref 126	Ref 127	Ref 128	Ref 129	Ref 130
	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi
208	302.6	327.3	384.5	447.1	508.6	565.6	614.3	656.7
209	509.9	515.1	520.6	517.4	505.5	486.2	460.3	428.8
210	569.0	577.4	588.7	592.0	583.2	566.5	539.3	504.5
211	630.2	641.1	658.9	666.0	659.8	642.9	614.5	576.4
212	647.5	657.0	673.5	680.0	674.0	657.8	631.0	593.9
213	595.6	602.9	614.6	616.6	607.7	590.1	563.4	526.8
214	539.0	543.9	550.2	547.0	534.8	517.3	491.1	457.9
215	286.6	261.4	213.1	171.3	136.3	107.7	85.6	67.3
216	221.3	225.7	234.7	239.9	241.2	237.7	231.3	221.5
217	249.9	254.9	264.2	270.0	271.7	267.5	259.3	246.7
218	167.1	187.4	232.6	282.8	338.2	395.9	454.4	512.3
219	105.0	108.0	111.2	111.7	111.5	110.5	104.9	93.0
220	120.8	124.2	129.0	130.8	131.0	130.7	127.4	117.5
225	195.1	173.6	137.4	107.8	85.5	68.4	56.4	47.3
226	388.7	358.8	302.0	249.5	204.4	164.7	132.7	104.2
227	423.7	391.4	336.1	286.0	240.7	198.5	162.5	128.8
228	540.0	513.8	461.8	404.1	347.3	291.0	239.4	191.3
229	225.9	250.1	302.6	359.6	418.5	477.0	533.3	586.5
230	77.8	88.1	114.4	147.0	186.9	233.6	286.2	343.2
231	322.3	322.3	321.9	317.7	308.9	296.4	282.6	264.3
232	437.3	440.8	442.5	438.3	426.8	409.2	387.4	359.8
233	471.6	473.1	474.3	468.2	454.8	438.0	414.5	385.0
234	357.8	357.2	356.0	350.6	342.1	331.0	315.8	296.5
235	102.2	108.4	121.1	131.1	139.2	147.5	156.3	164.9
236	85.9	95.8	117.4	139.9	163.9	190.0	218.0	246.3
237	73.3	83.2	107.6	136.6	171.8	213.0	258.1	308.2
238	71.2	80.7	105.0	135.2	172.2	215.8	264.4	319.0
239	70.3	79.8	104.0	134.5	172.6	217.1	267.9	324.1
244	192.2	171.3	134.0	105.4	83.2	67.7	56.0	49.1
245	193.5	172.3	135.0	105.6	83.7	67.8	57.1	49.1
246	140.9	137.4	135.0	132.1	130.0	128.1	126.8	125.8
247	108.8	111.8	115.5	116.7	115.0	109.2	97.3	90.5
248	98.0	97.1	94.9	91.5	87.7	84.9	84.5	86.7
249	116.8	115.4	112.0	107.5	103.0	100.0	100.0	101.6
252	242.2	267.9	323.4	384.3	444.0	502.1	556.5	607.1

Table XXV: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: β = 5.0°, M_∞ = 3.0, Upright, Pressures in psf

Ori-fice ID	Nominal α							
	-2.5°	0.0°	5.0°	10.0°	15.0°	20.0°	25.0°	30.0°
	Ref 132	Ref 140	Ref 134	Ref 135	Ref 136	Ref 137	Ref 138	Ref 139
	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi
2	145.0	164.1	205.7	253.0	305.4	360.0	417.0	474.8
5	175.0	175.1	175.0	173.7	170.5	166.0	158.9	148.2
6	259.0	259.8	260.5	258.6	254.2	247.7	238.8	226.9
9	265.3	240.9	194.8	155.7	123.2	97.1	76.8	61.0
10	109.6	124.4	158.7	199.0	246.3	298.0	355.1	413.6
13	141.9	141.9	141.4	139.7	137.7	135.5	130.4	122.2
14	216.2	216.2	216.3	214.9	212.6	208.3	202.5	194.9
17	254.8	229.4	182.9	138.5	110.5	79.7	63.1	51.1
19	114.1	111.1	108.1	107.0	106.2	105.6	103.7	96.5
20	182.4	181.4	171.8	171.4	171.0	169.6	168.4	165.7
21	91.4	91.5	93.0	93.8	92.9	91.9	91.3	82.1
22	146.0	146.7	149.3	151.1	150.3	148.7	149.2	149.3
23	80.5	80.3	80.5	80.6	81.2	81.0	80.7	72.4
24	131.4	130.2	130.2	130.3	132.0	134.4	135.4	134.4
25	74.7	75.1	75.1	72.5	71.4	72.2	75.0	76.1
26	123.9	122.8	121.2	119.7	118.8	120.1	123.0	127.7
43	142.1	148.0	157.6	165.1	169.9	173.0	175.2	176.8
44	208.5	216.5	230.9	242.7	250.8	254.5	254.6	253.3
85	199.8	200.4	201.7	201.9	198.2	191.3	183.2	171.1
86	289.3	291.1	294.1	292.8	289.0	281.3	269.3	254.1
87	153.3	168.8	200.7	233.9	267.2	301.5	334.9	366.4
88	192.9	212.0	251.1	292.3	334.0	374.3	414.4	451.0
89	65.4	73.0	92.4	118.5	151.0	189.5	234.6	284.7
90	66.0	75.7	99.3	129.3	165.3	207.2	255.5	308.0
91	63.5	71.9	93.4	121.5	156.3	197.6	245.3	298.6
921	294.6	288.4	219.3	176.8	140.6	111.0	88.0	69.3
922								
93	106.0	120.6	154.1	193.7	240.5	292.1	348.1	407.3
128	193.1	171.6	135.3	105.3	82.9	66.9	55.3	51.3
201	609.0	584.9	534.9	477.0	417.2	360.4	307.6	253.1
202	678.2	664.2	633.7	592.6	543.2	492.4	442.4	389.8
203	696.3	695.0	689.0	670.9	641.0	604.4	559.2	506.8
204	662.3	673.0	689.6	695.1	688.3	672.7	644.0	603.7
205	560.4	585.4	629.9	665.0	685.7	695.8	693.5	678.2
206	481.5	508.6	559.0	605.4	643.3	672.7	690.7	697.8
207	405.1	431.5	483.4	535.8	585.1	627.6	661.8	686.6

Table XXV(continued)

Nominal Conditions: β = 5.0°, M_∞ = 3.0, Upright, Pressures in psf

Orifice ID	Nominal α							
	-2.5°	0.0°	5.0°	10.0°	15.0°	20.0°	25.0°	30.0°
	Ref 132	Ref 140	Ref 134	Ref 135	Ref 136	Ref 137	Ref 138	Ref 139
	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi
208	300.5	325.6	382.1	444.0	505.5	561.4	611.0	651.3
209	476.5	481.5	486.1	483.2	470.9	452.6	428.6	398.8
210	537.7	546.3	557.7	560.3	551.7	536.3	511.1	478.5
211	609.7	621.6	637.8	645.2	639.4	624.1	596.0	559.3
212	658.5	669.0	684.5	690.1	684.4	669.0	641.7	604.0
213	619.1	626.9	639.2	640.8	631.5	615.2	587.0	549.4
214	568.3	573.2	580.4	578.4	565.5	548.0	520.6	486.0
215	282.7	257.9	210.5	169.7	134.9	106.5	84.5	66.8
216	194.4	198.5	206.3	211.4	211.6	208.4	202.6	193.3
217	279.7	285.8	296.5	302.0	304.3	300.3	291.4	278.5
218	164.6	184.9	228.5	278.1	332.7	389.9	448.4	505.3
219	89.4	92.1	94.7	94.8	93.7	91.2	83.5	73.9
220	140.5	144.2	150.2	152.2	152.8	153.6	152.9	144.7
225	193.8	172.9	136.5	107.8	85.3	67.9	55.3	45.7
226	387.4	357.8	301.6	249.4	204.1	164.2	132.1	103.7
227	421.3	389.8	334.9	284.9	239.8	197.4	161.5	128.3
228	538.1	511.5	459.2	402.3	346.3	289.7	238.9	191.7
229	224.6	249.4	301.4	357.9	416.5	474.5	531.0	582.8
230	77.3	87.8	114.1	146.7	186.3	232.8	284.8	341.8
231	288.3	288.7	287.7	283.6	275.2	264.1	251.8	234.8
232	404.6	407.6	409.0	404.3	392.6	375.3	353.4	328.7
233	503.8	505.8	508.0	502.0	488.6	471.2	446.4	415.4
234	394.7	394.5	392.2	386.6	377.8	365.2	348.4	327.8
235	90.6	96.0	105.8	112.9	118.6	125.8	133.1	141.0
236	78.7	87.3	105.7	124.6	145.7	169.1	194.4	221.6
237	70.5	79.6	101.9	129.3	162.4	201.5	244.8	293.1
238	69.3	78.6	101.7	130.6	166.6	209.2	256.6	309.6
239	69.6	78.9	103.1	133.6	171.0	215.8	265.6	320.7
244	191.3	170.4	133.2	104.7	82.2	65.4	53.6	46.8
245	191.6	170.5	133.6	105.2	82.7	66.6	55.3	47.3
246	120.2	118.0	115.9	113.3	111.1	109.5	108.4	106.9
247	92.9	96.0	98.6	98.2	94.8	87.3	76.9	73.7
248	81.8	81.9	81.0	78.4	74.7	72.4	71.6	74.0
249	137.5	135.6	131.2	126.2	121.5	118.2	117.1	119.2
252	241.0	266.6	321.9	381.7	441.1	499.1	553.6	601.9

Table XXVI: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: $\beta = -2.0^{\circ}$, $M_{\infty} = 3.0$, Upright, Pressures in psf

Orifice ID	Nominal α		
	0.0°	15.0°	25.0°
	Ref 141	Ref 142	Ref 143
	Pi	Pi	Pi
2	16[illegible]	304.9	416.9
5	238.6	234.3	219.2
6	192.7	187.8	174.5
9	242.8	123.3	77.3
10	124.1	246.3	355.9
13	197.3	193.8	185.6
14	156.7	152.4	144.5
17	233.4	105.3	63.5
19	155.9	153.3	152.0
20	123.7	119.4	117.2
21	132.4	135.6	134.3
22	102.2	103.9	102.8
23	116.4	118.2	120.2
24	90.2	91.5	91.0
25	108.5	104.2	109.7
26	85.2	81.3	85.2
43	200.4	234.5	240.8
44	160.8	183.3	185.6
85	268.5	266.6	248.3
86	221.1	218.0	201.2
87	202.0	320.6	398.5
88	177.9	281.5	350.3
89	76.3	162.4	251.6
90	72.1	153.6	240.3
91	72.1	156.9	246.8
921	269.2	140.3	87.9
922			
93	120.1	240.3	349.4
128	174.2	84.1	57.6
201	587.3	417.4	306.6
202	669.6	547.9	445.5
203	698.7	645.9	561.8
204	675.3	692.8	645.9
205	588.7	690.6	696.2
206	512.4	647.9	694.6
207	433.1	588.4	665.5

Table XXVI(continued)

Nominal Conditions: $\beta = -2.0^{\circ}$, $M_{\infty} = 3.0$, Upright, Pressures in psf

Orifice ID	Nominal α		
	0.0°	15.0°	25.0°
	Ref 141	Ref 142	Ref 143
	Pi	Pi	Pi
208	326.0	508.8	614.3
209	554.7	547.3	500.3
210	611.3	619.4	573.5
211	660.7	679.3	633.1
212	636.7	654.0	610.8
213	567.3	571.2	527.4
214	503.0	492.9	449.7
215	264.6	137.5	86.3
216	263.5	282.2	272.2
217	218.6	230.9	218.4
218	189.6	342.5	459.2
219	132.7	137.7	135.3
220	101.7	105.6	97.8
225	173.6	85.5	55.9
226	358.9	203.2	131.6
227	391.4	239.5	161.7
228	513.5	346.1	238.9
229	248.9	418.5	532.5
230	87.9	186.8	285.4
231	368.3	354.8	325.6
232	481.7	470.2	430.4
233	430.4	411.1	371.5
234	312.6	298.4	273.2
235	127.0	168.8	188.6
236	107.1	188.9	249.2
237	87.7	183.3	274.2
238	83.0	178.6	273.8
239	80.1	173.7	269.5
244	171.0	82.9	55.3
245	171.1	83.2	56.5
246	166.5	158.6	154.3
247	135.6	144.5	130.3
248	119.8	107.7	105.1
249	93.3	84.0	80.1
252	266.7	443.7	555.9

Table XXVII: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: $\beta = -5.0^{\circ}$, $M_{\infty} = 3.0$, Upright, Pressures in psf

Orifice ID	Nominal α		
	0.0°	15.0°	25.0°
	Ref 144	Ref 145	Ref 146
	Pi	Pi	Pi
2	163.2	303.1	415.2
5	270.7	266.1	250.1
6	166.6	162.1	150.2
9	242.1	123.2	76.9
10	123.7	245.5	354.2
13	226.8	223.2	214.5
14	134.5	130.3	122.9
17	231.4	110.6	62.8
19	179.6	178.3	177.5
20	105.4	101.2	98.2
21	155.3	159.5	157.1
22	86.4	87.7	86.0
23	137.0	138.9	143.0
24	76.9	77.4	75.8
25	127.7	123.0	128.2
26	72.1	68.9	71.0
43	227.4	266.6	274.6
44	139.8	157.7	159.2
85	302.4	300.5	280.5
86	193.1	189.9	174.9
87	217.8	343.6	425.9
88	163.3	258.3	322.0
89	77.8	167.0	257.8
90	70.1	148.2	232.2
91	71.8	156.8	246.2
921	267.9	140.1	87.7
922			
93	119.8	239.6	347.7
128	174.0	82.6	53.4
201	581.8	413.9	303.6
202	663.4	544.1	443.5
203	693.5	640.8	558.0
204	669.4	687.2	640.9
205	584.3	685.5	690.7
206	508.0	643.3	689.2
207	429.3	584.2	660.7

Table XXVII(continued)

Nominal Conditions: $\beta = -5.0^{\circ}$, $M_{\infty} = 3.0$, Upright, Pressures in psf

Orifice ID	Nominal α		
	0.0°	15.0°	25.0°
	Ref 144	Ref 145	Ref 146
	Pi	Pi	Pi
208	324.6	506.8	610.2
209	583.5	577.7	529.8
210	634.8	643.1	596.9
211	671.1	689.2	643.2
212	615.0	633.5	592.1
213	534.8	539.1	498.2
214	468.0	457.5	416.9
215	265.6	138.4	86.5
216	295.6	316.4	306.1
217	191.8	201.6	190.2
218	191.7	344.1	459.5
219	155.8	161.4	161.6
220	86.8	89.0	77.5
225	173.0	85.0	54.1
226	356.3	201.4	130.1
227	388.7	237.0	159.5
228	507.7	342.8	238.0
229	247.3	415.1	529.0
230	87.6	186.4	284.7
231	406.1	392.8	360.4
232	514.1	503.5	461.8
233	396.7	376.6	339.2
234	279.3	265.6	243.1
235	144.1	194.4	216.7
236	117.5	209.0	274.4
237	91.1	191.9	285.8
238	84.9	183.6	279.8
239	80.2	174.3	269.7
244	169.3	81.3	52.4
245	168.6	81.6	54.3
246	192.6	183.9	179.3
247	157.9	170.4	160.8
248	141.0	126.8	123.9
249	78.5	71.7	67.6
252	265.7	441.4	552.0

Table XXVIII: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: β = 0.0°, M_∞ = 3.5, Inverted, Pressures in psf

