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Summary

An experimental investigation was conducted to expand the data base and knowledge of flow fields in cavities over the subsonic and transonic speed regimes. A rectangular, three-dimensional cavity was tested over a Mach number range from 0.30 to 0.95 and at Reynolds numbers per foot from 1.0×10^6 to 4.2×10^6. Two sizes of cavities with length-to-height ratios (l/h) of 4.4 and 11.7 and with rectangular and nonrectangular cross sections were tested. Extensive static pressure data on the model walls were obtained, and a complete tabulation of the pressure data is presented. The boundary layer approaching the cavity was turbulent, and the thickness was measured with a total pressure rake. The static pressure measurements obtained with the deep-cavity configuration ($l/h = 4.4$) at Reynolds numbers greater than 3.0×10^6 per foot showed large fluctuations during the data sampling time. The data showed much less unsteadiness at lower Reynolds numbers for the deep cavity and for all conditions tested with the shallow cavity. Although mean static pressure distributions have been used in past cavity analyses at transonic free-stream conditions, the data presented in this report indicate that consideration of the instantaneous pressure distributions is necessary. The data also indicate that the shallow-cavity static pressure measurements were sensitive to the thickness of the boundary layer entering the cavity.

Introduction

Many investigations, both experimental (refs. 1–9) and computational (refs. 10–17), have been conducted to study the flow field inside two- and three-dimensional rectangular cavities. Although investigations have been conducted from the subsonic to the hypersonic regimes, most of the effort has concentrated on the supersonic speed regime for application to military aircraft. Because of a renewed interest in the internal carriage of stores, a basic study of cavity flow at subsonic and transonic speeds has been conducted.

Three types of mean flow over the cavity (fig. 1) exist at supersonic speeds. The first type of mean flow occurs when the cavity is "deep" and is termed open-cavity flow. In open-cavity flow, the flow essentially bridges the cavity, and a shear layer is formed over the cavity. A weak shock can form near the leading edge of the cavity as a result of the flow being compressed slightly by the shear layer. The second type of mean flow occurs when the cavity is "shallow" and is termed closed-cavity flow. In closed-cavity flow, the flow separates at the forward face of the cavity, reattaches at some point along the cavity floor, and separates again before reaching the rear cavity face. In this flow field two distinct separation regions are created; one is downstream of the forward face, and one is upstream of the rear face. The third mean flow occurs in the region where the flow field changes from closed- to open-cavity flow and is termed transitional-cavity flow. Stallings and Wilcox (ref. 4) have found that transitional flow occurs in supersonic free-stream conditions for l/h ratios between approximately 10 and 13.

The open- and closed-cavity flow fields can have undesirable effects on the store or cavity at supersonic speeds. For the open-cavity flow field, high-intensity tones can be produced which can induce structural vibration (ref. 9). When closed-cavity flow fields are present, the cavity pressure gradient can impact adversely the store separation characteristics (ref. 18).

The type of flow field which is present in the cavity must be known to ensure good carriage and separation characteristics for the store. Research on cavity flow in the transonic speed regime has been limited (refs. 1, 2, and 6). Most of this work focused on cavities with l/h ratios between 4 and 10. The pressure distributions from these cavity studies showed that at transonic speeds the flow field inside a cavity was similar to the flow field that developed at supersonic speeds and that the three types of mean flow occurred for approximately the same values of l/h.

To accomplish the internal carriage and release of stores at transonic speeds, the cavity flow field must be understood more fully. This investigation was conducted to expand the data base and knowledge of flow fields in cavities for subsonic and transonic regimes and to study the effects of Reynolds number on cavity flow fields. A rectangular, three-dimensional cavity model (ref. 19) was tested in the David Taylor Research Center (DTRC) 7- by 10-Foot Transonic Wind Tunnel (TWT) at Mach numbers from 0.30 to 0.95 and at Reynolds numbers from 1.0×10^6 to 4.2×10^6 per foot. Two sizes of cavities ($l/h = 4.4$ and 11.7) were tested and extensive static pressure data on the model were obtained. The boundary layer approaching the cavity was turbulent and had been thickened artificially. The boundary-layer thickness was measured with a rake 2 in. upstream of the cavity.

Symbols

Symbols in parentheses are found in tables IV–XI.

C_p (CPxxx)	coefficient of pressure, $\frac{p - p_\infty}{q_\infty}$
C_p^*	critical pressure coefficient

h	cavity depth, ft
l	cavity length, ft
M_∞	free-stream Mach number
p	measured surface static pressure, psf
p_∞	free-stream static pressure, psf
p_t	measured local total pressure, psf
$p_{t\infty}$	free-stream total pressure, psf
q_∞	free-stream dynamic pressure, psf
R_∞	free-stream unit Reynolds number, per ft
t	time, sec
$T_{t\infty}$	free-stream total temperature, °F
U/U_∞	ratio of local velocity to free-stream velocity
w	cavity width, ft
x	distance in streamwise direction, ft (see fig. 4)
y	distance in spanwise direction, ft (see fig. 4)
z	distance normal to flat plate, ft (see fig. 4)
δ	boundary-layer thickness, in.

Experimental Methods

Wind-Tunnel Description

The transonic cavity flow model was tested in the DTRC 7- by 10-Foot TWT. The 7- by 10-Foot TWT is a continuous-flow, transonic facility that is capable of operating over a Mach number range from 0.2 to 1.17. The tunnel can obtain Reynolds numbers per foot from approximately 1.0×10^6 to 5.5×10^6. A diagram that shows the operating range of the 7- by 10-Foot TWT is provided in figure 2. The solid circles (fig. 2) denote the conditions at which the present test has been conducted. More information concerning this facility is documented in reference 19.

Model Description

A rectangular, three-dimensional cavity was mounted in a flat plate; a photograph of the model mounted in the tunnel is shown in figure 3. A flat plate was chosen as the parent body to allow a well-defined two-dimensional flow field to develop ahead of the cavity. The model was supported in the center of the tunnel by six legs. The forward two legs on each side were swept to distribute longitudinally the model cross-sectional area for blockage considerations. Two guy wires were attached to opposite sides of the plate to increase lateral stiffness and stability. The 12:1 elliptical contour of the leading edge and the trailing-edge flap were chosen to reduce the leading-edge pressure gradient. (The trailing-edge flap had little effect on the leading-edge pressure distribution.) A fairing was placed around the cavity on the underside of the plate for aerodynamic purposes.

The cavity had a length of 3.5 ft, a width of 0.8 ft, and a maximum depth of 0.8 ft. The model dimensions are shown in figure 4. The cavity floor could be moved from the maximum depth of 0.8 ft to a depth of 0.3 ft or to the plate surface. The configuration with no cavity, the floor at the plate surface, was used when the boundary-layer thickness was measured. The cavity l/h values tested were 4.4 for the deeper configuration ($h = 0.8$ ft) and 11.7 for the more shallow configuration ($h = 0.3$ ft).

In addition to the basic rectangular box cavity, three additional cavity configurations were tested. Two of these configurations were variations on the empty cavity shape and were made by inserting wooden blocks inside the cavity (fig. 5). The front blocks consisted of two triangular blocks placed in the forward corners of the cavity to give the cavity leading edge a pointed shape (fig. 5(a)). The rear block was a single block placed in the aft portion of the cavity to create a ramp (fig. 5(b)). The intent of changing the cavity shape was to affect the pressure waves inside the cavity. The tones inside the cavity were expected to be reduced if the wave front could be disrupted. (Heller and Bliss (ref. 9) give a detailed description of the pressure wave activity inside a cavity.) Dynamic transducers had been installed on the cavity floor to enable frequency spectra in the cavity to be calculated, but the measurements obtained were in error; therefore, the data were not reduced. Due to time constraints, the deep cavity was tested only with blocks in the forward portion of the cavity. The shallow cavity was tested in both configurations, with either the front blocks or with a rear block. The shallow cavity also was tested in a third configuration, which was a sawtooth fence installed at the cavity leading edge (fig. 6). The purpose of a leading-edge fence was to help the flow span the length of the cavity, thereby reducing unfavorable store separation characteristics associated with the closed (shallow) cavity. To have the most effect on the shear layer, experience has shown that the fence height should be between 3/4 to 1 times the boundary-layer thickness. The expected boundary-layer thickness was 0.8 in. for this test, so a fence height of 0.7 in. was chosen for the test.

A table that summarizes the model configurations tested is given below.

Configuration	l/h
Empty	4.4, 11.7
Front blocks	4.4, 11.7
Rear block	11.7
Fence	11.7

The model was instrumented with 262 static pressure orifices. A majority of these orifices were concentrated on the cavity walls. Figure 7 shows the regions on the model where the orifices were located, and table I provides the static pressure orifice locations. (Note that the orifice number was assigned by instrumentation hookup; therefore, the numbers are not consecutive.) Not all orifices were available for all configurations tested.

Test Conditions

The model was tested in the DTRC 7- by 10-Foot TWT at Mach numbers from 0.3 to 0.95 and at Reynolds numbers ranging from 1.0×10^6 to 4.2×10^6 per foot. The Reynolds number was varied for fixed Mach numbers between 0.60 and 0.90. Table II provides a summary of the nominal test conditions.

Measurements

Surface static pressures. The model static pressures were measured using electronically scanned pressure (ESP) transducers that were referenced to the tunnel static pressure; these transducers had a range of ±5 psid and a quoted accuracy of ±0.01 psi. The tunnel static and total pressures were measured using individual quartz transducers with a quoted accuracy of 0.03 percent of the full-scale range (30 psia).

During the experimental investigation, a C_p versus x/l plot of the pressures on the deep cavity (l/h = 4.4) centerline was displayed and updated continuously. Observation of the static pressure data indicated the possibility of a pressure wave in the cavity. Earlier tests (refs. 1–5 and 7–9) did not report this unsteady characteristic of static pressure data; in fact, for supersonic free-stream conditions, discussions with Stallings (private communication from Robert L. Stallings, Jr., NASA Langley Research Center, Hampton, Virginia, 1987) indicated the data in references 4 and 5 were very repeatable. The recent data reported by Dix (ref. 6) also showed the cavity static pressures to be unsteady at subsonic and transonic flow conditions.

For the experimental data reported herein, each orifice was sampled 20 times over a 1.25-sec period; these data then were averaged to produce the results for one data point. Because the data were not repeatable, several data points were taken consecutively, while test conditions were held constant. Approximately 100 data samples were taken at each test condition to obtain a representative sampling of the data.

Boundary-layer thickness. The ratio of boundary-layer thickness to cavity depth was shown to be an important parameter to match in the study of cavity flows (ref. 3). The scaled boundary-layer height was estimated to be approximately 0.8 in. at flight conditions. To obtain a boundary-layer thickness of 0.8 in. at the cavity leading edge would require approximately 5 ft of flat plate ahead of the cavity. To reduce the model weight because the plate was being made of a solid piece of aluminum, only 3 ft of plate forward of the cavity was used. An appropriate boundary-layer thickness was artificially generated by placing a heavy layer of No. 60 grit from 1 in. aft of the leading edge to 24 in. aft of the leading edge. The length of the band of grit was determined by specifying the length of the smooth surface that was required downstream of the roughened surface to allow the boundary layer to readjust. The length of the smooth surface needed to allow the boundary layer to recover was approximately 15 boundary-layer thicknesses (refs. 20 and 21).

To determine the boundary-layer thickness, the cavity floor was moved flush with the plate surface, and the total pressure through the boundary layer was measured with a rake at a point 2 in. forward of the cavity leading edge. A drawing and photograph of the rake are shown in figures 8 and 9. A ±15 psid ESP module, referenced to tunnel static, was used to measure the total pressures through the boundary layer; the measured pressure was accurate to ±0.03 psi.

A static pressure port also was located on the flat plate 2 in. forward of the cavity leading edge. Because the static pressure port was at the same position as the rake, the rake affected the static pressure measurement when this measurement was taken while the rake was in place. To prevent this interference, the static pressure measurement was obtained during later runs in which the same test conditions were used and the boundary-layer rake had been removed.

Several methods were considered to determine the boundary-layer thickness. The disadvantages of most methods are that a curve must be faired through the boundary-layer velocity profile and that a consistent determination of the curve intersection with the free-stream velocity must be made. The curve intersection is difficult to determine with any consistency because of the asymptotic nature of the velocity profile. In this test, the boundary layer was very thick and nearly equal to the height of the boundary-layer rake, thus causing much inconsistency in the estimation of the boundary-layer thickness. The method described in reference 22 was employed in order to provide an estimate for comparison purposes. In this method, the measured total pressure p_t was plotted against z, which is the measured distance of each total pressure tube above the flat plate. (An example of the data obtained in the test is shown in figure 10.) A straight line then was faired through the last several data points inside the edge of the boundary layer, as illustrated in figure 10. The boundary-layer thickness then is defined to be the value of z where the linearly extrapolated boundary-layer total pressure reaches free-stream total pressure. (This is shown on the plot as the point where the line drawn through the measured pressures in the boundary layer intersects with the free-stream total pressure value $p_{t\infty}$.) To determine if this method was reasonable, the boundary-layer thickness was estimated using the traditional definition of boundary-layer thickness; the edge of the boundary layer was defined to be the point where $U/U_\infty = 0.99$. The value of p_t at $U/U_\infty = 0.99$ was calculated assuming that an adiabatic and perfect flow existed and that the static pressure measured at the surface remained constant through the boundary layer. The calculated value of p_t is plotted as the solid symbol in figure 10 at the value of $z = \delta$ estimated previously. The total pressure estimated using the conventional definition falls on the measured total pressure curve, providing assurance that the boundary-layer thickness determined by the method in reference 22 is reasonable. The actual boundary-layer thickness is probably slightly thicker than the estimation of δ used herein. The method of reference 22 assumes that the boundary-layer pressure will increase linearly to free-stream total pressure whereas the pressure in the boundary layer actually increases asymptotically toward the free-stream value. The boundary-layer thicknesses determined using the method in reference 22 are tabulated in table III. This table shows that δ changes little when the Reynolds number is increased. The heavy layer of grit forward of the cavity caused the boundary-layer thickness to be relatively insensitive to changes in the Reynolds number.

A majority of the runs were made with the 2-ft band of grit at the leading edge; however, in order to study the effect of a change in boundary-layer thickness, a few runs were made in the $l/h = 11.7$ configuration with transition fixed at the flat plate leading edge, i.e., instead of using a 2-ft band of grit. In order to fix transition, a strip of No. 60 grit was sparsely distributed over a width of 0.10 in. (approximately 1 in. aft of the leading edge) in accordance with the recommendations of reference 23. These runs were made at Mach numbers from 0.30 to 0.95 and at the lowest Reynolds number tested for each Mach number (table II). Because of wind tunnel time constraints, the boundary-layer thickness was not measured for this configuration. This was a relatively simple configuration (a flat plate with turbulent flow), so it was expected that an analytical model could provide an estimate of the boundary-layer thickness. The deep cavity ($l/h = 4.4$) was not tested in the transition strip configuration.

Flow visualization. A schlieren flow-visualization system was set up to allow observation of the flow over the cavity region. No shock waves from the model leading edge were reflected from the tunnel wall into the cavity region at any Mach number tested.

Test plans included flow visualization inside the cavity. Fifteen-denier monofilament fluorescent mini-tufts with a diameter = 0.0019 in. were cemented on the inside cavity walls. One side of the cavity was plexiglass to allow photographs to be taken of the tufts inside the cavity. The mini-tufts were to be photographed during each run; however, this method was not successful because the unsteadiness inside the cavity tore these mini-tufts from the cavity walls.

Tabulated data. The pressure measurements, which were reduced to coefficient form, are presented in tables IV–XI. These tables contain the exact tunnel test conditions as well as the measured pressures. The pressure data are presented as CPxxx, where xxx refers to the orifice number. (The locations of the orifices are presented in table I.) The measured pressure tabulated for each orifice is the average of the 100 individual data samples.

Discussion of Results

Three methods of calculating pressures are shown in figures 11–31. The first method compares individual data samples to demonstrate the variation in pressures over a 1.25-sec sampling period. (This method is noted in the legends of figs. 11–13 and 31 by "individual data samples are plotted.") The second method compares data points in which each data point is the average of 20 samples obtained over a 1.25-sec sampling period. (This method is indicated by the word "point" in the legends of figs. 14 and 16.) The third method compares results among cavity configurations, Mach numbers, and Reynolds numbers; these data are presented as the average of all measurements taken at the specified test condition. (This method is noted in the legends of figs. 17–30 by "an average of 100 data samples is plotted.")

Static Pressure Unsteadiness

Figure 11 shows the variation in C_p along the cavity floor centerline for several individual samples taken during a 1.25-sec period. Each sample is an instantaneous, unaveraged record of the data. Samples were chosen to show the wide variation in instantaneous static pressure measurements. The plots show that a sizable change takes place in the magnitude and shape of the pressure distribution on the cavity floor over time. Figure 11 is representative of the deep-cavity data obtained at all Mach numbers tested for Reynolds numbers of 3.3×10^6 per ft or greater. As the Reynolds number decreases, the unsteadiness also decreases, as illustrated by comparing the data in figures 11 and 12. Figures 11 and 12 also show that the pressure distribution is relatively smooth with no discontinuities. Notice that at $x/l \approx 0.28$ in figure 11 and at $x/l \approx 0.45$ in figure 12, a node with all curves passing through approximately the same point exists. This node indicates the presence of a standing wave, which may result from the interaction of the compression waves inside the cavity. Compression waves are formed as the shear layer dips into the cavity and the external flow contacts the rear cavity wall. Reference 9 gives specific details for the method by which the compression waves are formed and interact. According to Heller and Bliss (ref. 9), the second modal frequency at which a cavity oscillates is usually the predominant mode.

Less flow unsteadiness is seen for the shallow cavity than for the deep cavity (fig. 13). The increased steadiness of the flow in the shallow cavity is expected because there is no fluctuating shear layer as in a deep cavity.

Data Repeatability

The C_p distribution down the centerline of the model is displayed in figure 14 as if the cavity were laid out flat. The coordinate system is shown in figure 4. The first portion of the plot (x/l from -1.0 to 0) is the pressure distribution from the leading edge of the plate ($x/l = -0.857$) to the beginning of the cavity. The next segment of the plot (z/h from 0 to -1.0) shows the pressures measured on the forward wall of the cavity, beginning near the cavity opening and moving toward the cavity floor. The next segment of the plot (x/l from 0 to 1.0) is the cavity floor, and the segment of z/h from -1.0 to 0 is the rear wall of the cavity, moving from the cavity floor toward the opening. The last segment (x/l from 1.0 to 1.4) is the data from the orifices on the plate downstream of the cavity.

Figure 14 shows four data points taken at $M_\infty = 0.60$ and $R_\infty = 3.5 \times 10^6$ for the deep-cavity configuration. Very slight differences exist in the averaged measurements toward the downstream end of the cavity floor, the aft wall, and for a short distance downstream of the cavity. The data on the model leading edge repeat very well, thus implying that the unsteadiness in the cavity flow is not due to tunnel flow instabilities. Notice also that in comparing the figure 14 data with those in figure 11, the mean data do not represent the instantaneous pressure distribution on the cavity floor. These findings are in agreement with the following statement made by Rossiter (ref. 1): "...the real flow is highly unsteady and...the (mean) flow patterns...do not necessarily correspond to features which could be observed in the flow at any instant of time." For further comparison, the total variation in the 100 individual, unaveraged measurements as compared to the average measurement for $M_\infty = 0.60$ and $R_\infty = 3.5 \times 10^6$ is shown in figure 15. These data show the importance of obtaining a large enough data sampling to define properly the cavity mean pressure distribution.

A plot of the repeatability of the data points for the shallow cavity is shown in figure 16. In this figure, a representative pressure distribution with 20 samples of data averaged for a shallow-cavity configuration is provided at $M_\infty = 0.60$ and $R_\infty = 3.5 \times 10^6$; these are the same conditions used for the deep cavity. Figure 16 shows that the mean data for the shallow cavity can be considered repeatable, as was expected from the small variation in samples over time (fig. 13).

To study the effects of such parameters as Mach and Reynolds numbers on cavity flow, data are presented (figs. 17–30) as the average of the 100 individual pressure samples obtained for a given orifice and test condition.

Mach Number Effects

Data for various Mach numbers at nearly constant Reynolds numbers are compared in figures 17 and 18. Figure 17 shows data for the deep-cavity configuration, and figure 18 shows the shallow-cavity configuration. As shown in figure 17, little difference exists between the deep-cavity pressure distributions at Mach numbers of 0.85 and 0.95. The C_p values for $M_\infty = 0.6$ are slightly more negative on the cavity floor than at $M_\infty = 0.85$ and 0.95. At $M_\infty = 0.3$, the data show a much different distribution on the cavity floor. The pressure distributions in the aft-cavity region, including the floor and wall, are more negative at $M_\infty = 0.3$ than for the other Mach numbers. Although the Reynolds number at $M_\infty = 0.3$ is lower than the Reynolds numbers tested for the other Mach numbers plotted, this should not affect the mean distribution, as will be discussed in the section entitled "Reynolds Number Effects." Figure 18 shows the effect of Mach number on the measured static pressure distribution for the shallow-cavity configuration. The lower Mach numbers (0.3 and 0.6) show a slight plateau-pressure region at $x/l \approx 0.5$; this plateau pressure implies that the flow has impinged on the cavity floor and that the flow structure may be of the closed-cavity type at the lower Mach numbers. At a Mach number of 0.85, the C_p distribution shows no plateau through this region; the lack of a plateau is typical of transitional cavity flow. This flow trend also is seen at all Mach numbers above 0.85, although these data are not shown in figure 18.

In figures 17 and 18, the data at $M_\infty = 0.3$ do not form a smooth curve. The variation in the data about the mean line may have resulted from the decision to size the transducers for the high-pressure ranges. The decision resulted in values of C_p which may be in error by as much as ± 0.02; the trends shown in figures 17 and 18 for $M_\infty = 0.3$ are valid, however.

Reynolds Number Effects

The Reynolds number effects were of interest to this test. Previous research indicated that δ/l is an important parameter in cavity flows (ref. 3). Generally, when the Reynolds number is varied, the thickness of the boundary layer is altered; however, the thick layer of grit at the leading edge of the model caused the boundary-layer thickness to change little with an increase in Reynolds number. This thick layer of grit allowed the Reynolds number to be varied independently of the boundary-layer thickness. Figures 19 and 20 show a comparison of Reynolds numbers at a constant Mach number for the deep and shallow cavities, respectively. These plots are for $M_\infty = 0.6$, but they are representative of what occurred at all Mach numbers. The variation in R_∞ for this test was relatively small (approximately a factor of 3), so not much change was expected. As can be seen in the plots, very little change exists in the mean C_p distribution over the range of Reynolds numbers tested. As discussed in the section on static pressure unsteadiness, the unsteadiness of the flow was affected by even this small change in R_∞ for the deep-cavity configuration; for $R_\infty > 3 \times 10^6$, the deep-cavity pressures showed large fluctuations with time.

Effects of Boundary-Layer Thickness

The shallow cavity was tested using two methods to develop the boundary layer. In the first method, the boundary layer was artificially thickened using a 2-ft band of grit downstream of the leading edge (fig. 4). In the second method, the boundary layer developed naturally after being tripped near the leading edge of the flat plate. These methods should generate different boundary-layer thicknesses, and the boundary layer that developed after being tripped at the leading edge should be thinner. Because of time constraints, the boundary-layer thickness was not measured when the leading-edge trip was used; however, with the relatively simple model configuration of a flat plate with a turbulent boundary layer, the one-seventh power law of Stratford and Beavers (ref. 24) was used to provide an estimate of the boundary-layer thickness. This boundary-layer thickness was computed to be approximately 0.60 in. ($\delta/l = 0.014$) for $M_\infty = 0.95$ and $R_\infty = 1.8 \times 10^6$ (as compared to a 0.88-in. measured value for the artificially thickened configuration). The value of δ, estimated by the Stratford and Beavers method, was calculated at a point 2 in. forward of the cavity leading edge in order to compare it with the measured boundary-layer thicknesses. The calculation of the boundary-layer thickness that was generated with the leading-edge strip does not need to be exact. What is important for this comparison is that a difference in the boundary-layer thickness exists. Figure 21 shows the sensitivity of the shallow-cavity pressure distribution to the boundary-layer thickness as the boundary layer enters the cavity. As can be seen, the effects are that the pressure distributions become slightly more positive in the aft region of the cavity and more negative downstream of the cavity when the boundary layer entering the cavity is thinner.

Flow Symmetry

To study the lateral symmetry of the flow inside the cavity, the C_p distributions on both sides of the centerline are compared; figure 7 shows the locations of the orifices. Figures 22 and 23 are representative of the data that were obtained for the deep cavity, and figures 24 and 25 represent the shallow-cavity configuration. (Recall that when the cavity is in the shallow configuration, fewer orifices are exposed to the flow.) These plots show that the flow is relatively symmetrical about the model centerline. The pressures measured on the sidewall also are nearly the same as those on the floor. For the deep-cavity configuration (figs. 22 and 23), the C_p on the sidewalls becomes slightly more negative for the orifices in the aft-cavity portion near the cavity opening, and the rear wall shows a positive shift in the level of C_p measured by the row of orifices nearest to the cavity opening in the region of the cavity centerline. This perturbation is probably due to the shear layer fluctuations on the rear face of the deep cavity.

Effects of Cavity Shape

The shallow cavity was tested in several configurations. Changes were made to the forward- and aft-cavity shapes (fig. 5), and a fence was added (fig. 6). Figures 26 and 27 are representative of the results obtained. The addition of blocks to the forward portion of the shallow cavity has minimal impact on the static pressure distribution, except on the rear wall where a more positive pressure distribution resulted (fig. 26). The rear block was not instrumented; therefore, no static pressure measurements were taken in the aft-cavity portion for this configuration.

The addition of a fence upstream of the shallow cavity has a significant impact on the static pressures measured on the model (fig. 27). At lower Mach numbers, the pressure distribution is altered to be similar to a transitional cavity flow (fig. 27(a)). For Mach numbers >0.85, the measured pressures are reduced considerably in the aft portion of the cavity; this reduction causes the distribution in the aft end of the cavity to be more similar to an open-cavity distribution (fig. 27(b)). The change in the mean flow to more of an open-cavity flow causes a store to have less difficulty separating from the cavity. The effect of the fence is to impart increased momentum to the shear layer as the Mach number increases (fig. 28). The data are not shown, but at $M_\infty \leq 0.60$, the fence has a limited effect on the flow. As the Mach number increases, the data show very little separation downstream of the cavity; however, it is not clear if this is due to the fence or to Mach number effects.

The shallow cavity with front blocks was tested with both the transition strip on the model and with the 2-ft band of grit. In figure 29, the effect of a change in the boundary-layer thickness is not altered when front blocks are placed within the cavity. The distribution in the aft region of the cavity becomes more positive as the boundary-layer thickness decreases (fig. 21).

The deep-cavity configuration was tested with blocks in the forward portion of the cavity. The effect of this shape change on the static pressure distribution is minimal (fig. 30). The blocks were placed in the cavity in an attempt to affect the pressure wave propagation within the cavity and thereby impact the noise level of the open cavity. Because the dynamic data were in error, the effect of the block on the unsteadiness of the cavity was studied by comparing the individual static pressure measurements. Several individual data samples are shown in figure 31; these samples were taken over a 1.25-sec period (see the discussion for fig. 11). A comparison of figures 11 and 31 shows that the unsteadiness in the static pressure measurement is not affected by the change in cavity shape. The location of the nodal point is affected however; the node moves farther downstream. For the deep-cavity configuration with front blocks, the node is at $x/l \approx 0.5$ as compared to $x/l \approx 0.275$ for an empty cavity. The change in the cavity shape may affect the harmonics of the cavity, but the shape change does not appear to effect the unsteadiness of the flow (fig. 31).

Concluding Remarks

To aid in the understanding of the flow in cavities at transonic speeds, an experimental study was conducted in the David Taylor Research Center 7- by 10-Foot Transonic Wind Tunnel. For this investigation, cavities with length-to-height (l/h) ratios of 4.4 and 11.7 were tested at Mach numbers from 0.30 to 0.95 and at Reynolds numbers from 1.0×10^6 to 4.2×10^6 per foot. Static pressures were measured on the model, and the boundary-layer thickness was measured 2 in. upstream of the cavity leading edge. For most of the test, the boundary layer was artificially thickened, thus causing the boundary-layer thickness to vary little with Reynolds number. With the boundary-layer thickness held constant, Reynolds number had no effect on the pressure distribution for the range of Reynolds numbers tested. For the shallow cavity ($l/h = 11.7$), runs also were made without artificially thickening the boundary layer. The comparison between artificially thickened and nonthickened boundary layers showed the pressure distribution in the aft-cavity portion to be sensitive to boundary-layer thickness entering the cavity. The measured pressures in the aft-cavity portion were greater than for the thinner boundary-layer runs. For the deep-cavity configuration ($l/h = 4.4$), at Reynolds numbers greater than 3.0×10^6 per foot, the individual samples on the cavity floor fluctuated significantly over the 1-sec sampling period. The data showed much less unsteadiness for the deep cavity at lower Reynolds numbers and for all conditions tested with the shallow cavity. Although mean static pressure distributions have been used in past deep-cavity analyses with transonic free-stream conditions, the data presented in this report indicate that averaged data may not be adequate when determining cavity loads or cavity aerodynamics.

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Table I. Static Pressure Orifice Locations

[See figure 4 for coordinate origin]

Orifice number	x, in.	y, in.	z, in.	Orifice location on model	Orifice number	x, in.	y, in.	z, in.	Orifice location on model
1	−36.0	0.0	−0.500	Plate, leading edge	56	0.0	2.750	−4.8	Forward wall of cavity
2	−35.0	0.0	−.224	Plate, forward of cavity	57	0.0	4.125	−4.8	Forward wall of cavity
3	−34.0	0.0	−.127	│	65	3.0	4.8	−1.2	Right-hand sidewall of cavity
4	−33.0	0.0	−.067	│	66	6.0	4.8	−1.2	│
5	−32.0	0.0	−.029	│	67	12.0	4.8	−1.2	│
6	−31.0	0.0	−.007	│	68	18.0	4.8	−1.2	│
7	−30.0	0.0	0.0	│	69	3.0	4.8	−4.8	│
8	−29.0	0.0	0.0	│	70	6.0	4.8	−4.8	│
9	−28.0	0.0	0.0	│	71	12.0	4.8	−4.8	│
10	−27.0	0.0	0.0	│	72	18.0	4.8	−4.8	↓
11	−26.0	0.0	0.0	│	80	2.0	−4.8	−2.4	Left-hand sidewall of cavity
12	−25.0	0.0	0.0	│	82	2.0	−4.8	−6.0	│
13	−24.0	0.0	0.0	│	83	2.0	−4.8	−7.2	│
14	−22.0	0.0	0.0	│	84	6.0	−4.8	−2.4	│
15	−20.0	0.0	0.0	│	85	6.0	−4.8	−3.6	│
16	−18.0	0.0	0.0	│	86	6.0	−4.8	−6.0	│
17	−16.0	0.0	0.0	│	87	6.0	−4.8	−7.2	│
18	−14.0	0.0	0.0	│	88	2.0	−4.8	−4.8	│
19	−12.0	0.0	0.0	│	89	4.0	−4.8	−4.8	│
20	−10.0	0.0	0.0	│	90	6.0	−4.8	−4.8	│
21	−8.0	0.0	0.0	│	91	8.0	−4.8	−4.8	↓
33	−6.0	0.0	0.0	│	97	1.0	−4.8	−1.2	Left-hand sidewall of cavity
34	−4.0	0.0	0.0	│	98	2.0	−4.8	−1.2	│
35	−2.0	0.0	0.0	↓	99	3.0	−4.8	−1.2	│
36	−3.0	−7.8	0.0	Plate, left of cavity	100	4.0	−4.8	−1.2	│
37	3.0	−7.8	0.0	│	101	5.0	−4.8	−1.2	│
38	9.0	−7.8	0.0	│	102	6.0	−4.8	−1.2	│
39	15.0	−7.8	0.0	│	103	7.0	−4.8	−1.2	│
40	21.0	−7.8	0.0	↓	104	8.0	−4.8	−1.2	│
41	−3.0	7.8	0.0	Plate, right of cavity	105	9.0	−4.8	−1.2	│
42	10.0	7.8	0.0	│	106	10.0	−4.8	−1.2	│
43	21.0	7.8	0.0	↓	107	11.0	−4.8	−1.2	│
44	0.0	−4.125	−1.2	Forward wall of cavity	108	12.0	−4.8	−1.2	│
45	0.0	−2.750	−1.2	│	109	14.0	−4.8	−1.2	│
46	0.0	−1.375	−1.2	│	110	16.0	−4.8	−1.2	│
47	0.0	0.0	−1.2	│	111	18.0	−4.8	−1.2	│
48	0.0	1.375	−1.2	│	112	20.0	−4.8	−1.2	│
49	0.0	2.750	−1.2	│	113	22.0	−4.8	−1.2	│
50	0.0	4.125	−1.2	│	114	24.0	−4.8	−1.2	│
51	0.0	−4.125	−4.8	│	115	26.0	−4.8	−1.2	│
52	0.0	−2.750	−4.8	│	116	10.0	−4.8	−4.8	│
53	0.0	−1.375	−4.8	│	117	12.0	−4.8	−4.8	│
54	0.0	0.0	−4.8	│	118	15.0	−4.8	−4.8	│
55	0.0	1.375	−4.8	↓	121	24.0	−4.8	−4.8	↓

Table I. Continued

Orifice number	x, in.	y, in.	z, in.	Orifice location on model	Orifice number	x, in.	y, in.	z, in.	Orifice location on model
123	18.0	−4.8	−2.40	Left-hand sidewall of cavity	172	40.0	0.0	Variable	Cavity floor
124	18.0	−4.8	−3.60		173	41.0	0.0	Variable	
125	18.0	−4.8	−6.00		174	22.0	2.4	Variable	
126	18.0	−4.8	−7.20		175	24.0	2.4	Variable	
129	1.0	0.0	Variable	Cavity floor	176	26.0	2.4	Variable	
130	2.0	0.0	Variable		177	28.0	2.4	Variable	
131	3.0	0.0	Variable		178	30.0	2.4	Variable	
132	4.0	0.0	Variable		179	32.0	2.4	Variable	
133	5.0	0.0	Variable		180	34.0	2.4	Variable	
134	6.0	0.0	Variable		181	36.0	2.4	Variable	
135	8.0	0.0	Variable		182	37.0	2.4	Variable	
136	10.0	0.0	Variable		183	38.0	2.4	Variable	
137	12.0	0.0	Variable		184	39.0	2.4	Variable	
138	14.0	0.0	Variable		185	40.0	2.4	Variable	
139	16.0	0.0	Variable		186	41.0	2.4	Variable	
140	18.0	0.0	Variable		188	30.0	−2.4	Variable	
141	20.0	0.0	Variable		189	36.0	−2.4	Variable	
142	1.0	2.4	Variable		190	38.0	−2.4	Variable	
143	2.0	2.4	Variable		191	40.0	−2.4	Variable	
144	3.0	2.4	Variable		193	28.0	−4.8	−1.2	Left-hand sidewall of cavity
145	4.0	2.4	Variable		194	30.0	−4.8	−1.2	
146	5.0	2.4	Variable		195	31.0	−4.8	−1.2	
147	6.0	2.4	Variable		196	32.0	−4.8	−1.2	
148	8.0	2.4	Variable		197	33.0	−4.8	−1.2	
149	10.0	2.4	Variable		198	34.0	−4.8	−1.2	
150	12.0	2.4	Variable		199	35.0	−4.8	−1.2	
151	14.0	2.4	Variable		200	36.0	−4.8	−1.2	
152	16.0	2.4	Variable		201	37.0	−4.8	−1.2	
153	18.0	2.4	Variable		202	38.0	−4.8	−1.2	
154	20.0	2.4	Variable		203	39.0	−4.8	−1.2	
155	2.0	−2.4	Variable		204	40.0	−4.8	−1.2	
156	4.0	−2.4	Variable		205	41.0	−4.8	−1.2	
157	6.0	−2.4	Variable		206	30.0	−4.8	−4.8	
158	12.0	−2.4	Variable		207	32.0	−4.8	−4.8	
159	18.0	−2.4	Variable		208	34.0	−4.8	−4.8	
161	22.0	0.0	Variable		209	36.0	−4.8	−4.8	
162	24.0	0.0	Variable		210	38.0	−4.8	−4.8	
163	26.0	0.0	Variable		211	40.0	−4.8	−4.8	
164	28.0	0.0	Variable		212	30.0	−4.8	−2.4	
165	30.0	0.0	Variable		213	30.0	−4.8	−3.6	
166	32.0	0.0	Variable		214	30.0	−4.8	−6.0	
167	34.0	0.0	Variable		215	30.0	−4.8	−7.2	
168	36.0	0.0	Variable		216	36.0	−4.8	−2.4	
169	37.0	0.0	Variable		217	36.0	−4.8	−3.6	
170	38.0	0.0	Variable		218	36.0	−4.8	−6.0	
171	39.0	0.0	Variable		219	36.0	−4.8	−7.2	

Table I. Concluded

Orifice number	x, in.	y, in.	z, in.	Orifice location on model	Orifice number	x, in.	y, in.	z, in.	Orifice location on model
220	40.0	−4.8	−2.4	Left-hand sidewall of cavity	271	43.0	−7.8	0.0	Plate, left of cavity
221	40.0	−4.8	−3.6	↓	272	45.0	−7.8	0.0	Plate, left of cavity
222	40.0	−4.8	−6.0	↓	273	32.0	7.8	0.0	Plate, right of cavity
223	40.0	−4.8	−7.2	↓	274	45.0	7.8	0.0	Plate, right of cavity
225	42.0	4.0	−3.6	Aft wall of cavity	275	42.0	4.0	−1.2	Aft wall of cavity
226	42.0	3.0	−3.6	↓	276	42.0	3.0	−1.2	↓
227	42.0	2.0	−3.6	↓	277	42.0	2.0	−1.2	↓
228	42.0	1.0	−3.6	↓	278	42.0	1.0	−1.2	↓
229	42.0	0.0	−3.6	↓	279	42.0	0.0	−1.2	↓
230	42.0	−1.0	−3.6	↓	280	42.0	−1.0	−1.2	↓
231	42.0	−2.0	−3.6	↓	281	42.0	−2.0	−1.2	↓
232	42.0	−3.0	−3.6	↓	282	42.0	−3.0	−1.2	↓
233	42.0	−4.0	−3.6	↓	283	42.0	−4.0	−1.2	↓
234	42.0	0.0	−5.4	↓	284	42.0	0.0	−2.4	↓
235	42.0	4.0	−7.2	↓					
236	42.0	3.0	−7.2	↓					
237	42.0	2.0	−7.2	↓					
238	42.0	1.0	−7.2	↓					
239	42.0	0.0	−7.2	↓					
240	42.0	−1.0	−7.2	↓					
241	42.0	−2.0	−7.2	↓					
242	42.0	−3.0	−7.2	↓					
243	42.0	−4.0	−7.2	↓					
244	42.0	0.0	−8.4	↓					
245	24.0	4.8	−1.2	Right-hand sidewall of cavity					
246	30.0	4.8	−1.2	↓					
247	36.0	4.8	−1.2	↓					
248	39.0	4.8	−1.2	↓					
249	24.0	4.8	−4.8	↓					
250	30.0	4.8	−4.8	↓					
251	36.0	4.8	−4.8	↓					
252	39.0	4.8	−4.8	↓					
257	44.0	0.0	0.0	Plate, aft of cavity					
258	46.0	0.0	0.0	↓					
259	48.0	0.0	0.0	↓					
260	50.0	0.0	0.0	↓					
261	52.0	0.0	0.0	↓					
262	54.0	0.0	0.0	↓					
263	27.0	−7.8	0.0	Plate, left of cavity					
264	29.0	−7.8	0.0	↓					
265	31.0	−7.8	0.0	↓					
266	33.0	−7.8	0.0	↓					
267	35.0	−7.8	0.0	↓					
268	37.0	−7.8	0.0	↓					
269	39.0	−7.8	0.0	↓					
270	41.0	−7.8	0.0	↓					

Table II. Nominal Test Conditions

Mach number	Reynolds number, per ft	q_∞, psf	$p_{t\infty}$, psf	$T_{t\infty}$, °F
0.30	1.0×10^6	70.1	1201.5	112.0
.60	1.6×10^6	202.4	1023.1	91.3
.60	3.5×10^6	410.9	2085.3	85.4
.80	1.5×10^6	238.5	818.4	105.4
.80	3.3×10^6	529.7	1806.2	108.3
.80	3.9×10^6	619.6	2113.6	106.7
.85	1.6×10^6	278.7	893.9	120.2
.85	3.3×10^6	550.7	1766.9	111.3
.85	4.0×10^6	666.9	2116.5	101.2
.90	1.6×10^6	287.7	865.3	116.2
.90	1.9×10^6	317.3	951.5	82.5
.90	3.3×10^6	549.4	1645.6	93.7
.95	1.7×10^6	322.6	914.0	121.1

Table III. Measured Boundary-Layer Thickness

Mach number	Reynolds number, per ft	δ, in.
0.30	1.0×10^6	Not measured
.60	1.6×10^6	0.80
.60	3.5×10^6	.77
.80	1.5×10^6	.82
.80	3.3×10^6	.86
.80	3.9×10^6	.85
.85	1.6×10^6	.84
.85	3.3×10^6	.88
.85	4.0×10^6	.88
.90	1.6×10^6	.85
.90	1.9×10^6	.87
.90	3.3×10^6	.90
.95	1.7×10^6	.88

Table IV. Pressure Coefficients for $l/h = 4.4$ Cavity

Run	M_∞	$R_\infty \times 10^{-6}$	p_∞	$p_{t\infty}$	q_∞	$T_{t\infty}$	CP1	CP2	CP3	CP4	CP5	CP6	CP7	CP8	CP9	CP10
69.	0.29	1.0	1095.9	1162.1	64.8	87.0	0.8456	-0.2614	-0.2834	-0.2271	-0.2213	-0.1599	-0.1644	-0.0711	-0.1042	-0.0620
68.	0.58	1.5	799.2	1004.0	188.4	100.6	1.0080	-0.2316	-0.3009	-0.2397	-0.2187	-0.1725	-0.1465	-0.0776	-0.0836	-0.0597
216.	0.60	1.6	755.2	961.1	188.5	73.4	0.9300	-0.2595	-0.2959	-0.2417	-0.2013	-0.1578	-0.1535	-0.0549	-0.0777	-0.0551
8.	0.60	3.5	1659.4	2112.0	414.3	74.4	0.9873	-0.3467	-0.2964	-0.2136	-0.1961	-0.1651	-0.1319	-0.0752	-0.0652	-0.0568
66.	0.79	1.5	539.2	817.5	238.3	105.8	1.1214	-0.3139	-0.3569	-0.2795	-0.2549	-0.1990	-0.1556	-0.0868	-0.0799	-0.0581
218.	0.79	3.3	1194.6	1811.5	528.2	109.6	1.1234	-0.3641	-0.3698	-0.2593	-0.2351	-0.1891	-0.1473	-0.0800	-0.0650	-0.0489
214.	0.80	3.9	1389.8	2114.0	619.3	107.7	1.1214	-0.3992	-0.3695	-0.2603	-0.2357	-0.1925	-0.1347	-0.0817	-0.0667	-0.0517
64.	0.84	1.6	559.3	890.1	277.9	120.7	1.1388	-0.2833	-0.4022	-0.2893	-0.2649	-0.2015	-0.1543	-0.0830	-0.0686	-0.0468
118.	0.85	3.3	1105.6	1767.8	555.4	110.9	1.1604	-0.3347	-0.4453	-0.2851	-0.2535	-0.2002	-0.1488	-0.0796	-0.0629	-0.0457
15.	0.85	4.0	1326.8	2120.3	665.6	109.9	1.1585	-0.3736	-0.4570	-0.2876	-0.2529	-0.2010	-0.1452	-0.0793	-0.0628	-0.0459
67.	0.89	1.6	516.4	865.7	287.5	116.9	1.2076	-0.2193	-0.4200	-0.4206	-0.3960	-0.2454	-0.1524	-0.0778	-0.0561	-0.0342
116.	0.90	1.9	564.7	951.2	317.6	82.5	1.1663	-0.2076	-0.4735	-0.4125	-0.3562	-0.2104	-0.1443	-0.0599	-0.0517	-0.0306
17.	0.90	3.3	996.3	1677.5	559.7	100.2	1.2091	-0.2450	-0.5101	-0.4287	-0.3711	-0.2193	-0.1442	-0.0703	-0.0455	-0.0295
63.	0.95	1.7	510.6	914.2	323.6	121.7	1.2240	-0.1097	-0.3185	-0.3257	-0.3691	-0.3598	-0.3690	-0.2591	-0.1372	-0.0412

Run	CP11	CP12	CP13	CP14	CP15	CP16	CP17	CP18	CP19	CP20	CP21	CP33	CP34	CP35	CP36	CP37
69.	-0.1166	-0.0799	-0.0682	-0.0298	-0.0543	-0.0663	-0.0838	-0.0227	-0.0590	-0.0025	-0.0683	-0.0489	-0.0032	-0.0133	-0.0087	-0.0384
68.	-0.0903	-0.0677	-0.0417	-0.0239	-0.0308	-0.0538	-0.0544	-0.0218	-0.0352	-0.0067	-0.0350	-0.0240	-0.0045	-0.0053	-0.0122	-0.0227
216.	-0.0870	-0.0647	-0.0242	-0.0220	-0.0365	-0.0590	-0.0471	-0.0207	-0.0294	0.0190	-0.0561	-0.0120	0.0017	0.0099	-0.0006	-0.0289
8.	-0.0690	-0.0538	-0.0288	-0.0256	-0.0085	-0.0492	-0.0295	-0.0198	-0.0204	-0.0153	-0.0076	-0.0076	-0.0118	-0.0040	-0.0241	-0.0032
66.	-0.0802	-0.0589	-0.0341	-0.0172	-0.0171	-0.0442	-0.0423	-0.0169	-0.0239	-0.0022	-0.0149	-0.0095	0.0058	0.0071	-0.0019	-0.0024
218.	-0.0637	-0.0452	-0.0200	-0.0168	-0.0024	-0.0398	-0.0238	-0.0139	-0.0145	-0.0046	-0.0003	-0.0007	-0.0004	0.0038	-0.0125	0.0050
214.	-0.0648	-0.0469	-0.0219	-0.0189	-0.0024	-0.0429	-0.0246	-0.0159	-0.0160	-0.0073	-0.0002	-0.0006	-0.0034	0.0028	-0.0162	0.0045
64.	-0.0670	-0.0473	-0.0247	-0.0089	-0.0050	-0.0338	-0.0326	-0.0102	-0.0165	-0.0007	-0.0009	-0.0046	0.0096	0.0077	0.0014	0.0042
118.	-0.0600	-0.0423	-0.0157	-0.0135	-0.0008	-0.0377	-0.0219	-0.0130	-0.0132	-0.0006	0.0008	0.0014	0.0019	0.0064	-0.0100	0.0074
15.	-0.0593	-0.0413	-0.0151	-0.0132	0.0014	-0.0369	-0.0210	-0.0132	-0.0131	-0.0010	0.0015	0.0041	0.0018	0.0077	-0.0106	0.0085
67.	-0.0534	-0.0352	-0.0145	-0.0013	0.0020	-0.0303	-0.0285	-0.0089	-0.0144	0.0006	0.0053	0.0010	0.0135	0.0140	0.0040	0.0135
116.	-0.0502	-0.0330	-0.0010	-0.0017	-0.0022	-0.0352	-0.0222	-0.0089	-0.0108	0.0187	-0.0110	0.0066	0.0134	0.0199	0.0075	0.0073
17.	-0.0430	-0.0286	-0.0034	-0.0048	0.0093	-0.0315	-0.0155	-0.0106	-0.0096	0.0001	0.0102	0.0076	0.0052	0.0119	-0.0068	0.0188
63.	-0.0171	0.0089	0.0275	0.0355	0.0297	-0.0093	-0.0124	0.0013	-0.0062	0.0111	0.0100	0.0065	0.0181	0.0196	0.0077	0.0164

Table IV. Continued

Run	CP38	CP39	CP40	CP41	CP42	CP43	CP44	CP45	CP46	CP47	CP48	CP49	CP50	CP51	CP52	CP53
69.	0.0068	-0.0383	-0.0886	-0.0459	0.0103	-0.1035	0.0293	0.0025	0.0130	-0.0059	0.0293	-0.0272	0.0392	0.0028	0.0270	0.0028
68.	-0.0046	-0.0228	-0.0335	-0.0182	-0.0008	-0.0341	0.0102	-0.0031	-0.0071	-0.0139	0.0061	-0.0170	0.0143	0.0021	0.0080	-0.0053
216.	0.0059	-0.0082	-0.0261	-0.0201	0.0042	-0.0127	0.0109	-0.0030	-0.0311	-0.0300	0.0199	-0.0317	0.0170	0.0193	0.0139	0.0135
8.	-0.0069	-0.0123	-0.0267	-0.0045	0.0009	-0.0284	0.0093	0.0065	0.0097	0.0045	0.0011	0.0110	0.0109	0.0056	0.0069	-0.0057
66.	0.0072	-0.0091	-0.0162	-0.0021	0.0111	-0.0159	0.0207	0.0102	0.0103	0.0041	0.0154	0.0028	0.0237	0.0121	0.0176	0.0050
218.	0.0027	-0.0061	-0.0150	0.0050	0.0070	-0.0175	0.0155	0.0103	0.0128	0.0070	0.0051	0.0116	0.0142	0.0072	0.0110	-0.0022
214.	0.0004	-0.0070	-0.0155	0.0029	0.0048	-0.0191	0.0106	0.0040	0.0072	0.0027	-0.0022	0.0066	0.0061	0.0002	0.0041	-0.0071
64.	0.0081	-0.0091	-0.0083	0.0026	0.0108	-0.0134	0.0171	0.0072	0.0113	0.0042	0.0109	0.0048	0.0220	0.0086	0.0149	0.0011
118.	0.0034	-0.0068	-0.0105	0.0055	0.0075	-0.0103	0.0147	0.0123	0.0148	0.0105	0.0098	0.0139	0.0184	0.0106	0.0142	0.0044
15.	0.0046	-0.0030	-0.0068	0.0074	0.0095	-0.0079	0.0152	0.0115	0.0126	0.0088	0.0085	0.0143	0.0173	0.0097	0.0115	0.0013
67.	0.0115	-0.0035	-0.0002	0.0100	0.0156	0.0009	0.0241	0.0163	0.0240	0.0163	0.0169	0.0156	0.0265	0.0132	0.0195	0.0055
116.	0.0167	0.0064	0.0075	0.0069	0.0144	0.0038	0.0241	0.0193	0.0088	0.0065	0.0261	0.0058	0.0288	0.0261	0.0248	0.0204
17.	0.0097	0.0020	0.0055	0.0107	0.0105	-0.0085	0.0164	0.0139	0.0181	0.0126	0.0050	0.0170	0.0155	0.0091	0.0143	0.0040
63.	0.0179	0.0034	0.0093	0.0110	0.0185	0.0019	0.0287	0.0217	0.0247	0.0180	0.0225	0.0163	0.0308	0.0196	0.0255	0.0140

Run	CP54	CP55	CP56	CP57	CP65	CP66	CP67	CP68	CP69	CP70	CP71	CP72	CP80	CP82	CP83	CP84
69.	0.0209	0.0000	0.0251	-0.0052	-0.0199	0.0003	-0.0122	-0.0150	-0.0063	0.0118	-0.0118	-0.0284	0.0209	0.0159	0.0026	0.0104
68.	-0.0036	-0.0099	0.0077	-0.0027	-0.0198	-0.0300	-0.0448	-0.0473	-0.0122	-0.0139	-0.0298	-0.0365	0.0037	-0.0004	-0.0043	-0.0196
216.	-0.0009	-0.0048	0.0276	0.0127	-0.0098	-0.0401	-0.0316	-0.0284	-0.0012	-0.0170	-0.0175	-0.0274	0.0128	-0.0115	0.0208	-0.0209
8.	-0.0022	-0.0006	0.0052	0.0045	-0.0019	-0.0165	-0.0311	-0.0440	-0.0032	-0.0090	-0.0207	-0.0277	0.0047	0.0121	-0.0003	-0.0120
66.	0.0087	0.0048	0.0169	0.0091	-0.0028	-0.0106	-0.0257	-0.0291	0.0025	0.0002	-0.0135	-0.0199	0.0154	0.0145	0.0071	-0.0046
218.	0.0008	0.0000	0.0069	0.0048	0.0018	-0.0059	-0.0225	-0.0333	-0.0012	-0.0042	-0.0126	-0.0157	0.0087	0.0139	0.0032	-0.0076
214.	-0.0030	-0.0030	0.0030	0.0019	0.0010	-0.0072	-0.0224	-0.0400	-0.0033	-0.0051	-0.0134	-0.0219	0.0073	0.0128	0.0025	-0.0092
64.	0.0061	0.0023	0.0110	0.0047	-0.0030	-0.0061	-0.0289	-0.0345	-0.0001	-0.0004	-0.0176	-0.0179	0.0124	0.0154	0.0027	-0.0075
118.	0.0074	0.0060	0.0095	0.0075	0.0028	-0.0063	-0.0276	-0.0388	0.0057	0.0009	-0.0148	-0.0193	0.0135	0.0151	0.0088	-0.0056
15.	0.0037	0.0037	0.0093	0.0064	0.0051	-0.0051	-0.0232	-0.0351	0.0021	-0.0022	-0.0151	-0.0159	0.0097	0.0113	0.0041	-0.0062
67.	0.0140	0.0104	0.0158	0.0093	0.0066	0.0063	-0.0234	-0.0209	0.0082	0.0096	-0.0125	-0.0108	0.0177	0.0235	0.0082	0.0058
116.	0.0150	0.0122	0.0257	0.0183	0.0092	-0.0051	-0.0147	-0.0214	0.0144	0.0068	-0.0056	-0.0047	0.0221	0.0132	0.0232	-0.0012
17.	0.0071	0.0062	0.0095	0.0100	0.0121	0.0078	-0.0164	-0.0337	0.0066	0.0055	-0.0097	-0.0078	0.0156	0.0220	0.0117	-0.0004
63.	0.0177	0.0133	0.0201	0.0151	0.0114	0.0102	-0.0127	-0.0146	0.0134	0.0133	-0.0039	-0.0013	0.0238	0.0269	0.0172	0.0062

Table IV. Continued

Run	CP85	CP86	CP87	CP88	CP89	CP90	CP91	CP97	CP98	CP99	CP100	CP101	CP102	CP103	CP104	CP105
69.	-0.0130	0.0225	-0.0016	0.0187	-0.0248	0.0094	-0.0015	-0.0104	0.0303	0.0049	0.0068	-0.0042	0.0207	-0.0156	0.0139	-0.0256
68.	-0.0260	-0.0088	-0.0184	0.0025	-0.0224	-0.0158	-0.0190	-0.0055	0.0089	-0.0099	-0.0141	-0.0253	-0.0194	-0.0363	-0.0251	-0.0407
216.	-0.0204	0.0055	-0.0065	0.0149	-0.0294	-0.0215	-0.0002	0.0008	0.0170	0.0115	-0.0335	-0.0091	-0.0123	-0.0393	-0.0133	-0.0356
8.	-0.0135	-0.0121	-0.0133	0.0041	-0.0055	-0.0084	-0.0172	0.0099	0.0062	-0.0043	-0.0053	-0.0171	-0.0189	-0.0209	-0.0217	-0.0285
66.	-0.0097	0.0021	-0.0041	0.0133	-0.0013	-0.0009	-0.0074	0.0090	0.0182	0.0031	0.0038	-0.0099	-0.0048	-0.0158	-0.0110	-0.0223
218.	-0.0100	-0.0071	-0.0083	0.0081	-0.0021	-0.0035	-0.0132	0.0118	0.0132	0.0019	0.0034	-0.0101	-0.0107	-0.0165	-0.0198	-0.0251
214.	-0.0094	-0.0068	-0.0067	0.0065	-0.0013	-0.0034	-0.0132	0.0122	0.0130	0.0038	0.0056	-0.0054	-0.0065	-0.0120	-0.0149	-0.0203
64.	-0.0113	-0.0011	-0.0063	0.0096	-0.0132	-0.0008	-0.0132	0.0067	0.0170	-0.0003	0.0037	-0.0122	-0.0064	-0.0162	-0.0130	-0.0230
118.	-0.0055	-0.0005	-0.0020	0.0104	0.0010	-0.0002	-0.0089	0.0129	0.0157	0.0055	0.0039	-0.0037	-0.0043	-0.0103	-0.0116	-0.0188
15.	-0.0062	-0.0035	-0.0053	0.0071	-0.0013	-0.0019	-0.0097	0.0128	0.0133	0.0039	0.0011	-0.0085	-0.0097	-0.0155	-0.0151	-0.0200
67.	-0.0003	0.0062	0.0017	0.0160	0.0094	0.0103	-0.0050	0.0148	0.0218	0.0069	0.0155	-0.0008	0.0054	-0.0025	-0.0021	-0.0126
116.	0.0001	0.0131	0.0078	0.0218	0.0005	0.0025	0.0041	0.0174	0.0249	0.0193	0.0029	0.0072	0.0046	-0.0100	-0.0019	-0.0148
17.	-0.0004	0.0018	0.0014	0.0145	0.0092	0.0053	-0.0067	0.0186	0.0186	0.0110	0.0111	0.0035	0.0036	-0.0013	-0.0057	-0.0132
63.	0.0034	0.0130	0.0085	0.0228	-0.0104	0.0125	0.0002	0.0202	0.0292	0.0161	0.0198	0.0070	0.0108	-0.0001	0.0010	-0.0085

Run	CP106	CP107	CP108	CP109	CP110	CP111	CP112	CP113	CP114	CP115	CP116	CP117	CP118	CP121	CP123	CP124
69.	0.0061	-0.0123	0.0104	-0.0156	0.0205	-0.0513	-0.0733	-0.1701	-0.1649	-0.2368	-0.0111	-0.0188	0.0071	-0.1829	-0.0426	-0.0276
68.	-0.0293	-0.0404	-0.0341	-0.0490	-0.0385	-0.0588	-0.0517	-0.0687	-0.0482	-0.0601	-0.0241	-0.0307	-0.0263	-0.0349	-0.0414	-0.0301
216.	-0.0415	-0.0368	-0.0410	-0.0525	-0.0121	-0.0515	-0.0396	-0.0638	-0.0461	-0.0516	-0.0538	-0.0241	-0.0192	0.0012	-0.0168	-0.0280
8.	-0.0253	-0.0284	-0.0275	-0.0325	-0.0383	-0.0406	-0.0379	-0.0469	-0.0389	-0.0375	-0.0108	-0.0206	-0.0233	-0.0250	-0.0320	-0.0260
66.	-0.0135	-0.0229	-0.0172	-0.0276	-0.0254	-0.0381	-0.0339	-0.0460	-0.0313	-0.0375	-0.0056	-0.0166	-0.0117	-0.0165	-0.0262	-0.0134
218.	-0.0186	-0.0242	-0.0194	-0.0230	-0.0261	-0.0309	-0.0277	-0.0341	-0.0227	-0.0244	-0.0077	-0.0194	-0.0168	-0.0087	-0.0255	-0.0144
214.	-0.0171	-0.0232	-0.0227	-0.0300	-0.0294	-0.0306	-0.0250	-0.0282	-0.0199	-0.0213	-0.0063	-0.0185	-0.0211	-0.0106	-0.0301	-0.0225
64.	-0.0150	-0.0253	-0.0208	-0.0320	-0.0316	-0.0403	-0.0320	-0.0376	-0.0167	-0.0215	-0.0062	-0.0196	-0.0170	-0.0055	-0.0317	-0.0189
118.	-0.0175	-0.0242	-0.0244	-0.0343	-0.0383	-0.0422	-0.0333	-0.0363	-0.0234	-0.0229	-0.0096	-0.0186	-0.0220	-0.0017	-0.0362	-0.0240
15.	-0.0195	-0.0241	-0.0211	-0.0290	-0.0319	-0.0367	-0.0301	-0.0279	-0.0168	-0.0137	-0.0128	-0.0212	-0.0197	0.0025	-0.0284	-0.0182
67.	-0.0056	-0.0173	-0.0122	-0.0228	-0.0236	-0.0269	-0.0219	-0.0306	-0.0168	-0.0233	0.0036	-0.0128	-0.0078	0.0010	-0.0238	-0.0072
116.	-0.0172	-0.0190	-0.0198	-0.0251	-0.0088	-0.0212	-0.0068	-0.0120	-0.0002	-0.0020	-0.0188	-0.0132	-0.0095	0.0187	-0.0112	-0.0106
17.	-0.0144	-0.0205	-0.0205	-0.0259	-0.0216	-0.0182	-0.0085	-0.0099	-0.0002	0.0009	-0.0031	-0.0165	-0.0191	0.0019	-0.0196	-0.0141
63.	-0.0029	-0.0135	-0.0093	-0.0188	-0.0117	-0.0147	-0.0048	-0.0109	0.0039	-0.0035	0.0020	-0.0109	-0.0065	0.0076	-0.0105	-0.0007

Table IV. Continued

Run	CP125	CP126	CP129	CP130	CP131	CP132	CP133	CP134	CP135	CP136	CP137	CP138	CP139	CP140	CP141	CP142
69.	-0.0603	-0.0337	-0.0118	0.0218	-0.0096	0.0158	-0.0194	-0.0040	-0.0154	0.0094	-0.0373	0.0091	-0.0303	-0.0166	-0.0693	0.0343
68.	-0.0480	-0.0359	-0.0254	-0.0121	-0.0296	-0.0217	-0.0373	-0.0282	-0.0315	-0.0211	-0.0384	-0.0218	-0.0395	-0.0352	-0.0535	0.0019
216.	-0.0452	-0.0449	-0.0042	-0.0064	-0.0177	-0.0205	-0.0343	-0.0436	-0.0224	-0.0050	-0.0261	0.0042	-0.0125	-0.0168	-0.0416	0.0235
8.	-0.0299	-0.0239	-0.0153	-0.0135	-0.0203	-0.0202	-0.0235	-0.0178	-0.0258	-0.0237	-0.0260	-0.0272	-0.0333	-0.0346	-0.0369	-0.0047
66.	-0.0244	-0.0136	-0.0098	0.0001	-0.0133	-0.0065	-0.0184	-0.0095	-0.0154	-0.0090	-0.0220	-0.0115	-0.0242	-0.0193	-0.0308	0.0104
218.	-0.0197	-0.0117	-0.0114	-0.0072	-0.0169	-0.0139	-0.0184	-0.0111	-0.0157	-0.0144	-0.0177	-0.0173	-0.0241	-0.0224	-0.0265	0.0013
214.	-0.0241	-0.0181	-0.0084	-0.0049	-0.0126	-0.0112	-0.0151	-0.0096	-0.0157	-0.0167	-0.0200	-0.0226	-0.0287	-0.0288	-0.0304	-0.0007
64.	-0.0238	-0.0121	-0.0131	-0.0001	-0.0144	-0.0063	-0.0175	-0.0069	-0.0156	-0.0115	-0.0221	-0.0146	-0.0269	-0.0214	-0.0298	0.0068
118.	-0.0230	-0.0153	-0.0053	-0.0007	-0.0083	-0.0054	-0.0102	-0.0065	-0.0109	-0.0110	-0.0177	-0.0172	-0.0240	-0.0231	-0.0288	0.0080
15.	-0.0162	-0.0093	-0.0084	-0.0058	-0.0120	-0.0089	-0.0126	-0.0084	-0.0123	-0.0130	-0.0176	-0.0186	-0.0249	-0.0231	-0.0247	0.0052
67.	-0.0098	0.0014	-0.0028	0.0085	-0.0034	0.0045	-0.0059	0.0047	-0.0062	-0.0044	-0.0140	-0.0096	-0.0206	-0.0142	-0.0209	0.0139
116.	-0.0147	-0.0090	0.0087	0.0103	0.0032	0.0032	-0.0048	-0.0069	-0.0029	0.0018	-0.0117	0.0001	-0.0087	-0.0080	-0.0190	0.0234
17.	-0.0133	-0.0058	0.0020	0.0041	-0.0012	0.0003	-0.0025	0.0020	-0.0048	-0.0063	-0.0109	-0.0136	-0.0186	-0.0173	-0.0185	0.0103
63.	-0.0078	0.0014	0.0039	0.0148	0.0029	0.0097	-0.0003	0.0082	-0.0010	0.0009	-0.0093	-0.0037	-0.0139	-0.0078	-0.0143	0.0194

Run	CP143	CP144	CP145	CP146	CP147	CP148	CP149	CP150	CP151	CP152	CP153	CP154	CP155	CP156	CP157	CP158
69.	0.0086	0.0135	-0.0119	0.0242	-0.0152	0.0214	-0.0053	0.0086	-0.0264	-0.0063	-0.0607	-0.0361	-0.0004	0.0206	-0.0109	-0.0164
68.	-0.0126	-0.0147	-0.0302	-0.0151	-0.0317	-0.0145	-0.0267	-0.0197	-0.0338	-0.0282	-0.0475	-0.0342	-0.0173	-0.0135	-0.0293	-0.0254
216.	0.0093	-0.0083	-0.0018	-0.0181	-0.0215	0.0017	0.0058	0.0002	-0.0173	-0.0007	-0.0390	-0.0345	0.0018	-0.0040	-0.0116	-0.0347
8.	-0.0105	-0.0108	-0.0217	-0.0142	-0.0218	-0.0213	-0.0252	-0.0216	-0.0263	-0.0265	-0.0284	-0.0258	-0.0099	-0.0172	-0.0213	-0.0161
66.	-0.0003	0.0007	-0.0146	-0.0012	-0.0145	-0.0027	-0.0149	-0.0086	-0.0191	-0.0155	-0.0280	-0.0165	-0.0025	-0.0018	-0.0148	-0.0111
218.	-0.0054	-0.0058	-0.0163	-0.0086	-0.0144	-0.0101	-0.0166	-0.0117	-0.0156	-0.0171	-0.0202	-0.0160	-0.0035	-0.0080	-0.0158	-0.0086
214.	-0.0059	-0.0057	-0.0148	-0.0084	-0.0131	-0.0117	-0.0171	-0.0144	-0.0183	-0.0214	-0.0251	-0.0219	-0.0044	-0.0083	-0.0130	-0.0105
64.	-0.0038	-0.0020	-0.0170	-0.0022	-0.0148	-0.0058	-0.0180	-0.0104	-0.0198	-0.0167	-0.0270	-0.0135	-0.0046	-0.0029	-0.0152	-0.0100
118.	0.0003	0.0000	-0.0062	-0.0016	-0.0079	-0.0055	-0.0132	-0.0129	-0.0192	-0.0199	-0.0229	-0.0153	-0.0007	-0.0014	-0.0073	-0.0123
15.	-0.0018	-0.0015	-0.0088	-0.0042	-0.0090	-0.0073	-0.0128	-0.0115	-0.0171	-0.0183	-0.0205	-0.0156	-0.0011	-0.0048	-0.0092	-0.0120
67.	0.0044	0.0088	-0.0067	0.0076	-0.0045	0.0020	-0.0113	-0.0056	-0.0136	-0.0114	-0.0176	-0.0058	0.0048	0.0066	-0.0051	-0.0011
116.	0.0143	0.0083	0.0075	0.0045	-0.0002	0.0085	0.0049	0.0020	-0.0076	0.0002	-0.0136	-0.0063	0.0108	0.0087	0.0024	-0.0130
17.	0.0044	0.0058	-0.0011	0.0058	0.0002	-0.0005	-0.0065	-0.0066	-0.0110	-0.0124	-0.0109	-0.0050	0.0057	0.0023	-0.0015	-0.0080
63.	0.0105	0.0125	0.0004	0.0129	0.0020	0.0083	-0.0032	0.0020	-0.0057	-0.0024	-0.0103	0.0022	0.0103	0.0122	0.0007	0.0007

Table IV. Continued

Run	CP159	CP161	CP162	CP163	CP164	CP165	CP166	CP167	CP168	CP169	CP170	CP171	CP172	CP173	CP174	CP175
69.	-0.0331	-0.1192	-0.1221	-0.2208	-0.2131	-0.2619	-0.2107	-0.2075	-0.1056	-0.0788	0.0050	0.0851	0.1925	0.2933	-0.0648	-0.1457
68.	-0.0392	-0.0621	-0.0374	-0.0533	-0.0305	-0.0361	-0.0024	0.0113	0.0486	0.0558	0.0820	0.1097	0.1742	0.2868	-0.0336	-0.0434
216.	-0.0130	-0.0639	-0.0433	-0.0357	-0.0216	-0.0093	-0.0040	0.0120	0.0439	0.0768	0.0901	0.1033	0.1960	0.2699	-0.0269	-0.0444
8.	-0.0317	-0.0401	-0.0320	-0.0278	-0.0152	-0.0070	0.0147	0.0317	0.0727	0.0705	0.0933	0.1172	0.1754	0.2846	-0.0265	-0.0272
66.	-0.0228	-0.0352	-0.0192	-0.0276	-0.0085	-0.0067	0.0223	0.0381	0.0691	0.0771	0.1013	0.1242	0.1859	0.2982	-0.0160	-0.0189
218.	-0.0230	-0.0288	-0.0194	-0.0188	-0.0034	0.0028	0.0263	0.0462	0.0772	0.0833	0.1055	0.1278	0.1852	0.3032	-0.0162	-0.0140
214.	-0.0251	-0.0319	-0.0215	-0.0206	-0.0077	0.0029	0.0267	0.0498	0.0801	0.0851	0.1052	0.1269	0.1809	0.3034	-0.0153	-0.0141
64.	-0.0245	-0.0311	-0.0115	-0.0132	0.0060	0.0149	0.0461	0.0671	0.0990	0.1062	0.1296	0.1446	0.2001	0.3091	-0.0110	-0.0085
118.	-0.0238	-0.0297	-0.0164	-0.0127	0.0055	0.0186	0.0492	0.0705	0.1008	0.1103	0.1294	0.1480	0.2049	0.3207	-0.0152	-0.0095
15.	-0.0195	-0.0241	-0.0084	0.0013	0.0178	0.0316	0.0587	0.0825	0.1109	0.1205	0.1378	0.1576	0.2067	0.3187	-0.0110	-0.0025
67.	-0.0148	-0.0215	-0.0066	-0.0076	0.0086	0.0200	0.0534	0.0777	0.1082	0.1167	0.1435	0.1605	0.2203	0.3302	-0.0049	-0.0029
116.	-0.0075	-0.0278	-0.0129	-0.0060	0.0100	0.0269	0.0467	0.0709	0.1034	0.1265	0.1408	0.1561	0.2229	0.3231	0.0027	0.0014
17.	-0.0194	-0.0183	-0.0083	-0.0047	0.0092	0.0255	0.0578	0.0852	0.1199	0.1290	0.1488	0.1688	0.2206	0.3388	-0.0016	0.0060
63.	-0.0099	-0.0157	0.0005	-0.0030	0.0132	0.0223	0.0531	0.0774	0.1111	0.1207	0.1439	0.1616	0.2186	0.3298	0.0062	0.0081

Run	CP176	CP177	CP178	CP179	CP180	CP181	CP182	CP183	CP184	CP185	CP186	CP188	CP189	CP190	CP191	CP193
69.	-0.1842	-0.2596	-0.2078	-0.2392	-0.1854	-0.1326	-0.0438	-0.0050	0.1017	0.1719	0.3010	-0.2294	-0.1263	0.0045	0.1779	-0.2839
68.	-0.0346	-0.0407	-0.0039	0.0025	0.0335	0.0548	0.0863	0.1033	0.1497	0.1990	0.3020	-0.0100	0.0571	0.1128	0.2002	-0.0658
216.	-0.0277	-0.0355	-0.0146	0.0072	0.0697	0.0719	0.0732	0.1051	0.1659	0.1962	0.2915	-0.0008	0.0881	0.0951	0.1954	-0.0579
8.	-0.0196	-0.0126	0.0088	0.0223	0.0476	0.0776	0.1014	0.1209	0.1574	0.2105	0.2960	0.0084	0.0758	0.1245	0.2085	-0.0298
66.	-0.0081	-0.0085	0.0207	0.0301	0.0589	0.0795	0.1061	0.1235	0.1661	0.2154	0.3123	0.0201	0.0817	0.1310	0.2154	-0.0322
218.	-0.0018	0.0045	0.0290	0.0397	0.0664	0.0906	0.1174	0.1376	0.1701	0.2214	0.3135	0.0259	0.0915	0.1391	0.2238	-0.0188
214.	-0.0063	0.0005	0.0223	0.0390	0.0666	0.0947	0.1187	0.1369	0.1680	0.2189	0.3110	0.0213	0.0860	0.1322	0.2195	-0.0193
64.	0.0077	0.0148	0.0455	0.0607	0.0947	0.1160	0.1401	0.1564	0.1904	0.2319	0.3252	0.0420	0.1108	0.1663	0.2359	-0.0129
118.	0.0034	0.0138	0.0429	0.0625	0.0950	0.1158	0.1382	0.1577	0.1911	0.2391	0.3313	0.0404	0.1164	0.1598	0.2397	-0.0174
15.	0.0142	0.0263	0.0545	0.0752	0.1058	0.1310	0.1514	0.1711	0.2036	0.2478	0.3361	0.0569	0.1326	0.1726	0.2474	0.0000
67.	0.0105	0.0206	0.0482	0.0683	0.1034	0.1249	0.1473	0.1674	0.2077	0.2582	0.3513	0.0563	0.1280	0.1807	0.2564	-0.0191
116.	0.0185	0.0227	0.0501	0.0739	0.1199	0.1377	0.1500	0.1738	0.2138	0.2451	0.3371	0.0462	0.1325	0.1576	0.2523	0.0030
17.	0.0218	0.0335	0.0607	0.0844	0.1161	0.1441	0.1667	0.1853	0.2138	0.2567	0.3454	0.0465	0.1260	0.1739	0.2655	0.0064
63.	0.0225	0.0287	0.0566	0.0730	0.1078	0.1321	0.1567	0.1756	0.2100	0.2525	0.3451	0.0520	0.1222	0.1754	0.2581	0.0030

Table IV. Continued

Run	CP194	CP195	CP196	CP197	CP198	CP199	CP200	CP201	CP202	CP203	CP204	CP205	CP206	CP207	CP208	CP209
69.	-0.2377	-0.2889	-0.2410	-0.2817	-0.2189	-0.2264	-0.1746	-0.1889	-0.0930	-0.1098	-0.0399	0.0654	-0.2461	-0.2772	-0.2262	-0.2201
68.	-0.0378	-0.0499	-0.0269	-0.0359	-0.0090	-0.0047	0.0219	0.0205	0.0551	0.0384	0.0621	0.1785	-0.0089	-0.0107	0.0142	0.0201
216.	-0.0337	-0.0475	-0.0127	-0.0401	0.0038	0.0265	0.0426	0.0263	0.0761	0.0373	0.0574	0.1792	-0.0001	-0.0101	0.0183	0.0293
8.	-0.0128	-0.0101	-0.0029	0.0025	0.0166	0.0159	0.0360	0.0457	0.0516	0.0505	0.0669	0.1903	0.0127	0.0291	0.0457	0.0548
66.	-0.0090	-0.0165	0.0024	-0.0023	0.0252	0.0289	0.0493	0.0515	0.0752	0.0633	0.0848	0.1985	0.0203	0.0230	0.0481	0.0573
218.	-0.0022	0.0012	0.0112	0.0168	0.0338	0.0347	0.0450	0.0507	0.0570	0.0493	0.0648	0.2053	0.0234	0.0351	0.0508	0.0644
214.	-0.0024	-0.0002	0.0091	0.0149	0.0238	0.0259	0.0335	0.0358	0.0380	0.0339	0.0524	0.1919	0.0196	0.0296	0.0470	0.0580
64.	0.0159	0.0130	0.0332	0.0288	0.0525	0.0522	0.0666	0.0612	0.0714	0.0544	0.0771	0.2190	0.0404	0.0478	0.0719	0.0798
118.	0.0037	0.0055	0.0178	0.0247	0.0410	0.0457	0.0613	0.0630	0.0713	0.0638	0.0812	0.2303	0.0317	0.0415	0.0621	0.0794
15.	0.0192	0.0232	0.0351	0.0397	0.0544	0.0596	0.0695	0.0735	0.0803	0.0690	0.0845	0.2264	0.0438	0.0582	0.0801	0.0985
67.	0.0066	0.0043	0.0218	0.0243	0.0468	0.0484	0.0713	0.0777	0.0979	0.0916	0.1134	0.2429	0.0459	0.0554	0.0827	0.0972
116.	0.0234	0.0188	0.0401	0.0287	0.0552	0.0654	0.0692	0.0489	0.0646	0.0360	0.0679	0.2254	0.0383	0.0445	0.0671	0.0800
17.	0.0270	0.0369	0.0472	0.0515	0.0618	0.0559	0.0563	0.0435	0.0380	0.0284	0.0689	0.2424	0.0348	0.0442	0.0581	0.0771
63.	0.0269	0.0243	0.0410	0.0387	0.0580	0.0554	0.0675	0.0604	0.0689	0.0555	0.0860	0.2288	0.0435	0.0521	0.0743	0.0851

Run	CP210	CP211	CP212	CP213	CP214	CP215	CP216	CP217	CP218	CP219	CP220	CP221	CP222	CP223	CP225	CP226
69.	-0.0961	-0.0369	-0.2461	-0.2781	-0.2317	-0.2604	-0.1743	-0.2103	-0.1431	-0.1578	-0.0100	-0.0551	0.0478	0.0678	0.0856	0.1203
68.	0.0769	0.1139	-0.0192	-0.0230	-0.0063	-0.0156	0.0320	0.0232	0.0499	0.0419	0.1134	0.1062	0.1452	0.1613	0.2397	0.2050
216.	0.0728	0.1018	-0.0099	0.0004	0.0133	-0.0038	0.0447	0.0409	0.0647	0.0569	0.1232	0.0926	0.1605	0.1553	0.2292	0.1971
8.	0.0854	0.1406	0.0046	0.0059	0.0141	0.0157	0.0498	0.0480	0.0590	0.0649	0.1116	0.1269	0.1464	0.1719	0.2562	0.2090
66.	0.1024	0.1434	0.0114	0.0110	0.0223	0.0191	0.0629	0.0567	0.0774	0.0754	0.1321	0.1315	0.1626	0.1823	0.2599	0.2207
218.	0.0995	0.1591	0.0147	0.0173	0.0238	0.0280	0.0598	0.0580	0.0734	0.0789	0.1159	0.1362	0.1710	0.1984	0.2958	0.2532
214.	0.0951	0.1520	0.0178	0.0191	0.0185	0.0267	0.0497	0.0503	0.0726	0.0757	0.1139	0.1335	0.1666	0.1966	0.2793	0.2364
64.	0.1285	0.1808	0.0351	0.0304	0.0418	0.0418	0.0764	0.0725	0.1025	0.1019	0.1427	0.1618	0.1999	0.2169	0.2964	0.2607
118.	0.1250	0.1836	0.0245	0.0279	0.0342	0.0392	0.0665	0.0678	0.0926	0.0972	0.1405	0.1591	0.1929	0.2142	0.3236	0.2734
15.	0.1336	0.1917	0.0298	0.0374	0.0482	0.0568	0.0828	0.0862	0.1104	0.1163	0.1484	0.1682	0.2069	0.2293	0.3301	0.2826
67.	0.1480	0.1918	0.0294	0.0333	0.0500	0.0540	0.0878	0.0883	0.1144	0.1143	0.1648	0.1771	0.2028	0.2222	0.3177	0.2646
116.	0.1222	0.2001	0.0349	0.0394	0.0468	0.0452	0.0711	0.0736	0.1113	0.1148	0.1531	0.1698	0.2364	0.2454	0.3176	0.2938
17.	0.1235	0.2219	0.0361	0.0341	0.0354	0.0429	0.0537	0.0574	0.0946	0.1026	0.1451	0.1830	0.2330	0.2530	0.3317	0.3074
63.	0.1353	0.2042	0.0392	0.0354	0.0475	0.0505	0.0767	0.0744	0.1090	0.1119	0.1537	0.1786	0.2263	0.2470	0.3170	0.2924

Table IV. Continued

Run	CP227	CP228	CP229	CP230	CP231	CP232	CP233	CP234	CP235	CP236	CP237	CP238	CP239	CP240	CP241	CP242
69.	0.0762	0.1183	0.0653	0.1022	0.0902	0.1015	0.0878	0.0792	0.1868	0.1887	0.1560	0.1665	0.1542	0.1630	0.1382	0.2109
68.	0.1792	0.2094	0.2008	0.2188	0.2093	0.2107	0.2463	0.1547	0.2388	0.2197	0.1846	0.1739	0.1654	0.1718	0.1723	0.2199
216.	0.1721	0.2120	0.1861	0.1940	0.1972	0.1831	0.2243	0.1484	0.2219	0.1981	0.1792	0.1567	0.1599	0.1538	0.1672	0.2030
8.	0.2031	0.2101	0.2141	0.2152	0.2036	0.2064	0.2543	0.1546	0.2381	0.2131	0.1835	0.1741	0.1680	0.1765	0.1835	0.2147
66.	0.1982	0.2173	0.2149	0.2297	0.2229	0.2296	0.2637	0.1708	0.2541	0.2330	0.1983	0.1889	0.1797	0.1872	0.1901	0.2309
218.	0.2396	0.2537	0.2565	0.2522	0.2350	0.2448	0.2976	0.1940	0.2735	0.2486	0.2178	0.2067	0.1980	0.2042	0.2119	0.2470
214.	0.2318	0.2438	0.2420	0.2319	0.2172	0.2356	0.2905	0.1869	0.2565	0.2319	0.2056	0.1974	0.1869	0.1930	0.2052	0.2424
64.	0.2485	0.2635	0.2560	0.2575	0.2384	0.2521	0.3026	0.2109	0.2732	0.2514	0.2192	0.2142	0.2022	0.2119	0.2152	0.2603
118.	0.2589	0.2744	0.2746	0.2716	0.2570	0.2655	0.3180	0.2250	0.2897	0.2612	0.2325	0.2241	0.2210	0.2254	0.2333	0.2688
15.	0.2666	0.2787	0.2785	0.2726	0.2597	0.2636	0.3156	0.2215	0.2897	0.2635	0.2361	0.2231	0.2133	0.2178	0.2266	0.2601
67.	0.2362	0.2527	0.2678	0.2888	0.2814	0.2820	0.3167	0.2231	0.3033	0.2803	0.2416	0.2318	0.2213	0.2313	0.2329	0.2712
116.	0.2871	0.3020	0.2661	0.2425	0.2296	0.2500	0.3200	0.2251	0.2808	0.2564	0.2396	0.2223	0.2177	0.2181	0.2371	0.2795
17.	0.3150	0.3102	0.2788	0.2393	0.2159	0.2524	0.3237	0.2305	0.2850	0.2610	0.2428	0.2354	0.2273	0.2315	0.2456	0.2901
63.	0.2813	0.2859	0.2632	0.2491	0.2333	0.2570	0.3168	0.2211	0.2910	0.2713	0.2424	0.2333	0.2198	0.2283	0.2364	0.2815

Run	CP243	CP244	CP245	CP246	CP247	CP248	CP249	CP250	CP251	CP252	CP257	CP258	CP259	CP260	CP261	CP262
69.	0.1914	0.2730	-0.2054	-0.2457	-0.1947	-0.0736	-0.2069	-0.2448	-0.1960	-0.0475	-0.0233	0.0045	-0.0301	-0.0001	-0.0472	-0.0260
68.	0.2340	0.2609	-0.0625	-0.0285	0.0145	0.0345	-0.0391	-0.0085	0.0297	0.0947	-0.2041	-0.0795	-0.0620	-0.0275	-0.0378	-0.0215
216.	0.2165	0.2471	-0.0635	-0.0311	0.0189	0.0489	-0.0263	-0.0109	0.0363	0.0909	-0.1793	-0.0808	-0.0574	-0.0057	-0.0234	-0.0247
8.	0.2399	0.2606	-0.0431	-0.0184	0.0255	0.0370	-0.0229	0.0097	0.0567	0.1074	-0.2082	-0.0885	-0.0527	-0.0384	-0.0305	-0.0186
66.	0.2444	0.2736	-0.0342	-0.0020	0.0376	0.0472	-0.0136	0.0234	0.0604	0.1208	-0.1959	-0.0667	-0.0372	-0.0059	-0.0055	0.0146
218.	0.2710	0.2865	-0.0220	0.0073	0.0533	0.0642	0.0037	0.0388	0.0811	0.1396	-0.2557	-0.1086	-0.0677	-0.0448	-0.0372	-0.0222
214.	0.2663	0.2742	-0.0337	-0.0033	0.0471	0.0554	-0.0072	0.0322	0.0807	0.1379	-0.2641	-0.1213	-0.0756	-0.0573	-0.0485	-0.0348
64.	0.2779	0.2660	-0.0317	0.0082	0.0601	0.0681	-0.0042	0.0459	0.0923	0.1541	-0.2732	-0.1161	-0.0726	-0.0389	-0.0333	-0.0096
118.	0.2942	0.3013	-0.0189	0.0177	0.0672	0.0676	0.0089	0.0431	0.0989	0.1640	-0.2692	-0.1216	-0.0731	-0.0452	-0.0341	-0.0173
15.	0.2825	0.2901	-0.0177	0.0192	0.0710	0.0690	0.0095	0.0506	0.1050	0.1712	-0.2828	-0.1247	-0.0737	-0.0476	-0.0355	-0.0194
67.	0.2883	0.3029	-0.0092	0.0240	0.0626	0.0536	0.0031	0.0449	0.0929	0.1671	-0.2395	-0.0915	-0.0484	-0.0172	-0.0076	0.0174
116.	0.3036	0.2969	-0.0324	-0.0021	0.0712	0.1075	0.0144	0.0441	0.1101	0.1705	-0.2391	-0.1104	-0.0631	-0.0194	-0.0171	-0.0068
17.	0.3163	0.3065	-0.0289	-0.0020	0.0749	0.1092	0.0103	0.0480	0.1162	0.1790	-0.2665	-0.1234	-0.0694	-0.0447	-0.0291	-0.0120
63.	0.2991	0.2893	-0.0150	0.0116	0.0703	0.0976	0.0104	0.0489	0.1077	0.1756	-0.2195	-0.0831	-0.0432	-0.0118	-0.0065	0.0145

Table IV. Concluded

Run	CP263	CP264	CP265	CP266	CP267	CP268	CP269	CP270	CP271	CP272	CP273	CP274	CP275	CP276	CP277	CP278
69.	-0.1476	-0.1278	-0.1460	-0.0941	-0.0922	-0.0307	-0.0445	0.0039	-0.0213	-0.0292	-0.0867	-0.0003	0.2806	0.3623	0.2927	0.3235
68.	-0.0358	-0.0236	-0.0303	-0.0106	-0.0119	0.0031	-0.0251	-0.0374	-0.0684	-0.0709	0.0108	-0.0594	0.2609	0.2805	0.3111	0.3789
216.	-0.0348	-0.0247	-0.0171	-0.0171	0.0010	0.0263	-0.0124	-0.0083	-0.0406	-0.0832	0.0266	-0.0394	0.2753	0.3263	0.3051	0.3881
8.	-0.0161	-0.0113	-0.0104	0.0002	-0.0009	-0.0045	-0.0170	-0.0473	-0.0698	-0.0584	-0.0215	-0.0662	0.2540	0.2361	0.3090	0.3549
66.	-0.0141	-0.0043	-0.0072	0.0103	0.0102	0.0207	-0.0016	-0.0248	-0.0569	-0.0498	0.0073	-0.0470	0.2600	0.2586	0.2933	0.3652
218.	-0.0023	0.0030	0.0038	0.0129	0.0091	0.0025	-0.0200	-0.0613	-0.0915	-0.0781	-0.0146	-0.0811	0.2834	0.2819	0.3588	0.4017
214.	0.0000	0.0048	0.0060	0.0151	0.0112	0.0011	-0.0239	-0.0698	-0.1008	-0.0863	-0.0110	-0.0893	0.2838	0.2833	0.3696	0.4109
64.	0.0010	0.0114	0.0104	0.0258	0.0183	0.0140	-0.0203	-0.0629	-0.1011	-0.0850	-0.0088	-0.0820	0.2856	0.2882	0.3500	0.4081
118.	0.0053	0.0124	0.0154	0.0253	0.0217	0.0130	-0.0160	-0.0665	-0.1033	-0.0887	0.0030	-0.0924	0.2867	0.2686	0.3471	0.4083
15.	0.0114	0.0178	0.0216	0.0308	0.0277	0.0168	-0.0139	-0.0663	-0.1032	-0.0902	0.0106	-0.0941	0.2960	0.2804	0.3603	0.4169
67.	0.0072	0.0168	0.0165	0.0345	0.0320	0.0334	0.0081	-0.0364	-0.0810	-0.0619	0.0010	-0.0690	0.2723	0.2341	0.2954	0.3718
116.	0.0152	0.0229	0.0297	0.0348	0.0384	0.0336	-0.0154	-0.0509	-0.0862	-0.0935	0.0401	-0.0676	0.3417	0.3920	0.4292	0.4735
17.	0.0210	0.0277	0.0320	0.0426	0.0353	0.0140	-0.0246	-0.0806	-0.1105	-0.0902	0.0045	-0.0863	0.3420	0.3762	0.4554	0.4734
63.	0.0182	0.0284	0.0302	0.0464	0.0414	0.0364	0.0025	-0.0404	-0.0804	-0.0643	0.0166	-0.0595	0.3205	0.3408	0.3928	0.4290

Run	CP279	CP280	CP281	CP282	CP283	CP284
69.	0.3050	0.3108	0.3107	0.3643	0.2885	0.2002
68.	0.3981	0.3842	0.3448	0.2973	0.2672	0.3010
216.	0.4087	0.3609	0.3455	0.2955	0.2715	0.3146
8.	0.3743	0.3863	0.3402	0.2819	0.2715	0.2917
66.	0.4015	0.4023	0.3567	0.3047	0.2818	0.3089
218.	0.4033	0.3880	0.3286	0.2600	0.2665	0.3118
214.	0.4084	0.3881	0.3106	0.2442	0.2676	0.3091
64.	0.4177	0.4136	0.3341	0.2712	0.2851	0.3465
118.	0.4280	0.4403	0.3708	0.2971	0.3055	0.3599
15.	0.4304	0.4080	0.3380	0.2726	0.2921	0.3361
67.	0.4174	0.4363	0.3980	0.3429	0.3172	0.3334
116.	0.4432	0.3409	0.2645	0.2108	0.2555	0.3411
17.	0.4300	0.3392	0.2266	0.1814	0.2578	0.3484
63.	0.4140	0.3710	0.2910	0.2449	0.2764	0.3360

Table V. Pressure Coefficients for $l/h = 11.7$ Cavity

Run	M_∞	$R_\infty \times 10^{-6}$	p_∞	$p_{t\infty}$	q_∞	$T_{t\infty}$	CP1	CP2	CP3	CP4	CP5	CP6	CP7	CP8	CP9	CP10
74.	0.30	1.0	1065.1	1132.3	65.7	83.7	0.7999	-0.2404	-0.2871	-0.2163	-0.2275	-0.1705	-0.1578	-0.0979	-0.1020	-0.0732
273.	0.59	1.6	757.5	962.2	187.5	82.4	0.9715	-0.2143	-0.2962	-0.2250	-0.2183	-0.1771	-0.1453	-0.0976	-0.0816	-0.0667
39.	0.60	1.6	799.8	1020.4	201.8	89.9	0.9341	-0.2413	-0.3043	-0.2363	-0.2123	-0.1737	-0.1483	-0.0820	-0.0853	-0.0671
136.	0.60	3.4	1666.9	2124.0	418.2	88.3	0.9671	-0.3027	-0.2959	-0.2198	-0.2012	-0.1702	-0.1083	-0.0819	-0.0712	-0.0601
173.	0.80	1.5	513.2	784.2	231.4	85.7	1.1199	-0.2977	-0.3678	-0.2834	-0.2632	-0.2101	-0.1555	-0.1026	-0.0849	-0.0674
41.	0.80	3.3	1213.6	1846.0	540.8	115.0	1.1110	-0.3226	-0.3702	-0.2584	-0.2401	-0.1962	-0.1480	-0.0900	-0.0692	-0.0552
236.	0.80	4.0	1393.0	2123.6	624.2	97.4	1.1154	-0.3500	-0.3710	-0.2613	-0.2387	-0.1972	-0.1392	-0.0896	-0.0688	-0.0562
172.	0.85	1.6	545.1	870.8	273.2	118.0	1.1617	-0.2696	-0.4267	-0.3087	-0.2834	-0.2172	-0.1623	-0.0954	-0.0816	-0.0583
240.	0.85	3.3	1117.3	1794.0	566.5	115.7	1.1554	-0.2936	-0.4529	-0.2844	-0.2589	-0.2071	-0.1481	-0.0895	-0.0661	-0.0509
37.	0.85	4.0	1324.2	2121.2	667.9	110.7	1.1524	-0.3307	-0.4712	-0.2985	-0.2590	-0.2077	-0.1421	-0.0815	-0.0682	-0.0517
272.	0.89	1.6	518.6	869.6	288.9	116.9	1.2067	-0.2005	-0.4195	-0.4270	-0.4121	-0.2667	-0.1661	-0.0839	-0.0637	-0.0404
38.	0.90	1.9	571.1	966.6	324.3	95.8	1.1814	-0.1866	-0.4600	-0.4206	-0.3905	-0.2362	-0.1503	-0.0696	-0.0580	-0.0383
140.	0.90	3.3	1025.4	1733.0	580.5	112.7	1.1897	-0.2023	-0.4862	-0.4222	-0.3936	-0.2306	-0.1458	-0.0721	-0.0492	-0.0335
271.	0.95	1.8	516.3	921.0	324.9	117.6	1.2455	-0.1047	-0.3148	-0.3265	-0.3786	-0.3702	-0.3794	-0.2959	-0.1806	-0.0663