Ori-fice ID	Nominal α			
	-5.0°	-2.5°	0.0°	2.5°
	Ref 231	Ref 230	Ref 232	Ref 228
	Pi	Pi	Pi	Pi
2	93.2	105.9	120.7	140.7
5	158.8	158.5	158.3	158.0
6	167.2	167.3	166.8	166.5
9	230.2	206.5	184.8	159.0
10	68.0	77.6	89.0	105.1
13	127.3	127.1	126.6	126.0
14	135.1	134.9	133.8	133.2
17	220.9	196.0	173.1	146.7
19	101.9	98.2	95.7	94.0
20	108.5	108.8	103.2	101.6
21	78.8	78.6	77.8	78.8
22	85.5	85.3	84.7	84.9
23	68.8	67.8	67.2	67.0
24	75.1	74.1	73.5	73.1
25	63.3	62.7	62.2	61.4
26	70.2	69.5	68.8	67.9
43	120.2	125.8	130.9	136.8
44	126.7	132.3	136.9	142.7
85	181.2	181.8	181.6	182.2
86	191.4	192.5	192.5	193.0
87	114.9	127.3	140.8	158.3
88	118.7	131.3	145.3	162.9
89	40.0	45.0	50.8	60.2
90	36.9	42.1	48.7	58.7
91	37.6	42.4	48.2	57.7
921	255.4	231.3	207.8	180.1
922				
93	65.4	74.8	85.7	101.8
128	164.7	144.7	126.0	104.8
201	526.1	505.1	483.4	454.3
202	577.3	566.0	553.8	536.3
203	581.3	581.1	579.1	575.5
204	539.9	551.0	559.5	568.1
205	436.5	460.5	481.3	506.2
206	367.2	392.4	414.5	442.7
207	304.3	327.5	348.6	376.6

Table XXVIII(continued)

Nominal Conditions: β = 0.0°, M_∞ = 3.5, Inverted, Pressures in psf

Orifice ID	Nominal α			
	-5.0°	-2.5°	0.0°	2.5°
	Ref 231	Ref 230	Ref 232	Ref 228
	Pi	Pi	Pi	Pi
208	218.7	239.2	258.8	286.8
209	416.8	422.8	426.5	429.4
210	463.4	472.2	478.5	485.3
211	511.4	523.4	531.8	541.2
212	518.9	530.1	538.1	546.6
213	473.7	482.2	487.8	493.1
214	427.3	432.5	435.8	438.2
215	248.7	224.6	202.0	174.8
216	172.1	176.3	179.7	184.5
217	181.1	186.1	189.7	193.8
218	109.7	124.0	140.2	162.0
219	75.9	77.0	78.5	80.0
220	81.1	82.6	84.1	85.8
225	164.7	145.3	128.1	107.8
226	337.8	310.5	283.7	251.2
227	369.3	341.1	314.5	283.2
228	467.4	444.1	420.1	389.6
229	153.7	172.0	191.1	216.9
230	46.0	52.3	60.2	72.3
231	262.6	262.8	262.2	261.2
232	358.8	362.4	364.2	365.5
233	372.7	375.0	375.6	374.9
234	275.5	275.2	274.3	272.6
235	69.2	74.2	79.6	86.1
236	51.9	59.2	66.9	78.0
237	42.2	48.4	56.2	67.5
238	40.7	46.6	53.9	65.1
239	40.2	45.7	52.8	63.7
244	161.4	142.1	124.5	103.6
245	162.2	143.2	125.4	104.4
246	109.4	105.2	103.7	102.1
247	76.7	79.1	81.4	83.4
248	71.9	70.7	69.6	68.1
249	78.6	77.5	76.5	74.7
252	166.8	185.7	205.9	233.4

Table XXIX: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: β = 0.0°, M_∞ = 3.5, Upright, Pressures in psf

Orifice ID	Nominal α								
	-2.5°	0.0°	2.5°	5.0°	10.0°	15.0°	20.0°	25.0°	30.0°
	Ref 147	Ref 156	Ref 149	Ref 150	Ref 151	Ref 152	Ref 153	Ref 154	Ref 155
	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi
2	105.0	119.9	136.6	154.9	195.6	240.1	286.0	334.6	384.2
5	166.3	167.0	168.1	168.6	168.2	165.7	160.9	153.8	143.8
6	157.2	157.8	158.6	159.0	158.0	155.4	151.5	144.8	135.8
9	206.4	186.0	165.9	147.4	115.1	89.4	68.4	52.4	41.7
10	76.9	88.2	101.5	116.0	150.1	189.5	232.7	280.1	331.3
13	133.4	133.8	134.6	135.0	134.3	132.9	130.6	126.0	118.7
14	126.3	126.4	126.7	126.7	125.9	124.2	121.6	117.8	111.6
17	198.0	174.9	153.3	133.7	96.3	73.2	54.3	42.0	34.1
19	104.5	102.3	101.3	100.9	100.9	101.1	100.7	99.4	94.6
20	101.3	96.9	96.0	95.4	95.0	94.7	94.3	92.9	89.1
21	84.7	84.3	85.2	86.0	87.3	86.9	86.0	85.9	83.0
22	79.4	78.4	78.8	79.6	81.0	80.8	80.0	80.3	78.0
23	73.3	72.7	72.7	72.8	73.2	74.5	74.6	74.2	73.7
24	68.8	68.2	68.0	68.1	68.5	69.6	69.8	69.8	68.8
25	67.9	67.2	67.0	66.4	64.5	63.9	64.7	66.7	68.2
26	64.4	63.8	63.4	63.0	61.4	60.8	61.6	63.5	64.4
43	131.5	137.5	143.4	149.4	159.4	165.8	169.8	172.7	173.7
44	124.4	129.6	134.8	139.7	147.2	152.5	155.5	156.8	157.0
85	190.0	191.4	193.4	194.9	195.2	192.3	186.1	177.7	166.0
86	181.3	182.6	184.2	185.3	185.0	182.0	176.8	169.0	157.8
87	130.3	144.9	160.1	176.5	210.0	242.8	274.0	306.1	334.8
88	126.3	140.0	154.3	169.6	201.4	232.8	263.7	294.3	322.4
89	44.6	50.8	57.9	66.6	88.1	115.8	149.3	189.2	233.2
90	41.2	47.7	55.1	64.1	86.1	113.8	147.0	186.7	230.6
91	41.5	47.6	54.7	63.5	85.3	113.1	147.2	188.3	234.1
921	230.2	208.7	187.5	167.6	132.1	103.6	80.0	61.1	48.0
922									
93	74.1	85.0	98.0	112.2	145.5	184.1	227.0	274.1	325.8
128	147.4	129.4	112.3	97.0	72.1	54.8	42.8	36.1	33.2
201	501.9	482.6	463.3	440.7	390.7	339.7	291.9	243.8	199.0
202	563.3	553.5	542.6	530.0	494.8	453.9	410.3	365.3	319.0
203	577.3	579.0	579.4	578.6	563.3	538.6	506.1	466.4	417.8
204	547.4	559.7	569.6	578.7	583.5	579.1	564.4	540.0	501.1
205	457.8	481.6	504.4	525.8	557.5	576.1	583.7	583.1	566.9
206	389.7	415.1	440.0	463.7	505.2	537.2	562.6	579.9	582.9
207	325.4	349.0	373.4	397.1	443.4	484.4	521.8	553.4	572.0

Table XXIX(continued)

Nominal Conditions: β = 0.0°, M_∞ = 3.5, Upright, Pressures in psf

Ori-fice ID	Nominal α								
	-2.5°	0.0°	2.5°	5.0°	10.0°	15.0°	20.0°	25.0°	30.0°
	Ref 147	Ref 156	Ref 149	Ref 150	Ref 151	Ref 152	Ref 153	Ref 154	Ref 155
	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi
208	237.0	259.0	282.5	307.8	361.5	413.2	461.8	506.9	540.7
209	429.7	435.9	441.2	445.1	442.8	433.3	416.8	393.9	363.3
210	477.3	487.2	495.3	502.2	504.8	498.7	483.9	460.6	426.7
211	524.4	537.0	547.5	556.8	563.4	558.7	544.0	519.6	482.1
212	521.5	533.3	543.1	551.8	557.8	553.0	539.3	516.8	481.3
213	470.2	479.0	486.0	492.1	493.6	486.7	472.0	450.2	417.1
214	420.2	425.6	429.9	433.1	430.4	421.0	405.1	384.2	354.8
215	224.6	204.0	182.9	163.2	128.5	100.8	77.8	59.5	46.7
216	183.5	188.9	194.0	198.7	204.5	206.1	203.6	198.6	189.4
217	175.7	180.3	184.5	188.3	193.2	193.9	191.6	185.5	176.2
218	123.3	140.1	158.4	178.6	223.0	269.1	317.5	367.5	417.2
219	82.5	84.5	86.3	87.4	88.5	88.9	88.4	84.7	75.8
220	76.6	77.9	79.6	80.8	82.2	82.7	82.2	78.8	71.3
225	147.0	129.4	113.5	99.7	75.6	56.8	44.7	35.9	30.2
226	308.6	283.4	260.5	236.6	193.8	156.8	124.9	97.1	75.8
227	339.2	314.1	292.2	269.6	227.5	188.6	153.9	121.5	95.6
228	440.8	419.4	398.9	375.6	326.1	276.4	229.5	184.0	146.3
229	170.2	190.7	212.6	235.7	285.9	335.4	385.3	434.3	478.8
230	51.7	59.5	68.8	79.8	105.9	138.1	176.3	219.9	269.4
231	271.9	273.2	274.5	274.5	270.9	264.0	253.3	240.3	222.9
232	369.9	374.2	377.6	379.6	375.6	366.4	351.5	331.2	305.6
233	362.2	364.8	366.7	367.2	361.6	351.1	335.6	317.1	291.5
234	262.4	263.0	263.5	263.4	259.1	252.1	242.7	231.3	215.3
235	78.2	83.8	89.8	95.6	106.0	114.8	122.7	131.3	138.8
236	61.1	69.7	78.8	88.5	108.9	131.1	154.6	179.6	204.9
237	48.9	56.7	65.6	76.1	100.6	130.3	165.2	204.7	248.0
238	46.7	53.9	62.7	73.0	97.5	128.0	164.4	206.2	253.4
239	45.3	52.3	60.8	70.9	95.4	126.0	162.5	205.4	253.7
244	143.9	126.6	110.5	95.7	71.1	54.3	42.5	35.2	31.2
245	145.2	126.9	110.8	96.6	72.0	54.9	44.2	36.1	31.4
246	111.0	110.2	109.6	108.9	107.3	105.7	104.0	102.2	100.0
247	84.4	87.3	89.6	91.3	93.6	93.7	90.0	81.6	76.0
248	76.5	75.4	74.5	73.3	70.7	67.4	65.2	64.9	67.3
249	71.8	70.9	70.3	69.2	66.3	63.4	61.1	61.1	63.8
252	184.1	205.5	228.5	253.2	305.7	357.4	406.9	455.2	496.8

Table XXX: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: β = 2.0°, M_∞ = 3.5, Upright, Pressures in psf

Ori-fice ID	Nominal α							
	-2.5°	0.0°	5.0°	10.0°	15.0°	20.0°	25.0°	30.0°
	Ref 157	Ref 165	Ref 159	Ref 160	Ref 161	Ref 162	Ref 163	Ref 164
	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi
2	105.4	119.8	155.1	196.4	241.2	286.5	334.4	384.1
5	150.9	151.0	152.8	152.4	150.7	145.8	138.8	129.1
6	172.8	173.4	174.7	174.1	171.5	166.5	160.0	149.9
9	206.1	186.0	147.4	114.8	89.1	68.2	52.3	41.6
10	77.0	88.0	116.1	150.4	189.7	232.7	280.1	330.5
13	120.7	120.9	121.6	121.1	119.7	117.3	112.8	105.4
14	140.2	140.3	140.7	140.2	138.3	135.3	131.4	124.4
17	195.8	174.2	132.7	96.3	72.8	53.8	41.7	34.1
19	93.9	91.5	89.7	89.6	89.8	88.9	87.3	82.5
20	114.4	108.7	107.1	106.7	106.7	105.8	104.4	100.7
21	74.7	74.0	76.0	76.8	76.4	75.5	75.7	71.5
22	88.8	88.9	90.3	91.6	91.4	90.3	90.7	89.3
23	64.1	63.6	63.8	64.5	65.3	65.1	65.0	63.0
24	77.8	77.0	76.9	77.5	79.0	79.6	79.1	79.2
25	59.3	58.8	58.2	56.2	56.0	56.5	58.7	59.3
26	73.1	72.2	71.2	69.7	69.3	69.9	72.1	73.4
43	119.9	125.1	135.8	144.6	150.7	154.0	156.5	157.6
44	136.7	142.6	153.6	162.4	168.5	171.3	173.6	172.2
85	173.1	174.2	177.5	177.8	175.6	170.0	161.6	150.7
86	198.0	199.6	202.6	202.6	199.5	193.7	185.3	172.7
87	123.5	136.3	166.2	198.4	230.2	260.4	290.2	318.5
88	133.7	147.7	179.1	213.1	246.4	278.0	310.0	339.6
89	44.1	50.1	65.5	86.5	113.5	146.5	185.0	228.0
90	41.8	48.6	65.5	88.2	116.8	150.4	190.5	235.2
91	41.6	47.7	63.5	85.4	113.6	147.6	188.3	233.6
921	230.0	209.1	167.7	132.3	103.5	79.9	61.0	48.1
922								
93	74.3	85.0	112.1	145.9	184.8	227.1	274.2	325.2
128	147.1	129.1	96.2	71.7	54.7	42.6	35.9	32.9
201	502.5	483.9	441.5	391.1	340.3	292.2	243.9	200.2
202	563.6	554.7	530.2	494.8	454.3	409.8	364.6	319.4
203	578.4	580.2	578.9	564.0	540.0	506.2	465.6	419.0
204	548.6	560.6	579.2	584.4	581.1	564.5	539.7	502.6
205	458.1	482.2	526.6	557.7	577.7	583.5	583.2	567.5
206	389.9	415.3	463.9	505.4	538.8	562.5	579.8	583.4
207	325.5	349.0	398.2	443.5	485.9	522.1	553.2	572.1

Table XXX(continued)

Nominal Conditions: β = 2.0°, M_∞ = 3.5, Upright, Pressures in psf

Orifice ID	Nominal α							
	-2.5°	0.0°	5.0°	10.0°	15.0°	20.0°	25.0°	30.0°
	Ref 157	Ref 165	Ref 159	Ref 160	Ref 161	Ref 162	Ref 163	Ref 164
	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi
208	237.8	259.4	308.6	362.0	414.1	462.3	506.7	540.8
209	412.2	418.3	426.8	424.3	414.8	398.3	376.4	347.9
210	462.4	471.8	486.3	489.4	483.7	467.9	445.1	414.2
211	516.2	528.5	548.0	554.7	550.6	535.7	510.9	475.3
212	531.1	542.6	561.2	567.3	562.9	548.7	524.9	489.8
213	486.1	494.7	508.6	510.4	504.3	488.3	464.9	432.0
214	437.8	443.7	452.3	449.6	440.9	424.4	402.0	371.3
215	223.1	202.4	162.1	127.7	100.1	76.9	58.8	46.5
216	168.1	172.3	181.7	187.2	189.1	187.1	181.5	172.8
217	191.4	196.3	205.6	210.7	212.0	209.5	203.4	192.2
218	122.8	138.8	177.7	221.6	268.0	315.8	365.9	414.4
219	72.8	74.6	77.3	78.0	78.2	77.0	72.9	64.2
220	86.1	88.1	91.2	92.7	93.4	93.5	90.9	82.8
225	146.5	128.9	99.3	75.2	56.4	44.3	35.8	30.0
226	308.8	283.9	237.1	194.2	157.0	124.7	96.7	76.0
227	339.3	314.6	270.0	228.0	188.9	153.8	121.1	95.9
228	441.6	420.5	375.8	326.5	276.9	229.4	183.7	146.9
229	170.9	190.7	236.7	286.7	336.7	386.2	434.5	478.7
230	51.6	59.2	79.6	105.7	138.2	176.2	220.5	268.8
231	252.3	253.0	254.8	250.5	244.0	234.6	221.9	206.1
232	352.1	356.0	360.5	356.5	346.6	331.7	312.2	288.7
233	380.6	383.4	386.8	381.3	371.3	355.0	334.7	308.6
234	281.6	282.1	283.4	279.1	271.9	261.8	249.1	231.6
235	71.3	76.3	86.4	95.2	103.2	109.7	117.4	125.5
236	57.1	64.9	81.9	100.5	121.1	142.9	165.9	190.5
237	47.6	55.0	73.5	97.0	126.1	159.4	197.5	239.6
238	45.9	53.1	71.5	95.7	125.7	161.2	202.6	247.9
239	45.2	52.3	70.5	94.9	125.7	162.1	204.8	252.6
244	143.8	126.5	95.6	70.9	54.1	42.1	34.8	30.6
245	144.4	126.7	96.4	71.9	54.5	43.9	35.7	30.9
246	100.0	99.0	97.5	96.1	94.4	92.7	91.0	89.1
247	75.2	77.6	80.8	82.5	81.9	76.7	69.1	66.1
248	66.8	66.0	64.5	62.3	59.3	57.3	57.3	59.9
249	81.6	80.5	78.0	75.1	71.8	69.5	69.0	71.5
252	184.6	205.5	253.9	306.5	358.5	407.3	454.8	496.6

Table XXXI: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: β = 5.0°, M_∞ = 3.5, Upright, Pressures in psf

Orifice ID	Nominal α							
	-2.5°	0.0°	5.0°	10.0°	15.0°	20.0°	25.0°	30.0°
	Ref 166	Ref 174	Ref 168	Ref 169	Ref 170	Ref 171	Ref 172	Ref 173
	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi
2	105.1	119.7	154.2	195.3	239.4	285.2	332.9	382.6
5	129.6	129.3	130.5	130.9	129.2	124.9	118.6	110.4
6	198.6	199.1	200.5	199.8	196.6	191.2	183.9	173.0
9	205.2	185.4	147.2	114.9	88.9	68.4	52.2	41.6
10	77.2	87.9	115.4	149.8	188.8	231.5	278.5	329.3
13	102.1	102.7	103.0	102.4	101.3	99.1	94.8	88.0
14	162.9	163.2	163.7	163.2	160.8	157.7	153.1	146.1
17	195.0	173.4	133.1	97.0	74.9	53.8	41.3	33.5
19	78.9	77.0	74.8	75.0	74.6	74.0	72.3	66.4
20	134.7	128.7	126.4	126.3	126.2	125.3	123.9	120.6
21	62.2	61.1	62.7	63.8	63.3	62.7	61.7	56.6
22	105.8	106.5	107.6	109.4	109.4	107.9	107.8	107.7
23	53.0	52.8	52.9	53.2	53.4	53.1	53.3	48.2
24	93.4	92.6	92.3	93.0	94.5	95.8	95.3	95.6
25	48.6	48.3	48.1	46.6	46.1	46.7	48.2	45.2
26	88.1	86.8	85.6	84.4	83.8	84.4	87.0	88.4
43	103.1	107.6	116.8	124.0	128.7	132.2	134.5	136.0
44	157.0	163.8	176.2	186.6	193.4	197.0	199.1	197.8
85	149.7	150.6	153.6	153.9	151.8	147.0	139.5	129.6
86	224.9	226.7	229.9	229.6	226.3	220.2	210.7	197.0
87	112.6	124.3	151.4	180.9	210.3	239.0	267.1	293.5
88	145.3	160.5	193.7	229.8	264.7	299.0	332.9	363.6
89	43.5	48.8	63.4	83.3	109.1	141.2	178.9	221.0
90	42.9	49.7	67.3	91.1	120.2	154.8	196.0	241.2
91	41.1	47.5	63.1	84.9	113.0	147.0	187.3	232.8
921	229.3	208.9	167.4	132.2	103.5	80.1	61.1	48.1
922								
93	74.2	85.0	111.8	145.1	183.4	225.8	272.6	323.4
128	145.8	128.0	95.1	70.6	53.7	41.4	34.2	30.8
201	500.2	481.7	439.5	389.9	339.4	292.0	243.5	199.3
202	560.4	551.3	527.1	491.5	451.1	407.6	362.0	317.0
203	575.0	577.6	575.8	560.3	536.4	503.0	463.2	416.3
204	545.2	558.0	576.6	581.7	577.4	561.7	536.6	499.3
205	454.9	478.9	522.9	554.2	573.6	581.5	579.4	563.8
206	386.4	412.2	460.8	501.4	534.7	559.4	575.8	579.2
207	323.4	346.8	395.5	441.3	482.8	519.0	550.0	568.3

Table XXXI(continued)

Nominal Conditions: β = 5.0°, M_∞ = 3.5, Upright, Pressures in psf

Orifice ID	Nominal α							
	-2.5°	0.0°	5.0°	10.0°	15.0°	20.0°	25.0°	30.0°
	Ref 166	Ref 174	Ref 168	Ref 169	Ref 170	Ref 171	Ref 172	Ref 173
	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi
208	236.5	258.5	306.8	359.3	411.1	459.7	503.1	536.6
209	383.4	389.0	397.0	394.3	385.4	370.3	349.3	322.3
210	435.7	445.5	459.5	462.2	456.8	442.0	420.7	390.8
211	499.0	511.7	531.1	537.8	533.6	519.5	495.5	460.5
212	541.4	553.1	571.9	577.3	572.7	558.7	534.4	498.9
213	506.9	516.2	530.4	532.3	525.6	509.4	485.2	451.0
214	463.4	469.5	478.8	476.8	467.6	450.7	426.8	395.3
215	220.2	200.1	160.2	126.4	98.8	76.3	58.4	46.2
216	146.4	150.2	158.5	163.2	164.6	162.9	157.9	150.3
217	217.0	222.4	232.4	238.2	239.7	237.0	230.7	218.9
218	121.1	136.9	174.3	217.5	263.1	310.7	360.7	409.2
219	60.4	61.8	64.2	64.6	64.4	62.4	57.0	50.0
220	102.3	105.1	108.3	110.3	111.0	112.1	110.6	103.7
225	146.0	128.6	98.8	75.2	56.5	44.0	34.9	29.1
226	308.3	283.6	236.5	194.1	156.7	124.6	96.5	75.7
227	338.5	314.0	269.1	227.2	188.1	153.4	120.9	95.6
228	440.2	418.8	374.2	325.1	276.1	229.1	183.7	147.3
229	170.5	190.5	235.9	285.1	334.7	384.1	432.1	475.6
230	51.7	59.1	79.0	105.5	137.5	175.3	218.9	268.0
231	225.0	225.4	226.3	222.4	216.3	207.5	196.2	182.2
232	324.2	328.0	331.5	326.6	316.3	302.0	283.1	260.8
233	408.2	411.4	415.4	410.3	400.1	383.3	361.6	334.0
234	312.6	312.9	313.6	309.9	302.0	291.2	276.9	258.0
235	62.6	66.6	74.0	80.8	87.0	92.8	99.5	106.1
236	51.6	58.1	72.5	88.2	106.0	126.1	147.1	169.6
237	45.7	52.0	68.8	91.2	118.3	150.1	187.1	227.7
238	44.6	51.5	68.9	91.8	121.1	155.6	195.7	240.7
239	45.0	51.5	69.5	94.1	124.5	160.8	203.0	250.9
244	143.5	126.2	94.8	70.6	53.4	41.2	33.3	28.2
245	143.1	125.9	95.9	71.8	54.4	43.2	34.6	29.7
246	84.3	83.6	82.0	80.9	79.3	77.9	76.8	74.9
247	62.9	65.2	67.1	67.7	65.9	60.1	54.3	52.9
248	54.7	54.8	53.9	52.0	49.4	47.5	47.5	50.1
249	98.4	97.0	93.6	89.8	86.1	83.6	82.9	85.0
252	184.2	204.9	252.5	305.1	356.4	404.9	452.2	493.5

Table XXXII: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: $\beta = -2.0^{\circ}$, $M_{\infty} = 3.5$, Upright, Pressures in psf

Orifice ID	Nominal α		
	0.0°	15.0°	25.0°
	Ref 175	Ref 176	Ref 177
	Pi	Pi	Pi
2	119.9	239.1	333.0
5	183.0	182.1	169.1
6	142.9	140.8	130.4
9	186.2	89.3	52.5
10	88.3	189.1	279.2
13	148.7	147.7	140.4
14	113.3	111.4	105.2
17	174.5	73.7	41.6
19	113.8	113.1	111.4
20	86.4	84.2	81.8
21	94.6	98.2	97.1
22	69.1	71.5	70.7
23	82.1	84.3	84.3
24	59.9	61.2	61.4
25	76.3	73.1	75.5
26	56.2	53.5	55.6
43	151.1	182.7	189.5
44	116.9	137.8	141.9
85	208.3	209.5	194.0
86	166.5	166.0	153.4
87	153.0	255.0	320.9
88	131.7	220.0	278.1
89	51.7	118.5	192.9
90	47.0	111.1	182.2
91	47.4	113.3	188.0
921	208.7	103.2	61.1
922			
93	84.8	183.7	273.4
128	129.3	54.6	35.2
201	481.2	338.1	242.7
202	552.6	452.9	364.9
203	578.3	537.2	465.1
204	558.1	577.5	538.2
205	481.0	574.6	581.7
206	414.8	536.1	578.2
207	348.6	483.6	552.1

Table XXXII(continued)

Nominal Conditions: $\beta = -2.0^{\circ}$, $M_{\infty} = 3.5$, Upright, Pressures in psf

Orifice ID	Nominal α		
	0.0°	15.0°	25.0°
	Ref 175	Ref 176	Ref 177
	Pi	Pi	Pi
208	258.6	412.6	505.8
209	454.0	451.2	411.5
210	502.3	513.3	475.0
211	544.9	566.2	527.3
212	522.9	543.0	507.0
213	462.6	469.6	433.1
214	407.1	401.3	365.1
215	204.7	101.1	59.6
216	204.7	224.0	216.1
217	164.6	177.6	168.9
218	141.3	270.9	369.2
219	94.7	100.5	97.9
220	69.4	73.2	67.8
225	128.4	57.2	35.4
226	283.1	156.1	96.4
227	313.1	187.8	120.9
228	418.1	275.6	183.5
229	190.2	334.8	433.5
230	59.3	138.3	219.5
231	293.1	283.6	258.5
232	392.6	384.5	349.8
233	346.5	331.2	297.8
234	244.4	233.5	212.9
235	91.6	126.9	145.2
236	74.3	141.6	193.3
237	58.9	135.2	211.0
238	54.8	130.9	209.7
239	52.6	126.7	205.6
244	126.2	53.9	34.3
245	125.2	54.4	35.3
246	123.0	117.7	114.1
247	97.0	105.9	95.4
248	85.3	76.2	73.4
249	62.5	55.8	54.1
252	205.6	356.8	454.1

Table XXXIII: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: β = -5.0°, M_∞ = 3.5, Upright, Pressures in psf

Orifice ID	Nominal α		
	0.0°	15.0°	25.0°
	Ref 178	Ref 179	Ref 180
	Pi	Pi	Pi
2	119.4	236.9	331.2
5	208.5	207.3	193.6
6	122.8	121.2	111.8
9	185.8	89.3	52.3
10	87.6	188.2	278.2
13	171.7	170.6	162.6
14	96.6	94.8	89.0
17	172.2	73.4	41.2
19	132.8	132.7	131.2
20	73.0	70.6	68.1
21	112.4	116.6	114.8
22	57.3	59.4	58.1
23	98.3	100.3	100.9
24	50.4	50.7	50.0
25	91.1	87.5	90.5
26	46.6	44.5	46.7
43	172.6	208.2	216.0
44	100.6	118.2	121.6
85	235.4	236.8	219.8
86	144.9	144.3	133.0
87	165.1	273.5	343.3
88	120.1	201.0	255.7
89	52.6	121.7	198.0
90	45.5	107.0	176.4
91	47.2	112.9	187.6
921	207.5	102.9	60.8
922			
93	84.6	182.8	272.1
128	129.7	53.7	32.7
201	477.3	336.1	240.9
202	548.3	450.1	363.8
203	574.0	532.8	462.2
204	552.8	572.5	534.0
205	476.3	569.9	577.5
206	411.2	531.8	574.5
207	344.8	479.6	548.4

Table XXXIII(continued)

Nominal Conditions: $\beta = -5.0^{\circ}$, $M_{\infty} = 3.5$, Upright, Pressures in psf

Orifice ID	Nominal α		
	0.0°	15.0°	25.0°
	Ref 178	Ref 179	Ref 180
	Pi	Pi	Pi
208	256.6	409.9	502.2
209	477.4	475.9	435.4
210	521.3	532.4	493.4
211	553.3	573.7	535.3
212	505.2	525.6	492.0
213	435.7	442.9	409.3
214	378.2	372.4	338.9
215	205.7	101.7	59.8
216	230.5	251.5	243.6
217	143.7	154.9	147.1
218	142.1	271.8	369.7
219	112.4	119.1	117.9
220	58.5	61.1	54.0
225	128.7	56.4	34.2
226	281.4	154.7	95.4
227	311.6	186.1	119.7
228	414.0	273.2	183.1
229	188.9	332.1	430.6
230	58.7	137.6	218.7
231	322.8	313.3	286.4
232	418.7	411.3	375.7
233	318.8	303.1	271.6
234	218.3	207.8	188.9
235	104.9	146.7	167.5
236	82.3	157.0	213.9
237	61.4	141.8	220.7
238	56.3	134.4	214.7
239	52.5	126.9	206.3
244	125.3	53.1	32.5
245	124.1	53.3	33.9
246	143.3	137.6	133.2
247	114.4	126.2	118.1
248	101.8	91.0	87.6
249	52.1	47.1	45.3
252	204.4	353.8	451.0

Table XXXIV: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: β = 0.0°, M_∞ = 4.6, Inverted, Pressures in psf

Orifice ID	Nominal α			
	-5.0°	-2.5°	0.0°	2.5°
	Ref 236	Ref 235	Ref 237	Ref 233
	Pi	Pi	Pi	Pi
2	56.6	64.7	74.9	85.7
5	100.1	100.4	100.9	100.7
6	106.3	106.8	107.4	107.1
9	152.6	135.7	120.1	105.9
10	39.4	45.4	53.2	61.4
13	77.7	77.6	77.7	77.6
14	83.6	83.7	83.7	83.2
17	141.5	123.1	107.1	87.2
19	59.0	56.7	55.5	54.5
20	64.0	61.9	60.9	60.1
21	44.6	43.5	43.5	44.2
22	49.6	48.0	47.9	48.2
23	37.8	36.9	36.6	36.1
24	41.8	40.9	40.5	40.0
25	33.8	33.5	33.2	32.8
26	38.0	37.8	37.5	37.0
43	73.5	77.2	81.4	85.1
44	79.0	82.4	86.4	89.8
85	116.4	117.2	118.3	119.0
86	124.2	125.4	126.4	126.8
87	71.1	79.7	89.4	99.4
88	74.5	83.2	93.0	102.6
89	22.3	25.0	28.6	32.8
90	18.5	21.6	25.6	29.9
91	20.6	22.9	26.3	30.4
921	171.0	153.5	136.8	122.1
922				
93	37.7	43.4	50.9	58.9
128	105.2	89.7	76.4	65.0
201	371.9	358.2	342.7	326.5
202	411.2	405.4	397.4	387.6
203	415.0	416.5	416.3	415.2
204	384.1	393.2	400.9	406.8
205	305.8	323.7	341.0	355.8
206	254.1	272.3	290.8	307.3
207	208.6	225.9	243.6	259.4

Table XXXIV(continued)