Run	CP11	CP12	CP13	CP14	CP15	CP16	CP17	CP18	CP19	CP20	CP21	CP33	CP34	CP35	CP36	CP37
74.	-0.1120	-0.0830	-0.0875	-0.0471	-0.0476	-0.0762	-0.0901	-0.0452	-0.0749	-0.0597	-0.0687	-0.0878	-0.0755	-0.1054	-0.0652	-0.0818
273.	-0.0846	-0.0694	-0.0547	-0.0360	-0.0240	-0.0581	-0.0554	-0.0374	-0.0453	-0.0490	-0.0314	-0.0525	-0.0601	-0.0794	-0.0580	-0.0592
39.	-0.0930	-0.0717	-0.0469	-0.0373	-0.0373	-0.0625	-0.0613	-0.0375	-0.0489	-0.0271	-0.0600	-0.0536	-0.0534	-0.0737	-0.0478	-0.0754
136.	-0.0758	-0.0617	-0.0362	-0.0334	-0.0187	-0.0541	-0.0413	-0.0328	-0.0366	-0.0341	-0.0331	-0.0396	-0.0569	-0.0701	-0.0581	-0.0568
173.	-0.0830	-0.0681	-0.0452	-0.0300	-0.0217	-0.0548	-0.0499	-0.0346	-0.0392	-0.0340	-0.0286	-0.0392	-0.0463	-0.0614	-0.0486	-0.0628
41.	-0.0678	-0.0512	-0.0305	-0.0253	-0.0065	-0.0401	-0.0339	-0.0263	-0.0293	-0.0287	-0.0147	-0.0294	-0.0419	-0.0587	-0.0499	-0.0486
236.	-0.0667	-0.0512	-0.0292	-0.0254	-0.0060	-0.0403	-0.0313	-0.0266	-0.0279	-0.0284	-0.0137	-0.0263	-0.0432	-0.0562	-0.0514	-0.0476
172.	-0.0788	-0.0592	-0.0368	-0.0203	-0.0182	-0.0488	-0.0484	-0.0267	-0.0366	-0.0211	-0.0281	-0.0370	-0.0336	-0.0553	-0.0387	-0.0626
240.	-0.0625	-0.0464	-0.0251	-0.0208	-0.0025	-0.0364	-0.0304	-0.0241	-0.0268	-0.0244	-0.0105	-0.0246	-0.0364	-0.0522	-0.0461	-0.0475
37.	-0.0660	-0.0492	-0.0204	-0.0189	-0.0084	-0.0380	-0.0317	-0.0236	-0.0260	-0.0124	-0.0226	-0.0213	-0.0341	-0.0454	-0.0428	-0.0510
272.	-0.0606	-0.0432	-0.0217	-0.0082	-0.0076	-0.0407	-0.0407	-0.0209	-0.0298	-0.0130	-0.0188	-0.0268	-0.0232	-0.0421	-0.0306	-0.0528
38.	-0.0576	-0.0415	-0.0111	-0.0100	-0.0091	-0.0386	-0.0350	-0.0214	-0.0263	-0.0016	-0.0294	-0.0210	-0.0248	-0.0384	-0.0297	-0.0575
140.	-0.0479	-0.0341	-0.0097	-0.0103	0.0017	-0.0318	-0.0267	-0.0212	-0.0236	-0.0133	-0.0118	-0.0177	-0.0286	-0.0410	-0.0391	-0.0465
271.	-0.0285	0.0020	0.0191	0.0294	0.0254	-0.0176	-0.0224	-0.0118	-0.0215	-0.0102	-0.0059	-0.0211	-0.0218	-0.0389	-0.0337	-0.0539

Table V. Continued

Run	CP38	CP39	CP40	CP41	CP42	CP43	CP44	CP45	CP46	CP47	CP48	CP49	CP50	CP65	CP66	CP67
74.	-0.0498	-0.0186	0.0371	-0.0788	-0.0376	0.0172	-0.1378	-0.1590	-0.1278	-0.1441	-0.1460	-0.1650	-0.1333	-0.1674	-0.1460	-0.1389
273.	-0.0470	0.0017	0.0569	-0.0479	-0.0347	0.0480	-0.1224	-0.1308	-0.1108	-0.1191	-0.1327	-0.1261	-0.1243	-0.1363	-0.1245	-0.1169
39.	-0.0390	0.0069	0.0541	-0.0615	-0.0310	0.0576	-0.1197	-0.1309	-0.1352	-0.1361	-0.1143	-0.1487	-0.1150	-0.1364	-0.1341	-0.1146
136.	-0.0423	0.0119	0.0568	-0.0420	-0.0310	0.0575	-0.1148	-0.1184	-0.1140	-0.1142	-0.1152	-0.1173	-0.1129	-0.1236	-0.1250	-0.1098
173.	-0.0505	-0.0051	0.0646	-0.0414	-0.0414	0.0620	-0.1061	-0.1157	-0.1029	-0.1044	-0.1102	-0.1167	-0.1069	-0.1215	-0.1140	-0.1106
41.	-0.0463	0.0011	0.0653	-0.0298	-0.0351	0.0619	-0.0946	-0.1001	-0.0833	-0.0873	-0.1020	-0.0955	-0.0948	-0.1071	-0.0951	-0.1001
236.	-0.0460	0.0027	0.0656	-0.0260	-0.0351	0.0634	-0.0943	-0.0973	-0.0837	-0.0849	-0.0989	-0.0930	-0.0943	-0.1049	-0.0962	-0.0996
172.	-0.0455	-0.0039	0.0708	-0.0364	-0.0364	0.0678	-0.0940	-0.1084	-0.0929	-0.0959	-0.0977	-0.1132	-0.0924	-0.1195	-0.1030	-0.1058
240.	-0.0462	-0.0027	0.0650	-0.0279	-0.0357	0.0625	-0.0859	-0.0923	-0.0762	-0.0789	-0.0918	-0.0877	-0.0858	-0.0995	-0.0874	-0.0925
37.	-0.0424	0.0010	0.0658	-0.0273	-0.0333	0.0688	-0.0825	-0.0883	-0.0824	-0.0823	-0.0834	-0.0930	-0.0814	-0.0962	-0.0921	-0.0891
272.	-0.0391	-0.0032	0.0741	-0.0265	-0.0310	0.0712	-0.0754	-0.0899	-0.0742	-0.0749	-0.0781	-0.0928	-0.0740	-0.0996	-0.0830	-0.0888
38.	-0.0373	0.0005	0.0713	-0.0309	-0.0318	0.0765	-0.0760	-0.0858	-0.0855	-0.0821	-0.0707	-0.0988	-0.0721	-0.0943	-0.0919	-0.0840
140.	-0.0420	-0.0040	0.0641	-0.0250	-0.0330	0.0651	-0.0710	-0.0773	-0.0666	-0.0676	-0.0740	-0.0798	-0.0710	-0.0864	-0.0787	-0.0790
271.	-0.0448	-0.0136	0.0668	-0.0253	-0.0374	0.0624	-0.0683	-0.0817	-0.0616	-0.0619	-0.0726	-0.0805	-0.0673	-0.0909	-0.0737	-0.0804

Run	CP68	CP80	CP84	CP85	CP97	CP98	CP99	CP100	CP101	CP102	CP103	CP104	CP105	CP106	CP107	CP108
74.	0.0361	-0.1467	-0.1480	-0.1681	-0.1657	-0.1486	-0.1684	-0.1343	-0.1708	-0.1488	-0.1631	-0.1575	-0.1831	-0.1487	-0.1641	-0.1180
273.	0.0402	-0.1319	-0.1300	-0.1395	-0.1317	-0.1321	-0.1405	-0.1185	-0.1411	-0.1348	-0.1373	-0.1431	-0.1473	-0.1317	-0.1353	-0.1079
39.	0.0510	-0.1225	-0.1316	-0.1374	-0.1321	-0.1197	-0.1287	-0.1306	-0.1328	-0.1245	-0.1387	-0.1320	-0.1469	-0.1385	-0.1350	-0.1098
136.	0.0486	-0.1185	-0.1242	-0.1255	-0.1187	-0.1186	-0.1221	-0.1174	-0.1243	-0.1219	-0.1265	-0.1314	-0.1339	-0.1289	-0.1262	-0.1052
173.	0.0306	-0.1155	-0.1149	-0.1204	-0.1135	-0.1160	-0.1218	-0.1117	-0.1211	-0.1161	-0.1183	-0.1184	-0.1244	-0.1157	-0.1201	-0.1056
41.	0.0343	-0.1023	-0.1007	-0.1059	-0.1019	-0.1025	-0.1094	-0.0920	-0.1092	-0.1047	-0.1050	-0.1096	-0.1107	-0.1032	-0.1074	-0.0937
236.	0.0340	-0.1008	-0.0991	-0.1022	-0.0985	-0.1012	-0.1066	-0.0901	-0.1055	-0.1031	-0.1020	-0.1077	-0.1087	-0.1018	-0.1050	-0.0928
172.	0.0345	-0.1047	-0.1044	-0.1121	-0.1093	-0.1021	-0.1163	-0.1033	-0.1145	-0.1035	-0.1115	-0.1066	-0.1166	-0.1064	-0.1123	-0.0966
240.	0.0271	-0.0942	-0.0920	-0.0968	-0.0928	-0.0944	-0.1010	-0.0856	-0.0990	-0.0948	-0.0951	-0.0990	-0.1012	-0.0946	-0.0986	-0.0863
37.	0.0308	-0.0873	-0.0908	-0.0923	-0.0886	-0.0870	-0.0905	-0.0885	-0.0911	-0.0885	-0.0938	-0.0939	-0.0993	-0.0953	-0.0960	-0.0868
272.	0.0308	-0.0866	-0.0846	-0.0922	-0.0898	-0.0842	-0.0981	-0.0843	-0.0954	-0.0844	-0.0913	-0.0878	-0.0972	-0.0864	-0.0931	-0.0799
38.	0.0344	-0.0820	-0.0865	-0.0892	-0.0842	-0.0809	-0.0861	-0.0900	-0.0870	-0.0823	-0.0908	-0.0832	-0.0930	-0.0906	-0.0905	-0.0822
140.	0.0234	-0.0791	-0.0801	-0.0829	-0.0774	-0.0790	-0.0841	-0.0781	-0.0835	-0.0801	-0.0827	-0.0826	-0.0863	-0.0826	-0.0847	-0.0757
271.	0.0188	-0.0819	-0.0773	-0.0849	-0.0810	-0.0796	-0.0926	-0.0760	-0.0884	-0.0790	-0.0825	-0.0812	-0.0875	-0.0768	-0.0835	-0.0707

Table V. Continued

Run	CP109	CP110	CP111	CP112	CP113	CP114	CP115	CP123	CP124	CP129	CP130	CP131	CP132	CP133	CP134	CP135
74.	-0.0701	-0.0047	0.0212	0.0574	0.0524	0.1076	0.1042	0.0760	0.1624	-0.1773	-0.1495	-0.1667	-0.1491	-0.1734	-0.1455	-0.1864
273.	-0.0547	-0.0047	0.0451	0.0745	0.0907	0.1254	0.1443	0.0831	0.1489	-0.1452	-0.1354	-0.1430	-0.1351	-0.1424	-0.1284	-0.1576
39.	-0.0624	0.0114	0.0385	0.0732	0.0808	0.1199	0.1364	0.0913	0.1453	-0.1340	-0.1245	-0.1365	-0.1286	-0.1421	-0.1386	-0.1521
136.	-0.0486	0.0089	0.0510	0.0818	0.1010	0.1265	0.1487	0.0947	0.1444	-0.1248	-0.1225	-0.1271	-0.1258	-0.1298	-0.1290	-0.1465
173.	-0.0741	-0.0208	0.0300	0.0736	0.0988	0.1355	0.1604	0.0513	0.0857	-0.1223	-0.1175	-0.1240	-0.1196	-0.1253	-0.1175	-0.1330
41.	-0.0605	-0.0186	0.0376	0.0779	0.1080	0.1404	0.1644	0.0538	0.0887	-0.1136	-0.1032	-0.1121	-0.1061	-0.1103	-0.1001	-0.1203
236.	-0.0603	-0.0193	0.0379	0.0778	0.1095	0.1410	0.1665	0.0533	0.0872	-0.1099	-0.1028	-0.1079	-0.1050	-0.1074	-0.1000	-0.1198
172.	-0.0726	-0.0177	0.0269	0.0753	0.1009	0.1463	0.1676	0.0433	0.0736	-0.1177	-0.1023	-0.1189	-0.1092	-0.1199	-0.1095	-0.1227
240.	-0.0597	-0.0227	0.0298	0.0728	0.1058	0.1412	0.1680	0.0397	0.0665	-0.1038	-0.0946	-0.1035	-0.0982	-0.1018	-0.0929	-0.1095
37.	-0.0626	-0.0167	0.0293	0.0760	0.1076	0.1446	0.1724	0.0443	0.0640	-0.0941	-0.0883	-0.0963	-0.0946	-0.0990	-0.0974	-0.1047
272.	-0.0622	-0.0171	0.0261	0.0742	0.1031	0.1508	0.1737	0.0335	0.0568	-0.0988	-0.0837	-0.0994	-0.0901	-0.0998	-0.0888	-0.1018
38.	-0.0623	-0.0092	0.0260	0.0739	0.1026	0.1454	0.1720	0.0411	0.0555	-0.0869	-0.0821	-0.0910	-0.0882	-0.0956	-0.0945	-0.0973
140.	-0.0564	-0.0202	0.0242	0.0691	0.1033	0.1427	0.1709	0.0313	0.0491	-0.0857	-0.0789	-0.0872	-0.0847	-0.0883	-0.0836	-0.0925
271.	-0.0563	-0.0242	0.0166	0.0618	0.0944	0.1408	0.1666	0.0165	0.0375	-0.0928	-0.0791	-0.0935	-0.0847	-0.0921	-0.0787	-0.0926

Run	CP136	CP137	CP138	CP139	CP140	CP141	CP142	CP143	CP144	CP145	CP146	CP147	CP148	CP149	CP150	CP151
74.	-0.1738	-0.1518	-0.0412	0.0409	0.1400	0.1547	-0.1512	-0.1711	-0.1499	-0.1882	-0.1419	-0.1787	-0.1693	-0.1968	-0.1301	-0.0523
273.	-0.1572	-0.1269	-0.0562	0.0270	0.1165	0.1697	-0.1394	-0.1466	-0.1351	-0.1552	-0.1296	-0.1476	-0.1569	-0.1704	-0.1258	-0.0567
39.	-0.1436	-0.1208	-0.0354	0.0425	0.1254	0.1639	-0.1207	-0.1306	-0.1301	-0.1395	-0.1282	-0.1429	-0.1404	-0.1489	-0.1109	-0.0491
136.	-0.1420	-0.1141	-0.0469	0.0344	0.1198	0.1715	-0.1240	-0.1274	-0.1262	-0.1318	-0.1261	-0.1347	-0.1432	-0.1456	-0.1151	-0.0472
173.	-0.1346	-0.1240	-0.0791	-0.0222	0.0559	0.1204	-0.1191	-0.1259	-0.1218	-0.1319	-0.1167	-0.1266	-0.1286	-0.1398	-0.1184	-0.0828
41.	-0.1249	-0.1105	-0.0737	-0.0182	0.0569	0.1249	-0.1126	-0.1165	-0.1095	-0.1216	-0.1075	-0.1140	-0.1192	-0.1318	-0.1109	-0.0725
236.	-0.1254	-0.1091	-0.0767	-0.0170	0.0578	0.1254	-0.1118	-0.1131	-0.1075	-0.1167	-0.1043	-0.1114	-0.1181	-0.1294	-0.1120	-0.0722
172.	-0.1199	-0.1178	-0.0727	-0.0277	0.0476	0.1056	-0.1076	-0.1179	-0.1143	-0.1261	-0.1064	-0.1188	-0.1136	-0.1279	-0.1060	-0.0784
240.	-0.1141	-0.1045	-0.0750	-0.0298	0.0369	0.0996	-0.1032	-0.1068	-0.1033	-0.1135	-0.0991	-0.1042	-0.1090	-0.1201	-0.1027	-0.0717
37.	-0.1056	-0.1001	-0.0665	-0.0215	0.0417	0.0986	-0.0926	-0.0965	-0.0988	-0.1014	-0.0955	-0.0992	-0.0975	-0.1051	-0.0948	-0.0685
272.	-0.1000	-0.1007	-0.0664	-0.0341	0.0285	0.0808	-0.0896	-0.0989	-0.0948	-0.1069	-0.0875	-0.0988	-0.0942	-0.1079	-0.0909	-0.0717
38.	-0.0954	-0.0965	-0.0594	-0.0239	0.0339	0.0834	-0.0813	-0.0888	-0.0920	-0.0935	-0.0872	-0.0935	-0.0879	-0.0954	-0.0850	-0.0661
140.	-0.0945	-0.0908	-0.0660	-0.0308	0.0241	0.0757	-0.0846	-0.0887	-0.0887	-0.0927	-0.0837	-0.0880	-0.0899	-0.0974	-0.0870	-0.0663
271.	-0.0933	-0.0930	-0.0683	-0.0425	0.0088	0.0555	-0.0868	-0.0948	-0.0897	-0.1034	-0.0828	-0.0910	-0.0872	-0.1013	-0.0863	-0.0696

Table V. Continued

Run	CP152	CP153	CP154	CP155	CP156	CP157	CP158	CP159	CP161	CP162	CP163	CP164	CP165	CP166	CP167	CP168
74.	0.0662	0.1277	0.1865	-0.1689	-0.1517	-0.1823	-0.1243	0.1281	0.1555	0.1847	0.1704	0.1969	0.1987	0.2590	0.2973	0.3792
273.	0.0372	0.1260	0.1863	-0.1431	-0.1391	-0.1517	-0.1131	0.1166	0.1958	0.2062	0.2154	0.2289	0.2524	0.2901	0.3464	0.4100
39.	0.0522	0.1201	0.1789	-0.1341	-0.1294	-0.1434	-0.1179	0.1271	0.1762	0.2055	0.1953	0.2206	0.2354	0.2903	0.3307	0.4067
136.	0.0434	0.1270	0.1792	-0.1256	-0.1258	-0.1357	-0.1099	0.1267	0.1972	0.2097	0.2162	0.2314	0.2555	0.2949	0.3474	0.4148
173.	-0.0143	0.0601	0.1373	-0.1253	-0.1209	-0.1273	-0.1145	0.0580	0.1723	0.2122	0.2339	0.2589	0.2826	0.3222	0.3658	0.4163
41.	-0.0113	0.0651	0.1408	-0.1080	-0.1075	-0.1171	-0.0987	0.0576	0.1775	0.2114	0.2389	0.2597	0.2878	0.3220	0.3675	0.4099
236.	-0.0149	0.0668	0.1353	-0.1057	-0.1073	-0.1141	-0.0975	0.0571	0.1800	0.2124	0.2426	0.2639	0.2902	0.3225	0.3731	0.4153
172.	-0.0140	0.0464	0.1276	-0.1166	-0.1093	-0.1185	-0.1059	0.0469	0.1584	0.2142	0.2345	0.2694	0.2906	0.3353	0.3712	0.4196
240.	-0.0220	0.0425	0.1120	-0.1008	-0.0999	-0.1066	-0.0933	0.0357	0.1576	0.2010	0.2352	0.2603	0.2913	0.3240	0.3640	0.4023
37.	-0.0162	0.0400	0.1083	-0.0928	-0.0924	-0.0982	-0.0968	0.0427	0.1532	0.2030	0.2312	0.2628	0.2897	0.3263	0.3612	0.4045
272.	-0.0212	0.0272	0.1004	-0.0975	-0.0908	-0.0989	-0.0892	0.0278	0.1339	0.1960	0.2261	0.2664	0.2904	0.3316	0.3616	0.4001
38.	-0.0165	0.0285	0.0944	-0.0905	-0.0878	-0.0918	-0.0934	0.0348	0.1300	0.1923	0.2181	0.2603	0.2824	0.3263	0.3524	0.3952
140.	-0.0245	0.0238	0.0860	-0.0850	-0.0854	-0.0884	-0.0863	0.0244	0.1286	0.1806	0.2176	0.2510	0.2794	0.3127	0.3449	0.3779
271.	-0.0320	0.0107	0.0725	-0.0919	-0.0882	-0.0927	-0.0799	0.0059	0.1058	0.1613	0.1999	0.2401	0.2691	0.3060	0.3335	0.3632

Run	CP169	CP170	CP171	CP172	CP173	CP174	CP175	CP176	CP177	CP178	CP179	CP180	CP181	CP182	CP183	CP184
74.	0.3913	0.4514	0.4439	0.4670	0.4139	0.1875	0.1708	0.1851	0.1768	0.2260	0.2468	0.3302	0.3714	0.4141	0.4132	0.4489
273.	0.4324	0.4763	0.4767	0.4915	0.4485	0.1990	0.2038	0.2164	0.2324	0.2552	0.2979	0.3690	0.4165	0.4394	0.4538	0.4747
39.	0.4302	0.4586	0.4804	0.4730	0.4308	0.1999	0.1995	0.2092	0.2079	0.2607	0.2890	0.3477	0.3935	0.4248	0.4380	0.4621
136.	0.4463	0.4789	0.4913	0.4945	0.4520	0.1995	0.2061	0.2157	0.2291	0.2579	0.2998	0.3642	0.4171	0.4411	0.4601	0.4805
173.	0.4331	0.4636	0.4724	0.4735	0.4500	0.1862	0.2142	0.2414	0.2602	0.2929	0.3288	0.3839	0.4164	0.4368	0.4514	0.4717
41.	0.4270	0.4601	0.4640	0.4699	0.4464	0.1821	0.2153	0.2414	0.2676	0.2898	0.3310	0.3844	0.4136	0.4277	0.4441	0.4640
236.	0.4363	0.4667	0.4701	0.4777	0.4517	0.1823	0.2148	0.2407	0.2687	0.2906	0.3318	0.3852	0.4187	0.4318	0.4493	0.4681
172.	0.4336	0.4622	0.4710	0.4695	0.4506	0.1812	0.2148	0.2476	0.2660	0.3082	0.3388	0.3897	0.4177	0.4398	0.4507	0.4727
240.	0.4171	0.4453	0.4504	0.4525	0.4382	0.1625	0.2044	0.2399	0.2703	0.2964	0.3329	0.3797	0.4085	0.4242	0.4404	0.4566
37.	0.4207	0.4398	0.4549	0.4402	0.4344	0.1656	0.2058	0.2392	0.2637	0.3005	0.3336	0.3757	0.4043	0.4208	0.4345	0.4508
272.	0.4102	0.4368	0.4423	0.4372	0.4313	0.1568	0.2000	0.2420	0.2665	0.3077	0.3358	0.3786	0.4016	0.4215	0.4307	0.4497
38.	0.4083	0.4229	0.4386	0.4204	0.4198	0.1540	0.1944	0.2350	0.2543	0.3052	0.3300	0.3647	0.3897	0.4132	0.4240	0.4406
140.	0.3916	0.4117	0.4199	0.4046	0.4109	0.1408	0.1856	0.2266	0.2577	0.2911	0.3227	0.3591	0.3826	0.3981	0.4117	0.4250
271.	0.3710	0.3967	0.3958	0.3911	0.3982	0.1210	0.1669	0.2140	0.2472	0.2834	0.3120	0.3515	0.3715	0.3865	0.3954	0.4101

Table V. Continued

Run	CP185	CP186	CP188	CP189	CP190	CP191	CP193	CP194	CP195	CP196	CP197	CP198	CP199	CP200	CP201	CP202
74.	0.4314	0.4165	0.2278	0.3645	0.4581	0.4673	0.1259	0.1995	0.1904	0.2317	0.2334	0.2813	0.2689	0.3232	0.3230	0.3662
273.	0.4715	0.4392	0.2631	0.4113	0.4844	0.5029	0.1748	0.2270	0.2431	0.2668	0.2947	0.3244	0.3284	0.3672	0.3890	0.3958
39.	0.4487	0.4243	0.2458	0.4043	0.4532	0.4690	0.1621	0.2143	0.2155	0.2637	0.2564	0.3122	0.3459	0.3812	0.3789	0.4137
136.	0.4797	0.4401	0.2599	0.4218	0.4815	0.4983	0.1804	0.2188	0.2380	0.2641	0.2915	0.3207	0.3435	0.3740	0.3964	0.4041
173.	0.4657	0.4433	0.2930	0.4201	0.4678	0.4832	0.1961	0.2502	0.2681	0.2971	0.3193	0.3507	0.3626	0.3923	0.4028	0.4067
41.	0.4606	0.4368	0.2927	0.4168	0.4662	0.4835	0.2044	0.2536	0.2740	0.2943	0.3266	0.3469	0.3576	0.3835	0.4007	0.3977
236.	0.4659	0.4393	0.2953	0.4213	0.4731	0.4889	0.2055	0.2473	0.2695	0.2926	0.3268	0.3488	0.3631	0.3882	0.4092	0.4088
172.	0.4637	0.4503	0.3046	0.4219	0.4654	0.4775	0.2000	0.2613	0.2714	0.3065	0.3229	0.3580	0.3712	0.4012	0.4051	0.4153
240.	0.4465	0.4303	0.2992	0.4086	0.4530	0.4649	0.2053	0.2556	0.2760	0.2973	0.3286	0.3507	0.3613	0.3874	0.4021	0.3953
37.	0.4426	0.4254	0.2955	0.4104	0.4400	0.4538	0.2092	0.2545	0.2724	0.3004	0.3210	0.3481	0.3707	0.3921	0.3994	0.4035
272.	0.4363	0.4287	0.3065	0.4030	0.4396	0.4467	0.2078	0.2651	0.2746	0.3070	0.3213	0.3521	0.3639	0.3873	0.3868	0.3978
38.	0.4248	0.4176	0.2949	0.3989	0.4219	0.4302	0.2034	0.2501	0.2595	0.3002	0.3007	0.3432	0.3744	0.3936	0.3836	0.4029
140.	0.4105	0.4029	0.2893	0.3844	0.4165	0.4195	0.2046	0.2510	0.2681	0.2914	0.3134	0.3354	0.3474	0.3690	0.3744	0.3787
271.	0.3947	0.3961	0.2863	0.3659	0.4043	0.4027	0.2008	0.2524	0.2640	0.2883	0.3046	0.3282	0.3316	0.3516	0.3567	0.3629

Run	CP203	CP204	CP205	CP212	CP213	CP216	CP217	CP220	CP221	CP225	CP226	CP227	CP228	CP230	CP231	CP232
74.	0.3405	0.3548	0.3363	0.2313	0.2054	0.3873	0.3665	0.4523	0.4549	0.4822	0.5155	0.5382	0.5574	0.5905	0.5583	0.5423
273.	0.3921	0.3956	0.3965	0.2689	0.2587	0.4262	0.4222	0.4722	0.5025	0.5392	0.5478	0.5852	0.5881	0.6170	0.5968	0.5859
39.	0.3657	0.3649	0.3848	0.2535	0.2594	0.4278	0.4302	0.4878	0.4780	0.5384	0.5525	0.5611	0.6138	0.6054	0.6016	0.5656
136.	0.4012	0.4077	0.4116	0.2646	0.2666	0.4310	0.4347	0.4864	0.5006	0.5550	0.5578	0.5871	0.6020	0.6254	0.6147	0.5982
173.	0.3989	0.4049	0.4278	0.2969	0.2977	0.4407	0.4357	0.4691	0.4929	0.5570	0.5602	0.5833	0.5886	0.6015	0.5884	0.5740
41.	0.4015	0.3981	0.4160	0.2977	0.2984	0.4358	0.4322	0.4528	0.4909	0.5549	0.5550	0.5829	0.5828	0.6000	0.5830	0.5668
236.	0.4079	0.4144	0.4254	0.2980	0.3007	0.4382	0.4349	0.4689	0.4973	0.5529	0.5470	0.5770	0.5828	0.6172	0.5976	0.5802
172.	0.4015	0.4097	0.4329	0.3063	0.3100	0.4447	0.4394	0.4692	0.4909	0.5622	0.5736	0.5849	0.6002	0.6034	0.5917	0.5751
240.	0.3970	0.4041	0.4166	0.3011	0.3028	0.4292	0.4270	0.4482	0.4776	0.5431	0.5419	0.5665	0.5591	0.5727	0.5615	0.5518
37.	0.3919	0.3906	0.4150	0.2991	0.3073	0.4306	0.4284	0.4541	0.4720	0.5524	0.5511	0.5652	0.5772	0.5782	0.5692	0.5495
272.	0.3891	0.3995	0.4254	0.3071	0.3125	0.4248	0.4195	0.4444	0.4673	0.5435	0.5537	0.5628	0.5730	0.5804	0.5706	0.5594
38.	0.3775	0.3778	0.4152	0.2964	0.3122	0.4201	0.4179	0.4476	0.4498	0.5418	0.5456	0.5437	0.5702	0.5623	0.5681	0.5447
140.	0.3774	0.3768	0.3964	0.2930	0.2995	0.4027	0.3979	0.4182	0.4451	0.5340	0.5299	0.5458	0.5460	0.5450	0.5348	0.5190
271.	0.3645	0.3696	0.3903	0.2856	0.2893	0.3834	0.3816	0.3964	0.4281	0.5087	0.5146	0.5277	0.5211	0.5313	0.5221	0.5148

Table V. Continued

Run	CP233	CP245	CP246	CP247	CP248	CP257	CP258	CP259	CP260	CP261	CP262	CP263	CP264	CP265	CP266	CP267
74.	0.4926	0.0834	0.1918	0.3225	0.3084	-0.8008	-0.4826	-0.2964	-0.1999	-0.1783	-0.1210	0.0413	0.0573	0.0347	0.0632	0.0268
273.	0.5570	0.1219	0.2239	0.3726	0.3518	-0.7352	-0.5065	-0.3054	-0.2064	-0.1543	-0.1064	0.0816	0.0906	0.0846	0.1000	0.0773
39.	0.5465	0.1005	0.2176	0.3608	0.3449	-0.7156	-0.5078	-0.3125	-0.1840	-0.1498	-0.1136	0.0721	0.0848	0.0809	0.0899	0.0803
136.	0.5794	0.1251	0.2274	0.3778	0.3596	-0.7295	-0.5057	-0.3016	-0.1977	-0.1435	-0.1091	0.0884	0.0939	0.0936	0.1007	0.0868
173.	0.5603	0.1356	0.2491	0.3897	0.3816	-0.6992	-0.5216	-0.3451	-0.2279	-0.1689	-0.1209	0.1088	0.1218	0.1232	0.1346	0.1182
41.	0.5562	0.1431	0.2511	0.3867	0.3744	-0.6990	-0.5144	-0.3381	-0.2256	-0.1636	-0.1179	0.1158	0.1271	0.1315	0.1393	0.1215
236.	0.5657	0.1460	0.2540	0.3917	0.3794	-0.6998	-0.5200	-0.3388	-0.2269	-0.1636	-0.1197	0.1181	0.1275	0.1296	0.1396	0.1228
172.	0.5649	0.1374	0.2610	0.3956	0.3933	-0.6842	-0.4970	-0.3399	-0.2141	-0.1590	-0.1052	0.1211	0.1387	0.1406	0.1535	0.1352
240.	0.5438	0.1468	0.2546	0.3812	0.3798	-0.6800	-0.4894	-0.3271	-0.2221	-0.1589	-0.1112	0.1234	0.1368	0.1425	0.1508	0.1328
37.	0.5473	0.1419	0.2563	0.3836	0.3769	-0.6574	-0.4767	-0.3160	-0.1997	-0.1427	-0.0998	0.1239	0.1374	0.1441	0.1507	0.1397
272.	0.5508	0.1430	0.2619	0.3791	0.3911	-0.6199	-0.4171	-0.2792	-0.1697	-0.1181	-0.0650	0.1351	0.1551	0.1590	0.1720	0.1541
38.	0.5441	0.1328	0.2548	0.3739	0.3831	-0.6319	-0.4444	-0.3018	-0.1831	-0.1364	-0.0958	0.1292	0.1476	0.1540	0.1611	0.1538
140.	0.5205	0.1438	0.2515	0.3605	0.3667	-0.6353	-0.4329	-0.2896	-0.1912	-0.1349	-0.0919	0.1302	0.1460	0.1541	0.1621	0.1479
271.	0.5101	0.1374	0.2484	0.3470	0.3605	-0.5955	-0.3657	-0.2449	-0.1551	-0.1069	-0.0589	0.1382	0.1597	0.1674	0.1802	0.1614

Run	CP268	CP269	CP270	CP271	CP272	CP273	CP274	CP275	CP276	CP277	CP278	CP279	CP280	CP281	CP282	CP283
74.	0.0150	-0.0484	-0.1165	-0.1912	-0.1616	-0.0219	-0.1659	0.4271	0.5208	0.5650	0.5895	0.5675	0.6137	0.5698	0.5499	0.4637
273.	0.0482	-0.0089	-0.1179	-0.2058	-0.1768	0.0275	-0.1925	0.4772	0.5471	0.6186	0.6209	0.6139	0.6460	0.6282	0.6031	0.5184
39.	0.0685	-0.0071	-0.0946	-0.1881	-0.1938	0.1144	-0.1795	0.4780	0.5695	0.5887	0.6344	0.6422	0.6279	0.6258	0.5974	0.5088
136.	0.0598	0.0013	-0.1078	-0.1940	-0.1804	0.0801	-0.1847	0.4892	0.5570	0.6174	0.6332	0.6342	0.6392	0.6340	0.6065	0.5181
173.	0.0895	0.0187	-0.1162	-0.2446	-0.2307	0.1053	-0.2347	0.5119	0.5768	0.6151	0.6121	0.6026	0.6191	0.6253	0.6131	0.5364
41.	0.0871	0.0209	-0.1172	-0.2389	-0.2169	0.0904	-0.2281	0.5020	0.5553	0.6098	0.6087	0.6004	0.6267	0.6156	0.5841	0.5137
236.	0.0880	0.0228	-0.1182	-0.2401	-0.2180	0.1010	-0.2298	0.5034	0.5565	0.6157	0.6107	0.6003	0.6287	0.6177	0.5925	0.5204
172.	0.1103	0.0325	-0.1007	-0.2428	-0.2304	0.1281	-0.2284	0.5275	0.5966	0.6201	0.6161	0.6006	0.6064	0.6074	0.6016	0.5249
240.	0.0982	0.0320	-0.1106	-0.2441	-0.2217	0.1028	-0.2326	0.4953	0.5498	0.5933	0.5821	0.5660	0.5846	0.5779	0.5584	0.4923
37.	0.1111	0.0388	-0.0949	-0.2228	-0.2143	0.1472	-0.2135	0.5039	0.5637	0.5928	0.5971	0.5902	0.5882	0.5994	0.5735	0.5063
272.	0.1285	0.0541	-0.0726	-0.2106	-0.1946	0.1455	-0.1933	0.5069	0.5736	0.5920	0.5797	0.5628	0.5885	0.6034	0.5998	0.5259
38.	0.1340	0.0532	-0.0711	-0.2207	-0.2272	0.1917	-0.2121	0.5052	0.5776	0.5692	0.5782	0.5743	0.5528	0.5774	0.5706	0.5019
140.	0.1169	0.0488	-0.0874	-0.2267	-0.2102	0.1391	-0.2145	0.4854	0.5405	0.5684	0.5552	0.5396	0.5486	0.5595	0.5474	0.4826
271.	0.1329	0.0661	-0.0603	-0.2098	-0.1995	0.1313	-0.2042	0.4697	0.5255	0.5495	0.5240	0.5019	0.5376	0.5496	0.5410	0.4722

Table V. Concluded

Run	CP284
74.	0.5336
273.	0.5415
39.	0.5539
136.	0.5570
173.	0.5284
41.	0.5214
236.	0.5192
172.	0.5334
240.	0.4940
37.	0.5140
272.	0.5099
38.	0.4948
140.	0.4686
271.	0.4479

Table VI. Pressure Coefficients for $l/h = 4.4$ Cavity With Front Blocks

Run	M_∞	$R_\infty \times 10^{-6}$	p_∞	$p_{t\infty}$	q_∞	$T_{t\infty}$	CP1	CP2	CP3	CP4	CP5	CP6	CP7	CP8	CP9	CP10
61.	0.30	1.0	1130.4	1201.4	69.5	110.8	0.8143	-0.2152	-0.2937	-0.1863	-0.2374	-0.1675	-0.2018	-0.1026	-0.0961	-0.0651
256.	0.60	1.5	756.5	963.8	189.8	96.1	0.9687	-0.2249	-0.2974	-0.2145	-0.2134	-0.1702	-0.1410	-0.0891	-0.0758	-0.0586
220.	0.60	1.6	761.2	972.7	193.3	80.4	0.9355	-0.2666	-0.2995	-0.2304	-0.2026	-0.1606	-0.1511	-0.0654	-0.0757	-0.0553
47.	0.60	3.4	1636.5	2085.6	410.9	80.6	0.9742	-0.2944	-0.2924	-0.2157	-0.1955	-0.1649	-0.1046	-0.0761	-0.0654	-0.0533
57.	0.80	1.6	574.7	877.7	258.7	109.7	1.1003	-0.2852	-0.3576	-0.2592	-0.2466	-0.1955	-0.1436	-0.0939	-0.0743	-0.0560
52.	0.80	3.3	1219.4	1849.8	539.6	116.2	1.1292	-0.3254	-0.3634	-0.2593	-0.2369	-0.1906	-0.1410	-0.0808	-0.0649	-0.0483
48.	0.80	3.9	1380.8	2095.8	611.9	99.0	1.1191	-0.3489	-0.3660	-0.2535	-0.2339	-0.1925	-0.1339	-0.0877	-0.0627	-0.0494
258.	0.85	1.6	547.0	877.4	276.7	118.8	1.1382	-0.2789	-0.4134	-0.2948	-0.2672	-0.2044	-0.1534	-0.0849	-0.0712	-0.0486
54.	0.85	3.3	1118.0	1793.9	566.0	119.1	1.1524	-0.2960	-0.4347	-0.2840	-0.2504	-0.1972	-0.1417	-0.0765	-0.0601	-0.0432
49.	0.85	3.9	1300.8	2083.1	655.6	113.6	1.1558	-0.3304	-0.4545	-0.2876	-0.2542	-0.2014	-0.1376	-0.0794	-0.0612	-0.0443
59.	0.91	1.7	523.6	895.7	303.8	120.0	1.1566	-0.1986	-0.4190	-0.4016	-0.3905	-0.2519	-0.1483	-0.0754	-0.0547	-0.0321
120.	0.90	2.0	575.3	976.2	328.4	90.5	1.1833	-0.2272	-0.4791	-0.4192	-0.3788	-0.2283	-0.1493	-0.0647	-0.0545	-0.0336
53.	0.90	3.2	997.7	1686.3	564.9	108.9	1.1933	-0.2177	-0.4958	-0.4399	-0.3893	-0.2280	-0.1386	-0.0611	-0.0441	-0.0252
60.	0.95	1.7	511.9	915.2	323.6	123.1	1.2361	-0.1028	-0.3360	-0.3335	-0.3733	-0.3676	-0.3741	-0.2648	-0.1405	-0.0464

Run	CP11	CP12	CP13	CP14	CP15	CP16	CP17	CP18	CP19	CP20	CP21	CP33	CP34	CP35	CP36	CP37
61.	-0.1098	-0.0659	-0.0960	-0.0329	-0.0371	-0.0609	-0.0889	-0.0148	-0.0690	-0.0511	-0.0207	-0.0577	0.0029	-0.0376	-0.0169	0.0051
256.	-0.0815	-0.0569	-0.0487	-0.0261	-0.0149	-0.0473	-0.0455	-0.0209	-0.0274	-0.0278	-0.0070	-0.0217	-0.0116	-0.0147	-0.0221	0.0022
220.	-0.0830	-0.0625	-0.0307	-0.0244	-0.0263	-0.0530	-0.0435	-0.0183	-0.0272	0.0064	-0.0357	-0.0133	0.0009	0.0038	-0.0049	-0.0148
47.	-0.0701	-0.0552	-0.0288	-0.0212	-0.0112	-0.0410	-0.0291	-0.0202	-0.0192	-0.0132	-0.0078	-0.0049	-0.0093	0.0027	-0.0216	-0.0043
57.	-0.0738	-0.0523	-0.0378	-0.0197	-0.0091	-0.0410	-0.0364	-0.0178	-0.0232	-0.0179	0.0011	-0.0123	-0.0025	-0.0028	-0.0103	0.0012
52.	-0.0648	-0.0457	-0.0223	-0.0136	-0.0035	-0.0335	-0.0254	-0.0153	-0.0156	-0.0073	0.0004	-0.0020	-0.0018	0.0030	-0.0141	0.0037
48.	-0.0601	-0.0444	-0.0242	-0.0146	0.0029	-0.0304	-0.0197	-0.0147	-0.0122	-0.0158	0.0131	0.0009	-0.0047	0.0027	-0.0182	0.0123
258.	-0.0695	-0.0482	-0.0270	-0.0106	-0.0080	-0.0361	-0.0329	-0.0119	-0.0182	-0.0015	-0.0036	-0.0042	0.0086	0.0080	0.0007	0.0099
54.	-0.0583	-0.0415	-0.0155	-0.0066	-0.0002	-0.0287	-0.0215	-0.0103	-0.0118	0.0018	0.0035	0.0060	0.0079	0.0141	-0.0032	0.0147
49.	-0.0583	-0.0413	-0.0156	-0.0081	0.0009	-0.0290	-0.0203	-0.0121	-0.0109	-0.0012	0.0053	0.0049	0.0032	0.0114	-0.0088	0.0110
59.	-0.0527	-0.0334	-0.0142	-0.0022	-0.0008	-0.0310	-0.0281	-0.0108	-0.0161	0.0001	-0.0004	-0.0024	0.0091	0.0089	0.0011	0.0124
120.	-0.0530	-0.0371	-0.0038	-0.0048	-0.0039	-0.0366	-0.0256	-0.0120	-0.0145	0.0148	-0.0131	0.0043	0.0111	0.0161	0.0041	0.0060
53.	-0.0440	-0.0281	0.0017	0.0058	0.0068	-0.0226	-0.0157	-0.0063	-0.0071	0.0136	0.0036	0.0131	0.0149	0.0238	0.0039	0.0175
60.	-0.0208	0.0051	0.0230	0.0333	0.0256	-0.0136	-0.0160	-0.0019	-0.0118	0.0064	0.0063	0.0039	0.0144	0.0149	0.0048	0.0176

Table VI. Continued

Run	CP38	CP39	CP40	CP41	CP42	CP43	CP47	CP54	CP67	CP68	CP69	CP70	CP71	CP72	CP107	CP108
61.	0.0123	-0.0214	-0.0590	-0.0125	0.0223	-0.1063	0.0523	0.0433	-0.0062	-0.0050	-0.0053	0.0506	-0.0019	0.0032	-0.0079	0.0272
256.	-0.0068	-0.0177	-0.0239	0.0013	-0.0036	-0.0428	0.0265	0.0209	-0.0361	-0.0542	-0.0087	0.0100	-0.0298	-0.0288	-0.0309	-0.0223
220.	0.0086	-0.0016	-0.0160	-0.0175	0.0068	-0.0150	0.0099	0.0346	-0.0263	-0.0372	0.0077	0.0067	-0.0200	-0.0290	-0.0293	-0.0352
47.	-0.0066	-0.0120	-0.0299	-0.0111	-0.0008	-0.0256	0.0104	0.0222	-0.0308	-0.0507	0.0076	0.0098	-0.0233	-0.0332	-0.0243	-0.0311
57.	0.0001	-0.0127	-0.0186	-0.0055	0.0023	-0.0270	0.0167	0.0185	-0.0308	-0.0447	-0.0005	0.0096	-0.0256	-0.0265	-0.0291	-0.0272
52.	-0.0028	-0.0109	-0.0202	-0.0012	0.0019	-0.0203	0.0098	0.0091	-0.0314	-0.0494	0.0012	0.0088	-0.0248	-0.0322	-0.0254	-0.0294
48.	-0.0008	-0.0049	-0.0123	0.0029	0.0011	-0.0257	0.0257	0.0190	-0.0229	-0.0462	0.0021	0.0102	-0.0193	-0.0184	-0.0224	-0.0255
258.	0.0140	-0.0008	-0.0027	0.0040	0.0162	-0.0087	0.0259	0.0275	-0.0217	-0.0322	0.0144	0.0238	-0.0133	-0.0143	-0.0180	-0.0168
54.	0.0134	0.0047	-0.0011	0.0083	0.0175	-0.0017	0.0261	0.0294	-0.0176	-0.0308	0.0188	0.0225	-0.0106	-0.0119	-0.0119	-0.0166
49.	0.0084	-0.0010	-0.0069	0.0035	0.0106	-0.0104	0.0165	0.0213	-0.0207	-0.0416	0.0092	0.0115	-0.0152	-0.0186	-0.0146	-0.0234
59.	0.0155	0.0001	0.0020	0.0058	0.0160	-0.0085	0.0249	0.0268	-0.0196	-0.0331	0.0139	0.0236	-0.0144	-0.0113	-0.0154	-0.0181
120.	0.0186	0.0047	-0.0012	0.0016	0.0174	0.0014	0.0222	0.0316	-0.0173	-0.0291	0.0200	0.0193	-0.0124	-0.0136	-0.0164	-0.0261
53.	0.0228	0.0117	0.0085	0.0115	0.0220	0.0038	0.0253	0.0346	-0.0098	-0.0282	0.0220	0.0230	-0.0054	-0.0049	-0.0068	-0.0180
60.	0.0251	0.0043	0.0136	0.0067	0.0215	-0.0052	0.0312	0.0320	-0.0132	-0.0338	0.0208	0.0295	-0.0090	-0.0025	-0.0137	-0.0211