Nominal Conditions: β = 0.0°, M_∞ = 4.6, Inverted, Pressures in psf

Orifice ID	Nominal α			
	-5.0°	-2.5°	0.0°	2.5°
	Ref 236	Ref 235	Ref 237	Ref 233
	Pi	Pi	Pi	Pi
208	148.4	162.9	178.2	193.4
209	290.1	295.2	299.3	301.4
210	325.5	332.6	338.8	342.9
211	363.4	372.4	380.3	386.2
212	369.1	378.0	385.7	391.3
213	334.2	341.1	347.2	351.2
214	299.0	304.1	308.2	310.2
215	166.2	148.9	132.7	118.2
216	111.5	114.8	118.4	121.4
217	118.4	121.7	125.1	127.8
218	67.8	77.6	88.8	100.9
219	42.0	42.8	43.8	44.7
220	46.6	47.1	48.0	48.7
225	106.5	92.1	79.0	67.5
226	230.0	210.7	191.8	174.9
227	254.4	235.7	217.8	201.4
228	328.7	312.7	296.1	279.0
229	100.2	112.6	126.1	140.3
230	24.9	28.3	33.5	38.9
231	175.6	176.4	177.6	176.8
232	248.5	251.4	254.3	255.0
233	259.4	261.7	263.7	263.8
234	186.1	186.7	187.1	186.7
235	40.3	43.4	46.7	49.8
236	27.8	31.8	36.7	42.0
237	21.3	25.1	29.7	34.7
238	20.5	23.7	28.2	33.4
239	20.2	23.5	27.6	32.5
244	102.7	87.8	75.0	64.1
245	103.7	88.9	75.5	64.4
246	63.8	62.6	61.9	60.9
247	43.0	44.3	45.9	46.7
248	40.4	39.6	38.6	38.0
249	44.4	43.7	42.7	41.9
252	109.2	122.3	136.7	151.3

Table XXXV: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: β = 0.0°, M_∞ = 4.6, Upright, Pressures in psf

Orifice ID	Nominal α									
	-2.5°	0.0°	2.5°	5.0°	10.0°	15.0°	20.0°	25.0°	30.0°	32.0°
	Ref 181	Ref 191	Ref 183	Ref 184	Ref 185	Ref 186	Ref 187	Ref 188	Ref 189	Ref 190
	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi
2	66.1	74.9	86.0	98.6	126.2	158.2	192.1	228.7	263.3	273.9
5	106.1	106.8	106.9	107.1	106.4	104.4	101.2	95.8	89.4	87.4
6	101.0	101.3	101.3	101.3	100.3	98.5	95.5	90.6	85.1	83.3
9	134.2	120.2	105.9	92.8	69.9	51.6	38.6	29.2	22.7	21.4
10	46.0	53.0	61.6	71.4	94.4	122.2	154.1	189.4	225.1	235.6
13	82.7	82.8	83.1	82.8	82.3	81.2	79.2	76.0	71.5	69.9
14	78.4	78.4	78.3	77.9	77.2	76.0	74.2	71.6	67.8	66.2
17	122.2	107.0	87.6	75.7	55.4	39.6	29.3	22.4	18.0	17.0
19	60.9	59.6	59.0	58.9	58.3	58.3	58.5	57.5	54.7	53.4
20	57.5	56.5	56.0	55.7	55.2	55.1	55.3	54.1	51.9	50.7
21	47.0	47.0	47.8	48.5	48.7	48.3	48.7	48.6	46.5	45.7
22	44.2	44.5	45.0	45.4	45.5	45.2	45.6	45.5	44.1	43.4
23	40.2	39.6	39.3	39.7	39.9	40.3	40.5	40.5	39.9	39.2
24	38.1	37.6	37.1	37.5	37.5	37.7	38.1	38.4	38.0	37.4
25	36.7	36.1	35.7	35.4	33.7	33.7	34.6	35.2	35.1	34.8
26	34.8	34.5	34.1	33.8	32.3	32.1	33.0	33.8	33.9	33.5
43	82.5	86.1	90.8	94.6	100.9	106.0	109.5	112.1	113.9	114.5
44	78.3	81.3	84.8	87.8	93.3	97.3	100.0	102.0	102.9	103.2
85	124.0	124.9	125.8	126.2	126.2	124.1	119.8	113.4	105.8	103.3
86	119.3	119.9	120.5	120.7	120.2	118.2	114.4	108.2	101.2	98.8
87	83.8	92.7	103.6	114.6	137.3	161.6	185.3	208.1	229.0	235.4
88	81.5	89.9	99.7	110.3	132.0	155.2	178.1	200.1	220.3	226.3
89	25.4	28.3	33.2	38.5	52.6	71.7	95.2	123.5	155.7	165.9
90	21.5	24.9	29.7	35.6	50.1	69.7	94.0	122.5	154.4	164.6
91	22.7	25.6	30.0	35.5	50.0	69.5	93.6	122.6	155.7	166.0
921	151.7	137.0	121.6	107.2	82.1	61.6	46.3	35.0	26.8	25.1
922										
93	44.1	50.7	59.0	68.7	91.2	118.7	150.1	184.9	221.1	231.5
128	90.0	77.9	65.8	55.2	39.1	28.0	22.0	18.5	16.9	16.6
201	356.1	343.4	326.6	309.3	272.1	235.0	198.9	163.8	133.0	125.0
202	404.1	397.8	388.4	377.4	351.2	321.4	288.7	255.0	221.2	211.6
203	416.3	417.2	416.0	413.2	402.1	384.5	359.8	328.7	294.6	284.5
204	393.9	401.3	407.4	411.6	415.1	412.4	401.3	381.3	354.7	345.5
205	326.4	341.4	357.5	371.0	394.3	409.0	414.8	413.2	402.4	397.7
206	275.7	291.5	309.1	325.1	355.2	379.6	398.2	409.7	413.0	412.0
207	228.8	243.7	260.8	277.3	309.8	339.9	366.9	389.1	403.8	406.1

408.2

Table XXXV(continued)

Nominal Conditions: β = 0.0°, M_∞ = 4.6, Upright, Pressures in psf

Orifice ID	Nominal α									
	-2.5°	0.0°	2.5°	5.0°	10.0°	15.0°	20.0°	25.0°	30.0°	32.0°
	Ref 181	Ref 191	Ref 183	Ref 184	Ref 185	Ref 186	Ref 187	Ref 188	Ref 189	Ref 190
	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi
208	165.2	178.2	194.5	211.1	247.7	285.2	320.9	353.0	379.0	384.5
209	303.7	307.6	310.4	311.5	309.1	302.0	289.7	272.4	250.8	244.1
210	340.5	346.3	351.0	354.3	355.8	351.5	340.3	322.2	298.7	291.0
211	377.1	384.8	391.6	396.0	400.4	397.5	386.3	367.2	341.0	332.6
212	374.3	382.0	388.3	392.6	397.1	394.2	383.5	365.1	340.9	333.1
213	334.6	340.2	344.4	347.4	348.8	343.9	332.9	314.9	292.6	285.3
214	296.6	300.2	302.6	303.0	301.1	294.3	282.7	265.6	245.4	239.1
215	147.8	133.3	118.2	104.4	79.4	59.6	44.9	33.8	26.1	24.3
216	121.3	124.5	128.1	130.8	134.5	135.7	134.4	130.3	124.6	123.1
217	116.4	118.9	121.7	123.7	127.1	127.8	126.1	121.6	116.4	114.8
218	79.1	89.2	101.9	115.5	145.8	179.6	214.9	252.1	286.6	297.1
219	46.3	47.3	48.3	49.0	49.8	50.3	50.2	47.6	42.8	41.9
220	43.8	44.7	45.5	45.9	46.7	47.3	47.3	44.8	40.9	39.9
225	90.7	79.7	68.5	58.2	41.0	30.0	23.1	18.4	15.3	14.7
226	208.2	192.2	174.1	157.6	126.9	99.8	77.6	58.9	44.8	41.7
227	233.5	218.1	200.7	184.7	153.6	124.1	98.3	75.9	58.5	54.3
228	310.5	296.6	278.6	260.8	223.3	186.0	151.2	119.5	94.1	87.8
229	114.5	126.0	141.0	156.8	191.4	228.5	264.6	300.6	332.4	341.2
230	28.4	32.8	38.9	46.1	63.6	86.4	114.0	146.0	180.9	191.8
231	184.7	185.5	185.0	184.2	180.5	174.9	167.5	157.6	145.4	142.0
232	260.2	262.4	263.5	263.6	259.7	252.1	240.3	224.9	206.8	201.2
233	254.3	255.8	256.0	255.0	250.5	242.5	231.2	215.6	198.2	192.8
234	179.2	179.4	178.7	177.4	173.8	168.6	161.6	151.9	141.0	137.6
235	46.2	49.4	53.0	56.9	64.1	70.9	77.6	84.4	91.0	92.7
236	33.9	38.2	44.3	50.7	65.3	81.4	98.4	117.0	136.3	142.0
237	25.9	29.9	35.8	42.7	59.5	80.6	105.6	134.0	165.7	175.7
238	24.4	28.1	33.9	40.6	57.5	79.1	104.8	135.1	169.1	179.7
239	23.8	27.3	32.9	39.4	55.8	77.4	103.8	134.8	169.2	180.2
244	87.5	76.4	64.7	54.4	38.2	27.4	21.3	17.3	15.0	14.7
245	88.0	76.8	65.2	55.3	39.4	29.0	22.5	18.0	15.5	14.9
246	66.8	66.1	65.7	65.0	63.4	62.1	61.3	60.2	58.9	58.1
247	48.1	49.2	50.4	51.9	53.5	53.8	51.8	47.9	46.9	46.8
248	42.8	41.9	41.2	40.4	38.5	36.7	35.8	35.7	37.0	37.4
249	40.4	39.6	39.1	38.2	36.3	34.6	33.6	33.8	35.5	35.8
252	124.2	136.5	152.3	169.0	205.1	243.4	280.4	315.3	345.8	353.8

Table XXXVI: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: β = 2.0°, M_∞ = 4.6, Upright, Pressures in psf

Orifice ID	Nominal α								
	-2.5°	0.0°	5.0°	10.0°	15.0°	20.0°	25.0°	30.0°	32.0°
	Ref 192	Ref 201	Ref 194	Ref 195	Ref 196	Ref 197	Ref 198	Ref 199	Ref 200
	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi
2	65.1	74.3	98.2	125.9	158.0	192.0	228.0	262.9	273.9
5	94.2	94.9	95.1	94.8	93.6	90.4	85.8	79.7	78.2
6	111.1	111.8	111.7	111.1	109.4	106.0	101.0	94.2	92.1
9	133.5	120.2	92.6	69.6	51.6	38.3	29.1	22.7	21.2
10	45.5	52.5	71.2	94.2	121.8	153.5	188.2	224.2	235.2
13	72.6	72.8	72.8	72.3	71.7	70.0	67.2	62.8	61.4
14	87.9	88.0	87.2	86.6	85.5	83.5	80.3	75.8	74.4
17	120.5	106.3	74.9	55.0	39.5	29.1	22.4	18.0	17.0
19	52.5	51.7	50.8	50.7	51.0	50.9	50.0	46.9	46.0
20	65.7	65.0	63.6	63.2	63.2	62.7	61.6	59.2	58.2
21	40.0	40.3	41.5	41.8	41.6	41.7	41.5	39.4	38.6
22	50.9	51.1	52.0	52.4	51.9	52.0	52.3	50.9	50.2
23	34.0	33.9	33.8	33.9	34.4	34.4	34.9	33.7	33.2
24	43.5	43.3	43.1	43.1	43.8	44.1	44.4	44.0	43.5
25	30.8	30.9	29.9	28.5	28.5	29.1	30.0	29.6	29.4
26	40.3	40.1	39.1	37.6	37.6	38.3	38.9	39.2	39.1
43	73.3	76.7	84.0	89.9	94.6	98.2	101.1	102.7	103.2
44	86.6	90.0	97.2	103.3	108.0	111.0	112.7	113.1	113.3
85	110.8	111.9	113.4	113.4	111.7	107.9	102.4	95.2	93.1
86	129.9	131.0	132.3	132.2	130.1	125.9	119.7	111.3	108.4
87	77.8	86.2	106.8	128.5	151.6	174.4	196.8	216.9	222.9
88	86.0	94.7	116.3	139.6	164.0	187.7	211.1	232.1	238.1
89	24.6	27.7	37.3	51.0	69.3	92.4	120.2	151.8	161.8
90	21.5	25.3	36.2	51.3	71.3	95.9	124.7	157.2	167.5
91	22.0	25.2	35.0	49.5	69.0	93.0	122.1	155.1	165.7
921	151.3	137.1	107.0	81.8	61.6	46.2	35.0	26.8	25.0
922									
93	43.3	50.1	68.4	90.9	118.3	149.6	184.3	220.3	231.2
128	89.3	77.6	54.7	38.5	27.7	21.7	18.3	16.7	16.5
201	356.4	343.5	309.1	271.6	234.6	198.5	164.5	133.0	124.9
202	404.4	397.8	377.1	350.1	320.0	287.3	254.8	220.6	211.0
203	416.2	417.4	413.3	401.1	383.3	358.5	329.0	294.4	284.3
204	393.4	401.4	411.8	414.0	411.4	400.3	381.5	354.5	345.9
205	325.5	341.1	371.0	393.0	407.4	413.6	412.4	401.8	397.9
206	274.1	290.8	324.6	353.7	378.2	397.1	409.3	412.3	412.1
207	227.5	243.2	277.0	309.0	338.4	366.1	388.4	402.7	405.8

Table XXXVI(continued)

Nominal Conditions: β = 2.0°, M_∞ = 4.6, Upright, Pressures in psf

Orifice ID	Nominal α								
	-2.5°	0.0°	5.0°	10.0°	15.0°	20.0°	25.0°	30.0°	32.0°
	Ref 192	Ref 201	Ref 194	Ref 195	Ref 196	Ref 197	Ref 198	Ref 199	Ref 200
	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi
208	164.1	177.9	210.9	247.1	284.2	320.5	352.4	378.1	384.0
209	289.0	293.3	297.0	294.4	287.6	275.5	258.9	238.3	232.3
210	327.4	333.9	341.6	342.9	338.9	327.7	310.7	288.0	281.1
211	370.1	378.2	389.3	392.8	389.6	378.6	360.6	334.5	326.5
212	381.6	389.1	399.7	402.6	399.2	388.8	371.5	346.2	338.1
213	346.3	352.2	359.5	359.9	355.1	343.7	326.3	302.9	295.4
214	309.9	313.6	317.4	314.7	307.7	295.4	278.5	257.4	250.8
215	146.3	132.5	103.3	78.7	59.3	44.4	33.7	25.9	24.3
216	109.4	112.4	118.3	121.8	123.0	121.8	118.5	113.2	111.7
217	126.2	129.3	135.0	138.8	139.8	138.1	133.7	127.2	125.1
218	77.8	87.9	114.3	144.4	177.7	212.7	249.2	284.4	295.2
219	39.5	40.7	42.1	42.9	43.3	42.6	39.9	35.9	35.1
220	50.0	51.0	52.5	53.3	54.0	54.1	52.4	47.8	46.6
225	90.4	79.7	57.7	40.8	30.1	22.8	18.2	15.2	14.5
226	208.2	192.5	157.3	126.7	99.9	77.3	59.0	44.8	41.6
227	233.6	218.2	184.5	153.3	124.1	98.2	76.2	58.5	54.2
228	310.8	296.5	260.5	222.8	185.7	150.7	119.7	94.0	87.8
229	113.6	125.6	156.6	191.3	228.1	264.4	299.5	331.8	340.6
230	27.8	32.5	45.4	63.3	85.8	113.3	144.9	180.3	191.5
231	169.6	170.7	169.6	166.0	160.9	153.7	144.4	133.4	130.6
232	245.3	248.2	248.9	244.7	237.0	225.5	210.8	193.6	188.7
233	267.0	269.0	269.1	264.4	256.4	244.3	229.0	210.4	204.6
234	191.7	192.3	191.1	187.7	182.3	174.5	164.7	152.8	149.0
235	41.2	44.1	50.2	56.7	63.0	68.9	75.2	81.0	82.9
236	30.6	34.8	45.7	58.9	73.6	89.6	107.6	125.4	131.1
237	24.5	28.6	40.2	56.4	76.9	100.7	128.7	159.4	169.1
238	23.3	27.2	39.1	55.6	76.7	101.9	131.6	165.0	175.7
239	23.1	27.0	38.6	55.2	76.7	102.7	133.2	167.9	179.3
244	87.2	76.3	54.1	38.0	27.2	20.8	16.9	14.7	14.3
245	87.4	76.5	54.8	38.8	29.0	22.2	18.0	15.2	14.7
246	58.3	57.9	56.7	55.5	54.7	53.8	53.2	51.8	51.2
247	41.1	42.5	44.3	45.9	46.1	43.5	40.7	40.2	40.6
248	36.4	36.1	34.9	33.1	31.9	30.6	31.2	32.3	32.8
249	46.4	45.7	43.7	41.5	39.8	38.8	38.8	40.1	40.5
252	123.1	136.1	168.3	204.7	242.9	280.1	314.4	345.3	353.4

Table XXXVII: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: β = 5.0°, M_∞ = 4.6, Upright, Pressures in psf

Ori-fice ID	Nominal α 0.0° Ref 210 Pi	5.0° Ref 203 Pi	10.0° Ref 204 Pi	15.0° Ref 205 Pi	20.0° Ref 206 Pi	25.0° Ref 207 Pi	30.0° Ref 208 Pi	32.0° Ref 209 Pi
2	74.2	98.1	125.7	157.4	191.1	226.7	261.5	272.2
5	79.7	80.2	79.8	78.8	76.0	72.2	67.0	65.4
6	130.3	130.3	129.6	127.3	123.5	117.5	110.1	108.0
9	119.5	92.1	69.3	51.6	38.4	29.1	22.7	21.2
10	52.3	71.1	93.9	121.4	152.9	187.6	223.0	233.8
13	60.3	60.1	59.7	59.2	57.9	55.5	51.6	50.3
14	104.4	103.6	102.9	101.5	99.1	95.2	90.5	89.0
17	104.4	77.3	55.6	39.4	28.9	22.2	17.8	16.9
19	41.7	41.2	41.2	41.2	41.1	40.3	37.3	36.3
20	78.7	77.5	77.0	76.7	75.9	75.0	72.1	71.2
21	32.2	33.2	33.3	33.3	33.5	33.1	30.7	29.9
22	63.1	64.3	64.6	64.3	64.0	64.0	62.9	62.4
23	27.2	27.0	26.9	27.1	27.4	27.4	25.8	25.3
24	54.0	53.8	54.0	54.9	55.1	54.9	55.0	54.9
25	24.3	23.4	22.5	22.7	23.0	23.8	22.4	22.0
26	50.2	49.1	47.6	47.4	48.0	48.9	49.3	49.3
43	64.6	70.7	75.6	79.7	83.0	85.7	87.6	88.2
44	105.6	113.6	120.6	126.1	129.3	130.5	131.2	131.4
85	95.3	96.5	96.4	95.2	92.0	87.1	81.0	79.1
86	150.9	152.1	152.0	149.4	144.8	137.5	128.1	125.5
87	77.4	96.3	116.4	137.5	158.9	179.6	198.3	203.9
88	104.0	127.3	152.3	177.7	202.9	227.7	249.1	255.7
89	27.1	36.2	49.0	66.7	89.0	115.7	146.5	156.3
90	26.2	37.7	53.5	74.0	99.2	128.5	161.6	171.7
91	25.1	34.8	49.5	68.7	92.9	121.7	154.6	164.8
921	136.6	106.6	81.5	61.7	46.3	35.0	26.9	25.1
922								
93	50.2	68.3	90.9	117.9	149.2	183.5	219.0	229.7
128	76.7	54.1	38.1	27.1	20.8	17.5	15.0	14.3
201	341.6	307.5	270.4	233.8	198.0	163.6	132.5	124.5
202	395.2	374.5	347.5	317.5	285.4	252.7	219.1	209.5
203	415.2	410.6	398.4	380.7	356.4	326.4	292.3	282.9
204	399.5	409.8	412.4	409.1	398.3	379.2	352.1	344.2
205	339.1	368.6	390.7	405.2	411.7	410.2	399.3	395.0
206	288.6	322.2	351.5	375.3	394.7	406.4	409.8	409.4
207	241.3	275.3	307.2	336.4	363.8	385.9	400.1	402.9

Table XXXVII(continued)

Nominal Conditions: β = 5.0°, M_∞ = 4.6, Upright, Pressures in psf

Ori-fice ID	Nominal α							
	0.0°	5.0°	10.0°	15.0°	20.0°	25.0°	30.0°	32.0°
	Ref 210	Ref 203	Ref 204	Ref 205	Ref 206	Ref 207	Ref 208	Ref 209
	Pi	Pi	Pi	Pi	Pi	Pi	Pi	Pi
208	177.2	209.7	245.8	282.3	318.6	349.7	375.4	381.4
209	270.5	274.3	272.0	265.9	254.8	239.6	219.5	213.7
210	313.7	321.5	322.9	319.1	309.0	293.0	271.3	265.2
211	365.4	376.4	379.9	377.4	366.8	349.3	324.1	316.1
212	397.0	407.2	409.6	406.6	396.1	378.3	352.8	344.7
213	368.2	375.4	376.1	370.9	359.4	341.0	316.6	309.3
214	333.1	337.1	334.7	327.5	315.0	297.0	274.6	267.6
215	130.4	101.8	77.6	58.6	43.9	33.3	25.7	24.1
216	96.8	101.9	104.8	106.0	105.0	101.9	97.5	96.2
217	148.3	154.4	158.4	159.8	158.0	152.6	145.1	142.9
218	86.6	112.5	141.8	174.6	209.1	245.3	280.4	290.5
219	32.5	33.5	34.1	34.3	33.5	30.7	27.7	27.1
220	62.6	64.6	65.5	66.3	66.9	65.2	60.7	59.3
225	79.1	57.7	40.9	29.9	22.4	17.9	14.8	14.1
226	191.5	156.8	126.2	99.6	77.0	58.8	44.7	41.5
227	217.2	183.7	152.6	123.7	98.0	76.0	58.4	54.3
228	294.9	259.2	221.7	185.1	150.3	119.6	94.2	88.0
229	125.4	156.2	190.6	226.8	263.2	297.6	329.7	338.4
230	32.3	45.5	63.2	85.8	113.2	144.4	179.5	190.4
231	150.5	149.6	145.7	141.3	134.7	126.5	116.9	114.2
232	226.5	226.9	222.4	214.8	203.9	190.2	174.3	169.8
233	289.9	290.1	285.5	277.0	264.8	248.3	228.7	222.6
234	214.5	213.4	209.8	204.0	195.5	184.5	171.1	167.1
235	37.4	42.4	47.4	52.3	57.3	63.0	68.0	69.7
236	30.4	39.5	50.6	63.6	78.1	94.1	110.8	115.9
237	26.7	37.5	52.6	71.6	94.3	120.8	150.6	159.9
238	26.5	37.6	53.3	73.7	98.1	126.9	159.8	170.1
239	26.7	38.3	54.8	75.9	101.7	132.4	166.8	177.5
244	75.8	54.0	37.8	26.9	20.2	16.3	13.1	12.3
245	76.1	54.8	39.1	28.7	21.8	17.4	14.5	13.6
246	47.7	46.8	45.7	45.0	44.4	44.0	42.8	42.3
247	34.1	35.6	36.5	35.9	33.2	31.8	31.8	31.9
248	28.7	28.0	26.9	25.8	24.7	25.4	26.4	26.6
249	56.9	54.2	51.5	49.4	48.1	47.9	49.2	49.7
252	135.8	168.2	204.2	241.9	278.4	312.4	342.9	350.9

Table XXXVIII: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: $\beta = -2.0^{\circ}$, $M_{\infty} = 4.6$, Upright, Pressures in psf

Orifice ID	Nominal α		
	0.0°	15.0°	25.0°
	Ref 212	Ref 213	Ref 214
	Pi	Pi	Pi
2	77.2	157.5	227.0
5	118.2	115.8	106.7
6	90.3	88.0	81.4
9	116.4	51.9	29.1
10	54.6	121.6	188.2
13	93.1	91.1	85.6
14	69.3	67.3	63.3
17	97.9	39.6	22.4
19	67.8	66.8	65.7
20	49.4	48.5	47.1
21	54.4	55.8	55.9
22	38.3	39.1	39.3
23	45.8	46.8	47.4
24	32.3	32.2	33.2
25	41.6	39.5	41.0
26	29.5	27.6	29.1
43	97.1	117.4	123.5
44	73.0	86.8	91.6
85	137.4	136.3	124.9
86	108.0	106.3	97.9
87	101.2	170.1	219.1
88	85.6	144.9	188.9
89	30.2	73.3	126.3
90	25.5	67.5	119.2
91	26.3	68.9	122.5
921	132.6	61.7	34.8
922			
93	52.3	117.8	183.9
128	74.4	27.6	17.8
201	338.9	234.4	162.9
202	396.0	320.8	254.2
203	417.5	383.2	327.0
204	402.7	410.7	379.3
205	345.0	406.9	411.0
206	295.6	377.4	407.8
207	247.6	338.0	387.5

Table XXXVIII(continued)

Nominal Conditions: $\beta = -2.0^{\circ}$, $M_{\infty} = 4.6$, Upright, Pressures in psf

Orifice ID	Nominal α		
	0.0°	15.0°	25.0°
	Ref 212	Ref 213	Ref 214
	Pi	Pi	Pi
208	181.8	283.8	351.5
209	320.9	315.2	284.1
210	358.5	361.9	331.6
211	392.5	401.9	371.2
212	376.9	385.7	357.0
213	329.8	330.7	302.2
214	287.3	279.7	251.4
215	130.0	60.2	34.0
216	137.2	148.4	142.6
217	108.0	115.2	110.5
218	92.5	180.5	251.8
219	54.8	58.0	55.8
220	39.0	41.1	38.1
225	76.6	30.1	18.2
226	187.0	99.8	58.6
227	213.2	124.0	75.6
228	291.6	185.7	119.1
229	129.3	227.4	298.7
230	33.9	85.9	145.1
231	198.9	189.3	170.5
232	275.5	265.9	237.9
233	242.3	227.7	201.4
234	165.7	155.0	139.1
235	55.9	79.5	94.1
236	43.5	88.6	126.7
237	32.8	83.8	139.0
238	30.3	80.6	138.1
239	28.7	77.3	135.0
244	72.8	27.3	16.9
245	73.1	28.9	17.9
246	75.0	70.5	68.0
247	56.9	62.3	56.5
248	48.1	42.3	41.4
249	33.9	30.1	29.6
252	140.1	242.5	313.7

Table XXXIX: Unitary Plan Wind Tunnel - 4% Model
Nominal Conditions: β = -5.0°, M_∞ = 4.6, Upright, Pressures in psf

Orifice ID	Nominal α		
	0.0°	15.0°	25.0°
	Ref 215	Ref 216	Ref 217
	Pi	Pi	Pi
2	74.2	156.3	225.3
5	137.3	134.2	123.8
6	76.0	74.3	68.4
9	119.8	51.6	29.1
10	52.6	121.0	187.2
13	110.3	107.8	101.3
14	57.6	55.8	52.4
17	103.6	39.4	22.3
19	82.2	80.9	79.3
20	40.5	39.4	37.9
21	67.2	68.7	68.2
22	30.8	31.5	31.2
23	57.2	58.4	58.3
24	26.1	25.8	25.9
25	52.4	49.7	51.0
26	23.4	22.0	22.9
43	112.0	136.1	142.5
44	60.8	72.9	77.4
85	157.5	156.1	143.6
86	92.0	90.6	83.2
87	107.7	184.0	235.7
88	74.9	131.1	171.7
89	29.7	75.8	129.7
90	23.8	64.8	114.8
91	25.0	68.7	121.9
921	135.7	61.2	34.8
922			
93	50.3	117.3	182.9
128	77.8	27.2	17.1
201	340.2	232.3	161.5
202	395.1	318.3	252.6
203	414.3	379.5	324.2
204	397.0	406.9	375.6
205	337.6	403.4	407.3
206	288.3	374.4	404.4
207	240.4	335.1	384.1

Table XXXIX(continued)

Nominal Conditions: $\beta = -5.0^{\circ}$, $M_{\infty} = 4.6$, Upright, Pressures in psf

Orifice ID	Nominal α		
	0.0°	15.0°	25.0°
	Ref 215	Ref 216	Ref 217
	Pi	Pi	Pi
208	175.9	282.0	348.9
209	338.7	334.0	301.8
210	372.2	376.9	345.6
211	397.3	407.9	377.0
212	361.3	372.6	345.0
213	307.9	310.4	284.0
214	264.1	257.7	231.6
215	134.5	60.4	34.2
216	155.4	168.6	162.4
217	92.1	99.0	94.8
218	90.5	181.2	252.5
219	67.3	71.2	69.7
220	32.1	33.3	29.8
225	79.5	29.7	17.7
226	190.4	98.7	58.2
227	216.1	122.4	75.2
228	293.0	183.8	118.6
229	125.0	225.4	296.4
230	32.5	85.6	144.5
231	221.4	211.4	190.8
232	295.1	286.5	257.8
233	220.6	206.5	182.1
234	146.2	136.2	121.6
235	64.5	93.7	110.0
236	47.9	100.6	141.6
237	33.4	89.0	145.8
238	30.0	83.3	141.4
239	27.6	77.6	135.0
244	75.4	26.7	16.0
245	75.3	28.3	17.2
246	90.2	84.8	81.2
247	69.0	76.8	71.2
248	59.6	52.4	50.8
249	27.5	24.5	24.1
252	135.5	240.4	311.3

Figure 1. - Photograph of Model.

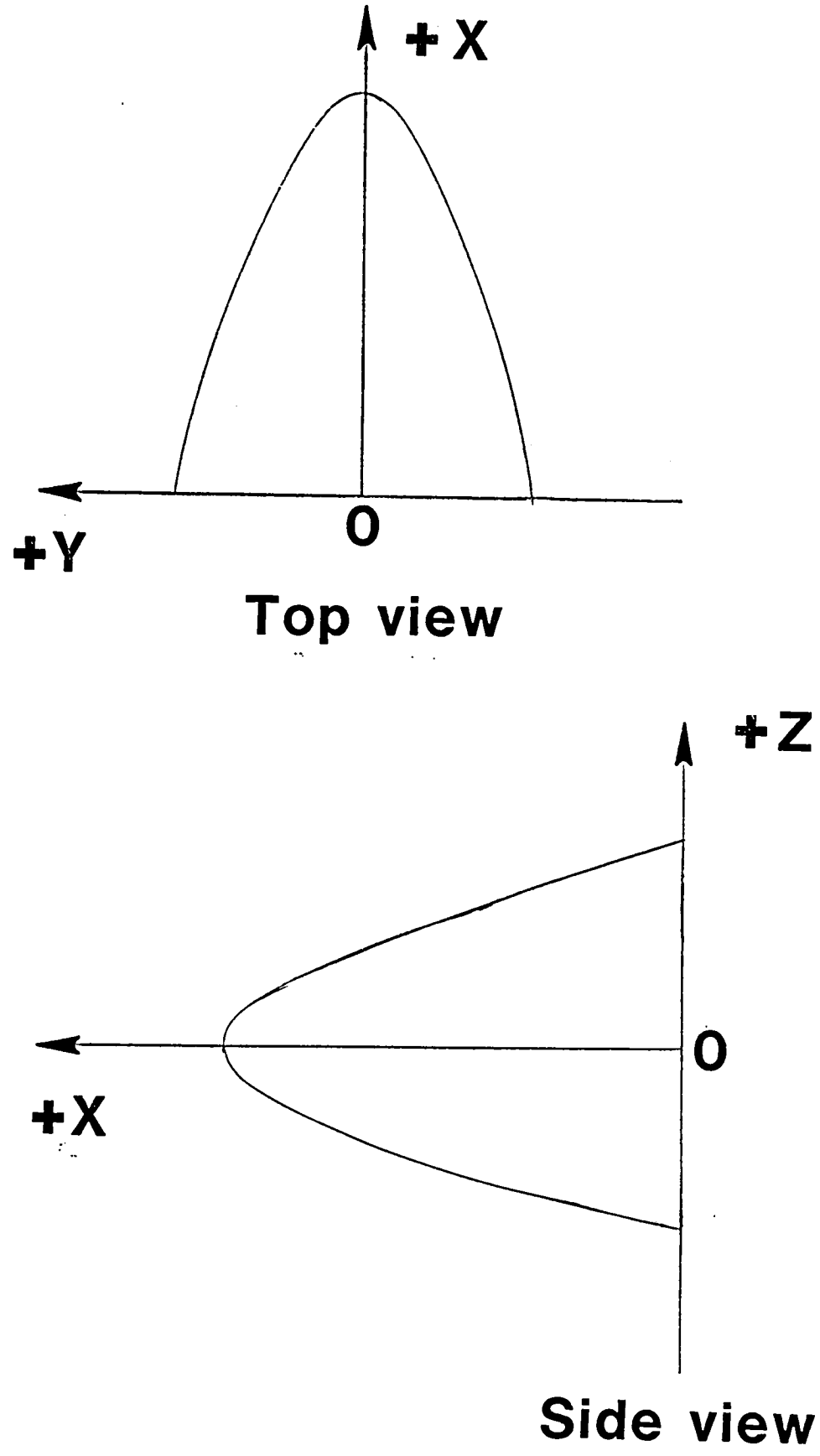

Figure 2. - Model's coordinate system.