Run	CP109	CP110	CP111	CP112	CP113	CP114	CP115	CP117	CP118	CP121	CP123	CP124	CP125	CP126	CP129	CP130
61.	0.0061	0.0003	-0.0187	-0.0405	-0.1330	-0.1341	-0.2278	-0.0149	0.0122	-0.2124	-0.0429	0.0049	-0.0289	0.0159	-0.0295	0.0447
256.	-0.0369	-0.0671	-0.0473	-0.0494	-0.0538	-0.0467	-0.0639	-0.0355	-0.0350	-0.0744	-0.0588	-0.0267	-0.0351	-0.0108	-0.0137	0.0074
220.	-0.0564	-0.0254	-0.0529	-0.0414	-0.0550	-0.0408	-0.0515	-0.0274	-0.0267	-0.0145	-0.0314	-0.0355	-0.0505	-0.0456	0.0194	0.0196
47.	-0.0446	-0.0491	-0.0502	-0.0473	-0.0525	-0.0524	-0.0583	-0.0283	-0.0354	-0.0384	-0.0419	-0.0338	-0.0390	-0.0329	0.0130	0.0086
57.	-0.0398	-0.0431	-0.0432	-0.0376	-0.0455	-0.0320	-0.0421	-0.0299	-0.0281	-0.0322	-0.0385	-0.0210	-0.0342	-0.0208	0.0006	0.0105
52.	-0.0389	-0.0444	-0.0463	-0.0415	-0.0415	-0.0327	-0.0375	-0.0269	-0.0292	-0.0224	-0.0373	-0.0255	-0.0340	-0.0259	0.0057	0.0100
48.	-0.0366	-0.0531	-0.0366	-0.0326	-0.0223	-0.0144	-0.0177	-0.0276	-0.0346	-0.0292	-0.0427	-0.0296	-0.0277	-0.0151	0.0029	0.0048
258.	-0.0343	-0.0358	-0.0363	-0.0262	-0.0291	-0.0123	-0.0246	-0.0199	-0.0192	-0.0108	-0.0301	-0.0145	-0.0234	-0.0102	0.0070	0.0194
54.	-0.0318	-0.0360	-0.0348	-0.0243	-0.0235	-0.0137	-0.0195	-0.0160	-0.0192	-0.0032	-0.0269	-0.0138	-0.0163	-0.0078	0.0155	0.0184
49.	-0.0421	-0.0439	-0.0372	-0.0262	-0.0246	-0.0156	-0.0231	-0.0197	-0.0279	-0.0084	-0.0324	-0.0222	-0.0260	-0.0193	0.0158	0.0155
59.	-0.0354	-0.0385	-0.0340	-0.0196	-0.0218	-0.0070	-0.0178	-0.0183	-0.0195	-0.0072	-0.0288	-0.0114	-0.0192	-0.0059	0.0091	0.0213
120.	-0.0426	-0.0239	-0.0365	-0.0222	-0.0267	-0.0146	-0.0208	-0.0161	-0.0180	0.0126	-0.0172	-0.0155	-0.0255	-0.0200	0.0257	0.0246
53.	-0.0340	-0.0275	-0.0313	-0.0136	-0.0097	0.0032	-0.0051	-0.0105	-0.0162	0.0118	-0.0197	-0.0124	-0.0146	-0.0072	0.0289	0.0298
60.	-0.0424	-0.0337	-0.0279	-0.0071	-0.0049	0.0134	0.0017	-0.0181	-0.0209	0.0075	-0.0238	-0.0140	-0.0173	-0.0039	0.0182	0.0285

Table VI. Continued

Run	CP131	CP132	CP133	CP134	CP135	CP136	CP137	CP138	CP139	CP140	CP141	CP147	CP148	CP149	CP150	CP151
61.	-0.0072	0.0388	-0.0058	0.0584	-0.0061	-0.0017	-0.0282	-0.0057	-0.0562	-0.0215	-0.0456	-0.0084	0.0248	-0.0449	-0.0007	-0.0221
256.	-0.0099	0.0038	-0.0077	0.0205	-0.0364	-0.0514	-0.0462	-0.0545	-0.0634	-0.0489	-0.0435	-0.0164	-0.0303	-0.0678	-0.0429	-0.0388
220.	0.0039	0.0036	-0.0116	-0.0176	-0.0260	-0.0210	-0.0364	-0.0143	-0.0286	-0.0280	-0.0455	-0.0046	-0.0047	-0.0092	-0.0104	-0.0255
47.	0.0013	-0.0012	-0.0069	-0.0091	-0.0300	-0.0369	-0.0384	-0.0374	-0.0406	-0.0393	-0.0439	-0.0047	-0.0210	-0.0326	-0.0331	-0.0355
57.	-0.0039	0.0017	-0.0121	-0.0068	-0.0338	-0.0339	-0.0396	-0.0326	-0.0415	-0.0351	-0.0416	-0.0124	-0.0203	-0.0355	-0.0279	-0.0345
52.	0.0000	0.0023	-0.0081	-0.0081	-0.0297	-0.0319	-0.0345	-0.0346	-0.0418	-0.0404	-0.0425	-0.0083	-0.0183	-0.0314	-0.0277	-0.0314
48.	-0.0023	-0.0001	-0.0050	-0.0006	-0.0308	-0.0382	-0.0310	-0.0384	-0.0391	-0.0361	-0.0320	-0.0095	-0.0274	-0.0367	-0.0276	-0.0254
258.	0.0039	0.0104	-0.0050	0.0021	-0.0203	-0.0186	-0.0256	-0.0188	-0.0296	-0.0229	-0.0292	-0.0033	-0.0056	-0.0207	-0.0121	-0.0198
54.	0.0093	0.0109	0.0016	0.0014	-0.0159	-0.0162	-0.0186	-0.0158	-0.0202	-0.0180	-0.0222	0.0042	-0.0038	-0.0135	-0.0102	-0.0139
49.	0.0073	0.0059	-0.0033	-0.0056	-0.0189	-0.0201	-0.0262	-0.0259	-0.0311	-0.0295	-0.0303	-0.0027	-0.0096	-0.0177	-0.0170	-0.0210
59.	0.0072	0.0132	-0.0019	0.0038	-0.0179	-0.0171	-0.0239	-0.0184	-0.0282	-0.0209	-0.0252	-0.0021	-0.0047	-0.0206	-0.0129	-0.0194
120.	0.0154	0.0123	0.0000	-0.0103	-0.0144	-0.0097	-0.0213	-0.0070	-0.0144	-0.0136	-0.0255	0.0037	0.0029	-0.0015	-0.0053	-0.0161
53.	0.0215	0.0204	0.0101	0.0046	-0.0063	-0.0063	-0.0134	-0.0072	-0.0123	-0.0102	-0.0168	0.0123	0.0062	-0.0013	-0.0024	-0.0089
60.	0.0150	0.0189	0.0047	0.0075	-0.0099	-0.0082	-0.0180	-0.0114	-0.0207	-0.0129	-0.0182	0.0050	0.0037	-0.0083	-0.0047	-0.0124

Run	CP152	CP153	CP154	CP157	CP158	CP159	CP161	CP162	CP163	CP164	CP165	CP166	CP167	CP168	CP169	CP170
61.	-0.0165	-0.0394	0.0032	-0.0185	0.0374	-0.0524	-0.0760	-0.0915	-0.1732	-0.1962	-0.2433	-0.2102	-0.1979	-0.1248	-0.1129	0.0183
256.	-0.0467	-0.0324	-0.0199	-0.0232	-0.0078	-0.0583	-0.0418	-0.0473	-0.0371	-0.0371	-0.0350	-0.0283	-0.0004	0.0199	0.0244	0.0801
220.	-0.0119	-0.0368	-0.0319	0.0021	-0.0329	-0.0247	-0.0633	-0.0427	-0.0486	-0.0376	-0.0315	-0.0191	-0.0042	0.0494	0.0650	0.0883
47.	-0.0348	-0.0337	-0.0330	-0.0081	-0.0305	-0.0342	-0.0432	-0.0412	-0.0428	-0.0390	-0.0320	-0.0158	0.0034	0.0304	0.0471	0.0740
57.	-0.0313	-0.0371	-0.0267	-0.0150	-0.0220	-0.0388	-0.0438	-0.0332	-0.0352	-0.0238	-0.0243	-0.0036	0.0138	0.0426	0.0510	0.0816
52.	-0.0342	-0.0381	-0.0332	-0.0122	-0.0208	-0.0379	-0.0416	-0.0374	-0.0351	-0.0282	-0.0184	0.0020	0.0258	0.0532	0.0665	0.0911
48.	-0.0310	-0.0218	-0.0188	-0.0094	-0.0143	-0.0377	-0.0281	-0.0309	-0.0195	-0.0202	-0.0094	0.0000	0.0272	0.0468	0.0627	0.0902
258.	-0.0175	-0.0242	-0.0124	-0.0036	-0.0104	-0.0259	-0.0301	-0.0164	-0.0216	-0.0100	-0.0093	0.0148	0.0340	0.0672	0.0771	0.1079
54.	-0.0122	-0.0148	-0.0079	0.0034	-0.0074	-0.0144	-0.0185	-0.0125	-0.0123	-0.0080	-0.0021	0.0190	0.0432	0.0693	0.0867	0.1111
49.	-0.0198	-0.0228	-0.0161	-0.0020	-0.0175	-0.0214	-0.0246	-0.0195	-0.0225	-0.0173	-0.0114	0.0097	0.0339	0.0632	0.0818	0.1032
59.	-0.0164	-0.0198	-0.0080	-0.0036	-0.0091	-0.0231	-0.0248	-0.0128	-0.0188	-0.0090	-0.0074	0.0164	0.0370	0.0685	0.0790	0.1099
120.	-0.0067	-0.0214	-0.0163	0.0082	-0.0211	-0.0119	-0.0373	-0.0214	-0.0184	-0.0101	0.0001	0.0117	0.0322	0.0709	0.0954	0.1140
53.	-0.0058	-0.0108	-0.0050	0.0139	-0.0095	-0.0105	-0.0195	-0.0090	-0.0135	-0.0036	0.0002	0.0248	0.0462	0.0794	0.0987	0.1179
60.	-0.0075	-0.0125	0.0008	0.0069	-0.0064	-0.0158	-0.0196	-0.0053	-0.0133	-0.0029	0.0007	0.0279	0.0501	0.0870	0.1006	0.1305

Table VI. Continued

Run	CP171	CP172	CP173	CP174	CP175	CP176	CP177	CP178	CP179	CP180	CP181	CP182	CP183	CP184	CP185	CP186
61.	0.0482	0.2192	0.2998	-0.0493	-0.1148	-0.1552	-0.2114	-0.2210	-0.2373	-0.1557	-0.1184	-0.0476	-0.0037	0.1027	0.1725	0.2999
256.	0.0836	0.1825	0.2725	-0.0409	-0.0434	-0.0405	-0.0266	-0.0365	-0.0165	0.0309	0.0514	0.0725	0.0966	0.1410	0.1917	0.2763
220.	0.1081	0.1964	0.2758	-0.0252	-0.0405	-0.0301	-0.0457	-0.0267	-0.0085	0.0494	0.0652	0.0803	0.1094	0.1666	0.1989	0.2883
47.	0.1080	0.1696	0.2753	-0.0333	-0.0328	-0.0303	-0.0300	-0.0200	-0.0073	0.0193	0.0479	0.0713	0.0995	0.1422	0.2013	0.2825
57.	0.1017	0.1672	0.2673	-0.0295	-0.0309	-0.0224	-0.0203	-0.0038	0.0067	0.0393	0.0630	0.0873	0.1069	0.1460	0.1921	0.2778
52.	0.1139	0.1763	0.2870	-0.0292	-0.0286	-0.0216	-0.0138	0.0002	0.0187	0.0511	0.0764	0.0974	0.1207	0.1586	0.2121	0.2986
48.	0.1075	0.1779	0.2856	-0.0274	-0.0226	-0.0148	-0.0003	-0.0013	0.0209	0.0538	0.0831	0.1013	0.1251	0.1575	0.2084	0.2923
258.	0.1293	0.1938	0.2952	-0.0123	-0.0134	-0.0038	-0.0009	0.0193	0.0314	0.0642	0.0887	0.1149	0.1352	0.1755	0.2212	0.3083
54.	0.1377	0.1988	0.3023	-0.0105	-0.0070	0.0025	0.0095	0.0243	0.0410	0.0682	0.0921	0.1141	0.1384	0.1760	0.2278	0.3099
49.	0.1334	0.1938	0.3045	-0.0119	-0.0092	-0.0042	-0.0025	0.0141	0.0307	0.0582	0.0857	0.1102	0.1355	0.1721	0.2237	0.3061
59.	0.1323	0.1960	0.2964	-0.0067	-0.0078	0.0011	0.0026	0.0220	0.0348	0.0679	0.0940	0.1191	0.1391	0.1779	0.2225	0.3066
120.	0.1354	0.2114	0.3016	-0.0098	-0.0149	-0.0025	-0.0064	0.0122	0.0344	0.0811	0.0990	0.1118	0.1417	0.1916	0.2297	0.3150
53.	0.1506	0.2072	0.3164	-0.0010	0.0002	0.0081	0.0091	0.0315	0.0465	0.0750	0.1047	0.1312	0.1556	0.1925	0.2406	0.3250
60.	0.1574	0.2186	0.3240	0.0038	0.0030	0.0134	0.0143	0.0370	0.0508	0.0861	0.1169	0.1455	0.1686	0.2068	0.2482	0.3360

Run	CP188	CP189	CP190	CP191	CP193	CP194	CP195	CP196	CP197	CP198	CP199	CP200	CP201	CP202	CP203	CP204
61.	-0.2002	-0.1410	0.0527	0.2123	-0.2772	-0.1993	-0.2416	-0.2285	-0.2231	-0.1969	-0.2705	-0.2098	-0.1801	-0.1395	-0.0883	0.0045
256.	-0.0107	0.0268	0.1305	0.2146	-0.0634	-0.0377	-0.0388	-0.0422	-0.0216	-0.0188	-0.0423	-0.0210	0.0013	-0.0025	0.0272	0.0638
220.	-0.0206	0.0610	0.0958	0.2072	-0.0631	-0.0399	-0.0553	-0.0301	-0.0561	-0.0252	-0.0170	0.0065	-0.0169	0.0150	-0.0043	0.0216
47.	-0.0211	0.0475	0.1044	0.2002	-0.0626	-0.0586	-0.0566	-0.0485	-0.0417	-0.0257	-0.0197	0.0039	0.0212	0.0411	0.0420	0.0561
57.	0.0004	0.0544	0.1122	0.1988	-0.0398	-0.0214	-0.0263	-0.0133	-0.0147	0.0037	0.0004	0.0188	0.0233	0.0405	0.0374	0.0649
52.	-0.0014	0.0703	0.1283	0.2135	-0.0350	-0.0275	-0.0276	-0.0188	-0.0133	-0.0039	-0.0033	0.0132	0.0212	0.0291	0.0370	0.0562
48.	0.0077	0.0617	0.1236	0.2206	-0.0145	-0.0014	0.0054	0.0065	0.0176	0.0196	0.0095	0.0155	0.0180	0.0068	0.0104	0.0343
258.	0.0202	0.0821	0.1441	0.2278	-0.0238	-0.0031	-0.0094	0.0033	0.0016	0.0206	0.0171	0.0332	0.0342	0.0516	0.0497	0.0785
54.	0.0219	0.0913	0.1375	0.2296	-0.0212	-0.0078	-0.0062	0.0025	0.0063	0.0206	0.0231	0.0371	0.0467	0.0590	0.0625	0.0870
49.	0.0139	0.0748	0.1273	0.2269	-0.0125	-0.0025	-0.0038	0.0042	0.0049	0.0188	0.0207	0.0270	0.0275	0.0347	0.0300	0.0519
59.	0.0197	0.0818	0.1485	0.2300	-0.0170	-0.0004	-0.0073	0.0044	0.0048	0.0238	0.0207	0.0352	0.0347	0.0481	0.0463	0.0762
120.	0.0198	0.1004	0.1323	0.2319	-0.0224	-0.0132	-0.0215	0.0008	-0.0140	0.0170	0.0351	0.0509	0.0448	0.0732	0.0510	0.0752
53.	0.0266	0.0985	0.1426	0.2416	0.0012	0.0079	0.0067	0.0213	0.0154	0.0369	0.0462	0.0533	0.0493	0.0591	0.0462	0.0710
60.	0.0308	0.0984	0.1561	0.2572	-0.0005	0.0157	0.0096	0.0239	0.0193	0.0365	0.0333	0.0439	0.0346	0.0398	0.0254	0.0615

Table VI. Continued

Run	CP205	CP206	CP207	CP208	CP209	CP210	CP211	CP212	CP213	CP214	CP215	CP216	CP217	CP218	CP219	CP220
61.	0.0546	-0.2245	-0.2477	-0.2163	-0.2321	-0.0925	-0.0300	-0.2147	-0.2855	-0.2456	-0.2498	-0.1898	-0.2315	-0.1968	-0.2039	-0.0710
256.	0.1336	-0.0166	-0.0123	0.0032	0.0002	0.0493	0.1086	-0.0142	-0.0380	-0.0348	-0.0263	0.0039	-0.0072	-0.0003	0.0035	0.0603
220.	0.1341	-0.0190	-0.0258	-0.0074	0.0029	0.0519	0.0982	-0.0210	-0.0213	-0.0123	-0.0295	0.0123	0.0096	0.0399	0.0357	0.0916
47.	0.1579	-0.0336	-0.0224	-0.0019	0.0196	0.0593	0.1125	-0.0421	-0.0373	-0.0331	-0.0318	0.0220	0.0186	0.0283	0.0356	0.0998
57.	0.1622	0.0004	0.0030	0.0235	0.0303	0.0740	0.1233	-0.0035	-0.0079	-0.0024	-0.0031	0.0350	0.0274	0.0467	0.0466	0.1037
52.	0.1763	-0.0037	0.0062	0.0229	0.0349	0.0825	0.1298	-0.0080	-0.0067	-0.0011	0.0047	0.0329	0.0335	0.0522	0.0559	0.1062
48.	0.1525	0.0044	0.0135	0.0241	0.0306	0.0617	0.1408	0.0062	-0.0001	-0.0054	0.0022	0.0195	0.0146	0.0354	0.0439	0.0768
258.	0.1860	0.0193	0.0238	0.0426	0.0486	0.0984	0.1550	0.0115	0.0075	0.0181	0.0185	0.0483	0.0435	0.0681	0.0708	0.1224
54.	0.2013	0.0184	0.0293	0.0472	0.0624	0.1077	0.1697	0.0084	0.0126	0.0195	0.0269	0.0528	0.0550	0.0741	0.0782	0.1366
49.	0.1746	0.0139	0.0249	0.0402	0.0547	0.0952	0.1635	0.0084	0.0141	0.0168	0.0214	0.0459	0.0478	0.0747	0.0802	0.1213
59.	0.1855	0.0196	0.0233	0.0440	0.0515	0.1000	0.1617	0.0130	0.0098	0.0179	0.0195	0.0488	0.0446	0.0699	0.0727	0.1236
120.	0.2003	0.0145	0.0164	0.0395	0.0602	0.1041	0.1599	0.0044	0.0145	0.0228	0.0180	0.0575	0.0595	0.0849	0.0858	0.1463
53.	0.2016	0.0259	0.0324	0.0518	0.0697	0.1141	0.1861	0.0230	0.0276	0.0326	0.0348	0.0605	0.0615	0.0917	0.0955	0.1411
60.	0.1899	0.0246	0.0278	0.0472	0.0563	0.1082	0.1944	0.0269	0.0197	0.0254	0.0279	0.0509	0.0455	0.0807	0.0850	0.1276

Run	CP221	CP222	CP223	CP225	CP226	CP227	CP228	CP229	CP230	CP231	CP232	CP233	CP234	CP235	CP236	CP237
61.	-0.0440	-0.0308	0.0396	0.0396	0.0917	0.0862	0.0694	0.0586	0.1042	0.0564	0.1013	0.0685	0.0593	0.1709	0.1867	0.1281
256.	0.0974	0.0878	0.1382	0.1819	0.1714	0.1830	0.1450	0.1537	0.1563	0.1244	0.1620	0.1859	0.1116	0.1950	0.1879	0.1464
220.	0.0773	0.1553	0.1606	0.2117	0.1993	0.1810	0.1916	0.1522	0.1453	0.1408	0.1579	0.2006	0.1327	0.2035	0.1882	0.1731
47.	0.0994	0.1228	0.1522	0.2088	0.1696	0.1586	0.1623	0.1716	0.1866	0.1872	0.1941	0.2229	0.1312	0.2193	0.2021	0.1745
57.	0.1102	0.1384	0.1636	0.2207	0.1958	0.1843	0.1832	0.1760	0.1807	0.1685	0.1860	0.2252	0.1365	0.2149	0.2004	0.1689
52.	0.1190	0.1456	0.1719	0.2414	0.2002	0.1910	0.1950	0.2069	0.2133	0.2047	0.2223	0.2544	0.1616	0.2379	0.2197	0.1898
48.	0.1113	0.1445	0.1791	0.2499	0.2267	0.2301	0.2045	0.1936	0.1699	0.1452	0.1771	0.2331	0.1430	0.2198	0.2020	0.1767
258.	0.1363	0.1728	0.1972	0.2521	0.2313	0.2114	0.2067	0.1931	0.1970	0.1906	0.2137	0.2522	0.1629	0.2452	0.2312	0.2018
54.	0.1462	0.1769	0.2001	0.2635	0.2332	0.2104	0.2071	0.2015	0.2049	0.2071	0.2276	0.2610	0.1669	0.2499	0.2344	0.2089
49.	0.1398	0.1899	0.2165	0.2740	0.2529	0.2358	0.2347	0.2163	0.2026	0.1965	0.2197	0.2667	0.1718	0.2545	0.2369	0.2153
59.	0.1417	0.1786	0.2040	0.2555	0.2422	0.2253	0.2163	0.1963	0.1933	0.1845	0.2146	0.2552	0.1678	0.2467	0.2326	0.2062
120.	0.1387	0.2011	0.2125	0.2736	0.2515	0.2244	0.2358	0.2084	0.2050	0.2112	0.2235	0.2700	0.1773	0.2597	0.2391	0.2208
53.	0.1546	0.2160	0.2354	0.2916	0.2772	0.2570	0.2502	0.2176	0.2013	0.1951	0.2228	0.2765	0.1856	0.2657	0.2473	0.2300
60.	0.1593	0.2217	0.2450	0.2966	0.3027	0.2897	0.2694	0.2201	0.1896	0.1728	0.2147	0.2760	0.1886	0.2658	0.2536	0.2330

Table VI. Continued

Run	CP238	CP239	CP240	CP241	CP242	CP243	CP244	CP245	CP246	CP247	CP248	CP249	CP250	CP251	CP252	CP257
61.	0.1781	0.1368	0.1736	0.1122	0.2042	0.1711	0.2845	-0.1558	-0.2246	-0.1931	-0.0770	-0.2021	-0.2215	-0.1963	-0.0584	-0.0598
256.	0.1651	0.1414	0.1673	0.1497	0.1961	0.2005	0.2317	-0.0486	-0.0564	-0.0051	0.0426	-0.0558	-0.0180	0.0240	0.0789	-0.1798
220.	0.1645	0.1628	0.1646	0.1765	0.2119	0.2152	0.2486	-0.0669	-0.0544	0.0034	0.0533	-0.0324	-0.0178	0.0324	0.0915	-0.1279
47.	0.1653	0.1613	0.1659	0.1760	0.1985	0.2135	0.2454	-0.0612	-0.0525	-0.0058	0.0232	-0.0411	-0.0222	0.0281	0.0824	-0.1675
57.	0.1644	0.1488	0.1597	0.1612	0.2022	0.2147	0.2322	-0.0425	-0.0307	0.0167	0.0547	-0.0265	0.0015	0.0445	0.1018	-0.2091
52.	0.1838	0.1703	0.1808	0.1848	0.2145	0.2324	0.2565	-0.0385	-0.0211	0.0239	0.0378	-0.0260	0.0064	0.0538	0.1140	-0.2621
48.	0.1739	0.1570	0.1685	0.1755	0.2122	0.2323	0.2425	-0.0324	-0.0314	0.0310	0.0786	-0.0138	0.0139	0.0622	0.1175	-0.2149
258.	0.1951	0.1816	0.1924	0.1960	0.2383	0.2490	0.2658	-0.0255	-0.0128	0.0337	0.0682	-0.0053	0.0237	0.0628	0.1311	-0.1754
54.	0.1962	0.1855	0.1928	0.2016	0.2310	0.2456	0.2648	-0.0166	-0.0059	0.0383	0.0622	0.0080	0.0258	0.0695	0.1368	-0.1651
49.	0.2003	0.1866	0.1916	0.2067	0.2387	0.2544	0.2658	-0.0344	-0.0279	0.0318	0.0731	-0.0010	0.0200	0.0754	0.1456	-0.2049
59.	0.1997	0.1840	0.1933	0.1978	0.2392	0.2508	0.2627	-0.0223	-0.0184	0.0348	0.0828	0.0001	0.0245	0.0714	0.1386	-0.1833
120.	0.1982	0.1903	0.1896	0.2058	0.2413	0.2537	0.2689	-0.0302	-0.0186	0.0355	0.0795	0.0040	0.0158	0.0711	0.1444	-0.1841
53.	0.2142	0.2049	0.2087	0.2251	0.2598	0.2760	0.2868	-0.0219	-0.0142	0.0489	0.1014	0.0138	0.0302	0.0882	0.1608	-0.1773
60.	0.2227	0.2050	0.2131	0.2226	0.2675	0.2782	0.2868	-0.0217	-0.0240	0.0449	0.1231	0.0108	0.0308	0.0930	0.1720	-0.1860

Run	CP258	CP259	CP260	CP261	CP262	CP263	CP264	CP265	CP266	CP267	CP268	CP269	CP270	CP271	CP272	CP273
61.	0.0227	-0.0294	-0.0348	-0.0661	-0.0108	-0.1244	-0.1023	-0.1140	-0.0655	-0.1054	-0.0752	-0.0574	-0.0362	-0.0594	0.0174	-0.4443
256.	-0.0725	-0.0554	-0.0456	-0.0423	-0.0200	-0.0345	-0.0276	-0.0351	-0.0165	-0.0278	-0.0273	-0.0362	-0.0541	-0.0772	-0.0517	-0.0963
220.	-0.0472	-0.0347	0.0041	-0.0087	-0.0012	-0.0290	-0.0206	-0.0215	-0.0133	-0.0058	0.0113	-0.0161	-0.0139	-0.0364	-0.0537	-0.0031
47.	-0.0718	-0.0476	-0.0400	-0.0351	-0.0283	-0.0312	-0.0300	-0.0286	-0.0184	-0.0155	-0.0122	-0.0158	-0.0402	-0.0599	-0.0525	-0.0412
57.	-0.0880	-0.0599	-0.0441	-0.0396	-0.0185	-0.0184	-0.0127	-0.0191	-0.0037	-0.0128	-0.0130	-0.0278	-0.0603	-0.0897	-0.0671	-0.0688
52.	-0.1359	-0.1045	-0.0924	-0.0941	-0.0927	-0.0123	-0.0100	-0.0117	-0.0035	-0.0071	-0.0119	-0.0320	-0.0773	-0.1150	-0.1025	-0.0402
48.	-0.0983	-0.0629	-0.0575	-0.0442	-0.0296	0.0007	0.0019	-0.0019	0.0091	-0.0011	-0.0173	-0.0334	-0.0784	-0.1002	-0.0730	-0.0621
258.	-0.0557	-0.0275	0.0002	0.0054	0.0290	-0.0035	0.0024	-0.0022	0.0130	0.0090	0.0131	-0.0064	-0.0317	-0.0608	-0.0444	-0.0223
54.	-0.0560	-0.0218	0.0008	0.0113	0.0294	0.0047	0.0070	0.0073	0.0175	0.0186	0.0189	0.0043	-0.0273	-0.0537	-0.0400	-0.0106
49.	-0.0923	-0.0531	-0.0366	-0.0259	-0.0118	0.0004	0.0021	0.0025	0.0126	0.0113	0.0049	-0.0149	-0.0573	-0.0854	-0.0673	-0.0283
59.	-0.0657	-0.0349	-0.0083	-0.0026	0.0198	0.0009	0.0056	0.0018	0.0159	0.0120	0.0132	-0.0089	-0.0387	-0.0693	-0.0521	-0.0269
120.	-0.0825	-0.0468	-0.0085	-0.0087	0.0012	-0.0031	0.0009	0.0032	0.0094	0.0190	0.0282	-0.0023	-0.0286	-0.0645	-0.0730	0.0196
53.	-0.0659	-0.0260	0.0022	0.0110	0.0257	0.0145	0.0165	0.0177	0.0274	0.0303	0.0283	0.0026	-0.0326	-0.0610	-0.0533	0.0169
60.	-0.0677	-0.0357	-0.0082	-0.0051	0.0155	0.0150	0.0199	0.0177	0.0328	0.0273	0.0227	-0.0103	-0.0450	-0.0750	-0.0582	-0.0085

Table VI. Concluded

Run	CP274	CP275	CP276	CP277	CP278	CP279	CP280	CP281	CP282	CP283	CP284
61.	-0.0162	0.2369	0.2707	0.3091	0.2701	0.2171	0.3233	0.2597	0.3213	0.2551	0.1446
256.	-0.0603	0.2461	0.2856	0.3326	0.3282	0.2981	0.2949	0.2501	0.2350	0.2178	0.2176
220.	-0.0251	0.2845	0.3505	0.3370	0.3660	0.3470	0.2635	0.2404	0.2124	0.2004	0.2302
47.	-0.0598	0.2344	0.2464	0.2928	0.3121	0.3225	0.3367	0.3161	0.2735	0.2518	0.2328
57.	-0.0733	0.2468	0.2643	0.3301	0.3397	0.3182	0.3319	0.2795	0.2397	0.2281	0.2441
52.	-0.1085	0.2448	0.2437	0.3091	0.3412	0.3444	0.3379	0.2953	0.2520	0.2492	0.2601
48.	-0.0809	0.2950	0.3238	0.4009	0.3810	0.3287	0.2979	0.2091	0.1682	0.2046	0.2578
258.	-0.0429	0.2693	0.2904	0.3283	0.3515	0.3417	0.3332	0.2899	0.2577	0.2518	0.2600
54.	-0.0427	0.2647	0.2699	0.3161	0.3384	0.3383	0.3448	0.3082	0.2839	0.2758	0.2827
49.	-0.0697	0.2867	0.3092	0.3619	0.3662	0.3444	0.3260	0.2649	0.2250	0.2401	0.2708
59.	-0.0487	0.2862	0.3187	0.3619	0.3665	0.3357	0.3157	0.2660	0.2356	0.2434	0.2638
120.	-0.0530	0.2982	0.3346	0.3496	0.3816	0.3730	0.3172	0.2857	0.2530	0.2560	0.2787
53.	-0.0416	0.3256	0.3656	0.4029	0.4029	0.3657	0.3278	0.2605	0.2209	0.2516	0.2921
60.	-0.0468	0.3575	0.4232	0.4545	0.4317	0.3605	0.2952	0.2089	0.1801	0.2207	0.2844

Table VII. Pressure Coefficients for l/h = 11.7 Cavity With Front Blocks

Run	M_∞	$R_\infty \times 10^{-6}$	p_∞	$p_{t\infty}$	q_∞	$T_{t\infty}$	CP1	CP2	CP3	CP4	CP5	CP6	CP7	CP8	CP9	CP10
88.	0.29	1.0	1001.7	1063.5	60.5	57.0	0.8365	-0.3159	-0.2805	-0.2402	-0.2291	-0.1906	-0.1766	-0.1056	-0.1058	-0.0892
87.	0.60	1.6	720.6	916.9	179.7	61.4	0.9672	-0.2405	-0.2857	-0.2335	-0.2156	-0.1797	-0.1416	-0.0909	-0.0813	-0.0694
33.	0.59	3.3	1682.8	2134.9	414.4	95.8	0.9827	-0.3062	-0.2922	-0.2073	-0.1979	-0.1652	-0.1396	-0.0803	-0.0644	-0.0532
286.	0.80	1.5	543.9	826.7	241.8	109.8	1.1202	-0.3091	-0.3536	-0.2780	-0.2579	-0.2031	-0.1573	-0.0872	-0.0816	-0.0592
35.	0.79	3.3	1197.0	1812.0	526.9	107.8	1.1140	-0.3200	-0.3621	-0.2596	-0.2339	-0.1905	-0.1471	-0.0809	-0.0663	-0.0512
132.	0.80	4.0	1398.6	2123.0	619.9	96.2	1.1160	-0.3594	-0.3690	-0.2676	-0.2376	-0.1948	-0.1412	-0.0817	-0.0691	-0.0546
186.	0.85	1.6	535.0	857.3	270.1	115.8	1.1616	-0.2804	-0.4109	-0.3071	-0.2827	-0.2168	-0.1581	-0.0895	-0.0769	-0.0541
234.	0.85	3.3	1093.8	1751.0	550.8	110.5	1.1576	-0.2838	-0.4457	-0.2870	-0.2550	-0.2039	-0.1550	-0.0831	-0.0653	-0.0490
232.	0.85	4.0	1325.2	2122.7	668.3	110.0	1.1601	-0.3260	-0.4676	-0.2874	-0.2569	-0.2061	-0.1431	-0.0856	-0.0640	-0.0494
285.	0.90	1.6	516.3	870.5	290.8	115.0	1.1933	-0.2111	-0.3750	-0.4156	-0.4164	-0.3109	-0.1713	-0.0867	-0.0635	-0.0402
134.	0.90	3.3	1010.2	1702.1	568.3	108.0	1.1909	-0.1971	-0.4878	-0.4264	-0.3810	-0.2197	-0.1400	-0.0661	-0.0483	-0.0317
185.	0.95	1.7	509.0	906.4	319.3	116.5	1.2322	-0.1112	-0.2890	-0.3278	-0.3697	-0.3748	-0.3782	-0.2881	-0.1729	-0.0621

Run	CP11	CP12	CP13	CP14	CP15	CP16	CP17	CP18	CP19	CP20	CP21	CP33	CP34	CP35	CP36	CP37
88.	-0.1234	-0.1024	-0.0852	-0.0588	-0.0603	-0.0924	-0.0907	-0.0630	-0.0791	-0.0627	-0.0808	-0.0755	-0.0877	-0.1004	-0.0736	-0.0803
87.	-0.0878	-0.0750	-0.0489	-0.0362	-0.0306	-0.0615	-0.0539	-0.0406	-0.0439	-0.0376	-0.0420	-0.0417	-0.0545	-0.0651	-0.0496	-0.0562
33.	-0.0685	-0.0527	-0.0340	-0.0273	-0.0087	-0.0463	-0.0345	-0.0241	-0.0279	-0.0320	-0.0145	-0.0296	-0.0421	-0.0570	-0.0452	-0.0340
286.	-0.0830	-0.0626	-0.0377	-0.0208	-0.0221	-0.0500	-0.0501	-0.0256	-0.0355	-0.0153	-0.0334	-0.0338	-0.0289	-0.0490	-0.0295	-0.0519
35.	-0.0655	-0.0488	-0.0240	-0.0206	-0.0073	-0.0417	-0.0303	-0.0211	-0.0236	-0.0156	-0.0158	-0.0203	-0.0300	-0.0424	-0.0363	-0.0402
132.	-0.0687	-0.0531	-0.0241	-0.0223	-0.0110	-0.0449	-0.0317	-0.0239	-0.0251	-0.0151	-0.0209	-0.0196	-0.0332	-0.0409	-0.0396	-0.0435
186.	-0.0751	-0.0557	-0.0323	-0.0170	-0.0144	-0.0449	-0.0442	-0.0231	-0.0314	-0.0155	-0.0226	-0.0290	-0.0249	-0.0443	-0.0278	-0.0468
234.	-0.0620	-0.0459	-0.0212	-0.0179	-0.0046	-0.0398	-0.0289	-0.0209	-0.0233	-0.0142	-0.0126	-0.0180	-0.0270	-0.0387	-0.0345	-0.0403
232.	-0.0605	-0.0450	-0.0215	-0.0185	-0.0021	-0.0385	-0.0261	-0.0208	-0.0215	-0.0180	-0.0070	-0.0159	-0.0284	-0.0381	-0.0373	-0.0354
285.	-0.0607	-0.0441	-0.0227	-0.0109	-0.0095	-0.0429	-0.0426	-0.0243	-0.0309	-0.0155	-0.0185	-0.0253	-0.0219	-0.0389	-0.0277	-0.0411
134.	-0.0473	-0.0332	-0.0058	-0.0071	0.0007	-0.0347	-0.0242	-0.0177	-0.0194	-0.0037	-0.0126	-0.0108	-0.0196	-0.0281	-0.0279	-0.0377
185.	-0.0302	-0.0017	0.0178	0.0256	0.0185	-0.0221	-0.0263	-0.0142	-0.0222	-0.0061	-0.0113	-0.0187	-0.0178	-0.0330	-0.0268	-0.0410

Run	CP38	CP39	CP40	CP41	CP42	CP43	CP47	CP67	CP68	CP107	CP108	CP109	CP110	CP111	CP112	CP113
88.	-0.0680	-0.0244	0.0244	-0.0784	-0.0568	0.0183	-0.2212	-0.1963	0.0062	-0.2150	-0.1909	-0.1201	-0.0369	-0.0098	0.0203	0.0207
87.	-0.0497	-0.0034	0.0508	-0.0459	-0.0422	0.0524	-0.1725	-0.1585	0.0228	-0.1644	-0.1533	-0.0924	-0.0275	0.0188	0.0526	0.0710
33.	-0.0397	0.0090	0.0642	-0.0228	-0.0282	0.0582	-0.1472	-0.1425	0.0362	-0.1463	-0.1340	-0.0767	-0.0134	0.0412	0.0695	0.0874
286.	-0.0416	-0.0055	0.0679	-0.0342	-0.0348	0.0659	-0.1362	-0.1369	0.0299	-0.1395	-0.1302	-0.0945	-0.0249	0.0187	0.0671	0.0878
35.	-0.0426	0.0003	0.0668	-0.0206	-0.0343	0.0673	-0.1258	-0.1259	0.0301	-0.1285	-0.1223	-0.0817	-0.0271	0.0272	0.0698	0.0987
132.	-0.0451	-0.0006	0.0642	-0.0229	-0.0366	0.0679	-0.1304	-0.1295	0.0284	-0.1330	-0.1299	-0.0861	-0.0265	0.0238	0.0664	0.0974
186.	-0.0419	-0.0093	0.0681	-0.0299	-0.0350	0.0654	-0.1172	-0.1261	0.0247	-0.1271	-0.1203	-0.0911	-0.0299	0.0165	0.0657	0.0916
234.	-0.0437	-0.0044	0.0661	-0.0203	-0.0360	0.0671	-0.1122	-0.1187	0.0239	-0.1191	-0.1149	-0.0828	-0.0310	0.0205	0.0670	0.0990
232.	-0.0440	-0.0034	0.0672	-0.0171	-0.0350	0.0667	-0.1055	-0.1161	0.0244	-0.1174	-0.1107	-0.0800	-0.0309	0.0251	0.0688	0.1033
285.	-0.0401	-0.0126	0.0651	-0.0248	-0.0337	0.0616	-0.0918	-0.1086	0.0176	-0.1076	-0.1002	-0.0796	-0.0363	0.0125	0.0606	0.0919
134.	-0.0380	-0.0036	0.0679	-0.0160	-0.0317	0.0716	-0.0970	-0.1029	0.0248	-0.1049	-0.1027	-0.0760	-0.0249	0.0194	0.0683	0.1018
185.	-0.0382	-0.0178	0.0594	-0.0241	-0.0327	0.0576	-0.0747	-0.0950	0.0104	-0.0946	-0.0895	-0.0735	-0.0361	0.0065	0.0550	0.0850

Table VII. Continued

Run	CP114	CP115	CP123	CP124	CP129	CP130	CP131	CP132	CP133	CP134	CP135	CP136	CP137	CP138	CP139	CP140
88.	0.0545	0.0670	0.0226	0.1012	-0.2216	-0.2273	-0.2259	-0.2236	-0.2353	-0.2286	-0.2188	-0.1622	-0.1115	-0.0105	0.0686	0.1480
87.	0.0918	0.1091	0.0348	0.0818	-0.1733	-0.1767	-0.1772	-0.1776	-0.1836	-0.1818	-0.1739	-0.1379	-0.0933	-0.0235	0.0505	0.1215
33.	0.1110	0.1250	0.0488	0.1014	-0.1683	-0.1592	-0.1654	-0.1592	-0.1672	-0.1546	-0.1598	-0.1280	-0.0761	-0.0166	0.0592	0.1342
286.	0.1316	0.1467	0.0228	0.0501	-0.1434	-0.1290	-0.1424	-0.1343	-0.1508	-0.1459	-0.1488	-0.1232	-0.1017	-0.0382	0.0109	0.0834
35.	0.1307	0.1514	0.0281	0.0561	-0.1365	-0.1303	-0.1365	-0.1332	-0.1424	-0.1369	-0.1389	-0.1210	-0.0902	-0.0423	0.0136	0.0822
132.	0.1276	0.1500	0.0261	0.0502	-0.1333	-0.1324	-0.1359	-0.1360	-0.1432	-0.1452	-0.1432	-0.1219	-0.0916	-0.0405	0.0141	0.0806
186.	0.1388	0.1568	0.0142	0.0374	-0.1278	-0.1140	-0.1271	-0.1187	-0.1343	-0.1290	-0.1368	-0.1176	-0.1009	-0.0487	-0.0049	0.0617
234.	0.1351	0.1585	0.0182	0.0393	-0.1208	-0.1158	-0.1219	-0.1187	-0.1280	-0.1264	-0.1310	-0.1149	-0.0912	-0.0488	-0.0004	0.0616
232.	0.1376	0.1621	0.0184	0.0402	-0.1191	-0.1152	-0.1202	-0.1175	-0.1245	-0.1213	-0.1284	-0.1147	-0.0889	-0.0486	0.0015	0.0634
285.	0.1395	0.1609	0.0034	0.0251	-0.1062	-0.0919	-0.1046	-0.0951	-0.1090	-0.1013	-0.1189	-0.1070	-0.0960	-0.0584	-0.0228	0.0360
134.	0.1421	0.1692	0.0164	0.0316	-0.0978	-0.0960	-0.1011	-0.1000	-0.1091	-0.1116	-0.1149	-0.1013	-0.0863	-0.0472	-0.0049	0.0497
185.	0.1329	0.1577	-0.0035	0.0163	-0.0862	-0.0754	-0.0874	-0.0796	-0.0918	-0.0867	-0.1041	-0.0944	-0.0899	-0.0595	-0.0288	0.0241

Run	CP141	CP147	CP148	CP149	CP150	CP151	CP152	CP153	CP154	CP157	CP158	CP159	CP161	CP162	CP163	CP164
88.	0.1640	-0.2425	-0.2214	-0.2218	-0.1781	-0.1078	0.0006	0.0739	0.1353	-0.2420	-0.1757	0.0835	0.1662	0.1821	0.1757	0.1922
87.	0.1694	-0.1884	-0.1847	-0.1782	-0.1468	-0.0956	-0.0161	0.0651	0.1308	-0.1882	-0.1447	0.0674	0.1936	0.2092	0.2139	0.2284
33.	0.1864	-0.1748	-0.1740	-0.1731	-0.1356	-0.0798	-0.0068	0.0793	0.1468	-0.1783	-0.1188	0.0765	0.2151	0.2233	0.2339	0.2441
286.	0.1320	-0.1530	-0.1454	-0.1487	-0.1218	-0.0915	-0.0291	0.0248	0.1024	-0.1528	-0.1246	0.0289	0.1737	0.2236	0.2346	0.2685
35.	0.1393	-0.1423	-0.1455	-0.1461	-0.1229	-0.0862	-0.0303	0.0353	0.1018	-0.1458	-0.1151	0.0319	0.1853	0.2207	0.2429	0.2655
132.	0.1383	-0.1448	-0.1474	-0.1432	-0.1228	-0.0885	-0.0316	0.0314	0.0993	-0.1460	-0.1226	0.0332	0.1838	0.2199	0.2401	0.2651
186.	0.1110	-0.1359	-0.1339	-0.1375	-0.1135	-0.0893	-0.0343	0.0129	0.0857	-0.1367	-0.1140	0.0150	0.1574	0.2131	0.2349	0.2701
234.	0.1187	-0.1289	-0.1364	-0.1344	-0.1141	-0.0837	-0.0334	0.0229	0.0859	-0.1320	-0.1092	0.0170	0.1655	0.2080	0.2377	0.2656
232.	0.1184	-0.1261	-0.1359	-0.1352	-0.1141	-0.0806	-0.0342	0.0253	0.0870	-0.1300	-0.1047	0.0180	0.1713	0.2099	0.2416	0.2672
285.	0.0833	-0.1111	-0.1169	-0.1243	-0.1017	-0.0827	-0.0408	0.0029	0.0658	-0.1144	-0.0947	-0.0005	0.1311	0.1835	0.2157	0.2524
134.	0.1004	-0.1072	-0.1149	-0.1134	-0.0979	-0.0753	-0.0313	0.0146	0.0734	-0.1093	-0.0985	0.0142	0.1471	0.1954	0.2263	0.2623
185.	0.0649	-0.0925	-0.0998	-0.1070	-0.0897	-0.0765	-0.0416	-0.0045	0.0526	-0.0938	-0.0865	-0.0050	0.1082	0.1589	0.1911	0.2291

Run	CP165	CP166	CP167	CP168	CP169	CP170	CP171	CP172	CP173	CP174	CP175	CP176	CP177	CP178	CP179	CP180
88.	0.2040	0.2672	0.3203	0.4298	0.4715	0.5326	0.5526	0.4921	0.4170	0.1656	0.1658	0.1827	0.1797	0.2344	0.2748	0.3621
87.	0.2493	0.2954	0.3573	0.4502	0.4987	0.5483	0.5655	0.4806	0.4535	0.1696	0.1888	0.2084	0.2238	0.2633	0.3142	0.3842
33.	0.2693	0.3072	0.3750	0.4621	0.5126	0.5730	0.5804	0.5296	0.4761	0.1789	0.2023	0.2197	0.2464	0.2703	0.3267	0.4027
286.	0.2840	0.3308	0.3748	0.4597	0.5041	0.5515	0.5616	0.4300	0.4781	0.1561	0.1905	0.2259	0.2448	0.2985	0.3338	0.3821
35.	0.2886	0.3266	0.3760	0.4586	0.5094	0.5545	0.5643	0.4517	0.4839	0.1510	0.1895	0.2218	0.2520	0.2889	0.3347	0.3809
132.	0.2884	0.3251	0.3730	0.4558	0.5072	0.5521	0.5720	0.4620	0.4817	0.1545	0.1917	0.2235	0.2511	0.2937	0.3383	0.3799
186.	0.2885	0.3293	0.3681	0.4477	0.4908	0.5390	0.5403	0.3981	0.4790	0.1377	0.1772	0.2190	0.2448	0.2944	0.3275	0.3702
234.	0.2910	0.3253	0.3691	0.4477	0.4940	0.5361	0.5411	0.4151	0.4795	0.1367	0.1799	0.2179	0.2498	0.2881	0.3283	0.3668
232.	0.2931	0.3210	0.3660	0.4425	0.4880	0.5362	0.5410	0.4275	0.4821	0.1354	0.1799	0.2189	0.2548	0.2865	0.3264	0.3615
285.	0.2742	0.3076	0.3404	0.4051	0.4409	0.4884	0.4765	0.3421	0.4626	0.1120	0.1541	0.1991	0.2306	0.2711	0.2980	0.3337
134.	0.2856	0.3191	0.3524	0.4250	0.4678	0.5056	0.5128	0.3730	0.4703	0.1240	0.1657	0.2079	0.2399	0.2825	0.3141	0.3429
185.	0.2519	0.2841	0.3106	0.3634	0.3910	0.4328	0.4118	0.2899	0.4406	0.0963	0.1356	0.1788	0.2097	0.2497	0.2719	0.3043