○	α	-2.4	M_∞	1.50 P_{t_2}	922.69
□	α	-.3	M_∞	1.50 P_{t_2}	921.23
◇	α	2.3	M_∞	1.50 P_{t_2}	921.49
△	α	4.8	M_∞	1.50 P_{t_2}	921.58
◺	α	9.7	M_∞	1.50 P_{t_2}	921.92
◺	α	14.7	M_∞	1.50 P_{t_2}	921.93
◺	α	19.7	M_∞	1.50 P_{t_2}	921.99

Run # 1, β .0, Facility: UNITARY Tunnel 4% Model

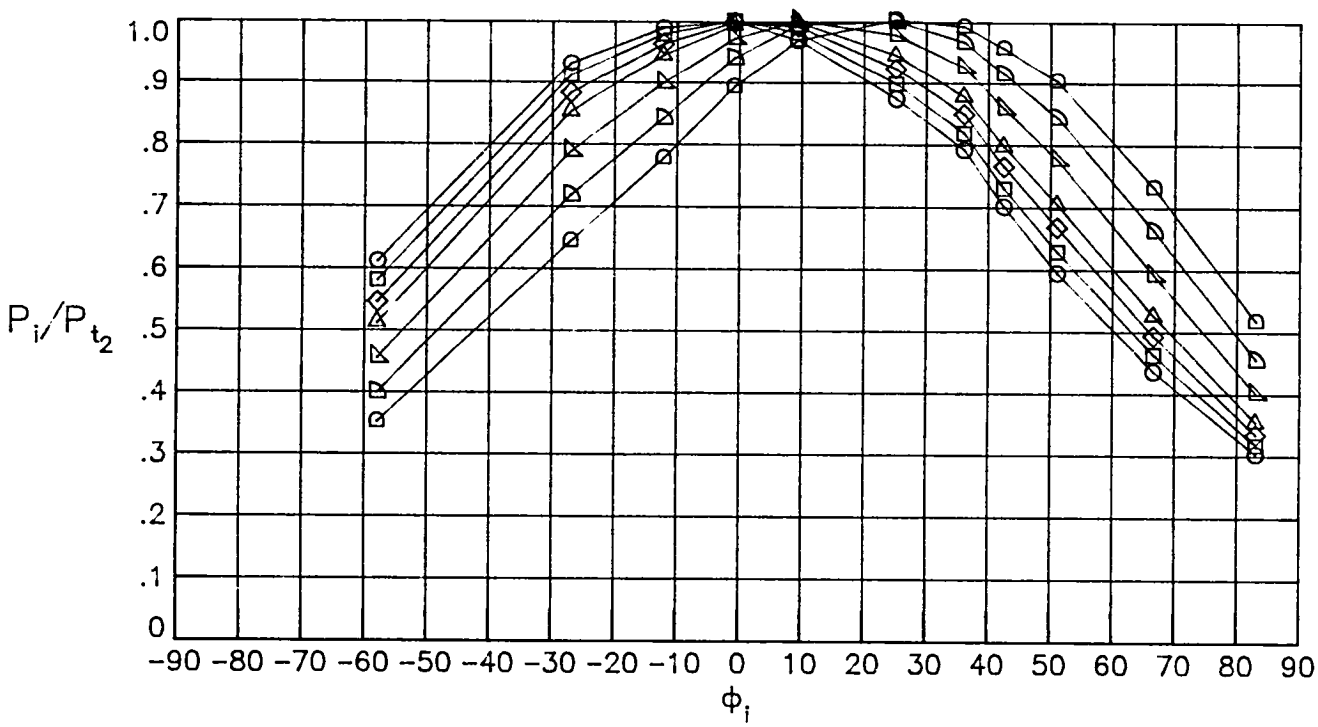

Figure 3. - Sample data, M_∞ = 1.50, β = 0, longitudinal sweep.

○	α	−1.3	M_∞	2.00	P_{t_2}	850.63
□	α	−.1	M_∞	2.00	P_{t_2}	850.66
◇	α	2.4	M_∞	2.00	P_{t_2}	850.55
△	α	4.9	M_∞	2.00	P_{t_2}	850.59
◺	α	9.9	M_∞	2.00	P_{t_2}	850.60
◗	α	14.9	M_∞	2.00	P_{t_2}	850.74
◘	α	19.9	M_∞	2.00	P_{t_2}	850.77
◇	α	24.9	M_∞	2.00	P_{t_2}	849.21
◊	α	29.9	M_∞	2.00	P_{t_2}	849.25

Run # 6, β .0, Facility: UNITARY Tunnel 4% Model

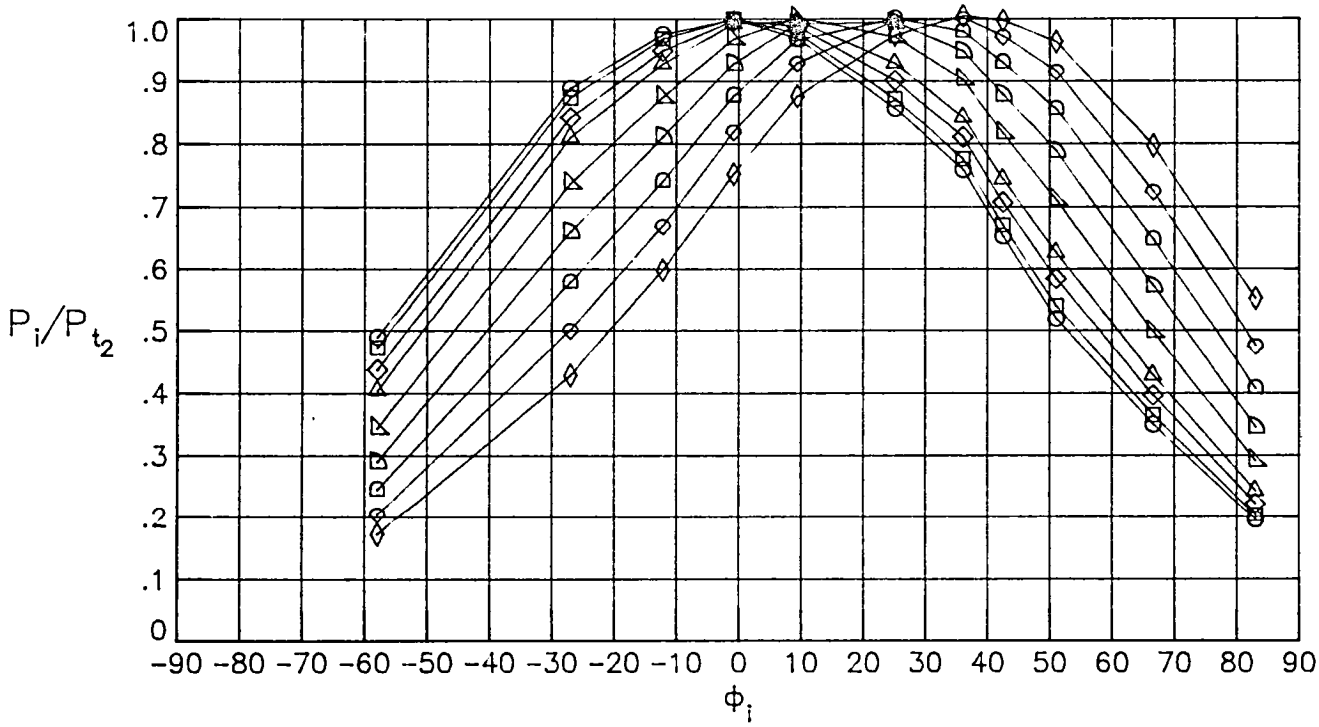

Figure 4. - Sample data, M_∞ = 2.00, β = 0, longitudinal sweep.

○	α	−2.4	M_∞	2.30	P_{t_2}	842.12
□	α	.1	M_∞	2.30	P_{t_2}	853.11
◇	α	2.6	M_∞	2.30	P_{t_2}	842.17
△	α	5.1	M_∞	2.30	P_{t_2}	858.93
◺	α	10.1	M_∞	2.30	P_{t_2}	842.05
◺	α	15.1	M_∞	2.30	P_{t_2}	844.69
◺	α	20.1	M_∞	2.30	P_{t_2}	844.78
◇	α	25.1	M_∞	2.30	P_{t_2}	842.40
◇	α	30.1	M_∞	2.30	P_{t_2}	841.06

Run # 1, β .0, Facility: UNITARY Tunnel 4% Model

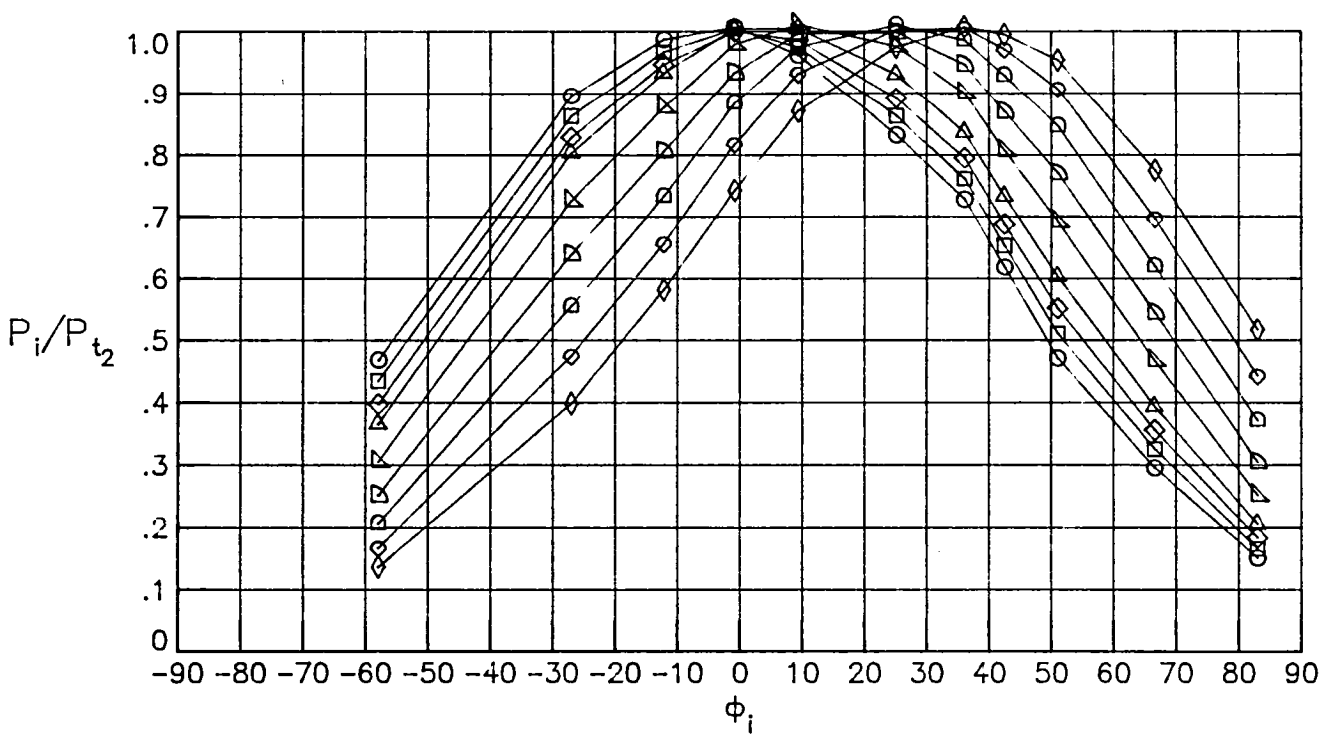

Figure 5. - Sample data, M_∞ = 2.30, β = 0, longitudinal sweep.

○	α	-2.4	M_∞	2.96	P_{t_2}	692.95
□	α	.1	M_∞	2.96	P_{t_2}	692.83
◇	α	2.6	M_∞	2.96	P_{t_2}	693.04
△	α	5.1	M_∞	2.96	P_{t_2}	693.13
◺	α	10.1	M_∞	2.96	P_{t_2}	693.22
◻	α	15.1	M_∞	2.96	P_{t_2}	693.28
◻	α	20.1	M_∞	2.96	P_{t_2}	693.02
◇	α	25.1	M_∞	2.96	P_{t_2}	693.01
◇	α	30.1	M_∞	2.96	P_{t_2}	693.03

Run # 6, β .0, Facility: UNITARY Tunnel 4% Model

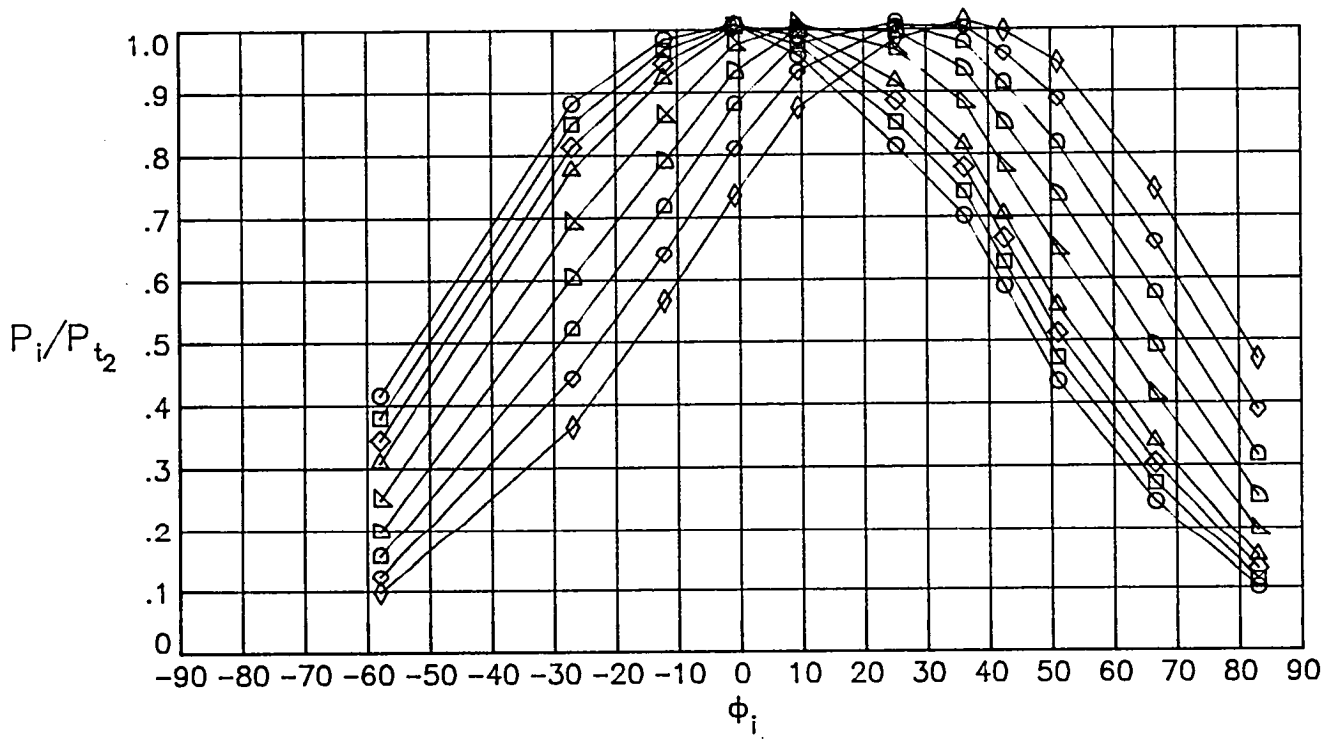

Figure 6. - Sample data, M_∞ = 2.96, β = 0, longitudinal sweep.

○	α	-2.5	M_∞	3.50	P_{t_2}	575.33
□	α	-.0	M_∞	3.50	P_{t_2}	575.37
◇	α	2.5	M_∞	3.50	P_{t_2}	575.66
△	α	5.0	M_∞	3.50	P_{t_2}	575.67
◺	α	10.0	M_∞	3.50	P_{t_2}	575.67
◻	α	15.0	M_∞	3.50	P_{t_2}	575.61
∩	α	20.0	M_∞	3.50	P_{t_2}	575.65
◇	α	25.0	M_∞	3.50	P_{t_2}	575.61
◊	α	30.0	M_∞	3.50	P_{t_2}	575.64

Run # 11, β .0, Facility: UNITARY Tunnel 4% Model

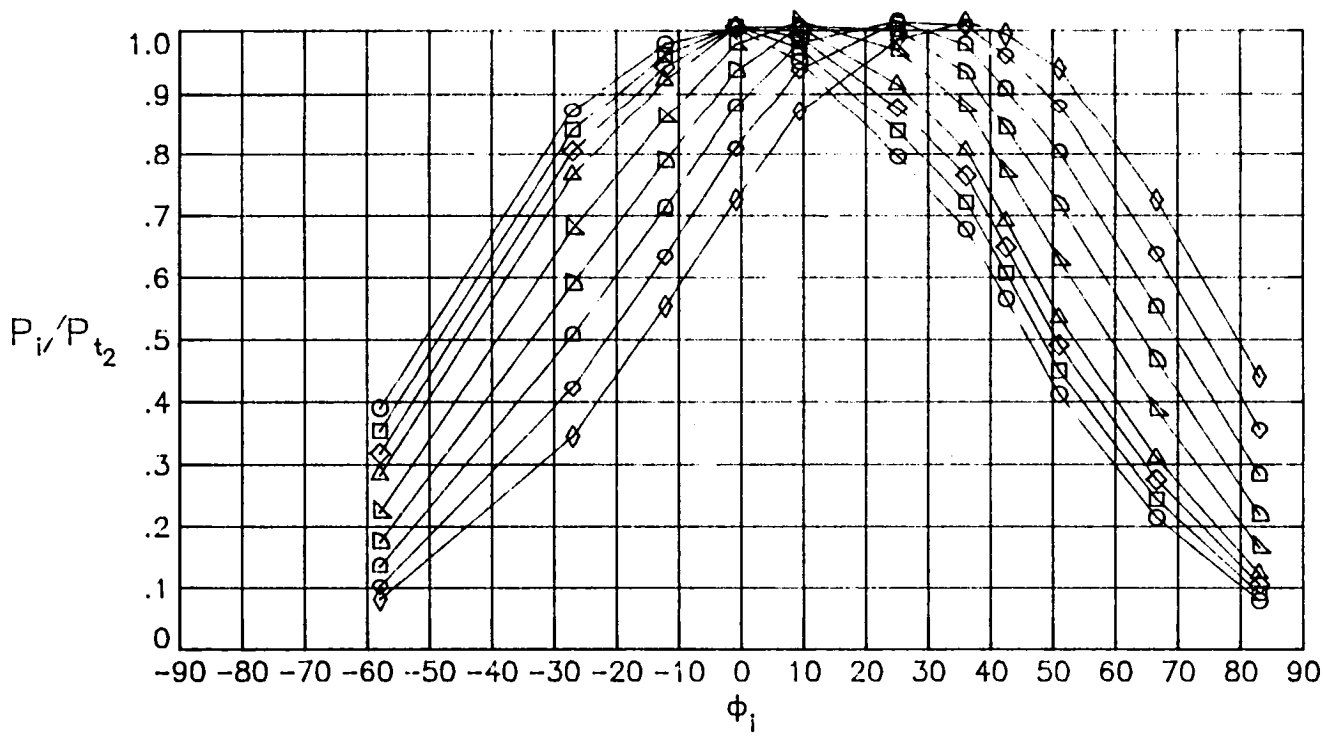

Figure 7. - Sample data, M_∞ = 3.50, β = 0, longitudinal sweep.

○	α	-2.2	M_∞	4.63	P_{t_2}	407.93
□	α	-.0	M_∞	4.63	P_{t_2}	407.99
◇	α	2.5	M_∞	4.63	P_{t_2}	408.03
△	α	5.0	M_∞	4.63	P_{t_2}	408.06
◺	α	10.0	M_∞	4.63	P_{t_2}	408.09
◻	α	15.0	M_∞	4.63	P_{t_2}	408.11
⌂	α	19.9	M_∞	4.63	P_{t_2}	408.14
◇	α	25.0	M_∞	4.63	P_{t_2}	408.15
◊	α	29.9	M_∞	4.63	P_{t_2}	408.19
⌂	α	31.4	M_∞	4.63	P_{t_2}	408.20

Run # 16, β 0.0, Facility: UNITARY Tunnel 4% Model

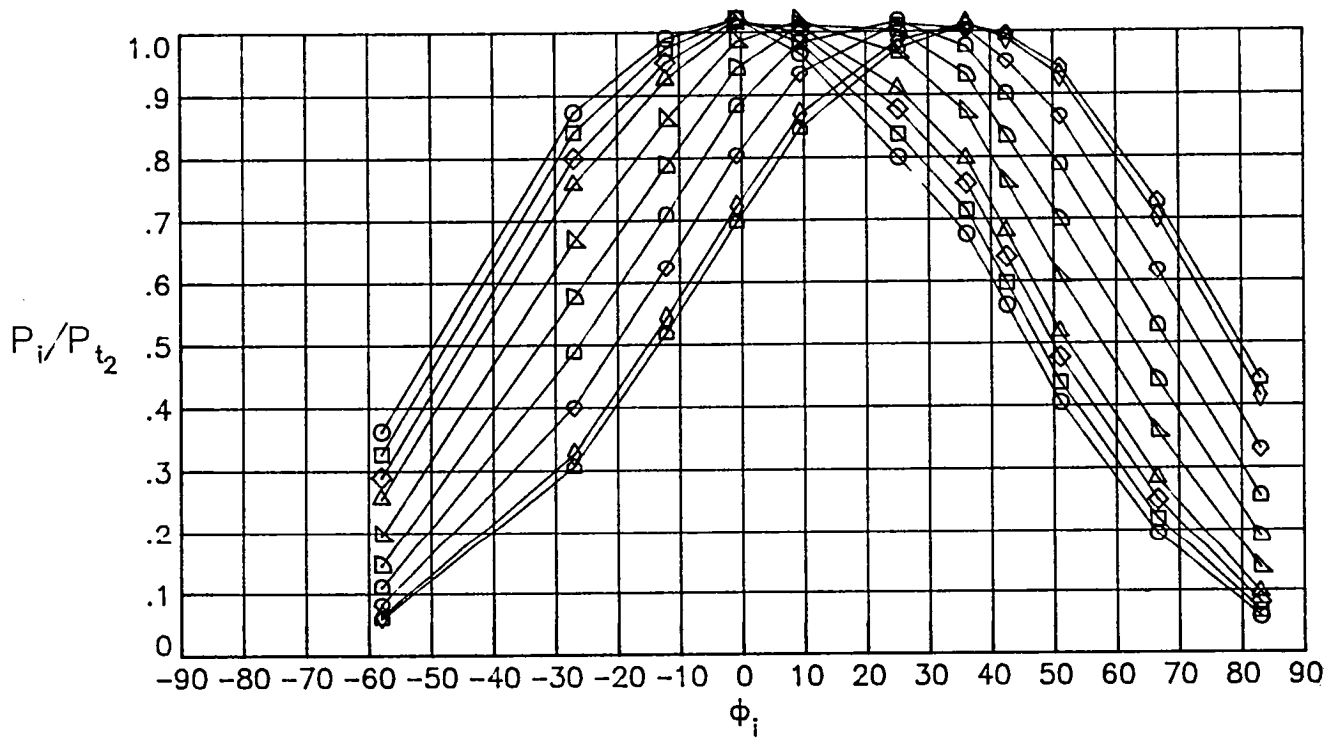

Figure 8. - Sample data, M_∞ = 4.63, β = 0, longitudinal sweep.

○	β	.0	M_∞	1.50	P_{t_2} 921.23
□	β	2.0	M_∞	1.50	P_{t_2} 921.92
◇	β	5.0	M_∞	1.50	P_{t_2} 921.59
△	β	-2.0	M_∞	1.50	P_{t_2} 922.40
◺	β	-5.0	M_∞	1.50	P_{t_2} 922.73

Run # 1, α -.3, Facility: UNITARY Tunnel 4% Model

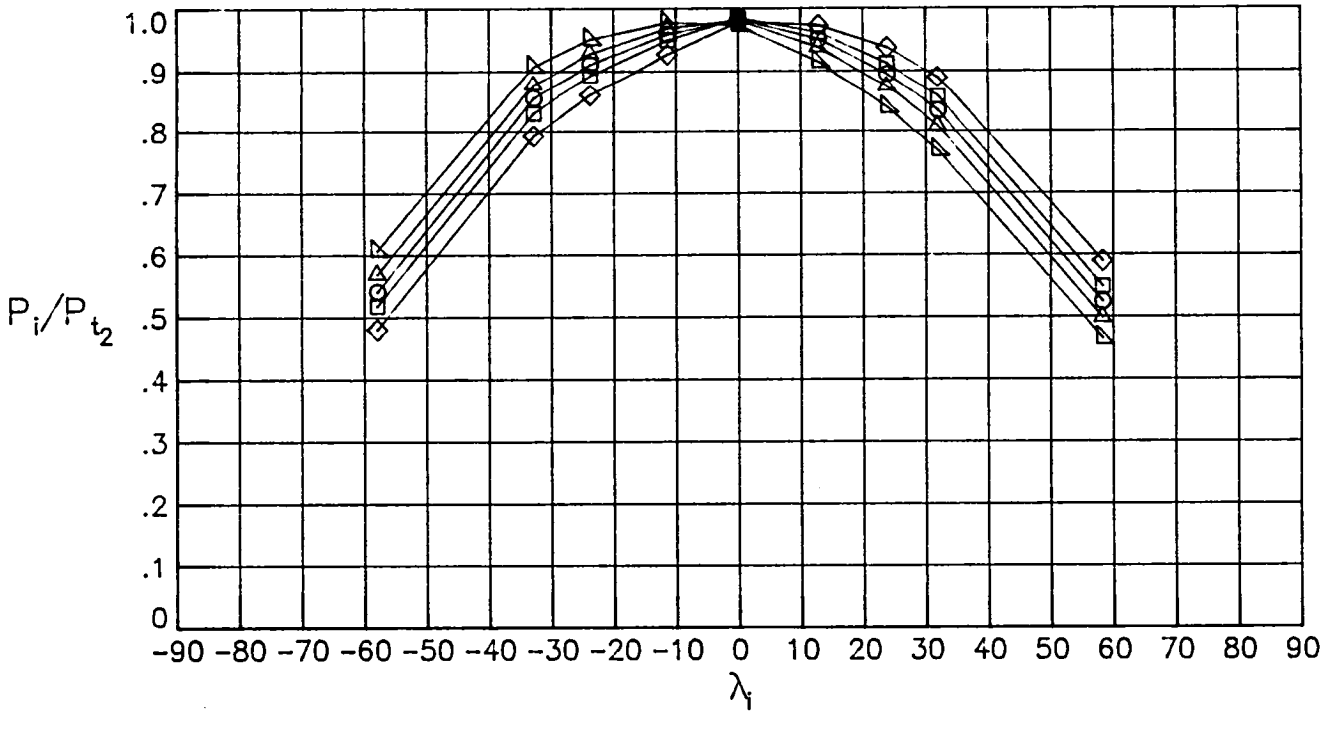

Figure 9. - Sample data, M_∞ = 1.50, β = 0, lateral sweep.

○	β	.0	M_∞	2.00	P_{t_2} 850.66
□	β	2.0	M_∞	2.00	P_{t_2} 849.36
◇	β	5.0	M_∞	2.00	P_{t_2} 849.91
△	β	-2.0	M_∞	2.00	P_{t_2} 850.06
◺	β	-5.0	M_∞	2.00	P_{t_2} 850.12

Run # 6, α -.1, Facility: UNITARY Tunnel 4% Model

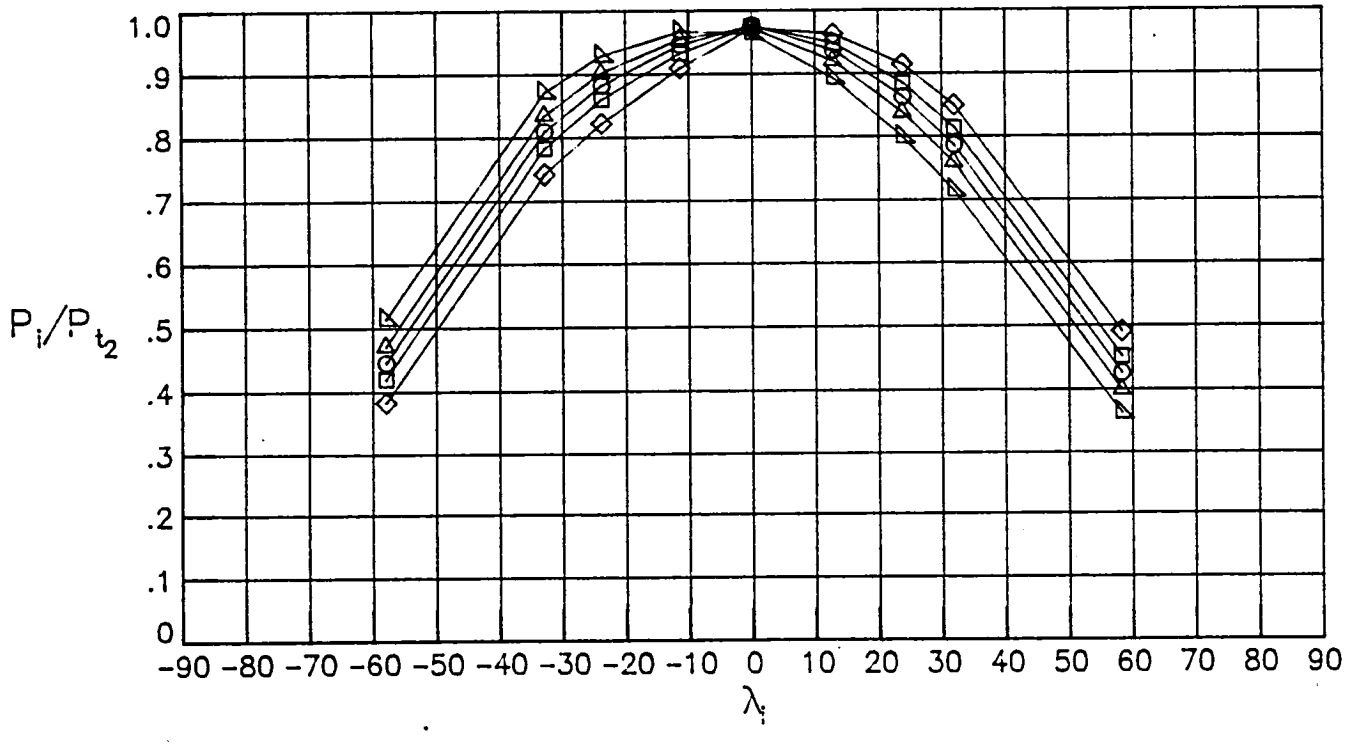

Figure 10. - Sample data, M_∞ = 2.00, α = 0, lateral sweep.