Table VII. Continued

Run	CP181	CP182	CP183	CP184	CP185	CP186	CP188	CP189	CP190	CP191	CP193	CP194	CP195	CP196	CP197	CP198
88.	0.4001	0.4334	0.4494	0.4885	0.4186	0.3774	0.2238	0.4195	0.4972	0.4596	0.0952	0.1554	0.1658	0.2098	0.2255	0.2791
87.	0.4142	0.4460	0.4778	0.5048	0.4353	0.4114	0.2548	0.4471	0.5092	0.4700	0.1391	0.1875	0.2074	0.2412	0.2684	0.3096
33.	0.4322	0.4593	0.4963	0.5241	0.4772	0.4418	0.2717	0.4624	0.5408	0.5139	0.1554	0.2079	0.2312	0.2559	0.2952	0.3248
286.	0.4142	0.4629	0.4918	0.5134	0.4131	0.4342	0.2904	0.4290	0.5020	0.4252	0.1724	0.2292	0.2359	0.2758	0.2857	0.3283
35.	0.4202	0.4618	0.4966	0.5160	0.4382	0.4402	0.2851	0.4382	0.5123	0.4515	0.1802	0.2261	0.2445	0.2740	0.2980	0.3287
132.	0.4153	0.4563	0.4930	0.5139	0.4389	0.4367	0.2859	0.4346	0.5066	0.4520	0.1806	0.2238	0.2431	0.2719	0.2971	0.3290
186.	0.4089	0.4555	0.4847	0.4999	0.3899	0.4283	0.2908	0.4124	0.4877	0.3980	0.1849	0.2380	0.2450	0.2782	0.2887	0.3178
234.	0.4112	0.4538	0.4863	0.4986	0.4059	0.4261	0.2870	0.4178	0.4926	0.4096	0.1871	0.2317	0.2489	0.2726	0.2941	0.3189
232.	0.4077	0.4489	0.4831	0.4978	0.4079	0.4238	0.2893	0.4151	0.4980	0.4225	0.1930	0.2351	0.2549	0.2722	0.2991	0.3142
285.	0.3764	0.4161	0.4409	0.4483	0.3344	0.3938	0.2735	0.3734	0.4498	0.3396	0.1894	0.2370	0.2428	0.2648	0.2716	0.2880
134.	0.3880	0.4299	0.4612	0.4729	0.3688	0.4073	0.2787	0.3964	0.4630	0.3689	0.1988	0.2365	0.2477	0.2714	0.2821	0.3001
185.	0.3416	0.3748	0.3955	0.3953	0.2819	0.3650	0.2504	0.3386	0.4023	0.2840	0.1853	0.2305	0.2354	0.2565	0.2591	0.2706

Run	CP199	CP200	CP201	CP202	CP203	CP204	CP205	CP212	CP213	CP216	CP217	CP220	CP221	CP225	CP226	CP227
88.	0.2974	0.3497	0.3585	0.3662	0.3206	0.3228	0.3040	0.2419	0.2318	0.4404	0.4320	0.4753	0.5096	0.5712	0.5711	0.6566
87.	0.3367	0.3756	0.3781	0.3704	0.3739	0.3538	0.3633	0.2657	0.2740	0.4582	0.4500	0.4855	0.5361	0.6119	0.6065	0.6921
33.	0.3439	0.3785	0.3964	0.3771	0.3980	0.3800	0.3868	0.2796	0.2848	0.4673	0.4620	0.4916	0.5577	0.6189	0.6250	0.7075
286.	0.3441	0.3491	0.3427	0.3994	0.3925	0.3441	0.3832	0.2901	0.3022	0.4190	0.4140	0.4828	0.5451	0.6350	0.6414	0.7142
35.	0.3467	0.3527	0.3475	0.3900	0.4122	0.3653	0.3929	0.2853	0.3007	0.4234	0.4193	0.4854	0.5481	0.6335	0.6330	0.7154
132.	0.3508	0.3606	0.3503	0.3885	0.4078	0.3601	0.4003	0.2852	0.3014	0.4277	0.4215	0.4829	0.5487	0.6419	0.6336	0.7181
186.	0.3166	0.3271	0.3473	0.3997	0.3854	0.3213	0.3729	0.2866	0.2971	0.4005	0.3994	0.4617	0.5379	0.6384	0.6393	0.7246
234.	0.3246	0.3297	0.3427	0.3889	0.3901	0.3224	0.3730	0.2828	0.2963	0.4030	0.4056	0.4600	0.5359	0.6273	0.6212	0.7127
232.	0.3163	0.3196	0.3493	0.3915	0.4007	0.3426	0.3769	0.2844	0.2936	0.3992	0.4014	0.4633	0.5441	0.6275	0.6160	0.7104
285.	0.2826	0.3035	0.3268	0.3630	0.3386	0.2627	0.3362	0.2668	0.2716	0.3700	0.3699	0.4068	0.4976	0.6120	0.5994	0.6883
134.	0.3036	0.3149	0.3446	0.3865	0.3609	0.2815	0.3631	0.2719	0.2866	0.3813	0.3852	0.4375	0.5161	0.6264	0.6054	0.6934
185.	0.2660	0.2861	0.3058	0.3259	0.2821	0.2086	0.3183	0.2454	0.2483	0.3446	0.3453	0.3544	0.4510	0.5858	0.5625	0.6461

Run	CP228	CP230	CP231	CP232	CP233	CP245	CP246	CP247	CP248	CP257	CP258	CP259	CP260	CP261	CP262	CP263
88.	0.7132	0.7284	0.6939	0.6060	0.5618	0.0432	0.1609	0.3464	0.3234	-0.7912	-0.5486	-0.3073	-0.1928	-0.1527	-0.1236	0.0373
87.	0.7418	0.7576	0.7091	0.6225	0.6029	0.0924	0.1925	0.3553	0.3708	-0.7008	-0.5350	-0.3078	-0.1846	-0.1275	-0.0938	0.0808
33.	0.7443	0.7764	0.7279	0.6468	0.6196	0.1141	0.2085	0.3621	0.3905	-0.6980	-0.5096	-0.2934	-0.1731	-0.1165	-0.0755	0.1000
286.	0.7878	0.7893	0.7314	0.6403	0.6368	0.1200	0.2295	0.3265	0.4065	-0.6819	-0.5304	-0.3478	-0.2031	-0.1432	-0.0922	0.1149
35.	0.7710	0.7786	0.7159	0.6345	0.6294	0.1315	0.2291	0.3255	0.4046	-0.6802	-0.5393	-0.3477	-0.2128	-0.1455	-0.0989	0.1206
132.	0.7773	0.7896	0.7290	0.6382	0.6401	0.1298	0.2284	0.3222	0.4013	-0.6812	-0.5458	-0.3502	-0.2123	-0.1442	-0.1018	0.1199
186.	0.7963	0.7944	0.7224	0.6322	0.6354	0.1294	0.2366	0.3162	0.3876	-0.6583	-0.5080	-0.3414	-0.2034	-0.1241	-0.0822	0.1255
234.	0.7711	0.7839	0.7176	0.6321	0.6353	0.1371	0.2353	0.3152	0.3906	-0.6617	-0.5220	-0.3466	-0.2176	-0.1443	-0.0943	0.1294
232.	0.7665	0.7806	0.7126	0.6206	0.6261	0.1425	0.2375	0.3149	0.3888	-0.6462	-0.5045	-0.3322	-0.2072	-0.1335	-0.0819	0.1331
285.	0.7595	0.7623	0.6822	0.5931	0.6074	0.1317	0.2336	0.2993	0.3366	-0.5943	-0.4282	-0.2874	-0.1684	-0.1064	-0.0490	0.1321
134.	0.7656	0.7728	0.7063	0.6112	0.6277	0.1398	0.2386	0.3074	0.3564	-0.6242	-0.4745	-0.3184	-0.1946	-0.1279	-0.0797	0.1385
185.	0.7216	0.7255	0.6440	0.5625	0.5864	0.1263	0.2254	0.2801	0.2830	-0.5794	-0.3800	-0.2484	-0.1427	-0.0898	-0.0415	0.1333

Table VII. Concluded

Run	CP264	CP265	CP266	CP267	CP268	CP269	CP270	CP271	CP272	CP273	CP274	CP275	CP276	CP277	CP278	CP279
88.	0.0449	0.0370	0.0453	0.0241	0.0006	-0.0690	-0.1474	-0.2072	-0.1870	0.0361	-0.1911	0.4490	0.6023	0.7313	0.8054	0.8234
87.	0.0884	0.0895	0.0912	0.0746	0.0394	-0.0328	-0.1378	-0.2100	-0.1900	0.0851	-0.1974	0.4962	0.6240	0.7624	0.8325	0.8533
33.	0.1078	0.1056	0.1132	0.0892	0.0481	-0.0198	-0.1293	-0.1991	-0.1645	0.0660	-0.1806	0.5175	0.6275	0.7792	0.8329	0.8471
286.	0.1333	0.1299	0.1399	0.1116	0.0718	-0.0235	-0.1379	-0.2407	-0.2220	0.1347	-0.2199	0.5197	0.6471	0.7755	0.8664	0.8883
35.	0.1343	0.1384	0.1415	0.1170	0.0681	-0.0172	-0.1426	-0.2411	-0.2181	0.1229	-0.2269	0.5308	0.6402	0.7809	0.8561	0.8765
132.	0.1329	0.1386	0.1405	0.1186	0.0699	-0.0165	-0.1427	-0.2397	-0.2215	0.1339	-0.2271	0.5328	0.6412	0.7841	0.8651	0.8909
186.	0.1456	0.1455	0.1535	0.1215	0.0765	-0.0160	-0.1362	-0.2425	-0.2189	0.1283	-0.2220	0.5122	0.6274	0.7731	0.8645	0.8837
234.	0.1454	0.1509	0.1535	0.1259	0.0740	-0.0114	-0.1413	-0.2462	-0.2213	0.1319	-0.2317	0.5142	0.6177	0.7695	0.8507	0.8751
232.	0.1483	0.1536	0.1575	0.1284	0.0734	-0.0068	-0.1375	-0.2360	-0.2057	0.1228	-0.2211	0.5132	0.6094	0.7719	0.8497	0.8749
285.	0.1537	0.1569	0.1636	0.1310	0.0841	-0.0030	-0.1162	-0.2095	-0.1812	0.1296	-0.1853	0.4731	0.5651	0.7214	0.8152	0.8386
134.	0.1566	0.1642	0.1654	0.1401	0.0909	0.0038	-0.1200	-0.2254	-0.2098	0.1641	-0.2117	0.4989	0.5892	0.7380	0.8363	0.8664
185.	0.1568	0.1638	0.1730	0.1436	0.0967	0.0097	-0.0989	-0.1949	-0.1771	0.1468	-0.1783	0.4429	0.5088	0.6577	0.7531	0.7751

Run	CP280	CP281	CP282	CP283	CP284
88.	0.8178	0.7629	0.6454	0.4836	0.6090
87.	0.8541	0.7922	0.6548	0.5167	0.6169
33.	0.8624	0.7951	0.6755	0.5468	0.6138
286.	0.8786	0.7940	0.6618	0.5268	0.6280
35.	0.8739	0.7906	0.6619	0.5386	0.6174
132.	0.8858	0.7984	0.6513	0.5324	0.6208
186.	0.8743	0.7779	0.6333	0.5149	0.6246
234.	0.8588	0.7730	0.6356	0.5170	0.6058
232.	0.8528	0.7583	0.6203	0.5118	0.6072
285.	0.8199	0.7145	0.5692	0.4696	0.5886
134.	0.8344	0.7409	0.5933	0.4986	0.6051
185.	0.7528	0.6502	0.5076	0.4375	0.5585

Table VIII. Pressure Coefficients for l/h = 11.7 Cavity With Rear Block

Run	M_∞	$R_\infty \times 10^{-6}$	p_∞	$p_{t\infty}$	q_∞	$T_{t\infty}$	CP1	CP2	CP3	CP4	CP5	CP6	CP7	CP8	CP9	CP10
281.	0.80	1.5	547.2	831.5	243.2	109.7	1.1170	-0.3189	-0.3671	-0.2819	-0.2613	-0.2067	-0.1582	-0.0942	-0.0864	-0.0637
181.	0.85	1.6	538.7	862.1	271.1	116.4	1.1551	-0.2944	-0.4208	-0.3073	-0.2815	-0.2173	-0.1655	-0.0941	-0.0803	-0.0575
280.	0.90	1.7	517.2	871.6	291.1	113.5	1.2004	-0.2153	-0.3852	-0.4134	-0.4103	-0.2926	-0.1614	-0.0829	-0.0589	-0.0357
180.	0.95	1.7	500.1	894.4	316.3	114.5	1.2394	-0.0968	-0.2889	-0.3193	-0.3606	-0.3645	-0.3736	-0.2906	-0.1835	-0.0649

Run	CP11	CP12	CP13	CP14	CP15	CP16	CP17	CP18	CP19	CP20	CP21	CP33	CP34	CP35	CP36	CP37
281.	-0.0868	-0.0654	-0.0433	-0.0263	-0.0260	-0.0547	-0.0554	-0.0314	-0.0419	-0.0242	-0.0384	-0.0443	-0.0406	-0.0626	-0.0433	-0.0688
181.	-0.0778	-0.0582	-0.0361	-0.0203	-0.0177	-0.0483	-0.0484	-0.0274	-0.0366	-0.0214	-0.0279	-0.0374	-0.0348	-0.0560	-0.0397	-0.0646
280.	-0.0551	-0.0376	-0.0189	-0.0060	-0.0030	-0.0375	-0.0374	-0.0203	-0.0269	-0.0147	-0.0134	-0.0250	-0.0240	-0.0422	-0.0320	-0.0509
180.	-0.0265	0.0054	0.0240	0.0337	0.0276	-0.0143	-0.0192	-0.0089	-0.0176	-0.0039	-0.0058	-0.0173	-0.0187	-0.0355	-0.0308	-0.0555

Run	CP38	CP39	CP40	CP41	CP42	CP43	CP44	CP45	CP46	CP47	CP48	CP49	CP50	CP65	CP66	CP67
281.	-0.0479	-0.0041	0.0657	-0.0432	-0.0386	0.0617	-0.1088	-0.1223	-0.1080	-0.1120	-0.1103	-0.1281	-0.1056	-0.1333	-0.1183	-0.1178
181.	-0.0478	-0.0058	0.0685	-0.0383	-0.0387	0.0648	-0.1010	-0.1144	-0.0986	-0.1007	-0.1036	-0.1184	-0.0982	-0.1250	-0.1086	-0.1097
280.	-0.0414	-0.0040	0.0742	-0.0232	-0.0336	0.0690	-0.0806	-0.0933	-0.0729	-0.0749	-0.0854	-0.0926	-0.0792	-0.1028	-0.0846	-0.0906
180.	-0.0442	-0.0116	0.0695	-0.0238	-0.0370	0.0662	-0.0722	-0.0847	-0.0676	-0.0672	-0.0746	-0.0848	-0.0705	-0.0941	-0.0781	-0.0826

Run	CP68	CP80	CP84	CP85	CP97	CP98	CP99	CP100	CP101	CP102	CP103	CP104	CP105	CP106	CP107	CP108
281.	0.0365	-0.1181	-0.1187	-0.1281	-0.1245	-0.1159	-0.1302	-0.1152	-0.1283	-0.1175	-0.1254	-0.1204	-0.1324	-0.1203	-0.1274	-0.1089
181.	0.0323	-0.1114	-0.1101	-0.1188	-0.1155	-0.1088	-0.1226	-0.1080	-0.1204	-0.1102	-0.1177	-0.1129	-0.1228	-0.1116	-0.1182	-0.1014
280.	0.0280	-0.0920	-0.0879	-0.0968	-0.0930	-0.0911	-0.1041	-0.0820	-0.1004	-0.0901	-0.0933	-0.0942	-0.1005	-0.0866	-0.0957	-0.0797
180.	0.0207	-0.0842	-0.0809	-0.0883	-0.0838	-0.0822	-0.0943	-0.0791	-0.0913	-0.0819	-0.0859	-0.0847	-0.0909	-0.0799	-0.0866	-0.0738

Run	CP109	CP110	CP111	CP112	CP113	CP114	CP115	CP123	CP124	CP129	CP130	CP131	CP132	CP133	CP134	CP135
281.	-0.0773	-0.0168	0.0294	0.0757	0.0936	0.1361	0.1535	0.0568	0.0959	-0.1341	-0.1173	-0.1339	-0.1231	-0.1349	-0.1235	-0.1398
181.	-0.0747	-0.0202	0.0259	0.0741	0.0983	0.1418	0.1607	0.0465	0.0780	-0.1252	-0.1097	-0.1263	-0.1160	-0.1263	-0.1150	-0.1291
280.	-0.0603	-0.0236	0.0264	0.0746	0.1052	0.1489	0.1700	0.0331	0.0614	-0.1058	-0.0905	-0.1052	-0.0948	-0.1032	-0.0877	-0.1061
180.	-0.0587	-0.0235	0.0186	0.0655	0.0971	0.1433	0.1680	0.0204	0.0417	-0.0952	-0.0815	-0.0956	-0.0875	-0.0950	-0.0829	-0.0959

Table VIII. Continued

Run	CP136	CP137	CP138	CP139	CP140	CP141	CP142	CP143	CP144	CP145	CP146	CP147	CP148	CP149	CP150	CP151
281.	-0.1372	-0.1321	-0.0749	-0.0186	0.0653	0.1241	-0.1214	-0.1326	-0.1272	-0.1420	-0.1204	-0.1355	-0.1280	-0.1460	-0.1201	-0.0815
181.	-0.1268	-0.1236	-0.0771	-0.0296	0.0491	0.1093	-0.1148	-0.1256	-0.1212	-0.1341	-0.1127	-0.1255	-0.1187	-0.1349	-0.1124	-0.0803
280.	-0.1073	-0.1047	-0.0740	-0.0376	0.0270	0.0857	-0.0997	-0.1085	-0.1010	-0.1170	-0.0941	-0.1035	-0.0994	-0.1181	-0.0974	-0.0738
180.	-0.0959	-0.0962	-0.0698	-0.0420	0.0116	0.0598	-0.0886	-0.0966	-0.0921	-0.1043	-0.0850	-0.0932	-0.0901	-0.1042	-0.0886	-0.0713

Run	CP152	CP153	CP154	CP155	CP156	CP157	CP158	CP159	CP161	CP162	CP163	CP164	CP165	CP166	CP167	CP168
281.	-0.0071	0.0639	0.1473	-0.1318	-0.1228	-0.1352	-0.1182	0.0668	0.1678	0.2148	0.2249	0.2562	0.2723	0.3226	0.3680	0.4331
181.	-0.0150	0.0497	0.1309	-0.1241	-0.1160	-0.1256	-0.1106	0.0494	0.1592	0.2115	0.2316	0.2646	0.2840	0.3305	0.3727	0.4312
280.	-0.0252	0.0302	0.1062	-0.1023	-0.0964	-0.1056	-0.0880	0.0263	0.1392	0.1934	0.2278	0.2644	0.2891	0.3285	0.3664	0.4099
180.	-0.0318	0.0113	0.0760	-0.0941	-0.0899	-0.0948	-0.0827	0.0097	0.1089	0.1653	0.2043	0.2451	0.2725	0.3107	0.3420	0.3803

Run	CP169	CP170	CP174	CP175	CP176	CP177	CP178	CP179	CP180	CP181	CP182	CP183	CP188	CP189	CP190	CP193
281.	0.4545	0.4903	0.1923	0.2138	0.2365	0.2466	0.2872	0.3177	0.3779	0.4277	0.4660	0.4871	0.2848	0.4325	0.5043	0.1857
181.	0.4503	0.4849	0.1825	0.2133	0.2431	0.2587	0.2980	0.3290	0.3854	0.4310	0.4666	0.4879	0.2962	0.4343	0.5034	0.1940
280.	0.4249	0.4603	0.1568	0.1996	0.2400	0.2670	0.3004	0.3312	0.3814	0.4182	0.4468	0.4665	0.3042	0.4165	0.4839	0.2027
180.	0.3930	0.4222	0.1263	0.1720	0.2181	0.2492	0.2872	0.3142	0.3562	0.3872	0.4131	0.4289	0.2886	0.3869	0.4422	0.1986

Run	CP194	CP195	CP196	CP197	CP198	CP199	CP200	CP201	CP202	CP203	CP204	CP212	CP213	CP216	CP217	CP245
281.	0.2453	0.2535	0.2906	0.3044	0.3433	0.3597	0.3879	0.3914	0.4089	0.3883	0.3976	0.2899	0.2921	0.4446	0.4444	0.1235
181.	0.2534	0.2636	0.2979	0.3152	0.3508	0.3640	0.3918	0.3983	0.4143	0.4027	0.4173	0.2979	0.3015	0.4454	0.4447	0.1310
280.	0.2575	0.2705	0.2989	0.3192	0.3491	0.3578	0.3825	0.3924	0.4046	0.4048	0.4345	0.3019	0.3057	0.4282	0.4246	0.1424
180.	0.2492	0.2598	0.2861	0.3015	0.3290	0.3375	0.3602	0.3691	0.3879	0.3937	0.4354	0.2844	0.2902	0.4000	0.3965	0.1371

Run	CP246	CP247	CP248	CP257	CP258	CP259	CP260	CP261	CP262	CP263	CP264	CP265	CP266	CP267	CP268	CP269
281.	0.2411	0.3796	0.3893	-0.6926	-0.4808	-0.3000	-0.1675	-0.1231	-0.0823	0.1027	0.1179	0.1142	0.1266	0.1052	0.0769	-0.0028
181.	0.2488	0.3848	0.4000	-0.6758	-0.4689	-0.3002	-0.1686	-0.1181	-0.0728	0.1148	0.1311	0.1308	0.1424	0.1217	0.0923	0.0137
280.	0.2550	0.3790	0.4048	-0.6226	-0.3951	-0.2411	-0.1329	-0.0839	-0.0378	0.1329	0.1518	0.1550	0.1669	0.1459	0.1154	0.0424
180.	0.2486	0.3564	0.3916	-0.6010	-0.3452	-0.2087	-0.1154	-0.0743	-0.0345	0.1387	0.1602	0.1665	0.1798	0.1625	0.1350	0.0647

Table VIII. Concluded

Run	CP270	CP271	CP272	CP273	CP274
281.	-0.1127	-0.2149	-0.1915	0.0945	-0.1869
181.	-0.1053	-0.2239	-0.2008	0.1066	-0.1995
280.	-0.0791	-0.2050	-0.1726	0.1184	-0.1761
180.	-0.0578	-0.2094	-0.1965	0.1452	-0.1966

Table IX. Pressure Coefficients for $l/h = 11.7$ Cavity With Fence

Run	M_∞	$R_\infty \times 10^{-6}$	p_∞	$p_{t\infty}$	q_∞	$T_{t\infty}$	CP1	CP2	CP3	CP4	CP5	CP6	CP7	CP8	CP9	CP10
278.	0.29	1.0	1113.5	1182.6	67.6	88.6	0.7876	-0.2880	-0.2821	-0.2704	-0.2075	-0.1542	-0.1844	-0.0381	-0.1207	-0.0642
178.	0.59	1.6	797.7	1013.0	197.3	98.8	0.9535	-0.1769	-0.2857	-0.2330	-0.2026	-0.1616	-0.1453	-0.0660	-0.0787	-0.0535
242.	0.61	1.6	785.0	1006.2	202.0	93.1	0.9399	-0.2176	-0.2924	-0.2237	-0.2021	-0.1623	-0.1590	-0.0712	-0.0748	-0.0550
145.	0.60	3.3	1636.6	2084.7	410.1	93.1	0.9769	-0.2904	-0.2906	-0.2129	-0.1946	-0.1621	-0.1022	-0.0732	-0.0626	-0.0497
277.	0.79	1.5	554.0	839.1	244.2	108.4	1.1146	-0.2925	-0.3524	-0.2745	-0.2469	-0.1942	-0.1495	-0.0798	-0.0762	-0.0520
44.	0.80	3.3	1207.1	1835.2	537.2	110.5	1.1197	-0.3176	-0.3624	-0.2546	-0.2315	-0.1869	-0.1336	-0.0785	-0.0603	-0.0455
245.	0.80	3.9	1367.8	2082.7	611.1	102.3	1.1224	-0.3407	-0.3631	-0.2528	-0.2300	-0.1878	-0.1289	-0.0799	-0.0597	-0.0448
177.	0.85	1.6	541.2	863.8	270.7	115.3	1.1537	-0.2732	-0.3987	-0.2938	-0.2648	-0.2020	-0.1540	-0.0791	-0.0670	-0.0435
243.	0.85	3.3	1101.3	1764.2	555.5	110.9	1.1612	-0.2916	-0.4323	-0.2808	-0.2500	-0.1984	-0.1447	-0.0780	-0.0582	-0.0419
46.	0.84	3.9	1312.4	2093.6	655.7	111.5	1.1630	-0.3235	-0.4369	-0.2726	-0.2471	-0.1969	-0.1331	-0.0802	-0.0545	-0.0388
276.	0.91	1.7	519.2	885.3	299.3	116.4	1.1669	-0.1862	-0.3801	-0.4046	-0.3806	-0.2387	-0.1470	-0.0693	-0.0516	-0.0286
142.	0.90	1.9	585.1	990.0	332.1	99.6	1.1803	-0.1804	-0.4569	-0.4119	-0.3617	-0.2120	-0.1377	-0.0625	-0.0509	-0.0307
143.	0.90	3.3	1016.1	1715.2	573.8	107.7	1.1946	-0.2086	-0.4916	-0.4218	-0.3579	-0.2060	-0.1436	-0.0627	-0.0425	-0.0262
176.	0.95	1.8	507.1	909.7	322.5	117.2	1.2086	-0.0875	-0.3026	-0.3272	-0.3627	-0.3628	-0.3641	-0.2323	-0.1110	-0.0290

Run	CP11	CP12	CP13	CP14	CP15	CP16	CP17	CP18	CP19	CP20	CP21	CP33	CP34	CP35	CP36	CP37
278.	-0.1394	-0.0955	-0.0546	-0.0276	-0.0991	-0.0789	-0.1023	-0.0235	-0.0623	0.0657	-0.1121	-0.0010	0.1126	0.2158	0.0194	-0.1775
178.	-0.0856	-0.0636	-0.0335	-0.0168	-0.0294	-0.0438	-0.0433	-0.0072	-0.0138	0.0332	0.0041	0.0569	0.1402	0.2588	0.0349	-0.0983
242.	-0.0813	-0.0610	-0.0343	-0.0232	-0.0199	-0.0420	-0.0371	-0.0071	-0.0106	0.0248	0.0141	0.0588	0.1358	0.2533	0.0321	-0.0953
145.	-0.0669	-0.0510	-0.0262	-0.0160	-0.0049	-0.0322	-0.0194	-0.0034	0.0010	0.0181	0.0421	0.0745	0.1396	0.2685	0.0255	-0.0770
277.	-0.0765	-0.0560	-0.0280	-0.0104	-0.0130	-0.0337	-0.0298	0.0014	0.0008	0.0394	0.0396	0.0864	0.1768	0.3002	0.0674	-0.0755
44.	-0.0583	-0.0420	-0.0172	-0.0105	0.0075	-0.0203	-0.0093	0.0064	0.0134	0.0331	0.0660	0.1004	0.1780	0.3094	0.0621	-0.0589
245.	-0.0565	-0.0401	-0.0173	-0.0066	0.0084	-0.0201	-0.0066	0.0065	0.0147	0.0307	0.0703	0.1024	0.1768	0.3107	0.0602	-0.0561
177.	-0.0641	-0.0446	-0.0194	-0.0019	0.0003	-0.0230	-0.0184	0.0102	0.0116	0.0448	0.0605	0.1015	0.1930	0.3147	0.0835	-0.0578
243.	-0.0539	-0.0377	-0.0120	-0.0061	0.0110	-0.0169	-0.0058	0.0093	0.0170	0.0396	0.0715	0.1098	0.1905	0.3227	0.0747	-0.0579
46.	-0.0483	-0.0320	-0.0119	-0.0007	0.0169	-0.0131	-0.0001	0.0116	0.0213	0.0346	0.0840	0.1129	0.1903	0.3225	0.0731	-0.0472
276.	-0.0488	-0.0300	-0.0079	0.0059	0.0081	-0.0181	-0.0133	0.0123	0.0162	0.0485	0.0676	0.1090	0.2003	0.3193	0.0930	-0.0570
142.	-0.0493	-0.0326	-0.0018	0.0018	0.0068	-0.0186	-0.0097	0.0115	0.0173	0.0565	0.0592	0.1150	0.2025	0.3300	0.0943	-0.0654
143.	-0.0399	-0.0256	0.0019	0.0037	0.0170	-0.0111	-0.0005	0.0138	0.0226	0.0509	0.0767	0.1223	0.2056	0.3382	0.0912	-0.0547
176.	-0.0137	0.0092	0.0279	0.0359	0.0309	-0.0016	0.0003	0.0214	0.0256	0.0596	0.0793	0.1246	0.2185	0.3407	0.1097	-0.0594

Table IX. Continued

Run	CP38	CP39	CP40	CP41	CP42	CP43	CP44	CP45	CP46	CP47	CP48	CP49	CP50	CP65	CP66	CP67
278.	-0.0996	-0.0844	-0.0035	-0.0621	-0.1016	0.0092	-0.2049	-0.2376	-0.2796	-0.2827	-0.1778	-0.3147	-0.1836	-0.2581	-0.2642	-0.2746
178.	-0.0982	-0.0879	-0.0185	0.0200	-0.0965	-0.0169	-0.1550	-0.1668	-0.1742	-0.1792	-0.1524	-0.1865	-0.1483	-0.1782	-0.1756	-0.2043
242.	-0.0980	-0.0865	-0.0200	0.0171	-0.0964	-0.0165	-0.1546	-0.1650	-0.1727	-0.1770	-0.1538	-0.1838	-0.1494	-0.1728	-0.1694	-0.2002
145.	-0.1039	-0.0873	-0.0256	0.0365	-0.0982	-0.0267	-0.1477	-0.1524	-0.1504	-0.1540	-0.1540	-0.1538	-0.1487	-0.1586	-0.1570	-0.1891
277.	-0.0909	-0.0995	-0.0639	0.0611	-0.0899	-0.0660	-0.1264	-0.1359	-0.1317	-0.1360	-0.1241	-0.1471	-0.1227	-0.1449	-0.1369	-0.1590
44.	-0.0926	-0.0955	-0.0676	0.0748	-0.0889	-0.0704	-0.1184	-0.1221	-0.1126	-0.1172	-0.1229	-0.1211	-0.1197	-0.1297	-0.1218	-0.1468
245.	-0.0934	-0.0954	-0.0682	0.0756	-0.0887	-0.0713	-0.1195	-0.1210	-0.1110	-0.1150	-0.1256	-0.1196	-0.1219	-0.1275	-0.1197	-0.1458
177.	-0.0784	-0.0885	-0.0621	0.0810	-0.0768	-0.0662	-0.1085	-0.1163	-0.1063	-0.1121	-0.1083	-0.1225	-0.1051	-0.1254	-0.1142	-0.1360
243.	-0.0904	-0.0941	-0.0727	0.0854	-0.0869	-0.0741	-0.1148	-0.1177	-0.1098	-0.1134	-0.1181	-0.1183	-0.1142	-0.1260	-0.1198	-0.1399
46.	-0.0886	-0.0924	-0.0713	0.0919	-0.0830	-0.0773	-0.1083	-0.1093	-0.0937	-0.0990	-0.1158	-0.1028	-0.1100	-0.1182	-0.1069	-0.1328
276.	-0.0786	-0.0890	-0.0671	0.0922	-0.0758	-0.0715	-0.1046	-0.1137	-0.1024	-0.1062	-0.1042	-0.1167	-0.1016	-0.1208	-0.1108	-0.1295
142.	-0.0814	-0.0892	-0.0713	0.0899	-0.0805	-0.0678	-0.1098	-0.1158	-0.1193	-0.1191	-0.1036	-0.1276	-0.1064	-0.1226	-0.1226	-0.1320
143.	-0.0842	-0.0897	-0.0745	0.0996	-0.0814	-0.0741	-0.1068	-0.1098	-0.1049	-0.1076	-0.1080	-0.1140	-0.1067	-0.1179	-0.1147	-0.1287
176.	-0.0811	-0.0930	-0.0744	0.1090	-0.0779	-0.0779	-0.1048	-0.1133	-0.1043	-0.1075	-0.1044	-0.1172	-0.1026	-0.1201	-0.1120	-0.1282

Run	CP68	CP80	CP84	CP85	CP97	CP98	CP99	CP100	CP101	CP102	CP103	CP104	CP105	CP106	CP107	CP108
278.	-0.1149	-0.1957	-0.2332	-0.2476	-0.2473	-0.1836	-0.2046	-0.2566	-0.2184	-0.1993	-0.2580	-0.2067	-0.2676	-0.2611	-0.2745	-0.2674
178.	-0.1462	-0.1549	-0.1677	-0.1747	-0.1712	-0.1519	-0.1632	-0.1705	-0.1679	-0.1606	-0.1799	-0.1692	-0.1894	-0.1868	-0.1988	-0.1965
242.	-0.1435	-0.1557	-0.1655	-0.1720	-0.1672	-0.1531	-0.1629	-0.1669	-0.1679	-0.1606	-0.1769	-0.1685	-0.1870	-0.1848	-0.1974	-0.1958
145.	-0.1617	-0.1528	-0.1567	-0.1584	-0.1534	-0.1531	-0.1578	-0.1521	-0.1601	-0.1582	-0.1627	-0.1655	-0.1724	-0.1737	-0.1818	-0.1833
277.	-0.1463	-0.1294	-0.1345	-0.1426	-0.1413	-0.1272	-0.1380	-0.1346	-0.1398	-0.1320	-0.1430	-0.1364	-0.1499	-0.1430	-0.1548	-0.1519
44.	-0.1478	-0.1239	-0.1242	-0.1291	-0.1268	-0.1246	-0.1316	-0.1194	-0.1326	-0.1286	-0.1303	-0.1333	-0.1374	-0.1333	-0.1428	-0.1418
245.	-0.1510	-0.1243	-0.1237	-0.1275	-0.1244	-0.1251	-0.1307	-0.1176	-0.1310	-0.1281	-0.1281	-0.1337	-0.1360	-0.1323	-0.1416	-0.1403
177.	-0.1314	-0.1121	-0.1142	-0.1228	-0.1230	-0.1101	-0.1213	-0.1118	-0.1217	-0.1133	-0.1217	-0.1180	-0.1292	-0.1210	-0.1326	-0.1275
243.	-0.1445	-0.1193	-0.1208	-0.1250	-0.1223	-0.1196	-0.1256	-0.1169	-0.1268	-0.1234	-0.1259	-0.1274	-0.1317	-0.1280	-0.1368	-0.1348
46.	-0.1431	-0.1151	-0.1109	-0.1162	-0.1144	-0.1162	-0.1228	-0.1032	-0.1215	-0.1177	-0.1152	-0.1224	-0.1230	-0.1172	-0.1277	-0.1255
276.	-0.1267	-0.1089	-0.1114	-0.1199	-0.1180	-0.1068	-0.1175	-0.1086	-0.1186	-0.1100	-0.1194	-0.1147	-0.1236	-0.1155	-0.1260	-0.1218
142.	-0.1297	-0.1115	-0.1185	-0.1218	-0.1184	-0.1106	-0.1151	-0.1199	-0.1177	-0.1138	-0.1232	-0.1166	-0.1266	-0.1242	-0.1300	-0.1299
143.	-0.1328	-0.1099	-0.1133	-0.1164	-0.1134	-0.1106	-0.1148	-0.1118	-0.1167	-0.1139	-0.1178	-0.1169	-0.1220	-0.1204	-0.1261	-0.1257
176.	-0.1242	-0.1092	-0.1125	-0.1200	-0.1172	-0.1070	-0.1166	-0.1105	-0.1181	-0.1107	-0.1197	-0.1148	-0.1237	-0.1167	-0.1255	-0.1217

Table IX. Continued

Run	CP109	CP110	CP111	CP112	CP113	CP114	CP115	CP123	CP124	CP129	CP130	CP131	CP132	CP133	CP134	CP135
278.	-0.2823	-0.1517	-0.1784	-0.0760	-0.0728	0.0365	0.0376	-0.1341	-0.0975	-0.2199	-0.1947	-0.2287	-0.2156	-0.2561	-0.2730	-0.2460
178.	-0.2093	-0.1748	-0.1639	-0.1083	-0.0681	0.0116	0.0523	-0.1554	-0.1402	-0.1701	-0.1587	-0.1736	-0.1663	-0.1819	-0.1815	-0.1826
242.	-0.2066	-0.1727	-0.1565	-0.1043	-0.0588	0.0133	0.0531	-0.1490	-0.1336	-0.1727	-0.1615	-0.1741	-0.1671	-0.1799	-0.1737	-0.1813
145.	-0.1953	-0.1842	-0.1590	-0.1147	-0.0680	-0.0010	0.0496	-0.1599	-0.1453	-0.1627	-0.1604	-0.1648	-0.1617	-0.1666	-0.1632	-0.1740
277.	-0.1690	-0.1546	-0.1572	-0.1324	-0.1176	-0.0630	-0.0319	-0.1542	-0.1418	-0.1428	-0.1292	-0.1421	-0.1345	-0.1478	-0.1428	-0.1499
44.	-0.1529	-0.1594	-0.1485	-0.1296	-0.1074	-0.0726	-0.0385	-0.1510	-0.1373	-0.1370	-0.1286	-0.1346	-0.1300	-0.1362	-0.1280	-0.1422
245.	-0.1487	-0.1598	-0.1470	-0.1318	-0.1076	-0.0707	-0.0379	-0.1519	-0.1373	-0.1343	-0.1285	-0.1326	-0.1296	-0.1334	-0.1266	-0.1403
177.	-0.1421	-0.1369	-0.1397	-0.1220	-0.1110	-0.0687	-0.0468	-0.1381	-0.1231	-0.1268	-0.1118	-0.1247	-0.1154	-0.1279	-0.1197	-0.1304
243.	-0.1439	-0.1483	-0.1436	-0.1304	-0.1126	-0.0802	-0.0489	-0.1455	-0.1339	-0.1298	-0.1227	-0.1282	-0.1250	-0.1306	-0.1250	-0.1361
46.	-0.1349	-0.1493	-0.1373	-0.1289	-0.1095	-0.0797	-0.0508	-0.1443	-0.1278	-0.1260	-0.1181	-0.1228	-0.1183	-0.1218	-0.1114	-0.1287
276.	-0.1342	-0.1293	-0.1325	-0.1176	-0.1109	-0.0758	-0.0538	-0.1326	-0.1165	-0.1208	-0.1073	-0.1189	-0.1117	-0.1232	-0.1162	-0.1261
142.	-0.1401	-0.1302	-0.1373	-0.1222	-0.1116	-0.0776	-0.0518	-0.1322	-0.1250	-0.1184	-0.1121	-0.1189	-0.1173	-0.1259	-0.1253	-0.1277
143.	-0.1351	-0.1362	-0.1351	-0.1230	-0.1108	-0.0812	-0.0556	-0.1339	-0.1254	-0.1184	-0.1139	-0.1184	-0.1168	-0.1223	-0.1200	-0.1269
176.	-0.1325	-0.1268	-0.1315	-0.1180	-0.1134	-0.0815	-0.0653	-0.1309	-0.1158	-0.1191	-0.1073	-0.1176	-0.1119	-0.1226	-0.1176	-0.1253

Run	CP136	CP137	CP138	CP139	CP140	CP141	CP142	CP143	CP144	CP145	CP146	CP147	CP148	CP149	CP150	CP151
278.	-0.2132	-0.2865	-0.1814	-0.1790	-0.0716	-0.0386	-0.1591	-0.1920	-0.2122	-0.2089	-0.2003	-0.2443	-0.1795	-0.2065	-0.2160	-0.2516
178.	-0.1788	-0.2076	-0.1881	-0.1938	-0.1497	-0.1090	-0.1496	-0.1611	-0.1644	-0.1711	-0.1618	-0.1794	-0.1623	-0.1810	-0.1871	-0.2075
242.	-0.1824	-0.2046	-0.1938	-0.1935	-0.1496	-0.1001	-0.1557	-0.1658	-0.1655	-0.1748	-0.1636	-0.1780	-0.1724	-0.1853	-0.1886	-0.2055
145.	-0.1798	-0.1936	-0.2002	-0.1979	-0.1645	-0.1147	-0.1554	-0.1605	-0.1590	-0.1678	-0.1599	-0.1680	-0.1701	-0.1841	-0.1899	-0.1996
277.	-0.1462	-0.1643	-0.1544	-0.1697	-0.1559	-0.1503	-0.1267	-0.1362	-0.1338	-0.1457	-0.1321	-0.1467	-0.1347	-0.1497	-0.1489	-0.1657
44.	-0.1470	-0.1535	-0.1606	-0.1675	-0.1586	-0.1436	-0.1320	-0.1357	-0.1297	-0.1414	-0.1300	-0.1373	-0.1388	-0.1510	-0.1501	-0.1574
245.	-0.1457	-0.1507	-0.1611	-0.1665	-0.1578	-0.1425	-0.1319	-0.1342	-0.1286	-0.1400	-0.1279	-0.1349	-0.1387	-0.1493	-0.1491	-0.1566
177.	-0.1285	-0.1424	-0.1353	-0.1496	-0.1398	-0.1384	-0.1123	-0.1211	-0.1158	-0.1306	-0.1146	-0.1283	-0.1180	-0.1328	-0.1293	-0.1429
243.	-0.1389	-0.1455	-0.1493	-0.1566	-0.1512	-0.1428	-0.1243	-0.1281	-0.1246	-0.1344	-0.1255	-0.1321	-0.1331	-0.1416	-0.1407	-0.1483
46.	-0.1355	-0.1375	-0.1496	-0.1555	-0.1495	-0.1386	-0.1236	-0.1258	-0.1174	-0.1314	-0.1179	-0.1240	-0.1290	-0.1400	-0.1372	-0.1435
276.	-0.1234	-0.1361	-0.1281	-0.1396	-0.1324	-0.1339	-0.1080	-0.1163	-0.1118	-0.1240	-0.1104	-0.1229	-0.1129	-0.1270	-0.1227	-0.1347
142.	-0.1258	-0.1374	-0.1305	-0.1397	-0.1352	-0.1356	-0.1085	-0.1143	-0.1158	-0.1200	-0.1156	-0.1241	-0.1193	-0.1239	-0.1252	-0.1371
143.	-0.1280	-0.1345	-0.1352	-0.1417	-0.1392	-0.1359	-0.1137	-0.1179	-0.1165	-0.1223	-0.1166	-0.1230	-0.1212	-0.1279	-0.1292	-0.1369
176.	-0.1222	-0.1346	-0.1257	-0.1366	-0.1300	-0.1328	-0.1069	-0.1141	-0.1110	-0.1204	-0.1101	-0.1220	-0.1133	-0.1246	-0.1211	-0.1326

Table IX. Continued

Run	CP152	CP153	CP154	CP155	CP156	CP157	CP158	CP159	CP161	CP162	CP163	CP164	CP165	CP166	CP167	CP168
278.	-0.1561	-0.1480	-0.0089	-0.2286	-0.1912	-0.2264	-0.2939	-0.0887	0.0029	0.1586	0.1095	0.2022	0.1635	0.2490	0.2293	0.3266
178.	-0.1847	-0.1693	-0.0929	-0.1687	-0.1594	-0.1760	-0.2035	-0.1535	-0.0474	0.0562	0.0965	0.1664	0.1842	0.2292	0.2405	0.2858
242.	-0.1828	-0.1574	-0.0836	-0.1672	-0.1641	-0.1777	-0.1962	-0.1506	-0.0385	0.0570	0.1014	0.1602	0.1839	0.2255	0.2390	0.2807
145.	-0.1930	-0.1631	-0.1058	-0.1611	-0.1612	-0.1687	-0.1875	-0.1632	-0.0449	0.0336	0.1004	0.1503	0.1869	0.2170	0.2406	0.2721
277.	-0.1612	-0.1692	-0.1364	-0.1380	-0.1307	-0.1456	-0.1551	-0.1620	-0.1268	-0.0664	-0.0319	0.0301	0.0648	0.1197	0.1461	0.1813
44.	-0.1614	-0.1564	-0.1352	-0.1301	-0.1311	-0.1392	-0.1418	-0.1610	-0.1146	-0.0757	-0.0326	0.0167	0.0606	0.1026	0.1372	0.1664
245.	-0.1625	-0.1546	-0.1333	-0.1302	-0.1317	-0.1381	-0.1403	-0.1602	-0.1141	-0.0787	-0.0302	0.0139	0.0602	0.0989	0.1388	0.1666
177.	-0.1411	-0.1495	-0.1266	-0.1205	-0.1141	-0.1278	-0.1296	-0.1464	-0.1230	-0.0772	-0.0484	0.0043	0.0383	0.0901	0.1189	0.1531
243.	-0.1530	-0.1518	-0.1349	-0.1245	-0.1253	-0.1324	-0.1357	-0.1543	-0.1232	-0.0887	-0.0518	-0.0080	0.0342	0.0762	0.1127	0.1445
46.	-0.1517	-0.1431	-0.1298	-0.1205	-0.1206	-0.1276	-0.1232	-0.1533	-0.1174	-0.0925	-0.0522	-0.0148	0.0298	0.0686	0.1126	0.1387
276.	-0.1323	-0.1420	-0.1235	-0.1155	-0.1102	-0.1228	-0.1237	-0.1373	-0.1234	-0.0852	-0.0637	-0.0165	0.0111	0.0584	0.0876	0.1207
142.	-0.1346	-0.1443	-0.1301	-0.1174	-0.1153	-0.1230	-0.1321	-0.1383	-0.1255	-0.0877	-0.0667	-0.0208	0.0102	0.0593	0.0874	0.1228
143.	-0.1383	-0.1411	-0.1291	-0.1152	-0.1161	-0.1226	-0.1289	-0.1407	-0.1215	-0.0919	-0.0658	-0.0271	0.0103	0.0543	0.0877	0.1199
176.	-0.1292	-0.1397	-0.1246	-0.1154	-0.1104	-0.1214	-0.1245	-0.1338	-0.1264	-0.0925	-0.0783	-0.0371	-0.0127	0.0313	0.0592	0.0919