○	β	.0	M_∞	2.30	P_{t_2}	853.11
□	β	.0	M_∞	2.30	P_{t_2}	841.60
◇	β	2.0	M_∞	2.30	P_{t_2}	836.86
△	β	5.0	M_∞	2.30	P_{t_2}	837.55
◺	β	-2.0	M_∞	2.30	P_{t_2}	841.28

Run # 1, α .1, Facility: UNITARY Tunnel 4% Model

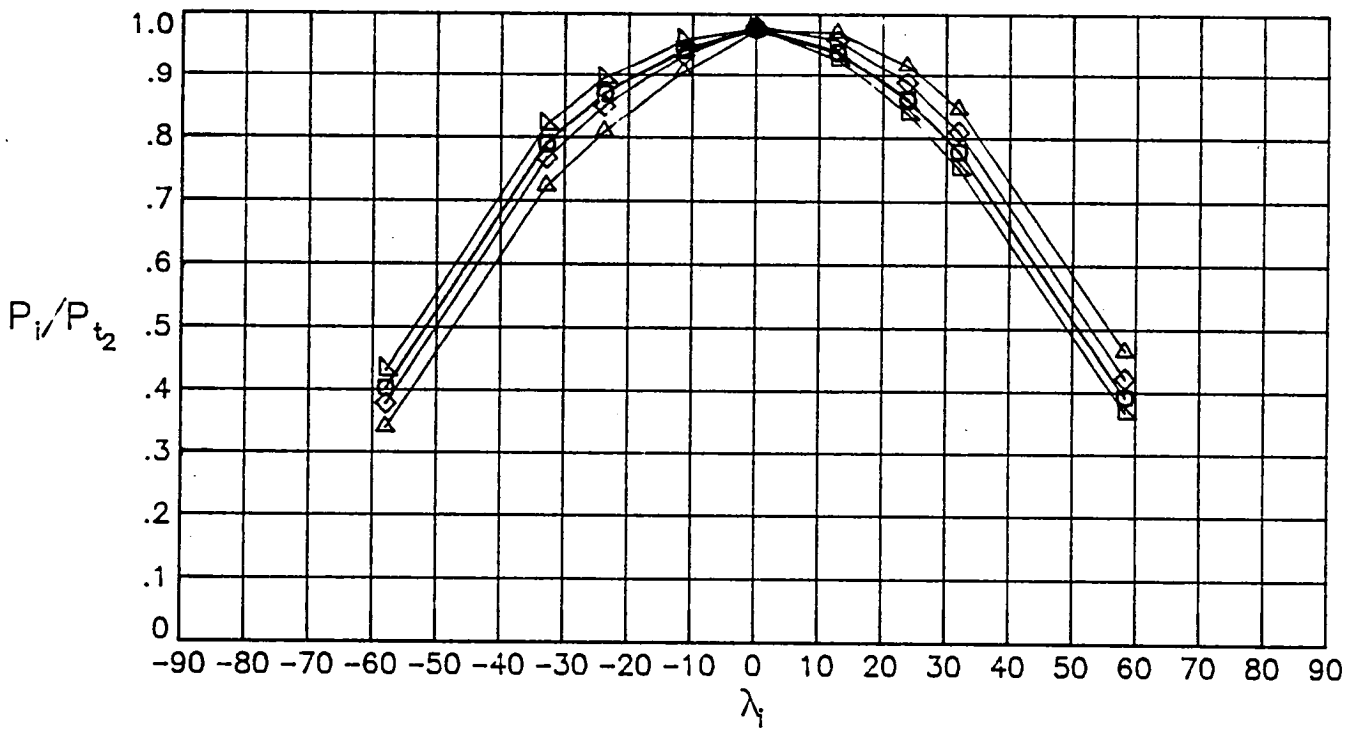

Figure 11. - Sample data, M_∞ = 2.30, α = 0, lateral sweep.

○	β	.0	M_∞	2.96	P_{t_2}	692.83
□	β	2.0	M_∞	2.96	P_{t_2}	692.92
◇	β	5.0	M_∞	2.96	P_{t_2}	692.84
△	β	-1.9	M_∞	2.96	P_{t_2}	693.12
◺	β	-5.0	M_∞	2.96	P_{t_2}	693.02

Run # 6, α .1, Facility: UNITARY Tunnel 4% Model

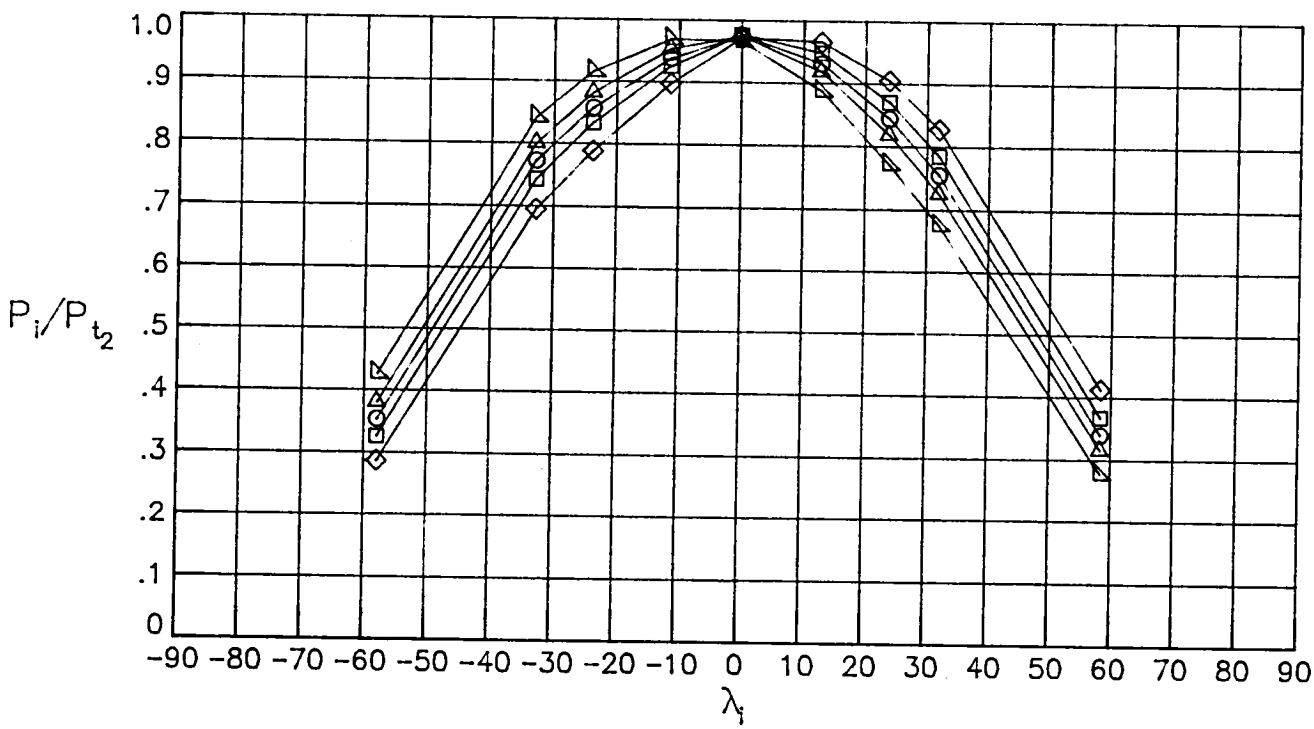

Figure 12. - Sample data, M_∞ = 2.96, α = 0, lateral sweep.

○	β	.0	M_∞	3.50	P_{t_2}	575.37
□	β	.0	M_∞	3.50	P_{t_2}	575.64
◇	β	2.0	M_∞	3.50	P_{t_2}	575.36
△	β	2.0	M_∞	3.50	P_{t_2}	575.61
◺	β	5.0	M_∞	3.50	P_{t_2}	575.66

Run # 11, α -.0, Facility: UNITARY Tunnel 4% Model

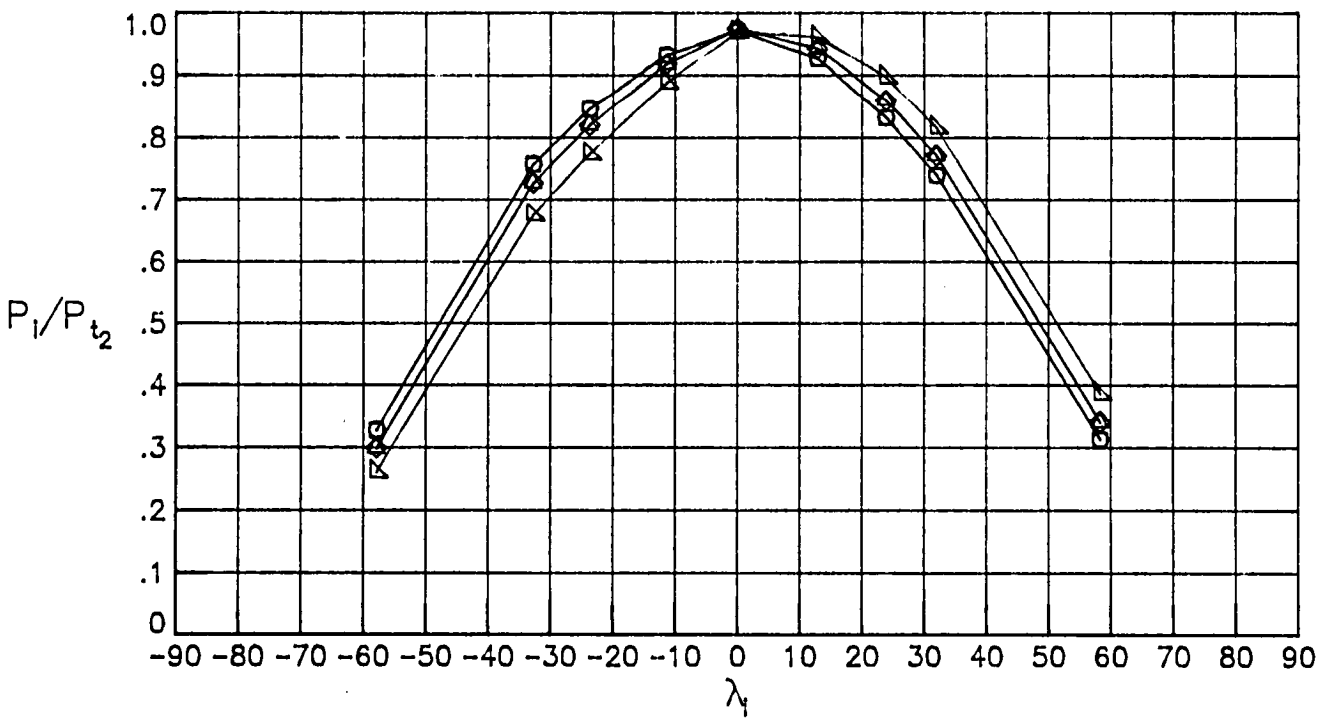

Figure 13. - Sample data, M_∞ = 3.50, = 0, lateral sweep.

○	β	0.0	M_∞	4.63	P_{t_2}	407.99
□	β	2.0	M_∞	4.63	P_{t_2}	407.83
◇	β	5.0	M_∞	4.63	P_{t_2}	407.97
△	β	-1.9	M_∞	4.63	P_{t_2}	408.01
◺	β	-5.0	M_∞	4.63	P_{t_2}	408.03

Run # 16, α -.0, Facility: UNITARY Tunnel 4% Model

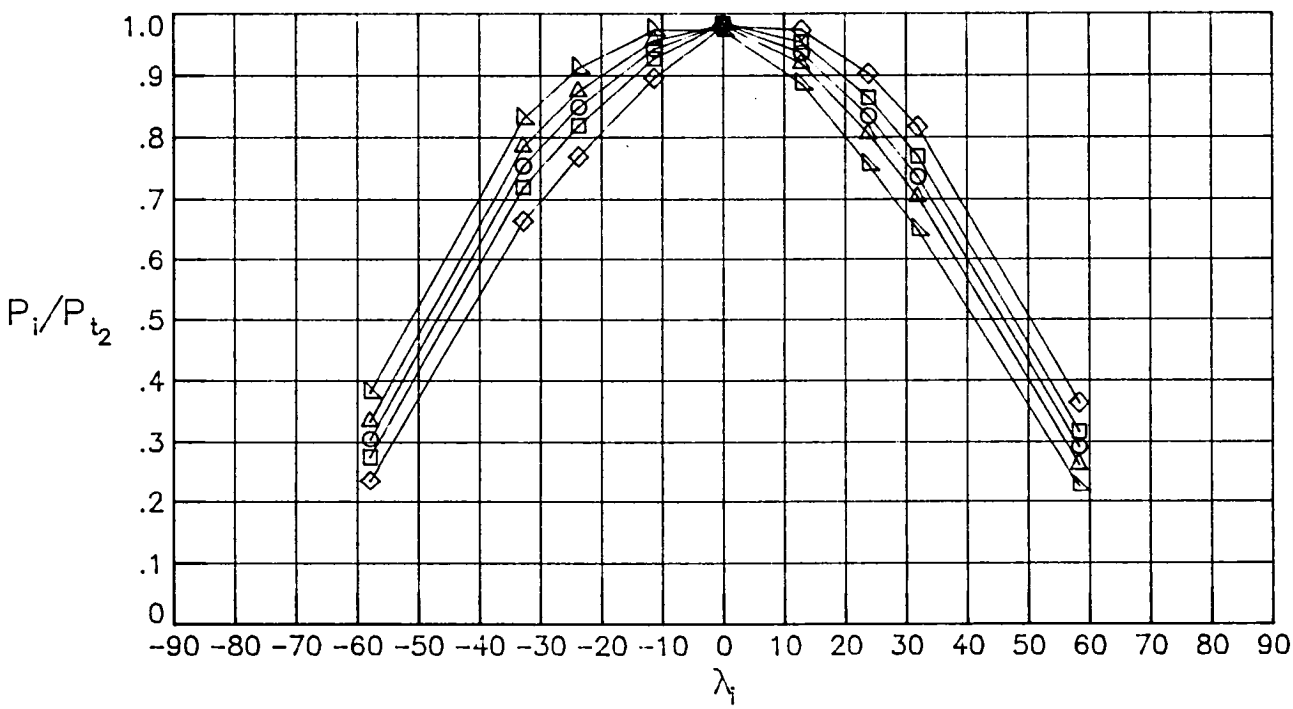

Figure 14. - Sample data, M_∞ = 4.63, = 0, lateral sweep.

1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.
NASA TM-84628		

4. Title and Subtitle	5. Report Date
Pressure Distributions on a 0.04-Scale Model of the Space Shuttle Orbiter's Forward Fuselage in the Langley Unitary Plan Wind Tunnel	March 1983
	6. Performing Organization Code: 506-63-32-01

7. Author(s)	8. Performing Organization Report No.
Pamela F. Bradley, Paul M. Siemers III, Paul F. Flanagan, and Martin W. Henry	
	10. Work Unit No.

9. Performing Organization Name and Address	11. Contract or Grant No.
NASA Langley Research Center Hampton, VA 23665	
	13. Type of Report and Period Covered: Technical Memorandum

12. Sponsoring Agency Name and Address	14. Sponsoring Agency Code
National Aeronautics and Space Administration Washington, DC 20546	

15. Supplementary Notes

16. Abstract

Pressure distribution tests on a 0.04-scale model of the forward fuselage of the Space Shuttle Orbiter are presented without analysis. The tests were completed in the Langley Unitary Plan Wind Tunnel (UPWT). The UPWT has two different test sections operating in the continuous mode. Each test section has its own Mach number range. The model was tested at angles of attack from -2.5° to 30° and angles of sideslip from -5° to 5° in both test sections. The test Reynolds number was 6.6×10^{6} per meter.

The tests were conducted in support of the development of the Shuttle Entry Air Data System (SEADS). In addition to modeling the 20 SEADS pressure orifices, the wind-tunnel model was also instrumented with orifices to match Development Flight Instrumentation (DFI) port locations currently existing on the Space Shuttle Orbiter Columbia (OV-102). This DFI simulation has provided a means for comparisons between reentry flight pressure data and wind-tunnel data.

17. Key Words (Suggested by Author(s))	18. Distribution Statement
Pressure Distributions Space Shuttle Forward Fuselage	Unclassified - Unlimited Subject Category 12

19. Security Classif. (of this report)	20. Security Classif. (of this page)	21. No. of Pages	22. Price
Unclassified	Unclassified	100	A05

For sale by the National Technical Information Service, Springfield, Virginia 22161