Run	CP169	CP170	CP171	CP172	CP173	CP174	CP175	CP176	CP177	CP178	CP179	CP180	CP181	CP182	CP183	CP184
278.	0.3372	0.3414	0.3981	0.3486	0.3242	0.1040	0.1278	0.1714	0.1127	0.2599	0.2167	0.2383	0.2595	0.3342	0.3202	0.3644
178.	0.2995	0.3249	0.3496	0.3246	0.3301	-0.0139	0.0478	0.1120	0.1369	0.2058	0.2146	0.2422	0.2639	0.2975	0.3093	0.3363
242.	0.2956	0.3241	0.3465	0.3276	0.3287	-0.0083	0.0523	0.1137	0.1428	0.1999	0.2133	0.2430	0.2628	0.2933	0.3071	0.3351
145.	0.2889	0.3190	0.3353	0.3251	0.3307	-0.0403	0.0351	0.1023	0.1487	0.1859	0.2123	0.2419	0.2666	0.2862	0.3081	0.3322
277.	0.1873	0.2066	0.2073	0.2003	0.2490	-0.1023	-0.0658	-0.0134	0.0221	0.0881	0.1181	0.1562	0.1742	0.1949	0.1982	0.2103
44.	0.1763	0.1970	0.1911	0.1923	0.2452	-0.1087	-0.0697	-0.0230	0.0241	0.0692	0.1086	0.1496	0.1711	0.1836	0.1928	0.1988
245.	0.1767	0.1976	0.1921	0.1979	0.2494	-0.1113	-0.0719	-0.0251	0.0266	0.0656	0.1091	0.1521	0.1750	0.1841	0.1922	0.1987
177.	0.1585	0.1780	0.1746	0.1842	0.2294	-0.1064	-0.0795	-0.0345	0.0007	0.0578	0.0905	0.1337	0.1528	0.1715	0.1736	0.1834
243.	0.1530	0.1708	0.1687	0.1786	0.2310	-0.1160	-0.0836	-0.0414	-0.0023	0.0433	0.0833	0.1254	0.1512	0.1633	0.1693	0.1759
46.	0.1496	0.1739	0.1676	0.1857	0.2375	-0.1194	-0.0892	-0.0503	-0.0013	0.0321	0.0803	0.1261	0.1511	0.1605	0.1690	0.1751
276.	0.1264	0.1444	0.1442	0.1584	0.2065	-0.1085	-0.0882	-0.0513	-0.0215	0.0285	0.0592	0.1014	0.1231	0.1395	0.1417	0.1514
142.	0.1316	0.1423	0.1480	0.1552	0.2050	-0.1106	-0.0889	-0.0533	-0.0249	0.0302	0.0620	0.0973	0.1210	0.1391	0.1425	0.1508
143.	0.1274	0.1409	0.1454	0.1581	0.2106	-0.1130	-0.0889	-0.0548	-0.0228	0.0220	0.0600	0.0972	0.1218	0.1354	0.1408	0.1469
176.	0.0987	0.1155	0.1213	0.1387	0.1882	-0.1115	-0.0967	-0.0670	-0.0437	0.0046	0.0320	0.0708	0.0926	0.1106	0.1133	0.1247

Table IX. Continued

Run	CP185	CP186	CP188	CP189	CP190	CP191	CP193	CP194	CP195	CP196	CP197	CP198	CP199	CP200	CP201	CP202
278.	0.3288	0.3488	0.1965	0.3014	0.2950	0.3140	0.0373	0.1241	0.0733	0.1842	0.0950	0.2161	0.2646	0.3092	0.2279	0.3562
178.	0.3167	0.3182	0.1931	0.2732	0.3119	0.3166	0.0815	0.1373	0.1319	0.1742	0.1623	0.2070	0.2238	0.2386	0.2178	0.2656
242.	0.3135	0.3134	0.1895	0.2699	0.3109	0.3219	0.0911	0.1417	0.1398	0.1782	0.1660	0.2073	0.2227	0.2401	0.2257	0.2596
145.	0.3233	0.3097	0.1902	0.2673	0.3136	0.3226	0.0949	0.1404	0.1537	0.1733	0.1871	0.2067	0.2102	0.2241	0.2327	0.2455
277.	0.1896	0.2304	0.0847	0.1768	0.2060	0.1925	0.0056	0.0702	0.0753	0.1100	0.1130	0.1465	0.1583	0.1752	0.1654	0.1820
44.	0.1857	0.2243	0.0723	0.1681	0.1989	0.1925	0.0062	0.0586	0.0756	0.0961	0.1175	0.1423	0.1465	0.1636	0.1656	0.1632
245.	0.1898	0.2238	0.0731	0.1671	0.2014	0.1955	0.0069	0.0573	0.0794	0.0992	0.1230	0.1391	0.1396	0.1594	0.1659	0.1580
177.	0.1746	0.2187	0.0551	0.1514	0.1825	0.1777	-0.0101	0.0482	0.0557	0.0876	0.0971	0.1300	0.1385	0.1620	0.1581	0.1718
243.	0.1723	0.2105	0.0453	0.1460	0.1745	0.1752	-0.0142	0.0345	0.0509	0.0735	0.0939	0.1183	0.1286	0.1486	0.1524	0.1516
46.	0.1743	0.2155	0.0406	0.1431	0.1801	0.1825	-0.0129	0.0308	0.0505	0.0658	0.0976	0.1146	0.1179	0.1396	0.1524	0.1454
276.	0.1488	0.1945	0.0281	0.1205	0.1469	0.1510	-0.0250	0.0263	0.0326	0.0614	0.0710	0.1004	0.1062	0.1305	0.1313	0.1441
142.	0.1471	0.1908	0.0227	0.1240	0.1395	0.1469	-0.0238	0.0217	0.0298	0.0641	0.0664	0.1021	0.1233	0.1413	0.1345	0.1521
143.	0.1492	0.1934	0.0213	0.1213	0.1444	0.1531	-0.0233	0.0204	0.0340	0.0580	0.0730	0.0986	0.1128	0.1337	0.1385	0.1467
176.	0.1270	0.1780	0.0018	0.0924	0.1157	0.1305	-0.0418	0.0050	0.0102	0.0392	0.0469	0.0755	0.0836	0.1051	0.1048	0.1222

Run	CP203	CP204	CP205	CP212	CP213	CP216	CP217	CP220	CP221	CP225	CP226	CP227	CP228	CP230	CP231	CP232
278.	0.2381	0.2634	0.2905	0.1941	0.2219	0.3454	0.3226	0.4580	0.3484	0.4461	0.5062	0.4183	0.5772	0.4931	0.5159	0.4594
178.	0.2431	0.2495	0.2866	0.1736	0.1969	0.2790	0.2799	0.3580	0.3567	0.4263	0.4406	0.4381	0.4940	0.4734	0.4592	0.4281
242.	0.2450	0.2461	0.2858	0.1729	0.1988	0.2863	0.2881	0.3559	0.3597	0.4209	0.4285	0.4383	0.4867	0.4760	0.4605	0.4252
145.	0.2492	0.2454	0.2840	0.1696	0.1932	0.2708	0.2757	0.3342	0.3644	0.4214	0.4173	0.4462	0.4654	0.4809	0.4562	0.4286
277.	0.1537	0.1563	0.2051	0.0795	0.0881	0.1843	0.1867	0.2224	0.2471	0.3296	0.3333	0.3392	0.3753	0.3688	0.3514	0.3276
44.	0.1551	0.1529	0.2006	0.0694	0.0784	0.1724	0.1803	0.2029	0.2441	0.3239	0.3176	0.3428	0.3541	0.3608	0.3390	0.3261
245.	0.1548	0.1513	0.2015	0.0702	0.0796	0.1699	0.1755	0.2027	0.2455	0.3229	0.3151	0.3412	0.3487	0.3649	0.3419	0.3272
177.	0.1538	0.1578	0.1893	0.0557	0.0615	0.1615	0.1622	0.2012	0.2261	0.3005	0.3074	0.3190	0.3379	0.3348	0.3146	0.2986
243.	0.1438	0.1430	0.1815	0.0466	0.0555	0.1485	0.1554	0.1860	0.2192	0.2974	0.2917	0.3109	0.3223	0.3321	0.3141	0.2974
46.	0.1483	0.1487	0.1863	0.0378	0.0431	0.1422	0.1485	0.1794	0.2240	0.2975	0.2895	0.3187	0.3150	0.3317	0.3063	0.2939
276.	0.1307	0.1370	0.1621	0.0315	0.0354	0.1295	0.1309	0.1696	0.1940	0.2683	0.2753	0.2859	0.3022	0.3033	0.2852	0.2718
142.	0.1296	0.1320	0.1695	0.0282	0.0401	0.1343	0.1395	0.1817	0.1940	0.2754	0.2747	0.2788	0.3086	0.3013	0.2947	0.2693
143.	0.1355	0.1328	0.1638	0.0237	0.0344	0.1334	0.1376	0.1737	0.1997	0.2766	0.2707	0.2868	0.3016	0.3101	0.2975	0.2803
176.	0.1132	0.1225	0.1441	0.0075	0.0118	0.1041	0.1046	0.1515	0.1726	0.2524	0.2592	0.2665	0.2854	0.2828	0.2664	0.2523

Table IX. Continued

Run	CP233	CP245	CP246	CP247	CP248	CP257	CP258	CP259	CP260	CP261	CP262	CP263	CP264	CP265	CP266	CP267
278.	0.4421	-0.0438	0.1316	0.2439	0.2851	-0.6091	-0.3306	-0.2388	-0.0886	-0.1217	-0.0933	0.0184	0.0512	0.0119	0.0517	0.0389
178.	0.4240	-0.0124	0.1420	0.2205	0.2583	-0.4733	-0.2423	-0.1561	-0.0805	-0.0724	-0.0481	0.0499	0.0759	0.0738	0.0930	0.0792
242.	0.4251	-0.0075	0.1380	0.2153	0.2538	-0.4788	-0.2551	-0.1654	-0.0936	-0.0830	-0.0614	0.0492	0.0730	0.0776	0.0898	0.0764
145.	0.4307	-0.0037	0.1388	0.2190	0.2471	-0.4608	-0.2341	-0.1418	-0.0963	-0.0734	-0.0544	0.0557	0.0763	0.0863	0.0972	0.0831
277.	0.3327	-0.0795	0.0663	0.1664	0.1609	-0.2419	-0.1032	-0.0718	-0.0344	-0.0350	-0.0170	0.0013	0.0319	0.0435	0.0731	0.0745
44.	0.3312	-0.0742	0.0549	0.1629	0.1501	-0.2148	-0.0958	-0.0633	-0.0458	-0.0388	-0.0265	0.0027	0.0283	0.0467	0.0697	0.0729
245.	0.3339	-0.0748	0.0544	0.1635	0.1496	-0.2192	-0.0979	-0.0632	-0.0512	-0.0402	-0.0278	0.0030	0.0272	0.0452	0.0698	0.0729
177.	0.2998	-0.0805	0.0450	0.1543	0.1580	-0.1253	-0.0331	-0.0147	0.0134	0.0147	0.0356	-0.0034	0.0260	0.0404	0.0712	0.0759
243.	0.3019	-0.0814	0.0363	0.1497	0.1458	-0.1587	-0.0696	-0.0464	-0.0322	-0.0273	-0.0151	-0.0069	0.0182	0.0375	0.0618	0.0690
46.	0.2984	-0.0770	0.0314	0.1479	0.1410	-0.1328	-0.0516	-0.0303	-0.0258	-0.0158	-0.0013	-0.0052	0.0183	0.0370	0.0640	0.0681
276.	0.2692	-0.0835	0.0245	0.1294	0.1375	-0.0853	-0.0182	-0.0069	0.0147	0.0135	0.0314	-0.0133	0.0146	0.0286	0.0583	0.0650
142.	0.2756	-0.0916	0.0216	0.1295	0.1395	-0.0958	-0.0391	-0.0254	0.0003	-0.0058	-0.0007	-0.0159	0.0101	0.0284	0.0525	0.0675
143.	0.2847	-0.0861	0.0199	0.1301	0.1356	-0.0929	-0.0344	-0.0184	-0.0058	-0.0049	0.0029	-0.0141	0.0100	0.0299	0.0541	0.0656
176.	0.2503	-0.0912	0.0037	0.1039	0.1206	-0.0354	0.0083	0.0113	0.0258	0.0190	0.0306	-0.0236	0.0033	0.0176	0.0475	0.0572

Run	CP268	CP269	CP270	CP271	CP272	CP273	CP274	CP275	CP276	CP277	CP278	CP279	CP280	CP281	CP282	CP283
278.	0.0697	-0.0456	-0.0434	-0.1145	-0.1678	0.3233	-0.0881	0.4056	0.5443	0.4380	0.5583	0.5650	0.4871	0.4955	0.4912	0.3925
178.	0.0637	-0.0113	-0.0608	-0.1092	-0.1140	0.1520	-0.0934	0.3606	0.4298	0.4506	0.5016	0.5040	0.4854	0.4709	0.4239	0.3583
242.	0.0576	-0.0156	-0.0681	-0.1143	-0.1184	0.1150	-0.1018	0.3506	0.4160	0.4452	0.4918	0.4964	0.4766	0.4582	0.4089	0.3518
145.	0.0507	-0.0074	-0.0780	-0.1167	-0.1031	0.0743	-0.1074	0.3481	0.3915	0.4555	0.4728	0.4719	0.4896	0.4560	0.3936	0.3429
277.	0.0736	0.0213	-0.0310	-0.0812	-0.0806	0.0756	-0.0710	0.2542	0.2943	0.3307	0.3580	0.3526	0.3485	0.3340	0.2930	0.2568
44.	0.0639	0.0272	-0.0355	-0.0800	-0.0704	0.0294	-0.0763	0.2411	0.2634	0.3280	0.3338	0.3253	0.3368	0.3206	0.2764	0.2458
245.	0.0618	0.0291	-0.0375	-0.0810	-0.0683	0.0209	-0.0788	0.2385	0.2571	0.3277	0.3261	0.3174	0.3435	0.3298	0.2829	0.2465
177.	0.0827	0.0508	0.0102	-0.0333	-0.0270	0.0472	-0.0230	0.2269	0.2600	0.2970	0.3109	0.3000	0.3083	0.2950	0.2606	0.2271
243.	0.0668	0.0388	-0.0181	-0.0636	-0.0572	0.0258	-0.0608	0.2214	0.2444	0.3013	0.3052	0.2952	0.3039	0.2923	0.2450	0.2118
46.	0.0617	0.0424	-0.0164	-0.0565	-0.0383	-0.0031	-0.0540	0.2131	0.2228	0.2995	0.2972	0.2868	0.3166	0.2857	0.2360	0.2197
276.	0.0743	0.0513	0.0181	-0.0215	-0.0167	0.0225	-0.0145	0.1973	0.2239	0.2616	0.2740	0.2651	0.2724	0.2549	0.2271	0.1990
142.	0.0801	0.0500	0.0167	-0.0275	-0.0411	0.0725	-0.0283	0.2059	0.2399	0.2589	0.2844	0.2838	0.2701	0.2623	0.2254	0.2000
143.	0.0711	0.0526	0.0109	-0.0296	-0.0291	0.0331	-0.0306	0.2005	0.2207	0.2672	0.2753	0.2698	0.2775	0.2725	0.2393	0.2080
176.	0.0704	0.0559	0.0342	0.0013	0.0022	0.0207	0.0065	0.1790	0.2013	0.2296	0.2439	0.2375	0.2443	0.2292	0.1999	0.1744

Table IX. Concluded

Run	CP284
278.	0.5124
178.	0.4359
242.	0.4214
145.	0.4117
277.	0.2997
44.	0.2765
245.	0.2773
177.	0.2639
243.	0.2482
46.	0.2495
276.	0.2310
142.	0.2403
143.	0.2327
176.	0.2094

Table X. Pressure Coefficients for $l/h = 11.7$ Cavity With Boundary-Layer Transition Strip

Run	M_∞	$R_\infty \times 10^{-6}$	p_∞	$p_{t\infty}$	q_∞	$T_{t\infty}$	CP1	CP2	CP3	CP4	CP5	CP6	CP7	CP8	CP9	CP10
97.	0.31	1.1	1061.4	1134.8	71.6	80.8	0.7186	-0.3176	-0.2559	-0.2212	-0.2088	-0.1556	-0.1511	-0.1011	-0.1223	-0.0783
296.	0.61	1.6	776.2	994.6	199.5	92.6	0.9184	-0.3312	-0.2698	-0.2359	-0.2170	-0.1733	-0.1497	-0.1077	-0.1035	-0.0773
196.	0.81	1.5	532.7	817.9	242.9	98.4	1.0784	-0.4439	-0.3215	-0.2810	-0.2549	-0.1996	-0.1566	-0.1086	-0.0983	-0.0713
295.	0.86	1.6	520.9	841.4	267.7	101.1	1.1322	-0.4865	-0.3269	-0.3027	-0.2781	-0.2105	-0.1516	-0.1109	-0.0893	-0.0640
195.	0.91	1.7	497.6	847.5	286.2	98.4	1.1760	-0.3781	-0.3929	-0.4058	-0.4192	-0.3554	-0.0977	-0.0655	-0.0587	-0.0395
94.	0.95	1.8	515.2	917.0	322.9	106.8	1.2395	-0.2770	-0.3116	-0.3332	-0.3615	-0.3909	-0.4159	-0.3774	-0.1407	0.0292

Run	CP11	CP12	CP13	CP14	CP15	CP16	CP17	CP18	CP19	CP20	CP21	CP33	CP34	CP35	CP36	CP37
97.	-0.1047	-0.0765	-0.0921	-0.0612	-0.0842	-0.0576	-0.0799	-0.0419	-0.0740	-0.0367	-0.0953	-0.0885	-0.0698	-0.0983	-0.0591	-0.0937
296.	-0.0811	-0.0662	-0.0719	-0.0522	-0.0527	-0.0429	-0.0498	-0.0344	-0.0489	-0.0373	-0.0543	-0.0558	-0.0566	-0.0774	-0.0554	-0.0716
196.	-0.0715	-0.0572	-0.0602	-0.0422	-0.0401	-0.0312	-0.0361	-0.0237	-0.0348	-0.0268	-0.0384	-0.0420	-0.0433	-0.0614	-0.0470	-0.0686
295.	-0.0603	-0.0476	-0.0558	-0.0376	-0.0277	-0.0230	-0.0262	-0.0179	-0.0269	-0.0310	-0.0197	-0.0357	-0.0395	-0.0566	-0.0465	-0.0598
195.	-0.0408	-0.0315	-0.0369	-0.0236	-0.0191	-0.0132	-0.0161	-0.0081	-0.0166	-0.0156	-0.0161	-0.0235	-0.0270	-0.0392	-0.0353	-0.0531
94.	0.0393	0.0389	0.0196	0.0138	0.0068	0.0070	-0.0001	0.0062	-0.0044	-0.0064	-0.0093	-0.0190	-0.0223	-0.0347	-0.0347	-0.0540

Run	CP38	CP39	CP40	CP41	CP42	CP43	CP44	CP45	CP46	CP47	CP48	CP49	CP50	CP65	CP66	CP67
97.	-0.0467	-0.0170	0.0342	-0.0872	-0.0373	0.0223	-0.1370	-0.1621	-0.1491	-0.1622	-0.1382	-0.1825	-0.1295	-0.1725	-0.1587	-0.1461
296.	-0.0460	0.0024	0.0586	-0.0557	-0.0357	0.0560	-0.1301	-0.1409	-0.1320	-0.1373	-0.1325	-0.1477	-0.1275	-0.1474	-0.1391	-0.1350
196.	-0.0497	-0.0044	0.0717	-0.0458	-0.0409	0.0703	-0.1135	-0.1239	-0.1134	-0.1168	-0.1147	-0.1297	-0.1108	-0.1322	-0.1225	-0.1254
295.	-0.0519	-0.0115	0.0723	-0.0399	-0.0425	0.0673	-0.1023	-0.1125	-0.0946	-0.0978	-0.1088	-0.1114	-0.1024	-0.1206	-0.1057	-0.1160
195.	-0.0429	-0.0097	0.0736	-0.0300	-0.0355	0.0718	-0.0808	-0.0912	-0.0792	-0.0788	-0.0834	-0.0934	-0.0798	-0.0992	-0.0893	-0.0937
94.	-0.0448	-0.0165	0.0706	-0.0246	-0.0369	0.0680	-0.0725	-0.0833	-0.0668	-0.0674	-0.0758	-0.0827	-0.0716	-0.0922	-0.0797	-0.0863

Run	CP68	CP80	CP84	CP85	CP97	CP98	CP99	CP100	CP101	CP102	CP103	CP104	CP105	CP106	CP107	CP108
97.	0.0550	-0.1408	-0.1507	-0.1690	-0.1696	-0.1381	-0.1565	-0.1529	-0.1635	-0.1421	-0.1696	-0.1493	-0.1876	-0.1602	-0.1712	-0.1352
296.	0.0608	-0.1341	-0.1391	-0.1474	-0.1436	-0.1330	-0.1431	-0.1361	-0.1459	-0.1381	-0.1478	-0.1418	-0.1564	-0.1465	-0.1511	-0.1271
196.	0.0427	-0.1191	-0.1219	-0.1286	-0.1248	-0.1185	-0.1276	-0.1197	-0.1279	-0.1205	-0.1269	-0.1223	-0.1334	-0.1249	-0.1314	-0.1185
295.	0.0245	-0.1129	-0.1089	-0.1171	-0.1130	-0.1119	-0.1224	-0.1033	-0.1204	-0.1114	-0.1137	-0.1140	-0.1193	-0.1086	-0.1180	-0.1056
195.	0.0165	-0.0905	-0.0895	-0.0954	-0.0904	-0.0898	-0.0977	-0.0874	-0.0967	-0.0895	-0.0937	-0.0912	-0.0976	-0.0901	-0.0968	-0.0876
94.	0.0081	-0.0838	-0.0809	-0.0879	-0.0829	-0.0826	-0.0927	-0.0786	-0.0909	-0.0830	-0.0855	-0.0845	-0.0897	-0.0797	-0.0874	-0.0781

Table X. Continued

Run	CP109	CP110	CP111	CP112	CP113	CP114	CP115	CP123	CP124	CP129	CP130	CP131	CP132	CP133	CP134	CP135
97.	-0.0887	0.0176	0.0314	0.0713	0.0551	0.1114	0.1059	0.1000	0.1734	-0.1695	-0.1431	-0.1643	-0.1490	-0.1771	-0.1653	-0.1833
296.	-0.0707	0.0094	0.0540	0.0922	0.1038	0.1412	0.1545	0.1076	0.1695	-0.1490	-0.1381	-0.1491	-0.1414	-0.1533	-0.1456	-0.1633
196.	-0.0890	-0.0203	0.0358	0.0894	0.1149	0.1579	0.1798	0.0654	0.1012	-0.1315	-0.1217	-0.1323	-0.1262	-0.1356	-0.1276	-0.1397
295.	-0.0850	-0.0396	0.0240	0.0807	0.1160	0.1622	0.1883	0.0372	0.0677	-0.1258	-0.1135	-0.1243	-0.1170	-0.1234	-0.1095	-0.1267
195.	-0.0743	-0.0354	0.0151	0.0721	0.1125	0.1624	0.1931	0.0223	0.0426	-0.1007	-0.0913	-0.1013	-0.0967	-0.1023	-0.0932	-0.1027
94.	-0.0687	-0.0380	0.0084	0.0617	0.1032	0.1563	0.1896	0.0085	0.0297	-0.0951	-0.0829	-0.0946	-0.0884	-0.0952	-0.0828	-0.0948

Run	CP136	CP137	CP138	CP139	CP140	CP141	CP142	CP143	CP144	CP145	CP146	CP147	CP148	CP149	CP150	CP151
97.	-0.1681	-0.1679	-0.0302	0.0612	0.1646	0.1670	-0.1326	-0.1547	-0.1498	-0.1725	-0.1443	-0.1769	-0.1531	-0.1833	-0.1319	-0.0618
296.	-0.1617	-0.1484	-0.0573	0.0431	0.1523	0.1992	-0.1348	-0.1448	-0.1411	-0.1555	-0.1402	-0.1552	-0.1522	-0.1697	-0.1370	-0.0689
196.	-0.1403	-0.1422	-0.0904	-0.0240	0.0749	0.1516	-0.1218	-0.1308	-0.1280	-0.1397	-0.1246	-0.1355	-0.1307	-0.1460	-0.1304	-0.0976
295.	-0.1308	-0.1301	-0.1010	-0.0517	0.0356	0.1164	-0.1196	-0.1270	-0.1194	-0.1351	-0.1139	-0.1249	-0.1225	-0.1398	-0.1249	-0.1014
195.	-0.1040	-0.1082	-0.0862	-0.0534	0.0111	0.0773	-0.0945	-0.1016	-0.0992	-0.1097	-0.0941	-0.1017	-0.0959	-0.1094	-0.1010	-0.0882
94.	-0.0955	-0.0998	-0.0830	-0.0584	-0.0032	0.0526	-0.0886	-0.0956	-0.0906	-0.1042	-0.0892	-0.0943	-0.0893	-0.1027	-0.0930	-0.0841

Run	CP152	CP153	CP154	CP155	CP156	CP157	CP158	CP159	CP161	CP162	CP163	CP164	CP165	CP166	CP167	CP168
97.	0.0802	0.1339	0.1888	-0.1610	-0.1409	-0.1741	-0.1584	0.1523	0.1498	0.1859	0.1499	0.1858	0.1781	0.2530	0.2790	0.3738
296.	0.0557	0.1469	0.2145	-0.1451	-0.1398	-0.1551	-0.1378	0.1505	0.2118	0.2245	0.2120	0.2314	0.2457	0.2977	0.3503	0.4323
196.	-0.0161	0.0680	0.1635	-0.1297	-0.1245	-0.1350	-0.1315	0.0714	0.2047	0.2464	0.2537	0.2770	0.2945	0.3413	0.3878	0.4527
295.	-0.0421	0.0374	0.1313	-0.1224	-0.1192	-0.1270	-0.1145	0.0300	0.1866	0.2393	0.2687	0.2913	0.3158	0.3529	0.3980	0.4497
195.	-0.0453	0.0109	0.0922	-0.0997	-0.0961	-0.1018	-0.0979	0.0092	0.1455	0.2124	0.2539	0.2911	0.3183	0.3562	0.3919	0.4352
94.	-0.0503	-0.0036	0.0658	-0.0924	-0.0904	-0.0952	-0.0878	-0.0057	0.1137	0.1804	0.2308	0.2791	0.3107	0.3482	0.3807	0.4154

Run	CP169	CP170	CP171	CP172	CP173	CP174	CP175	CP176	CP177	CP178	CP179	CP180	CP181	CP182	CP183	CP184
97.	0.3910	0.4369	0.4513	0.4499	0.3908	0.1942	0.1662	0.1745	0.1469	0.2217	0.2324	0.3036	0.3504	0.4048	0.4037	0.4396
296.	0.4612	0.5025	0.5160	0.5187	0.4642	0.2268	0.2164	0.2207	0.2207	0.2634	0.2981	0.3694	0.4268	0.4591	0.4739	0.4976
196.	0.4749	0.5094	0.5225	0.5248	0.4868	0.2200	0.2426	0.2612	0.2695	0.3093	0.3436	0.4058	0.4503	0.4753	0.4888	0.5125
295.	0.4679	0.5054	0.5090	0.5205	0.4907	0.1953	0.2383	0.2706	0.2923	0.3206	0.3586	0.4191	0.4537	0.4731	0.4881	0.5108
195.	0.4495	0.4785	0.4864	0.4907	0.4720	0.1615	0.2167	0.2638	0.2928	0.3301	0.3618	0.4081	0.4374	0.4579	0.4708	0.4908
94.	0.4277	0.4558	0.4616	0.4627	0.4560	0.1276	0.1864	0.2428	0.2831	0.3237	0.3562	0.3984	0.4217	0.4388	0.4508	0.4702

Table X. Continued

Run	CP185	CP186	CP188	CP189	CP190	CP191	CP193	CP194	CP195	CP196	CP197	CP198	CP199	CP200	CP201	CP202
97.	0.4126	0.4000	0.2050	0.3551	0.4285	0.4342	0.1143	0.1822	0.1604	0.2165	0.1977	0.2621	0.2682	0.3215	0.3061	0.3685
296.	0.4873	0.4542	0.2563	0.4301	0.5092	0.5175	0.1777	0.2273	0.2336	0.2686	0.2809	0.3229	0.3421	0.3815	0.3943	0.4240
196.	0.5068	0.4812	0.3028	0.4543	0.5113	0.5276	0.2122	0.2669	0.2781	0.3122	0.3294	0.3678	0.3862	0.4202	0.4296	0.4473
295.	0.5073	0.4845	0.3246	0.4538	0.5114	0.5323	0.2262	0.2838	0.3019	0.3280	0.3545	0.3820	0.3903	0.4215	0.4354	0.4375
195.	0.4852	0.4700	0.3300	0.4383	0.4808	0.4976	0.2328	0.2879	0.3045	0.3333	0.3528	0.3820	0.3933	0.4207	0.4267	0.4262
94.	0.4620	0.4531	0.3264	0.4204	0.4625	0.4740	0.2311	0.2868	0.3014	0.3290	0.3487	0.3736	0.3815	0.4040	0.4067	0.4119

Run	CP203	CP204	CP205	CP212	CP213	CP216	CP217	CP220	CP221	CP225	CP226	CP227	CP228	CP230	CP231	CP232
97.	0.3203	0.3388	0.3275	0.2086	0.1959	0.3741	0.3622	0.4628	0.4383	0.4765	0.5189	0.5230	0.5729	0.5677	0.5511	0.5286
296.	0.4068	0.4076	0.4219	0.2601	0.2589	0.4426	0.4456	0.5128	0.5225	0.5673	0.5818	0.6051	0.6393	0.6493	0.6342	0.6061
196.	0.4285	0.4406	0.4627	0.3073	0.3107	0.4716	0.4713	0.5238	0.5375	0.5908	0.6011	0.6206	0.6411	0.6503	0.6372	0.6165
295.	0.4387	0.4487	0.4649	0.3261	0.3267	0.4747	0.4718	0.5088	0.5383	0.5932	0.5993	0.6252	0.6273	0.6487	0.6293	0.6162
195.	0.4197	0.4280	0.4554	0.3312	0.3368	0.4594	0.4545	0.4843	0.5090	0.5755	0.5803	0.5990	0.6051	0.6183	0.6064	0.5911
94.	0.4111	0.4190	0.4499	0.3245	0.3299	0.4384	0.4323	0.4623	0.4889	0.5617	0.5675	0.5811	0.5842	0.5961	0.5860	0.5702

Run	CP233	CP245	CP246	CP247	CP248	CP257	CP258	CP259	CP260	CP261	CP262	CP263	CP264	CP265	CP266	CP267
97.	0.4825	0.0764	0.1816	0.3076	0.3047	-0.7649	-0.4724	-0.2898	-0.1674	-0.1599	-0.1155	0.0306	0.0496	0.0272	0.0545	0.0302
296.	0.5777	0.1264	0.2298	0.3814	0.3659	-0.7369	-0.5425	-0.3237	-0.1926	-0.1476	-0.1049	0.0783	0.0906	0.0859	0.0996	0.0842
196.	0.5979	0.1498	0.2691	0.4167	0.4081	-0.7105	-0.5699	-0.3802	-0.2306	-0.1695	-0.1184	0.1134	0.1288	0.1297	0.1442	0.1310
295.	0.6006	0.1608	0.2819	0.4208	0.4158	-0.6977	-0.5456	-0.3763	-0.2432	-0.1719	-0.1123	0.1297	0.1461	0.1491	0.1649	0.1474
195.	0.5812	0.1597	0.2865	0.4141	0.4180	-0.6369	-0.4642	-0.3146	-0.1960	-0.1313	-0.0771	0.1440	0.1638	0.1704	0.1853	0.1720
94.	0.5660	0.1523	0.2843	0.4005	0.4095	-0.6392	-0.4257	-0.2904	-0.1835	-0.1227	-0.0701	0.1525	0.1765	0.1861	0.2020	0.1885

Run	CP268	CP269	CP270	CP271	CP272	CP273	CP274	CP275	CP276	CP277	CP278	CP279	CP280	CP281	CP282	CP283
97.	0.0332	-0.0422	-0.0898	-0.1682	-0.1680	0.0884	-0.1513	0.4284	0.5403	0.5410	0.5929	0.5900	0.5711	0.5440	0.5502	0.4687
296.	0.0673	-0.0010	-0.1024	-0.2054	-0.1986	0.0903	-0.1944	0.4983	0.5870	0.6362	0.6688	0.6710	0.6790	0.6649	0.6270	0.5418
196.	0.1100	0.0331	-0.1049	-0.2549	-0.2526	0.1338	-0.2491	0.5379	0.6107	0.6474	0.6671	0.6708	0.6862	0.6737	0.6412	0.5646
295.	0.1185	0.0476	-0.1036	-0.2683	-0.2521	0.0916	-0.2615	0.5433	0.6018	0.6554	0.6493	0.6354	0.6658	0.6564	0.6403	0.5642
195.	0.1458	0.0733	-0.0690	-0.2332	-0.2219	0.1483	-0.2253	0.5353	0.5923	0.6173	0.6106	0.6012	0.6277	0.6288	0.6125	0.5431
94.	0.1618	0.0907	-0.0503	-0.2321	-0.2389	0.1630	-0.2390	0.5188	0.5745	0.6005	0.5901	0.5799	0.6038	0.6121	0.5900	0.5184

Table X. Concluded

Run	CP284
97.	0.5360
296.	0.5957
196.	0.5980
295.	0.5714
195.	0.5451
94.	0.5248

Table XI. Pressure Coefficients for l/h = 11.7 Cavity With Front Blocks and Boundary-Layer Transition Strip

Run	M_∞	$R_\infty \times 10^{-6}$	p_∞	$p_{t\infty}$	q_∞	$T_{t\infty}$	CP1	CP2	CP3	CP4	CP5	CP6	CP7	CP8	CP9	CP10
91.	0.29	1.0	1025.3	1087.0	60.4	67.2	0.8181	-0.3590	-0.2865	-0.2506	-0.2367	-0.1846	-0.1679	-0.1219	-0.1321	-0.0959
90.	0.60	1.6	743.9	946.0	185.1	76.6	0.9494	-0.3229	-0.2703	-0.2405	-0.2164	-0.1732	-0.1419	-0.1046	-0.0986	-0.0741
292.	0.95	1.7	491.4	876.2	309.0	102.3	1.2506	-0.2857	-0.3178	-0.3217	-0.3658	-0.3990	-0.4153	-0.3970	-0.2436	0.0125

Run	CP11	CP12	CP13	CP14	CP15	CP16	CP17	CP18	CP19	CP20	CP21	CP33	CP34	CP35	CP36	CP37
91.	-0.1142	-0.0881	-0.1069	-0.0741	-0.0866	-0.0659	-0.0812	-0.0568	-0.0794	-0.0519	-0.0919	-0.0857	-0.0831	-0.1039	-0.0691	-0.0938
90.	-0.0754	-0.0626	-0.0636	-0.0467	-0.0468	-0.0363	-0.0393	-0.0282	-0.0371	-0.0270	-0.0443	-0.0408	-0.0459	-0.0608	-0.0423	-0.0548
292.	0.0433	0.0440	0.0135	0.0086	0.0132	0.0060	0.0005	0.0009	-0.0074	-0.0290	0.0061	-0.0250	-0.0328	-0.0486	-0.0452	-0.0370

Run	CP38	CP39	CP40	CP41	CP42	CP43	CP47	CP67	CP68	CP107	CP108	CP109	CP110	CP111	CP112	CP113
91.	-0.0614	-0.0210	0.0340	-0.0887	-0.0526	0.0262	-0.2583	-0.2197	0.0154	-0.2353	-0.2046	-0.1319	-0.0284	-0.0117	0.0231	0.0113
90.	-0.0400	0.0096	0.0698	-0.0424	-0.0319	0.0710	-0.1812	-0.1629	0.0417	-0.1697	-0.1600	-0.1012	-0.0143	0.0300	0.0672	0.0805
292.	-0.0543	-0.0313	0.0612	-0.0266	-0.0449	0.0499	-0.0740	-0.1109	-0.0149	-0.1045	-0.0996	-0.0877	-0.0664	-0.0050	0.0442	0.0908

Run	CP114	CP115	CP123	CP124	CP129	CP130	CP131	CP132	CP133	CP134	CP135	CP136	CP137	CP138	CP139	CP140
91.	0.0596	0.0699	0.0391	0.1518	-0.2529	-0.2455	-0.2542	-0.2458	-0.2667	-0.2540	-0.2383	-0.1660	-0.1156	0.0213	0.1082	0.1994
90.	0.1116	0.1300	0.0547	0.1171	-0.1805	-0.1760	-0.1809	-0.1785	-0.1908	-0.1876	-0.1802	-0.1380	-0.0967	-0.0107	0.0727	0.1644
292.	0.1421	0.1756	-0.0253	0.0036	-0.1057	-0.0961	-0.1043	-0.0969	-0.1039	-0.0914	-0.1225	-0.1199	-0.1058	-0.0919	-0.0556	0.0030

Run	CP141	CP147	CP148	CP149	CP150	CP151	CP152	CP153	CP154	CP157	CP158	CP159	CP161	CP162	CP163	CP164
91.	0.1956	-0.2702	-0.2344	-0.2431	-0.1841	-0.1073	0.0419	0.1154	0.1830	-0.2671	-0.1969	0.1343	0.1763	0.2005	0.1758	0.2026
90.	0.2133	-0.1944	-0.1818	-0.1816	-0.1497	-0.0981	0.0019	0.0997	0.1820	-0.1933	-0.1524	0.1060	0.2310	0.2445	0.2351	0.2527
292.	0.0629	-0.1076	-0.1292	-0.1388	-0.1156	-0.0993	-0.0715	-0.0160	0.0476	-0.1139	-0.0942	-0.0309	0.1263	0.1753	0.2324	0.2677

Run	CP165	CP166	CP167	CP168	CP169	CP170	CP171	CP172	CP173	CP174	CP175	CP176	CP177	CP178	CP179	CP180
91.	0.2057	0.2841	0.3366	0.4652	0.5093	0.5780	0.5960	0.5416	0.4466	0.1989	0.1828	0.1945	0.1798	0.2526	0.2851	0.3830
90.	0.2702	0.3272	0.3886	0.4927	0.5415	0.5923	0.6120	0.5538	0.4919	0.2186	0.2273	0.2392	0.2451	0.2939	0.3414	0.4230

Table XI. Concluded

Run	CP181	CP182	CP183	CP184	CP185	CP186	CP188	CP189	CP190	CP191	CP193	CP194	CP195	CP196	CP197	CP198
91.	0.4320	0.4745	0.4835	0.5247	0.4589	0.4091	0.2323	0.4552	0.5395	0.5087	0.1016	0.1782	0.1791	0.2362	0.2380	0.3036
90.	0.4621	0.4910	0.5170	0.5489	0.4928	0.4575	0.2802	0.4956	0.5577	0.5313	0.1619	0.2187	0.2353	0.2757	0.2975	0.3456
292.	0.4072	0.4362	0.4639	0.4759	0.3842	0.4264	0.3029	0.3945	0.4825	0.4004	0.2149	0.2670	0.2854	0.2958	0.3266	0.3321

Run	CP199	CP200	CP201	CP202	CP203	CP204	CP205	CP212	CP213	CP216	CP217	CP220	CP221	CP225	CP226	CP227
91.	0.3173	0.3817	0.3842	0.4336	0.3586	0.3561	0.3323	0.2580	0.2431	0.4730	0.4620	0.5341	0.5445	0.5972	0.6173	0.6929
90.	0.3760	0.4215	0.4351	0.4386	0.4106	0.3997	0.4135	0.2991	0.3014	0.5053	0.5031	0.5388	0.5796	0.6453	0.6496	0.7230
292.	0.3166	0.3315	0.3557	0.3684	0.3730	0.3205	0.3820	0.2947	0.2910	0.3921	0.3866	0.4278	0.5291	0.6282	0.6094	0.7052

Run	CP228	CP230	CP231	CP232	CP233	CP245	CP246	CP247	CP248	CP257	CP258	CP259	CP260	CP261	CP262	CP263
91.	0.7636	0.7727	0.7383	0.6502	0.5818	0.0411	0.1807	0.3779	0.3433	-0.8456	-0.5973	-0.3184	-0.1699	-0.1463	-0.1150	0.0340
90.	0.7789	0.7924	0.7544	0.6730	0.6404	0.1047	0.2262	0.4149	0.4004	-0.6972	-0.5491	-0.2946	-0.1438	-0.0914	-0.0535	0.0972
292.	0.7443	0.7660	0.6785	0.6170	0.6280	0.1482	0.2587	0.3293	0.3576	-0.6539	-0.4597	-0.3108	-0.2055	-0.1244	-0.0618	0.1517

Run	CP264	CP265	CP266	CP267	CP268	CP269	CP270	CP271	CP272	CP273	CP274	CP275	CP276	CP277	CP278	CP279
91.	0.0486	0.0327	0.0492	0.0272	0.0159	-0.0662	-0.1387	-0.2162	-0.2040	0.0658	-0.1990	0.4694	0.6565	0.7640	0.8626	0.8776
90.	0.1080	0.1063	0.1140	0.1001	0.0751	-0.0016	-0.1059	-0.1954	-0.1804	0.1235	-0.1820	0.5346	0.6704	0.7955	0.8702	0.8890
292.	0.1754	0.1819	0.1976	0.1620	0.1046	0.0278	-0.1194	-0.2529	-0.2161	0.0629	-0.2428	0.4915	0.5529	0.7337	0.7956	0.8061

Run	CP280	CP281	CP282	CP283	CP284
91.	0.8814	0.8230	0.7073	0.5189	0.6675
90.	0.8789	0.8222	0.7064	0.5629	0.6666
292.	0.8282	0.7208	0.5843	0.5043	0.6041

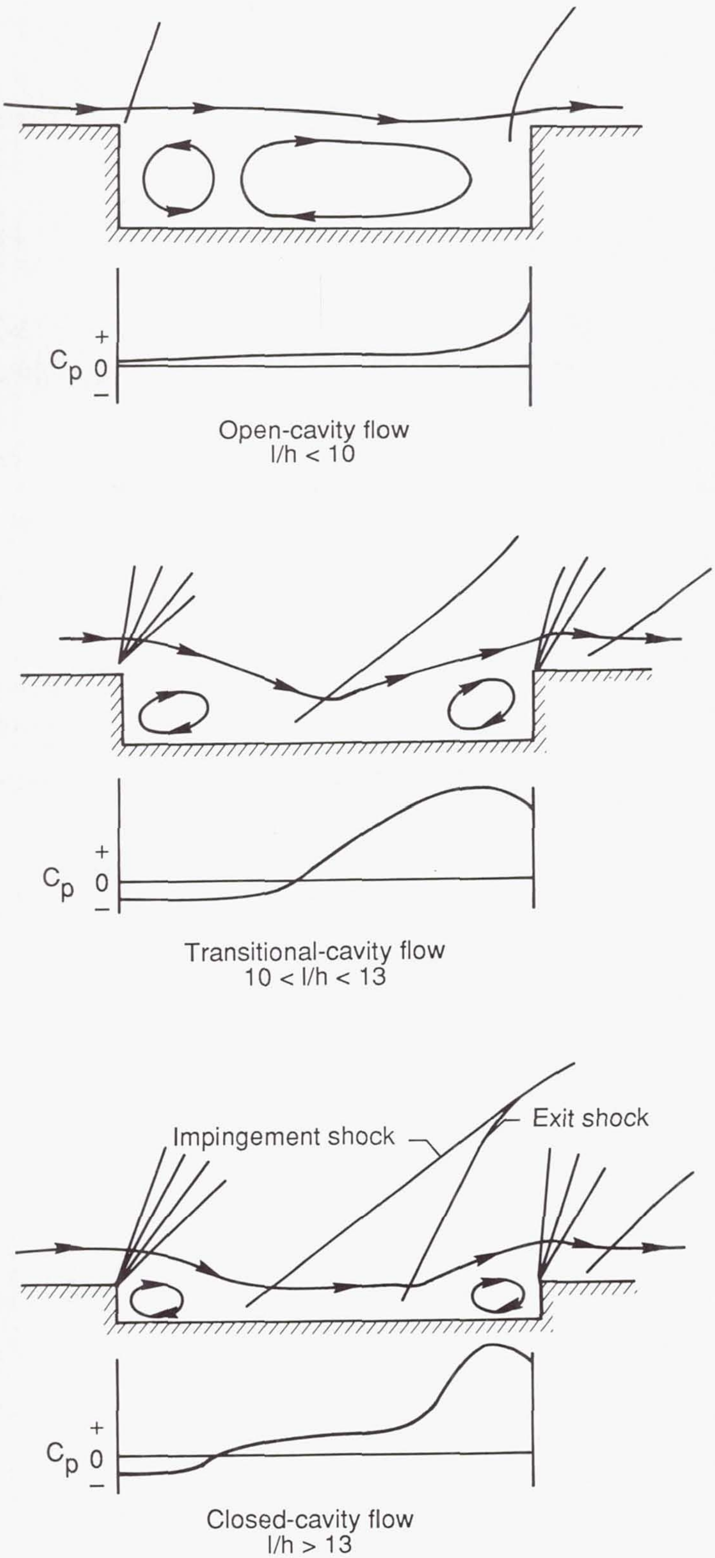

Figure 1. Sketches of cavity flow field models at supersonic speeds (ref. 4).

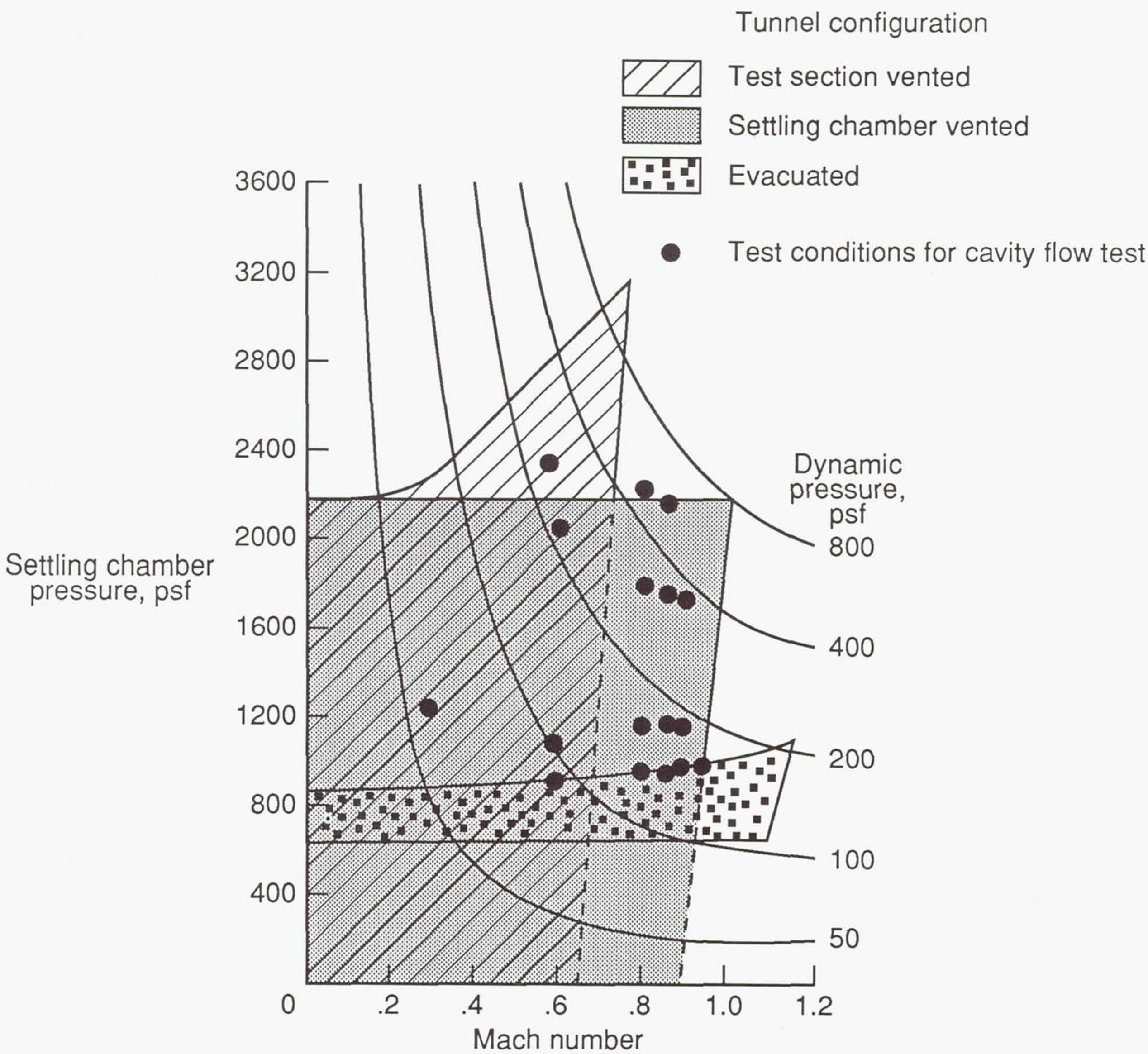

Figure 2. Operating conditions for DTRC 7- by 10-Foot TWT (ref. 19).

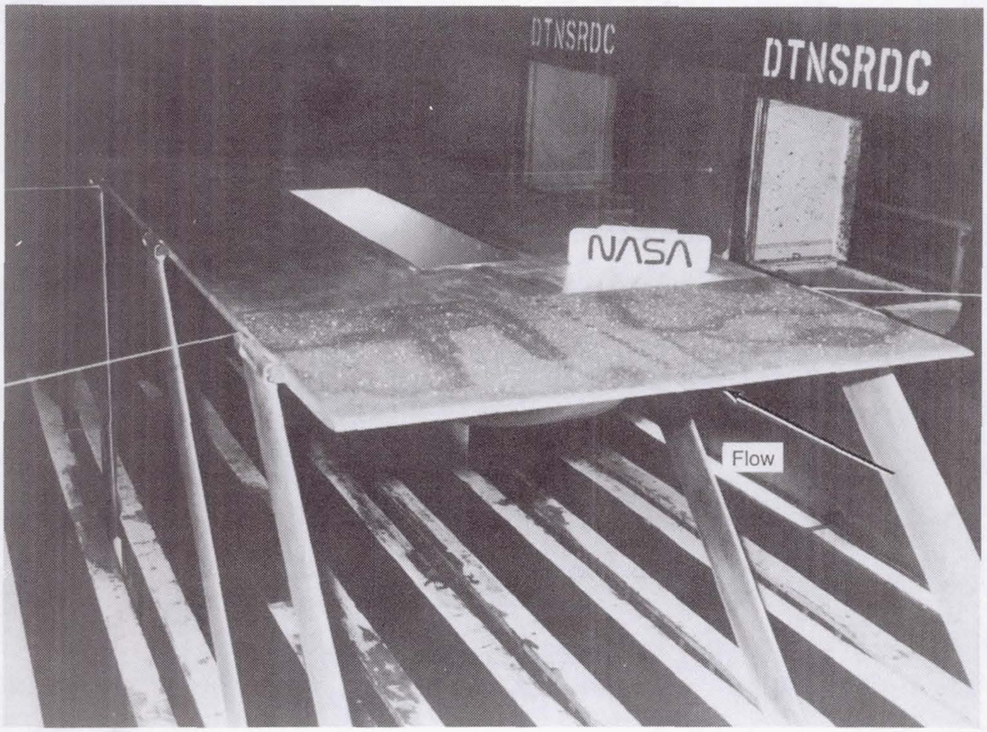

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Figure 3. Transonic cavity flow model installed in DTRC 7- by 10-Foot TWT.

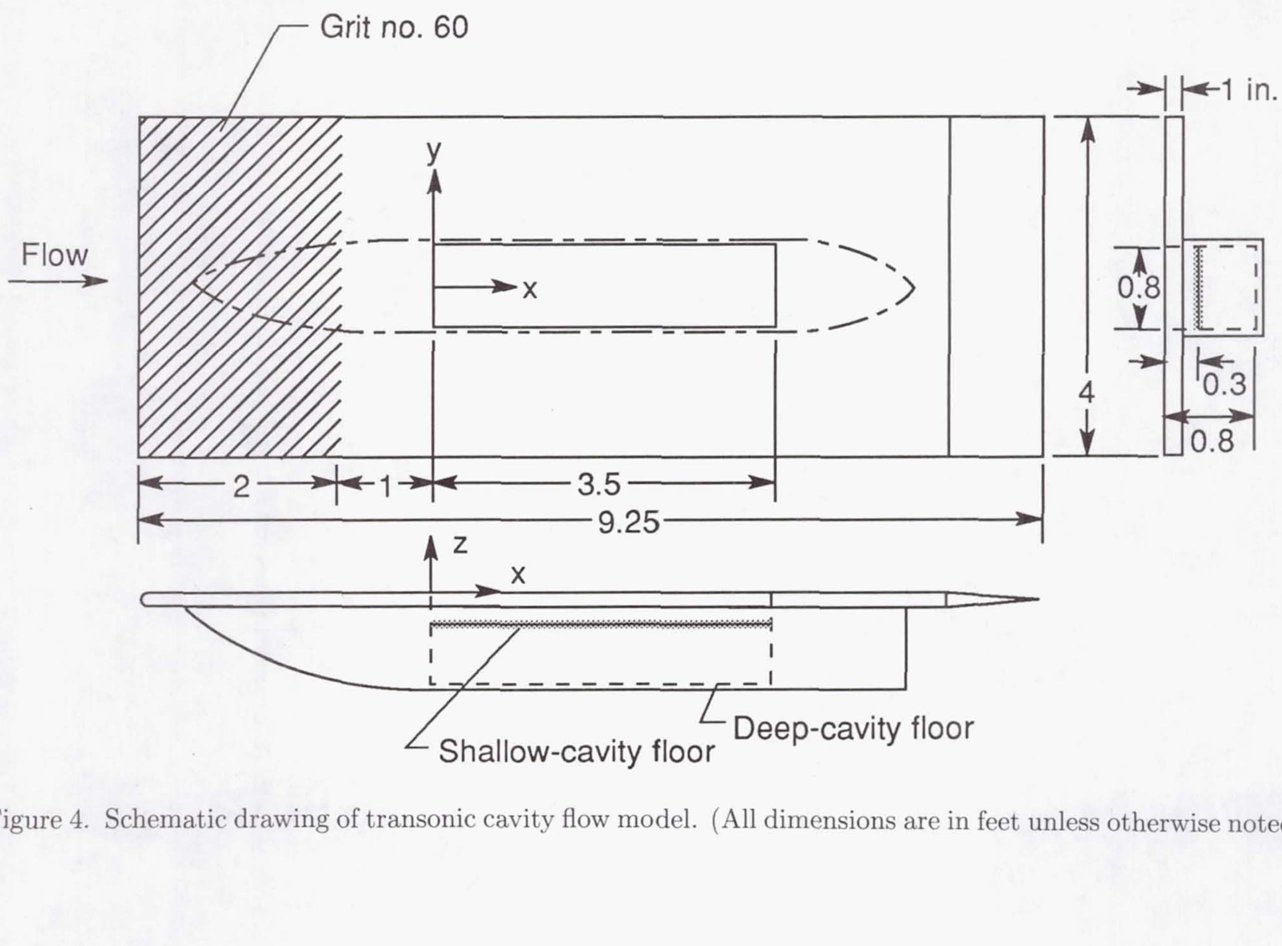
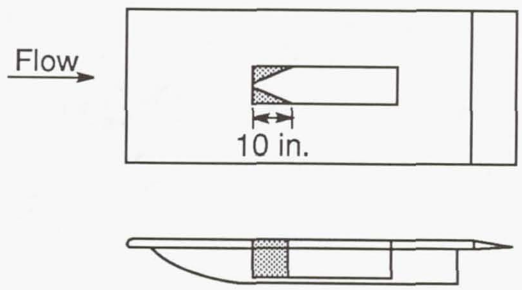
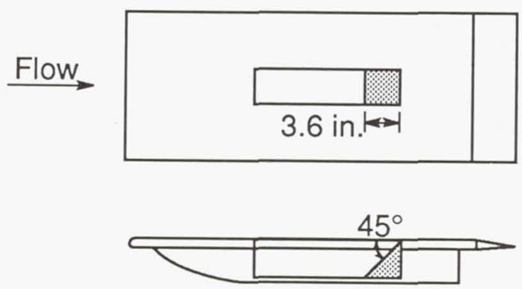


Figure 4. Schematic drawing of transonic cavity flow model. (All dimensions are in feet unless otherwise noted.)

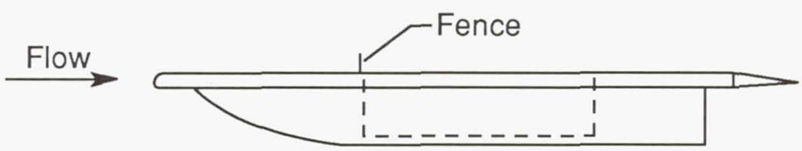


(a) Front blocks.

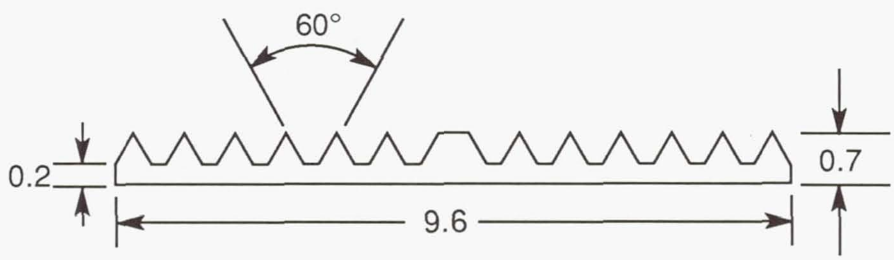


(b) Rear block (shallow cavity only).

Figure 5. Nonrectangular cavity configurations.



(a) Fence placement on model.



(b) Enlarged frontal view of fence.

Figure 6. Model configuration with leading-edge fence. (All dimensions are in inches unless otherwise noted.)

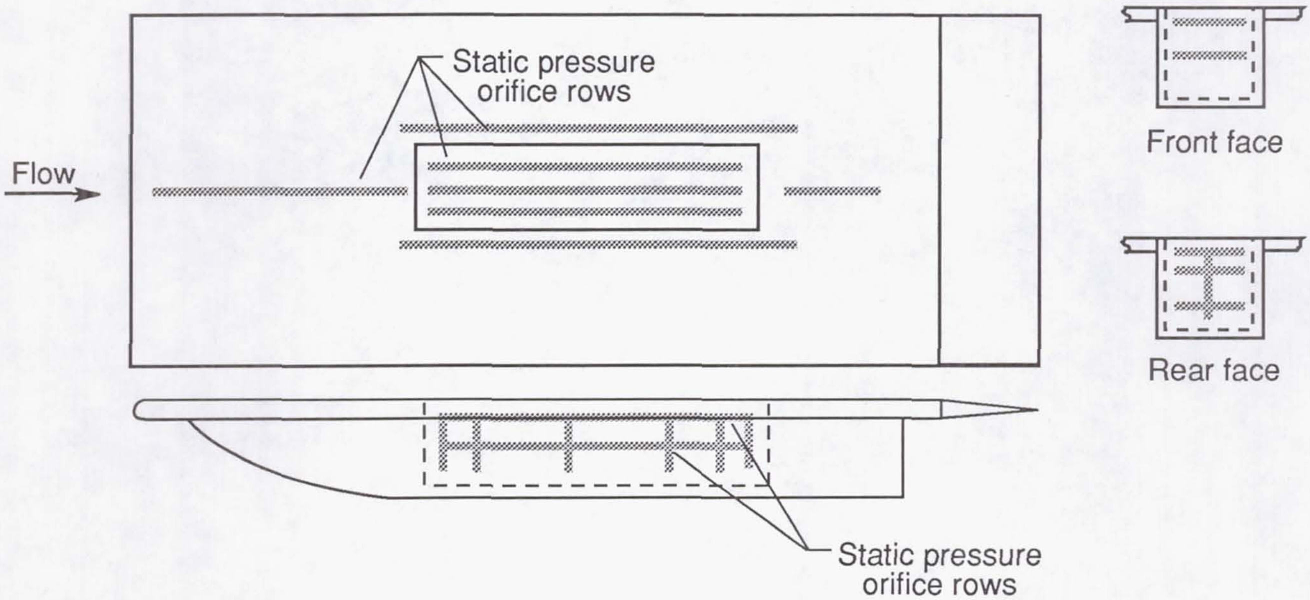


Figure 7. Static pressure orifice locations.

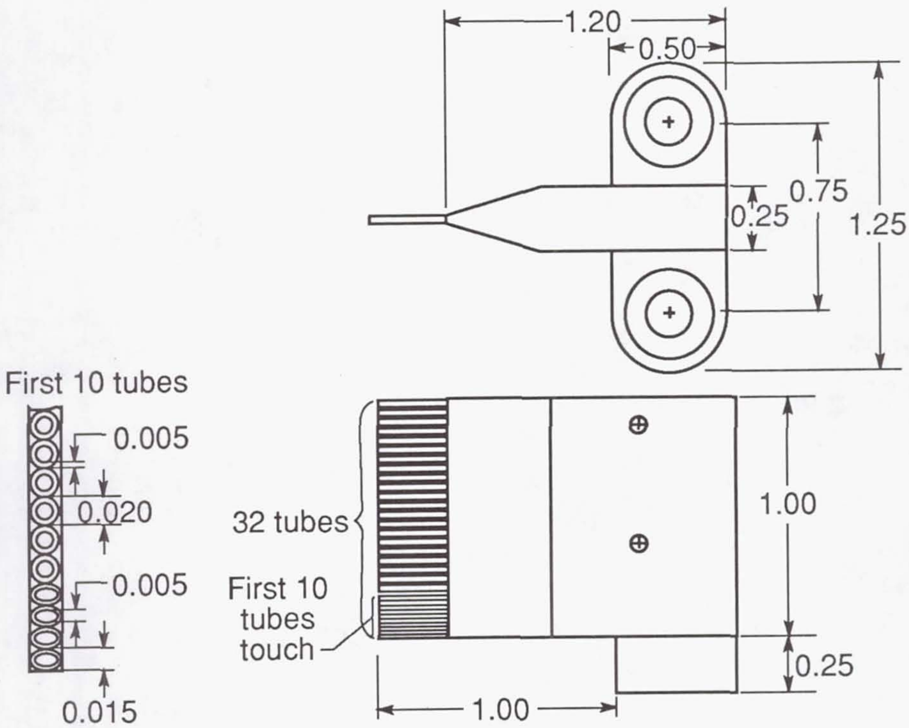


Figure 8. Schematic drawing of boundary-layer rake. (All dimensions are in inches.)

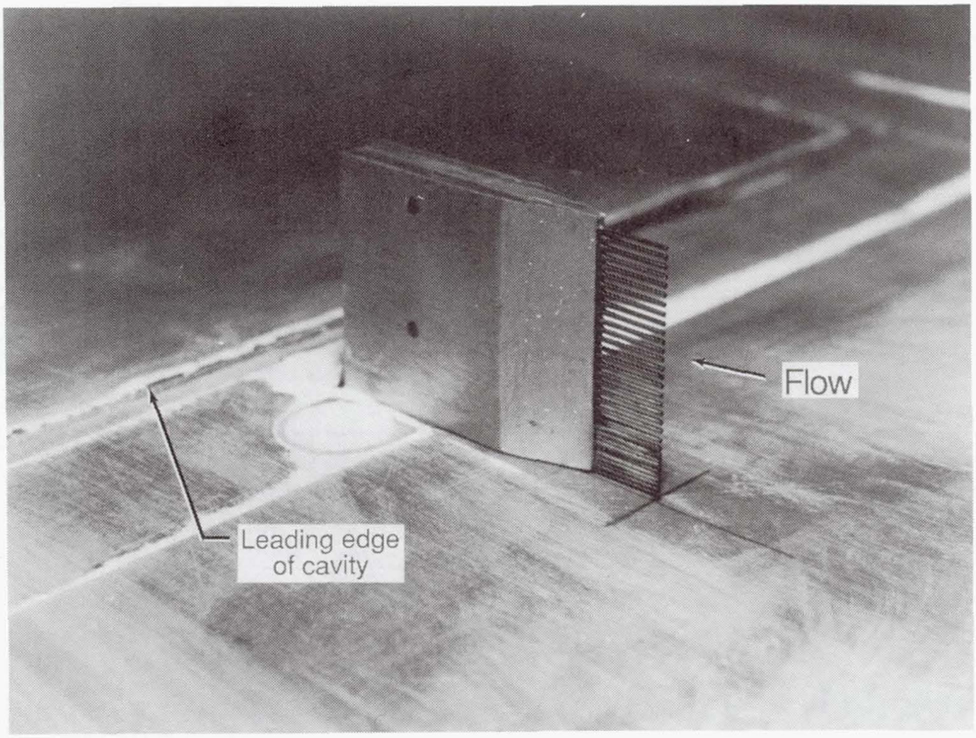


Figure 9. Boundary-layer rake installed on model.

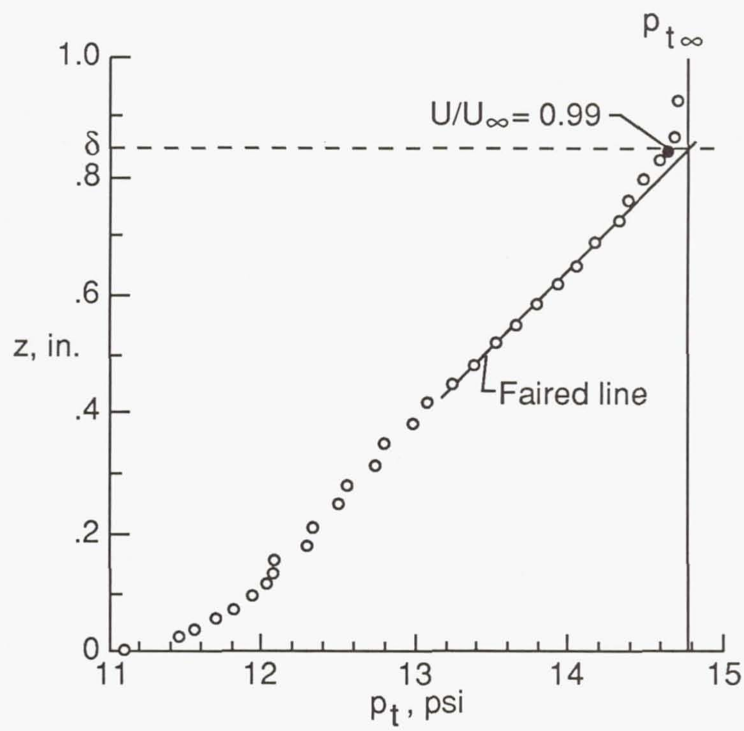


Figure 10. Estimation of boundary-layer thickness.

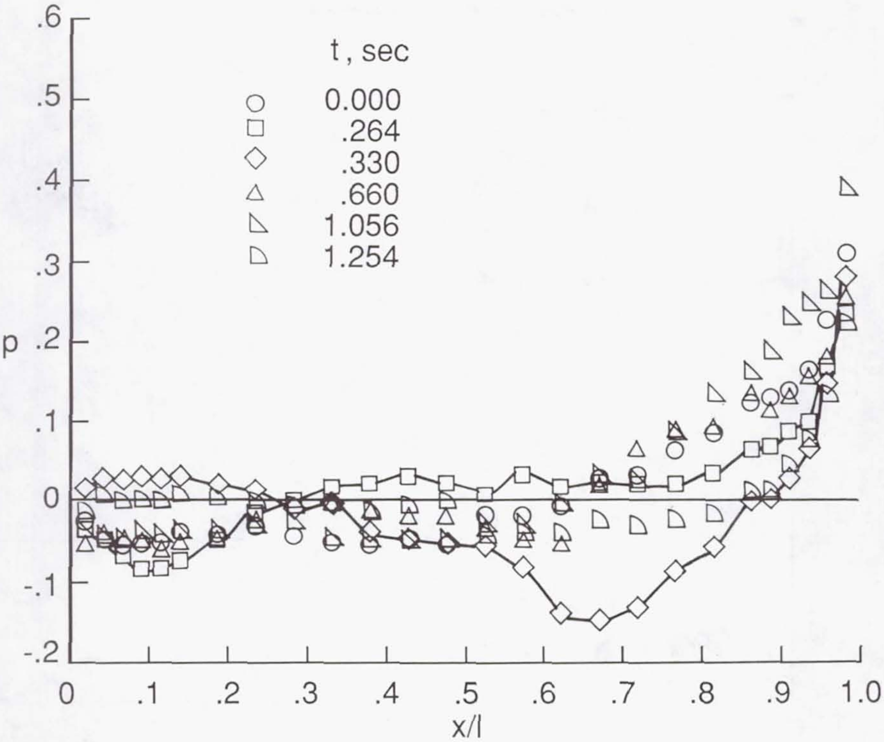


Figure 11. Variation of cavity floor centerline pressure distributions with time where $l/h = 4.4$, $M_\infty = 0.60$, and $R_\infty = 3.5 \times 10^6$. (Individual data samples are plotted.)

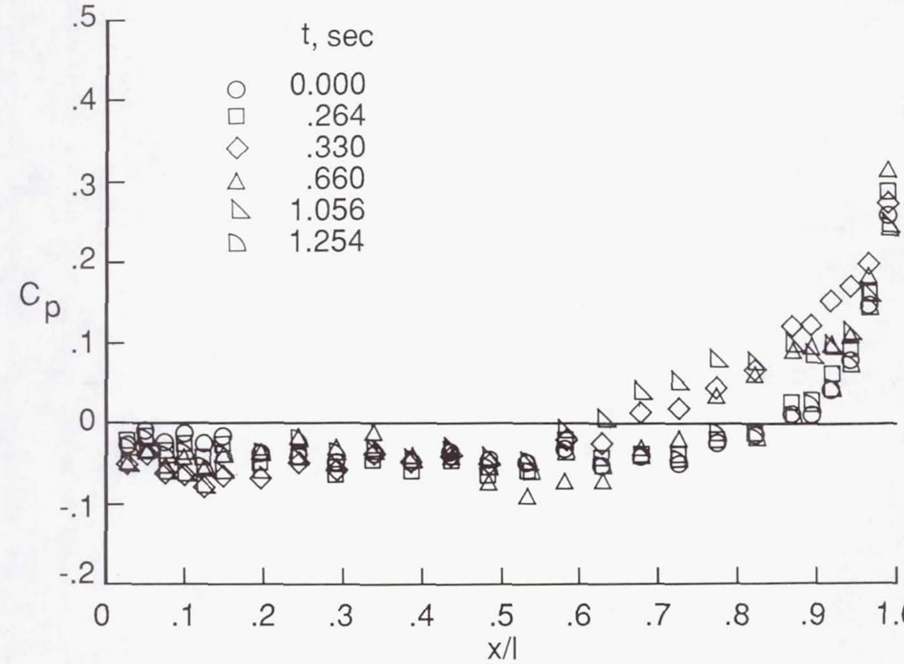


Figure 12. Variation of cavity floor centerline pressure distributions with time where $l/h = 4.4$, $M_\infty = 0.60$, and $R_\infty = 1.6 \times 10^6$. (Individual data samples are plotted.)

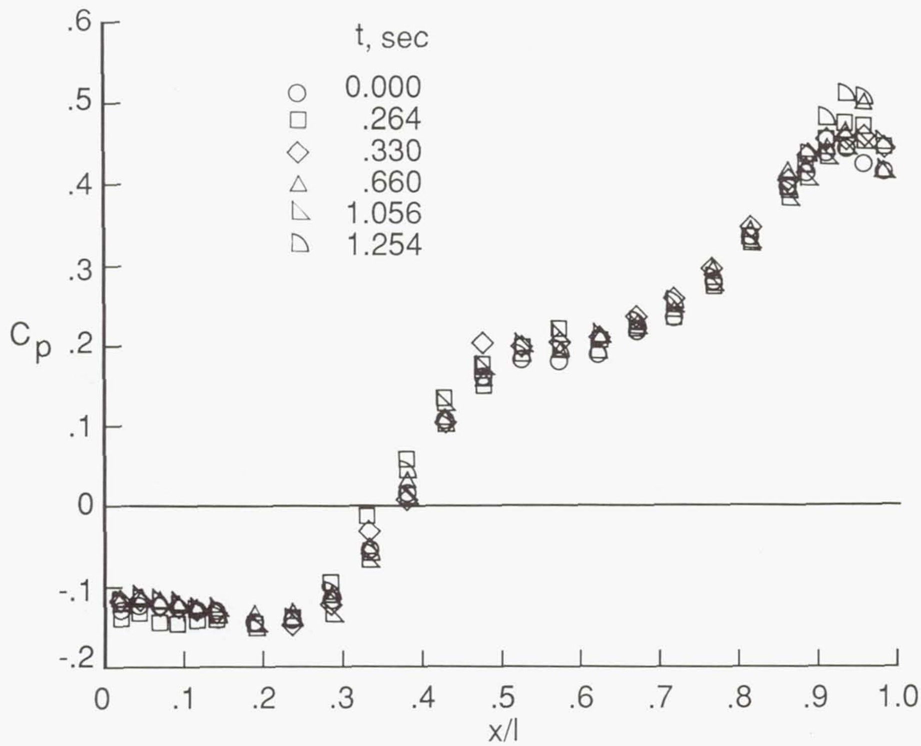


Figure 13. Variation of cavity floor centerline pressure distributions with time where $l/h = 11.7$, $M_\infty = 0.60$, and $R_\infty = 3.5 \times 10^6$. (Individual data samples are plotted.)

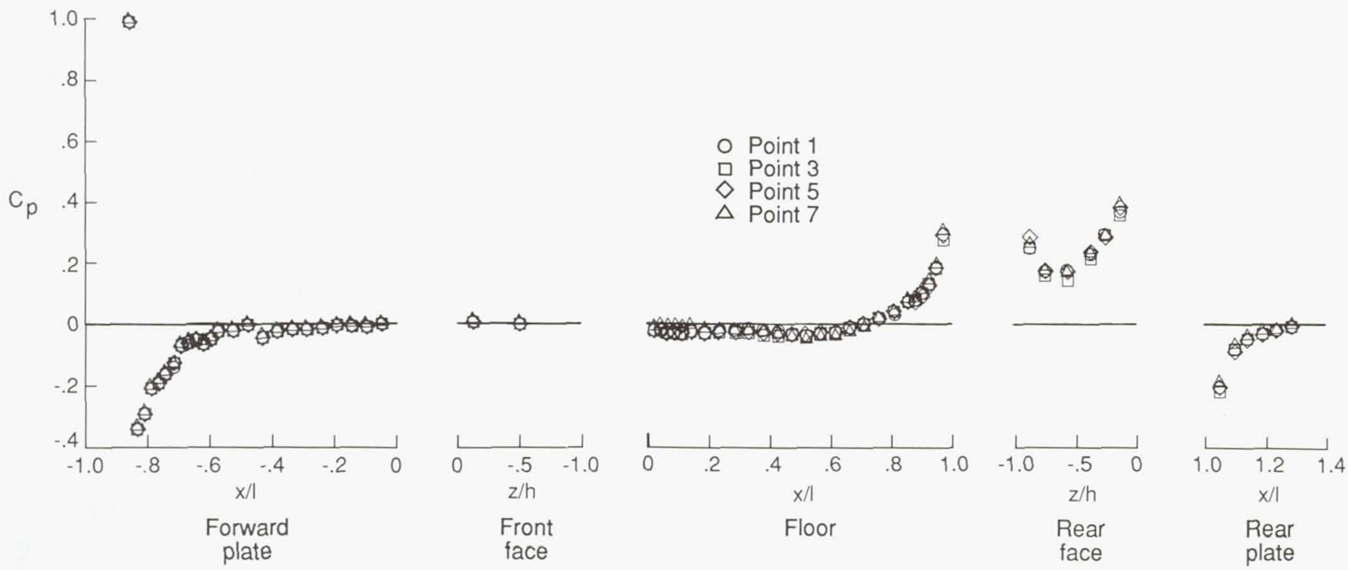


Figure 14. Repeatability of centerline pressure distributions where $l/h = 4.4$, $M_\infty = 0.60$, and $R_\infty = 3.5 \times 10^6$. (Each point is an average of 20 data samples.)

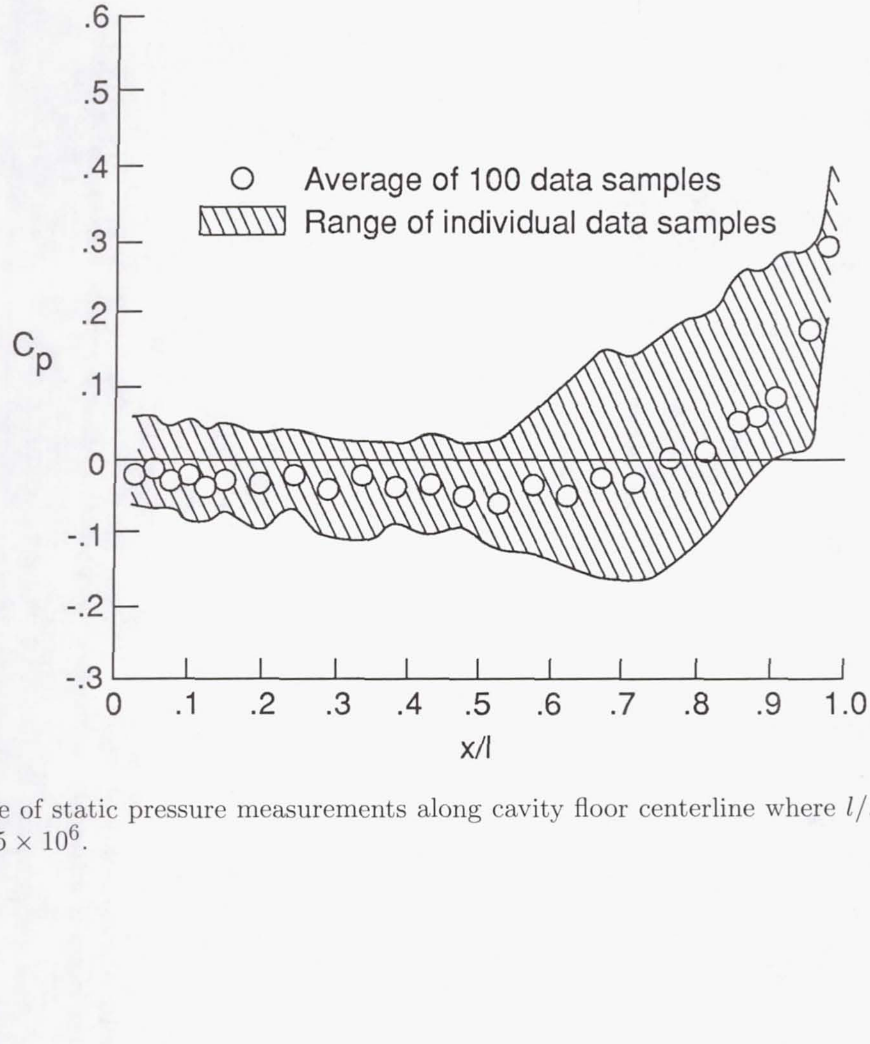


Figure 15. Range of static pressure measurements along cavity floor centerline where $l/h = 4.4$, $M_\infty = 0.60$, and $R_\infty = 3.5 \times 10^6$.

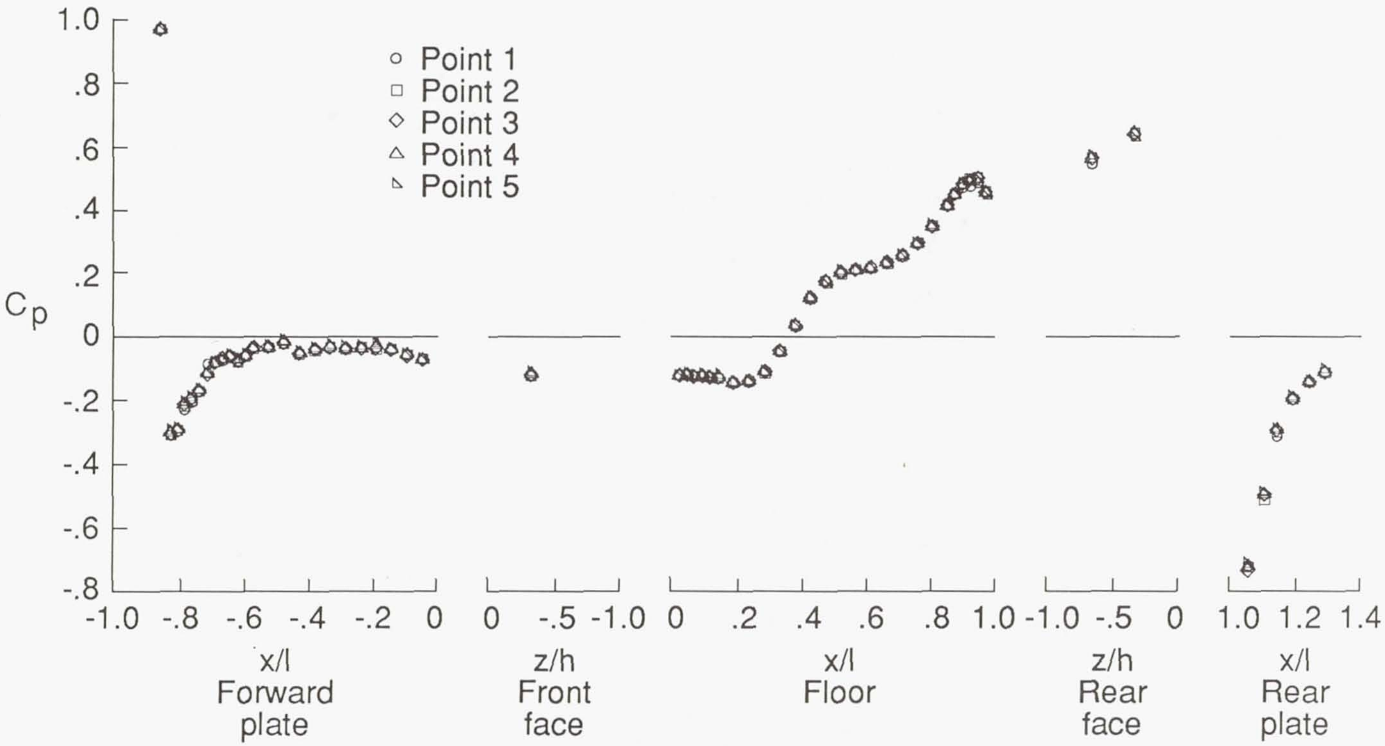


Figure 16. Repeatability of centerline pressure distributions where $l/h = 11.7$, $M_\infty = 0.60$, and $R_\infty = 3.5 \times 10^6$. (Each point is an average of 20 data samples.)

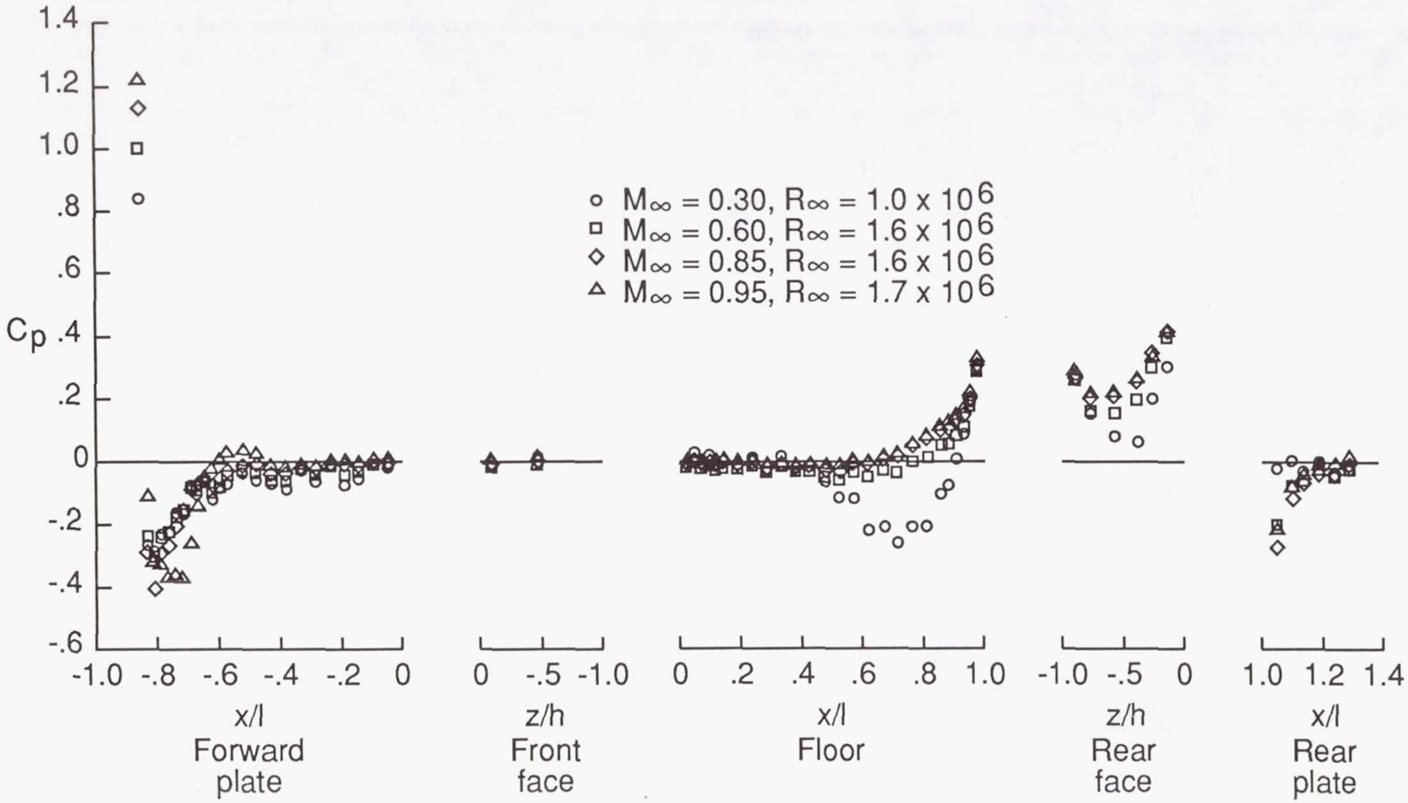


Figure 17. Effect of Mach number on centerline pressure distributions where $l/h = 4.4$. (An average of 100 data samples is plotted.)

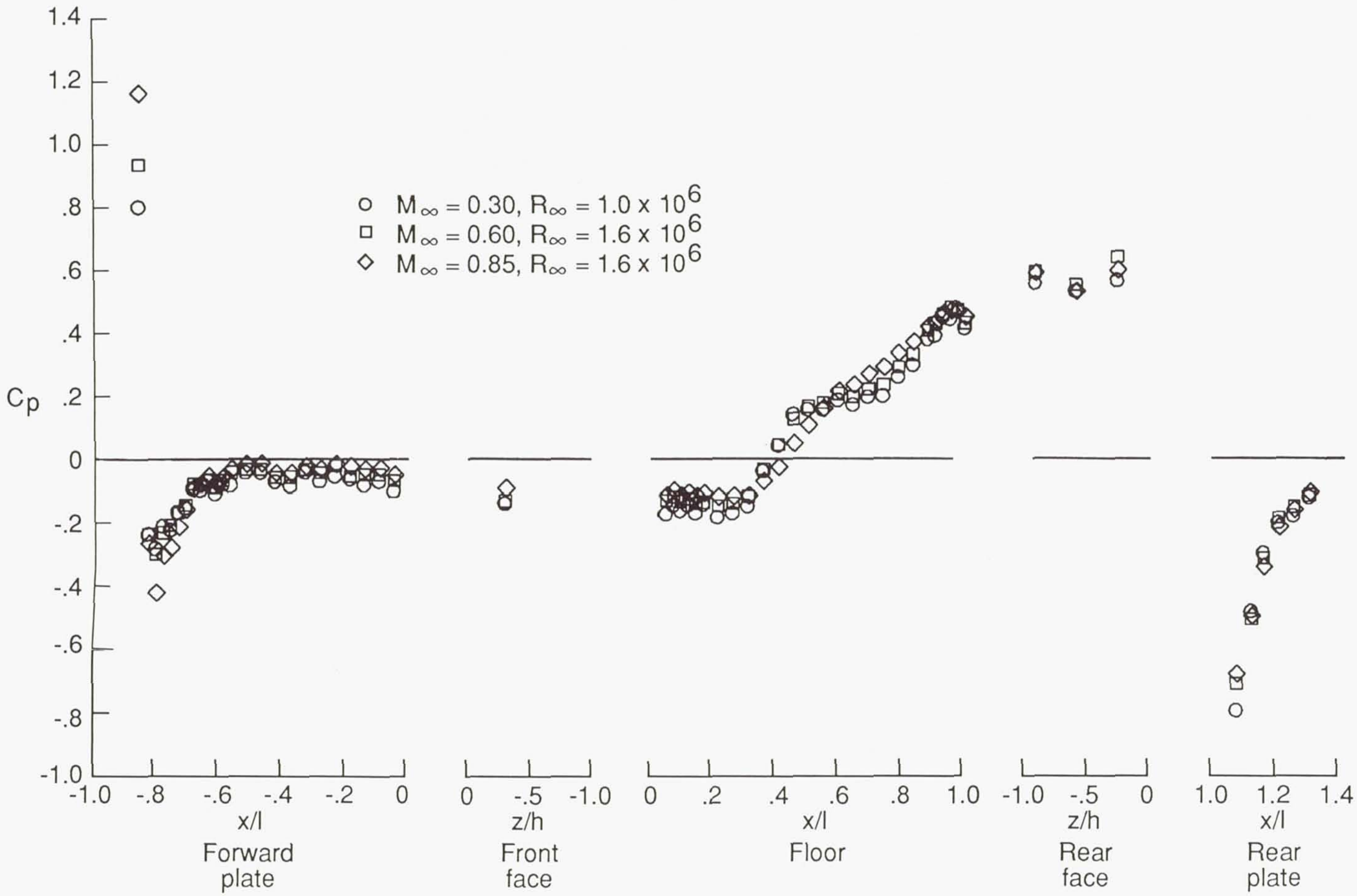


Figure 18. Effect of Mach number on centerline pressure distributions where $l/h = 11.7$. (An average of 100 data samples is plotted.)

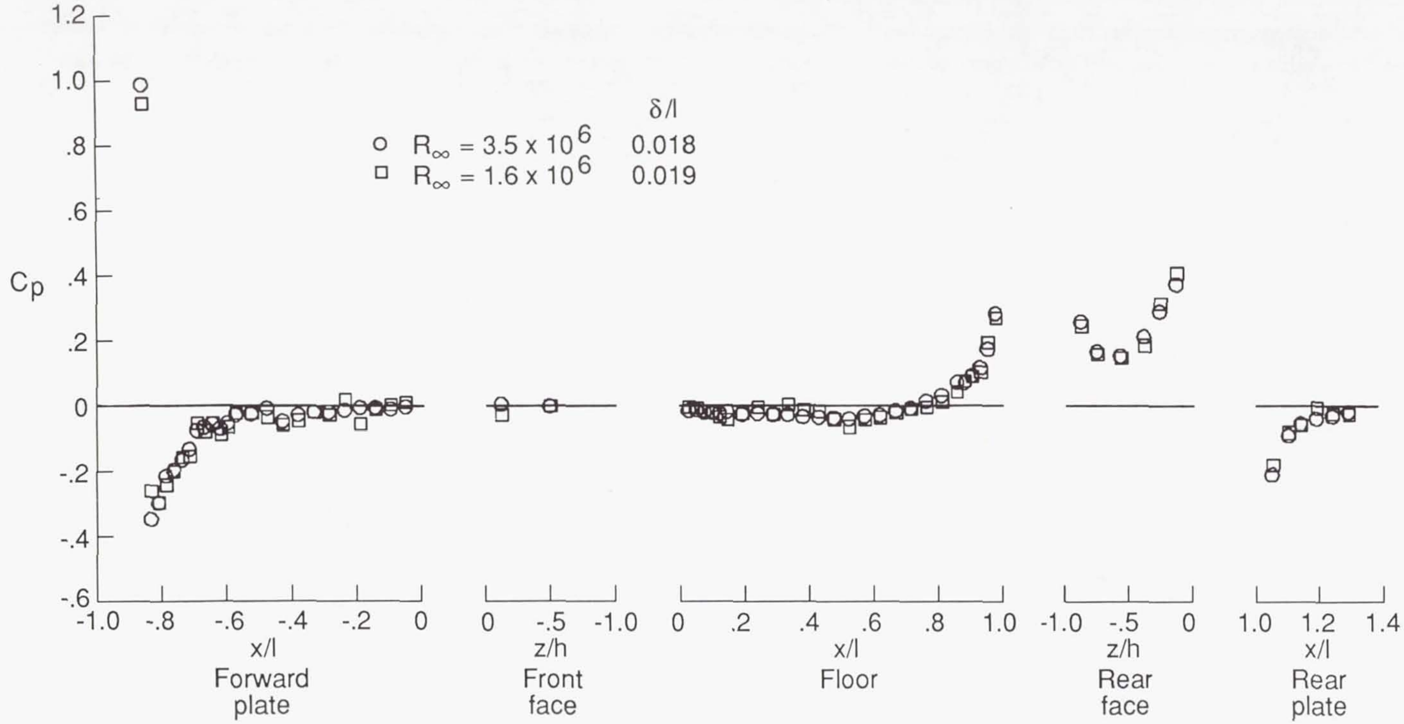


Figure 19. Effect of Reynolds number on centerline pressure distributions where $l/h = 4.4$ and $M_\infty = 0.60$. (An average of 100 data samples is plotted.)

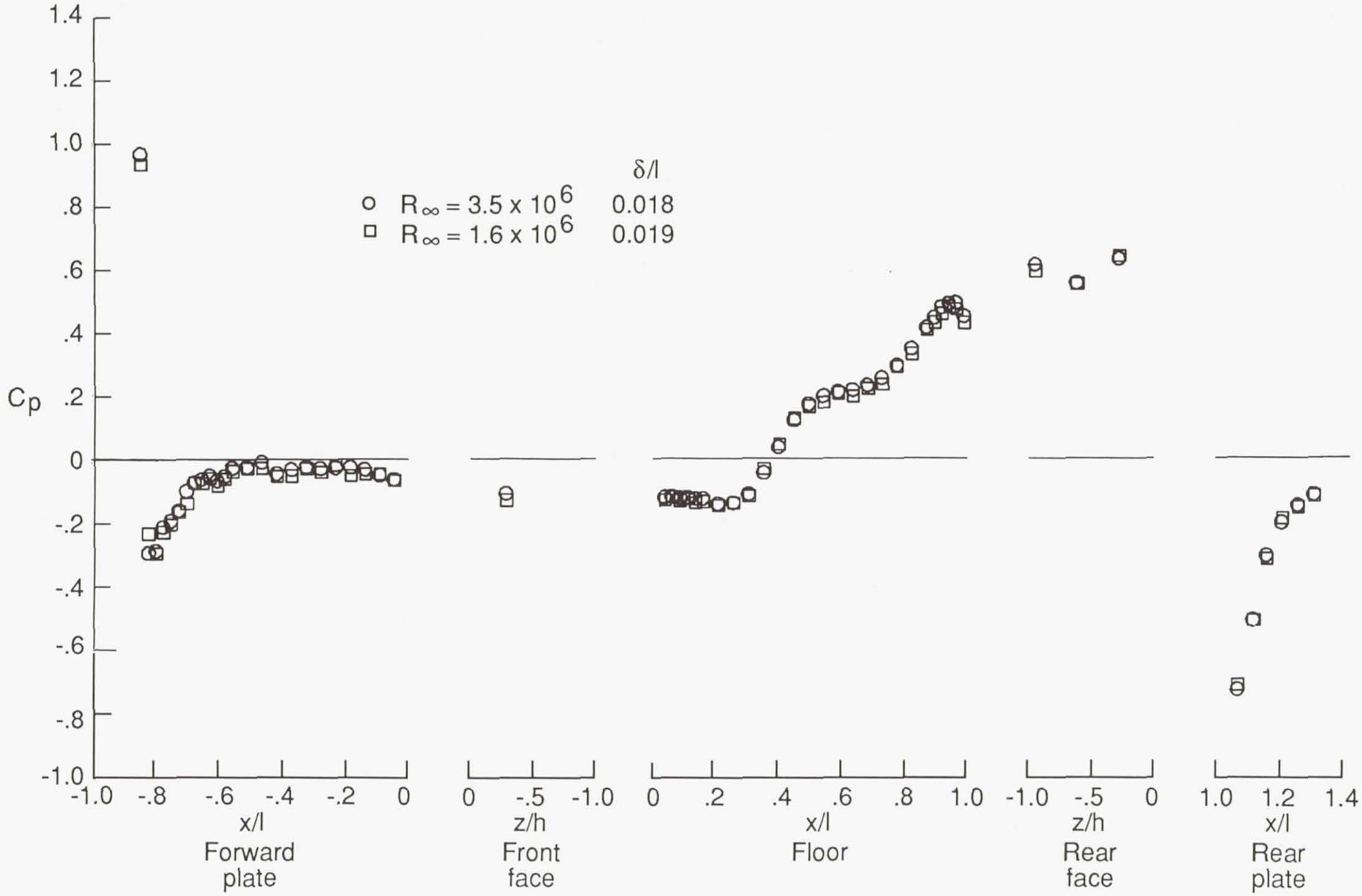


Figure 20. Effect of Reynolds number on centerline pressure distributions where $l/h = 11.7$ and $M_\infty = 0.60$. (An average of 100 data samples is plotted.)

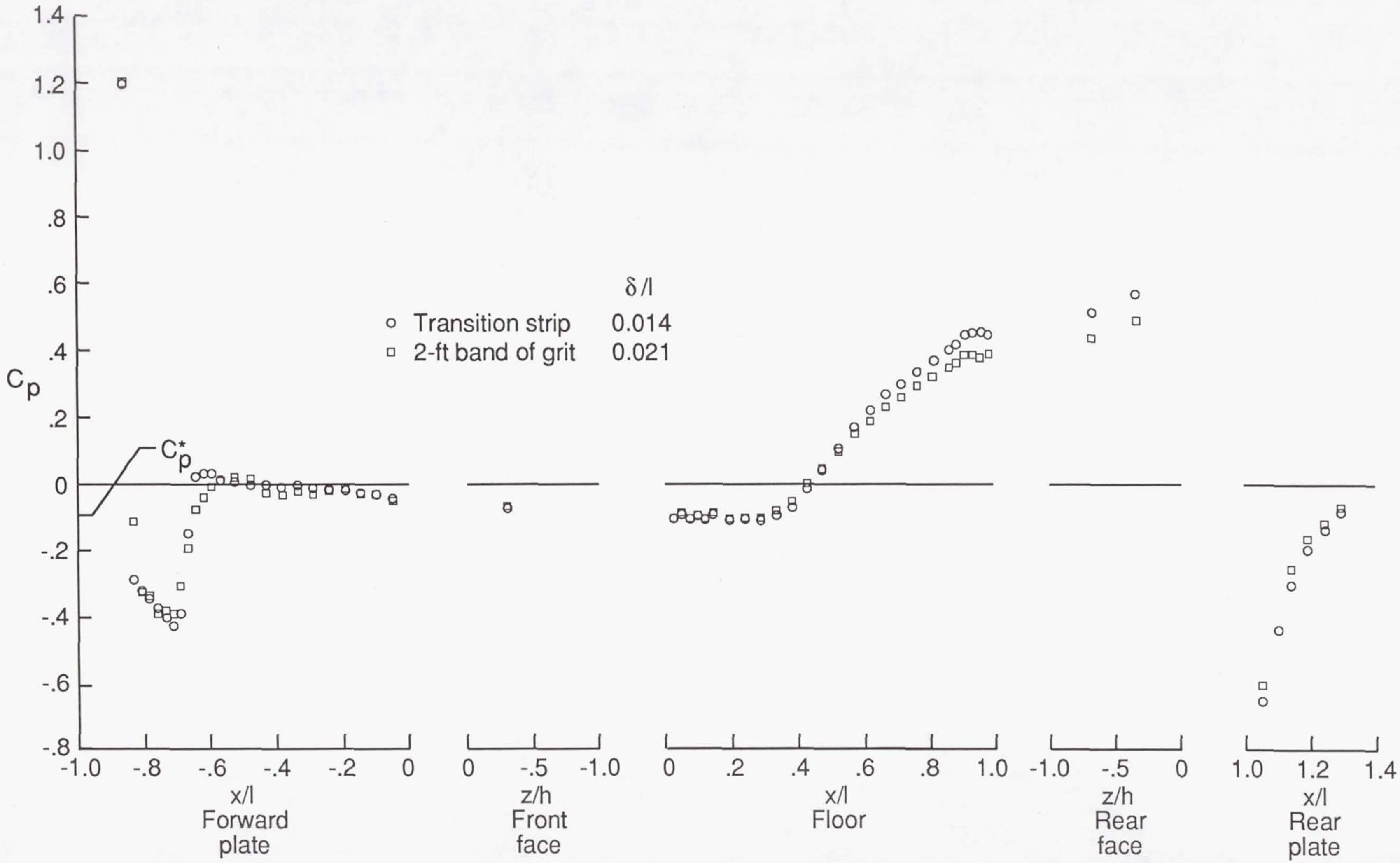
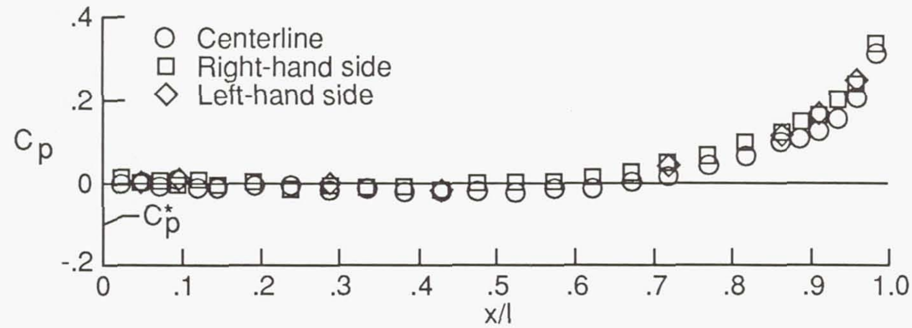
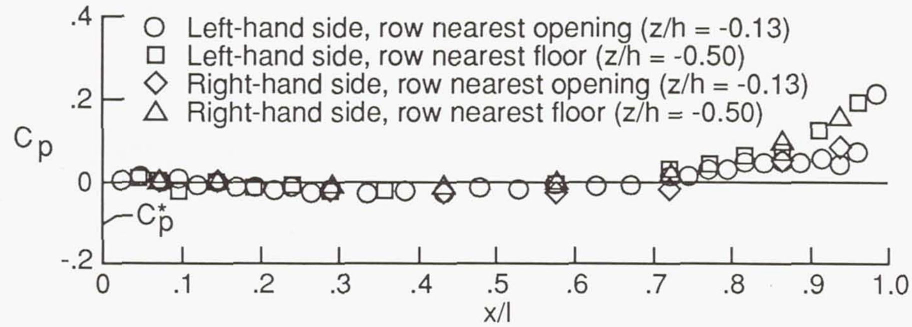


Figure 21. Effects of boundary-layer thickness on centerline pressure distributions where $l/h = 11.7$, $M_\infty = 0.95$, and $R_\infty = 1.7 \times 10^6$. (An average of 100 data samples is plotted.)

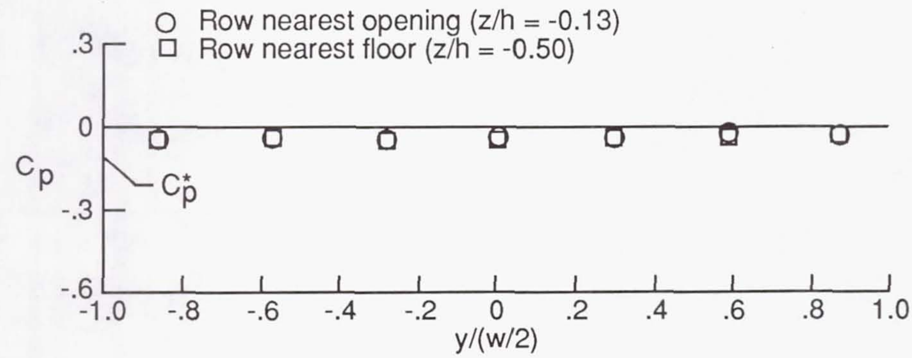


(a) Floor.

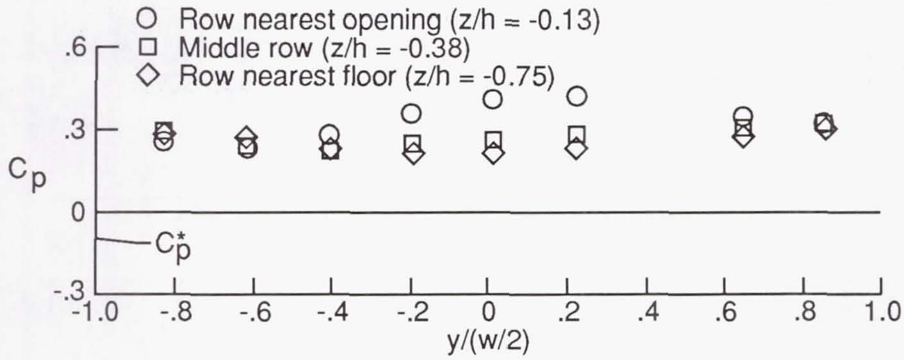


(b) Sidewalls.

Figure 22. Comparison of cavity longitudinal pressure distributions where $l/h = 4.4$, $M_\infty = 0.95$, and $R_\infty = 1.7 \times 10^6$. (An average of 100 data samples is plotted.)

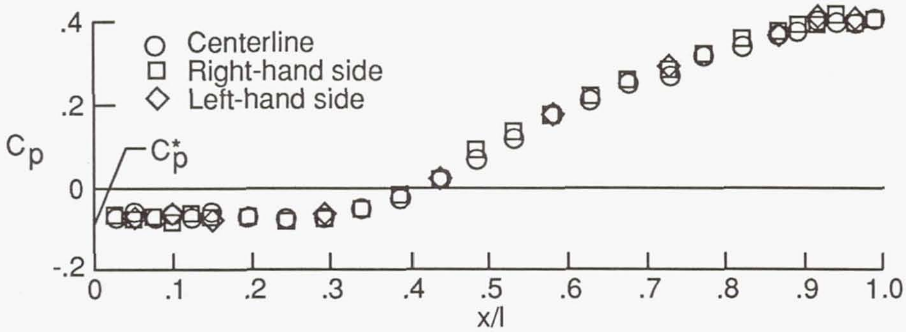


(a) Forward face.

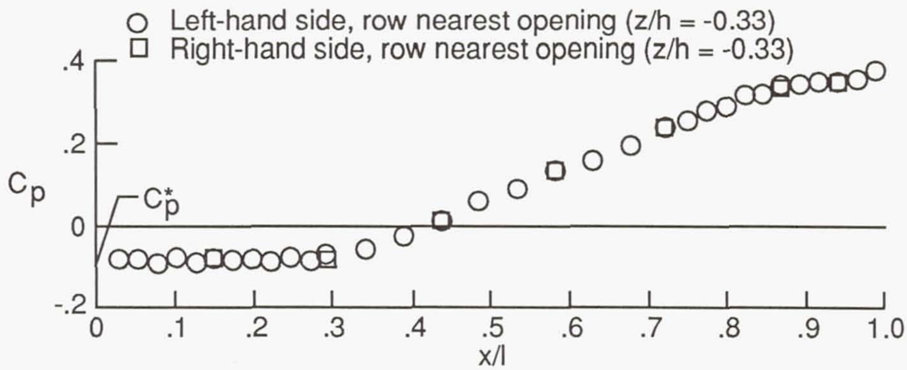


(b) Rear face.

Figure 23. Comparison of cavity lateral pressure distributions where $l/h = 4.4$, $M_\infty = 0.95$, and $R_\infty = 1.7 \times 10^6$. (An average of 100 data samples is plotted.)

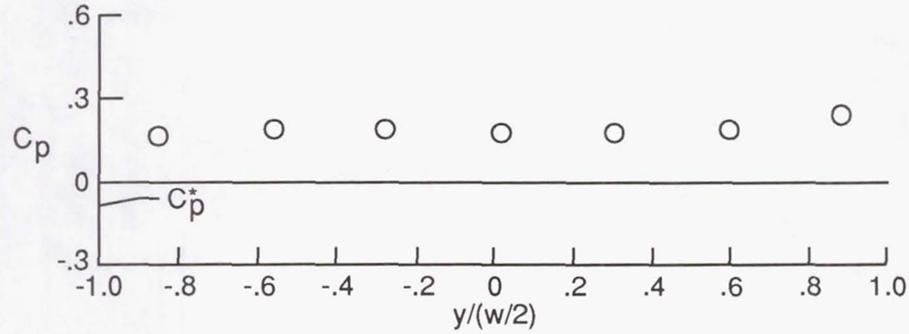


(a) Floor.

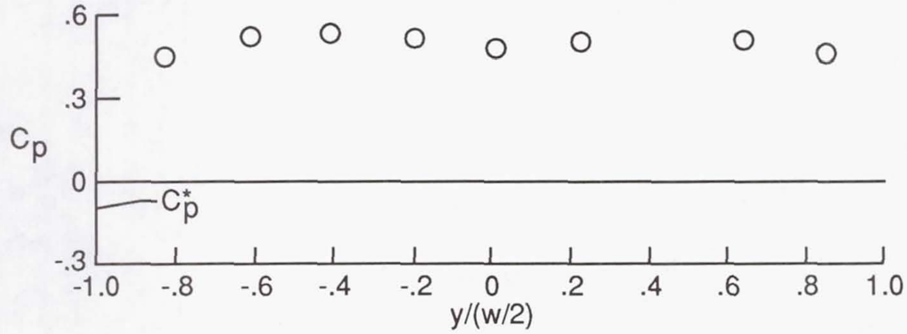


(b) Sidewalls.

Figure 24. Comparison of cavity longitudinal pressure distributions where $l/h = 11.7$, $M_\infty = 0.95$, and $R_\infty = 1.7 \times 10^6$. (An average of 100 data samples is plotted.)



(a) Forward face ($z/h = -0.33$).



(b) Rear face ($z/h = -0.33$).

Figure 25. Comparison of cavity lateral pressure distributions where $l/h = 11.7$, $M_\infty = 0.95$, and $R_\infty = 1.7 \times 10^6$. (An average of 100 data samples is plotted.)

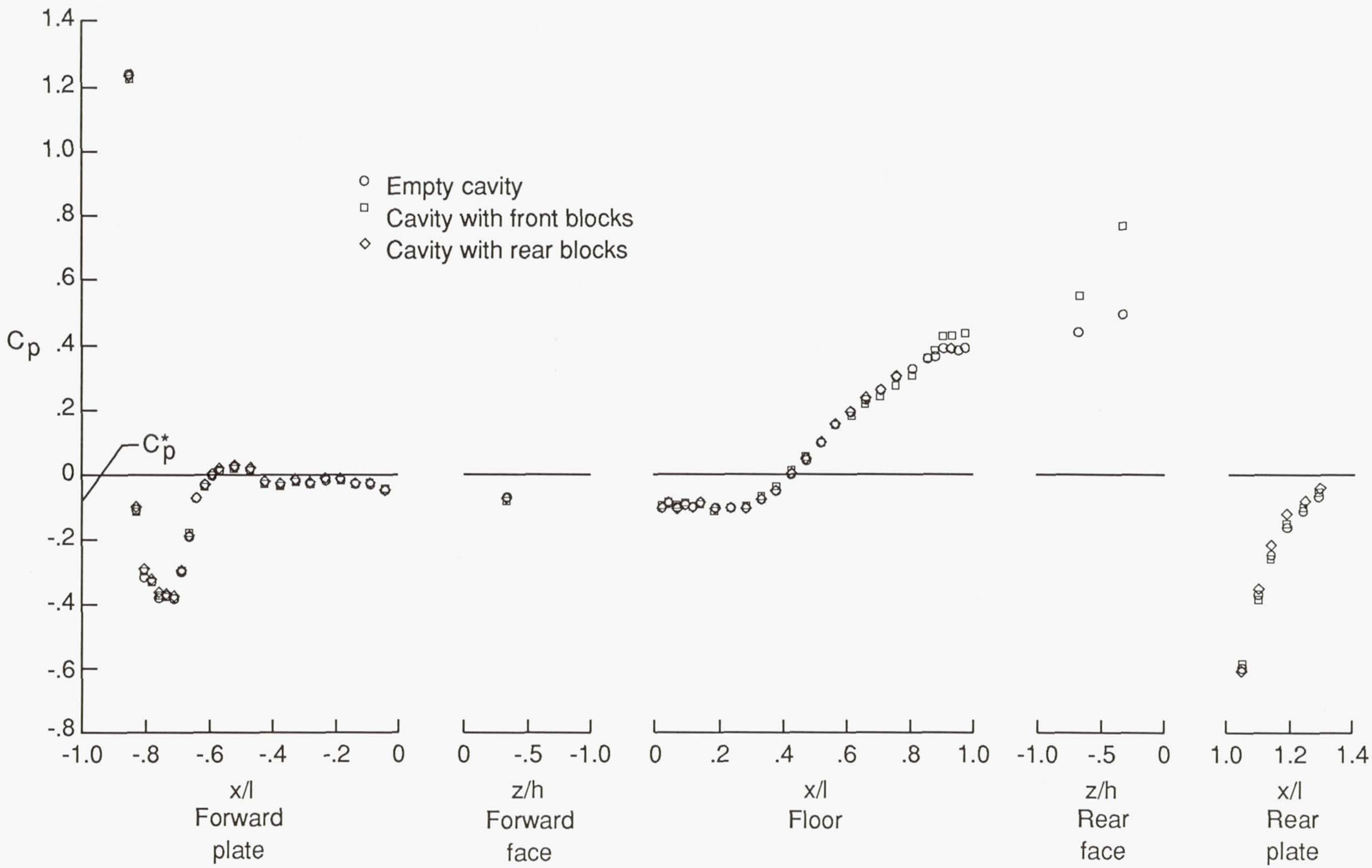
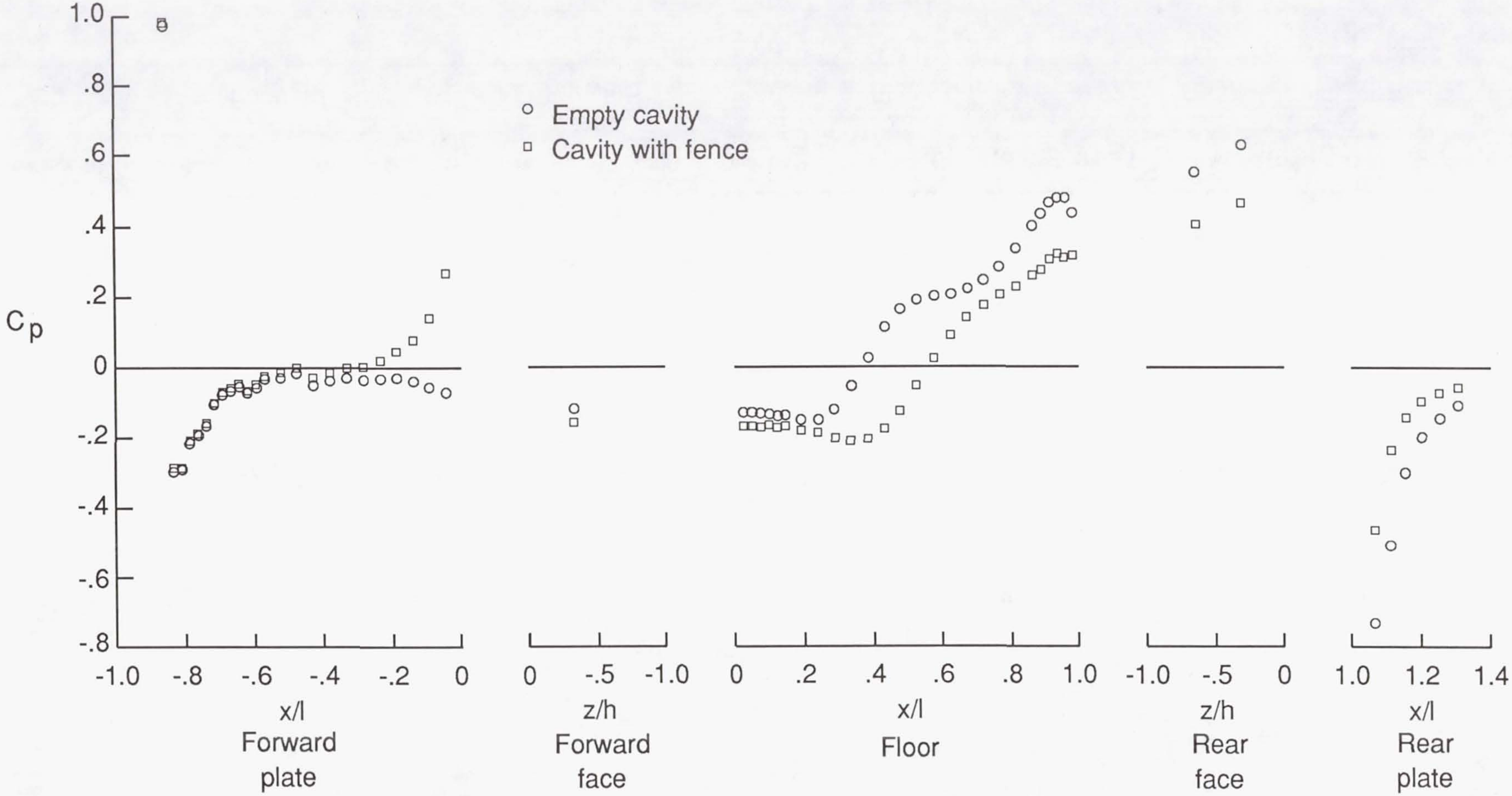
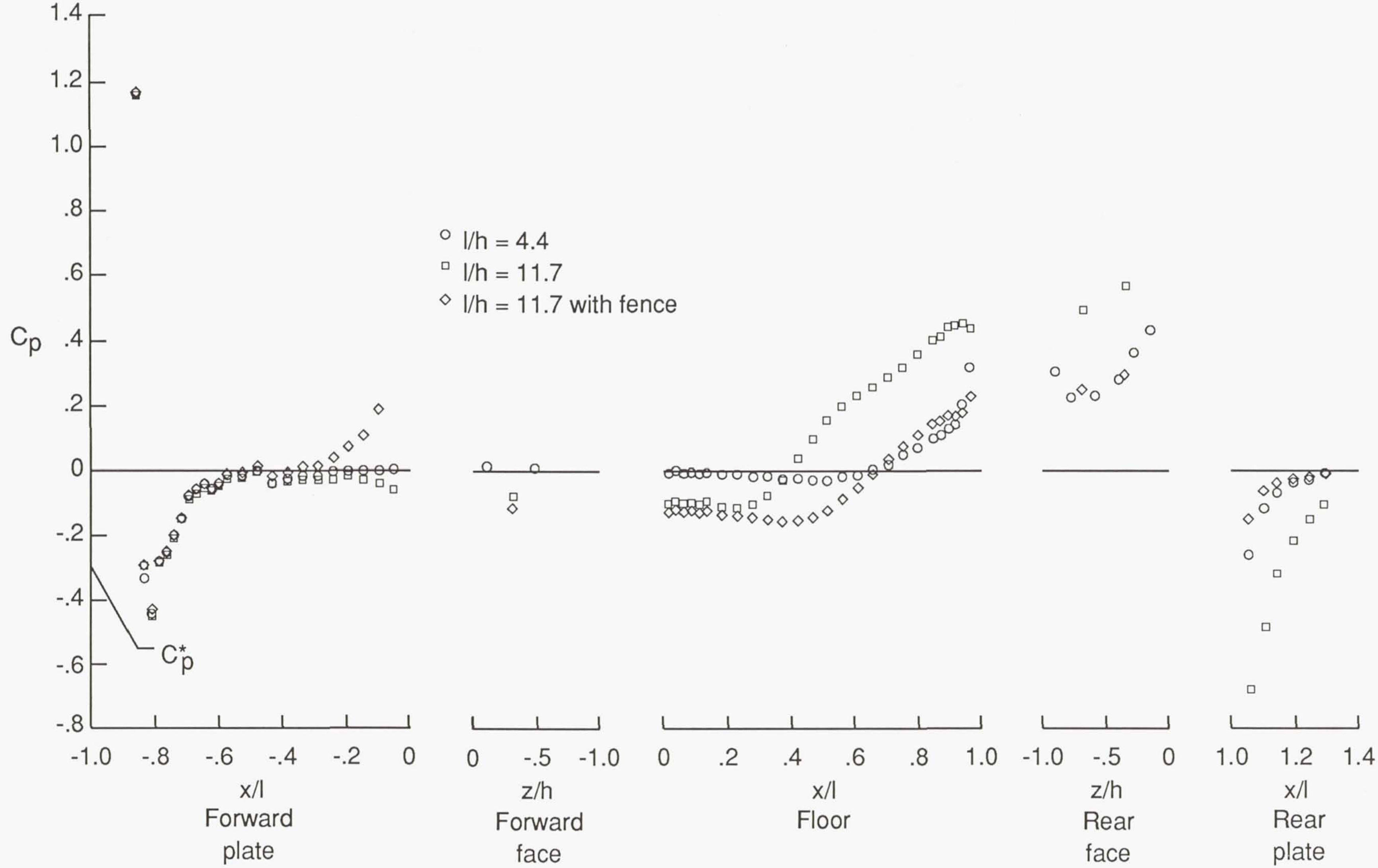


Figure 26. Effects of cavity shape on centerline pressure distributions where $l/h = 11.7$, $M_\infty = 0.95$, and $R_\infty = 1.7 \times 10^6$. (An average of 100 data samples is plotted.)



(a) $l/h = 11.7$, $M_\infty = 0.60$, and $R_\infty = 3.5 \times 10^6$.

Figure 27. Effects of upstream fence on centerline pressure distributions. (An average of 100 data samples is plotted.)



(b) $M_\infty = 0.85$ and $R_\infty = 3.3 \times 10^6$.

Figure 27. Concluded.

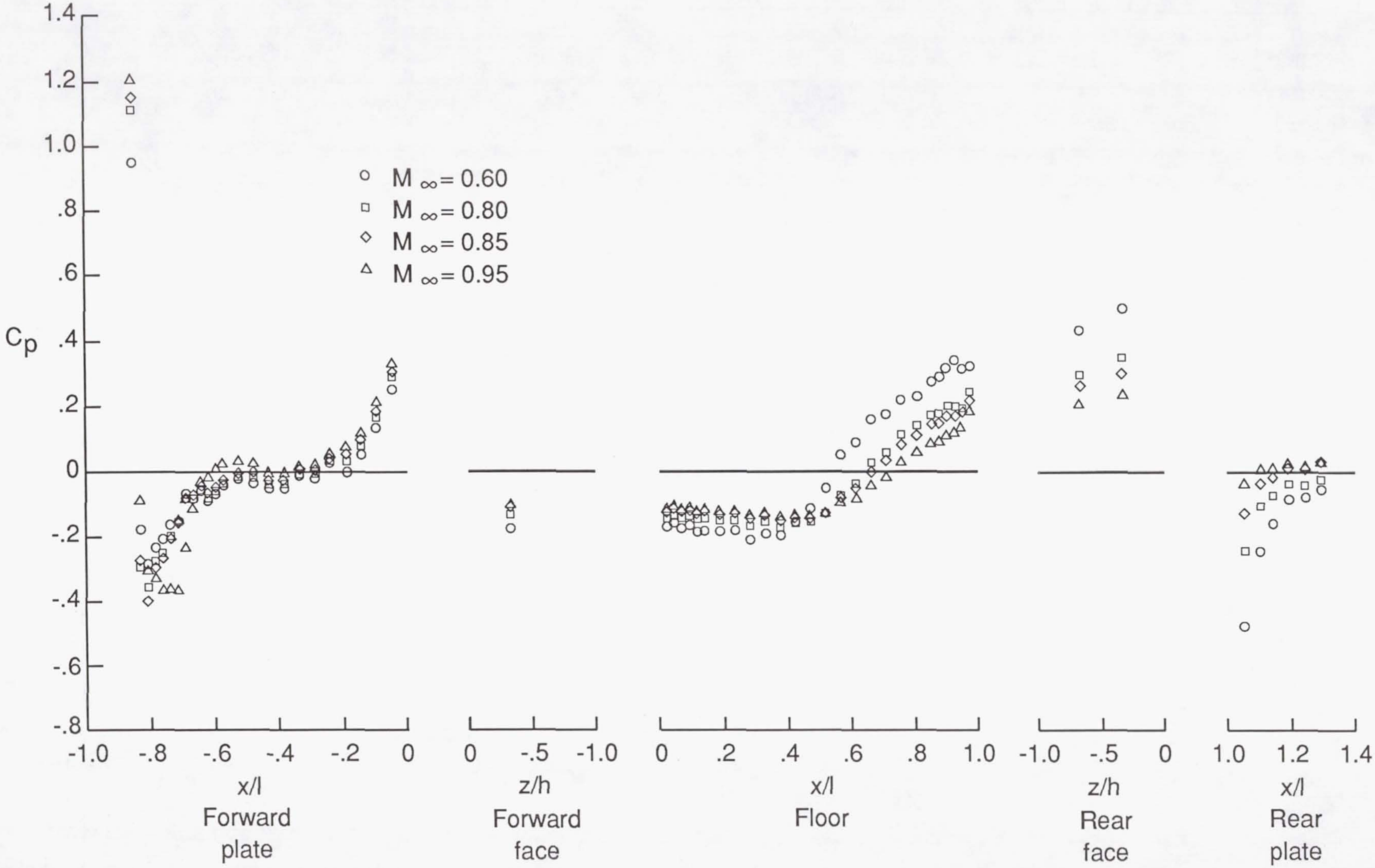


Figure 28. Effects of Mach number on centerline pressure distributions for cavity with fence where $l/h = 11.7$. (An average of 100 data samples is plotted.)

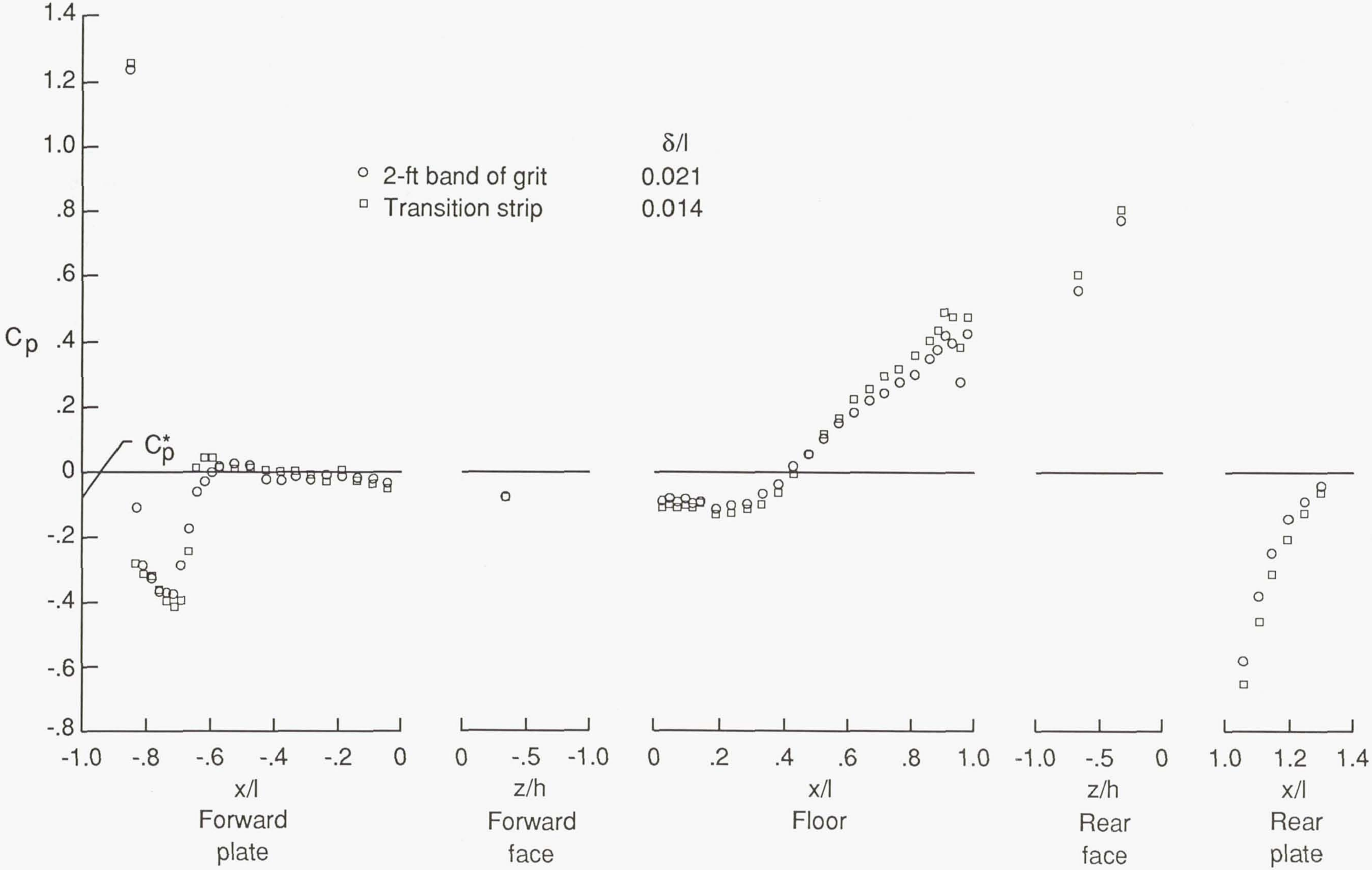


Figure 29. Effects of boundary-layer thickness on centerline pressure distributions for cavity with front blocks where $l/h = 11.7$, $M_\infty = 0.95$, and $R_\infty = 1.7 \times 10^6$. (An average of 100 data samples is plotted.)

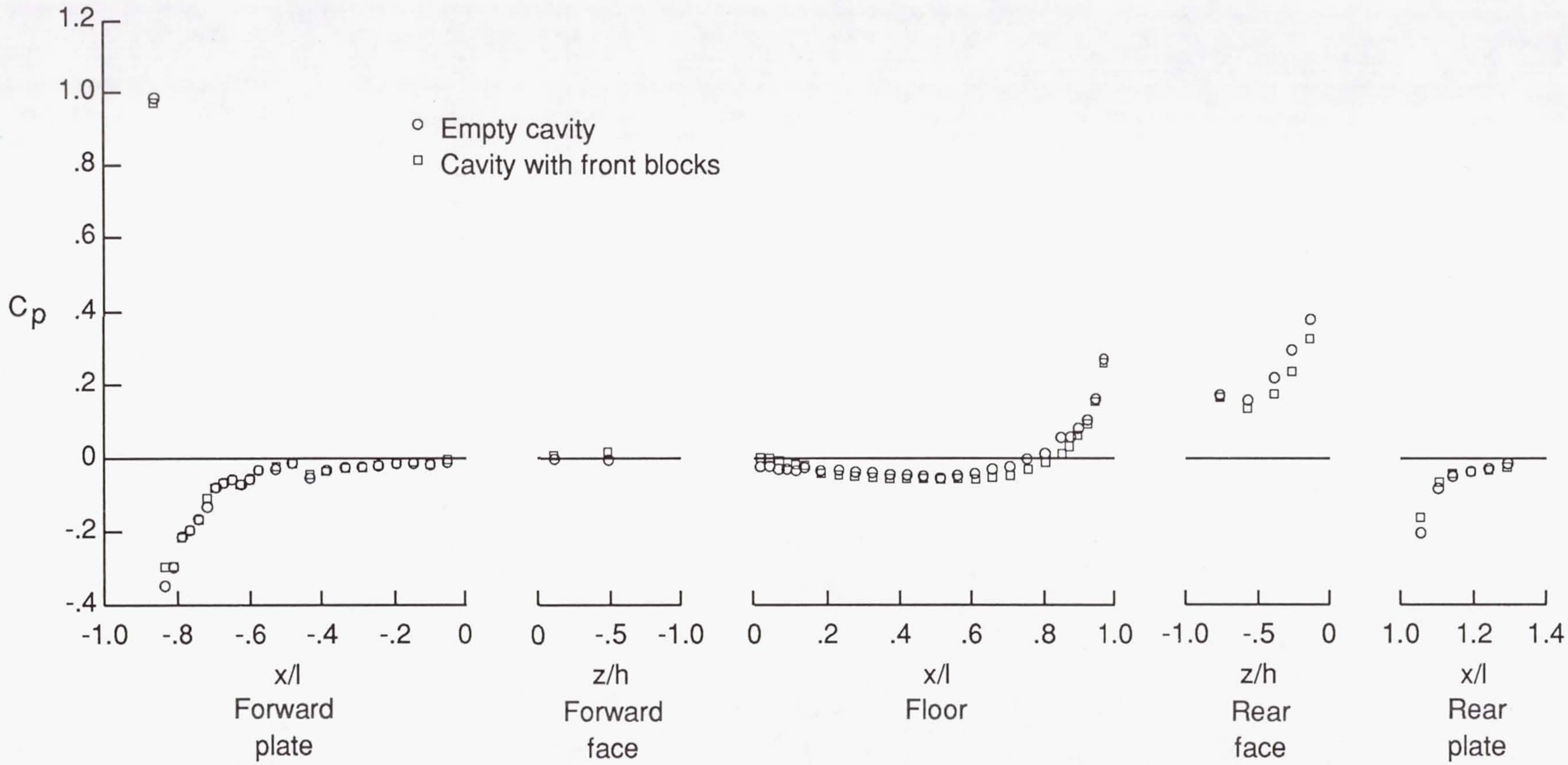


Figure 30. Effect of cavity shape on centerline pressure distributions where $l/h = 4.4$, $M_\infty = 0.60$, and $R_\infty = 3.5 \times 10^6$. (An average of 100 data samples is plotted.)

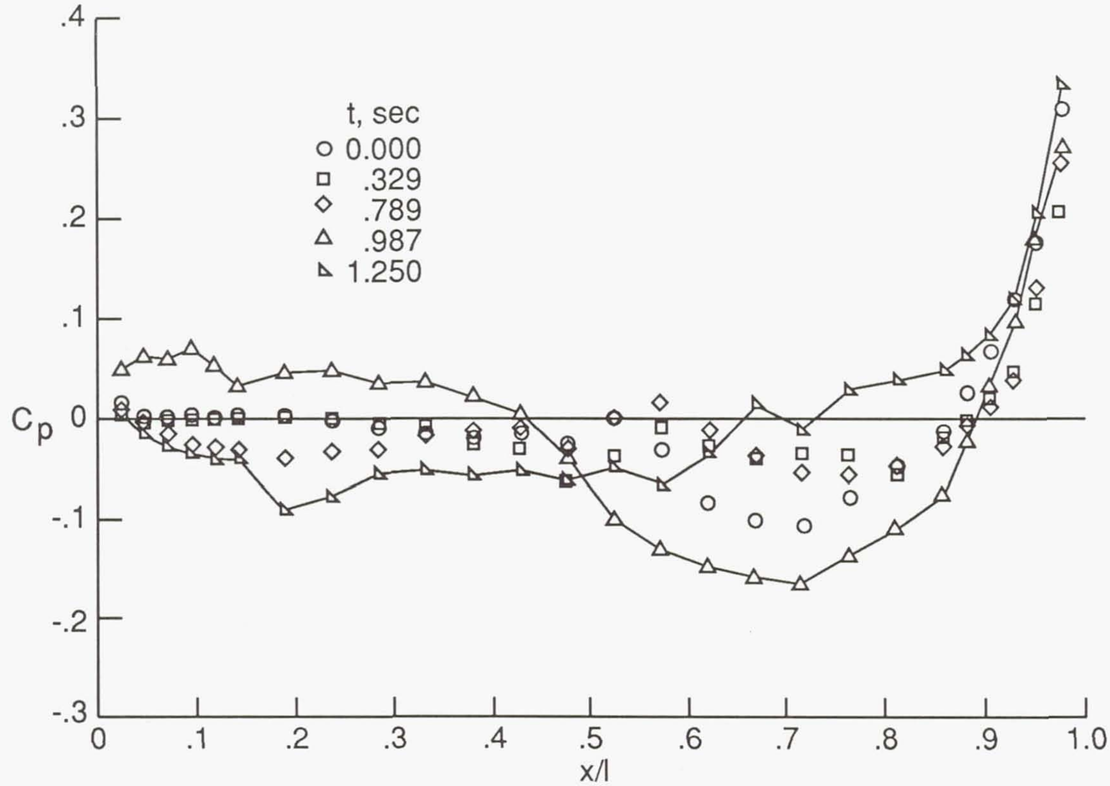


Figure 31. Variation of cavity floor centerline pressure distributions with time for cavity with front blocks where $l/h = 4.4$, $M_\infty = 0.60$, and $R_\infty = 3.5 \times 10^6$. (Individual data samples are plotted.)

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15. Supplementary Notes

16. Abstract

An experimental investigation was conducted to expand the data base and knowledge of flow fields in cavities over the subsonic and transonic speed regimes. A rectangular, three-dimensional cavity was tested over a Mach number range of 0.30 to 0.95 and at Reynolds numbers per foot from 1.0×10^6 to 4.2×10^6. Two sizes of cavities with length-to-height ratios (l/h) of 4.4 and 11.7 and with rectangular and nonrectangular cross sections were tested. Extensive static pressure data on the model walls were obtained, and a complete tabulation of the pressure data are presented. The boundary layer approaching the cavity was turbulent, and the thickness was measured with a total pressure rake. The static pressure measurements obtained with the deep-cavity configuration (l/h = 4.4) at Reynolds numbers greater than 3.0×10^6 per foot showed large fluctuations during the data sampling time and for all conditions tested with the shallow cavity. The data showed much less unsteadiness at lower Reynolds numbers for the deep cavity and for all conditions tested with the shallow cavity. Although mean static pressure distributions have been used in past cavity analyses at transonic free-stream conditions, the data presented in this report indicate that consideration of the instantaneous pressure distributions is necessary. The data also indicate that the shallow-cavity static pressure measurements were sensitive to the thickness of the boundary layer entering the cavity.

17. Key Words (Suggested by Authors(s))	18. Distribution Statement
Cavity flow Transonic speeds Pressure measurements Turbulent boundary layer	Unclassified—Unlimited Subject Category 02

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